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## REPORT

OF THE

# COMMISSIONER OF PATENTS 

FOR

THE YEAR1868.

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## REPORT

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# THE COMMISSIONER OF PATENTS 

FOR

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\text { THE YEAR } 1868 .
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January 21, 1869.-Referred to the Committee on Patents and ordered to be printed.

Departinent of the Interior, Patent Office, Washington, D. C., January 21, 1869.
Sir: In compliance with the requirement of section 14 of the Patent Act, approved March 3,1837, I have the honor to forward, herewith, my annual report upon the state and condition of the Patent Office.

With great respect, your most obedient servant,
ELISHA FOOTE,
Commissioner.
Hon. Schuyler Colfax,
Speater of the House of Representatives.

> United States Patent Orifice,

Washington, D. O., January 20, 1869.
SIR: During the year ending December 31, 1868, there have been filed in the Patent Office 3,705 caveats, and 20,445 applications for patents; 12,059 patents have been issued, 419 have been re-issued, and 140 extended.

Compared with other years, the business of the office has been greater than that of any preceding period. The number of patents issued has been more than double the number of 1865 , and more than three and one-half times that of 1858 .

Since the Patent Office was first established its business has had a rapid growth in amount and in importance. In 1836, eight or ten persons were enough to transact all its business. Now between three and four hundred are required.

This increase has arisen in part from the growth of the country, but more from the stimulus that our patent laws have given to invention. The rewards which they have held out for successful improvements have increased in value with the progress of the country and with the more proper appreciation and greater security of patented property. A really successful invention now brings to its author a competency for life; and, as a consequence, the efforts of almost every class in community are directed in search of useful improrements.

In all those improvements of life to which patent laws relate our own age has witnessed more advance than all the preceding ages of the world taken together. One improvement seems to have begotten another. New fields for exploration have been constantly opening. And so far from reaching any limit of invention, we seem but on the way to other advances and improvements beyond our present comprehension.

I am, however, unable to attribute the extraordinary increase of the last few years in the number of patents issued to an equal increase of real improvements; for I apprehend that much of apparent prosperity has arisen from the allowance of patents that should never have been granted.

Several causes have contributed to this :
1st. A practice has recently grown up of subdividing inventions and issuing several patents for what was formerly embraced in one. It has served to increase the receipts of the office, but at the same time it has greatly increased the expenses of the inventor, not only for office fees, bat for all the other expenditures incurred in obtaining patents. Had the practice been confined to separate and distinct improvements upon different parts of a machine, no exception could be taken to it; but it has been carmed to the extent of several patents for the same inrention, and patents for parts, which taken alone constituted no invention. It has tended to complicate and confuse patented rights, and, in some instances, I apprehend, been a source of frauds upon the public. I am not aware of any useful purpose that it has served, and believe it should be regarded with disfavor.

2d. Ample provisions have been made from time to time to guard against the improper rejection of applications for patents. In case of a refusal, the examiner in charge must assign his reasons for it, and specifically point out and refer the party to any previous device which, in his riew, anticipates the invention. These gromnds the applicant may controvert and have a second examination and a second decision. If still rejected, he may appeal to the board of examiners-in-chief, and have their investigation and decision upon his case. From the examiners-in-chiof he may appeal to the Commissioner in person, and from the Commissioner to one of the judges of the supreme court of the District of Columbia.

An examiner's action receives no such scrutiny when he allows a patent. If he be pressed for time, or be indifferent as to his duties, he may put an end to his labors by a simple indorsement. If he lack capacity, there will then be no exposure of his ignorance or of the unsoundness of his views. It may have happened that in some instances the allowance of pateuts has served to cloak incapacity and indifference to duty.

I have endeavored to provide some means for reviewing briefly favorable decisions before patents were issued upon them, but found that the force in the office was inadequate to such work in addition to the perform-
ance of other indispensable duties. The only reliance we have to guard against the issue of improper patents is upon the ability and integrity of examiners and their assistants.

3 d . The great increase of the business of the office has not been accompanied with a corresponding increase of the examining corps. Examiners, in some cases, have had thrown upon them an amount of labor they could not perform well ; and, from the necessity of the case, patents have been hurriedly allowed without the full investigation they should have received. Formerly thirty or forty cases per month were deemed to be as many as an examiner with an assistant could thoroughly investigate and decide. Now it is not unusual for the same examiner, with two or three assistants, to dispose of as many as two hundred cases in the same time. In one room during the past year more applications have been decided than by the whole office in 1855, or in any previous year.

The granting of improper and illegal patents defeats every object and purpose of patent laws. It serves to mislead and deceive the public, and to subject them to the annoyance of unjust and invalid claims. It throws distrust and discredit upon patented property, and injures the salable value of meritorious inventions. Did the practice of the office fully accord with the intent of the law, and its investigations command the entire confidence of the community, so that business operations and the investment of capital could with safety be founded upon them, it would do more to enhance the rewards which the laws contemplate for valuable improvements than any other measure that could be devised.

To improve the qualifications of examiners and obtain a high order of ability in the examining corps, has been deemed by me an object of the first importance-one, indeed, upon which the success of the office greatly depended.

A committee of three gentlemen, selected for their ability and fitness for the purpose, was appointed to examine into the qualifications of such of the employés as had received their appointments without the examinations required by law. The duty has been, so far, faithfully and judiciously performed, and several changes in the office have resulted therefrom.

Great care has been exercised in supplying vacancies. The positions of examiners' clerks and assistants have been regarded as the schools of the office, in which to qualify gentlemen of ability and culture for higher places ; and the qualities sought for in appointees to those positions have been such as, in due time, will make them able and well-instructed examiners.

Questions as to the patentability of inventions become more difficult with the increase in the number of previous devices. An examiner must familiarize himself with all the inventions that have been made in his class-not only in this country, but in Europe. Their great number and complexity have rendered the study of them a profession to be acquired by years of labor. An examiner's decisions involve nice questions of law, of science, and of mechanics. The more recondite principles upon which depend the practical success of processes and machinery, must be familiar to him. Large amounts of property often depend directly or indirectly upon his action. The ability and acquirements necessary to the proper discharge of his duties must be of a high order-scarcely less than those we expect in a judge of the higher courts of law.

I have been strongly impressed with the belief that the salaries now paid these gentlemen are inadequate to procure and retain the best services. They were prescribed in 1848. At that time they would obtain of all the necessaries and conveniences of life more than double of what
the same money will purchase now. For all practical purposes it is the same as if those salaries had been reduced one-half. As a consequence, gentlemen who have become experienced and expert in the performance of their duties resign their places for more lucrative employments. Within the short time that I have been connected with the office, several whose services were invaluable have resigned, and it is apprehended that others will soon follow their example. I think I know the wishes of inventors well enough to say that, if the sums they now pay into the Patent Office are insufficient, they would gladly increase them to secure prompt and correct action upon their cases.

The reduction in the value of the currency has also operated with hardship upon other employés of the office. So long as the funds of the office admit it without tax upon the country, it is believed that their salariss should be made to approximate what they were before 1861.
The act of Congress relative to the Patent Office passed in July, 1836, provided for a machinist at a salary of $\$ 1,200$ per year. For several. years thereafter this was construed to mean a real mechanic to repair and keep in order the models deposited in the office. Afterwards it came to imply a clerk to take charge of the model room. For many years past there have been few or no repairs of breakages and other injuries to models, and large numbers of them are now more or less damaged; some have been totally destroyed. To put them in proper order will require the labor of two men for several years.

Injuries should be repaired at the time they are done, and the persons causing them held accountable therefor. To do such work, and keep in repair furniture and other articles used in the office, would occupy two men continuously.

Certified copies for models are frequently ordered to be used in courts and for other purposes. To supply them the models are sent to some of the machine shops in the city. Questions involving large interests sometimes depend upon features shown in these models. They lose their force as testimony when suffered to go leyond the supervision of the office. Suspicions of changes have, in some instances, been strongly entertained.

It is believed that the interests of the office will be promoted by establishing within it a machine shop and employing competent persons to do the work I have indicated.

Notwithstanding the ample room for models in the Patent Office, the cases to hold them are now filled, and some of them crowded. More provision for them will have to be immediately made. By narrowing a little the present cases, an additional one may be placed between them. and still leave sufficient space for passages. Another shelf may be added and some of the cases lengthened. By these means their present capacity may be more than doubled, and that will meet the wants of the office for many years to come. The time will eventually arrive when the models of those machines that have proved useless will have to be selected out and discarded.

It is recommended to employ a few men in the office to alter these cases and make new ones as fast as the wants of the office shall require and its funds permit.

The subject of copying the drawings of patented devices is one of much importance to the office. There are now about 85,000 of them, and they increase at the rate of about 14,000 per year. There are also about 30,000 belonging to rejected applications. They are kept in drawers in what is called the draughtsman's room. There the examiners and their assistants resort to make their investigations. By long experience in
examining drawings, they acquire the habit of readily detecting in them any device that may anticipate an invention. Those that are decimed pertinent to the subject of inquiry are taken to the examiners' rooms and submitted to the inspection of parties interested. On appeals they are used in the room of the examiners-in-chief, in the Commissioner's room, and by the judges of the supreme cou't of the District. For the purpose of being copied for the annual report, and for other purposes, they are also taken from the draughtsman's room. Sometimes two or three thousand are absent from their places, and this has led to errors much to be lamented on the part of examiners.

Were all the drawings which each examiner has to consult bound in volumes, and placed in his room, convenient for him to study and refer to without leaving his desk, it is estimated that he could dispatch twice as much business as he now does, and with greater accuracy and freedom from mistakes.

The great number of examiners and their assistants who have to resort to the draughtsman's room for investigations, and the liability of drawings getting misplaced by accident or by design, have rendered it imperatively necessary to the proper dispatch of business to exclude the public from that room. Patent agents and attorness are thus deprived of their most ready means of investigating the novelty of inventions, and properly preparing specifications for patents. A convenient room for them, provided with copies of drawings, specifications, and other works of reference, would be a great convenience to the public, and promote the interests of the office.

Some of the drawings by long use have been much worn, and parts of them obliterated. Unless copied in time they will be lost.
Twenty copies of each specification are now printerl. Were there copies of drawings to accompany them, they could be furnished to public libraries, where investigations could be made without the necessity of resorting to Washington.

The Patent Office makes exchanges of its publications with several foreign governments. From Great Britain we receite full copies of their specifications and drawings. In our library we can investigate au English invention as well as can be done in the Patent Office of Great Britain. The volumes are handsomely bound and now fill a large room in the library. For them we make but the poor return of a copy of our annual report.

The copies of drawings ordered and paid for by the public now number about seven hundred per month, and the expense to the office of making them is about $\$ 1,400$ per month. A reduction of price would probably much increase the number.

Several plans have been proposed for making these copies. Were there as many as fifty of each drawing wanted, the new art of photo-lithography would afford by far the best and cheapest means. It makes a fac-simile of line drawings, of any size desired, and when once the stone is prepared copies may be taken with little expense. Specimens have been furnished the office which show the wonderful perfection to which this important art has attained. The only difficulty in the way lies in the great number of drawings to be copied. Without reference to those on hand, the current issues will amount to nearly fifty a day. At the low rate of ten cents apiece, without any charge for specifications, fifteen or twenty thousand per year would cost more than many libraries could well expend for them; and the fifty or sixty large volumes annually which they would make would soon require more room than many libraries would have to spare.

For a few copies, enough for the use of the Patent Office, ordinary photograpliy, or some of the late processes, would afford a cheaper means of supplying them.
A photographic establishment in the Patent Office, adapted to copying drawings of large size, would supply the orders for them much more cheaply and accurately than by the method of tracing heretofore pursued.

The receipts of the Patent Office from July last to the 1st of January have exceeded its expenditures by about $\$ 53,000$. It is confidently expected that for the year to come the excess will not be less than $\$ 100,000$. By strict economy and system in the management of the office, it is believed that salaries may be raised, necessary changes and improvements made, and every needful expenditure to raise the office up to its highest state of efficiency and usefulness incurred, without any charge or tax upon the public.

The large and growing business of the Patent Office has thrown more labor on the Commissioner than any one person can perform. As some relief, it is recommended that appeals from the board of examiners-inchief be made directly to the chief justice of the supreme court of the District of Columbia.

The act of Congress relating to the Patent Office, passed March 2, 1861, I have regarded as abolishing all fees on appeals from the Commissioner; and, since examining the subject, I have not felt myself authorized to receive or to pay over to the judges of the supreme court of the District the moneys they have been accustomed to receive for the hearing of such appeals. A different view of the act has been taken by one at least of the judges. It is important that the question should be settled; and it is respectfully submitted that it will be more in accordance with the general practice of the country, and better suited to the dignity of the court, to increase the salary of the judge performing the duties than to make his compensation dependent upon the business that comes before him.
The business of the Patent Office has outgrown the several acts creating it. It is difficult to find authority for the employment of several of its important and indispensable officers. The gentleman who superintends the preparation of abstracts and drawings for the annual report was appointed as an examiner. The Commissioner's assistant has the grade and compensation of a first assistant examiner. The gentleman who purchases the supplies of the office and upon whom its expenditures greatly depend is but a temporary clerk. More than one-half of the employés of the office are temporary clerls-an office intended by statute for copyist merely. A revision of the several acts, with proper amendments, would conduce much to the interests of the office and the convenience of the public.

I have deemed it advisable to make several changes in the practice of the office with a view of simplifying its proceedings and producing more accuracy and promptness in its business. As was to be expected, some inconvenience was at first felt; but experience has justified the changes, and with few exceptions they are now universally approved and commended. System and accountability has been introduced in reference to the expenditures of the office. The mode of receiving and accounting for moneys paid into the office has been entirely changed, and such checks provided as will, it is hoped, prevent mistakes and errors. In reference to applications for patents, the principle adopted is to aid and assist the applicant in obtaining what properly belongs to him rather
than to obstruct or delay him. The objects of our patent laws will, it is believed, be best attained by securing to each inventor, with as little expense and trouble as possible, the full benefits of his inrention so far as he may be entitled to them.

Respectfully submitted:

ELISHA FOOTE,
Commissioner.

## Hon. Schuyler Colfax,

 Speaker of the House of Representatives.

PATENTEES AND PATENTS.

## ALPHABETICAL LIST

OF

## PERSONS WHOSE PATENTS FOR INVENTIONS AND DISCOVERIES HAVE EXPIRED DURING THE YEAR 1868.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,592 | Abbe, Robert M. Heg | Aug. 29, 1854 |  |
| 13,560 | Abbett, Amos. Horem | Scpt. 20, 1854 |  |
| 11, 057 | Alos, Casimir. Spark arresters..................................... | June 13, 1854 |  |
| 11,958 | Absterdam John. Arrangement of means for lubricating the cylinders of steam engines. | Nor. 21, 1854 | VI. |
| 10,573 | Absterdam, John, and William Burnctt. Uso of fusiblo disks in steam boilers. | Feb. 28, 1854 | VI. |
| 10, 703 | Absterdam, John, and William B. Mcrrill, assignors to J. A Woedbury and William B. Morrill. Device for tonguing and grooving tapering beards. | Mar. 28, 1854 | गIV. |
| 11, 986 | Adams, Alden. Hay and cotto | Nov. 28, 1854 | XIT. |
| 10, 438 | Adams, Calvin. Copying 1 | Jan. 24,1854 | XVIL。 |
| 11, 685 | Adams, Menry WV. Breceli-leadi | Scpt. 19, 1854 | XIX. |
| 10, 851 | Adams, John W. Cetton | May 2,1854 | III. |
| 10,952 | Adams, Ransom P. Excavator for fon | May 23, 1854 | IT. |
| 11, 405 | Adler, Flkan. Machinery for making | Aug. 1, 1854 | IV |
| 11, 636 | Ager, Wilson. Mill-stone dress for cleaning g | Scpt. 5, 1854 | XIT. |
| 11, 637 | Akins, William II. Flour bolt | Sept. 5, 1854 | Х以. |
| 10, 728 | Akins, William H., assignor to Samuel J. Parker. Cops for sowing machino. | Apr. 4, 1854 | III. |
| 11, 563 | Alburger, Charles M. Hydrant, lose, hitching post, and parement washcr | Aug. 22, 1854 | XI. |
| 11,738 | Aldrich, Arad, assigner to John L. Cooper and Arad Aldrick. Machines for cutting irregular forms | Sept. 26, 1854 | NTV. |
| 11,922 | Allen, Edwin. Machincry for carving stone | Nov. 14, 1854 |  |
| 11, 107 | Same.....-Vencer polisher | June 20, 1854 | NIV. |
| 11, 006 | Allen, Henry. Machino for dressing poly | Juno 6, 18.54 | XIV, |
| 10,768 | Same...... Boring and mortising ma | Apr. 11, 1854 |  |
| 10, 853 | Allcuder, John. Operating catches in too | May 2,1854 |  |
| 11, 959 | Alrord, Clark. Hand brick molds | Nov. 21, 1854 | 1V |
| 11, 110 | Ambler, D. C. Sotting of steam lo | June 20, 18.54 | Y |
| 11, 109 | Samo ......-Quartz crushers | June 20, 1854 | II |
| 11, 884 | Ambler, Danicl C. Sewing machines | Nov. 7, 1854 | III. |
| 10,530 | Ambler, Georgo 13. Saddle tre | Fol. 14, 1854 | XVI. |
| 10, 675 | Ament, C. V. Devices for pres | Mar. 21,1854 |  |
| 12, 048 | Ames, Nathan. Polygraph | Dec. 12, 1854 | IVTII. |
| 12,049 | Same | Dec. 12, 1854 | XVII. |
| 11, 150 | Amory, Jonathan, and William F. Parrett. Furnaco of steam boiler | June 27, 18.54 |  |
| 11, 452 | Anderson, William. Harro | Ang. 1, 1854 |  |
| 10,533 | Andrews, Frederick T. Method of operating satrs | Fcl. 21,1854 | XI |
| 12,084 | Andrews, John, assignor to J. Andrews, N. A. Richardson, and Gardner Symmes. Sced planters. | Dec. 12, 1854 |  |
| 10, 439 | Andrews, R. \& A. F. TVeod saws | Jan. 24, 1854 |  |
| 10,616 | Andrews, Robert W. Britannia tea and coffee pots | Mar. 7, 1854 | X |
| 10, 720 | Andrews, Solomon. Drop and dio forging aud puaching mac | Apr. 4, 185. |  |
| 11, 348 | Same. ............ Mail-bag labels..... <br> Samo...... Manner of constructing padlocks for mail-bags and other uses, called the clam-shell padiock. (Extended Nov. 15, 1854). | July 25, 1854 Dcc. 5,1840 | XXII. |
| 10,465 | Antheny, Henry T, Presses for making miniaturo cases............... | Jan. 31, 1854 | XVIII. |
| 10, 953 | Anthony, Henry T., and Frank Phoebus. Apparatus for the manufacture of daguerreotypecases, \&c.. | May 23, 1854 | XVII. |
| 10,664 | Appleton, Charles F. Processes for dyeing | Mar. 21, 1854 |  |
| 10,677 | Same......Dycing apparatus. (Patented in England Jan. 7, 1854). | Mar. 21, 1854 | IV. |
| 10,978 | Samo..... Dyeing processes | May 30, 1854 |  |
| 10,797 | Armitage, Thomas. Portable ladder or fire cscape | Apr. 18, 1854 | $\underset{\mathrm{V}}{\mathrm{XXII}} .$ |
| 10,769 | Arnold, Francis. Lanterns combining foot stoves, \&- | Apr. 11, 1854 |  |
| 10,852 | Arnold, William E. Couplings in endless chain horse-powers | May 2,1854 | NTII. |
| 11,513 | Arthur, Robert. Closing tho meutlis of air-tight bottles, \&c | Aug. 15, 1854 | XXII. |
| 10, 490 | Asay, A. M. Dental chair | Felb. 7, 1834 | X |
| 10, 715 | Ashcroft, Edward H. Track cleancrs for railroads | Mar. 28, 1854 |  |
| 11, 055 | A shcroft, Thomas. Operating cut-off valves for steam engines | June 13, 1854 | VI. |
| 11,851 | Atherton, Nathan. Steam engincs. | Oct. 31, 1854 | VI. |
| 11, 714 | Aubin, N. Gas generators..... | Sept. 26, 1854 | TV. |
| 10,787 | Aulick, Georgo. Car couplin | Apr. 18, 1854 | X. |
| 10,819 | Avcry, John P. Mrote of sec | Apr. 25, 1854 | IX. |
| 11, 221 | Avery, John P., assignor to Josepli B. Bromley. Stone-dressing machine. | Nov. 7, 1854 | XV. |
| 10, 880 | Avery, Otis. Sowing machines | May 9, 1854 |  |
| 10, 954 | Babbitt, Isaac. Hones. (Patented in England March 30, 1854 | May 23,1854 | XXII. |

List of persons whose patents for inventions and discoveries have expired, fo.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 853 | Babcock, A. M. and G. H. Press for printing in colo | Oct. 31, 1854 |  |
| 11, 466 | Baboock, William S. Dumping wagons | Aug. 8, 1854 |  |
| 11, 987 | Bachstein, Gottleib. Arrangement of devico for applying power to fire engines. | Nov. 28,1854 | XI. |
| 10, 562 | Bachelor, S. B. Scythe fasteninge | Feb. 28, 1854 |  |
| 11, 686 | Badger, Elliot C. Machines for dressing | Sept. 19, 1854 |  |
| 11, 854 | Baeder, Charles. Knife die for cutting leather straps for whips | Oct. 31, 1854 |  |
| 10, 441 | Bailey, Charles P. Dumping cars | Jan. 24, 1854 |  |
| 10,698 | Bailey, C. P. Head-rest for portab | Mar. 28, 1854 | $\underset{\sim}{x} V I I .$ |
| 11, 772 | Bailey, Charles P. Railroad car seats ...................................... | Oct. 10, 1854 |  |
| $\begin{array}{r} 12,088 \\ 11,349 \end{array}$ | Same.......... Apparatus to a machine for cutting irregular forms Bailey, Thomas R. and George. Device in machines for cutting round tenons | Dec. 19, 1854 July 25, 1854 | XIV. XTV. |
| 11, 408 | Baker, Collins B. Brick presses .......................................................... | Aug. 1, 1854 |  |
| 10,922 | Baker, Frank. Lathe for irreg | May 16, 1854 |  |
| 11, 821 | Baker, Henry F. Plows. | Oct. 24, 1854 |  |
| 11, 960 | Same ....... . Papering wa | Nov. 21, 1854 | XV |
| 10, 699 | Balding, Anson. Submarine scoop | Mar. 28, 1854 |  |
| 10, 919 | Baldwin, D.P. Shower bath | May 16, 1854 | XVI |
| 11, 283 | Baldwin, Eden A., 2d, administrator of Eden Baldwin, deceased. Firearms | July 11, 1854 | XIX. |
| 11, 467 | Baldwin, Eden A. Tubular bridges | Aug. 8,1854 |  |
| 10, 955 | Baldwin, Hiram. Ratchet leve | May 23, 1854 | XII. |
| 10, 514 | Baldwin, M. W., and David Clark. Arrangements of vertical tube feed-water heaters in locomotive smoke-stacks. | Feb. 14, 1854 |  |
| 10,731 | Ball, Eastman R. Bedstead fastenings | Apr. 4, 1854 | XV |
| 11, 264 | Ball, Jonathan. Water pipes | July 11, 1854 |  |
| 11, 923 | Ball, Levi B. Smut machi | Nuv. 14, 1854 | VIII. |
| 11, 983 | Ball, Thomas C., assignor to Nathanicl Lamson. | Nov. 21, 1854 |  |
| 10,754 | Ball, William. Mills for grinding ores, \&c | Apr. 11, 1854 |  |
| 10, 799 | Ballard, James. Slitting gauges | Apr. 18, 1854 | XIV. |
| 10,854 | Ballard, William. Ships' knees | May 2,1854 | VII. |
| 11, 007 | Same ......... Bent timbers for ship | June 6, 1854 | VII. |
| 10,491 | Bancroft, Edward, and Wm. Sellers. | Feb. 7, 1854 | X |
| 11, 924 | Bancroft, William. Cultivators. | Nov. 14, 1854 |  |
| 10,629 | Bard, Edwin M. Mold boards for | Mar. 14, 1854 | I. |
| 11,855 | Barker, Joseph. Grain wimno | Oct. 31, 1854 | I. |
| 11, 114 | Barlow, Thomas II. Cat-nail ma | June 20, 1854 | II. |
| 11, 804 | Barnes, Joseph T. Power looms | Oct. 17, 1854 | III. |
| 11, 805 | Barnum, Daniel. Machinery for forming hat bodie | Oct. 17, 1854 | III. |
| 10, 489 | Barrows, Ebenezer. Rotary engines. (Patented in England July 3, 1851) . | Feb. 7, 1854 | VI. |
| 10,980 | Barsanter, John H. Knittin | May 30, 1854 | II. |
| 10,418 | Barth, John H. Bedsteads | Jan. 10, 1854 | XVII. |
| 10, 531 | Bartholomew, Frederick II. IV | Felb. 14, 1854 | XXII. |
| 11, 288 | Bartlett, Russell D. Machine for making the | July 11, 1854 | II. |
| 11, 465 | Same . . . . . . . . . Machine for making | Aug. 8, 1854 | XV. |
| 10, 532 | Barton, Jason. Horse bells | Feb. 14, 1854 | XXII. |
| 10, 539 | Same ...... Mode of attaching horse b | Feb. 21, 1854 | XXII. |
| 10, 908 | Bass, William L. 'Tables for ships' cabins | May 16, 1854 | VII. |
| 10, 537 | Bassett, Joel R., assignor to C. H. Williams. | Fel. 14, 1854 | XI. |
| 11, 115 | Bassett, Mark S. Flour sifter and renovator | June 20, 1854 | Xmi. |
| 11, 822 | Same --.....-Sifting and bolting | Oct. 24, 1854 | X1 |
| 11, 852 | Bassford, Abraham. Key for tuning piano | Oct. 31, 1854 | XVIII. |
| 10,496 | Batchelder, John M., and M. G. Farmer. Mode of making battery connectiou with an electro-magnetic coil on the traveling carriage of a telegraphic register | Feb. 7, 1854 | VIII. |
| 11, 058 | Batchelder, John M. Insuiating telegraphic wires | June 13, 1854 | VLI. |
| 11, 744 | Batchelder, Thomas. Machines for manufacturing frames of woodsaws | Oct. 13, 1854 | X 1 |
| 10, 440 | Batcheller, Lucien B. Railroad car bra | Jan. 24, 1854 |  |
| 11, 925 | Bates, Henry. Slide valves for the exhaust st | Nov. 14, 1854 | VI. |
| 10, 425 | Bates, Perry G. Spiral or worm-joint linge | Jan. 17, 1854 | II. |
| 11, 407 | Bauersfeld, Charles F. Bits for car | Aug. 1, 1854 |  |
| 11, 151 | Bauman, Jesse. Cider mills. | June 27, 1854 | XIII. |
| 10, 719 | Baxendale, James, assignor to J. Baxendale and J. Ferguson. Method of operating the doctors of printing cylinders | Mar. 28, 1854 | XVLI. |
| 11,593 | Bazemore, William T. Cultivators .... | Aug. 29, 1854 |  |
| 11, 512 | Bazin, James A., assignor to A. B. Ely. Braiding machincs | Aug. 8, 1854 | III. |
| 11, 585 | Same...............................C0 | Aug. 22, 1854 | XIU. |
| 11, 543 | Beach, Henry H. Winnowe | Aug. 15, 1854 | I. |
| 10, 956 | Beach, John. Cheose hoops | May 23, 1854 |  |
| 10,979 | Beal, William. Corn crush | May 30, 1854 | XIII. |
| 11, 715 | Beals, Fordyce. Fire-arms | Sept. 26, 1854 | XIX |
| 11, 152 | Beatty, Charles H. Coffeen | June 27, 1854 | XVII. |
| 10, 656 | Beaumont, Victor. Machine for | Mar. 21, 1854 | XVIL. |
| 11, 743 | Same -.......-Steam gange | Oct. 3, 1854 |  |
| 11, 823 | Bedwell, John D. Smut machine | Oct. 24, 1854 | XII |
| 11, 926 | Beebe, William. Double cylinder boilers for hot- Bee, Benjamin F. | Nov. 14, 1854 |  |
| 11, 016 | Beers, Smith. Method of turning hubs, | June 6, 1854 | XIV. |
| 11, 927 | Bell, Martin, and E. B. Isett. Furnaces for making iron direct from the ore | Nov. 14, 1854 |  |

List of persons whose patents for inventions and discoveries have expired, s.c.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10, 581 | Bell, Solyman. | Fel. 28, 1854 |  |
| 11, 928 | Bell, William. Lamp | Nov. 14, 1854 |  |
| 10, 466 | Benediet, Philander IT. Daruerreotype | Jan. 31, 1854 |  |
| 10,662 15 159 | Benton, R. P. Machine for dressing sp Bertram, William. Welding iron plates | Mar. 21,1854 |  |
| 10, 630 | Berry, James. Method of eonstructing molds for making printing bloeks. | Mar. 14, 1854 |  |
| 11, 101 | Bevan, John. Railroad ear ventilator. | June 13, 1854 |  |
| 11, 594 | Biddle, William. Washing machines.-................................ | Aug. 29, 1854 | X |
| 11,803 | Bigelow, E. B. Loom for weaving cut-pile fabries. (Patented in England December 31, 1851) | Oct. 17, 1854 |  |
| 11,350 | Bill, II. N. and J. C. Method of securing axe helves, \&e | July 25, 1854 |  |
| 10, 632 | Billings, Charles W. Seed plante | Mar. 14, 1854 |  |
| 11, 316 | Bird, Will E. Steam boiler | July 18, 1854 | $\mathrm{VI}$ |
| 12, 406 | Bissell, Levi. Improrement in meta | $\text { Aus. 20, } 1854$ | X. |
| 11,687 10,648 | Black, William. Stean engines. <br> Blake, Mansell, assignor to M. Blake, J. B. IIeAlester and E. Blako. Folding blinds. | Mar. 14, 1854 |  |
| 10,798 | Blake, Philos. Oyster knife | Apr. 18, 1854 | XVI |
| 10, 497 | Blanehard, Thomas. Maehines for polishing plow landles and other articles | Feb. 7, 1854 |  |
| 10,540 | Bliss, J. W. Window cord | Felb. 21, 1854 | XII. |
| 10,663 | Bliss, Jeremy W. Lifting ja | Mar. 21, 1854 | XII. |
| 12,018 | Blodgett, G. S., and P. T. Swreet. | Dea 5,1854 | V. |
| 10, 386 | Blodgett, Sherburn C. Hemming and cording umbrella covers. (Antedated July 3, 1853). |  | XXI. |
| 11, 111 | Blondin, Gabriel. Process for treating paints... | June 20, 1854 |  |
| 11, 112 | Same.......-Composition pain | $\begin{aligned} & \text { June } 20,1854 \\ & \text { July } 25,1854 \end{aligned}$ |  |
| $\begin{aligned} & 11,353 \\ & 10,793 \end{aligned}$ | Boeklen, R., and H. T. Brown. Bottles. <br> Boggett, Wm., and G. B. Pettit. Heating, warming, and eooking by gas. <br> (Patenter in Encland October 22, 1851) | July 25, 1854 <br> Apr. 18, 1854 | X |
| 11,116 | Bonc Joseph. Grain winnowers.................. | June 20, 1854 |  |
| 12, 050 | Bonelli, Gaetan. Operating looms by eleetrieity. (Patented in Franec August 15, 1853) | Dee. 12, 1854 | I |
|  | Bonney, William. Process of imitating marble and other sub | Aug. 8, 1854 | IV. |
| 10,732 | Booth, Solomon G. Machines for corrugating shee Bosworth, G. W., et al. (See D. Wilson, assignor.) | Apr. 4, 1854 |  |
| 10, 467 | Boughton, Enos. Cultivators .......... | Jan. 31, 1854 |  |
| 10, 800 | Bouton, R. M. Fauect. | Apr. 18, 1854 | XI. |
| 11, 824 | Bowen, Arehibald. Straw and g | Oct. 24, 1854 |  |
| 11, 825 | Boyack, Robert. Machinery for softening | Oct. 24, 1854 |  |
| 10, 468 | Boyd, William. Mode of fixing likenesses in monum | Jan. 31, 1854 |  |
| 11, 318 | Boynton, Leander W. Machines for preparing floe | July 18, 1854 | 11 |
| 11, 659 | Same.... .-...... Mrachines for cleaning wool | Sept. 12, 18.54 | 11. |
| 11, 773 | Same............ Machinery for mak | Oct. 10, 1854 | II. |
| 11, 469 | Boynton, Nathaniel A. Air heatin | Aug. 8, 1854 | $\stackrel{V}{V}$ |
| 11, 545 | Same..............- Hot air furnace. | Aug. 22, 1854 |  |
| 12, 014 | Boynton, Osgood G., assignor to Nchemiah Hunt. Guide for sewing machine | Junc 6, 1864 |  |
| 1.1, 531 | Bradley, William. Nutme | July 25, 1854 |  |
| 11, 514 | Bradsliaw, John A. Machine | Aug. 15, 1854 | XVI. |
| \% 174 | Same.......... Shingl | Oct. 10, 1854 | XIV. |
| 11,018 | Brady, Alfred. Vault covers | June 6, 1854 |  |
| 10, 983 | Breaer, Abel. Fastening | May 30, 1854 |  |
| 11,885 | Brennan, John B. Lool | Nov. 7, 1854 | $\stackrel{1}{\mathrm{~V}}$ |
| 10, 419 | Brewer, Harrey. Torch la | Jan. 10, 1854 |  |
| 11, 248 | Brewer, John W. Arrangement for modring and managing | July 1, 1854 | $\begin{aligned} & \text { XI. } \\ & \text { XII. } \end{aligned}$ |
| $\begin{aligned} & 11,547 \\ & 11,660 \end{aligned}$ | Bridendolph, Benjanin. Hominy mills. Bridgham, H. C., and James II. Stewart. Apparatus for turning the | Aug. 22, 1854 |  |
| 11, 717 | Briggs, Sehuyler, and John cr Ta | Sept. 26, 1854 |  |
| 11, 409 | Bristol, Riehard C. Steam boile | Aug. 1, 1854 | VI. |
| 11, $546{ }^{\text {b }}$ | Samo .........- Rotary engines | Aug. 22, 1854 |  |
| 10,587 | Brodhead, James F., assignor to Th | Fel. 28, 1854 | XIV |
| 11, 515 | Brooke, Villiarn. Glass molds | Aug. 15, 1854 |  |
| 11, 596 | Brooks, Leblueus. Spirit levels | Aug. 29, 1854 |  |
| 10,770 | Brooks, Stephen P. Iron frame upright pi | Apr. 11, 1854 | XV1 |
| 11, 886 | Broughton, Albert. Machinery for polishing stone. (Antedated Oetober 24, 1854) | Nov. 7, 1854 |  |
| 11, 302 | Brown, Adolphe and Felix. | July 4, 1854 | $\frac{x y}{x y}$ |
| 11, 658 | Brown, Alexander H. Brick presses | Sept. 5, 1854 | $\begin{aligned} & \text { XV. } \\ & \text { XII. } \end{aligned}$ |
| 12, 155 | Brown, William Hogg. Suspender pl | $\begin{array}{ll}\text { Oct. } & 2,1854 \\ \text { June } & 6,1854\end{array}$ | VII. |
| 11, 250 | Same........... Blasting roc | July 11, 1854 | IX. |
| 11, 191 | Brown, David, assignor to J. F. Clark and D. Brown. Machines for molding for metal castings. | June 27, 1854 | II. |
| 10,943 | Brown, Edward, assignor to "Tho Scovill Manufaeturing Company." Machines for making hinges. | May 16, 1854 |  |
| 11, 856 | Brown, Ephraim. Burglars' alarn | Oct. 31, 1854 | XX |
| 11, 470 | Brown, Isaac W. Fire-arms... | Aug. 8, 1854 | $\left\lvert\, \begin{array}{ll} \mathrm{XIX} \\ \mathrm{III} \end{array}\right.$ |
| 11, 317 | Brown, Israel F. Cotton gin ribs. |  | $\operatorname{III}_{\mathrm{XV}}$ |
| 10, 10,464 | Brown, J. W., assignor to Samuel M. Brown, John E., and S. S. Bartlett. M | Mar. 21, 1854 | XV1 |

List of persons whose patents for inventions and discoveries have expired, fo.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,929 |  | Nov. 14, 1854 |  |
| 11, 400 | Brown, L. A. and J. W. Press for veneering | Oct. ${ }_{\text {dand }}$ |  |
| 11,828 12,089 | Brown, Samuel W. Machinery for cleaning Same........Condenscris........... | Dec. 19, 1854 | VI. |
| 11, 404 | Brown, Thomas. Arrangement of means for working and stoppering chaill cablcs. (Patented in England April 20, 1847)................. | July 25,1854 | VIII. |
| 10, 820 |  | May |  |
|  | Brown, Thomas W., assigigor to William W. Meal. ${ }^{\text {Brent................. }}$ | Aug. 29, 185 |  |
|  | Bruce, George. Casting typ | Nov. 14, 1854 |  |
| 11, 487 | Bryent, Waltor, assignor to John B. Kelscy. Air-heatin | Oct. 24, 1854 |  |
| 10,771 | Buel, Julio T. Attachment for fish-hooks and artificial | Apr. 11, |  |
| 10,658 | Bulkiey, Ralph. Compounds for extinguishing fires.... | Mar. ${ }^{\text {May }} 8,18840$ |  |
|  | Bulkley, Henry G. Construction of sali evapo | July 4, 1854 | IV. |
|  | B | g. 29, 1854 |  |
| 570 | Bullock, Smith W., assignor to Stillman, Allen \& Co. Quartz crushers. |  |  |
| 11,464 | Bullock, William, assignor to Burton G. Murss. Seed planter | Ang. ${ }^{\text {, }} 1$ |  |
| 11, | Brady, Galusha J. Potato dig | May 23,1 | VIT. |
|  | Burch, Joseph. Constructing ships for safet | Fe |  |
| 10,53 10,8 | Burdick, J. L. Machincry for paging ola | Apr. |  |
| 11, 319 | Burgess, Hugh. Coating iron with brass or coppcr. (Patented in Eng. | July 18, 1854 | II. |
|  | lancss William. | Aug. 16, 1854 |  |
| 10, 589 | Burnctt, William. Arrangement of fusible plugs or disks for steam boilers | Mar. 7, 1854 | VI. |
|  | Burnham, James S. Maize |  |  |
| 11, 345 | Burns, Mary, administratrix of Robert Burns, deceascd. Carriage springs for light vehicles. (Patented in Englaud June 7, 1853) | July 18,1854 | x. |
| 10,654 | Burrage, Jonathan, assignor to J. Burrage and F. W. Newton. |  |  |
|  | Burt, Enoch. Fancy-check | Jan. 24,1854 | III. |
| 10,915 | Burt, Henry, assignor to Newark Patent Hosicry Company. Knitting machincs | May |  |
|  |  |  |  |
|  | Burwell, Alirred. Machinery for | Apr. 25,1854 | XIX. |
| 11,957 | Cadwell, J. W. Arrangemeut of lcver and catch for tow lines of canal |  |  |
|  | Cahill, John H. Hot-air | Aug. 15, 1854 |  |
|  | Cameron, David A. Belts | Mar. 21, 1854 |  |
| 101 | Campbell, Henry R. Combinatio | Jan. 10,1854 | III. |
| $\begin{aligned} & 10,401 \\ & 11,888 \end{aligned}$ | Campbell, William, assignor to W.Campbell and E. W. Shippen. Bearors for loose pulleys | Oct. 24, 1854 |  |
|  | Cary, Augustus C., and Jcremiah Smith. Hydraulic cngine | Mar. 21, 1854 |  |
| 413 | Carhart, Jeremiah. Method of uniting plates of metal of unequal | 854 |  |
| 11, 661 | Carpenter, D. Surface condenscrs for m | Scpt. 12,1854 |  |
|  | Carpentcr, Jesse. Spimning rope and cor |  |  |
| 354 | Carpenter, L. B. Lamp fastenings | Oct. 10,18 | रi |
| 77 | Carpenter, Samuel. Carpenter, Stephen D. Rotary pump | Oct. |  |
| 11, 1176 |  | Mar. 21,1854 |  |
| 11, 192 | Carter, Ira. Pump. | June 27, 1854 |  |
|  | Carter, Thomas. Seed plant | Apr. 11,1884 |  |
| 11, 414 | Carton, John, and Joseph Br | Feb. 14, 1854 |  |
| 10, 513 |  | May 9,1854 | Xiv. |
| $\begin{gathered} 10,882 \\ 11,286 \end{gathered}$ | Casselman, William J., assignor to E. A. Swan. Machine for carving marble, stone, \&c | July 11, |  |
|  | Cauu, William. Cleaning bolts of flouring milis ............. |  | U. |
|  | Cayce, William. Door locks | Aug. 1, |  |
|  | Chadwick, William $P$. Oil or blubber |  |  |
| 10, 374 | Chamberlain, Dexter H., assignor to Chamberlain \& Hunt. Mode of banding pulleys for saws |  | XIV. |
|  | Chamberlain, Dexter H. | Feb. 7, 1 |  |
| 10, 500 |  |  |  |
|  | cor | Aus. 29.18 |  |
|  | Chamberlain, Dexter in thomsignor to Feathering paddle wheels.......... | Jan. 3,18 | VII. |
|  |  | July 18 18 |  |
| 11, 322 |  |  |  |
| 11, 356 | Chapin, Thomas F | July 25,18 |  |
| 11, | nan, Abncr. |  |  |
|  | han. | Aug. |  |
|  | apman, Thomas M. Dev | Nov. |  |
| 11, 771 | man, William S. Pre | May 23,1 |  |
| 10, | Chatfield, Thomas W. Ho |  |  |
| 11, 410 | Cheny, G. W. |  |  |

List of persons whose patents for inventions and discoverics have expired, \&c.-Continued.

| No. | Name and inventiou. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10,515 | Chichester, Lewis S. Machine for cleaning | Feb. 14, 18.94 | III. |
| 10, 722 | Same ........... Dressing dax and he | Apr. 11, 18.54 | III. |
| 11, 355 | Same ..........Cotton cins | Jnily 25, 1854 | $11 .$ |
| 11, 0.59 | Childs, Samuel. Stills for distilling fatty bodies ........................ | June 13, 18.54 | IV. |
| 10, 563 | Chittenden, John W., and William C. Mead. Machines for splitting hoops | Feb. 28,1854 | XIV. |
| 12, 090 | Chubl, Tlomas J. Metal separato | Dec. 19, 1854 |  |
| 10, 85.5 | Churchmau, W. II. Hydraulic | May 2, 1854 |  |
| 10, 928 | Cilley, N. W. Method of hanging gates, \&e | May 16, 1854 | 1 |
| 11, 639 | Clareni, Charles. Attaching pulleys to shafts | Sept. 5, 18.54 | NI. |
| 10, 957 | Clark, Alfred T. Mode of balancing window sashes | May 23, 1854 | IX. |
| 10, 399 | Clark, Davic. Oil cups for steam cngines | Jau. 10, 1854 | VI. |
| 12, 092 | Clark, D. W., and S. H. Gray. Double-acting force pump | Dec. 19, 185.4 | XI |
| 11, 015 | (lark, Edtrin and James M. Flouring mills. | $J$ Juno 6, 185.1 | XIII. |
| 11, 0:37 | Clark, Harrison O. Lathe | June 6, 1854 | X |
| 11, 656 | Clark, Heury L. Doors of bargage cars................................. | Sept. 5, 1854 |  |
| 11, 3548 | Clark, John. Arrangement of spring and spring eatch for elosing doors Same Chimney caps | July $2 \overline{3}, 18.54$ Sept - 1854 | ${ }_{\mathrm{V}}^{\mathrm{V}}$. |
| 11,640 11,078 | Same....Chimncy caps <br> Clark Lyman, assignor to L Clark and Joseph Sawser. Instrument | Sept. 5, 1854 | V. |
| 11, 078 | Clark. Lyman, assiguor to L. Clark and Joseph Sawser. Lustrument for trimming welts of boots, shoes, \&e. | June 13, 1854 | IVI. |
| 10,387 | Clark, Patrick. Regulating the damper of steam boilers, by the pressure of the steam | Jan. 3, 1854 | VI. |
| 11, 030 | Sane..... Water-level indieator for stean boilers............ | June 6, 1854 | V1. |
| 12, 019 | Same.......Stean | Dec. 5, 1854 | VI. |
| 11, 357 | Clark, Wm. Bottles | July 25, 1854 | IXI |
| 12, 091 | Clarke, Major 33. Cleaning sced cotton and feeding it to tl | Dec. 19, 1854 | III. |
| 10,623 | Clegg, Thomas, assignor to Thomas Clegrg and Nathaniel Stevens. Wire heddle eyes for looms. | Mar. 7, 1854 | 11 |
| 11, 285 | Same.... J̇tachine for making wire heddle eres | July 11, 1854 | III. |
| 11,300 | Clemens, S. A. Arrangement for diaphragm valvilar pumps | July 11, 1854 |  |
| 11, 857 | Clemson, Wim. Apparatns for tempering and flattening saws | Oct. 31, 1854 | XIV |
| 10, 469 | Cleveland, Wm. Fountain pens | Jan. 31, 1834 | XVIII |
| 11, 47.3 | Close Danicl. Planing and sawing mac | An¢. 8, 1854 | XIV. |
| 11, 983 | Cochran, J. IV. Quartz crusher. (Patented in Eugland Nov. 21, 1853) | Nov. 28, 1834 |  |
| 11, 208 | Coes, Amry G. Screw wrenches | July 4, 1854 | II. |
| 11,359 | Colehammer, George 4 . Lubricating compon | July 25, 18.54 | NIT. |
| 11,360 | Coles, Thomas. Onnibns-step protector | July 25, 18.4 | - |
| 11, 188 | Collier, Wm. F., assignor to W. F. Collier and Jos. Boyden. Machines for feeding paper to printing presses | June 2T, 1854 | XVIII |
| 11, 146 | Collins, S. Y., assignor to W. O. Hickok. Mode of setting and holding pens for ruling paper | June 20, 18.4 | XVIII |
| 10,361 | Collman, John. lialing machine | Jan. 3, 1834 | NVII |
| 10,388 | Collyer, Robert IK. Quartz pulveriz | Jan. 3, 1834 | 1 I. |
| 11, 034 | Same......... - Cold amalgan | Juno 6, 1834 | IL. |
| 10, 56.5 | Colver, Lewis WV. Seed planters. | Febo. 28,1854 |  |
| 11, $6 ¢ 5$ | Colver, Nathaniel. Boots and shoe | Sept. 12, 18.j4 | XVI. |
| 10, 7.5 | Colwell, Stephen. Iron buildings | Apr: 11, 1854 |  |
| 11, 320 | Conard, Lewis IR. Slide-block valves for | July 18, 1854 | II. |
| 10,564 | Conger, John P. Salt kilns. | Feb $23,185{ }^{\text {a }}$ | IV. |
| 10,541 | Commelly, E. G. Curred | Feh. 21, 1834 | II |
| 10, 791 | Commer, G. M1. Water wheel | Apr. 18, 1851. | NI. |
| 11, 689 | Comiad, Charles J. Methol of sav | Sept. 19, 1654 | XIV. |
| 10, 443 | Constant, Silas. Rosin-oil lamps | Jan. 24, 1854: |  |
| 11, 050 | Same - . . . . Lamp-chimuey len | June 13, 1854 | V |
| 11, 474 | Same...... Rosin-oil lamps | Ang. 8, 1554 | V. |
| 10, 691 | Cook, A. J. Disclarge apparatus of harves | Mar. 2S, 1854 |  |
| 10,358 | Cook, Alfred C. Machine for sawing bevel surface | Jan. 3, 1834 | XIV. |
| 10,591 | Cook, Caleb. Arrangement of valve motion for locomotive engines | Mar. 7, 1854 |  |
| 10, $5 \geq 0$ | Cook, Thomas, assignor to Starkic \& Livesay. Fire | Fob, 14, 1854 | XIX. |
| 10, 875 | Coon, Simeon. Scwing machines. | May 9, 1854 | III. |
| 10,781 | Coons, Matthias P. Ironfences | Aps. 18, 185.4 | II |
| 11, 012 | Same - . . . . . . . Tiret clann for w | June 6, 1854. | II |
| 11,517 | Samo ......... . Tailroad-car brak | Ang. 15, 1854 | I. |
| 11, 931 | Same .......... Multigrade ir | Nov. 14, 180. | II. |
| 10,595 | Cooper, George W. Cotton-seed planters | Mar: 7, 18.34 |  |
| 11, 210 | Copeland, A. S. Y. Mechanism for operating | July 4, 1554 | XIV |
| 11,719 | Copelaud, George. Clasps for loom harness | Sept. $26,1854$. |  |
| 10,773 | Corliss, Albert G. Swell-mute attachment | Apre 11, 1854; | XVIL |
| 11, 663 | Cornell, Jolu B. Mctallic slab shutters | Sopt. 12, 1834 | 1x. |
| 11,720 | Corwin, Joseph A. Knitting machines | Sept. 26, 1854 |  |
| 10,825 | Cottam, George H. Portabile folding-chair bedsteads | Apr: 25,1854 | $\mathrm{xvD}$ |
| 11, 0.50 | Coutaret, Dominique E. Manufacture of sulphuric | Truc 13, 1854 |  |
| 11, 203 | Cox, Thomas. Machine for bending fellocs. | Tuly 4,1854 | XIV. |
| 10,855 | Crabtree, John. Adjusting the packing of pistons for stean enginos | May 2,1854 |  |
| 11, 887 | Crair, Robert S. Traps for animals | Nov. 7, 1854 | $\underset{\mathrm{VICl}}{\mathrm{X}}$ |
| 11, 66.4 | Craig, Willian. Oscillating engines | Sept. 12, 1854 |  |
| 11,989 | Cram, Jolm. Towel stand or clothes horso | Nov. 28, 1854 | XVIt |
| 11, 9332 | Crandall, Horace J. Mode of adjusting the keel blocks of dry, sectional, or railway docks | Nor., 14, 1854 | IX. |
| 12,020 | Same.......... Arrangement for reefing topsails | Dec. 5, 185.4 | VII. |
| 12,093 | Samo........... - Bilge supporters for holding vessel | Dec. 19, 1854 | LX: |
|  | 2 P |  |  |

List of persons whose patents for inventions and discoverics have expired, \&o.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10, 360 | Crandall, Isaac. Running gear of wago | 3, 1854 | $X .$ |
| 11,518 | Crane, Aaron D. Machines for turning irreg | g. 15, 1854 |  |
| 11, 990 | Crawford, A. B. Clover | Nov. 28, 1854 |  |
| 11, 117 | Crawford, Benjamin. High-prcssure steam Cresson Chas. M. Form of cras retorts | $\begin{aligned} & \text { June } 20,1854 \\ & \text { Oct. } \quad 3,1854 \end{aligned}$ | IV. |
| 11, 742 | Cresson, Chas. M. Form of gas retorts. | $\begin{aligned} & \text { Oct. } 3,1854 \\ & \text { Dec. } 12,1854 \end{aligned}$ | Vi. |
| $\begin{aligned} & 12,052, \\ & 11,956 \end{aligned}$ | Cridge, Matthew, and Samuel Wordsworth. Oscillating steam engines | Nov. 14, 1854 | III. |
|  | Crompton, William, assignor to Furbush \& Crompton. Power looms. (Patent extonded and re-issued Scpt. 13, 1853; disclaimer entcred Feb. 1, 1854.) | Nov. 25, 1837 | Discl'r. |
| 10,50 | Crook, John J. Tin foils or sheots ......................................... | Feb. 7, 1854 |  |
| 11, 265 | Crosby, Harvey \& S. E. Mode of arranging arch boards for cistern arches | July 11, 1854 | IX. |
| 10, 878 | Crosby, lleman, jr. Sowing machines. | May 9, 1854 |  |
| 10,633 | Cross, Joshua. Faucets for measuring liq | Mar. 14, 1854 | XI. |
| 11, 153 | Cross, S. Oscar. Grape frame | Juno 27, 1854 |  |
| 11, 038 | Crosslcy, Thomas. Weaving cut-pile fabrics | Juno 6, 1854 July 18, 1854 | $\frac{I I I}{X V I I I .}$ |
| 11, 118 | Same-. . . . . . - Machine for printing wool and o | July 18, 1854 |  |
| $\begin{aligned} & 11,321 \\ & 11.564 \end{aligned}$ | Same................cthod of making printing block Same........... Manufacturing two-ply carpets | $\begin{aligned} & \text { July } 18,1854 \\ & \text { Aug. } 22,1854 \end{aligned}$ |  |
| 11, 634 | Crowell, Jamos E., assignor to J. E. Crowell, E. Smith, and C. T. Stickney. Machino for dressing ship timber.. | Ang. 29, 1854 | XIV. |
| 12, 021 | Crowell, Joseph D. Stcering apparatus. | Dcc. 5, 1854 |  |
| 11, 211 | Crozicr, Arclibald II. Machino for creasi | July 4, 1854 | XIV. |
| 11, 247 | Crozier, C. W. Camplor wash mixture | Dec. 12, 1854 |  |
| 12, 053 | Cumberland, William TV. Machines for bo | Dec. 12, 1854 |  |
| 10, 403 | Cummings, D. M. Machincry for mortising frames and window blinds. | $\begin{aligned} & \text { Jan. 10, } 1854 \\ & \text { Aug. 15, } 1854 \end{aligned}$ |  |
| 11, 319 |  | Jan. 24, 1854 | XVII. |
| $\begin{array}{r} 10,444 \\ \mathbf{1 0} 0,959 \end{array}$ | Cunningham, W illiam. Will ashing mac........ | May 23, 1854 | XI |
| 11, 212 | Currier, 'Thomas W. Bedsteads, cribs | July 4, 1854 | X |
| 11, 411 | Cushman, E., and J. R. Drying thick | Aug. 1, 1854 |  |
| 10,476 | Catler, T. O. Quartz crushers | Jan. 31, 1854 | II. |
| 12, 054 | Samo ....For crushing and grinding mineral and other substances. (Patonted in England January 23, 1854) | Dcc. 12, 1854 | II. |
| 11, 213 | Cutting, Jamos A. Tho preparation of collodion for photographic pictures | July 4,1854 | XVIII. |
| .11, 267 | Same........... Photographic pictures on glass | July 11, 1854 |  |
| 11, 475 | Catting, Lewis. Stop motion for specders | Aug. 8, 1854 |  |
| 10, 924 | Daboll, Charles M., assignor to C. M. and A. P. Daboll. Catch for holding tho bit in brace stocks. | May 16, 1854 |  |
| 11, 778 | Dale, John D. Planing machines | Oct. 10, 1854 |  |
| :1,193 | Dalson, A. F. Milk and other e | June 27, 1854 |  |
| 11, 721 | Damo, John. Parrel and bows. | Scpt. 26, 18.54 | VI |
| 10, 833 | Damorel, William. Extension b | May 9, 1854 |  |
| 10, 926 | Dana, Chas. H. Potato digs | May 16, 1854 |  |
| 11,361 | Same...... . Cultivator | July 25,1854 |  |
| 11, 641 | Same ${ }^{\text {S }}$ (..... Soed plantors ........... | Scpt. 5, 1854 May 23, 1854 |  |
| $\begin{aligned} & 10,961 \\ & 11,888 \end{aligned}$ | Danforth, Loring. Machines for making boo Daniels, Reuben. Improved joint in wator w | $\begin{aligned} & \text { May } 23,1854 \\ & \text { Nov. } 7,1854 \end{aligned}$ | $\begin{aligned} & \text { XVIII. } \\ & \text { XI. } \end{aligned}$ |
| 10, 649 | Danicis, Westel S. Obstetrical supporters. | Mar. 14, 1854 | XX. |
| 11, 521 | Darling, Cook. Mode of scouring hubs to a | Aug. 15, 1854 |  |
| 10, 402 | Darling, Danicl S. Proventing dust from entering | Jan. 10, 1854 | V |
| 11,246 | Darling, Martin X. I. Motion of slide-valvo steam engmes | July 11, 1854 | VI. |
| 12,045 | Darracott, Framklin, assignor to Goo. Darracott. Dry | Dec. 5, 1854 | IV. |
| 11, 462 | Daser, Louis. Sced planters | Sept. 5, 1854 |  |
| 10,679 | Daugherty, Thomas. Shoolasts | Mar. 21, 1854 | XVI. |
| 11, 453 | Same . . . . . . . . . Lasting in | Aug. 1, 1854 | XVI. |
| 11,961 | David, Henry Farson. Saace | Nov. 21, 1854. | XVII. |
| 10,788 | Davis, Ari. Box machino | Apr. 13, 1854 | XIV. |
| 11, 415 | Samo... Magneto-electric ma | Aug. 1, 1854 | VII. |
| 10, 960 | Davis, Elias. Solf-rcting power pr | May 23, 1854 | XIT. |
| 10, 902 | Davis, Francis, assignor to J. M. Recd. | May 9, 1854 | XI |
| 11, 690 | Davis, John. Tclegraphic keys | Sept. 19, 1854 | VIII. |
| 11, 476 | Davis, Joseph H. Maunfacturing pigments from | Aug. 8, 1854 |  |
| 10,502 | Davis, Lewis S. Blocks for h | Feb. 7, 1854 | XV |
| 10,566 | Davis, Robert W. Chmons | Fob. 28, 1854 |  |
| 11, 032 | Daris, Waitman. Seed plantor | Juno 6, 1854 |  |
| 10, 470 | Daris, William O. Presses for | Jan. 31, 1854 | XII. |
| 10, 428 | Davison, F. Saliva pumps | Jan. 17, 1854 | XX. |
| 11, 889 | Davison, Fordinand. Stone-driling | Nov. 7, 1854 | X |
| 11, 119 | Day, Bcujamin F. Steam engin | June 20, 1854. |  |
| 11, 580 | Day, B. Franklin. Hand press | Aug. 15, 1854 | XVIII |
| 11, 022 | Day, Edward P. Machine to print sulscribers' names, \&c., on nowspapers. | June 6, 1854 | XVII. |
| 11, 477 | Day, Joseplh C. Fire-arn | Ang. 8, 1854 | NIX. |
| 10,884 | Deam, Heman H. Folloc | May 0,1854 | XIV. |
| 12, 190 | De Bergue, Charles. Propeller | Apir. 6, 1854 | VII. |
| 10, 920 | Doderick, Levi. Hay and cotton pres | May 16, 1854 | XII. |
| 11,014 | Deegan, Ross. Machino for cleaning and watering strcets | Juno 6, 1854 | XXI. |
| 11,740 | Deering, Richard, sr. Circular stone | Oct. 3, 1854 | XV. |

List of persons whose patents for inventions and discoverics have cxpired, fe.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10, 471 | Denney, Samucl L. Divided railroad axles | Jan. 31, 1854 | X. |
| 11, 214 | Dennis, Dexter. Finishing palm-leaf hats | July 4, 1854 | II |
| 10, 445 | Dennis, John H. Beeh | Jan. 24, 1854 |  |
| 11,522 | Dennison, Aaron L. Punches and dics for punching watch hands | Aug. 15, 1854 | VII |
| 11, 416 | Deputy, H. C. Draughting and modeling vesscls ................. | Aug. 1, 1854 <br> Jan. | VII. |
| $\begin{aligned} & 10,381 \\ & 10,503 \end{aligned}$ | Desbcaux, Claudc. Apparatus for turning leaves of books Deschamps, F. O. Omnibus recisters | $\begin{aligned} & \text { Jan. } 3,1854 \\ & \text { Feb. 7, } 1854 \end{aligned}$ | $\begin{aligned} & \mathrm{XV} \\ & \mathrm{x} . \end{aligned}$ |
| 11, 362 | Deuble, George. Striking-part of ste | July 25, 1854 | VII |
| 11, 745 | Devlan, Patrick S. Brick machin | Oct. 3, 1854 | IV |
| 11,827 | Same . . . . . . . . Chairs for | Oct. 24, 1854 |  |
| 10,794 | De Saxe, Charles, assignor to Thomas H. Bate. Fishing rods and floats. | Apr. 18, 1854 | XX |
| 19, 795 | Samo...... Landing net for anglers | Apr. 18, 1854 | XVI. |
| 11,598 | Dickey, Julius C. Fastening skirts to sad | Aug. 29, 1854 | IVI. |
| 11, 363 | Dickinson, Charles W. Finishing-dics in machines for making rings from sheet metal | July 25,1854 | I. |
| 10,487 | Dickinson, Isaac L. Chums | Jan. 31, 1854 |  |
| 11, 665 | Dickson, Perry. Mill-stonc | Scpt. 12, 1854 | XII |
| 10,362 | Dillehay, William S. Straw cutters | Jan. 3, 1854 |  |
| 10,364 | Dimpfel, F. P. Stcam-hoilcr furnaces | Jan. 3, 1854 | V |
| 10,786 | Dixwell, Basil, and J. A. Dorr. Gas r | Apr. 18, 1854 |  |
| 11, 061 | Dodge, Nathaniel. Construction of tanning ap | June 13, 1854 | XVI. |
| 11, 154 | Dorlge, Thomas H. Gas and liquid regulators | Jıne 27, 1854 |  |
| 10,363 | Donlery, John. Nethod of forming plates for polychromatic printing. | Jan. 3, 1854 | X |
| 11,048 | Donovan, D., administrator of W. G. Hallman and D. Donovan, assign ors to Henry White. Cooking range .......................................... | June 6, 1854 |  |
| 11, 722 | Drayton, John. Bedstead fastenings. | Scpt. 26, 1854 | XVII. |
| 11, 239 | Drayton, Thomas, assignor to Geo. W. McCready, jr. Purifyin | July 4, 1854 |  |
| 10,446 | Driggs, Spencer B. Attachment to pia | Jan. 24, 1854 |  |
| 11, 021 | Dudlcy, Samuel H. Road scrapers | June 6, 1854 |  |
| 11,599 | Dudrey, J. B. Stave machine | Aug. 29, 1854 | XIV. |
| 11, 600 | Same.......... sam | Aug. 29, 1854 | XIV. |
| 11, 8:8 | Dalaney, Gcorge L. Mill bus | Oct. 24, 1854 | XI |
| 11, 779 | Dunham, Edwin Gr. Rock drill. | Oct. 10, 1854 | XV. |
| 10,733 | Eakins, Beujamin. Valve cock | Apr. 4, 1554 | X |
| 11,548 | Earle, Absalom B. Straw cutt | Aug. 22, 1854 |  |
| 11, $8: 9$ | Same.......... Seed planters | Oct. 24, 185.1 |  |
| 11, 420 | Earle, John E. Compasses and cali | Aug. 1, 1854 | VIII. |
| 11,643 | Eastman, Augustus Mr. Making ribbon of strip | Sept. 5, 1854 |  |
| 10, 567 | Eaton, A. K. Machines for pulverizing | Feb. 28, 1854 | II |
| 10, 734 | Samc ....Amalgamating gold and sily | A pr. 4, 1854 | II. |
| 10, 925 | Eaton, Ward. Machines for cutting glaziers' | May 16, 1854 | II. |
| 11, 194 | Eberhardt, Jonas. Preparation of arc | Junc 27, 1854 |  |
| 11, 780 | Eckert, Augustus. Magnctic alarm | Oct. 10, 1854 | X |
| 11, 691 | Eddy, Menry. Bcehives | Sept. 19, 1854 | I. |
| 10, 941 | Edmondson, Joseph, and C. Haworth, exectors of T. Edmondson, deceased. Case for holding railway and other tickets. | May 16, 1854 |  |
| 10, 947 | Same..... Machinc for printing railway and other tickets | May 23, 1854 | X |
| 10, 746 | Edson, Jacob. Pumps | Apr. 4, 1854 |  |
| 10,855 | Sane | May 9, 1854 |  |
| 11, 417 | Efferemn, John J. Machine for sawin | Aug. 1, 1854 | XIV |
| 11, 215 | Eiseubrandt, C. H. Valve for wind musical | July 4, 1854 | XV |
| 10, 774 | Elgar, John. Door hing | A pii. 11, 1854 |  |
| 11, 991 | Eliaers, Augustus. Seats for public buidin | Nov. 28,1854 | TX. |
| 11,806 | Elliott, Joseph D. Water meter | Oct. -7, 1854 | XI. |
| 11, 692 | Elliott, William G. | Sept. 19, 1854 |  |
| 11, 156 | Ellis, J. A. H., and Alexander Gordon. Reversible ca | June 27, 1854 | VII. |
| 11, 323 | Same...... Mode of operating excavating macl | July 18, 1854 | TX. |
| 11, 549 | Ellis, Willian Mr. Arrangement of the steam en | Aug. 22, 1854 | VI. |
| 10, 812 | Ells, Josiah. Revolving fire-arms | A 1 11. 25, 1854 | XIX. |
| 11, 419 | Same.....Revolving-breech fire-ar | Aug. 1, 1854 | X1/ |
| 10, 692 | Ellsworth, H. G. Belt clasps for machinery | Mar. 28,1854 | XII |
| 11, 046 | Ely, H., assignor to S. P. Ely. Drying floui | June 6, 1854 | V. |
| 10, 775 | Emcrson, R. H. Ear | Apr. 11, 1854 |  |
| 12, 197 | Emery, William 13. Mode of arranging and driving | Nov. 13, 1854 | XTV* |
| 11, 418 | Emmons, Phineas. Machines for molding crackers | Aug. 1, 1854 | XVII. |
| 10, 389 | Englebrecht, Theodore F. Double-acting spring hing | Jan. 3, 1854 |  |
| 11, 023 | English, Francis M. Whiffletrees | Jtue 6, 1854 | X |
| 10, 881 | Enoch, George T., and Danicl Wissinger. | May 16, 1854 |  |
| 11,325 | Enos, Roswell. Tanning | July 18, 1854 | XVI |
| 11, 324 | Erdle, Jacob. Windmill | July 18, 1854 | XI. |
| 10, 634 | Espcnchade, Fredcrick. Tapering nozzles to the exhaust pipes of locomotives | Mar. 14, 1854 | VI. |
| 11,-155 | Esterly, George. Grass harvesters. | Junc 27, 1854 |  |
| 11, 436 | Evcrett, Eliza A., and S. T. Thomas, administrators of Edward Everett, deceased. Warping and dressing yarns | Aug. 1, 1854 | III. |
| 11, 962 | Everitt, Chas. G. Machine for closing sheet-metal boxcs. | Nov. 21, 1854 |  |
| 11,601 | Ewing, O. G. Plows. | Aug. 29, 1854 |  |
| 11, 062 | Faas, Anthony. Accordco | June 13, 1854 | XVIT. |
| 10, 650 | Fagin, Lewis. Smut machines | Mar. 14, 1854 | $\begin{aligned} & \text { XIII. } \\ & \text { XVHI } \end{aligned}$ |
| $\begin{aligned} & 10,796 \\ & 10,984 \end{aligned}$ | Fairchild, J. H., and Sylvanus Richardson. Potato-washing machinc | Apr. 18,1854 May 30, 1854 | $\frac{\mathrm{XDII}}{}$ |
| 11, 603 | Fanning, Richard. Method | Aug. 29, 1854 | XIV |

## List of persons whose patents for inventions and discoveries have expired, $\oint \cdot 0$.-Continued.

| No. | Namo and invontion. | Dato. | Class. |
| :---: | :---: | :---: | :---: |
| 10,735 | Farley, Honry W. Railt | Apr. 4,1854 | IX. |
| 10,857 | Same.... Means for adjusting the valves of locomotive on | May 2,1854 | V1. |
| 10, 886 | Farr, Chas. K. Cultivators.................... | May 9, 18.54 | I. |
| 11, 454 | Same-........sa | Aug. 1, 1854 | I. |
| 11, 602 | Fawkes, Joseph W. Manure and lim | Aug. 20, 1854 |  |
| 10,472 | Fry, Cyrus J. Cotton presses... | Jan. 31, 1854 | XII. |
| 14, 120 | Fay, Samuel. Weaving doubl | June 20, 1854 | III. |
| 11,992 | Felter, Fleteher. Feathering paddlo | Nov. 28, 1854 | VII. |
| 10,817 | Field, Frederiek. Traveling bridges | Apr. 25, 1854 | IX. |
| 10, 624 | Field, George B. Rotary enltivators | Mar. 14, 1854 |  |
| 10,789 | Ficld, Samuel J. Apparatus for painting w | Apr. 18, 1854 | XVIII |
| 10,404 | Fillmore, Charles W. Clamps for holding steel plates whilo being hardened | Jan. 10, 1854 |  |
| 11,216 | Finklo, William. Mill-stono dress. .................... | July 4, 1854 |  |
| 10,607 | Fisher, Luther B. Seed plan | Mar. 7, 1854 |  |
| 10,694 | Same .............-samo - .-. | $\text { Mar. 28, } 1854$ |  |
| 11, 365 | Fishwick, James and Johll. Mode of driving | July 25, 1854 <br> Aug. 8, 1854 | $\begin{aligned} & \text { XIV. } \\ & \text { XIV. } \end{aligned}$ |
| $\begin{aligned} & 11,478 \\ & 11,313 \end{aligned}$ | Fisk, George C. Dovice for grooving looards Fiske, Orin W. Machinery for making past | $\begin{aligned} & \text { Aug. 8, } 1854 \\ & \text { July 11, } 1854 \end{aligned}$ | $\begin{aligned} & \text { XIV. } \\ & \text { XVII } \end{aligned}$ |
| 10,695 | Fitts, Benaiah. Feed-water apparatus for steam | Mar. 28, 1854 | VI. |
| 12,094 | Fitzgerald, Daniel, Thomas Rogers, and William C. Walkor. Guards for ferry boats. | Dee. 19, 1854 | Vi |
| 10,693 | Fitzhugh, Benjamin G. Harvesters of grain. | Mar. 28, 1854 |  |
| 10,801 | Flanders, David and samuel K. Fly trap | Apr. 18, 1854 | XXII. |
| 10, 736 | Flanders, Phanuel. Cranberry winno | Apr. 4, 1854 |  |
| 11, 013 | Flanders, W. A. Moth killer | June 6, 1854 |  |
| 11, 366 | Folsom, Charles. Roading tables | July 25, 1854 | XVII. |
| 10,668 | Fondo, Charles II., and Thomas B. I | Mar. 21, 1854 |  |
| 11, 268 | Foote, Gearge F. Ventilating railr | July 18, 1854 |  |
| 11, 605 | Forbes, J. T. Bedsteads for invalids | Aug. 29, 1854 | X |
| 11, 217 | Forbes, Robert 13. Lightning rods for | July 4, 1854 | VI |
| 11, 830 | Ford, Elbenezer. Granaries. | Oet. 24,1854 |  |
| 10,782 | Forsytho, Thomas P. Maehines for winding and | Apr. 18, 1854 | III. |
| 10,554 | Foster, James, jr., assignor to Platt Evens, jr. Seal | Feb. 21, 1854 | XII. |
| 10,542 | Foster, John T. Stone-pieking maehines. | Feb. 21, 1854 |  |
| 11, 859 | Foster, Junins. Burglars' alarm | Oct. 31, 1854 | XXII. |
| 11, 644 | Foster, William I. Arrangement of topsails from the deck of the vessel. | Sept. 5,18.54 |  |
| 11,781 | Fowler, Thaddens. Sewing | Oet. 10, 1854 |  |
| 10, 888 | Fox, Charles R. Journal box for saw-mi | May 9, 1854 | XIV |
| 11, 479 | Frary, Orange N. Melodeons | Aug. 8,1854 | XVIII |
| 11, 963 | Freelind, James. Valve gear for locomo | Nov. 21, 1854 |  |
| 11, 245 | Freneh, Elisha. Coal sifter | July 11, 1854 |  |
| 12, 050 | French, G. W., and William Wagstaff. Method of destro | Dee. 12, 1854 | XXII. |
| 11, 218 | Frey, Joseph, and D. B. Burnham. Sulmarine battery | July 4, 1854 | IX. |
| 10,905 | Frisbee, Hiram. Lath machine | May 16, 1854 |  |
| 11, 270 | Fry, Robert T. The enustruetion of | July 4, 1854 | XVIII |
| 11,693 | Fralghum, Benjamin. Sawing machine | Sept. 19, 1854 | XIV. |
| 11, $27 \%$ | Fullerton, William H. Haekling eorn hu | July 11, 1854 |  |
| 11, 480 | Fulton, John G. Salt-paeking maehines | Aug. 8, 1854 | X |
| 12, 695 | Gage, John S. Clover harvesters | Dee. 19, 1854 |  |
| 11,372 | Gaines, E. P. Mill-stone dress. | July 25, 1854 | XI |
| 11,307 | Gale, Alanson. Mowing machine | July 25,1854 |  |
| 11,993 | Gallagher, C. B. Couverting leeiproeating into rotar | Nov. 28, 1854 | II. |
| 10,858 | Gallagher, John. Cutter for metallie lars and | May 2, 1854 |  |
| 11, 287 | Gallahue, A. C. Machines for pegging boots and shoe | July 11, 1854 | XVI. |
| 12, 469 | Gambrill, H. N., and S. F. Burgee. Carding machines | Aug. 22, 1854 | III. |
| 13,389 | Gamewell, John N. Apparatus for discharging atmospherie electrieity from telegraph wires. | Sept. 1, 1854 | VIII. |
| 10,865 | Gardiner, Heman. Quartz erush | July 4, 1854 |  |
| 11, 219 | Same - . . . . . . . . . . . sa? | Mar. 21, 1854 | II. |
| 11, 368 | Gardiner, Sammel, jr. Maehinery for crushing and pulverizing ores, \&c. | July 25, 1854 | II. |
| 10, 669 | Garlington, J. L. Grain thresh | Mar. 21, 18.54 | 左. |
| 10, 608 | Gaston, J. C. Seed planters | Mar. 7, 1854 | I. |
| 12,057 | Gates, Moses. Hoes | Dee. 12, 1854 |  |
| 11, 606 | Gates, Nelson. Cast | Ang. 20, 1854 | II. |
| 10,737 | Gates, William, jr., and H. J. Harwood. Mashines for making frietion matehes. | Apr. 4, 185.4 | IV. |
| 11, 860 | Gates, William, jr. Machine for | Oet. 31, 1854 | IV. |
| 11,666 | Gatley, Joseph. Piston or valvo for rotary pumps | Sept. 12, 1854 | X |
| 11, 481 | Gemmil, Johas. Radiators.............. | Ang. 8, 1854 | V |
| 11,269 | Gengombre, H. P. Cement of boiled zoal tar and earth | Jnly 11, 1854 |  |
| 11,293 | Genung, Robert V. Lifting jacks .-................... | July 11, 1854 | XIT. |
| 11, 203 | Gesucr, Abralham, assignor to the Asphalt Mining and Keroseno Gas Company. Kerosene burning Tuids, 1 | June 27, 1854 | IV. |
| 11, 204 | Same...... Kerosene burni 3 g flui | June 27, 1854 | IV. |
| 21, 275 | Same..... Kerosene bur-ing finids, B | June 27, 1854 | IV. |
| 11,369 | Gibson, Abram J. Vehieles. | July 25, 1854 | X. |
| 11,424 | Same...... Mode of atie | Ang. 1, 1854 | X. |
| 11, 425 | Same...... Modo of autaching | Ang. 1, 1854 | X. |

List of persons whose patents for inventions and discoreries have expired, \&o.-Continued.

| No. | Name aud invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,668 | Gi | Sept. 12, 1854 | X. |
| 10, 390 | Gilbert, Banford. Corn | Jatr | V1. |
| 11, 739 | Gitehell, D. W., assignor to Joln C. Wagstaff. Uniting bats for making seamless felt garments | Sept. 26, 1854 |  |
| 10, 543 | Gladiug, William P. Cai | Fel. 21, 1854 | VII. |
| 10, 816 | Glass, George W. Cast-ir | Apr. 25,18 |  |
| 11,121 | Gleason, F. A. Construeti | Jume 20,18 | X VIII |
| 11,221 | Gleason, Joel. Millk strainer | July ${ }^{4}, 188$ |  |
| 11,607 | Gleason, John. Slice ral ves for stca | Aug. ${ }^{\text {Fel }}$ 21, 1854 |  |
| 11, 12.515 | Gledhill John. Treating hair for |  |  |
| 10,859 | Goddard, Curtis. Jachine for makiug | May ${ }^{\text {An }}$, 1854 | XI |
| 10,405 | Goftin, F. C., assignor to A. B. Ely. Attaching eross-bar fastenings to vault and safe doors. | Jan. 10,1854 |  |
| 10,660 | Samo.....Safe |  | 11. |
| 11, 190 | Saime..... Powder chamrel to doo | Juno 27, | II. |
| 10, 517 | Same......Fire aud burglar-proor safe | Fclb. 14, 181 |  |
| 11, 423 | Gold, 13. F. Latling buildin | Aug. 1, 1854 |  |
| 12, 058 | Good, Jolun. Coftin | Dec. 12, 1854 | XX |
| 10,536 | Goodman, Allen, and Lyman Whceler. Machine for seraping and toothing veneer | Feb. 14, 18.54 |  |
|  | Goodwin, Lorenzo D. Water wh | Apr. 4, 1854 |  |
|  | Goodyear, Charles. Treating vulcanizablo gu | Apr. 4, 1554 |  |
| 11, 694 | Goolnan, William P., and Samuel Morris. Portable st | Sept. 19,1854 |  |
| 11, 064 | Gordon, George P. Printing | June 13, 1854 | XVM1 |
| 11, 183 | Gore, Ezem, Benjemin F . . Wailroad-eha | Oet. 10,1854 |  |
| 11, 78 | Gossin, Louisa A. Constrinction of sugar-making | Oet. 10, 1854 |  |
| 15, | Goulding, John. Ja | Nov. 22, |  |
|  | Grader, George W., and Benjamin | Dee. 19, | XIII. |
| 10, 044 | Gralha, Edinund II., assignor to E. Graham and Artemus Wheoler. |  |  |
| 11, 224 | Grahan, Wm. | Sept. 26, 1854 |  |
| 11, 770 | Grant, John E., assighor to Cyrus Carpenter and A. D. Shaw. Mot-air furuaces. |  |  |
| 11, 455 | Grant, Robert. Hydraulic press......................................... |  | xI. |
|  | Brakes for | Oet. 10, 18 | IX. |
| 11, 587 | Graves, Benjamin F., assignor to Win. C. Knowlton. Tool for boring reeesses for casters, \&e. | Aug. 22, 1854 |  |
| 12, 022 | Gray, Joslua. Rotary pum |  |  |
| 10,571 | Gray, Mieluael M. Railroad-ehai |  |  |
| 11,063 | Green, Edwin J. Joint-botied | June 13, 1854 |  |
| 11, 890 | Green, Jacol. Glass furnae | Nov. 7,1854 |  |
| 11,297 | Green, Joel. Apparatus for sealing | July 11, 1854 | XXII |
| 10, 657 | Grecue, Henry. Grain and grass Garvesters. (Antedated September 21, 1853) |  |  |
| 10, 391 | Greene, J. Dureil. Breecli-1oading | Jant. 3, 1854 |  |
| 11, 157 | Same.................same. (Patented in Eugland May 12, 1854) | June 27, 1854 |  |
| 11, 964 | Greene, Samuel. Cleaning cards of earding engin | Nov. 21,1854 |  |
| 10, 916 | Greenlear, A. Water wheel | May 16, 1854 |  |
|  | Greenonoll Jolun J Jact water | Jny 11, 1854 |  |
| 11, 220 | Greenongh, Joun de Machines | Jnly ${ }^{\text {Jnly }}$ 4, 1854 |  |
| 10, 98 | Gregg, Clarles. Vises or chu | May 30, 1854 | II |
| 11, | Greer, Isaac. Brick presses | Aug. 1, 1854 |  |
| 11, 784 | Griffith, John W. Coustruetion of ship | Oet. 10, 1854 | V1 |
| 10,516 | Griffiths, John. Valve eock | Fel. 14, 1854 |  |
| 12,112 | Griffiths \& Shields, assignors to Robert Griffiths. Machino for forging horseshoes. |  |  |
| 10,435 | Griswold, Geo. WV. Amputating apparatus | Jan. 17, 1854 |  |
| 11, 122 | Tool | 20, 1854 |  |
| 11, 326 | Proeess | July 18, 1854 | IT |
| 11, 371 | Samo .......... Grates ............... | 25, 1 |  |
| 11,646 | Sano -....... Portable do | t. 5, 1854 |  |
| 11, 2 | Guild, Charles 11. Gas-leating | 11, 1854 |  |
| 11. | Gullett, Beaj. D. Cotto | 10, 885 |  |
| 12, 0 | Hadley, Stephen, jr. Direet-act | Dee. 19,1854 | XI |
| 12, 059 | Hagar, E. L. Harrows | Dee. 12, 1854 |  |
| 11,2 | Hague, John R. Maeline for pune | July 4,1854 |  |
| 10, | ight, Danicl, jr | 4, 1854 |  |
| 10, | Hall, Abijah, and S | Feb. 23,1837 |  |
| 10, 4 | liall, Alesauder. P |  | - |
| 10,7 | Same | Apr. 1111854 |  |
| 11, |  | Sept. 20,1 |  |
| ${ }_{11}^{11,5}$ | Hall, | Jebly ${ }^{\text {d }}$ |  |
|  | Hall, John S. P | Feb, |  |
| 10, 5 | Same......same | Aug. 1, 1854 |  |

List of persons whose patents for inventions and discoveries have expired, \&.c.-Continued.

| No. | N,ame and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,158 | Hall, Widliam. Bank lo | June 27, 1854 | II. |
| 10,802 | Hallonbeek, Martin | Apr. 18, 1854 |  |
| 11, 725 | Halsoy, Moses E. Chair frames | Scpt. 26, 1854 | $\frac{X V U}{X V I}$ |
| 10,407 | Halvorson, Halvor. Machines for pegging boots and shoes ............. |  |  |
| 11, 435 | Halvorson, H., assignor to H. Ralvorson and II. Barues. Mechanism for measuing eloth on looms. | Aug. 1,1854 | III. |
| 10,849 | Halvorson, Halvor, assignor to H. Halvorson and J. T. Heard. Processes for distilling rosin oil | May 2, 1854 | IV |
| 10,850 | Samo...... Distilling apparatu | May 2,1854 | IV |
| 10,365 | Hamilton, James. Quartz-cr | Jan. 3, 1854 | II. |
| 12,023 | Hammitt, John T. luailroad-ear soa | Dee. 5, 1854 | X. |
| 10, 918 | Hammon, Heman B. Ox yolkes | May 16, 1854 | , |
| 16,544 | Hanson, James. Gas-gencrating apparat | Mar. 21, 1854 | IV |
| 11, 727 | Hardman, Thomas, and Albert Voso. Wl | Sept. 26, 1854 | $\frac{\mathrm{X}}{\mathrm{II} .}$ |
| 11,374 | Harig, A. C., and D. C. Stoy. Bank locks......... <br> Harloy J. I and Samuel Maxwell. Ventilating s | July 25, 1854 <br> Sept. 12, 1854 | $\frac{\mathrm{II} .}{\mathrm{V} .}$ |
| $\begin{aligned} & 11,669 \\ & 10,986 \end{aligned}$ | Harloy, J. L., and Samuel Maxwell. Ventilating ship timbers. <br> Harraday, John. Machine for eutting out cloth. (Patented in England January 20, 1854) | Sept. 12, 1854 May 30, 1854 | X. |
| 11, 123 | Harris, Cliarles S. Producing continuous cireular motion from xcciprocating reetilinear | June 20, 1854 | X |
| 11, 934 | Harris, Daniel, assiguor to John P. Bowker, jr. Sowing ma | Nov. 14, 1854 |  |
| 11, 065 | Harris, F. M. Tail boards of wat | June 13, 1854 | X. |
| 11, 863 | Harris, J., J. B. Scott, and G. Richmond. Maehinery for making rope and eordage | Oct. 31, 1854 | II |
| 11, 524 | Harris, Joseph, jr. Lamp | Aug. 15, 1854 |  |
| 11, 749 | Harris, Thomas J., jr. Fastening | Oct. 3,1854 |  |
| 10,763 | Harrison, James, jr. Sewving machines | Apr. 11, 1854 | II |
| 10,690 | Harrison, R. H., assignor to R. H. Harrison and J. J. Gallagher, jr. Churns | Mar. 28, 1854 |  |
| 11,24 | Hartson, George B. Making wrought-iron ear | July 11, 1854 | X. |
| 11, 584 | Harvey, H. A., and Edward P. Cowles, administrators of Thomas W. Harvey, assignors to the Harvoy Stecl and Iron Company. Furnaces for making wrought iron directly from the ore. | Aug. 22, 1854 | I. |
| 10,385 | Harvey, Thomas TV., assigncr to John B. Terry. Machino for sticking pins. | Jan. 3, 1854 | II |
| 10 | Harvie, A., and C. Guild. Vinons formonting in elose vessels | Apr. 25, 1854 | IV. |
| 10,635 | Haskins, E. S. Spring clasps for clothes | Mar. 14, 1854 | XVI |
| 10,636 | Hastings, Elbridge G. Machines for dres | Mar. 14, 1854 |  |
| 11, 314 | Hatchor, Jacob J. Pen and pencil case | July 11, 1834 | XVIII. |
| 11, 150 | Hateher, Wiliiam Z. Stop and waste co | Aug. 22, 1854 |  |
| 11, 726 | Hatfield, Aaron L. Machino for adding | Sept. 26, 1854 | VIIT. |
| 11, 427 | Hathaway, John M. Shot pouches | Aug. 1, 1854 | XIT |
| 11,748 | Hawes, I. L. Drying cloth | Oct. 3,1854 |  |
| 10,670 | Hawkes, Charles iv. Nipp | Mar. 21, 1854 | XV |
| 11, 893 | Hay, A. K. Glass furnaees | Nov. 7, 1854 |  |
| 11, 263 | Haydon, Hiram W. Ornam | July 11, 1854 | X |
| 10,506 | Hayden, J. B. Mctallie hub | Felo. 7, 1854 | X. |
| 10,962 | Hayos, John P. Hot-air f | May 23, 1854 |  |
| 10, 594 | Hoacock, Joel P. Apparatus for rounding | Mar. 7, 1854 | XIV. |
| 11, 375 | Heath, Mark A. Windows | July 25, 1854 |  |
| 10, 740 | Hedgos, Stephen. Tablo and chair combined..................... | Apr. Jan. 3, 1854 |  |
| 10,366 10,452 | Holton, Michael W. Mothod of hanging and operating saw gate Honch, Peter, W. S., and J. J. Mills for grinding sumae ......... | $\begin{aligned} & \text { Jan. } 3,1854 \\ & \text { Jan. } 24,1854 \end{aligned}$ | $\begin{aligned} & \text { XIV. } \\ & \text { XIII. } \end{aligned}$ |
| 11, 861 | Heneage, Robort. Tootl-elothing for pieker ey | Oct. 31, 1854 | III. |
| 11, 124 | Henry, John. Cast-iron ear trheols | June 20, 1854 |  |
| 10,572 | Henson, Thomas D., and George Rohr. Sced plan | Feb. 28, 1854 | 1. |
| 11, 831 | Herriet, Julias, assignor to John Gaylord Wills. Gutta-percha storootype composition | Oct. 24, 1854 | XVIII. |
| 11,551 | Heywood, Lovi, J. L. Ross, and James K. Otis. Portable | Aug. 22, 1854 | XV |
| 11, 994 | Hibluard, Elias A. Rotary cooking stove | Nov. 28, 1854 |  |
| 11,223 | Hiblard, William C. Regulating the | July 4, 1854 | V |
| 11, 935 | Hibbs, Jonathan. Plows | Nov. 14, 1854 |  |
| 11, 224 | Hidden, Enocl. Reading and writing stand | July 4,1854 | XVIII. |
| 10, 921 | Higgins, George E. Fastenings for ea | May 16, 1854 | XVIII. |
| 11, 894 | Higgins, Horace S. Barrol machinery | Not. 7, 1854 | , |
| 11, 159 | Hill, Daniol. Sced plantor | Juno 27, 1854 |  |
| 11, 807 | Hill, E. A. Sinoke-consuming sto | Oet. 17, 1854 |  |
| 11, 565 | Hill, Joseph. Daguerreotype-plate holder -.....-... | Aug. 22, 1854 | XVLI |
| 11, 147 | Hill, Luther, assignor to L. Hill and L. Stratton. Machino for cutting out boot soles | June 20, 1854 | XI |
| 11, 010 | Hill, William W. Arrangement of dampers in rotary | June 6, 1854 |  |
| 11, 647 | Hinde, John. Mrehines for breaking flax and homp | Sept. 5,1854 | III. |
| 10,384 | Hine, R. M., assignor to Silsly \& Hine. Shanks of hay and manure forks |  |  |
| 10,598 | Hinman, George C. Sash sustaii | Mar. 7,1854 | II. |
| 10,488 | Hitcheock, Daniel 'T. Diaphragm pumps .-...... | Jan. 17, 185 |  |
| 12,060 10,988 | Hoard, J. W. Anglers' combined flont Hobson, Carmi. Stave machine...... | Dee. 12, 1854 May 30, 1854 | XXIV. |
| 11,728 | Hochstrasser, Henry. Machine for paging books | Sept. 26, 1854 | XVIII. |
| 10,637 | Hock, A. Gilding or plating fibrous substances. (Patented in Franco Dec. 15, 1852). | Mar. 14, 1854 | XVIII. |

List of persons whose patents for inventions and discoveries have expired, $\xi \cdot$. .-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,609 | Hockman, Samuel M. Sced planters | Aug. 29, 1854 | I. |
| 10,860 | Hodgin, Robert. Straw cu | May 2, 1854 |  |
| 10, 622 | Hodgkins, Christopluer, assignor to N. Hunt. So | Mar. 7, 1854 | III. |
| 10, 879 | Same | May 9, 1854 | III. |
| 11, 936 | Hodgkinson, Georgo. Prging nachino | Nov. 14, 1854 | $\frac{X V}{X V}$ |
| 13, 116 | Hodgson, Thomas. Mamufacture of artificial stono | May 9, 1854 |  |
| 10,547 | Holbrook, Samuel F. Contrivances for protecting passengers in railroad cars | Fob. 21, 1854 |  |
| 11,995 | Hollen, Joscph. Knitting machincs. | Nov. 28, 1854 |  |
| 12, 470 | Hollingsworth, J., and R. S. Mershon. Fire-arıs ...... | Aug. 1, 1854 | XIX. |
| 12, 471 | Samo........ ........................... Repeatiug fire-arms | Aug. 1, 1854 | XLX. |
| 11, 403 | Holly, B., assignor to Silsby, Raco \& Holly. Mortising machino | July 25, 1854 | XIV. |
| 10, 392 | Holmes, James 13. Machines for nailing washboards. | Jan. 3,1854 | XIV. |
| 10,987 | Holmes, Silas A. Camcras for taking stereoscope or other daguerreotypes. | May 30, 1854 | XVIII. |
| 10, 804 | Hopkins, David A. Ticket box for railroad cars | Apr. 18, 1854 |  |
| 11, 428 | Same.......... Railroad-car couplin | Ang. 1, 1854 |  |
| 10, 910 | Hopkins, Israel M. Knitting machincs | May 10, 1854 | III. |
| 11,786 | Horsford, E. N. Compounds for neutralizi | Oct. 10, 1854 |  |
| 11, 808 | Horton, D. W. Shoemakers' edge planes | Oct. 17, 1854 | XVI. |
| 10,619 | Hotchkin, 1 shley. Hanging gate | Mar. 7, 1854 | IX. |
| 11, 160 | Hotchkiss, Julius. Manufacturing suspen | June 27, 1854 | XX |
| 11,802 | Howd, Samuel B., assignor to T. 'I. Davis, J. L. Leach, and I. F. Stovens. Apparatns for the mannfacture of salt. | Oct. 10, 1854 | IV |
| 12,098 | Howe, Isaac 13. Machincs for straightening heary metal bars. | Dcc. 19, 1854 |  |
| 11,862 | Howe, John C. Firc-arms | Oct. 31, 1854 | XIX |
| 11, 054 | Howe Tyler. Bed bottom | June 13, 1854 | XVII. |
| 10,534 | Howell, Joln W. Stuffing lorse collar: | Fel. 14, 1854 | XVI. |
| 11, 125 | Howes, Frederick. Extra yard to topsa | Jıno 20, 1854 | VII |
| 10, 938 | Howes, Peter S. Sclf-heating smoothing iron | May 16, 1854 | XVII. |
| 11, 648 | Hubbard, Moses G. Method of hanging plane | Sept. 5, 1854 | XIV. |
| 10,548 | Hughes, Amos P. Tool for dovetailing | Feb. 21, 1854 | XIV. |
| 10,923 | Hughes, Beruard. Trip hammers | May 16, 1854 |  |
| 10, 067 | Same . . . . . . . . Vises | June 13, 185. | II. |
| 11, 553 | Same ........ Actuating engincs by lisulphuret of carbon | Aug. 22, 1854 | VI. |
| 10,927 | Hults, James. Gun locks | May 16, 1854 | ILX. |
| 11,225 | Humphrey, Fenton. Spike | July 4, 18.54 |  |
| 11,066 | Hudley, Benjamin R. Bed bottoms | June 13, 1854 | XVII. |
| 11, 262 | Hunt, Samuel. Apparatus for deta | July 11, 1854 | XVI. |
| 11, 161 | Hunt, Walter. Sowing | Juno 27, 1854 | III |
| 11, 376 | Same ..... Shirt collar's | July 25, 1854 | X |
| 11, 126 | Huntington, Solomon F. Carriage | June 20, 1854 |  |
| 10, 803 | Hurd, Julius C. Cleaning cotfon and othe | Apr. 18, 1854 | III |
| 11, 610 | Hurst, Abraliam R. Mantre cxcarators | Aug. 29, 1854 |  |
| 10,590 | Hussey, Isaac. Machines for plas | Mar. 7, 1854 | IX |
| 11, 327 | Huston, Felix. Mode of raising vessels | July 18, 1854 | VII. |
| 10, 429 | Hyatt, E. C., and C. Mcyer. Maurafacture of boot and shoe soles of guttapereha or India-rulber | Jan. 17, 1854 | XVI. |
| 11, 695 | Hyatt, Thaddeus. Vault ligh | Scpt. 19, 1854 |  |
| 11, 426 | Hydo, Joseph. Washloards | Aug. 1, 1854 | XVIT. |
| 11, 552 | Hyde, J. Burrows. Apparatus fo | Ang. 22, 1854 | VIII. |
| 11, 226 | Ide, Samucl. Seed planter | July 4, 1854 |  |
| 11, 053 | Her, James, and TVilliam Fitzpatrick. Nail- | June 13, 1854 | II. |
| 11, 227 | Ingalls, Joshua K. Catch for vanlt covers. | July 4, 1854 | IX. |
| 10, 890 | Ingersoll, Platt C. Arrangement of pestle with the mortar | May 9, 1854 | X |
| 11,787 | Ingersoll, Simon. Pawl | Oct. 10, 1854 |  |
| 11, 788 | Jack, John. Saw gummer | Oct. 10, 1854 | XTV. |
| 12,061 | Jackman, Enoel. Sceuring earpets to | Dcc. 12, 1854 | XVI. |
| 11, 457 | Jackson, Abraham. Horse-power hoisti | Aug. 1, 18.54 | XII. |
| 11, 554 | Jackson, Georgo. Knitting machincs . | Ang. 22, 1854 | III. |
| 11, 377 | Jackson, Henry. Stcam boiler | July 25, 1854 | VI. |
| 10, 569 | Jackson, Timothy D. Dies for making seamless metal tubes | Fclu. 28, 1854 | II. |
| 10, 963 | Jackson, Amos. Apparatus for regulating the supply of feod water to steam boilers. | May 23, 1854 | VI. |
| 11,331 | Jaeger, William G. W. Manufacture of lamplack .......... | Juty 18, 1854 |  |
| 11, 195 | James, Henry B. Smut machines. | June 27, 1854 |  |
| 11, 864 | Jaruagin, Chosley. Seats for wagons ......---.... | Oct. 31, 1854 |  |
| 11, 954 | Jarosson, Lcon. Method of construeting printing bloc | Nov. 4, 1854 | XVII. |
| 11, 833 | Jenks, Barton H. Looms | Oct. 24, 1854 |  |
| 12, 062 | Jenkins, J., and J. R. Cooko. Inub londs for carriages | Dec. 12, 1854 |  |
| 11,920 10 40 | Jonkins, John, assignor to Roe, Horton \& Co. Cauriago lifting jaeks. Jonnings, James $H^{\text {a }}$, and Thomas Brierly. Machinery for fulline eloth | $\begin{aligned} & \text { Nov. } 7,1854 \\ & \text { Jan. } 24,1854 \end{aligned}$ | $\begin{aligned} & \text { XII. } \\ & \text { III. } \end{aligned}$ |
| 11, 789 | Jennings, Lyman., Cans for holding liquids.......................... | Oct. 10, 1854 | XVI. |
| 11,566 | Jinkins, Joseph C. Truing forks ........... | Aug. 22, 1854 | XVII. |
| - 10, 805 | Johnson, Abram C. Operating dumping ears | Apr. 18, 1854 | $\frac{\mathrm{x}}{\mathrm{III}}$ |
| 12, 063 | Johnson, Edward C. Fliers. | Dec. 12, 1854 |  |
| 10, 473 | Johnson, Eleazcr W. Saw mill | $\begin{aligned} & \text { Jan. } 31,1854 \\ & \text { Teb. } 28.1854 \end{aligned}$ | $\begin{aligned} & \text { XIV. } \\ & \text { XVIII. } \end{aligned}$ |
| 10, 575 | Johnson, Frank G. Tablo | Teb. 28, 18.54 | XVIII. |
| 11, 162 | Johnson, H. M. Rotary cultivator | June 27,1854 |  |
| 11, 182 | Johnson, Josio. Briek presses | Aug. 8, 1854 | $X V$ |
| 11, 029 | Johnson, William B. Seed pl | June 6, 1854 |  |

List of persons whose patents for inventions and discoveries have expired, $f c .-$ Continued.

| No. | Namo and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10.597 | Johnsou, Wm. II. Sc | Mar. 7, 1854 | III. |
| 10, 403 | Johnston, James J. Heaters for smoothing iro | Jan. 10, 1854 | XV |
| 11,044 | Johnston, James J., and J. V. Cunningham. Molding hollow | June 6, 1854 |  |
| 10,409 | Johnston, John. Self-heating smoothing irons | Jan. 10, 1854 | XVII. |
| 11, 833 | Johnston, Joseph. Bran duster. (Antedated April 24, 1854) | Oct. 24, 1854 | XIII. |
| 11,567 | Jones, Abner W. Means for preventing the explosion of boil | Aug. 22, 1854 |  |
| 10,826 | Jones, G. C., and P. King. Wedge m | Apri. 25, 1854 | XIV. |
| 10, 696 | Jones, Richard. Making zine white | Mar. 28, 1854 |  |
| 10,424 | Jones, Thomas L., assignor, through Horace Dressor and self, to James <br> B. Jones. Feathering paddle wheels | Jan. 10, 1854 | VII. |
| 11, 068 | Jones, William E. Saddle trees....................... | Juno 13, 1854 | XVI. |
| 11,525 | Judd, Albert II. Safety apparatus | Aug. 15, 1854 |  |
| 10, 806 | Keach, Lawson P. Cooking oysters, | Api. 18, 1854 | XVII. |
| 11,228 | Keck, Philip H. Washboards | July 4, 1854 | XVII. |
| 10, 420 | Kedzie, John. Filtars | Jan. 10, 1854 |  |
| 11, 069 | Keech, Jos., and Stephen Stillwell | Juno 13, 1854 |  |
| 11, 729 | Keeler, J. F. Platform scales | Sept. 26, 1854 | XII |
| 10, 807 | Koller, George W. Fire escap | Apr. 18, 1854 | XXII. |
| 11, 196 | Kelley, Alfred D. Heel cutters. (Antedated March 20, 1854) | June 27, 1854 | XVI. |
| 10, 671 | kells, Philip H. Harvesters | Mar. 21, 1854 |  |
| 11,649 | Keadall, A. Riving machino | Sopt. 5, 1854 | XVI. |
| 11, 965 | Kendall, Adoniram. Shingle mac | Nov. 21, 1854 | XIV |
| 11, 895 | Keudall, Thomas. Bottle stopper | Nor: 7, 1854 | XXII. |
| 11, 183 | Kemedy, D. W. Drying cloth | June 27, 1854 | $\checkmark$. |
| 11, 295 | Kenncdy, James C. Elevated ov | July 11, 1854 | $\checkmark$. |
| 10, 861 | Ketchum, A. C. Car trucks with adj | May 2, 1854 |  |
| 10, 697 | Ketchum, Seymour. Smint machines. | Mar. 28, 1854 | XIIT. |
| 11, 429 | Ketchum, Wm. F. Submerged paddle whee | Aug. 1, 1854 | VII. |
| 10,841 | Ketchum, Wm. F., assignor to K. L. Howard. Guard fingers of harvester's | Apr. 25, 1854 | I. |
| 12, 113 |  | Dee. 19, 1854 |  |
| 11, 996 | Kidd, Whitten E. Molds for pressing bommet fronts.... | Nov. 28, 1854 | XXI. |
| 11, 542 | Kidder, William, assignor to Wm. Kidder and N. Hunt. Machino for pegging boots and shoes. | Aug. 15, 185. |  |
| 10, 651 | Kimball, Alpheus. Securing window s | Mar. 14, 1854 |  |
| 11, 750 | Kimbel, John. Dumping car | Oct. 3, 1854 | X. |
| 10,596 | Kimble, Henry B. Sash faste | Mar. 7, 1854 | II |
| 11,966 | King, Jerome B. Kettles for calc | Nov. 21, 1854 | IV. |
| 11, 611 | King, John H., jr. Seed planters | Aug. 29, 185.4 |  |
| 12, 084 | Kittie, Samuel P. Railroad switches...... | Dee. 5, 1854 | LX. |
| 11,865 | Kitson, Michard. Machinery for picking cotton and other fibrous substances. | Oct. 31,1854 |  |
| 10,508 | Kneet, Renben. Daguerreotype-plato holder | Feb. 7, 1854 | XVII. |
| 11, 483 | Knight, Daniel. Fire-arms | Ang. 8, 1854 | XIX. |
| 10,518 | Knowles, Jonathan. Process of treating vegetable fibers. (Patented in France April 4, 185 $5^{\circ}$ ) | Feb. 14, 1854 | IV. |
| 11, 077 | Kownover, D. N., assignor to R.L.Kownover. Mode of closing wickets in eanal gates. | June 13, 1854 |  |
| 11,866 | Krider, John M. Tailors' measuring instr | Oct. 31, 1854 | XXI. |
| 11, 049 | Knupp, Alfrcd. Making ear and other wheel tires. | June 6, 1854 |  |
| 10,828 | Knhlersmedt, W., and W. Hauff. Apparatus for feeding paper to printing presses. |  |  |
| 10,845 | Lachemaier, Mathias. Deviee in constructing strap.iron | May 2, 1854 |  |
| 10, 317 | Lackey, Leander. Machines for pegging boots and | May 16, 1854 |  |
| 10. 250 | Lafetra, Tyler W. Machine for drying tob | Apr. 4, 1854 | XXII. |
| 11,229 | Laird, Joseph F. Ore-stamping machin | July 4, 1854 |  |
| 11,612 | Landman, C. R. Lamp tillers. | Aug. 29, 1854 | $\nabla$. |
| 11, 730 | Same....... Safety lamp | Sept. 26, 1854 | $\checkmark$. |
| 11, 289 | Lanegan, Andrew. Lanterns | July 11, 1854 | V. |
| 10,811 | Lapham, William, oxeeutor of Seneea Lapham, deceased. Maizo harvesters | Apr. 18, 1854 |  |
| 10, 638 | Larwill, J. B., and J. Cross. Faucets for meas | Mar. 14, 1854 | XI. |
| 11, 165 | Latta, Alexander B. Hydro-pneumatic forco | Jume 27, 1854 |  |
| 11, 075 | Latourette, David L. Mills | Junie 13, 1854 | XI |
| 11, 378 | Lavers, Wm. G. Device for securing onds of wires in fence posts...... | July 25, 1854 | II. |
| 11, 731 | Laville, John Baptiste. Machinery for felting hats and hat bodies. (Patcuted in France August 20, 185\%) | Sept. 26, 1854 |  |
| 11, 164 | La Mothe, Bernard J. Iron buildings | J1110 27, 1854 <br> Oct. 17, 1854 |  |
| 11, $93 \%$ | Leach, George T. Method of engaging and disengaging selfacting car bralies |  |  |
| 10, $4 \% 4$ | Leach, ILarry. Propellcrs | Jan. 31, 1854 | ViII. |
| 10,762 | Leavitt, Charles, assignor to S . I. Cockrill. Machines for eloaning cotton. |  |  |
| 11, 379 | Lechtenthaler, Grifith. Culivator | July 25,1854 |  |
| 10, 948 | Lee, Elon A. Piano-forte action. | May 23, 1854 | XVIII. |
| 11, 967 | Lee, George IV. Sced plante | Nov. 21, 1854 |  |
| 10, 716 | Leods, Joseph. Cooking stov | Mar. 28, 1854 |  |
| 11, 230 | Same..... Controlling draught in brick | July 4, 1854 | XV. |
| 11, 896 | Same......Furnaces for heating buildings | Nov. 7, 1854 |  |

List of persons achose patents for inventions and discoveries have expired, \&c.-Continued.

| No. | Name and invention. | Datc. | Class. |
| :---: | :---: | :---: | :---: |
| 10, 342 | Le | May 16, 1854 | V . |
| 11, 613 | L'Hommedieu, Ezra. Dies for making a | Aus. 29, 1854 | II. |
| 11, 867 | Lenher, Samuel. Attachment to siphon | Oct. 31, 1854 |  |
| 12,099 | Leonard, Wm. B, Rogistering dyman | Dec. 19, 1854 | VIII. |
| 10, 625 | Lesley, Oliver. Saw set | Mar. 1t, 1854 |  |
| 11, 751 | Leslie, James Y. Knitting machincs...................................... | Oct. 3, 1854 | II |
| 10,410 | Lester, Ebenezer A. Squcezing and compressing machines for motallic bodies. | Jau. 10, 1854 | II. |
| 11, 599 | Leran, Georgo. Reeling machi | Mar. 7, 18.54 |  |
| 11,555 | Letvis, Abel F. Floating anchors | Aug. 22,1854 | VII. |
| 12,085 | Lieberman, M. Jacob, sulbject of the Emperor of liussia, at present rosiding in New York, assignor to Georgo S. Hauford \& Co. Waterprooting cloths, \&c. | Doc. 12, 1854 | III. |
| 12,025 | Lilley, John. Machinery for separating the fiber from tho woody portion of tropical plants. (Patented in England July 21, 1853). | Dec. 5, 18.54 |  |
| 11, $86 \cdot$ | Lillibridge, Warren and Chas. 'Tailors' measure............... | Oct. 31, 1854 | - |
| 11, 197 | Lindner, Edward. Repeating magazinc and nec | June $27,18.54$ | NI |
| 11, 197 | Lipman, IIynen L. Eyclet m | Jıne 6, 1854 |  |
| 10, 827 | Little, George. Mode of operating tho feed tahles of printing presses. | 1 1pr. 25.1854 | 1 |
| 10,937 | Little, Isaac W. Os Yokes................................................ | May 16, 1854 |  |
| 11, 406 | Little, Wm. Lubrirating material. (Patented in England July 1t, 18, 3 ) | Aug. 1, 1854 | XII. |
| 10,448 | Littlefield, Demnis G. St | Jan. 24, 1854 |  |
| 10, C80 | Livermore, Georgo W. Machinery for mal | Маг: 21, 1854 | X |
| 10, 749 | Livcrmore, Georgo W. Machines for crozing the euds of staves. (Patentod in England Ang. 31, 18:3) | Apr: 4, 18.54 | V. |
| 11, 381 | Livingston, N. B. Coupling for car | July 25, 1854 |  |
| 11, 123 | Lloyd, Charles C. Gas meters and regulat | June 20, 1854 |  |
| 10,375 | Longbotham, James H. Bookbindors' drying | Jau. 3, 1854 | XVII. |
| 10, 475 | Longking, Thomas. Apparatus for cleaning and buffing daguerreotypo plates. | Јад. 31, 1854 | XVII. |
| 11, 982 | Loomis, Joseph ( $\mathfrak{F}$, Mary Am Loomis, executris and assiguor to W. A. Gardner. Surgical forceps. | Nov. 21, 1854 |  |
| 11,526 | Lord, J. L. Grimistono fram | Aug. 15, 1854 |  |
| 19,748 | Loughborongh, Wm. S. Bit fastening for cast-iro | Alir: 4, 1854 | X |
| 10, 891 | Loughnidge, Wm. Method of mioading canal boats and other vessels. | May 9,1854 | II |
| 11, 293 | Loughridge, Win. Arrangement of means for frecing canal boats from water | July 11, 1854 |  |
| 12,065 | Lovecraft, John F. Fced motion for sawing light lumbe | Dec. 12, 1854 | XIV |
| 10,600 | Loveland, Sannel. Scetional dry docks. (Autedated Sept. 7, 1853) | Mar. 7, 1854 |  |
| 11, 294 | Lowe, Wm. Operating cut-off valves of stean | July 11, 1854 |  |
| 11, 752 | Lownds, Jacob J. P'cn and pencil case | Oct. 3, 1854 | IVIIT. |
| 10, 848 | Lundfear, Mervin T. Boxes for recd musical instrun | May 2, 1854 |  |
| 12, 064 | Luttgens, H. A. Cut-off regulators for steam | Dec. 12, 1854 |  |
| 11, 166 | Lyctli, John MIcF. Cothins | June 27, 185t | X |
| 10,576 | Lyman, A.S. Air engine | Feb. 28, 1854 |  |
| 11, 261 | Lyour, Amos. Lightning | July 11, 1854 | V |
| 11, 382 | Lyon, Johm. Ditching plows | July 25, 1854 |  |
| 12, 066 | Lyon, Willian, assignor to F. and G. Simpson, B. Dodd, and C. B. Mer- riman. Sewing machines.................................................... | Dcc. 12, 1854 |  |
| 11, 762 | Malie, John. Pen and pea | Oct. 3, 1854 |  |
| 10,655 | McFarlane, J. G. Secal planter: | Mar. 14, 1854 |  |
| 11, 167 | Mallcrd, William. Regulators | June 27, 1854 | V |
| 11, 168 | Samc..-.......Gas burners | Juno 27, 1854 | V. |
| 11, 148 | Mallory, Lcvi W., assignor to Willian Morris. | Jıme 20, 1854 | K. |
| 10, 393 |  | Jan. 3, 1854 | I. |
| 11, 810 | Manny, Johu II. Grain and grass harvestors. (Antedated Juno 15, | Oct. 17, 1854 | I. |
| 11, 459 | Mansfield, Martin H. Screens for hulling clover secd and cleaning grain | Ang. 1, 1854 |  |
| 11, 431 | Mansfield, Willis. House for switch ten | Aug. 1, 1854 |  |
| 10,973 | Mansure, John, assignor to Farr \& Thomps | May 23,1854 | IV |
| 10,892 | Marchant, Horatio G. Manure and sand | May 9,1854 |  |
| 11, 897 | Marcy, E. E. Vulcanizing olastic gums | Nov. 7, 1854 | IV. |
| 12, 764 | Margatroyd, Thomas, jr. Carriage spring | July 1, 1854 |  |
| 10,611 | Marks, David B. Artificial leg | Mar. 7, 18.54 | $X X .$ |
| 10,454 | Marks, Joseph. Valvcs, piston, and steam passages in cylindrical steam hests | Jau. 24, 1854 | VI. |
| 10, 701 | Marks, Joseph, assignor to William Whiting. Machinery for operating car brakes. (Patentod in England Nov. 23, 1852) | Mar. 28, 185t | $\mathrm{X} .$ |
| 10,702 | Marks, Jos., and John Howarth, assignors to William Whiting. Machinery for operating car brakes. | Mar. 28, 185. |  |
| 12,026 | Markham, Leonard F. Machine for rounding tho backs | Dec. 5, 1854 | XV |
| 10, 661 | Marland, Obadiah. Iron safes | Mar. 21, 1854 |  |
| 12, 027 | Marland, Obadiah. Paper-making machinery. (Patentod in England Scpt. 28, 1854) | Dec. 5, 1854 | III. |
| 12,028 | Marland, Obadiah. Paper-making machincry. (Patentod in England Scpt. 28, 1854) | Dec. 5, 1854 | IIT. |
| 11, 556 | Marquis, Robert. Bala | Aug. 22, 1854 | IX. |
| 11, 670 | Marsh, Scymour N. Trusses | Sept. 12, 1854 | XX. |
| 10,753 | Marshall, Elbridgo. Seed pla | Apr. 11, 1854 |  |
| 11, 557 | Same...... . . . . Manure | Aug. 22, 1854 | I. |

List of persons whose patents for inventions and discoveries have expired, \&.-Continued.

| No. | Name and invention. | Dato. | Class. |
| :---: | :---: | :---: | :---: |
| 11,968 | Martin, Daniel B. Packing slide valves in steam eugi | Nov. 21, 1854 <br> Nov 28, 185 | VI. |
| 11,997 | Marta, Manich Steom hoile | Nov. 28, 1854 | XVI. |
| 11, 129 | Martin, Joln S. Painters | July 11, 1854 | VII. |
| 11, 291 | Martin, Joseph T. Grapplo for rais | Nov. 7, 1854 |  |
| 11,898 | Martin, William Nelson. Coal | Jan. 10, 1854 | II |
| 10, 411 | Matteson, Marvy II. Flexible cord | June 20, 1854 | VIII. |
| 11,133 | Matthewson, Nathan F . Watch-ch Maton, Francis. Breech-loading ti | Nov. 14, 1854 | XIX |
| 11, 938 | Maton, Fraucis. Breech-loading | July 11, 1854 | V. |
| 11,259 | Mayer, Andrew. Gras stotes.... Same........Regulators for | Sept. 12, 1854 | V |
| 11, 672 | Maynard, Gibert. Corn shellers | Sept. 12, 1854 |  |
| 10,492 | MicAdams, John and Whl. Machi | Feb. 28, 1854 |  |
| 10,577 | McBricle, Wm. Machines for ma | Aug. 20, 1854 |  |
| 11, 614 | MrcCauley, John G. Ha | Aug. 8, 1854 | X. |
| 11, 486 | McClelland, James S. Buggies. | Oct. 31, 1854 | X. |
| 11,869 11,740 | McConnell, dames LE. Rainoad-car aking illumating gas from | Sept. 26,1854 | $\frac{\mathrm{IV}}{\mathrm{XIT}}$ |
| 11, 253 | McCorl, Wm. Horse-power | July 11, 185! |  |
| 11, 004 | McCormick, Samuel. Impressing the threads upon serew dianks. (Pat ented in England March 22, 1853) | June 6, 1854 | II. |
| 11,998 | McDouald, Angus W. Tanks and cisterns for supplying locomotives.. | June 20, 1854 | XXII. |
| 11, 131 | McDongall, D. E. Burglars ${ }^{\text {ald }}$ | Tan. 10, 1854 |  |
| 10, 421 |  | Nov. 7, 1854 |  |
| 11, 899 | McGaftuy, Ives V. Potato digerers.... | June 27, 1854 | XI. |
| 11, 169 | McGowan, John II. Double-acting forco | Sept. 12, 1854 |  |
| $\begin{aligned} & 11,673 \\ & 10,430 \end{aligned}$ | Miccrecgor, dames, jr. Machines for mincin | Jan. 17, 1854 Nor. 71854 |  |
| 11, 900 | Mckeage, Barnet. Mode of sawing loots for | IIar. 21, 1854 |  |
| 10,681 | McKema, samuel. Portanto notal puncl - ............................ |  |  |
| 11, 282 | McKinstry, Ann G. V., admimistratrix of Wm. Mexinstry, deceasod. Adinstable bearings for circular sarvs. | July 11, 1854 | $x \Gamma$ |
| 11, 130 | NicLanghlin, Thos. G. Radial arms for | Aug. 15, 1854 | X. |
| 11,527 | Same.i.i.........Railroal-car brake............... | Aug. 1, 1854 | X. |
| $\begin{aligned} & 11,438 \\ & 10,964 \end{aligned}$ | McLean, William S. Car wheels with indepentent inange and inction in McMullen, John. Meehanical means for preventing mernstation in steam boilers. | May 23, 1854 | VI. |
| 11,48\% | MoMurtry, John. Maehino for making | Aug. 8, 1854 |  |
| 11, 834 | TENair, Jolu G. Manufacturing carpets and rug | Oct. ${ }^{\text {3, }} 1854$ | IX |
| 11, 763 | McRea, William C. Railroad and switch tclegraph draw bri | Apr. 18, 1854 | XI |
| 10, 783 | Moldrum, Garret. Turning lat | Juno 27, 1854 | X |
| 11, 170 | Melendy, Johur. Fruit picker -............................................. | Jun at, |  |
| 11, 463 | Mellen, Dustin F., assignor to D. F. Mchen, J. F. Augustus, ama S. $\alpha$ Eaton. Machine for planing metals. | Aug. 1, 1854 | $\pi .$ |
| 11, 568 | Mellen, Dustiu F. Machine for sawi | Aug. 7,1854 |  |
| 17, 337 | Mellier, Charles M. A. Paper pulp | Aug. 22, 1854 | XII |
| 11,558 | Mellish, Henry Grain mills... | Oct. 10, 1854 |  |
| 11, 790 | Mícudenhall, Stephen C. Looms - .... | Aug. 8, 1854 | XVII. |
| 11,484 10,507 | Meriwether, Ansel, assignor to John M. Irvine and A. Merrell. Machine for dressing spokes | Feb. 7, 1854 | XIV. |
| 10, 431 | Merrell, Loristoin G. Pill mach | Jan. 17,1854 |  |
| 10, 412 | Mcrrell, William G. Machine for cutting | June 13, 1854 |  |
| 11, 071 | Merrick, J. Vaughan. Exhaust fans |  | II. |
| 12,100 | Merrill, Chas. Sash fasteners............................. | Aug. 8, 1854 | VI. |
| 11, 485 | Merrill, J., and Gco. Patten. Pefrigerators for marino | Juno 20, 1854 | VI. |
| 11, 132 | Merriman, Anson. Stcam-engino 1 | July 11, 1854 | IX. |
| 11, 290 | Mettam, Chas. Construction of iron hou | Mar. 14, 1854 | I. |
| 10,652 | Mriddlekauff, Daniel S. Mrain harresters. ........................... |  |  |
| 11, 671 | Middleton, John W. Method of applying heat to dilate gasses for the purpose of elevating water. | Sept. 12, 1854 | XI. |
| 11, 675 | Same..... Apparatus for distributing |  | X |
| 11,697 | Same..... Tidal or current liydr | Aug. 8, 1854 | III. |
| 11,505 | Micgelt, Peter. Shuttie guards for power | May 23, 1854 | XI. |
| 10, 951 | Miles, L. A. Valvo pump. | Mar. 7, 1854 | III. |
| 10, 609 | Miller, Charics. Sew Processes of galvanizin | May 30, 1854 |  |
| 10,976 | Miller, Elliott T. Shells, or gienado bombs | Nov. 7, 1854 | XIX. |
| 11, 901 | Miller, George D. Tuyercs ................ | Jan. 3, 1854 | II. |
| 10,367 | Miller, Joseph. Railroad-car coupli | Nov. 14, 1854 | X. |
| 11, 940 | Miller, Josepry R. Mill for shelling and grinding corn | Dec. 5, 1854 | I. |
| 12, 030 | Miller, Honry R. Rodney. Carriaro tops........................... | Apr. 4, 1854 | X. |
| 10, 723 | Miller, William J. Machine for cat | June 27, 1854 |  |
| 11, 172 | Miller W. I. Washstands. | Dec. 5, 1854 | XVIL |
| 12, 029 | Miller, W. H. Uasustands-...... | Aug. 8, 1854 | XVL. |
| 11, 488 | Millican, William E. Railroad-car | Apr. 25, 1854 |  |
| 10; 818 | Milligan, Wiliam ${ }^{\text {a }}$, | June 27, 1854 | XX. |
| 1i, 171 | Minthorn, Daniel. Inhaling tube | Ang. 8, 1854 |  |
| 11, 490 | Moffitt, Alexander. Spring | May 30, 1854 | III. |
| 13, 178 | Molliere, Picrre. Sewing | Ang. 1, 1854 | V |
| 11, 437 | Monnin, Charles W., and | Fcb. 21, 1854 | II. |
| 10, 549 | Montgomery, Riehard. Corrugating med | June 13, 1854 | III. |
| 11, 070 | Montgomery, William. Card-tects macar | Sept. 26, 1854 | X. |
| 11, 732 | Moody, Paul. Connecting a se |  |  |

List of persons whose patents for inventions and discoverics have expired, f.c.-Continued.

| No. | Name and invention. | Date. | Class |
| :---: | :---: | :---: | :---: |
| 10,659 | Moore, Daniel, assignor to George S. Cameron. Machines for rubbing type. | Mar. 21, 185 |  |
| 11,870 | Moore, Daniel. Cartridges for breecl-londing fire-arms ............... | Oet. 31, 185 |  |
| $\begin{aligned} & 11,871 \\ & 12,603 \end{aligned}$ | Sane....... Powder flask for breceh-load | $\begin{array}{\|l\|l\|} \hline \text { Oct. } & 31, \\ \text { Mar. } & 185 \\ \hline \end{array}$ | XI |
| 11,761 | Moore, Speueer. The feeding-hoppers of grain threshers and separators. | Oet. 3,1854 | I. |
| 11, 941 | Moore, William. Gr |  |  |
|  | Morgan, Elijah. Shingle n | - |  |
| 11, 632 | Morley, P. A., assignor to Jas. Bright. | Aug. 29, 18 |  |
| 10,676 | Morris, David A. Anti.frietion boxes. | Mar. 21, 1854 |  |
| 11, 134 | Morris, Edmund. Slate frame | June 20, |  |
|  | Same...........sam | Nov. 7, 1854 |  |
| 11, 676 | Morris, Ephraim. Apparatus for determining the weight of eargoes in vessels | Sent. 12, 185 |  |
| 10,479 | Mrorris, John L. L. Steam | Jan. 31, |  |
| 11, 1139 | Morris, Wm. Omnibus registers. | Nov. 14, 185 |  |
| $\begin{aligned} & 11,430 \\ & 11,698 \end{aligned}$ | Morrison, Wm. H., and M. W. E. Doran. Mortising m | Aug. 1, 185. | $\begin{aligned} & \text { xIV. } \\ & \text { in. } \end{aligned}$ |
| 11, 650 | Morss, Josepline. Driving-wheels of locomotives for aseending inelined planes. |  |  |
| 10 | Mott, Jordan L. Railroad-car wheel | Mar 911854 |  |
|  | Same....... Securing ear | Jun |  |
|  | ame........) Stode of securiug staples to walls | July 25, 185 | xxum. |
|  | Same.........Mode of eonstrueting a eombined furnaee and ealdron, for the use of agriculturists and others. (Patent extended Novem. ber 20,1854 ) |  |  |
| 10,704 | Mott, Rielard D. Store | Mar. 28, 1854 | XVIII |
|  | Mourier, E., and F.F. E. Valle | Dee. 30, 1854 |  |
|  | Muller, Charlos. Maelines for ea | Jan. 3, |  |
| 11,231 | Muntz, William Henry; Paddle w | July ${ }^{\text {4, }} 1851$ |  |
| 11,330 | Murdoek, Ebenezer. Tobaceo eutti | July 18, 1854 |  |
| 10,977 | Minrphy, Jolnn. Proeesses for treating gitta- | May 30, 1854 |  |
| 11,076 | Murray, Bronson, assignor to T. R. Spencer, as Harvester eutters | Jume 13, 1854 |  |
| 11,942 | Myers, Alpheus, M. D. Tape-worm trap | Nov. 14, 1854 | XX. |
|  | Ta | Nov 14 |  |
|  | Myers, Jac |  |  |
|  | Myers, James, jr. Making sugar molds....... | Dee. 19, 1854 | iv. |
| 11,696 | Napier, James R., and Wm. J. M. Rankin. \&ir in England June 9, 1853) | Sept. 19, 1854 | IT. |
| 11, 135 | Needham, Orwell H . Breast |  |  |
| 10, 449 | Neilson, George. Ventilating railr | Jan. 24, 1854 |  |
| 10, 990 | me ......V Ventilating | May 30, 1854 |  |
|  | Neiseh, Robert | Aug. 15, 1854 |  |
| 11, | Nelson, Riehard L. Modo of att |  |  |
| 10, 743 | Nesmith, John. Maehines for making wire nettiug. -.............. | Apr. 4, 1854 | II. |
| 12,900 | Newman, James. Laking metal rods and tubes. (Patented in Engla | Nov. 28, 1854 |  |
| 10, 551 | Newman, M., N. C. Whiteomb, and G. C. Cole. Whifletreo | Feb. 21, 1854 |  |
| 11, 074 | Newman, M., 2d, N. C. Whiteomb, and G. C. Cole. Coupli | June 13, 1854 |  |
| 10, 950 | Newton, Abner N. Primer for | May 23, 1854 | X |
| 11 | Breeel-load |  |  |
|  |  |  |  |
| 10 | Newton, O., and J. A. Crever. | Mar. 14, 1854 |  |
| 11, 615 | Niehols, John B. ${ }^{\text {Nindor }}$ (inding | Juy Aus 29,1854 |  |
| $1{ }_{10}^{11,}$ | Niehols, John B. Binding fol | Aug. 29, 1854 | VII. |
| 10 | Nichols, Oldin. Chain-eable st | Apr: 4, 1854 |  |
| 10, 396 | Nieholson, Henry C., and James Spratt. Sea | Jan. ${ }^{\text {, }} 1854$ |  |
| 15, 704 | Nixon, Cliristopher N. Hanging ships' ru | May 2,1854 | VII. |
| 11, 199 | Noble, James. Combing eottou and othe | Juno 27, 18 |  |
| 10, 7 | Noreross, Nicholas G. Feerl motion | Mar. 28,18 | XI |
| 10, 844 | Same - ........... Devices for tonguing aud grooving lu | May 2, 18 | XIV |
|  | Norfolk, E. L. Maelinery for dressing tla | May 9,1854 | III. |
| 11, 944 | Normand, C. B. Mode of eontrolling and guiding logs in saw mills without a carriage. (Patented in Englaud Oet. 27,1852 ; in France |  |  |
|  | Nov. 5, 1852) | Nov. 14, 1854 | $\begin{aligned} & \text { XIV. } \\ & \text { xIV. } \end{aligned}$ |
| 11, 946 | Same. Mothod of eontrolling the log for enrved and bevel sawing. |  |  |
|  | ented in England Oet. 27, 1852; in France Nov. 5, 1852) |  |  |
| 11,733 | Septimus. Running |  |  |
| 677 | North, Newell. Spoke maehin | cpt. 12, |  |
| 11, 004 | Norton, John. Blasting roek, timber |  |  |
| 11, 970 | Nuttin, Mighill. Arrangem | Nov. 21, | VIII. |
| 10, 751 | Ogden, John C., assignor to Charles S. Ogden. Making railroad ehairs | Apr. 4, 185 |  |
| 10, 373 | Ogden, Zina, assiguor to Lowis C. Ogden. Lowering, raising, and fastening earriage tops |  |  |
| 12,067 | Olds, ITenry II. Propulsion | Dee. 12, 1854 |  |
|  | Oliver, Riehard. |  |  |
| 11,678 | E. | Sept. 12, 1854 | xIX. |

List of persons whose patents for inventions and discoveries have expired, \&c.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 136 | Osborn, James P. Method of turning casks, \&c., from solid pieces | June 20, 1854 |  |
| 10,627 | Overend, Audrew. Machine for dauping printing pap | Mar: 14, 1854 | $\mathrm{XVMII} .$ |
| 11, 072 | Same.......... Printers' friskets | $\begin{aligned} & \text { June } 13,1854 \\ & \text { Jan. } 24.1854 \end{aligned}$ |  |
| 10,458 | Overend, William. Wetting pap |  | XIV. |
| $\begin{aligned} & 10,556 \\ & 11.527 \end{aligned}$ | Packard, Charles F . Machincs for cut Same..............Sawing machine | July 11, 1854 | XIV. |
| 10, 480 | Page, Charles G. Electro-magnetic engines. (Patented in England May 3, 1851) | Jan. 31, 1854 | VIII. |
| 10,510 | Page, Clark D. Lime kiilus................................................. | Feb. 7, 1854 |  |
| 10, 394 | Page, George F. Ratchet catch for Pa Tucius Screw bolts and wult | $\begin{array}{ll} \text { Janı. } & 3,1854 \\ \text { Jan. } & 3,1854 \end{array}$ | $\begin{aligned} & \text { XIV. } \\ & \text { II. } \end{aligned}$ |
| 10,368 10,863 | Page, Lucius. Screw bolts and nut Parett Washiugton F. Harrows | $\begin{aligned} & \text { Jan. } 3,1854 \\ & \text { May } 2,1854 \end{aligned}$ |  |
| 10, 863 | Palcn, Vincent. Mechanism for sarving off piles un | Oct. 31, 1854 | IX. |
| 11, 002 | Palm, Josepl Baron de. Brick and pottery kilns. (Patented in England July 13, 1852) | June 6, 1854 | XV. |
| 10,481 | Palmer, William. Watcr gauges for steam boilers. | Jan. 31, 1854 |  |
| 11, 759 | Same ........ Apparatrs for starti | Oct. 3, 1854 | $1 x$ |
| 11,439 | Palmer, William M. Thecshing machine.............................. | Aug. 1, 1854 |  |
| 11, 051 | Palner, William Russcll. Threshers. (Patented in England April 11, 1853)................................................................................ | June 13, 1854 |  |
| 11,398 | Same ...... Horse-powers. (Patented in England April 11, 1853) | July 18, 1854 |  |
| 11, 853 | Palmic, G. F. and A. H. Fire-arms | Oct. 24, 1854 | $\frac{1}{x}$ |
| 11, 530 | Patrick, Andrew. Unloading coal and | Aug. 15, 18.54 |  |
| 10,864 | Patton, G. M. Arrangement of spring dies in machines for making clinch rings. | May 2,1854 | II. |
| 11, 760 | Paul, Zachariah M. Brick machine | Oct. 3, 1854 | XV. |
| 11, 200 | Pearsall, Thomas. Ventilatcd flour barr | Juno 27, 1854 | XIV. |
| 11,850 | Pearson, Mark R., assignor to M. R. Pcarson and Samucl Shaw. Selfacting roller catch for mule | Oct. 24, 1854 | II |
| 10, 744 | Pease, Aldiel. Drill for metal drilling | Apr. 4, 1854 |  |
| 11, 559 | Pcase, Julius A. Diaphragm pump | Aug. 22, 1854 | XI. |
| 11, 947 | Same . . . . . . . India-rubber | Nov. 14, 1854 | IV. |
| 12, 283 | Poaslec, Horace W. Machincs for washi | Sept. 20, 1854 | 1 II |
| 11, 174 | Peavey, I. H. Charger for firc-arms | June 27, 1854 | XIX. |
| 10, 930 | Peck, Jcremiah, assignor to J. Peck and | May 16, 1854 | XIX. |
| 11, 758 | Peck, Samuel. Manufacture of daguerreoty | Oct. 3, 1854 | XVIII. |
| 10,639 | Penfield, Eldridge II. Metallic grummets for | Mar. 14, 1854 |  |
| 12,068 | Same | Dec. 12, 1854 | XXII. |
| 11, 173 | Penrosc, Thomas. Road scraper and spreader | Juno 27, 1854 | IX. |
| 11, 081 | Pcrices, Samuel. Crushing and grinding quartz and minerals. (Patented in England Oct. 12, 1852). | June 13, 1854 |  |
| 11,837 | Perkins, E. L. Machincry for polishing paper. .................... | Oct. 24, 1854 | III. |
| 12, 087 | Perkins, Joseph, assignor to Perkins \& Upton. Trussing yards to vessels' masts | Dec. 12, 1854 | V1 |
| 11, 079 | Pcrlcy, Charles. Adjustable rails for rcplacing cars on the tra | June 13, 1854 |  |
| 11, 080 | Same........Chain-cable stoppe | Juno 13, 1834 | VII. |
| 12, 001 | Pcrry, A. D. Breech-loading firc-arms. (Patented in England June 3, 1854) | Nov. 28, 1854 | X |
| 12,.069 | Perry, James. Gold collc | Dec. 12,1854 |  |
| 11, 972 | Perry, William. Spinning fram | Nov. 21, 1854 | II |
| 11, 441 | Petsch, Alexander H. Dumping car | 人ug, 1, 1854 |  |
| 10, 653 | Pettes, Simon. Drilling machines | Mar. 14, 1854 | XV |
| 11, 679 | Phares, Joseplı. Tailors' shears. | Sept. 12, 1854 | XX |
| 11, 028 | Phelps, Elijal. Excavators | June 6, 18.J4 | 1 |
| 10,640 | Phelps, E.C. Stop cock. | Mar. 14, 1854 | X |
| 11, 905 | Plillips, Dewey. Farm gate | Nov. 7, 1854 | IX. |
| 10, 593 | Phillips, William G. Method | Mar. 7, 1854 |  |
| 11, 836 | Phineas, Myer. Pen holder. | Oct. 24, 1854 | XVIII. |
| 11, 175 | Pier, Oliver. Trap for anima | June 27, 1854 | XXII. |
| 10, 414 | Picrce, David. Gold separato | Jan. 10, 1854 |  |
| 10, 991 | Picree, John R. Neck yokes | May 30, 1854 |  |
| 10, 413 | Pierce, Henry E. Machine for matting the ends of blocks in making matches. | Jan. 10, 1854 | XXII |
| 10,966 | Pigot, James. Apparatus for | May 23, 1854 | X |
| 11, 256 | Pine, Robert G. Plating metals | July 11, 1854 |  |
| 11, 701 | Pitman, Isaac. Rosin-oil lamps | Sept. 19,1854 |  |
| 11, 176 | Platt, L. L. and A. L. Manufacture of wooden but | June 27,1854 | XXI. |
| 11, 177 | Plumb, Hiram and simou H. Mortising maehine | June 27, 1854 | XI |
| 12, 031 | Plumb, William Henry. Machines for crushing orc | Dco. 5, 1854 | II. |
| 10,610 | Polley, Clark. Mcthod of opcrating hydraulic rams | Mar. 7, 1854 | XI. |
| 10, 482 | Pomeroy, Ebenezcr G. Manufacture of sheet iron | Jan: 31, 1854 | II. |
| 10, 992 | Poolo, Danicl. Quartz crushers. | May 30, 1854 | II |
| 11, 492 | Porter, Charles T. Stonc-dressi | Aug. 8,1854 | XV |
| 10,559 | Porter, Rufus, assignor to George stephenson. Machinery for making cordaro | Feb. 21, 1854 |  |
| 11, 271 | Porter, Rufus. Cane | July 11, 1854 | $\overline{X V I}$ |
| 11, 560 | Portcr, William D. Wo | Aug. 22, 1854 |  |
| 11, 082 | Potter, Merritt F. Railroad odom | Jume 13, 1854 | VIII, |
| 11, 651 | Powcli, Thomas M. Icc cream fre | Sept. 5, 1854 | XVE. |
| 12, 114 | Pratt, Elisha, assignor to E. Pratt and H. P. Upton. Leather-splitting machines | Dec. 19,1854 | XVI. |

List of persons whose patents for inventions and discoveries have cxpired, $s c$.-Continued.

No.

11, 009
11, 793
10, 893
10, 522
11, 056
11, 033
11,008
11, 616
10, 378
10, 829
10, 450
18, 861
10,911
11, 757
11,385
11, 272
11, 386
10, 865
11, 756
11, 255
I1,000
11, 839
11, 993
10, 784
10, ,907
11, 617
11, 139
11, 045
10, 460
10, 493
10,524
12,047
11, 493
11, 138
10, 896
10, 574
11, 838
11, 201
12, 102
11, 086
11, 533
16, 189
12, 013
11, 561
11, 820
11, 840
18, 873
11, 906
11, 387
10, 641
10,612
11, 942
10, 904
10, 726
12,115
12,015
11, 754
11, 532
10, 455
10, 628
11, 140
10, 523
10, 866
12, 0 \% 0
11,973
12, 032
11, 907
11, 562
10,706
10,914
10, 895
10, 395
10, 582
12, 002

| Name aud invention. | Dato. | Class |
| :---: | :---: | :---: |
| Pratt, Jared. Making seamless metal tub | June 6,1854 |  |
| Proscott, Emerson. Maehines for splitting | Oct. 10, 1854 | X |
| Preseott, Jonathan and Georgo W. Machino for reducing wood slivers. | May 9,1854 | XI |
| Preston, Robert. Cloth drying | Feb. 14, 1854 | III. |
| Prew, David. Cast-iron car | Junc 13, 1854 |  |
| Price, Ebenezer N. Bridlo bits | June 13, 1854 | XV |
| Price, Whitman. Cultivator | June 6, 1854 |  |
| Same......... Plows for plantin | Aug. 20, 18.54 |  |
| Price, William H. Bedstead fasten | Janl. 3, 1854 | XV |
| Prindle, Daniel R. Field fence...................................... | Apr. 25, 1854 |  |
| Prosser, Thomas. Manufacture of hollow slabs and tlanged metallic plates | Jan. 24, 18.54 | II. |
| Same ........ - Surfaco coudc | Oet. 31, 185. 4 | VI |
| Putnam, Joseph. Molding elay pip | May 16, 1854 |  |
| Putnam, Silas S. Curtain fixtures | Oct. 3, 1854 | XVI |
| Quantin, Alphonso. Stopping min | July 25, 1854 | XXII. |
| labbeth, J. Diaper pins | Jnly 11, 1854 |  |
| Race, W., assignor to H. C. Silsby and W. Race. Stove | July 25, 1854 |  |
| Ramsay, Wm. B. aud G. M. Floxiblo harrows | May 2,1054 |  |
| Rankin, Androw. Making hat bodies | Oct. 3, 1854 | II |
| Rankin, David. Applying water to crniformod | July 11, 1854 |  |
| Ratuch, A. R. Machines for washing bottles | June 6, 1854 | x |
| Rauch, John H. Sliding pen and pen | Oct. 24, 1854 | XVIU |
| Ray, Elias M. Knitting machines | May 30, 1854 |  |
| Ray, Fowler M. Spiral springs for railroa | A11. 18, 1854 |  |
| Read, Charles A. Self-heating smooth | May 16, 1834 | XV |
| Redick, William. Seed planters | Aug. 29, 1854 |  |
| Reed, Jesse. Arrangement of ship's eapstan | J une 20, 1854 | VII. |
| Reed, John C., assignor to C. P. Buckinghan, II. P. Upton, and J. C. Read. Grinding mills. | Juno 6, 18.54 | X1 |
| Reese, Jacob. Rolling axles and shafts | Jan. 24, 1854 |  |
| Sane.... Machimes for making unt | F'el3. 7, 1854 | II. |
| Samo.... Hauging the foro plato to iron-rolling mach | Feb. 14, 1854 | L. |
| Regester, Joshua, assignor to Clampit \& Regester. Lubricating appar- atus. | Dee. 5, 1854 | XII. |
| Reif, Christian. Clover scparators | Aug. 8, 1854 |  |
| Reimer, Benj. F. Brakes in railroad ears | June 20, 18.4 |  |
| Remingtou, John R., dueeaserl. Coment comp | July 4, 1854 | IV. |
| Renton, James. White zine furnaces | Feld. 28, 1854 | IV. |
| Same....... Making wroug | Oct. 24, 1854 | U |
| Revercomb, Jacob. Plows. | Jnno 27, 1854 |  |
| Reyuolds, George. Compositions | Dec. 19, 1854 | X |
| Reynolds, lra. Harvesters. | June 13, 1854 |  |
| Reyuolds, O. L. Machino tor cutting irreg | Aug. 15, 185.1 | SIV. |
| Rich, Obadiah. Proparing tamato of 1 | Dec. 8, 1854 |  |
| Richards, Henry, aud Charles F. Windsor. Wind | Nov. 28, 1854 | XII. |
| Richardson, H., S. Morris, ir., and l3. C. Perry. Folding umbrellas | Aug. 22,185 |  |
| Richardson, John, Pen and pencil case | Oct. 17, 1854 | XVIII |
| Same | Oct. 24,1854 | xVII, |
| Same ................ . san | Oct. 31, 1854 | XVILI. |
| Rider, Willian E., and John Murphy. Desulphurizing gutta-percha aud likc gums. | Nov. 7, 1854 |  |
| Ring, Elihn. Butter workers | July 25,1854 |  |
| Ripley, Ezra. Fancet | Mar. 14, 1854 |  |
| Ripley, Scaman C. Brick mae | Mar. 7, 1854 | XV. |
| Robbins, Charles 4 . Ditching and | Nov. 14, 1854 |  |
| Roberts, Cyrus. Harvestor rakes | May 16, 1854 |  |
| Roberts, Elijall. Gates for water whee | Aprr. 4, 1854 | N |
| Roberts, Milton, assignor to Roberts \& Pierce. Machino for turning prismatic forms | Dec. 19,1854 | XIV |
| Robertson, Thomas J., assignor to T. J. W. Robertsou and N. E. Teach. |  |  |
| Sewing machines. | Nov. 28, 1854 |  |
| Robertson, Wm. H. Machines for dressing | Oct. 3, 1854 |  |
| Robie, Jacob C. Turntablo | Alig. 15, 1854 |  |
| Robinson, James. Threshers and cleaners of grail | Jan. 24, 1854 |  |
| Rolinson, Jos. W. Form of seythes | Mar. 14, 1854 | I. |
| Robiuson, S. B. Drying grain | Junc 20, 1854 | V. |
| Robinson, Warren. Ships' ventilator | Feb. 14, 1851 |  |
| Robinson, William, jr. Machinery for | May 2, 1854 | III. |
| Roe, Henry A. Cheesc vats | Dee. 12, 1854 |  |
| Rocbling, John A. Manufacturing wire ropo | Nov. 21, 1854 | IT. |
| Same......... Stcam boilers | Doc. 5, 1854 |  |
| Roff, Erastus W. Machinery for cutting tenons on bliud slats | Nov. 7, 1854 | XVV |
| ogers, Artemas. Instrument for manufacturing door lenol | Aug. 28, 1854 | II. |
| Rogers, David B. Machines for forming cultivators' teeth | Mar. 28, 1854 |  |
| Rogers, Georgo. Bathis for coating metals with other metals | May 16, 1854 |  |
| Rogers, James. Maohine for marking out sash. | Mar. 9, 1854 | XIV. |
| Rogers, Thonas. Machines for cutting hand rails | Jan. 3,1854 | XIV. |
| Rollins, George A. Tool-rest for turning lathes | Fob. 28, 18.54 | X |
| Root, $\mathrm{E} . \mathrm{K}$. Machine for boring tho chumbers in tho cylinders of fire- arme arms | Nov. 28, 1854 | XIX. |

List of persons whose patcints for inventions and discoveries have expired, \&c.-Continued.

| No. | Nane and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 531 | Roper, Sylvester H. Ser | Aug. 15, 1854 | III. |
| 12, 071 | Ross, Joel II. Ifygrometric re |  |  |
| 11, 495 | Ross, Luther, and G. Potter. Machine for cutting | Aug. ${ }^{\text {Aug. } 22,1854}$ |  |
| 11, 591 | IRoss, Robert. Steam val | Dec. 12, 1854 | III. |
| 12,072 10 | Roth, George. Looms........................................................ | Dec. 12, 1054 |  |
| 10,780 | Roth, J. A., and J. Lea. Machues for bleaching hax. (Patented in England February 7, 1854) | Apr. 18, 1854 | III. |
| 10,803 | Same................. Processes for bleaching flax. (Patented in | Apr. 18, 1854 | II. |
| 10,834 | Same........................................ apparatus. (Patented in England <br> February 7 1854) |  | T. |
| 11,329 | February ${ }^{7}$, 1854) <br> ................................................................ <br> in Encland February 7 , 1854)... | Jay ${ }^{\text {July } 18,1854}$ | II. |
| 11,755 | Rousc, Wanton. Self-acting mules....... | Oct. 3, 18.54 |  |
| 11, 652 | Rowland, Charles. Tables | Sept. 5, 1854 | $\begin{aligned} & \text { XVII. } \\ & \text { XXI. } \end{aligned}$ |
| 10,779 | Rowland, Moses T. Tailors' mea | Apl. 18, 1854 |  |
| 11, 085 | Rowley, James L., assiguor to J. L. Rowley and N. II. Gilson. Car riaces | June 13, 1854 | X. |
| 11, 653 | Rugg, B. A., and E. H. Benjanin. Machinery for feeding paper to printing presses. | Sept. 5, 1854 | XVIII |
| 11, 241 | Ruggles, Solomon W., assignor to Ruggles, Smith, and Austin. Selfacting cheese presses. | July 4, 1854 | XII. |
| 11,511 | Ruggles, Solomon W., assignor to S. W. Ruggles and A. R. Smith. Fan blower | Aug. 8, 1854 |  |
| 10,588 | Ruggles, Stephen P Printing presses | Feb. 28, 1854 | $\begin{aligned} & \text { XVIII } \\ & \text { VI. } \end{aligned}$ |
| 11, 908 | Rumlcy, Charles. Steam-encine |  | $\begin{aligned} & \text { VI. } \\ & \text { VI. } \end{aligned}$ |
| 11, 909 | Same..........Rotary enigi | Nov. 11, 1854 | IX. |
| 11, 254 | Runge, Gustavus. Trap doors Russell, David. Spade plows. | Feb. 27, 1854 |  |
| 11, 036 | Same..... Method of op | June 6, 1854 | XTV. |
| 10,369 | Russell, Jonathan. Machine for cutting irr | Jan. 3, 1854 | XIV. |
| 11, 619 | Russell, Titus II. Saw-mill dogs | Aug. 29, 1854 | रry. |
| 11,569 | Rust, William O. Saw set | Aug. 22, 1854 |  |
| 10,620 | Ryan, Daniel, and J. Tlanagan. Water cl |  |  |
| 11,499 | Safford, Albert G. Applying springs to w |  |  |
| 10, 831 | Salomon, Johu C., jr. Brick makin | Feb. 21, 1854 |  |
| $11,552$ | Sampson, Ilnathau. Attaching hubs Same ..........Platform seales | July 25,1854 | X X |
| 11, 178 | Sauders, B. D. Winnowers of grain | June 27, 1854 |  |
| 11,570 | Saugster, Hugh. Securiag glasses i | Aug. 22, 1854 |  |
| 10, 913 | Sargent, Charles G. Machinery for com | May 16, 1854 | II |
| 11,534 |  | Oct. 17, 1854 | III. |
| 11, 812 | Sargent, Moses, jr. Roving tubes. | June 27, 1854 | X. |
| 11,179 11,974 | Saunders, Villiam H. Carriage axlo...... | Nov. 21, 1854 | 11. |
| 10, 579 | Sawyer, Joseph. Sockets for bench hoo | Feb. 28, 1854 | XIV. |
| 10, 613 | Same........ Machines for splitting rattan | Mar. 7, 1854 | XXII. |
| 11, 509 | Saxton, Amos I. Mode of constructing iron butiour | Aug. 8, 1854 |  |
| 11, 087 | Schinz, Charles. Process for hardening | June 13, 1854 |  |
| 10,546 | Schuyler, Joseph M., and William Zern, assignois to D. L. Weaving wire screens. | Feb. 21, 1854 |  |
| 11, 445 | Schwingrowbert, Louis. Shoe horns | Aug. 1, 1854 | XVI. |
| 11, 875 | Scott, E. W. Machine for manufacturing | Aug. 31, 1854 |  |
| 10, 931 | Scott, Lyman. Portable gri | May 16, 1854 |  |
| 10,785 | Seagrave, John D. Machines for paring appl | Apr. 18, 1854 | XVII. |
| 11, 910 | Searle, Isaac. Machinery for makin | Nov. 7, 1854 |  |
| 11, 180 | Seaver, Peasley. Calipors |  |  |
| 10,759 | Seay, Thomas E. Brick machin | Apr. 11, 1854 |  |
| 14,255 | Scithen, John. Envelopes for bottles |  |  |
| 11, 911 | Selleck, Robert M. Harness saddles | Nov. 7, 1854 | XVI. |
| 11, 095 | Sergeant, Henry C. Feed-water apparatus to stea | June 14, 1884 | X. |
| 11,233 | Severson, Bcnjanin. Cast-iron car wheel | July 4,1854 | X. |
| 11, 883 | Sewell, William, assignor to Joseph Barton ; reassignor to W. Sewell. Surface condensers | Oct. 31, 1854 | VI. |
| 11, 712 | Seymour, Edward, assignor to Daniel B. Brown. Gold scparator | Sept. 19, 1854 | II. |
| 12, 971 | Seymour, Alfred B. Machines for helically increasing sheet-metal pipes. | May 29, 1854 |  |
| 10,674 | Shands, J. G. Machines for dressin | Mar. 21, 1854 |  |
| 11, 035 | Shank, Isaac R. Lath machine ... | June 6, 1854 <br> Oct. 24, 185 | VIII. |
| 11,841 | Shanklin, Josiah. Level, bevel, scalc, and |  | vII. |
| 12, 075 | Shares, Daniel W. Secd planters and cult | Dec. 12, 1854 |  |
| 11, 571 | Shaw, Edmund. Sewing machine...................................... | Aug. 22, 1854 | III. |
| 11, 581 | Shaw, Molvin, assignor to MI. Shaw and D. G. Wheeler. Clamps for sewing machines. (Antedated February 22,1854 )....................... | Aug. 22, 1854 | III. |
| 10,646 | Shaw, Philander. Rotary cultivators ................. | Mar. 14, 1854 |  |
| 11, 680 | Samo ......... Sewill machines | Sept. 12, 1854 | III. |
| 10,760 | Shaw, W. A., and George Parker. Gas | Apr. 11, 1854 |  |
| 11, 443 | Shearman, Simeon. Method of cleaning and feeding in grain to the mill stones | Aug. 1, 1854 |  |
| 11,033 | Sheffield, John. Apparatus for filing m | June 6, 1854 |  |
| 11, 681 | Sheldon, Samuel. Portable grist | Sept. 12, 1854 |  |
| 11, 842 | Sherwood, Benjamin. Safes | Oct. 24, 1854 |  |

List of persons whose patents for inventions and discoverics have expired, fe.-Continued.

| No. | Name and invontion. | Dato. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 794 | Sherwood, John P. Damper for | Oct. 10, 1854 | V. |
| 12, 103 | Samo.......... Cut-nail ma | Dee. 19, 1854 | II |
| 10,494 | Shimer, Miehael. Winnowers | Feb. 7, 1854 |  |
| 12, 033 | Shirley, Daniel H. Piano-forto | Nov. 28, 1854 | XVIT. |
| 10, 867 | Short, Sewall. Violins | May 2, 1854 | XVIII |
| 11, 090 | Shore, William. Buck | June 13, 1854 |  |
| 10,382 | Shuttloworth, John. Por | Jan. 3, 1854 | II |
| 11, 619 | Sibbet, R. L. Method of tenoning sp | Ang. 29, 1854 | XI |
| 10,642 | Siekels, Gerard. Rotary ongines | Mar. 14, 1854 |  |
| 10,761 | Sigler, Henry. Fish hooks | Apr. 14, 1854 | YXI |
| 11, 461 | Sikes, James W. Cap or withe fo | Aug. 1, 1854 | VII. |
| 11,092 | Silver, Thomas. Tightening windo | June 13, 1854 | IX. |
| 11,094 | Simonds, G. B., and A. Brezer. Spa | June 13, 1854 |  |
| 11,682 | Simonds, Lorenzo. Palato for artifieial | Sept. 12, 1854 | XX. |
| 11,842 | Singer, Isaac M. Sowing maelines | May 2, 1854 |  |
| 10, 974 |  | May 30, 1854 | III. |
| 10, 975 | San | May 30, 1854 | III. |
| 11, 843 | Sirret, Emile. Fastening lamps in lanterns | Oct. 24, 1854 | V. |
| 10,718 | Sizer, Ephraim, Titus, and Emorson, and A. ioalladay. Sackot's braiding maehine. | Mar. 28, 1854 | III. |
| 11, 572 | Skinner, Haleyon, and W. Greenhalgl. Carpenters' gaugo | Aug. 22, 1854 |  |
| 10,909 | Skinner, Smith A. Surgieal splints | May 16, 1854 | XX. |
| 11,912 | Slater, James. Form for and modo of oper | Nov. 7, 1854 | XIV |
| 10,432 | Sloan, Thomas J. Apparatus for indieating tho aetion of tho feed pump to steam boilers | Jan. 17, 1854 | VI |
| 10,912 | Same........ . Water indieators for steam boilers | May 16, 1854 | VI. |
| 12,035 | Same........ Casting metal win | Dec. 5, 18.54 |  |
| 11, 683 | Smart, Don Carlos. Curtain fixturos | Sept. 12, 1854 | XVI |
| 10,708 | Smart, Joseph, Iumps | Mar. 28,1854 |  |
| 10, 836 | Smiley, De Witt C. Oils for | Apr. 25, 1854 | X |
| 11, 620 | Smith, A. J. Corn shellors | Ang. 29, 1854 |  |
| 12, 036 | Smith, D. G. Rumning | Dec. 5, 1854 |  |
| 10,939 | Smith, D. M. Lathe dog | May 16, 1854 | XIV. |
| 11, 303 | Smith, F. B. Lifting jael | July 11, 1854 | XII. |
| 11, 274 | Sinith, F. G. Condensers for steam | July 11, 1854 | VI |
| 11,684 | Same... Mode of operating fire eng | Sept. 12, 1854 | XI |
| 11,753 | Smith, Franeis II. Briek maehinos | Oet. 3,1854 | X |
| 10, 709 | Smith, Henry C. Construetion of shin | Mar. 28, 1854 | X |
| 11, 497 | Smith, Ira, and J. Stonesiper. Lard lamp | Aug. 8, 1854 |  |
| 11, 913 | Smith, Jeremiah P. Corn shellers | Nov. 7, 1854 |  |
| 10,553 | - Smith, John B. Maehine for slitting elothes | Feb. 21,1854 | XVII |
| 11,253 | Smith, J. B. Machines for mortising sasli st | July 11, 1854 | XI |
| 12, 104 | Smith, Jonathan. Dry doeks, and other methods for holding ressels by the keel. | Dee. 19, 185-4 | T |
| 11, 275 | Smith, Josiah M. Machines | July 11, 1854 | XV |
| 11,389 | Smith, J. W. Sheet-metal ea | Jnly 25, 1854 |  |
| 11, 702 | Smith, Marvin. Water meter- | Sept. 19, 1854 | 入1. |
| 10, 643 | Smith, Nathan, and A. Crandall. Maehines for grinding cotton ear | Mar. 14, 1854 | II. |
| 10,560 | Smith, Solomon, assignor to S. Smith and Willian Sehoalor. Partieoloring maehines. | Feb. 1, 185 | IV. |
| 11, 273 | Smith, Thomas 13. Cow eatehors | July 11, 1854 |  |
| 11, 336 | Smith, William W. Buekles | July 18, 1854 | XVI. |
| 10,835 | Snell, Varanes. Maehines for eutting an | Apr. 25, 1854 | XVI. |
| 11,307 | Snow, George B. Mode of ringing bells | July 11, 1854 | XXII. |
| 11, 337 | Suyder, Alram. Railroad-ear truek. | July 18, 1854 |  |
| 11,340 | Snyder, John F. Metallie fire-plaees | July 18, 1854 | V |
| 10,583 | Snyder, John G., and Joseph Young. Secd plant | Feb. 28, 1854 | I. |
| 10, 809 | Sohn, Anthony. Machines for filling match fran | Apr. 18, 1854 | I |
| 10, 604 | Sollenberger, Joseph. Carriage bra | Mar. 7, 1854 |  |
| 10,745 | Same............. Training vines..................................................... | Apr. 4, 1854 | I. |
| 11,304 | Southworth, Albert S., and J. J. Hawes. Taking dagnerreotypes for stereoscopes. | Jnly 11, 1854 | XVII |
| 10,461 | Soule, Charles IR. Threshers and separators of grain | Jan. 24, 1854 |  |
| 10,446 | Souther, George. Tires for carriage who | Aug. 1, 1854 |  |
| 10, 415 | Spafforl, J. P. Sat gummers............................................. | Jan. 10, 1854 | XIV. |
| 11, 250 | Spangler, Washington, assignor to himself, E. I. Chambers and W.F. Wilson. Augers, gimlets, \&e. | July 11, 1854 | XIV. |
| 10,936 | Spear, Mathew. Miter box- | May 16, 1854 | XIV. |
| 12, 105 | Speed, John J., jr., and John A. Bailey. Shinglo | Dee. 19, 1854 | NIV |
| 11, 795 | Speer, Cornelins. Ginning and elcaning eotton | Oct. 10, 1854 | IM. |
| 11,019 11,234 | Speers, Noah W. Hydrant cap Speicht, Johm S Bricikkilns | Juno 6, 1554 | XV. |
| 12, 004 | Spenee, Nathaniel. Molds for pressing bonnet frames. (Antedated <br> Nov. 10, 1853) | July 24, 1854 Nov. 28, 1854 | XXI. |
| 10, 832 | Speneer, $\Lambda$., and A.Locsehner. Forming and hardening 1 | Apr. 25, 1854 | III. |
| 11, 535 | Spencer, Gcorge. Railroad-ear wint | Apr. 15, 1854 |  |
| 11, 573 | Spencer, Robert. Harness saddlotrees | Ang. 22, 1854 | XVI. |
| 11,576 | Sane - . . . . . Harness saddle | Aug. 22, 1854 | XVI. |
| 11,339 | Spilman, Peter. Cutting apparatus for laying off the sergo in gar- ments........................................................................... | July 18,1854 | X |
| 10,987 | Sprague, Alexander M. Flue bottom of | May 9, 1854 | I. |

List of persons whose patents for inventions and discoveries have expired, \&c.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 10,898 | Sprague, Alexander M. Pistons for steam engines | May 9, 1854 | VI. |
| 11,091 | Sprague, E. H. Locking up printers' forms. | June 13, 3854 |  |
| 10, 644 | Sprague, Welcome. Sced planters. | Mar. 14, 1854 |  |
| 11,332 | Spratt, James. Hernetical sealing |  | $\begin{aligned} & \text { XXII } \\ & \text { XIV. } \end{aligned}$ |
| 11, 813 | Squire, Jolin J. Sawing machine Staford Hiram. Rat trap...... | Oet. 17, 18.54 <br> Apr. 11, 1854 | $\begin{aligned} & \text { XIV. } \\ & \text { XXI. } \end{aligned}$ |
| 10,758 10,813 | Stafford, Hiram. Rat trap................-....-........-.-.................. | $\text { Apr. } 25,1854$ | IV. |
| 11, 093 | Stagg, David I. Loeks, in operating bolts and for controlling series of doors | June 13, 1854 | II. |
| 10,710 | Stagg, Thomas Gr. Maehines for tenouing blind slats, \&c............... | Mar. 28, 1854 | XIV. |
| 10, 521 | Standish, John, assignor to J. Standish and H. A. Miller. Machines for pegging boots and shoes. | Feb. 14, 1854 | XVI. |
| 11, 574 | Starr, Alfred A. Catamenial ameliorator .-............. | $\text { Aug. 27, } 1854$ | $\underset{\text { XXI }}{\mathrm{XX}}$ |
| 10,545 | Stearns D. \& II. Stretching and drying | Fcb. 21, 1854 <br> Dec. 12, 1854 | $\begin{aligned} & \text { III. } \\ & \text { III. } \end{aligned}$ |
| 12,074 | Stedman, George W, Sewing machine Stein, Louis. Revolving fans for apar | Dec. 12, 1854 | $\prod_{X V I .}$ |
| 12, 525 | Sterling, W. G. Planting hoes | Feb. 14, 1854 | I. |
| 10, 833 | Sterling, William G. Forming roofs | Apr. 25, 1854 | IX. |
| 11, 703 |  | Sept. 19, 1854 | VIII. |
| 11, 975 | Stevens, Joln Lee. Furnaces. (Patented in England October 1, 1852).. | Nov. 21, 1854 |  |
| 11, 622 | Stevens, Joshua. Chairs for exercising | Aug. 29, 1854 | III |
| 10, 994 | Stevens, M. W., and E. E. Kingsley. Sewin | May 30, 1854 July 181854 | $\begin{array}{ll\|} \text { IIT. } \end{array}$ |
| 11,334 | Stevenson, T. C. Washing machines | July 18, 1854 Oct. 17, 1854 | $\begin{aligned} & \text { XVII. } \\ & \text { XI. } \end{aligned}$ |
| 11, 814 | Stevenson, Richard B. Water pipes.... | Oct. 17, 1854 Oct. 31, 1854 | $\frac{\mathrm{XI} .}{\mathrm{V} .}$ |
| 11,876 | Stevenson, William J. Soldering furna | $\begin{array}{lr} \text { Oct. } & 31,1854 \\ \text { Jan. } & 3,1854 \end{array}$ | İ |
| 10,932 | Stewart, Linus. Saw-....-.......... | $\begin{array}{ll} \text { Jan. } & 3,1854 \\ \text { Dec. } & 5,1854 \end{array}$ | $\begin{aligned} & I V . \\ & X V I . \end{aligned}$ |
| 12,037 10,462 | Stewar't, Matthew. Manufacture of | Jan. 24, 1854 | XIV. |
| 11, 577 | Stillman, Paul. Counting machines.. | Aug. 22, 1854 | VIII. |
| 11, 949 | Stillson, George D. Excavating machine | Nov. 14, 1854 | IX. |
| 10,433 | Stimpson, C. W. Photographic-plate vise | Jan. 17, 1854 | XVIII. |
| 10,605 | Stoakes, James W. Apparatus for paying the seams of res | Mar. 7, 1854 |  |
| 11, 734 | Stockton, Joseph B. Spriugs to the knives of straw cutters | Sept. 26, 1854 | I. |
| 10,397 | Stoddard, Oren. Machinery for sawing logs. | $\text { Jan. 3, } 1854$ | XIV. |
| 10,906 | Stoddard, William. Rotary shingle maeli | $\text { May } 16,1854$ | $\begin{aligned} & \text { XIV. } \\ & \text { XIV. } \end{aligned}$ |
| 11,950 | Same . . . . . . . . . Shingle machine | Nov. 14, 1854 | $\mathrm{XIV} \text {. }$ |
| 12,038 | Stone, Amasa. Method of extinguishing fre in inaccessilyle place | Dec. 5, 1854 |  |
| 10,603 | Stone, R. J. R. Machine for boring and mortising earriage habs | Mar. 7, 1804 | $\frac{X I V}{X}$ |
| 11, 442 | Stone, Sandford. Self-loating and dumping car | $\begin{aligned} & \text { Aug. 1, } 1854 \\ & \text { Apr. 25, } 1854 \end{aligned}$ | $\frac{X}{X I X}$ |
| 10,834 | Storn, Willian M. Bullet molds | $\begin{aligned} & \text { Apr. } 25,1854 \\ & \text { May } \\ & 2,1854 \end{aligned}$ | $\frac{X X X}{X I X}$ |
| 10,846 11,391 | Same...... . . . . Chargers f Stouler, David. Ditching spat | July 25, 1854 | $\frac{X I X .}{I .}$ |
| 11,391 11,312 | Stomter, David. Ditching spate .............. | July 11, 1854 | र̇U. |
| 11, 498 | Stout, Thomas B. Car compling......................... . . . | Aug. 8, 1854 | X. |
| 11, 088 | Stowell, John. Stcering apparatu | Jume 13, 1854 | VII. |
| 11, 181 | Straub, Isaac. In grinding mills. | June 27, 1854 | XIII. |
| 11, 390 | Same.... Comr-cob cutter | July 25, 1854 |  |
| 11, 306 | Straw, Willis. Chain lrook. | Jnly 11, 1854 |  |
| 10,935 | Street, William II. Attaching blankets to cylinders for printing presses | $\text { May 16, } 1854$ | $\begin{aligned} & \text { XVIII. } \\ & \text { XI. } \end{aligned}$ |
| 10,969 | Strode, Joseplı C. Hydraulic rams | $\text { May } 23,1854$ | $\begin{aligned} & \text { XI. } \\ & \text { XI. } \end{aligned}$ |
| 11,621 | Same........ Pmppet valve for hydrauic rams | $\Delta u g .29,1854$ | VI. |
| 11, 333 | Stubblefield, Thomas. Steam gauges. | July 18, 1854 | V1. |
| 11, 444 | Stull, Jolm. Saw mills. | $\text { Aug. 1, } 1854$ | XIV. |
| 10,869 | St. Jolm, L. U. Hydrodynamic engi | May 2,1854 |  |
| 11, 305 | St. John, R. H. Bedstead fastenings | July 11, 1854 | XVII. |
| 10,968 | Suggert, Lewis C. Proccsses for treating lemp | May 23, 1854 | IV. |
| 11, 182 | Sumner, Thomas. Steam hammers | June 27, 1854 |  |
| 10,580 | Summer, William. Organs. | Sept. 25, 1854 | $\begin{aligned} & \text { XXII. } \\ & \text { XVII! } \end{aligned}$ |
| 16, 200 | Surcery, William P. Cigars. | Feb. 28, 1854 | $\begin{aligned} & \text { XVII!. } \\ & \text { VIII. } \end{aligned}$ |
| 10, 423 | Swaim, James. Magnetie toy called the Magical Cup | Jan. 10, 1854 Aug. 28, 1854 |  |
| 11,575 | Swartz, David and Samuel. Fastenings of plow | Aug. 22, 185 | $\frac{\mathrm{I}}{\mathrm{I}}$ |
| 11,951 | Swartz, Jacob. Grain and grass liarvesters | Nov. 14, 1854 Jume 13, 1854 | $\stackrel{1}{\text { VI }}$. |
| 11, 089 | Sweeney, Peter. Steam boilcrs. | Junc 13, 1854 | V . |
| 11, 278 | Same.-.....-Hot-air frrna |  |  |
| 11, 536 | Sweet, Willian A. Fire-arms....-..........-........ | Aug. 1., 18.54 <br> Aug. | $\begin{aligned} & \text { XIX. } \\ & \text { III. } \end{aligned}$ |
| 11,597 | Swingle, Alfied, assignor to L. Townsend. Sewing mach | $\begin{gathered} \text { Aug. } 8,1854 \\ 121854 \end{gathered}$ | $\begin{aligned} & \mathrm{III} . \\ & \mathrm{XI} . \end{aligned}$ |
| 12,078 | Taft, Benjamin F. Boring machine.........-....-........................ | Dec. 12, 1854 <br> Tune 6, 1854 | XIV. |
| 11, 017 | Taft, Tinothy F. Device for opcrating cutter heads of planing machines | $\text { June 6, } 1854$ | $\begin{aligned} & \text { XIV. } \\ & \text { XII } \end{aligned}$ |
| 12, 107 | Taggart, Samuel. Clutch in machines for packing | $\begin{aligned} & \text { Dec. } 19,1854 \\ & \text { Nov. } 28,1854 \end{aligned}$ | $\begin{array}{ll} \text { XII } \\ \text { III. } \end{array}$ |
| 12, 005 | Talbot, Williant. Looms for wearing bags | $\begin{aligned} & \text { Nov. } 28,1854 \\ & \text { May } \\ & 9,1854 \end{aligned}$ |  |
| 10,899 | Tallent, Daniel. Construction of Tapley, Johri. Pumps............ | May 9, 1854 | IX. |
| 11,704 | Tapley, Johil. Pumps....-.-............-. .-. . | Jant. 3, 1854 | XVI。 |
| 10,379 12,039 | Tapley, Philip P. Masker, Thomas T. Regulating the furnace of hot-water apparatus. | Dee. 5, 1854 | V. |
| 10,647 | Taylor, Abijah. Steam-engine fancet valve................ | Mar. 14, 1854 | VI. |
| 11, 005 | Taylor, Donald. Bertli-knee former.... | June 6, 1854 | VII. |
| 10,933 | Taylor, H. S. Machine for paging boo | May 16, 1854 | XVIII |
| 12, 040 | Taylor, James. Corering cotton thread with wool........................- | Dec. 5, 1854 | III. |
| 11, 097 | Taylor, T. C. Soap compounds. (Patented in England Scptember 17, 1853) | June 13, 1854 | IV. |
| 11,098 | Same.... . Soap manufacturing process. | June 13, 1854 | IV. |

List of persons whose patents for inventions and discoverics have expired, fc.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11,510 | Taylor, Weatherill. Bushing sheaves for ships | Aug. 8, 1854 |  |
| 11,952 | Tayman, Benjamin J. Maehinery for stretching | Ňov. 14, 1854 |  |
| 10,946 | Teal, Peter, aud Charles Tyler, assignors to W.P. Cresson \& Co. Lathes for turning the interior surface of hollow ware. (Patented in Englaud April 19, 1853) |  |  |
| 12, 453 | Teese, Lew is, and Son. Forks for gold diggers | May 23, 1854 Nov. 27, 1851 |  |
| 11, 142 | Terry, Adrian R. Coating gas | June 20, 1854 | IV |
| 11, 308 | Terry, Jabez C. Screw wrenches | July 11, 1854 | II. |
| 10,372 | Terry John 13. Machines for sticking | Jan. 3, 1854 | II. |
| 11,767 | Thatcher, Joseph. Movements of gas | Oct. 3,1854 | IV. |
| 10,765 | Thayer, George W. Trusses for ironl bri | Apr. 11, 1854 | LX. |
| 11, 096 | Thomas, Earl of Dundonald. Composition for eoating telegraphic wires, and for other purposes. (Patented in England October 6, 1852).... | June 13, 1854 |  |
| 10,995 | Thomas, Robert S. Typograph...... ................................... | May 30, 1854 | II. |
| 11,919 | Thomas, Samuel T., and Eliza Ann Everett, administratrix of E. Everett. Loom beans. | Nกv. 7,1854 | III. |
| 10,837 | Thomas, W. B., and S. Hickok. Railinad-ear seats | Apr. 25, 1854 |  |
| 11, 815 | Thonin, C. F., and C. Stumer. Proecsyes for enameling | Oct. 17, 1854 | IV. |
| 11, 500 | Thompson, John, and A. S. Moore. Machines for eutting boot and shoo soles. (Antedated February 8, 1854). | Aug. 8, 1854 | XV |
| 12,220 | Thompson, Nathan, jr. Life-preserving seats | Oet. 16, 1854 | VII. |
| 11,258 | Thompsoin, John M. Parallel motion for beam | July 11, 1854 | VI |
| 11, 878 | Thompson, Julins. Odomet | Oct. 31, 1854 | VIII. |
| 10,760 | Thompson, Nathan, jr. Reversible life-bo | Apr. 11, 1854 | VII. |
| 12, 108 | Same.................... Life-preserving seats. (Patented in England September 18, 1854) | Dee. 19, 1854 | V |
| 10, 557 | Thompson, Smith. Spooling yarn from the cop | Feb. 21, 1854 |  |
| 11,276 | Thompsor, Willet. Ship | July 11, 1854 |  |
| 11, 184 | Thorn, Enocli. Ventilating sev | Jnue 27, 1854 |  |
| 11, 877 | Thorp, Samuel R. Odometers | Oct. 31, 1854 | VIII. |
| 10, 484 | Thring, Frederick J. Carpet bags... | 'Jan. 31, 1854 | XX |
| 12,086 | Tiebo \& Muhle, assignors to Tícbe, Muhle \& Homan. Casting the spouts of tea pots | Dee. 12, 1854 |  |
| 10,815 | Tiffiany, Joseph C. Ditehing | Apr. 25, 1854 |  |
| 11,976 | Tilchman, Samuel H. T. Inhaling | Nov. 21, 1854 |  |
| 10,380 | Tilton, William B. Gnitars | Jan. 3, 1854 | XVI |
| 12,006 | Tinsley, William. Miter bo | Nov. 28, 1854 | XIV. |
| 12,041 | Titns, William D. Lantern | Dee. 5, 1854 |  |
| 10,764 | Toll, Jose. lat traps. | Apr. 11, 1854 | XXII. |
| 11,341 | Tomlinson, Seymour. Macli | July 18, 1854 |  |
| 11,796 | Tongue, Henry. Steam engines. | Oct. 10, 18.54 |  |
| 10, 810 | Towers, Willian H. Machine for op | Apr. 18, 1854 | XVII. |
| 10, 934 | Same..... . . . . .Guit | July 25, 1854 |  |
| 11,977 | Same | Nov. 21, 1854 | XVIL |
| 10,838 | Towle, Simeon. Eye-bath syring | Apr. 25, 1854 |  |
| 10,485 | Town, Edward. Machine for pag | Jan. 31, 1854 | XVur |
| 12, c07 | Tracy, Edward H. Inclined sliding valves. | Nov. 28, 1854 |  |
| 11,583 | Treadwell, Daniel, assignor to H. II. and F. II. Stimpson. Operating damper's of furnaces | Ang. 22, 1854 |  |
| 11,578 | Treadwell, Francis C., jı: | 人ug. 22,1854 | V |
| 12, 704 | Trimble, Isaac R. Woorlen splice | Oct. 10, 1854 |  |
| 11, 765 | Tripp, Ervin 13. Printi | Oct. 3, 1854 | XVIIII. |
| 10, 712 | Trott, George. Oil cup for steam | Mar. 28, 1854 | VI. |
| 10,711 | 'Trotter, Jonathan G. Furnaces for zi | Mar. 28, 1854 | IV. |
| 10, 839 | True, Isaac. Reaction water wheel | Apr. 25, 18.54 | XI. |
| 10,451 | Trumbull, Harvey. Feed apparatus of | Jan. 24, 1854 |  |
| 11, 978 | Trussell, Thomas W. Dressin | Nov. 21, 1854 | XIII. |
| 10,561 | 'Tucker, Hiram, assignor to M. Tucker and Joseph Story. Applying colors to stone. (Patented in England September 24, 1853).......... | Feb. 21, 1854 |  |
| 12,008 | Tugnot, George. Rotary lathe............................ | Nov: 28, 1854 | XTV. |
| 11,501 | Tuiner, Elward. Hame fastenin | Aug. 8, 1854 | XVI. |
| 10, 949 | Turner, George B. Smut machin | May 23, 1854 | XIII. |
| 11, 183 | Turner, Hartwell L. Headgate for water whe | June 27, 1854 | XI. |
| 10,49.5 | Turner, Josial, and W. C. Sturoc. Winnower | Feb. 7, 18.54 |  |
| 11, 631 | Turner, Sidney S., assignor to Elmer Townsend. | Aug. 29, 1854 | III. |
| 10, 940 | Tyler, Pliilos B. Method of nibbing saw tceth | May 16, 1854 | XIV. |
| 11, 202 | Same - ..... Cordage machinery | June 27, 1854 | III. |
| 11,342 | Same....... Winding cord, rope, an | July 18, 1854 |  |
| 11, 502 | Tyler, P. B., and Berij. Lathrop. Rollers | Ang. 8, 1854 | XVII. |
| 10,602 | Tyng, L. B. Tail stocks for turning lath | Mar. 7, 18.54 | XIV |
| 10, 717 | Underhill, Henry. Hand printing press | Mar. 28, 1854 | XVMI. |
| 10, 483 | Uuderwood, Benjamin. Constrnction of printing block | Jan. 31, 1854 | x V1m |
| 11, 709 | Upton, Benjamin F. Apparatus for polishing daguerreotype plates | Sept. 19, 1854 | XVIII |
| 10,777 | Ustick, Stephen. Brick inachines. (Antedated November 15, 1853) | Apr. 18, 1854. | $\mathrm{XV} .$ |
| 12,109 10,687 | Utley, Grey. Boot-crimping machines Valentine, E., and A. Bradway. Mach | Dec. 19, 1834 Mar. 28,1854 | $\begin{aligned} & \text { XVI. } \\ & \text { XIV. } \end{aligned}$ |
| 11, 979 | Vanbunschohen, Isaac. La | Nov. 21; 1854 |  |
| 10, 996 | Vanduzen, B. C., assignor to J. B. Martin and B. C. Vanduzen. Furnace grate bars. | May 30, 1854. | V. |
| 11, 393 | Vanzant, John E. Arrangemont of indicating tubes for ascertaining draurht of and for trimming reasels. | July 25, 1854 |  |
| 10,840 | Van Allen, C. D. Invalid bedsteads.. | Apr. 25, 1854 | VII |

List of persons whose patents for inventions and discoveries have expired, \&c.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 590 | Van Anden, William. Maehines for rolling shoulders | Aug. 22, 1854 | $\frac{\pi}{V I I} .$ |
| 11, 394 | Van Antwerp, Abraham. Paddle $\overline{\text { J }}$ | Nov. 28, 1854 | XIV. |
| 12, 009 | Van Fleet, Daniel. Planing machine.... | Nov. 28, 1854 |  |
| 12, 777 | Vau Hoesen, Levi, assiguor to Now Piano-forto stools | Det. 3, 1854 <br> Aug. 29, 1854 | $\begin{aligned} & \text { XVII } \\ & \text { XI. } \end{aligned}$ |
| 11, 630 |  |  |  |
| 11, 106 | Vietory, Edmund, assignor to D. M. Lindloy and G. Goulding. chinery for wool spinning. | June 13, 1854 June 13, 1854 | $\begin{aligned} & \text { III. } \\ & \text { II. } \end{aligned}$ |
| 11, 099 | Vitally, Antlony, and Carl Kolb. Seeu | Oct. 10, 1854 | XIV. |
| 11,797 | Valkening, Henry P | June 6, 1854 | VI. |
| 10, 999 | Waddell, Robert. Balan | Oct. 24, 1854 |  |
| 11,844 | Wade, Oron W. Stoves | June 6, 1854 | XII. |
| 11, 024 | Wade, Robert M. Lubri <br> Wait, I. T. and L. J. Se | Aug. 15, 1854 | II. |
| 12, 010 | Wakeley, William. Metal drills ..................... | Nov. 28, 1854 |  |
| 10,997 | Waley, William, assignor to Jonathan Whipple, jr. blocks. | $\begin{aligned} & \text { May } 30,1854 \\ & \text { July } 20,1854 \end{aligned}$ | XII. |
| 12, 610 | Walker, Joseph. Halling cotton sec | July 11, 1854 |  |
| 11,315 | Walker, Matthew, assignor to $M_{r}$ Walker \& sons. Hron picket fence.. | Aug. 1, 1854 | XVII. |
| $\begin{aligned} & 11,451 \\ & 11,047 \end{aligned}$ | Walker, William B. Manufacture of brooms ............................. meister. Blowing fan | June 6,1854 | II. |
| 10,416 | Walworth, Caleb C. Float valve for discharging eondensed water . ${ }^{\text {a }}$. | Jan. 10,1854 | IX. |
| 11, 311 | Ward, William E. Mode of manufaeturing iron slats for window blinds. Warlell, Charles P. S. Machine for cutting tonons. | Aug. 29, 1854 | XIV. |
| 11,625 | Wardwell, Charles P. S. Machine for cutting tonons .i.................. |  |  |
| 11, 346 | Wardwell, George 1, assignor to Machines for pegging boots and shoes...................................... | $\text { July 18, } 1854$ | $\begin{aligned} & \text { XVI. } \\ & \text { XXI. } \end{aligned}$ |
| 10, 436 | Ware, Charles T. P., assignor to D. C. Morchead. Clasps... | Aun. 29,1854 |  |
| 11, 62.4 | Warlick, Noalı. Horse-shoeing app | Sept. 29, 1854 | III |
| 11, 654 | Warner, Daniol, jr. Mraehinery for | Jan. 1\%, 1854 | XX |
| \$6, 434 | Warren, Ira. Tonsil instrum | Aug. 1, 1854 | XI |
| ,11,450 | Warth, Albin. Fire engines | Oct. 10, 1854 | XI |
| -11, 11,845 | TVarwick, William. | t. $24,185.4$ | X |
| 11, 185 | Washburn, Philo, İ. G. O. White, and Georgo A. Copel | June 27, 1854 | X |
| 11, 914 | Washington, B. H. Means for direct | Nov. ${ }^{\text {7 }} 1854$ |  |
| 11,980 | Waterbury, Milan. . Seed planter | Dec. 12, 1854 | VI. |
| 12, 079 | Waterman, H. Condensers | Apr. 18, 1854 | XI |
| 10, 778 | Waterman, Stephen. Cilcular-saw | Aug. 29,1854 | XV |
| 11, 233 | Waters, E. Breast cups | Aug. 1, 1854 |  |
| $\begin{aligned} & 11,432 \\ & 11,981 \end{aligned}$ | Watson. William. Stone and marble saws (Patented in England May 22, 1852) | Nov. 21,1854 | IV. |
| 11, 816 | Wayne, Henry. Joint for toilet | $\begin{aligned} & \text { Oct. } 17,1854 \\ & \text { May } 2,1854 \end{aligned}$ |  |
| 10, 870 | Weare, John M. Milkers' proter | July 25, 1854 | II. |
| 11, 396 | Webl, Benjamin. Pol | Dec. 5, 1854 | XI. |
| 12,042 | Webb, Ellis. ${ }^{\text {Webl }}$ Joseph W. Portabl | Feb. 7,1854 |  |
| 11, 539 | Webb, Timothy U. Insulators for lig | Aug. 15, 1854 |  |
| 10, 688 | Webber, Elbridge. Ships blo | Mar. 28,1854 |  |
| 10, 871 | Same . . . . . . . . Rotary planing knifo | Mov. 7,1854 |  |
| $\begin{aligned} & .11 ; 915 \\ & 120 \end{aligned}$ | Same............ Machinery for | Dec. 5, 1854 |  |
| 11, 764 | Webster, Benjamin. Mosquit | Oct. 3, 1854 | XVII. |
| 10, 767 | Webster, John. Lubricator. | Apr. 11, 1854 |  |
| 10, 529 | Webster, Jolm, and O. Sponcer, assignors todol | Mar. 28,1854 |  |
| 10, 713 | Webster, William. Machines for bo | June 27, 1854 | XXI. |
| 11, 186 | Weed, Monry. hode of constructing | Nov. 28, 1854 | IT. |
| 12,011 10,872 | Weed, Theodore E. Sown bit | May 2,1854 | II |
| 10,872 | Weeks, Danicl P. Hot-air fu | Вec. 12, 1854 | V |
| 12, 110 | Samo........ Oven cooking-r | Dec. 19, 1854 |  |
| 11, 706 | Weeks, John J. Sansage stuffer | Sept. 19, 18.54 |  |
| 11, 735 | Same. . . . . Harvesters of grain | June 13, 1854 | III. |
| 11, 105 | Weissenborn, Gustavas. Thernio-udor | Nov. 17, 1854 | XI. |
| 12,081 | Wiemar, Jaeob. Door loeks ......... | Dec. 12, 1854 | II. |
| 10,486 | Wiemer, Peter L. Steam hamm | Jan. 31,1854 |  |
| 10,727 | Wells, David A . The preparatio | Apr. 11,1854 | X. |
| 11,310 | Wells, Moses D. Brakes for light | Aug. 15, 1854 |  |
| 11,538 | Samo............. | Sept. 26, 1854 | XVI |
| 11, 71736 | Welsh, Joseph. Loom | Oct. 3, 1854 | III. |
| 10,463 | Werner, Carl E. Distilling appan | Jan. 24, 1851 | IV. |
| 11,626 | West, Joseph D. Hydraulic ram | Ang. ${ }^{\text {A }}$ Nov, 14.1854 | XI |
| 11, 953 | Westgate, Orson. Saw gange ...... | June 13, 1854 | XIII. |
| 11, 104 | Westinghouse, Georgo. Endless-chain horse-power-....................... |  |  |
| $\begin{aligned} & 11,611 \\ & 11,143 \end{aligned}$ | Westrap, Walter. Charles E., John and Sammel. Ordinary and superhoated | Jume 6, 1854 | $\mathrm{X}_{\mathrm{V}}$ |
|  | steam eonbined for heating purpo | June 20, 21854 | I. |
| 10,874 | Whaten, Soth. Hay knives | Mar 9, 1854 | I. |
| 10,877 | Wheeler, Clark. Beehi |  |  |

List of persons whose patents for inventions and discoveries have expired, fo.-Continued.

| No. | Name and invention. | Date. | Class. |
| :---: | :---: | :---: | :---: |
| 11, 235 | Wheeler, M. J., G. W. Rogers, H. W. Picree, and M. B. Tidey. Beveling plane | July 4, 1854 | XTV. |
| 12, 012 | Wheeler, William. Wa | Nov. 28, 1854 | XVய. |
| 11, 020 | Whipple, James A. Meehanism for oporating pumps ................ | June 6, 1854 |  |
| 11, 189 | Whipple, M. D. and L. W., assignors to L. W. Whipple and R. B. Fitts. Process of engraving or printing npon glass | June 27, 1854 | XVII. |
| 10,437 | White, Lewis B. 'Irusscs............. | Jan. 17, 1854 |  |
| 10,483 | White, Le lioy S. Fnniture casters .-.................................. | Jan. 31, 18.54 | XVII |
| 11, 657 | White, Le Roy S., assignor to L. S. White, Lewis White, and A. G. Stevens. R̉ailway lanps. | Sept. 5, 1854 |  |
| 11,506 | White, L. S., assinnor to B. Lathrop and P. B. Tyler. Furuituro casters. | Aug. 8, 1854 | XVII. |
| 11,540 | White, William A. Proeess for printing long-napped fab | Aug. 15, 1854 | XVLI. |
| 11, 149 | White, Stephen. Padlocks | Junc 20, 1854 |  |
| 11,627 | Whitehead, Jesse. Counter-twist spced | Aug. 29, 1854 | III |
| 11, 579 | Whiteley, Abner. Track clearers | Ang. 22, 1854 |  |
| 11, 710 | Same......... Grain and | Sept. 19, 1854 |  |
| 12,447 | Whitney, Eli. Fire-arms | Aug. 1, 1854 | XIX. |
| 11, 463 | Whitall, J. W., and W. W. Pendl | Aug. 1, 1854 | XXI. |
| 11, 251 | Wiekersham, John B. Foundation | July 1, 1854 |  |
| 10, 615 | Wiekersham, William. Sewing machines. | Mar: 7, 1854 | III. |
| 11,503 | Same .............. . Self-heating sino | Aug. 8, 1854 |  |
| 18,068 | Wiekerslam, Wm. Sewing maehines (A) | Dee. 20, 1854 | III |
| 18,069 | Same.........-Sewing machines (B) | Dec. 29,1851 | III. |
| 11, 708 | Wieks, Loren J. Method of operating guide rollers or feed elamps in sawing machine | Sept. 19, 1854 | X |
| 11, 102 | Wightman, James. Steam boilers | June 1:3, 1854 |  |
| 11, 580 | Wilber, Plilander. Cheese presses | Aug. 22,1854 | XII. |
| 10,683 | Wilbur, Alexander. Arachines for join | Mar. 21, 1854 | XIV. |
| 10,684 | Same........-. - Crozing machine | Mar. 21, 1854 | XIV. |
| 11, 769 | Wilcox, John, and S. A. Whitridge. Sow | Oct. 3, 1854 |  |
| 11, 655 | Wild, Georgo L. Stringed mrusical instr | Scpt. 5, 1854 | XVIII. |
| 10, 714 | Wilder, R. A. Railroad-ear wheels | Mar. 28,1854 |  |
| 11, 880 | Same .... Arrangement in spark | Oct. 31, 1854 |  |
| 11,398 | Willard, Simon. Portable bedstead | July 25, 1854 | XV |
| 11, 449 | Same - .-. .-. Bedstead. | Aug. 1, 1854 |  |
| 11, 397 | Williams, Charles. Mode of fitting head | Jnly 25.1854 | XIV. |
| 11, 817 | Williams, E. D., and 'T'. Tjrrell. Brick presses | Oct. 17, 1854 | XV |
| 10,526 | Williams, Henry S. Apparatus for controlling | Feb. 14, 1854 | VI. |
| 11, 799 | Williams, Irvin A. Loconotive lamp..... | Oct. 10, 1854 |  |
| 11,713 | Willians, Johu, assignor to F. Curtis \& Co. | Sept. 19, 1854 | VIII. |
| 10, 873 | Williams, Parley. Slotting machino | $\begin{aligned} & \text { May } \\ & \text { July } \\ & 25 \\ & \hline \end{aligned} 1854$ | XIV. |
| $\begin{aligned} & 11,393 \\ & 11,881 \end{aligned}$ | Willis, Daniel. Apparatus for cooking | Oet. 31,1854 | X |
| 12, 116 | Wilson, Allen B., assignor to W. P. N. Fitzgerald. Sewing | Dee. 19, 1854 | III. |
| 11, 073 | Wilson, Charles A. Operating valves for steam pumps | June 13, 1854 | VI. |
| 11, 916 | Wilton, Charles. Locks | Nov. 7, 1854 | II. |
| 11, 402 | Wilson, D., assiguor to W. F. Pratt, G. W. Josworth, and I. Mr. Bird. Thimbles for stove pipes. | July 25, 1854 | V. |
| 11,344 | Wilson. G. F., and J. M. Whiting. Machines for threading screws. (Patented in England April 4, 1854) | July 18,1854 | 11. |
| 10,621 | Wilson, Joseph. Self-acting railroad switehes | Mar. 7, 1854 | IX. |
| 10, 417 | Wilson, Stephen D. Valvo and valvo seats of ste | Jan. 10, 1854 | VI. |
| 10, 901 | Winans, Ross and Thomas. Locomotivo fire-box | May 0, 1854 | VI. |
| 10, 971 | Samo...... Locomotivo tender. (Autedated May 9, 1854) | May $23,18.5$ | VI. |
| 11, 144 | Winchester, Josseph Ih. Mode of raising and letting fall carriage tops. | Jmine 20, 1854 |  |
| 12, 083 | Winsor, Daniel I. Ships' windlasses | Dec. 12, 1854 | XII |
| 11, 207 | Winter, Archibald. Machine for sawin | Sept. 19, 1854 | XIV. |
| 11, 737 | Wisner, Joel. Washing machino | Sept. 20, 1854 | XVII. |
| 10,682 | Wolf, David and Herman. | Mar. 21, 1854 |  |
| 10,998 | Wood, Brown S. Kinitting machines | Juno 6, 1854 | III. |
| 11, 103 | Wood, G. W., and L. C. Webster. Ciunal | June 13, 1854 |  |
| 11, 187 | Woodbridge, WV. E., assignor to Charles Humphrey. | June 27, 1854 | XXIT. |
| 11, 504 | Woodbury, II. E. Doeument file or hol | Aug. 8, 1854 | XVILI. |
| 10,512 | Woodbury, J. A. Planing mach | Felo 7, 1854 | XIV. |
| 10, 527 | Woodruf, Jacob D, and J. II. Butterworth | Feb. 14, 1854 | 1X. |
| 11, 400 | Woods, Leonard. Hedre trimmer | July 25, 1854 |  |
| 11, 882 | Woodward, A. S., and B. F. Bartlett. Machinery for entting rags for making paper | Oct. 31, 1854 |  |
| 11,309 | Wood ward, Thomas B. Mrills for grindiı | July 11, 1854 | XIII. |
| 11,800 | Same........... Smat machines - ........................... | Oct. 10, 18.54 | XILI. |
| 11, 985 | Woodward, Stephen, assignor to S. Woodward, J. P. Nelson, and A. C. Carroll. Apparatus for drying clothes . | Nov. 21, 1854 | XVII. |
| 12,016 | Woodworth, Arad, 3d, and Georgo Chamberlain. Maehinery for making rope and cordago | Nov. 28, 1854 | III. |
| 10, 000 | Woolman, Enoch. Arrangement of friction roller in inclined-plano hinges. | May 9,1854 | II |
| 11, 801 | Woolsey, Edward J. Construction of sugar | Oct. 10, 1854 | IV. |
| 11, 628 | W oolten, John. Nail machines | Aug. 29, 1854 |  |
| 11, 635 | Worrall, Thomas, assignor to Miffin Paul. Multiform molding plano. | Aug. 29, 1854 | $\frac{\mathrm{XIV}}{\mathrm{IV}} .$ |
| 11, 541 | Wright, A. S. Gold amalcamator... | Aug. 15, 1854 | II. |
| 11, 846 | Wright, Benjamin H. Rotary steam | Oct. 24,1854 | VI. |

List of persons whose patents for inventions and discoveries have expired, \&.c.-Continued.


# ALPHABETICAL LIST 

OF
PERSONS WHOSE PATENTS FOR DESIGNS MAVE EXPIRED DURING THE YEAR 1868.

| No. | Name and iurention. | Date. |
| :---: | :---: | :---: |
| 2,083 | Alden, Augustus E. Design for a phot | June 13, 1865. |
| 1,366 | Allen, Robert, assignor to A. Smith. Carpet desi | Feb. 5, 1861. |
| 2,087 | Bailey, Robert M. Skirt border | June 13, 1865. |
| 1,396 | Barstow, A. C. Stovo ... | Mar. 26, 1861. |
| 1,422 | Brewer, I. D. Label or | May 28, 1861. |
| 1,390 | Brewer, E. C. Clock case | Mar. 19, 1861. |
| 1,423 | Burleigh, M. C. Stoves | May 28, 1861. |
| 1, 433 | Chaffee, Chas. S., assignor to the Bay State Glass Company. Tumbler | June 25, 1861. |
| 1,487 | Chilson, Gardner. Parlor stove............................................... | Nov. 5, 1861. |
| 1,402 | Chubbuck, S. E., assiguor to self and J. Y. and S. E. Chubbuck. jr. Steam radi- ators................................................................................. | Apr. 30, 1861. |
| 1,971 | Clough, Isaac, and Vincent Fountain, jr. Lantern....... | July 19, 1864. |
| 1,982 |  | July 19, 1864. |
| 1, 424 | Cook, C. W. Balmotal sk | May 38, 1861. |
| 2, 006 | Cridge, Edmund J. Cook | Dec. 13, 1864. |
| 1,979 | Dezouche, Isaac, assignor to Bridge, Beach \& Co. Plates of a cook stove | July 26, 1864. |
| 1,980 | Same......................................... Plates of a parlor cook stove | July $26,1864$. |
| 2,037 | Same............................................ . Stove ornament | Mar. 14, 1865. |
| 1,455 | Dougherty, Andrew. | July 23, 1861. |
| 1,488 | Eshleman, J. Albert. Cravat | Nov. 12, 1861. |
| 1,475 | Faber, Eberhard. Trado mark | Oct. 8, 1861. |
| 1,438 | Fay, Josiah C. Plates of a cooling | July 16, 1861. |
| 1,990 | Frischet, Samucl. Ruff | Scpt. 20, 1864. |
| 1,406 | Gibbs, Samuel W., assignor to J. F. Rathbone. Cooki | May 7, 1861. |
| 1,404 | Same ......................................... . Stove $^{\text {S }}$ | May 7, 1861. |
| 1,405 | Same | May 7, 1861. |
| 1,427 | Same | May 28, 1861. |
| 1, 458 | Gibbs, Samuel W., assignor to Abbott and Noblc. Cap and base for a parlor stove. | Aug. 13, 1861. |
| 1,479 | Giraud, F. Picture frame | Oct. 20, 1861. |
| 1,505 | Glominski, Antoine, A. E. Powers, administrator of. Floor cloth | Dcc. 3, 1861 |
| 1,440 | Gorham, J., G. Thurber, and L. Dexter, jr. Spoon and fork handles | July 16, $1861^{\circ}$ |
| 1,439 | Same ................................. ${ }_{\text {Handles }}$ of table-spoons and forks.. | July 16, $1861^{\circ}$ |
| 1, 471 | Same | Sept. 3, $1861{ }^{\circ}$ |
| 1,466 | Greene, William A. Laundry | Aug. 13, 1861. |
| 1, 425 | Greenwood, Miles. Pump | May 28, 1881. |
| 1,38\% | Hainemann, S., assignor to self and Julius Negbaur. | Feb. 20, 1861. |
| 1, 421 | Hawley, Samucl R. Hat | May 28,1861. |
| 1, 434 | Hayden, H. W. Mat for dagucrrcotype | Jturo 25, 1861. |
| 1,506 | Holt, John. Rolling pin | Dcc. 10, 1861. |
| 1,391 | Horton, Jas., and J. Martino, assignors to D. Stuart and R. Peterson. | Mar. 19, 1861. |
| 1,442 | Horton, Jas., and J. Martino, assignors to Stuart and Petcrson. Plates of a cooking stove | July 16, 1861. |
| 1,441 | Same...... Pla | July 16, 1861. |
| 1,484 | Hotchkiss, H. K. Clock caso | Oct. 29, 1861. |
| 1,435 | Hutchinson, Jas., assignor to J. E. Whipple. Oil | Juno 25, 1861. |
| 1,292 | Ingraham, Elias. Clo | Mar. 19, 1861. |
| 1,426 | Johnson, Albert F. Trade mark | May 28, 1861. |
| 1,437 | Kolty, Gibbons L. Window-shade mat | July 9, 1861. |
| 1, 473 | Knapp, Gilbert. Cook's storo | Sept. 3, 1861. |
| 1,386 | Long, John. Cooking stove. | Fob. 19, 1861. |
| 1,507 | Lyons, Thos., assignor to Russell and Erwin Manufacturing Company of Now Britain, Conn. Horse spur. | Dec. 24,1861. |
| 1,428 | Maynard, Edward, assignor to G. L. Kelty, of New York. Curtain loops | May 28, 1868. |
| 1,436 | McDuff, Jas., assignor to N. McGraw and MI. A. Taylor. Coffins. | June 25, 1861. |
| 1,474 | Mcrseredu, Jacob, assignor to W. P., A., and J. Abendrotl. Cook's stove | Scpt. 17, 1861. |
| 2, 082 | Mills, Fisk. Bust of Abraham Lincoln | June 6, 1865. |
| 2, 004 | Moore, Michael. Table caster | Dcc. 13, 1864. |
| 1, 429 | Morrisett, Jas. J., assiguor to Jacob L. Dodge. Hats | May $28,1861$. |
| 1,486 | Same | Oct. 29, 1861. |
| 1,480 | Ney, E. J., assignor to Lowell Manufacturing Company. Carpet | Oct. 22, 1861. |
| 1,367 | Same.. | Fcb. 5, 1861. |
| 1,368 | Samo | Fcb. 5, 1861. |
| 1,481 | Same | Oct. 22, 1861. |
| 1,482 | Same | Oct. 22, 1861. |
| 1,393 | Samo | Mar. 19, 1861. |
| 1,394 | Samo | Mar. 19, 1861 |
| 1,395 1,443 | Sam | Mar. 19, 1861. |
| 1, 444 | Sam | July 16, 1861. |
| 1, 445 |  | July 16, 1861. |
| 1,446 | San | July 16, 1861. |

Alphabetical list of persons whose patents for designs have expired, \&e.-Continued.

| No. | Name and invention. | Date. |
| :---: | :---: | :---: |
| 1,447 | Ney, E. J., assignor to Lowoll Manufacturing Company. Carpet pattern | July 16, 1861. |
| 1,448 |  | July 16, 1861. |
| 1,449 | Same.. | ${ }^{\text {July }}$ July 16, 1861. |
| 1, 1,450 | Same.. | July 16, 1861. |
| 1, 15 | Same.. | July 16, 1861. |
| 1,459 | Same. | Aug. 13, 1861. |
| 1, 460 | Same. | Ang. 13, 1861. |
| 1,461 | Same. | $\begin{aligned} & \text { Aug. 13, } 1861 . \\ & \text { Aug. 13. } 1861 . \end{aligned}$ |
| 1,462 | Same. | Aug. 13, 1861. |
| 1, 1463 | Same | Aug. 13, 1861. |
| 1,464 | Same. | Aug. 13, 1861. |
| 1, 972 | Same | July 19, 1861. |
| 1,973 | Same. | July 19, 1861. |
| 1,974 | Same. | July 19, 1861. |
| 1,975 | Same. | July 19, 1861. |
| 1,976 | Same. | July $19,1861$. |
| 1,977 | Same. | $\begin{aligned} & \text { July } \\ & \text { July } 19,1861 . \\ & 1861 . \end{aligned}$ |
| 1,978 | Same | Nov. 15, 1861. |
| 2, 000 | Same. | Nov. 15, 1861. |
| 2, 001 | Same. | Nov. 15, 1861. |
| 2,002 | Same | Nov. 15, 1861. |
| 2,003 | Same. | Nov. 15, 1864. |
| 2,008 | Same. | Dec. 13, 1864. |
| 2,009 | Same. | Dee. 13, 1864. |
| $\stackrel{\text { 2,010 }}{2,011}$ | Same <br> Same | Dec. 13, 1864. |
| 2, 012 | Samo. | Dec. 13, 1864. |
| 2,019 | Same. | Jan. 17, 1865. |
| 2,020 | Samo. |  |
| -2,021 | Same. | Jan. 17, 1865. |
| $\stackrel{2}{2,022}$ | Same | Jan. 17, 1865. |
| 2,025 | Same. | Jan. 24, 1865. |
| 2,026 | Same. | Jan. 24, 1865. |
| 2, 046 | Same | Apr. 11, 1865. |
| 2,047 | Same | Apr. 11, 1865. |
| 2,048 | Same. | Apr. 11, 1865. |
| 2,049 | Same. | Apr. 11,1865. |
| $\stackrel{2}{2,050}$ | Same | A pr. 11, 1865. |
| $\stackrel{2}{2,073}$ | Same | May 30, 1865. |
| 2,074 | Same. | May 30, 1865. |
| 2,075 | Samo | May 30,1865. |
| 2,076 | Same | May 30, 1865. |
| 2,077 | Same | May 30, 1865. |
| 1,407 | Palmer, Caleb W. Ovens of cool | May Apr. $9,1861$. |
| 1,398 <br> 2, <br> 1 | Probst, Charlos. Window glass......... | $\begin{aligned} & \text { Apr. } 9,1861 . \\ & \text { June 13, } 1865 . \end{aligned}$ |
| -2,052 | Purdy, Helen P. W. Composition in alto-reliero | Apr. 11, 1865. |
| 1,467 | Riekerby, Daniel. Slate roofing. .................. | Aug. 13, 1861. |
| -2,029 | Ryan, Miehael F. Badge or breast pin | Feb. 7, 1865. |
| 1,477 | Sailor, S. H., assignor to Smith, Irancis, \& Wells. Gas-burning cylinder | Oet. <br> Oet <br> $88,1861$. <br> 8.181 |
| 1,476 | Same.......................................... Egg c 5 linder store |  |
| 1,403 | Sargent, J. B. Twine box <br> Scypes, D. M., and S. Smith, assignors to Smith, Francis, \& Wells. Conk |  |
| 1,456 | Scypes, D. M., and S. Smith, assiguors to Smith, Francis, \& Wells. Cook Same......-Summer rauge. | $\begin{aligned} & \text { July } 23,1861 . \\ & \text { July } 23,1861 . \end{aligned}$ |
| 1,457 1,468 | Shaw, Chas. II. Work holder. | Aug. 13, 1861. |
| 1,469 | Shaw, C. A., and J. R. Clark. Sewing maehine | Aug. 13, 1861. |
| 1,420 | Smith, G., and H. Brown, assignors to Leibrandt \& MeDowell. Cooking ster | May 14, 1861. |
| 1,430 | Smith, G., and 1I. Brown, assignors to Cox, Whitman \& Cox. Store ....... | May 28, 1861. |
| 1,453 | Smith, G., and H. Brown, assignors to North, Chase \& North. Iron doors. | July $16,1861$. |
| 1,400 | Standard, Walter W., assignor to Jewett \& Root. Parlor storos | Apr. 9, 186. |
| 1,399 | Stanard, W. W., assignor to Jewett \& Root. Stores | $\begin{array}{ll} \text { Apr. } & 9,1861 . \\ \text { Apr. } & 9,1861 . \end{array}$ |
| 1, 401 |  | Apr. 9, 1861. |
| $\stackrel{2}{2}, 036$ | Sterens, W. TV., assignor to N. P. Richards \& Co. Plates of a cook stov Stiekner F. IH. Burial case | Feb. 28, $14,1861$. |
| $\stackrel{2}{2,031}$ | Tatro, William B. Double lamp stovo. | Sept. 20, 1864. |
| 1, 483 | Terry, Henry. Clock-ease front..... | Oet. 22, 1861. |
| 1, 454 | Terry, Naney D. Bonnets | July 16, 1861. |
| 1,370 | Thompson, Heury G., assignor to Hartford Carpet Company. Carpet desi | Feb. 12, 1861. |
| 1,371 | Same.................. | Feb. 12, 1861. |
| 1,372 | Same | Feb. 12,1861. |
| 1, 374 | Sam | Feb. 12, 1861. |
| 1,375 | Same | Feb. 12, 1861. |
| 1,376 | Same | Feb. 12, 1861. |
| 1,377 | Same | Fcb. 12, 1861. |
| 1,378 |  | ob. 12, 1861. |

Alphabetical list of persons whose patents for designs have expired, \&.c.-Continued.

| No. | Name and inrention. | Dato. |
| :---: | :---: | :---: |
| 1,379 | Thompson, II. G., assignor to Hartford Carpet Company. Carpet design | Feb. 12, 1861. |
| 1,380 | Same......................................................................... | Fel. 12, 1861. |
| 1,381 | Samo. | Fob. 12, 1861. |
| 1,382 | Same. | Fob. 12, 1861. |
| 1,383 | Samo. | Fel. 12, 1861. |
| 1,384 | Samo. | Feb. 12, 1861. |
| 1,385 | Same. | Folv. 12, 1861. |
| 1,408 | Same. | May 7, 1861. |
| 1,409 | Same. | May 7, 1861. |
| 1,410 | Same. | May 7, 1861. |
| 1, 411 | Same. | May 7, 1861. |
| 1,412 | Same. | May May 7, 7, 1861. |
| 1,414 | Same. | May 7, 1861. |
| 1,415 | Same. | May 7, 1861. |
| 1,416 | Samo. | May 7, 1861. |
| 1,417 | Same. | May 7, 1861. |
| 1,418 | Same. | Nov. 19, 1861. |
| 1,489 | Same. | Nov. 19, 1861. |
| 1,490 | Same. | Nov. 19, 1861. |
| 1,491 | Same. | Nov. 19, 1861. |
| 1,492 | Same. | Nov. 19, 1861. |
| 1,493 | Same. | Nov. 19, 1861. |
| 1,494 | Same. | Nov. 19, 1861. |
| 1,495 | Same. | Nov. 19, 1861. |
| 1,496 | Same. | Nov. 19, 1861. |
| 1,497 | Samo. | Nov. 19, 1861. |
| 1,498 | Same | Nov. 19, 1861. |
| 1,499 | Same. | Nov. 19, 1861 |
| 1,500 | Same. | Nov. 19, 1861 |
| 1,501 | Samo | Nov. 19, 1861. |
| 1,502 | Same. | Nov. 19, 1861. |
| 1,503 | Same. | Nov. 19, 1861. |
| 1,432 | Towers, Levi L., assignor to Cutler, 'Lowers \& Co. Trado mark | June 11, 1861. |
| 1,478 | Uhlinger, Wm. P . School desk............-.-.......... | Oct. 8, 1861. |
| 1,389 | Vedder, N. S., and E. Ripley, assignors to N. S. Veddor. St | Mar. 5, 1861. |
| 1,388 | Vedder, N. S. Cook stoves .................................. | Mar. 5, 1861. |
| 1, 397 | Vedder, N. S., assignor to Ingraham \& Phillips. Cooking stove.... | Apr. ${ }_{\text {a }} 1861$. |
| 1, 431 | Vedder, N. S., assignor to Vincent, Tibballs, Shirk \& Co. Cook stov | May 28, 1861. |
| 2,013 | Vedder, Nicholas S. Plates of a stovo. | Dec. 13, 1864. |
| 2,014 | Same.......-.... Store plate | Dec. 13, 1864. |
| 2,015 | Vedder, N. S., and E. Ripley, assignors to N. S. Vedder. Stove plat | Dec. 13, 1864. |
| 1,993 | Webster, J. T., assignor to Elward Harvey: Floor oil cloth. | Oct. 18, 1864. |
| - 2,065 | Webster, J. T., assignor to Edward Harvey ....... . Same | May 9, 1865. |
| 1,419 | Young, Hiram. Teapot | May 7, 1861. |

# ALPHABETICAL LIST 

OF

## PATENTEES FOR THE YEAR 1868.

No.

79, 800
80, 891

80, 796
Same...............ee Martino, Beesley \& Currie, assignors)...........(Design.)
Abbott, Charles E., Malden, Mass. Extinguisher for lamps.
Abbott, Charles E., et al. (See Fowle, Joseph W., assignor.)
Abbott, Charles R. (See Farwell, W. M., assigior.)
73, 687 Abloott, Estes, Willoughby, Ohio. Construction of milk eans.
74, 874
75,104
75, 823
80, 10 万็
82, 268
Ubbott, F. M., Boston, Mass., and E. F. Fields, Lewiston, Maine. Stripper for carding cylinder.
Abbott, Henry B., Felicity, Ohio. Hillside plow.
Abbott, John H., Malden and Jeremiah A. Marden, Boston, Mass., assignors to John II. and Charles E. Abbott. Leather-splitting machine
Abbott, L. C., S. D. 'Tuttle, and M. L. Holt, Eaton, Ohio. School seat and desk
Abbott, Rogers A., assignor to self and Gustarns W. Ingalls, Woreester, Mass. Reed for melodeons
Abbott, Solon W. (See Chase, Willard W., assignor.)
Abbott, W. F., Marengo, M1. Measuring and tallying attachments to threshing machines.
Abbreuzzo, Onofrio, Italy. Aerial car. (Antedated July 15, 1868)
Same.......New York, N. Y. Orduance and other fire-arms. (Antedated Nov. 20, 1868)
Abel, William H., Greenville, R. $\dddot{\mathrm{I}}$. Device for converting motion
Same ...... Knitting machine
Same . ... Slecves of knitted carments (Antedated July 27 1868)
Same....... Knitting machine.

Abell, Olif, and Joseph Potter. (See Potter \& Abell.)
Abell, Peter F. (See Cabell, S. G., assignor.)
83, 434 Abraham, John, and Thomas R. Bayliss, England. Cartridges. (Patented in England March 20, 1868)
Absterdam, John, New York, N. X. Apparatus for refining iron and making steel
Same...... Process for refining iron and making steel.
Same...... $\Lambda$ pparatus for making stecl and refining iron .
Same.......Process for introducing gas fuel into a converter for making stecl and refining iron
Same...... Itanufacture of illuminating gas with other products
Absterdam, John, assignor to the First National Refined Iron and Steel Mann. facturing Company, New Xork, N. Y. Process for refining iron and steel........................................................................ (Rcissue)
Absterdam, John, and William Burnett. (See Burnett \& Absterdam.) (Extension.)
75, 824
83, 124
82, 474
84, 928
80, 892
76, 966
84, 526
3, 061
78, 854
82, 269

77, 157
82, 783
83, 435
77, 563
79, 801
83, 233

79, 429
77, 795

Achelis, George, Westehester, Pa., and Hermann Poppenhusen, Now York, N. $\bar{Y}$. Instrument for measuring distances.

Acker, George S., assignor to self and II. A. Lacey, Kalamazoo, Mieh. Car coupling
Acker, John W., Copenhagen, N. Y. Horso rako.
Aeker, William H., Tarrytown, N. Y. Clothes dryer
Ackerman, Henry, Pittsburg, Pa. Corn planter
Ackerman, John R., Edward B. Campbell, and Niram O. Golden, Dobb's Ferry, N. Y. Lamp burner.

Aekerson, Janes M., Lafayette, N. J. Sled brake.
Adair, Janes, Pittsburg, Pa. Card rack.
Adair, William, England. Pump. (Patented in England April 5, 1867)
Adams, Abel A., assignor to Russell W . and Forrest L. Pinney, Felchvilie, Vt. Head block.
Adams, Alexander. (See McMillen, Arthur W., assignor.)
Adams, A. J., assignor to self and Boyd P. Quiney, Portland, Oregon. Animal trap.
Adams, Anson T., Indianapolis, Ind. Furniture caster
Samo..... Washing machine
Adams, A. W., Now York, N. Y. Construetion of meter safes
Same...... Self-locking bolt for meter safes.
Adams, Calvin, Pittsburg, Pa. Post auger.
Adams, Charles E., et al. (See Ticks \& Doty, assignors.)
Adams, Charles R., ct al. (Sro Grecu Jacob, assignor).
Adams, Eliphalet H., assignor to selt and Charles F. Gardner, Detroit, Mich. Fifth wheel for carriages.

June 30, 1868.
May 12, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 73, 942 | A |
| 81, 722 | Adams, Hanson 17, Nemburyport, Mass. Machine for |
| 72, 959 | Adams, Mcury W, Milton, एa. Churn |
| 76, 134 |  |
| 80, 046 | Same......Philadelphia, Pa . $\mathrm{Br}^{\text {a }}$ |
| 74,028 | Adams, James U., Richficld, Mieh. Boil |
| 78, 911 | Same..... Packing for pis |
| 85, 196 | Adams, John, Findlay, Ohio. Sto |
| 77,564 | Adams, John, Pontiac, Mich. Ga |
| 78, 912 | Adams, John, Transfer, Pa. Hay raker and |
| 85, 350 | Adans, John, England. Revolving firc-arm. (Patented in England July 28, 1866). |
|  | Adams, John. (See Hannasy, Michael, assignor.) <br> Adams, Johm, and Albert Rhoades. (See Rhoades \& Ada |
| , 563 | Adams, Johm, and Albert Rhoades. (See Rhoades \& Ada |
|  | Adams, J. O., and E. A. Warficld. (See Aldrich, Robert H., assignor.) |
| 73, 276 | Adams, John Resco, Cisco, Cal. Railroad |
| 70, 173 | Adams, John W., Spring Creek, Wis. Car |
| 80, 797 | Adams, Joseph, Cleveland, Ohio. Wash boin |
|  | Adams, Joseph H. (See Martin, Heury A., assignor.) |
| 74, 476 | Adams, Levi, Amherst, Mass. Lubricators for axles, and mode of applying <br> them to axles. |
| 76, 0.33 | Same...... Carriage wheel |
| 83, 234 | Same...... King bolt and whifiletree pl |
| 81, 261 | A dams, L. J., and J. H. Esale, A ron, IIl. Gr |
| 73, 484 | Adams, Mayhew, Chilmark, Mass. Chock for whale |
| 75, 234 | Adams, Nelson B., San Francisco, Cal. Boat-detaching |
| 84, 402 | Adams, Oliver M., Milford, Mass. Boot crimper |
| 82, 058 | Adams, Otis, and James Hatch, San Francisco, Ca |
| 73, 277 | Adams, Ralph, Ottawa, Ill. Gate |
| 73, 485 | Adams, Sanford, Roston, Mass. Winno |
| 79, 176 | Same ..... Machine for making wire screens, |
| 82,059 | Adams, Thomas, assignor to sclf, James L. Romer, and Henry T. McCoun, son City, N. J. Lamp burner |
|  | Adams, William G., and Z. A. Willard. (See Willard \& Adams.) |
| 75, 537 | Adams, W. Juck, New York, N. Y. Card holder |
| 75, 718 | Adams, W. R., Independence, Mo. Corn cultivat |
| 84, 787 | Adamson, Alexander, Washington, D. C. Shoulder |
|  | Adamson, James M., and William Ross. (See Ross \& Adamson.) |
| 73, 220 | Adamson, William, Philadolphia, Pa. Holder |
| 79, 177 | Same...... Manufacture of leathe |
| 79, 178 | Same.....-Preparation of glue sto |
| 80, 108 | Addison, Edwin R., Wheeling, West Va. Machin |
|  | Addy, Charles J., and Albert G. Mead, (See Mcad \& Addy.) |
| 77, 236 | Adgate, Joseph J., Liberty, N. Y. Animal powe |
| 79, 293 | Adio, Patrick, England. Machine for clipping ho |
| 83, 585 | Adler, Max, assignor to sclf and Henry Breitwicser, Buffalo |
| 77, 933 | Adsit, Moses, Forrest, N. Y. Dranght at |
| 79, 887 | Adt, F., assignor to self and Elisha Turner, Wolcottville, Conn. Lamp |
| 76, 034 | Adt, John, assignor through mesue assignments to William Hart and George Hurford, Wolcottville, Conn. |
|  | Itna Nut Company. (See Candee \& Taylor, assignors.) |
| 79, 931 | Agate, John, Pittsford, N. Y. Becr cooler |
|  | Agnew, A., and S. W. Evans. (See Smith, Orren M |
| 74, 029 | Ahlborn, Augustus H., Lawrenceville, Pa. Mode of sccuring box metal in ca riage hubs |
| 77, 434 | Aiken, D. E. and A. A., Adrian, Mich. Splint |
| 85, 197 | Aiken, Henry, Pittsburg, Pa. Brick machi |
|  | Aiken, John II., et al. (See Bishop, Pendleton \& Aiken.) |
| 78,506 | Aiken, Walter, Franklin, N. II. Needle for knitting mac |
| 84, 603 | Aikin, Charles W., Decatur, Il . Wagon seat |
| 76,875 | Ainsworth, Seymour, Saratoga Springs, N. Y |
| 81, 572 | Ainsworth, Squirc, Pittsburg, Pa. Flexible pipe-joint coup |
| 82, 576 | Aitken, Henry, Scotland. Treating iron ores, \&c............ |
| 74, 477 | Akers, Thomas P., New York, N. Y. High and low water alarms for stea generators. |
| 75, 235 | Same...... Leakage measure, alarm, and |
| 78, 781 | Same.....Steam and water indicators for |
| 83, 898 | Akin, T. W., Patterson, N. Y. Milk can |
|  | Akin, Warrcn. (See Stewart, Gcorge W., assignor.) <br> Akins, William H., and Joseph C. Burritt, Ithaca, N. Y. Calendar clock. (Extension) |
| 79, 294 | Albee, James, assignor to Mosos Pond \& Co., Boston, Mass. Hot-air furnac |
| 83, 681 | Albec, Sewall, Wiscasset, Maine. Fishin |
| 75, 719 | Albee, Sylvestcr, Providence, R.I. Parlor coal siftor..........i................. |
| 3,113 | Albers, Henry, assignor to C. Albers \& Company, Warsaw, Ill. Trade mark. <br> (Design) |
| 77, 435 | Albert, C., Harrisville, Ohio. Shec |
| 80, 047 | Albertson, J., and S. C. Byers, assignors to James L. Haven and Jame son, Richmond, Ind. Hand loom. |
| 84, 982 | Albertson, James M., New London, |
|  | Alcott, Jolin H., et al. (See Bevans, Ira N., assignor.) |

## Date.

Feb. 4, 1868. Sept. 1, 1868. Jan. 7, 1868. Mar. 31, 1868. July 21, 1868. Fcb. 4, 1868. June 16, 1868. Dec. 22, 1868. May 5, 1868. June 16, 1868. Dсс. 29, 1868.

June 2, 1868.
Jan. 14, 1868.
May 26, 1868.
Aug. 11, 1868.

Feb. 18, 1868.
Mar. 31, 1868.
Oct. 20, 1868.
Scpt. 8, 1868.
Jan. 21, 1868.
Mar. 10, 1868.
Nov. 24, 1868.
Scpt. 15, 1868.
Jan. 14, 1868.
Jan. 21, 1868.
June 23, 1868.
Sept. 15, 1868.
Mar. 17, 1868.
Mar. 24, 1868.
Dcc. 8, 1868.

Jan. 14, 1868.
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July 21, 1868.
Apr. 28, 1868.
June 30, 1868.
Nov. 3, 1868.
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Mar. 31, 1868.
July 14, 1868.

Feb. 4, 1868.
May 5, 1868.
Dcc. 22, 1868.

June 2, 1868.
Dec. 1, 1868.
Apr. 21, 1868.
Sept. 1, 1868.
Sept. 29, 1868.
Feb. 18, 1868.
Mar. 10, 1868.
June 9, 1868.
Nov. 10, 1868.

Scpt. 18, 1868.
June 30, 1868.
Nov. 3, 1868.
Mar, 24, 1868.
July 21, 1868.
May 5, 1868.
July 21, 1868.
Dec. 15, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 76, 688 | Alden, |
| 83, 753 | Alden Char |
|  | Alden, Henry A. (See Judson, Thomas S., assig |
|  | Alden, Henry A., assignor to the New York Rubber Company, Matteawan, N. X. |
| ${ }_{76,480}$ | Same .....-India-rubber base ball |
|  | Alden, Milton, Auburn, N. Y. Morse rake |
|  | Alden Type Setting and Distributing Maehine Company. (See Slingerland, John T., assignor.) |
| 77, 436 | Aldrieh, David, assignor to Phelan and Coilender, New York, N. Y. Cuo |
| 2,903 | Aldrieh, Robert H., assignor to J. O. Adans and E. O. Warfield, Northampton, |
|  | Mass. Dusting brush...................................... (Reissue).. |
| 83,436 | Aldrieh, John H., assignor to self and John C. Whitin, Northbridge, Mass. Flyer for speeders. |
| 77, 945 | Aldridge, Hiram, Goshen, Ind., and Willis Bedford, Chicago, Ill, assignors to Hiram Aldridge. Horso-power |
| $\begin{aligned} & 80,893 \\ & 74,970 \end{aligned}$ | Ale, Ezra, Clearfield, Pa. Secretary................................................ |
|  | Alexander, Abram, assignor to Aloxander Bolt Manufacturing Company, Pittsburg, Pa. Furnace for heating bolt blanks |
| 76,035 <br> 2,886 <br> 8 | Same ...... Tool for shearin |
|  | Alexander, Charlos L., and Vietoria $\triangle$. Osborn, Washington, D. C. Book- |
| $\begin{gathered} 79,932 \\ 74,478 \end{gathered}$ | Alexander, C. M. M. Wa |
|  | Alexander, F. W., Baltimoio, Md. Muzzle-loading ordnanee. (Autedated Feb. |
| $\begin{array}{r} 85,351 \\ 84,983 \\ 2,905 \end{array}$ | Alexander |
|  | Alexander, Jabez, Naslua, N. II. Devic |
|  | Alexander, John, assignor to George W. Brown \& Company, Brooklyn, N. Y. |
| 80, 798 | Alexander, Johin F, assignor to self and Peter S. Miehie, Sholby, |
| $\begin{aligned} & 79,536 \\ & 84,045 \end{aligned}$ |  |
|  | Alexander, J. B. Washington, D. C. Botilo stopp |
|  | no......Device for raising and adjusting |
|  | Alexandor, Josepl B . |
|  | , |
| 77,34381,573 | Alexander, Robert, Eugeno City, Oregoul. Me |
|  | Alexander, Samuel T., Pittsburg, Pa. Railw |
| $\begin{array}{r} 2,860 \\ 3,000 \\ 76,967 \end{array}$ | Alga Chenieal Works (See Fougerat \& Tartiere, assigno |
|  | Same ..... Burinl casket........... ..............................(Design). |
|  | Alger, G. II., Ames, N. Y. Lifting jae |
| 75, 105 | Allaire, C. T., and Edwin Chapm |
|  | Allaire, Seaman, assignor to self, Robert Henry, and E. Wright Vail, Now York, N. Y. Carriage hub. |
| 80, 583 | Allard, Isaac, assignor to self and Frank A. Howard, Belfast, Maino. Serew driver. |
|  | Allen, Aaron H., Boston, Mass. Seat for publie bnildings..........(Extonsion). |
| $\begin{aligned} & 76,579 \\ & 77,437 \\ & 75,341 \end{aligned}$ | Allen, Albert F, Providenee, R.I. Hose coupling <br> Same.......Thimble pullo |
|  | Allen, Alexander, assignor to self, W. G. Wood, Johu G. Walker, and W. R. Walpole, Chieaco, III. Machine for cutting rass |
|  | Allen, Azró B. (See Crooker, Martin M., assignor.) |
| 80, 109 | Allen, B. F., and J. R. Ryerson, St. Albans, Maine. Fastening for boots and shoes. |
|  | Allen, Collis B., and Goorge Clayton. (See Clayton \& All |
| 77, 858 | Allen, C. F., Paw-Paw, Mich. Car truek. (Aut |
|  | Allen, Darius, et al. (See Taylor, O. H., assign |
| 76,372 | Allen, E. E., and F. M. Loveland. (See Claplin, Jos |
| $\begin{aligned} & 81,320 \\ & 76,135 \\ & 73,943 \end{aligned}$ | Allen, E. G., Boston, Mass. Steam safety valvo... |
|  | Allen, Edward M., Darlington, Md. Harvester cutt |
|  | Allen, Edwin, assignor to Allon Manufaeturing Company, Norwieh, Conn. |
|  | Allen, Elisha M. (See Willians, Giles is., assignor) |
|  |  |
| $\begin{aligned} & 81,125 \\ & 84,929 \\ & 76,689 \\ & 79,533 \end{aligned}$ | Allen, Enoel J., Rondout, |
|  | Allen, Ethan, Woreester, |
|  | Allen, E. W., Auburn, N. Y. Corn plante |
|  | Allen, George, assignor to B. W. Conroy, W conneetion |
| 82, 913 | Allen, George D., New York, N. Y. Eel Po |
|  | Same....il See Remington, William H., |
|  | en, Henry I., and Company. (See Hardin |
| 73, 221 | Allen, Horatio, Now York, N. Y. Conneeting the tubes with the heads of su face condensers. |
| 73, 768 | Allen, H . Nelson, and Georgo Weaver. (See Weaver \& Allen.) Allen, I . R., Charleston, ll . Apparatus for straighteuing |
|  | crooked legs |

## Date.

Apr. 14, 1868.
Nov. 3, 1868.

July 7, 1868.
July 7, 1863.
Apr. 7, 1868.

May 5, 1868.
Mar. 31, 1868.
Oct. 27,1868
May 19, 1868.
Aug. 11, 1868.
Mar. 3, 1868.
Mar. 31, 1863.
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July 14, 1868.
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Feb. 4, 1868
Ang. 11, 1868
July 7, 1868.
Nov. 17, 1868.

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Apr. 21, 1868.
Apr. 21, 1868.

Mar. 3, 1868.
Ang. 4, 1868.
Dec. 3, 1868
Apr. 14, 1868.
May 5,1868.
Mar. 10, 1868

July 21, 1868.
May 12, 1868.
Apr. 7, 1868.
Aug. 25, 1868.
Mar. 31, 1868.
Fob. 4, 1868.

Aug. 18, 1868
Doc. 15, 1868.
Apr. 14, 1868.
June 30, 1868.
Oet. 13, 1868

Jan. 14, 1868.

Tan. 28, 1868
Jan. 14, 1868

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 81, 321 | Allen, John, New York, N. Y. Lamp burner. (Antedated Aug. 12, 1868) | Aug. 25, 1868. |
| 76, 968 | Allen, John, Pughtown, Pa. Bed bottom. | Apr. 21, 1868. |
| 73, 068 | Allen, John, and Charles E. F. Lewis, Washington, D. C. Lamp-chimney fastener. | Jan. 7, 1868. |
|  | Allen, John B., and Charles S. Westland. (See Westland \& Allen.) |  |
| 73, 069 | Allcu, John F., New York, N. Y. Valve gear | Jan. 7, 1868. |
| 76, 580 | Allen, John F., Tremont, N. Y. Steam gene | Apr. 14, 1868. |
| 76, 581 | Same - . . Decarbonizing iron | Apr. 14, 1868. |
| 76,690 76,373 | Allen, J. G., Philadelphia, Pa. Spirit meter. <br> Alle, , | Apr. 14, 1868. |
| 76, 373 | Allen, J. Lathrop, assignor to solf and Marshall Lcfferts, New York, N. Y. Paper-eutting nachine | Apr. 7, 1868. |
| 79, 295 | Allen, J. S., and A. P. Wilkins, Allen's Grove, Wis. Key board for pianos, \&c. . | June 30, 1868. |
| 75, 342 | Allen, Leieester, assignor to self and Solomon P. Smith, New York, N. Y. Fluid metcr. | Mar. 10, 1868. |
| 80,698 | Allen, L. H., and John B. Wilford, Tamiaqua, Pa. Steam-ongine | Aug. 4, 1868. |
| 81, 454 | Allen, L. O., Gardiner, Maine. Caster for sewing | Aug. 25, 1868. |
| 84, 930 | Allen, Levi O., Gardiner, Maine. Stove-pipe damper. Same...... (See Hathaway, Richmond, assignor.) | Dee. 15, 1868. |
| 77,438 | Allen, Oliver E, New York, N. ${ }^{\text {V }}$. Car spring | May 5, 1868. |
| 80, 264 | Allen, Ransom, Salcm, Mich. Needlo for knitting | July 28, 1868. |
| 84, 247 | Allcn, Samuel L., Cinnaminson, N. J. Planting mach | Nov. 24, 1868. |
| 83, 817 | Allen, Samuel S., assiguor to self and John B. Morris, Riehmond, Ind. Oil blaeking for leatier | Nov. 10, 1868. |
| 73, 427 | Allen, Stephen M., Woburn, Mass. Artificial leather belting | Jan. 21, 1868. |
| 80, 048 | Samo | July 21,1868. |
|  | Allen, Stillman B. (See Nickerson, Hiram B., assignor.) |  |
| 84, 788 | Allen, Thomas R., Syraeuse, N. Y. Beehive |  |
| $\begin{aligned} & 75,508 \\ & 75,720 \end{aligned}$ | Allen, Truman P., Gowanda, N. Y. Feed Allen, William, assignor to Ames Plow |  |
|  | machine | Mar. 24, 1868. |
| 82,273 | Allen, William A., Med | Sept. 22, 1868. |
|  | Allen, William C., et al. (See Walker, Sylvest |  |
|  | Allender, John, deeeased, by Thomas Allender, exceutor, West Hampton, Mass. Mctallie grommets........................................................... (Extension) | June 19, 1868. |
| 75, 106 | Allender, William, New London, Conn. Casting aluminum plates on artifieial teeth |  |
| 77, 237 | Allerton, George M., New York, N. Y. Apparatus for raising sunken vessels. | Apr. 28, 1868. |
| 57, 859 | Same.......Forming tight seams | May 12, 1868. |
| 79, 933 | me...... Inflate | July 14, 1868. |
| 79, 934 | Same......Life preserve | July 14, 1868. |
| 74, 267 | Alley, J. A., Clifty, Ind. Combi | Feb. 11, 1868. |
|  | Allin, George. (Sce Harrison, Thomas J., assigno |  |
| 84, 837 | Alling, Calvin P., jr., Sylvan, Wis. Fol | Nov. 24, 1868. |
| 83, 437 | Alling, Prudden, Norwalk, Ohio. Vine eutter and garden cultivator eomb | Oet. 27, 1868. |
| 3,143 | Allinson, James, assignor to John Bromley \& Sons, Philadelphia, Pa. Carpet pattern $\qquad$ | Aug. 4, 1868. |
| 74, 268 | Allis, A. Q., Dayton, Ohio. Sulky plow | Feb. 11, 1868. |
| 74,785 | Same...... Machine for boring post | Feb. 25, 1868. |
| 79, 296 | Same...... Treadle for sewing ma | June 30, 1868. |
| 82, 060 | Allison, A. H., Charlottesville, Ind. Cultiva | Sept. 15, 1868. |
| 83, 899 | Allison, James, Cineinnati, Ohio. Hydrant | Nov. 10, 1868. |
| 78, 039 | Allison, J. M., Cranberry, Pa. Corn plan | May 19, 1868. |
| 84, 604 | Same | Dcc. 1, 1868. |
| 82, 475 | Allison, Robert, Port Carbon, Pa. Pumping | Sept. 29, 1868. |
|  | Allman, Herbert, and Frederick N. Gisborne. (See Gisborne \& Allman.) |  |
| 85, 352 | Allport. William, New Britain, Conn. Door b | Dec. 29, 1868. |
|  | Allstatter, N., and Frank Schurger. (See Sehurger \& Allstatter.) |  |
|  | Allyn, F. T., and J. C. Raymond. (See Raymond \& Allyn.) |  |
| 81,969 | Allyn, T. F., Nyack, N. X. Bow spring for railway ears | Sept. 8, 1868. |
| 80,049 | Allyn, William B., Boston, Mass. Key board for telegraph instrumo | July 21, 1868. |
|  | Almqvist, A. W., and F. W. Ofeldt. (See Ofeldt \& Almqvist.) |  |
| 77,565 | Alsing, Charles P., Nerr York, N. Y. Asphalt pavement | May 5,1868. |
| 76,374 | Alsop, Charles H., assignor to Joseph W. Alsop, Middletown, Conn. Brecchloading fire-arm. | Apr. 7,1868. |
| 81,574 | Alsop, Edwin, New York, N. Y. Hand mill | Sept. 1,1868. |
| 79, 537 | Alsop, Thomas, Elkhart, Hl . Mill-spindle spring | July 7, 1868. |
| 81, 455 | Same...... Governor for steam engines | Aug. 25, 1868. |
| 81,456 | Same...... Mode of attaching springs to mill spindles.............. | Aug. 25, 1868. |
| 77, 860 | Althouse, Jaeob, assignor to self and Joseph V. Winemiller, Cross Roads, Pa. Fertilizer | May 12, 1868. |
| 83, 235 | Alvord, Clark, Courtland, Wis. Drag bar | Oct. 20, 1868. |
| 84, 931 | Same...... Westford, Wis. Cultivator | Dec. 15, 1868. |
|  | Alvord, J. J., et al. (See Blinn, Alvord, \& Brewer.) |  |
| 79, 179 | Alvord, J. K., Fulton County, Ohio. Maehine for shearing sheep |  |
| 82, 673 | Same...... Delta, Ohio. Sheep-shearing device | $\begin{array}{ll}\text { Oet. } & 6,1868 . \\ \text { Nor. } \\ 3,1868 .\end{array}$ |
| 83,754 | Samo.......near Delta, Ohio. Flcecing cradle Amazeen, Christopher, New York, N. Y. Paper-bo | Nov. $3,1868$. |
| 84, 076 | Amazeen, Christopher, New York, N. Y. Paper-bos Ambler, A. J. (See Jauriet, Charles F., assignor.) | Nov. 17, 1868. |
| 83, 682 | Ambrun, Julius, Leavenworth, Kansas. Straw eu | Nov. 3, 1868. |
| 81, 726 | Ambruster, Charles S., assignor to self and Charles H. Riehman, Woodstown, <br> N. J. Hay fork <br> American Anti-Incrustation Company. (See Baker \& Dick, assignors.) | Sept 1,1868. |

Alphabetical list of patentees for the year 1868-Continued.


Date.

Mar. 24, 1868.
Feb. 18, 1868.

Feb. 11, 1868.
Feb. 25,1868
Feb. 25, 1868.
Feb. 25, 1868.
Feb. 25, 1868.
Feb. 25, 1868. Feb. 25, 1868.

Jan. 14, 1868.
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Oct. 6, 1868.
Sept. 8, 1868. Mar. 31, 1868. July 28, 1868. Jan. 14, 1868.

Jan. 21, 1868.
Aug. 25, 1868.

Aug. 11, 1868. June 30, 1868. Oct. 20, 1868.

Sept. 1, 1868.
Doc. 1, 1868.
Nov. 24, 1868.
Feb. 18, 1868.
May $26,1863$.
Janı. 14, 1868.
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July 7, 1868.
June 23, 1868.
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May 5,1868.
Feb. 11, 1868.
Oct. 13, 1868.

Jan. 21, 1868.
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Mar. 31, 1868.
Nov. 10, 1868.
Apr. 21, 1868.
Oet. 20, 1868
Jan. 28, 1868.
Apr. 21, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Andrews, Emanuel, Williamsport, Pa. Saw-grinding machine
Same...... (See Pine, Roburt G., assignor)
...... -............................
Andrews, Emery and William Tucker, assignors to the Star Mratch Corpora tion, Portland, Maine. Match machine.
Andrews, Herbert L., Chicago, Ill. Inkstand

> Same..... School desk

Same.......Blackboard
Andrews, $\mathrm{H} . \mathrm{P}$. , and M. E. Rawson, Cleveland, Ohio. Inkstand
Andretrs, J. E., Coeymans Irollow, N. Y. Machine for washing paper stock
Andrews, James H., Benicia, Cal. Gang plow
Andretws, J. S., ct al. (See Bell, Thomas S., assignor.)
Andrews, John S. (Sec Fanning, John, assignor.)
Andrews, MI. C., Lawrence, Mass. Railroad-ear ventilator
Andrews, Robert, Milwankee, Wis. Boot and shoe. (Antedated Aug. 7, 1868).
Andrews, R., and E. Armstrong, Allegheny, Pa. Governor valve. (Antedated May 12,1868 ).
Andrews, Robert W., Stafford, Conn. Operating the treadles of looms. (Reissue)
Andrews, William, Cumberland, Md. Gridiron
Andrews, William D., New York, N. Y. Centrifugal pump
(Extension).
Andrews, TVm. H., Ncw Haven, Conn. Rose for door knobs
Andrews, Wm. H., assiguor to self and Burton Mallory, New Haven, Conn. Attaching door knows to spindles
Andrews, William R., and Robert Dingwell, Newark, N. J. Leather streteling machine.
Ancel, T. S. Watertown, N. X. Machine for sharpening hop poles
Angus, William N., Morristown, N. J. Egg beater
Anhenser, Williañ, St. Louis, Mo. Extracting saccharine matters from malt Same..
same. (Antedated Oct. 28, 1868)
Annan, George N., Buffalo, N. Y. Grinding mill.
Annear, John, Philadelphia, Pa. Pumehing machine for tin and sheet metal
Aunis, IEmeline T., Mt. Morris, N. Y. Pillow support
Annis, Levi, Quiney, Mich. Potato digger
Anthony, Cornelius, assignor to C. L. Sanford, George B. Near, and James Traver, schenectady, N. Y. Tea kettle
Anthony, C. F., assignor to self and John Charters, Chicago, Ill. Kassock maeline
Anthony, Henry E., Providence, I. I. Wrench
Anthony, Richard, Scranton, Pa. Railway rail.
Antisdale, G. W., Chagrin Falls, Ohio. Truss and supporter
Anyan, Benjamin, Fitchville, Ohio. Cultivator.
Apel, J. II., Boston, Mass. Chair for childrea.
Apgar, E. A. and A. C., Trenton, N. J. Map and ehart holder
Appelgate, Joseph II. C., Bridgeton, N. J. Dumping eart.
Applebec, Cephas, Lyndon, Vt. Safety apparatus for lamps.
Appleby, H. C., Conneaut, Ohio. Carbureter..
Applegate, Joseph F., New Albany, Ind. Wagon Same.
same
Arbuekle, John, jr., Allegheny, Pa. Roasted coffec
Archer, Ellis S., assignor to Archer, Pancoast \& Company, New York, N. X. Lantern.
Archer, Pancoast \& Company. (See Travis, James F., assignor.)
Archibald, John, ot al. (Sec Forrest, John, assignor:)
Arden, Henry, Cimeinnati, Ohio. Hot-air furnace..
Same...... Car elevator.
Ariek, Clifford. (See Hadley, Charles F., assiguor.)
Arkell, James, assignor to self, Benjamin aud Adam Smith, Canajoharie, N. Y. ILachine for making paper tubes. \&c.
Arlington, Charles C., assignor to C. Wheeler, jr., Auburn, N. Y. Harvester rake
(Design)
Armbrust, J. D. M., A polloborough, Pa. Car coupling.
Armbruster, Jacob H. Philadelplia, Pa. Trade mark
Armendt, Tohu E. (See Newton, Wrm. M., assignor.) Armour, William, Ireland. Paper box
Arms, James C., Northampton, Mass. Fastening for poeket books, \&c
Same...... Paper clasp.
Same....... Pocket-book fastening
Armstrong, Aaron, Gillespie, 111 . Corn planter
Armstrong, Abrahan, Newburg, Ohio. Floor cieaner
Armstroug, Alonzo, and A. Weller, Buffalo, N. Y. Sleigh
Armstrong, B., Huntsburg, Ohio. Machine for making cheese
Armstrong, Danicl, Chicago, Ill. Machine for pointing horseshoe nails
Same...... Sash fastener.........................................
Armstrong, E., and R. Andrews. (Sce Andrews \& Armstrong.)
Armstrong, George W., et al. (See Young, Albert $\Lambda$., assignor.) Armstrong, George Bueyrus; Ohio. Garden implement.

Samo....... Feed-water heater and filter.
Same.......Steam generator
Same...... Apparatus for tolling grain
Armstrong, Jerome B., Corunna, Mich. Strap fastener

Date.

Ang. 18, 1868.
Dec. 29, 1868.

Dec. 1, 1868.
Mar. 31, 1868.
Sopt. 15, 1868
Sept. 15, 1868
Oet. 20, 1868
July 14, 1868
Scpt. 1, 1868

May 26, 1868.
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May 12, 1868.
Mar. 3,1868
Aug. 18, 1868. July 14, 1868.
Apr. 28, 1868.
Sept. 15, 1868.
July 21, 1868. Apr. 21, 1868. Mar. 17, 1868. Nov. 3, 1868. Sept. 1, 1868. Dec. 8, 1868. Feb. 25, 1868. Dee. 29, 1868. Ang. 4, 1868.
Feb. 25, 1868.
May 26, 1868.
Dec. 22, 1868.
Dee. 22, 1868.
Mar. 3, 1868.
Mar. 24, 1868.
Dec. 22,1863.
Mar. 10, 1868.
Dec. 29, 1868.
Nor. 17, 1868.
June 23, 1868.
June 16, 1868.
Nov. 10, 1868.
Jan. 21, 1868.
Mar. 17, 1868.

Feb. 11, 1868
May 5, 1868.

Feb. 11, 1868
July 7, 1868
Jan. 21, 1868
Dec. 1, 1863
Teb. 11, 1868
June 9,1868
June 16, 1868
Sept. 1, 1868
Sept. 29, 1868
A pr. 21, 1868
Mar. 10,1868
Apr. 21, 1868
Jan. 14, 1868
Sept. 20, 1868
Oct. 27, 1868

July 7, 1868
Sept. 8,1868
Sept. 8,1868
Sept. 15, 1868
May 19, 1868

# Alphabetical list of patentecs for the year 1868-Continued. 

No.

74, 030
79, 094
83, 901
74, 481
82,064
84, 466
3, 009
81, 323
84,338
81, 862
ส4, 271
78,716
3, 114

79, 430
73, 688

85,160
3, 049
81,575
83,586
80, 110
-8, 175
85, 264
74, 031
78,351
84, 467
74, 032
77, 238
88,578
$74,9 \% 1$

81, 324
76, 133
2,917
76, 878
79, 182
79, 623
81, 060
81, 576
81, 863
$82,9 \% 0$
83,587
43, 588
83, 00 ₹

81, 325
80, 760
81, 326
73, 282
82,784
78, 352
81, 864
80, 849
81, 865

74, 033
78, 041

Name, residonce, and invention or discovery

Armstrong, John, St. Lonis, Mo. Brick machine
Armstrong, John, New Orleans, La. Steam generator
Armstrong, John S., Delawaro, Ohio. Drivo well
Armstrong, P. W., Logan, Ohio. 'Timers' dio
Armstrong, R. H., and Robert Gilliland. (See Gilliland \& Armstrong.)
Armstrong, W. T., Freeland, Ill. Stock pump.
Arnaud, Iork, Boston, Mass. Bureau bedstead
Arnaud, Derk, and Edwin Shackford. (See Shackford \& Arnaud.)
Arnd, Gristavis, New York, N. Y. Stako to mark graves
(Dosign)
Arndt, Theophilus, assignor to self, Christian H. Nissley, and Isracl L. Landis, Mt. Joy, Pa. Car coupling.
Arndt, Thcophilus, assignor to sclf and E. L. Flowers, Mount Joy, Pa. Cul tivator.
Aruemann, Alfred, Guttenberg, Iowa. Safety attachment for pockets of apparel.
Arnold, Alonzo C., and Ebenczer Blackman, Norwalk, Conn. Lamp.
Arfold, Bcujamin, East Grecuwich, R. I. Net for fishing
Arnold, Boniamin, and James E. Hooper. (See Hooper \& Arnold.)
Arnold, C. P., assignor to tho Gyroscopic Top Company, Now York, N. Y. Frame of a gyroscopic top.
(Dc
Arnold, F., et al. (See Ncwell, Amos, assignor.)
Arnold, Francis, Haddam Neck, Comn. Wagon jack.
Arnold, George F., et al. (See Ncwell, Amos, assignor.)
Arnold, Hiram, Gowanda, N. Y. Well tube........
Arnold, Job, et al. (See Mooney, Georgo, assignor.)
same............................... same.
Arnold, Lauren B., Lansing, N. Y. Milk cooler
Arnold, L. D., and Samuel Scitz. (See Seitz \& Arnold.)
Arnold, S. D., assignor to P. and F. Corbin, Now Dritain, Conn. Cupboard latch
(Design)
Arnold, Saxton J., and Amos F. Clark, assignors to Saxton J. Arnold, Raymondsville, N. Y. Machino for making barrels
Arnold, T. G., Now York, N. Y. Die and punch. (Antedated Oct. a4, 1868).
Arnold, Thomas G., New York, N. Y. Malt-kilu tilo.
Arnold, Wilber F., New Britain, Conn. Lock snap hook
Samo...... Lirting jack.
Arnoldt, H. B., and Joln Grimm, St. Louis, Mo. Cultirator
Arrouquicr, William, Worcester, Mass. Clothes dryer
Arter, David, assignor to self and J. J. Kauffman, Ashland, Ohio. Eavetrough hanger
Arthar, Isaiah B., Sidonsburg, Pa. Corir plow and cultivator
Same...... Combined corn plow, planter, and cultivator.
Arrin, J. N., and J. Mr. Whitmore, assignors to selves and Ammi M. Bennett, Valparaiso, Ind. Corn planter.
Asay, A. Merritt, Philadelphia, Pa. Card for artificial tceth. (Antedated Feb. 20, 1868).
Asbahr, Hans, and Hans H. Andreson. (See Andresen \& Asbalır.)
Asbury, Menry, and John G. Bakor. (See Bakor \& Asbury.)
Ascough, William, Buffalo, N. Y. Lamp bracket. $\qquad$
Asheroft, E. H., Lynn, Mass. Compound for use in safe and powder magazines. Sanc..... Railroad-car heater.

$$
\begin{aligned}
& \text { Samo......Steain safety valro. } \\
& \text { Samo............ samo ........... }
\end{aligned}
$$

Asheroft, E. I., Boston, Mass. Dryor
Asheroft, E. H., Lynn, Mass. Devico for ventilating and desiceating.
Asheroft, E. H., Boston, Mass. Non-corrosivo valvo scat.
Sano...... Steam safety valvo.
Aslicroft, E. II., Lymn, Mass. Steam safoty valve
Samc...... Stean engino oil cup. $\qquad$
Same......Steam and water check valvo
A sheroft, E. H., Boston, Mass. Globo valve for steam and other enginery.
Ashcroft, E. II. (Sce Brown, James R., assignor.)
Same...... (See Lang, J. P. Theodore, assignor.)
Asheroft, E. II., and J. R. Brown, assignors to E. H. Ashcroft, Boston, Mass. Elevator
Ashcroft, John, New York, N. Y. Low-water indicator for boilers.
Same...... Steam safety valvo.
Samc...... (Sec Dougherty, S. B., assignor.)
A sheroft, Peter, and George F. L. Meakin, England. Railroad rail
Ashnead, Austin T., and Otis C. Whito. (See White \& Ashmead.)
Ashton, T. H., Defiance, Ohio. Clod crushor
Ashworth, Daniel, and Robert B. Eaton, Woburn, Mass. Apparatus for concentrating sulpliuric acid
Ashworth, Gcorge and Elijah, Great Britain. Portfolio. (Patented in England Marelı 15, 1867).
Ashworth, John, assignor to Georgo L. Davis, John A. Wiley, and Joseph M.
Stone, North Audover, Mass. Ring spimning firamo.
Same...... Operating shuttle boxes in looms
Ashworth, John, and D. C. Brown. (See Brown \& Ashworth.) Asmus, George. (See Linrmann, F. W., assignor)
Assman, Bermhard, and Jacob Noopel. (See Noepel \& Assman.)
Assman, Albert, Rahway, N. J. Lamp lighter.............
Asthower, Fritz, assignor to Jos. I. Von Wessely, Prussia.
(Roissue.)

## Date.

Fcb. 4, 1868.
June 23, 1868.
Not. 10, 1898.
Fcb. 18, 1868.
Scpt. 15, 1868.
Dec. 1, 1863.
May 5,1868.
Aug. 25, 1868.
Nov. 24, 1868.
Scpt. 8, 1868.
Fch. 11, 1868.
June 9, 1868.

July 21, 1868.
June 30, 1868.
Jan. 2ß, 1868.

Dec. 22, 1868.

May 26, 1868.
Sept. 1, 1868.
Nov. 3, 1868.
July 21, 1868. May 26, 1868.
Dec. 29, 1868.
Feb. 4, 1868.
May $26,1868$.
Dec. $1,1868$.
Ficb. 4, 1868.
Apr. 2z, 1863.
Sept. 20, 1868.
Mar. 3, 1868.
Aug. 25, 1868.
Mar. 31, 1868.
Apr. 14, 1868.
Apr. 21, 1868.
Juno 23, 1868.
July 7, 1868.
Aug. 18, 1868.
Sopt. 1, 1868.
Scpt. 8, 1868.
Sept. 22, 1868.
Nov. 3, 1868.
Nov. 3, 1868.
Nov. 10, 1868.

Ang. 25, 1868.
Aug. 4, 1868
Aug. 25, 1868.
Jan. 14, 1868.
Oct. 6,1808
Мצу $26,1868$.
Sept. 8, 1868
Ang. 11, 186S.
Scpt. 8, 1868.

Feb. 4, 1868.
May 19, 1868.

Alphabetical list of patentces for the year 1868-Continued.

No.

82, 065
79, 095
81, 327
76, 139
79, 297
75, 109
79, 183
-78,915
74, 034
74, 272
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75, 827
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75, 110
79, 278
3, 116
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80, 380
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77, 566
82, 066
83, 903
85, 419
83, 819
73, 488
78, 637
80, 111
3,019
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84, 339
79, 802
2,918
83, 441
75, 237
79, 624

84, 984
80, 895
74, 274
74, 273
74, 275
82, 785
76,691
82, 067
84, 468

83, 683
78, 564
81, 728
79, 625
3, 051
73, 864

## Name, residence, and invention or discovery.

Aston, John, assignor to Wm. Smith, Pittsburg, Pa. Molding pipe.
Atherton, Abel T., and Morton E. Converse. (See Converse \& Atherton.)
Atherton, Alpha A., Watcrbury, Vt. Washing machine.
Atherton, Calvin, Wales, Mich. Wagon spring.
Atherton, John B., and Henry A. Wheeler. (See Deming, F., assignor.)
Atherton, Nathan, Philadelphia, Pa. Steam engine.
Atherton, Robert, and Georgo Singleton, Paterson, N.J. Spinning machinery.
(Antedated June 19, 1868)
Atkeson, C. W., St. Louis, Mo. Cowl.
Atkin, Robert, Brooklyn, N. Y. Propelicr.
Atkins, Elias C., Indianapolis, Ind. Machine for polishing metal plates
Atkins, Jearum, Mokena, Ill. Gate.
Same...... Harvester cutter
Samc...... Safety valve.
Same...... Washington, D. C. Smoke stack for locomotive engines..........
Samc...... Calipers.-
Same........ Low-water alarm for boilors
Same ...... Smoke stack for locomotives
Atkinson, Benjamin, Davenport, Iowa. Pessary
Atkinson, Edward, Wrightstown, Pa. Roof
Atkinson, F. Mortimer. (See Daniels, D. G., assignor.)
Atkinson, Joseph H. (See Whipple, S. J., assignor.)
Same...... (See Walton, Elisha W., assignor:)
Same.............................samue.
Atkinson, Wm. B., Pittsburg, Pa. Clamp for railroad rails. (Antedated September 9, 1868)
Atterbury, J. S. and T. B., Pittsburg, Pa. Manufacture of glass ware.
Same.......Manufacturing glass ware with handles.
Same................................ same.
Same...... Lamp.
Atwatcr, Lewis, Ithaca, $N$.
Atwcil, R. H., Baltimore, Md. Liquid meter. (Antedatcd March 7, 1868)
Atwood, Anson, New York, N. Y. Car whecl
Atwood, Benjamin F., New York, N. Y. Compound to be applied to the hair Atwood, Eugene, Mansfield, Com. Spindle.
Atwood, Jolm E., assignor to self and A. and W. Sprague, Mansfield, Conn. Journal box.
Atwood, Leonard, Norwich, Conn. Valve for steam engines
Atwood, Leonard, Ncw York, N. Y. Hoisting apparatus for builders
Atwood, L. J., Waterbury, Conn. Pin cushion.
Atwood, Lewis J., assignior to sclf, Holmes, Booth \& Haydens, Waterbury, Conn. Lamp.
Same....... Lamp burner
Same....... Lamp
Atwood, Lewis J., assignor through mesne assignments to himself, Waterbury, Conn. Lamp
Atwood, Moses, New Sharou, Iowa. Seed planter
Samc..... Harrow
Atwood, Walter S., and Daniel M. Somers. (See Somers \& Atwood.)
Atwood, William, Cape Elizabeth, Maine. Machine for separating light from
heavy particles of litharge, paint, \&c.
(Reissue).
Aubin, Napolcon, Montreal, Canada. Fluid meter
(aeissue).
Aubin, N., Plattsburg, N. Y. Peat machine
Aughe, Jefferson, Dayton, Ohio. Coultcr holder .
Augspurger, John, Trenton, Ohio. Portable fence
Augspurger, John, and Peter Shellcnback. (See Shellcnback \& Angspurger.)
Aultman, C. (See Swartz \& Kreamer, assignors)
(Reissue.)
Same...... (See Buckins, Gcorge H., assignor.)
Samc............................
Same....... (See Yates, Wm., assignor.)
Auser, Joseph, Mt. Vernon, N. Y. Door and shutter fastener. (Antedated Dccember 12, 1868)
Austel, Carl F., New York, N. Y. Machinery for printing yarn
Austin, Artell. (See Strcetcr, Martin, assignor.)
Austin, Dinsmore, Underhill, Vt. Whiffetrec tug
Austin, Dinsmore, assignor to self and Homer Rawson, Underhill, Vt. Whiffetrce
Sanie...... Shaft coupling
Austin, Harrison W., Portago, Mich. Equalizing whiffctree
Austin, James E., Oswego, N. Y. Shingle machiac.
Same.........................................
Austin, Phineas E., New Haven, Conn. Mcthod of adjusting and holding dies and punches.
Austin, Richard. (See McFadden, Gcorge, assignor.)
Austin, William, England. Composition for the manufacture of safety and other friction matches.
Austin, William, assignor to sclf and Wm. Obdyke, Philadclphia, Pa. Construction of sheet-metal conductor pipes
Autenrieth, Jacol, Philadelphia, Pa. Cork cxtractor
Averill, Benjamin F., Dunkirk, N. Y. Weather strip
Averill, D. R., Newbury, Ohio. Paint.
Ayerill, James Champlain and Flisha S. Fitch Mooers N Y
Avery, Daniel W., and Francis N. Howard. (See Howard \& Avery.)

Date.

Sept. 15, 1868.
June 23, 1868.
Aug. 25, 1868.
Mar. 31, 1868.
June 30, 1868.
Mar. 3, 1868
June 23, 1868
June 16, 1868
Feb. 4, 1868.
Feb. 11, 1863.
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Mar. 24, 1868.
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Apr. 7, 1868.

Sept. 22, 1868
Mar. 3, 1863 June 30, 1868 Sept. 15, 1868. Sept. $29,1868$. Jan. 14, 1868 Mar. 24, 1868. July 28, 1868. Oct. 27, 1868. May 5, 1868.
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Jan. 21, 1868
June 9, 1868. July 21, 1868

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Oct. 27, 1868.
Mar. 10, 1868. July 7, 1868.

Dec. 15, 1868
Aug. 11, 1868
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Dec. 1, 1868

Nov. 3, 1868
June 2, 1868
Sept. 1, 1868
July 7, 1868
Tuly 23, 1868
Jan. 28, 1868

## Alphabetical list of patentecs for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 78,411 | Avery, Dexter, Westfield, Mass. Carrier for braiding | June 2, 1868. |
| 79, 299 | Same..... Whip | June 30, 1868. |
| 78,638 | Avery, G. C., Waldron, Ind. Plow and planter................. | June 9, 1868. |
| 74,875 | Avcry, Gcorge S., and Timothy Kceler. (See Keelcr \& Avery.) <br> Avery, Hiraun B., Bethel Township, Mich. Apparatus for ovaporating sorghuin juice and other liquids. | Feb. 25, 1868. |
|  | Avery, Irving M., and James M. Gale. (See Gale \& Arery.) |  |
| 74,788 | Arery, M. A., Groton, N. Y. Bntt | Feb. 25, 1868. |
| 76, 376 | Avery, Samuel, and Lowis Delille, Phænix, N | Apr. 7, 1868. |
| 75, 512 | Avis, Solomon S., Penn's Grove, N. J. Stump extrae | Mar. 17, 1868. |
| 77, 239 | Same...... Lard | Apr. 28, 1868. |
| 74,876 | Axtcll, Henry A., Westfield, Mass, Sofa cradlo.................................. | Fob. 25, 1868. |
| 73, 865 | Ayer, James C., and Edward Haeffely, Lowell, Mass. Composition for coloring hair. | Jan. 28, 1868. |
|  | Ayers, D. A. (See Danforth, D. A., assignor.) |  |
| 83, 356 | Ayers, Joseph O., assignor to J. O. Cutter and Wm. W. Goss, East Grecnsboro, <br> Vt. Sugar-pan derriek. | Oct. 27, 1868. |
| 74,972 | Ayers, S. K., Delton, Wis. Lamp | Mar. 3, 1868. |
| 79, 049 | Ayres, Daniel W., Shcldon, Ill. D | June 23, 1868. |
| 74, 973 | Ayres, James, Patcrson, N. J. Spring lealance for safety | Mar. 3, 1868. |
| 85, 265 | Ayres, James, Branchvillo, N. J. Device for sharpening rais | Dec. 29, 1868. |
| 77, 947 | Ayres, Samuel, New York, N. Y. Tr | May 19, 1868. |
| 82, 272 | Ayres, Samuel, Danville, Ky. Pencil sheath | Dое. $22,1868$. |
|  | Ayres, William, and Henry T. Payne. (See Payno \& Ayres.) |  |
| 77, 240 | Bablitt, Benjamin, New York, N. Y. Quartz erusher | Apr. 28, 1868. |
| 75, 82 | Bablitt, Benjamin T., New York, N. Y. Process for pre | Mar. 24, 1868. |
| 75, 829 | Same...... Coffec ro | Mar. 24, 1868. |
| 79,937 | Same...... Propelling | Jnly 14, 1868. |
| 79,938 | Same......Gas explosivo eng | July 14, 1868. |
| 79,939 |  | July 14, 1868. |
| 81, 24.2 | Bablitt, Francis S., Taunton, Mass. Nozzle for pipes.............. | Augr 18, 1868. |
| 75, 830 | Babbitt, J. L., assignor to Fuel Saving Furnace Company, Glen Cove, N. Y. |  |
| 83, 017 | Bablitt, W. H. H., New Corner: Ind. Gaiter boot | Oct. 13, 1868. |
| 77,241 | Babbs, J. S. L., assignor to self and J. B. Ford, Now Albany, Ind. Maehinc for making pegs. | Apr. 28, 1868. |
| 76,377 | Babcock, Charles A., assignor to self, D. M. Golden, and B. G. Eaton, Frankfort, N. Y. Whiffletree hook. |  |
| 79,300 | Babeock, Darins, Warsaw, Ill. Harrest | June 3c, 1868. |
| 78,916 | Babcock, Eli I.. Canandaigua, N. Y. Drill e | Jume 16, 1868. |
| 74, 035 | Babcoek, Ezra, Seott, N. Y. Combined harrow | Fel. 4, 1868. |
| 82, 580 | Babcoek, Franklin, Middletown, Conn. Sash holder | Sept. 29, 1868. |
| 82, 581 | Dabeoek, Franklin and Fredcriek, Middlctorn, Conn. Door | Sept. 29, 1868. |
| 3, 236 | Babenek, Holland C., assignor to self and Marshall Jewell, Cineinnati. Ohio. Belt lacing. <br> (Rcissue) |  |
| 80, 701 | Babeoek, James F., Boston, Mass. Apparatus for extingushing fires........... | Aug. 4, 1868. |
| 83, 582 | Same..... Composition for generating gases in fire extinguishers and for other purposes. | Sept. 29, 186\%̈. |
|  | Babcock, J. P., and Thomas Netherwood. (See Netherwood \& Babeock.) |  |
| 83, 442 | Babcock, William W., assignor to self, A. W. McCormick, and Samnol S. MeNauchton, Harmar, Ohio Car brake | Oct. 27, 1868. |
| 75, 722 | Babin, Willian, New York, N. Y. Buckle... | Mar. $24,1868$. |
| 82, 477 | Babson, George and John L., Roekport, Mass. Weighing apparatus. (Anto(dated September 17, 1868). | Sept. $29,1868$. |
| 82, 068 | Baehelder, C. G., Camden, Maine. Wagon axle | Sept. 15, 1868. |
| 73, 866 | Bachelder, John, Norwieh, Conn. Guite for car | Jan. 28, 1868. |
| 81, 577 | Same..... Machine for eovering eord | Scpt. 1, 1868. |
|  | Bachclder, J., and B. II. Reyuolds. (See Reynolds \& Bachelder.) |  |
| 76, 036 | Bacheldcr, John, and William H. Bliss, 2d, assignors to John Bachelder, Norwieh, Comn. Harness operating meehanism for looms. | Mar. 31, 1868. |
| 81, 973 | Bachelder, Joseph H. C., Winsted, Comn. Rolling mill | Sept. 8, 1868. |
| 83, 904 | Baehman, Gustav Bernard, Brooklyn, N. Y. Bottle-filling apparatus | Nov. 10, 1868. |
| 83, 018 | Baekus, Joseph, Greenvale, Ill. Device for muloading hay | Oet. 13, 1868. |
| 82, 676 | Backus, Osear J., San Franeisco, Cal. Nozzlo for hose pip | Oet. 6, 1868. |
| 78,565 | Backus, Quimby S., Winehcndon, Mass. Vis | June 2, 1868. |
| 3, 130 | Same............... . . . . . . . . . . samo . . . . . . . . . . . . . . . . . . . . (Design) | Jnly $28,1868$. |
| 82, 583 | Same...... Chuck drill. | Sept. 29, 1868. |
| 77, 948 | Bacon, Charles H., assignor to self and Wm. Read, jr., Boston, Mass. Governor for steam engines. | May 19, 1868. |
| 74, 276 | Bacon, Charles R., and George D. Clark, Newark, N. J. Blacking-box hol | Fel. 11, 1868 |
| 81, 458 | Bacon, Daniel, Brewersville, Ind. Corn sheller | Ang. 25, 1868 |
| 84, 249 | Baeon, Earlc C., New York, N. Y. Steam engi | Not. 24, 1868 |
| 85, 266 | Same....Pitman..................... | Dec. 29, 1868 |
|  | Baeon, James D. (See Smoot, W. S., assignor.) |  |
| 77, 242 | Bacon, Jerome, Mertina, Wis. Land-side plow. | Apr. 28, 1868 |
|  | Baeon, Jerome A. (See Taggart, John, assignor.) |  |
| 78, 251 | Bacon, Thomas K., assignor to self, Georce A. Pratt, William T. Norton, and <br> Hirann B. Crosby, Norwich, Conn. Drill holder <br> Bader, Herman, and Nicholas Gonner. (See Gonner \& Bader) | May 26, 1868. |
| 73, 769 | Badgley, Nathan E., Now York, N. Y. Breom......... | Jan. $28,1868$. |
| 78, 639 | Badoux, Pierre Joseph, New York, N. Y. E | June 9, 1868. |
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# Alphabelical list of patentees for the year 1868-Continued. 

No.

81, $5 \% 8$

81, 459
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77, 345
84, 789
79, 940
73, 489
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78, 917
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82, 194
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$84,40.4$
73, 689
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76, 379
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Bailer A. R., Elmore, Vt. Butter tul
Yarn beam for looms.
Bailey, D. D., and Major E. Hanover. (See Hanovor \& Bailey.)
Bailey, Fort., Car Feeport. Thi (or mover
Bailey, George L., et al. (See Beminger, Cornelius, et al.)
Bailey, Gilbert L., Portland, Maine. Switch for street railroads
Bailey, Honry, assignor to J. L. Komer and H. F. and W. R. Pease, New York, N. Y. Steam encine

Baer, A. P. (See Schlosser, Peter G., assignor.)
Bagcart, Thomas, Balimore, Md. Wire eloth.
Baggerman, C., and J. Green, St. Louis, Mo. Mortising machirıo.
Bargett, Edward, Fall River, Mass. Shuttle for looms.
Baham, J. A., R. C. Wilson and Samuel French, Auburn, N. X. Machino for removing wiro teeth from cards.
Baierlc, Arlam, Chicago, Ill. Ice house
Baielle, A., F. Hartman and F. Reesc, Chicago, Ill. Ice house for brewers and butchers.
Bailley, Alfied M., assignor to Metropolitan Washing Machine Company, Middlefield, Comn. Wringer..
aleficla, Conn. Wrimger..............
ailey, Benjamin A., assignor to self and Wm. H. Kilvert, Lcwiston, Maine.

Bailey, Ir. J. Pittsburg, Pa. Air-condensing apparatus
Same...... Hydrants.
Same.... . . . . same.
Bailey, Ienry W. (See Mercior, Edward, assignor.)
Bailey, Menry W., assignor to self and William C. Bailey, Springfield, Mass. Die for making hammers
Bailey, J. B., assimnor to the Bailey Manufacturing Company, Now York, N. Y. Construction of ice pitehers. .
Bailey, J. W., New Orleans, La. Toy pistol.
Bailey, Joseph W., New Orleans, La. Marking weatherboarding.
Bailey, L., and R. Thayer, assiguors through mesme assignments to Wm. A. Ely, Stratford, Conn. Lamp.
(Reissue)
Bailey, Seldon A., assignor to Bailey Washing and Wringing Machine Company, Woonsocket, R. I. Wringing machine..
(Reissue)
Bailey, Truman G., Amenia, N. Y. Bucklo.
Bailey, T. R., ir., Lockport, N. X. Hydrants $\qquad$ Baley, (1m. F. and James F. Snediker. (See Snediker \& Bailey.) Bailey, W. W., New York, N. Y. Low-water detector for steam generators Baillie, John, Salem, Ohio. Saw mill

Same..... Lathe tool holder.
Bailliere, Charles Edmund. (See Seitz, C. D. J., assignor.)
Bailliere, H. E., assignor to American Fiber Company, Hoboken, N. J. Manufacture of paper pulp
Baily, Ezra, assignor to self and Joscph Parker, Cincimnati, Ohio. Plank and timber dresser
Baily, Lyman M., assimuor to selfand JosephP. Long, Landgrove, Vt. Tuyereiron Baird, A. J., and John M. Cullen. (See Cullen \& Baird.)
Baird, David, Bloody Run, Pa. Mill-stone exhaust
Baird, D. W. (See Mathows, Darious A., assignor.)
Baird, John, New Kork, N. X. Composite vessol
Baird, Samuel J., Stannton, Va. Printing pres
Baker, C. S., and W. B. Noyes. (See Noyes\& Baker.) Baker, David, Boston, Mass. Well tubes

Samo.-............................ . same
Samo .-. .......................... - . sanıe
Baker, D. C., Buffalo, N. Y. Washing machine
Baker, David D., assignor to self and IIarvey Campbell, West Alexandria, Ohio. Churn
Baker, D. S., Vest Blomfield, N. Y. Stove grato
Sane.... . . Brake for machinery.
Baker, Edwin R., assignor to self and John R. Linton, Fair Havon, Mass. Wagon hub
Baker, Elijah, assicnor to self and Augustrs L. Baker, Loraine, N. Y. Reel.. Baker, Fred. M. (Sce Sanderson, George O., assignor.) Baker, G. W. (See Richard, Joseph, assignor.)
Baker, Hardy N., assignor to Benjamin D. Washburn, Boston, Mass. Blind hinge. Baker, Hadyn M, New York, N. Y. Cleaning cloths used by bank-note engravers Baker, Haydn M., Harlem, N. Y. Cleaning cotton wasto

Same...... Process of refinine cast iron
Baker, Haydu M., New York, N. Y. Manufacture of carbonate of soda
Samo..... Process of removing pigments, oils and gums from cloth used by engravers. (Autedated Nov. 7, 1868)
Baker, Hadyn M., assignor to self and H. M. French, Rochester, N. Y. Manufacture of soda and sulpluric acirl.
Baker, Henry, assignor to self and Christian G. Uerr, Lancaster, Pa. Bolt and latch
Baker, Heury O., New York, N. Y. Mncilage bottlo
Baker, Horaee, Cortland, N. Y. Hay raker and loader........................(Reissuo). Baker, James H., Saratoga Springs, N. Y. Variablo exhaust for non-condensing engines

## Date.

Oct. 13, 1863 Jan. 21, 1868 Sept. 1, 1868

Aug. 4, 1868.
Dee. 22, 1868
Juno 2, 1868
Junci 23, 1868
Aug. 25, 1868.
Aug. 4, 1868
Apr. 28, 1868
Dec. 8,1868
July 14,1868
Jan. 21, 1868
Jan. 14, 1868
Juno 16, 1868
Dec. 29, 1868

Mar. 17, 1868
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Mar. 24, 1868
Scpt. 1, 1868
Feb. 25, 1868
Apr. 28, 1868
Ang. 11, 1868.
Mar. 10, 1868
Mar. 17, 1868
Teb. 11, 1868.
Feb. 25, 1868.

Jan. 21, 1868
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Jan. 21, 1868.
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Nov. 24, 1868
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Apr. 21, 1868. May 12, 1868 Sept. 1, 1868

Aug. 18, 1868
Nov. 17, 1868

Nov. 10, 1868
Feb. 25, 1868
July 28, 1868
Sept. 15, 1868
Nov. $24,1868$.
Nov. 24, 1868.
Jan. 28, 1868.
Jan. 21, 1868
Apr. 7, 1868
Apr. 7, 1868
Mar. 241868.

Alphabetical list of patentees for the year 1868-Continued.


Date.

Apr. 28, 18.88.
Feb. 11, 1868.
Sept. 29, 1868.
Sept. 22, 1868
June 23, 1868
June 23, 1868
Oct. 27, 1868.
June 23, 1868.
Oct. 6, 1868
May 5, 1868.

June 23, 1868.
Nov. 17, 1868.
Aug. 18, 1868.

Dee. 8, 1868.
Feb. 25, 186を.
Sept. 8, 1868.
Nov. 17, 1868.
Feb. 4, 1868.
May 15, 1868.
Mar. 10, 1863.
Nov. 17, 1868.

Mar. 24, 1868.

June 30, 1868.
Nov. 10, 1868.
June 16, 1868.

Jume 9, 1868.
Dee. 1, 186?

Mar. 31, 1868
Sept. 15, 1863
Sept. 8, 1868.
Mar. 10, 1868.
Apr. 7, 1863.
Apr. 14, 1868
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Oct. 20, 1868.

July 21, 1868.
May 12, 1868.
Aug. 25, 1868.
June 2, 1868.
July 21, 1868.
Apr. 14, 1868
Dee. 29, 1868
May 26, 1868.
Nov. 3, 1868
Sept. 1, 1898
Sept. 1, 1860
June 23, 1868.
Jan. 21, 1868.

Sept. 15, 1868.
Apr. 7, 1868.
Maj 5, 1368.

Alphabetical list of patentees for the year 1868-Continued.
No.
Ballon, Thomas A., Cleveland. Ohio. Friction roller for band saw

Bancroft, Edward C., Henry A., and Edward H., Syracuse, N. Y. Enamel for window sharles.
81, 732
75, 111
Bancroft, Josenh B., Milforl, Mass. Spindle step.
Bancroft, L. F., assignor to self and Andrew B. Yetter, Worcester, Mass. Strect
82,786

77, 440
74,789
79, 626
76, 038
75, 833
76, 583
80, 051
83, 020
81, 733
81, 734
81, 735
82, 273
83, 021
83, 022
83, 023
83, 024
80, 382
72, 960
72, 961

81, 583

76, 695
81, 328
83, 025

81, 329
75, 119
77, 569
79, 803
84, 251
81, 461
81, 868
78, 356
78, 566
75, 113
80, 799
85, 052
74, 483

76, 880
77, 158

75, 834
75, 835
sprinkler

80, 114 Barker, Silas, Hartford, Conn. Washing machine........................

Bancroft, N. W., Worcester, Mass. Gas machine
Bandmann, Julius. (See Nobel, Alfred, assignor.)
Bandtel, John C. (See Buercky, Jolnn, assignor.)
Bange, Charles, St. Louis, Mo. Clothes dryer...
Bangs, Jonathan, South Dcrnis, Mass. Belaying cleat
Banister, Isaae, Newark, N. J. Buckle
Banister, William, and Albert H. Rowell, assignors to selves and Isaac H. Butts, Lawrenee, Mass. Mode of lacing boots and shoes
Banks, T. C., Wallingford, Coun. Boiler alarm gauge.
Banner, Georme E., Newark, N. J. Floor clamp. (Antedated April 7 1868)
Bautel, Philipp, New York, N. Y. Chronometer.
Banzett, William, Brooklyn, N. Y. Leach tub.
Barbarin, Arthur, New Orleans, La. Gas burner
Same...... Self-lighting gas burncr. .
Same.... . Apparatus for lighting gas
Same....... Prodnetion of gas, and illuminating of street and other cars
Same...... Hatchet, hammer, and scraper
Same...... Box opener.
Sanıe. . . . . Shoemakers' instrument
Same...... Liquid sampler...........
Barber, Henry, Grecuficld, Mass. Machine for making wooden trays
Barber, Thomas, and Joel A. Otis. (See Otis \& Barber.)
Barbian, Joseph, Chicamo, Ill. Icc-honse floor
Barbier, John, Boston, Mass. Fastening for shoes
Barbour, $\Lambda$ lonzo, et al. (See Hicks \& Doty, assimnors.)
Barbour, James, and T. G. Eiswald. (See Eiswald \& Barbour.)
Barealo, Myron J., assignor to self and W. R. Tobey, Mt. Morris, N. Y. Mop wringer
Barcalo, Myron J., and William R. Tobey. (See Tobcy \& Barcalo.)
Barelay, John, assignor to self, Iufus D. Case, James Barclay, and Daniel Bing, Attleborough, Mass. Button-hole lining for carriage curtains.
Barclay, Robert, Buffalo, N. Y. Sewing naehine
Barclay, William P., Chieago, Ill. Sofa bedstead
Bard, Thomas R. (See Salisbury, A. J., assignor.)
Barden, Earl D., et al. (See Chandler, Win. H., assignor.)
Barden, John S., Providence, R. I. Mcchanical movement
Barden, John S., assignor to William M. Stonc, Providence, R. I. Pump.
Barden, John S., assignor to the Union Steam Valve Company, Providenco, R.I. Slide valve for steam engines.
Barden, John S., assignor to self and Daniel N. Pickering, Providence, R. I. Rotary steam engine.
Same..... . Steam pump.
Bardon, Thomas, Brooklyn, N. X. Engravers' plate
Barette, W. G., Canton, M, Apparatus for rectifying spirits
Barinds, Simeon L., St. Joseph, Mo. Perpetual calendar.
Barker, Addison, Camanche, Iowa. Hay loader
Barker, B. E. (See Fahnestock, John, assignor)
.........
Barker, David, England. Dryer.
Barker, Isaae. (See Stevens, Elward L., assig11or.)
Barker, James H., assignor to self and D. R. B. Nevins, Washington, D. C. Shutter operator.
Barker, Joseplı, Champlain, N. Y. Horseshoe
Barker, Joseph, assignor to self and Alonzo Kinyon, Amboy, Ill. Soparator sieve
Barker, Justin D. (See Curtis, Lowis P., assignor.)
Barker, J. F., Springfield, Mass. Apparatus for carbureting air Barlow, Ashbel P., Claremont, N. H. Saw mill

Same...... Mode of lubricating the slides of muley-saw mills

Date.

Aug. 11, 1868.
Dec. 29, 1868.
Sept. 29, 1868. Dec. 8, 1868. Sept. 29, 1868. July 21, 1868. June 23, 1868. Apr. 21, 1868.
Mar. 31, 1868.
Mar. 10, 1868.
Jan. 7, 1868.
May 26, 1868.
Mar. 31, 1868.
Sept. 15, 1868.
Sept. 1, 1868.
Mar. 3, 1868.
Oct. 6, 1868.

May 5, 1868.
Feb. 25, 1868.
July 7, 1868.
Mar. 31, 1868.
Mar. 24, 1868.
Apr. 14, 1868.
July $21,1868$.
Oct. 13, 1868.
Sept. 1, 1868.
Sept. 1, 1868.
Sept. 1, 1868.
Sept. 22, 1868.
Oct. 13, 1868.
Oet. 13, 1868.
Oct. 13, 1868.
Oct. 13, 1868.
July 28, 1868.
Jan. 7, 1868.
Jan. 7, 1868.

Sept. 1, 1868.

Apr. 14, 1868.
Aug. 25, 1868.
Oct. 13, 1868.

Aug. 25, 1868.
Mar. 3, 1868.
May 5, 1868.
July 14, 1868.
Nov. 24, 1868.
Aug. 25, 1868.
Sept. 8, 1868.
May 26, 1868.
June 2, 1868.
Mar. 3, 1868.

Aug. 11, 1868.
Dee. 22, 1868.
Feb. 18, 1868.
Apr. 21, 1868.
Apr. 28, 1868.
July 21, 1868.
Aug. 11, 1868.
Mar. 24, 1868.
Mar. 24, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| 84, 851 | Barlow, Ashbel P., St. Johm, N. B. Slide for hanging uprigh |
|  | Barlow, Harry, and George C. Shaler. (See Shaler \& Barlow.) |
| 84, 159 | Barlow, Warren S., Paterson, N. J. Door spring |
| 73, 974 | Barnaby, Samuel S., Maeon, Ga. Vise. (Autedated Nov. 23,1867 ) . |
| 84, 725 | Barnari, A. B., assiguor to Thomas C. Craven, Woreester, Mass. Hay spreader |
| 81, 129 | Barnard, A. B., S. I. Nye, and I. L. Hewett, West Fitchburg, Mass. Harvester |
| 76, 696 | Barnes, Alfred, Newark, N. J. Device for printing hat bod |
| 75, 836 | Barnes, 1 . T', assignor to Tittin Agrieultural Works, Tiftin, Ohio. Horse |
| 84,405 | Barnes, B. F., Boston, Mass. Oil |
| 76, 584 | Barnes, Charles, Cincinnati, Ohio. Vise |
| 78,355 | Barnes, Charles W., Janesville, Wis. Spring cateh and stop for doors. (Antedated May 19, 1868) |
|  | Barnes, Edwin D., et al. (See Millochan, A., assignor.) |
| 77, 949 | Barnes, Emory, Chelsea, Mich. Ditehing machino |
| 76,382 | Barnes, E. H., Marathon, N. Y. Apparatus for treating fractures and dis- |
| 82, 787 | Barnes, E. S., Nebraska Cits, Nobraska. Propelling apparatus |
| 80, 897 | Barnes, Gilbert W., Mount Vernon, N. Y. Sat |
| 78,567 | Barnes, John H., Troy, N. Y. Toy |
| 78, 176 | Barnes, Joshua B., Fort Wayne, Ind. W |
| 74, 191 | Barnes, J. J., Montieello, Ind. Finger bar for harvesters |
| 2, 429 | Barnes, Samuel H., deecased, by Franees L. Barnes, administratrix, New York, <br> N. Y. Corset spring. <br> (Reissuc) |
| 82,788 | Barnes, Stephen, New Haven, Comn. Composition clock dial |
| 74,279 | Barnes, Stephen, assiguor to self, W. S. Sanford, and John Garduer, New Haren, Conn. Handle for poeket eutlery |
|  | Barnes, 'T. H., and J. S. Boicourt. (Sce Boieourt \& Barnes.) |
| 82, 274 | Barnes, Thomas J., Cambridge, Ill. Horse yoke |
| 80, 266 | Barnes, William Lewis, Irvingtou, N. Y. Shutter and window fastening. (Antedated July 11, 1868) |
| 80, 115 | Barnett, David J., Alhion, Ind. Saw-gumming dever |
| 79,433 | Barnett, Edwin L. Eldorado, Ark. Cotton plante Barnett, Henry C (See Leftel Thomas, assionor.) |
| 84, 4\%0 | Barnett, Rufis P., Charles P. Purinton, and Nicholas Seibert, Nevada, Cal. Anti-frietion bearing for vertical shafts |
| 76, 383 | Barney, E. H., Springfield, Mass. Skate |
| 77, 862 | Barney, E. H., and Jom Berry, Springtield, Mass. |
| 3,007 | Same..... Skate fastener |
| 78, 412 | Barney, George C., Chieago, Ill. Filling for beds, eushions, |
| 81, 869 | Barns, William H., New Londou, Conn. Coffe |
| 80, 530 | Barnum, Eli M., New York, N. Y. Elevated railway |
| 76, 141 | Barnum, James W., New Orleans, La. Cottou |
| 76, 142 |  |
| 76, 143 | Same...................................... . |
| 76,144 |  |
| 76, 145 |  |
| 76, 146 |  |
| 79, 627 | Barnum, Lafayette, assignor to self, Levi Baruum, and Charles H. Ensign, Bridgeport, Conu. Machine for cutting aud dressing stone |
| 80, 702 | Barr, Robert J., Philadelphia, Pa. Centrifugal machine for filtering, draining, and drying |
| 72,962 | Barr, Samuel W., and Edwin MeGuire, Beloit, Wis. Well |
| 76,697 | Barrett, Asa, assignor to self and Milton D. Mattee, Baltimore, Md. Oyster rake. |
| 82, 675 | Barrett, John J., Chillicothe, Ohio. Axle greas |
|  | Barrett, Joseph, aud Franeis R. Wolfinger. (See Wolfuger \& Barrett.) |
| 79,434 | Barrett, Thomas, Charlestown, Mass. Machine for forming riugs on earboys and bottles |
| 73,945 | Barrier, F. M., Stereuson, Ala. Cultivator |
| 74,974 | Barringer, John H., jr., Hillsbor |
| 77, 244 | Barritt, Charles L., Richland, Mieh. Harvester rake |
| 82, 072 | Barron, John, Cineinnati, Ohio. Elastie dranght-attaehment for single and double harness |
|  | Barron's Patent Steel Manufaeturing Company. (See Boynton, John F., assignor) |
|  | Barron's Steel Manufacturing Company. (See Myers, James, jr., assignor.) |
| 81, 243 | Barrows, Arad, Philadelphia, Pa. Sad-iron handle |
| 81,243 3,143 |  |
| 82, 914 | Same...... Alkali ean |
| 79, 099 | Barry, Samuel, Dayton, Ohio. Saw |
| 75, 837 | Barry, Theodore A., and Ben. Adams Patten, San Franeiseo, Cal. Medieal preparation |
| 83, 238 | Barry, W. H., Rabbit River, Mieh. Harrow |
| 80, 851 | Barson, John, Ephraim Daniels, and Joanna Farrell, New York, N. Y. |
| 80, 116 | Barstow, H. H., Chieago, Ill. Nutmer grater |
| 83, 591 | Barthelmess, Robert MI, and Charles C. Millar, Savamah, Ga. Car eoupling |
| 76, 147 | Bartholf, A., New York, N. Y. Saw-gumming and toothing machine. (Antedated Oct 1867) |
| 78,042 | Bartholomew, David, and David C. Dinsmore, Kirkvillo, Iowa. Churn |

## Datc.

Dee. 15,1868
Nov. 17, 1 ©68
Feb. 4, 1868
Dee. 8, 1 عG8
Aug. 18, 186 Apr. 14, 1868 Mar. 24, 1868. Nov. 24, 1268. Apr. 14, 1868.

May 26, 1868.
May $19,1868$.
Apr. 7, 1868.
Oet. 6, 1868
Auc. 11, 1868.
Jume 2, 1868
May 26, 1868
Feb. 11, 1868
May 12, 1868.
Oct. 6,1868.
Feb. 11, 1868.
Scpt. 22, 1868.
July ミ8, 1868.
July 21, 1868.
June 30, 1868.

Dec. 1, 1868.
A pr. 7, 1868.
May 12, 1868. June 30, 1と68. June : 1568. Sept. 8, 1868. Aug. 4, 1868. Mar. 31, 1868. Mar. 31, 1868 Mar. 31, 1e68. Mar. 31, 1868. Mar. 31, 186s. Mar. 31, 1868.

July 7, 1868.
Aug. 4, 1268
Jan. 7, 1 ع68.
Apr. 14, 1868.
Oct. 6,1868.

June 30, 1868
Feb. 4, 1868
Mar. 3, 1868.
Apr. 28, 1868.
Sept. 15, 1868

Oet. 6, 1868
Ang. 18, 1868.
Oct. 6, 1868.
Oet. 13, 1868.
June 23, 1868.
Mar. 24, 1868.
Oet. 20, 1868.
Aug. 11, 1868.
July 21, 1868
Nov. 3, 1868
Mar. 31, 1868
May 19, 1868.

# Alphabetical list of patentees for the ycar 1868-Continued. 

| No. |
| :---: |
| 76,384 |
| 85,355 |
| 75,838 |
|  |
| 2,932 |

Bartholomew, D. B., Lancaster, Pa. Saw mill
Bartholonew, Kli, Cleveland, Olio. Washing and winging machine
Bartholomew, Ir. H., New York, N. Y. Door lock.
Same...-. Method of governing the action of valve cocks. (Exterision of 1, 071)
Same..... . Method of governing the action of valve cocks. (Extension of 1,072)

Date.

Apr. 7, 1868.
Dec. 29, 1868.
Mar. 24, 1868.
June 19, 1868.
June 19, 1868.
May 19, 186e.
Dec. $15,1868$.
Dec. 29, 1868.

Nov. 3, 1868.
Apr. 7, 1868.
3, 38
7\%,950
83, 357
73, 284

76, 585
76, 698
Bartlit, William C., Aledo, and Joseph M. Merryman, Moline, Ill. Grading machine.
Barto, Elias, Tiffin, Ohio. Machine for marking and covering corn.
Bartol, B. H. (See Jordan, 'Thomas B., assignor.)
76, 039
74, 485
76, 974
74,975
82, 678
80, 383
74, 036
83, 592
82, 195
73, 946
75, 839
78, 413 Barton, Harvey, Elyria, Olio. Dumping wagon.
(Antedated March 25, 1868). Barton, John V., Clifton Sprines, N. Y. Churn dasher
fats
Barton, William, T'roy, N. X. Slat matting
Same...... Slat matting for cars, \&c.
Barton, William H., Ohney, Ill. Horse lake
Bartow, S. O., Bethel, Comn. Harrester.
( Design)
Bartholomew, Oscar N., assignor through mesne assignments to self and J. S. 'J'hu'ston, Elmira, N. Y. Roofing compounds ............................ (Reissuc) -
Bartholomew, W. N., assignor to Joseph Reckendorfer, Newton Center, Mass. Rubber eraser
Bantlet, David L., et al. (See Bradley, John, assignor.)
Bartlett, George E. (See Rogers, Ichaborl R., assignor.)
Bartlett, J., et al. (See Cody, Bartlett \& Jones.)
Bartlett, John B., New York, N. Y. Glass bottle
Bartlett, Joseph W., New York, N. Y. Sewing machine
Centerville, N.J. Furnace for roasting ores
Same. . . . . Manufacture of pigments from the sulphurets of zine and lead. Bartlett, N. Gray, Kcokuk, Iowa. Inkstand

May 19, 1868.
Oct. 27, 1868.
Jan. 14, 1868.
Mar. 3, 1868.
July 9, 1868.
Apr. 14, 1868.
Apr. 14, 1868.
Nov. 10, 1868.
Mar. 31, 1868.
Feb. 18, 1868.
Apr. 21, 1868.
Mar. 3, 1868.
Oct. 6, 1868.

Bartram Walker B. Danbury, Conn. Gathering attachment for sewing me.................................... chines

July 28, 1868.
Feb. 4, 1868.
Nov. 3, 1868.
Sept. 15, 1868.
Feb. 4, 1868.
Barwick, James, England. Inkstand.......-............................................
Bascom, Henry C., Lacrosse, Wis. Charger for powder flasks. (Antedated March 16, 1868)

Pa Molical aompound

84, 080
Bassett, Charles II., Derby, Conn. Check hook for harness
Bassett, H. W., and F. A. Rich. (See Rich \& Bassett.)
3, 124
81, 736
81,974
83, 026
83, 239
80, 438
80, 587
Bassett, John A., Salem, Mass. Apparatus for carbureting air or gas . (Reissue)
Bassett, Johm Allen, Salem, Mass. Process and material for carbureting gas ..
Same...... Apparatus for the manufacture of heating and illuminating gas
Same.... . . Gas generator
Same...... Apparatus for the manufacture of illuminating gas
Bassett, John A. and O. C. Smith, Salem, Mass. Method of removing carbon from gas retor'ts.
Bassett, N. P., deceased, by Zebialı W. Bassett, administratrix, Fulton, N. Y. Beehivo
Bassett, R. M. and T. S. (See Simmons, W. W., assignor.)
79, 721
78, 252
76, 975
74, 486
79, 187
Bassett, T. D., Charlestown, Mass. Lathe for screw cutting
Mar. 24, 1868.
Jume 2, 1868.
Nov. 3, 1863.
Aug. 18, 1863.
Nov. 17, 1868.
Sept. 15, 1868.
Sept. 1, 1868.
Sept. 8, 1868.
Oct. 13, 1863.
Oct. 20, 1863.
July 28, 1868.
Aug. 4, 1868.
July 7, 1868.
May 26, 1868.
Batchelder, Hazen J., and George E. Wood, Marlboro, Mass. Horseshoe machine
Batehelder, Herrick, Incarling, Mass. Head block for saw mills
Batchehler, Stephen J., Manchester, N. H. Lamp extinguisher
Apr. 21, 1868.
Feb. 18, 1868.
June 23, 1863.

78,357
Batchelder, W. S., \& Company. (See Ward, A. F., assignor.)
Batehelder, W. W., New York, N. Y. Lighting gas.
Batcheller, N. H. (Sce Galusha, W. M., assignor:)
Bates, E. M., and I. G. Flisher. (See Flisher \& Bates.)
3, 108
Bates, Francis, Nies, James L., assignor to Willian Hartley Miller, Philadelphia, Pa. Steamengine packing
( Reissue)
83, 240 Bates, J. W., Glencoe, Minn. Bag tie
Bates, Robert, Cohasset, Mass. Window-sash fastener
Bates, T. L. (S'ee Witsil, George L., assignor.)
Bateson, Sammel S. (See Seholl, John, assiguor.)
82, 679
Battelle, W. H., Youngstown, Ohio. Nail-cutting machine
7\%, 570 Batterson, T. E., Rochester, N. Y. Fruit jar.
Nov. 3, 1868.

May 26, 1868.
Sept. 1, 1868.
Oct. 20, 1868.
Feb. 11, 1868.

Oct. 6, 1868.
84, 160
77.159

Battey, Manfred C., Washimgton, D. C. Awning for horse cars.
Batty, William T., assignor to self and Griffith Deshart, Canton, O. Car brake Baudouin, Constant, and Fleury Innot. (See Muot \& Baudouin.)
79, 628 Bauerschmitt, Adam, Rochester, N. Y. Bridle
May 5, 1868
Nov. 17, 1868.
Apr. 28, 1868.

Baugh, Edwin P., and James B. Chenoweth. (See Chenoweth \& Baugh.)

Alphabetical list of patentecs for the year 1863-Continued.


## Alphabetical list of patentees for the year 1868-Continued.

No.

75,349

79, 435
81, 331
82,275
85, 200
74, 881

80, 119
72, 963
79, 301
81, 462
79, 188
79, 799
84,528
76,586
82, 681
85, 423

81, 463
79, 436
81,975
77, 709
79, 889
79, 890
80, 898
74, 280
81, 976
76, 978
77, 571
83, 242
73, 564
79, 189
74, 281
78, 568
81, 464
81, 463
83, 594
84, 987
77, 951

2,984
$73,2 \geq 6$
77, 710

79, 891
80, 267
75, 841

73,071
76, 700
74, 282
83, 821
73, 565
84, 471
84, 606 ${ }^{\circ}$
79, 804
83, 446
Name, residence, and invention or discovery.

## Date.

Mar. 10, 1868.

June 30, 1868. Aug. 25, 1868. Sept. 22, 1868. Dec. 22, 1868.

Feb. 25, 1868.
July 21, 1868.
Jan. 7, 1868.
Junc 30, 1868.
Aug. ®5, 1868.
June $23,1868$.
July 7, 1868.
Dec. 1, 1868.
Apr. 14, 1868. Oct. 6, 1868. Dec. 29, 1868.

Ang. 25, 1868.
Junc 30, 1868.
Sept. 8, 1868.
May 12, 1868. Jnly $14,1868$. July 14, 1868. Aug. 11, 1868.

Feb. 11, 1868. Sept. 8, 1868.

Apr. 21, 1868.
May 5, 1868.
Oct. 20, 1868.
Jan. 21, 1868. Jnne 23, 1868. Fcl. 11, 1868. Jnnc 2, 1868. Aug. 25, 1868. Aug. 25, 1868.
Nov. 3, 1868.
Dec. 15, 1868.

May 19, 1868.
July 28, 1868. Junc 16, 1868. Jan. 14, 1868.

May 12, 1868.

Jnly 14, 1868.
Jnly 28, 1868.
Mar. 24, 1868.
Jan. 7, 1868.
Apr. 14, 1868.
Feb. 11, 1868.
Nor. 10, 1868.
Jan. 21, 1868.
Dec. 1, 1868.
Dec. 1, 1868.
July 14, 1868.
Oct. ${ }^{2}$, 1868.

May 5,1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

74, 283
74, 037
3, 194
76.979

75, 114
81, 33:
74, 234
77, 952
Bein, Julius, and Wm. Ulrick, Newark, N. J. Chidren's carriame.
Beins, H. W., MIt. Vernon, N. Y. Vulcanizing India-rubbor ear-springs and other artieles
Beinstein, Samuel. (Seo Warner, ddolph, assignor.)
83, 595
Beisner, George, Chicago, Ill. Churns.
Belbin, C. T., Baltimore, Md. Oyster dredge.
Belcher, B. B. (See Gerald, Amos F., assimor.)
Beleher, Charles, Newark, N.J. Paint mill.
Belden, Salmon, and John F. Crabtree, Visalia, Cal. Gun loek

> Same.... . . Breeelr-loading fire-arm.

Belden, Salmon, Visalia, and Johnson P. Ford, Santa Clara, Cal. Expansion wagon-wheel. (Antedated Dee. 24, 1868)
Belding, Edward, et al. (See Day, Lester, assignor.)
Belding, Georgo Washington. (Śe Slater, George, assignor.)
78, 043
73,157
76, 148
Bell, A. J., Bloomingburg, N. Y. Straw cutter.
Bell, A. John, Cincinnati, O. Foldiner conelı.
Bell, Denjamiri F. (See Meinhardt, Christian G., assignor.)

Bell, Edwin, St. Paul, Minu. Coffer dam
Bell, G. F., and C. E. Mason. (See Mason \& Bell.)
74, 033
76, 881
75, 812
.78, 415
76, 387
78, 918
84, 933
78, 359
73, 567
74, 285
74,286
76, 149
82, 196
82, 276
78, 782
84, 988
74, 039
77, 348
79, 892
79, 893
76, 980
75, 239
81, 333
74, 040
85, 358
76, 041
3, 073
77, 245
76, 388
Bell, George W., and George $W$. Fulmer, Hinckley, O. Horse and cattle poke, \&e. Bell, Henry C., Heyworth, Il. Churn.
Bell, Robert, Last Saginaw, Mich. Feathering paddle wheels.
Bell, Thomas, Bellport, N. Y. Fishing attaehmint for vessels
Bell, Thomas S., assignor to self, G. I. Reed, and J. S. Andrews, Vapello, Iowa. Pruning shears.
Bell, W. G., Pittsburg, Pa. Car eoupling
Bellairs, William, and'Uenry Demott, Atlinson, inl. Window blind
Lellany, William, Newark, N. J. Construetion of landles for metal tea and coffec pots Same..... Construetion of ice pitehers.
Bellander, Ernest W. L., Jersey City, N. J. Forming-bloek for moffs Bellerjeau, John, Philadelphia, Pa. Scaling eans and jars.

Same...... Lamp.
Belleville, Jnlien Franeis, Franee. Regnlator for stean engine.
Bellis, William, Riehmond, Ind. Governor
Bellows, C. P., Gloversville, N. Y. Dentists' flask
Bellows, E. H., Woreester, Mass. Steam engino.
Jeman, Wm. E., Portland, Maine. Jib-boom.
Bemelmans, L., and L. De Give, Atlanta, Ga. Manufaetnro of glass Same.
.same.
Bemenderfer, Heury F., and Dwight I. Fineh, Attica, Ohio. Hay fork.
Bement \& Dougherty: (See Miles, Frederiek B., assignor.)
Bement, William B., Philadelphia, I'a. Bolt-threading maehine.
Beminger, Cornelins, assignor to self, Willian Friend, and George L. Bailey, Mier, Ill. Soil pulverizer
Bemis, James W, Fall River, Mass. Lifting jaek.
Demiss, H. P., Milan, Ohio. Wash boiler.
Bender, Chales, Germany. Wire truss bridgo.
Bender, Charles, New York, N. Y. Suspension bridgo. $\qquad$
Bender, John, Lonaconing, Md. Bitters.
Bender, Karl, and C. F. T'eller, assignors to Martin Lochner, Grand Duehy of Messe. Thermostat.
Bendir, Hemy, and Anson L. Warburton. (Sce Warburton \& Bender.)
2,943
Bendix, H., and J. II. Fleiseh, assignors to II. Bendix, New York, N. Y. Neek-

Beuediet \& Burnham Manufaeturing Company. (See Blakeslee, Edward C. assignor.)
77, 796
Benediet, Alonzo, Albany, N. K. Carriage-pole tip
81, 466
83, 596
73, 690
81, 244
73, 4:32
84, 252
79, 051
Benerliet, Charles, and O. Ri Fyler, Wolcottville, Conn.
Benediet, Charles T', Hoboken, N. J. Sewing maehine
Benediet, E. U., Chicago, Ill. Car spring.
Benediet, W. J., and Joln Wylie, Sonth Norwalk, Conn. Felting maeline.
Benham, Wm. H., New Maven, Conn. Rein suap.
Benjamix, Edward D., Old Town, Ill. Plow
Benjamin, E. II., assignor to Gifford, Potter \& Company, Oak ILill, N. Y. Self. loeking shutter hinge.
Bemu, Walter C., assismor to self, L. L. Baker, and R. Hamilton, San Franeiseo,
Cal. Spark arrester for steam generator.
Same...... Mill-stono balanee
Bennage, I., and Willianı H. Warl. (See Warl \& Bennage.)
Bennet, Lyman, Amsterdam, N. Y. Deviee for eutting out bands and fronts of drawers

## Dato.

Feb. 11, 1868.
Feb. 4, 1868
Sept. 22, 1868
Apr. 21, 1868.
Mar. 3, 1868 Aug. 25, 1868 Feb. 11, 1868.

May $19,1868$.
Nov. 3, 1868.
June д, 1868
Apr. 7, 1868.
Apr. 14, 1868.
Dee. $99,1868$.
Dec. 29, 1868.

May 19, 1868.
Jain. 7, 1868.
Mar. 31, 1868.

Jan. 21, 1868.
Feb. 4, 1868.
A pr. 21, 1868.
Mar. 24, 1ع68.
Jnue 2, 1868.
Apr: 7, 1868.
Jıие 16, 1868.
Dec. $15,1868$.
May 26,1868.
Jan. 21, 1868.
Feb. 11, 1868.
Fel. 11, 1868.
Mar. 31, 1868.
Sept. 15, 1868.
Sept. 22, 1868.
Junc 9, 1868.
Dee. 15, 1868.
Feb. 4, 1868.
A pi: 28, 1863.
July 14, 1868.
.Jnly 14, 1863.
Apr. 21, 1868.
Mar. 10, 1868.
Aug. 25, 1868.
Frb. 4, 1868.
Dce. 29, 1868.
Mar. 31, 1868
Aug. 11, 1868
Apr. 28, 1868.
Aрг. 7, 1868

May $26,1868$.

May 12, 1868.
Ang. 25, 1868.
Nov. 3, 1868.
Jan. 23, 1868.
Ang. 18, 1868.
Jan. 21, 1863.
Nov. 24, 1868.
June 2:3, 1868.
Sept. 22, 1868.
Sopt. 22, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residenee, and invention or diseovery. |
| :---: | :---: |
| 73, 224 | Bemnett, A., Rockford, Ill. Cultivator Bemnett, Allan T., et al. (See Collins \& Nixon, assignors.) Same same. |
| 80,531 | Bemnett, 1llaı T., and W. O. Anderson, Cincinnati, Olio. Machine for cutting rags. <br> Bennett, Ammi M. (See Arvin \& Whitmore, assignors.) <br> Bennett, Benjamin, et al. (See Buckland \& Daniels, assignors.) <br> Bennett, Bishop, and Clark Root. (See Root \& Bemett.) <br> Bennett, Daniel W., and Michael Biglin. (See Biglin \& Bennett.) |
| 78, 641 | Bennett, Edmund, Nankin, Mich. Potato digger |
| 83, 447 | Bemett, E. S., assignor to self and Justus Sinith, Brooklyn, N. Y. Shirt and drawers combined. (Antedated Oct. 7, 1868) |
| 83, 822 | Same...... New York, N. Y. Stirrup. (Antedated Oct. 24, 1868)..... |
| 75, 115 | Bernett, George W., White Haren, Pa. Center plate for railroad cars. |
| 75, 240 | Bennett, James A., Millerton, N. Y. Milk can. <br> Bennett, John T., Pittsburg, Pa. Process of purifying iron and steel. (Antedated Feb. 28, 1868) |
|  | Beunett, John F. (See Boggs, Wilbur F., assignor.) |
| 74, 744 | Bennett, Joseph B., Brooklyn, N. Y. Rotary engine |
| 82, 197 | Bennett, P. R., Urbana, Ohio. Wateh. |
| 73, 158 | Bemmett, Willian, Rushrville, Ind. Attachment for |
| 73, 568 | Bemett, W. II., Nery York, N. Y. Culinary vessels |
| 84, 672 | Bennitt, Charles, Bristol Station, Ill. Slaaft couplin |
| 79, 629 | Benson, Benjamin S., Baltimore, Md. Machine for m |
| 83, 028 | Same......Pipe-molding |
| 83, 029 | Same..... Pracker for packing sand in |
| 83, 448 | Same...... Mold-blacking machine |
| 3, 230 | Bensen, David, Nautet, N. Y. Well curd...............................(Design) |
| 3,231 79,190 | Same |
| $85,270$ | Benson, Samuel, Allegheny City, Pa. Pum |
| 79, 528 | Benson, Sanuel, assiguor to self, James and John F. Benson, Centralia, 71. Regulating deviee for mill stones |
| 85, 201 | Bent, Alvin T., Autwerp, N. Y. Cheose lioop. (Antedated Dec. 11, 1868) |
| 75, 515 | Bent, H. H., assignor to self and E. Sins, Antrverp, N. Y. Cheese |
| 74, 745 | Bent, James Mr., Wayland, Mass. Shoe nail. |
| 2,956 78,044 | Sent, Sammucl S., Port Chester, N. Y. Chicken coop |
| 78,044 78,857 | Bent, Samucl S., Port Chester, N. Y. Chicken coop |
| 79, 437 | Same...... A pparatus to prevent horses cribbi |
| 76, 042 | Bentley, John W., Woonsocket, R. I. Nachine for manufacturing elouded yarn |
| 3,117 | Berdan, Hiram, assignor to the Berdan Fire-arms Manufacturing Company, Now York, N. Y. Breech-loader..... (Division A, reissuc) |
| 3,118 |  |
| 82, 587 | Same...... Metallic eartr |
| 85, 162 | Same...... Breech-loading tir |
| 83, 030 | Berdan, M., Maumeo City, Ohio. Plow |
|  | Berg, Peter, et al. (See Gram, Erust TV., assignor.) |
| 85, 163 | Bergen, Garrett P.. Brookiyn, N. X. Combined scissors sharpener and serew. driver. <br> Same .... (See Potter R W assignor) |
| 3, 069 | Same...... (Sec Potter, R. W., assignor) |
| 3,095 | Same............................. same............. ............... (Design).. |
| 3,096 | Same .............................. .same . . . . . . . . . . . . . . . . . . . . (Design) .. |
| 73, 072 | Berger, Jonas, Knoxville, Ml. Koy coupling for musical instruments. Bergerson, Ole. (See Marquis, John, assignor.) |
| 79, 191 | Bergner, Georg, Washington, Mo. Shears..... |
| 75, 843 | Bergstresser, Edwin I. Hublersburg, Pa. Seeding attachment to hoes |
| 2,937 | Bergstresser, E. L., assignor through mesne assignments to C. M. Titus. Horse rake. <br> (Reissue) |
| 84, 044 | Berkey, William Augustus, Grand Rapids, Mieh. Construction of fire-proof houses. |
|  | Berlin,Henry C., and George H. Jones. (See Fry, William T., assignor.) <br> Same...................................................same. <br> Ber Mïller, Louis, and Wm. Richardson. (See Richardson \& Ber Müller.) |
|  | Ber Mïller, Louis, and Wm. Richardson. (See Richardson \& Ber Mïller.) Bernard, Pierre. (See Poirel, Auguste, assignor.) |
| 80, 120 | Berner, William, Pottsville, Pa. Manufacture of tile for floorin |
| $83,449$ | Berney, Altied, Jersey City, N.J. Tea-kettle boiler.................................. |
| 81, 467 | Bernheisel, Jacob, st., Green Park, Pa. Lever jack |
| 74, 657 | Berret, Joseph H., New York, N. Y. Hand stamp |
| 81, 738 | Berrian, Cornelius, Clinton City, Iowa. Macline for pressing |
|  | Berry, Edward, and G. W. Morter. (See Morter \& Berry.) Berry, Elwin E. Farmincton, N. H. Table-leaf support |
| 83, 823 | Berry, E. M. aul L. M., Saltillo, Ind. Medical compound |
|  | Berry, John, and E. H. Barney. (See Barney \& Berry.) <br> Same. <br> same <br> (Reissue.) |
|  | Berry, J. S., and IT. Whisler. (See Whisler \& Berry.) Berry, T. F., and O. Brown. (See Brown \& Berry.) |
| 80, 328 | Berryman, Robert, Philadelphia, Pa. Indieator for steam generators |
| 76,389 | Berteling, Theodore, New York, N. Y. Flute |
| 77, 863 | Bertram. August, Now Albany, Ind. 4 Fini |

Date.

Jan. 14, 1868.
A.ug. 4, 1868.

June 9, 1868.
Oct. 27, 1868.
Nov. 10, 18 f8. Mar. 3, 1868. Aug. 11, 1868.

Mar. 10, 1868.
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July 7, 1868.
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Dec. 22, 1868
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Oet. 13, 1868.

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July 14, 1868.
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Nov. 10, 1868

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Nov. 10, 1868
Ang. 25, 1868 Fel. 18, 1868 Sept. 1, 1868.

May 26, 1868.
Nov. 10, 1868.

July 28, 1868
Api. 7, 1868
May 12, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

|  | Name, residence, and invention or discovery. |
| :---: | :---: |
| 79,941 | Bertram, Angust, New Albany, Ind. Boot and shoe shank...... Besler, John D., and James T. Clark. (See Clark \& Besler.) |
|  |  |
|  | Besse, H., Delaware, Ohio. Automatic water gate......... |
|  |  |
| 78,56 | Besser, S., assigmor to self and James Draper, Dorchester, m , Churn........... Best, Benjamin, Dayton, Ohio. Composition for destroying smut in fruit trees. |
| 79, 438 | Best, M. L., assignor to self and J. F. Hess \& Brother, Canton, Ohio. Machine for forming bread pans. |
|  | Best, Willian T., assignor to self and Daniel Vaughan, Scranton, Pa. Churn.. Bethea, James C., Blakely, Ga. Plow................................................... (Reissue).. |
|  |  |
| 76, | Bethea, James C., Blakely, Ga. Plow....................................... (Reissue) Betterton, Benjamin V., 'Yiqua, Ohio. Stone paint |
| 3, 2 | Betts, Henry, Norwalk, Comn. Manufacture of paper stock.......... (Reissue). Betts, Lewis F., Chicago, Ill. Lanteru. (Antedated Aug. 20,1868 ).............. |
|  |  |
|  | Same.....Can top............................................ |
| 76, 981 | , William H., Brooklyn, N. Y. Window sash lock |
|  | stead |
| 76, 390 | Bevan, Edward, and Abel Floming, deceased, by Margaret Fleming, admin tratrix, assignors to Edward Bevan, England. Device for kecping fo warm |
|  | Bevans, Ira N., assignor to self, John H. Alcott, and George G. Griswold, Thomaston, Conn. Car starter. |
| 76, 982 | Bevans, Samuel W., assignor to self and George A. Munson, Plymouth, Comn. Feather-dressing machine. |
| , 20 | Beyl, Solomon, Osborn, Ohio. Chalk-line box. Beyrodt, J. Menry, Louisville, Ky. Bed spring. |
| 79, 30 |  |
|  | Bezy, Auguste Leon, and Isidore Aguan Desmoyer, France. Stean generator. |
|  | Bickerstatt, S., Cincinnati. Ohio. Hermetically closed and keyless padlock.... Bickford, Dana, Boston, Mass. Knitting machine. |
| 80, 12 |  |
|  |  |
|  | Same. . . . . . Needle for k |
|  | Same -i..... Knitting pile fabrics...................... |
|  |  |
| 72, 964 | Bickuell, Ira, Cincinuati, Ohio. Fire kindling and fuel. |
|  | Bicknell, James W., New York, N. Y. Thill and pole for ca |
|  |  |
| 74,489 | Bidwell, Jason A., East Joston, Mass. Wood screw ........Same..... Screw driver and boring tool.................. |
|  |  |
|  | Same.......screw driver and boring tor......... |
|  |  |
|  | Bidwell, Lawson B., Hartford, Conn. Railroad chair. |
| 84, 790 | Bidwell, L. D., Birningham, Coun. Mowing machin |
|  | Biedernan, Edward J., Brooklyn, N. Y. Sugar packer |
|  | Bierce, William W., Cleveland, Ohio. Apparatus for carbureting Bigelow, A., Hamilton, Cauada. Shaft coupling <br> Bigelow, Charles H., deceased, by Harriet C. B. Bigelow, administratrix, Pitts- <br> field, Mass. Mode of manufacturing turbme wheels. . . . . . . . . . (Extension) |
| 84, |  |
|  |  |
| 77, | Bigelow, Elijah W., Worcester, Mass. Spit for roasting meat. Bigelow, George 'T., administrator of Samuel Nicolson, deceased. (See Nieolsou, Samuel.) |
|  |  |
|  | Bigelow, J. H., and William F. Collier. (See Collier \& Bigelow.) |
|  |  |
| 79, 894 |  |
|  | Biggar, William J., John C. Blood, and Del. M. Griswold, Conneaut, Ohio. Elec- tro-magnetic burglar-alarm. .................................................. |
| 84, 726 | Biggs, P. G., H. Granger, and II. A. Butler, Macon, Mo. Combined band cotter and feeder for thresliing machines. |
| 74, 491 | Biglin, Michael, and Daniel W. Bennett, Wilkesbarre, Pa. Wagon jaek........ |
|  | Bihn, Frederick, and Willian Schrader, Frankford, Pa. Recovery of useful products from the waste liquor of gelatine manufacture. |
| 82, 279 | Billings, Charles E., Springfield, Mass. Combined pistol and sword................. |
|  |  |
|  | Billings, Horace. (See Moody, C. D., assignor.) |
|  | Billings, J. D., aud G. W. Perry. (See Perry \& Billings.) |
|  |  |
|  | Bindewald, P. F., Strongsville, Ohio. Washing n Bing, Daniel, et al. (See Barclay, John, assicnor.) |
|  | Bingaman, Jacob H., et al. (See Weise, David S., assignor.) |
| 74, 746 | Binghan, Albert, Newtonville, Mass. Knob latch for doors. (Antedated Feb. 7, 1868) |
| 74, 041 | Bingham, B. D., Boston, Mass. Watches........................ |
|  |  |
|  | Bingham, G. E., and W. Grunert. (See Grunert \& Bingham.) |
| 75, 844 | Bingham, Horatio H., and John C. Hunt, Terre Haute, Ind. Grain dryer ....... |
|  | Bingham, James, and Robert Coward, Pittsburg, Pa. Rock-crusher aad tempering machine <br> Binly |
| 74, 237 |  |
| 78,717 |  |
|  | Binzer, C., Now York, N. Y. Lamp shade..................................... (Design) Birch, George I. New York, N. Y. Ironing board.............................................. |
|  | Birch, William H., and James B. Johnson. (See Jolinson \& Birch.) |
|  |  |

Dato.

July 14, 1868.
Jan. 7, 1868.
July 7, 1868.
June 2, 1868.
June $30,1868$.
Apr. 28, 1868.
Aug. 25, 1868.
Apr. 21, 1868.
Dec. 15, 1868.
Sept. 1, 1868.
Sept. 1, 1868.
Apr. 21, 1868.
Feb. 11, 1868.

Apr. 7, 1868.
June 30, 1868.
Apr. 21, 1868.
Dee. 22, 1868.
June 30, 1868.
Sept. 15, 1868.
May 19, 1868.
Jnly 21, 1868.
July 21, 1868.
Dec. 1, 1868 .
Dec. 1, 1868.
Nov. 3, 1868.
Jan. 7, 1868.
June 2, 1868.
Fel. 18, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
Mar. 10, 1868.
Feb. 25, 1868.
Dec. $8,1868$.
Aug. 18, 1868.
Jan. 7, 1868.
Nov. 17, 1868.
May 13, 1868. Apr. 28, 1868.

July 7, 1868. July $14,1863$.

July 14, 1868.
Dec. 8, 1868. Feb. 18, 1868.

Dec. $15,1868$. Sept. 22, 1868. Dec. 8, 1868.

Feb. 25, 1868.

Feb. 25, 1868.
Feb. 4, 1868.
June 23, 1868.
Mar. 24, 1868.
July 7, 1868.
Fel. 11, 1868.
June 9, 1868.
Mar. 17, 1868.
Apr. 14, 1868.
Dec. 1, 1868.

# Alphabetical list of patentees for the year 1808-Continued. 

## No.

85, 271
80, 384
81, 739
75, 516
81,977
74, 288
74, 978
76, 294
76, 295
83, 906
74, 791

81, 740
73, 569
79, 193
3,028
83, 127
75, 116
78, 178

75,845
83, 031
73,287
73, 288
79, 896
75,846

84, 727
82,074
77, 441
75,351
84, 046

80, 703
83, 907
80, 439
79, 805
82, 915
73, 492
79, 303
85, 053
79, 05:

77, 797
73.770

77, 161
84, 162
84, 163
84, 989
81, 978
3, 064
3, 065
84, 607
84, 608
80, 899
75, 663
75, 724
7\%, 442
77, 350
80, 440
73, 570

Bird, David P., Riehmond, Ohio. Flood fence
Birdsall, David, and John Maslin. (See Maslin \& Birdsall.)
Birkenhead, John, Canton, Mass. Driving wheel for locomoaives
Birkenshaw, Edwin, Ashuelot, N. H. Teazline machine
Birkey, Johm Q., Plinladelphia, Pa. Gas and other heater
Birkinshaw, Charles, Chicago, I⿴囗 Sewer pipe..
Birtwistle, George and Robert, Fall River, Mass. Grease or sizing
Bisbee, Randall, Boston, Mass. Modo of fitting clothing -
Bisbee, Thomas A., assignor to self and Edwin R. Stilwell, Dayton, Ohio. Steam-engine slide valve.
Same ...... Piston paeking
Bisbee, William, and Flening G. Hearn, Yreka, Cal. Selfadjusting hook
Bischof, Gustav, jr., assignor to self and John L. Kidwell, Great Britain. Pre-
paring fincly divided iron, and the separation of eopper, silver, and other metals fiom their solutions.
Bishop, Arlolphus F., Norwalk, Com., John M. Pendleton, New York, N. X., and John H. Diken, Norwalk, Conn. Fiber and gum fabric.
Bishop, Bainbridge, New Inussia, N. Y. Violin.
Bishop, Charles, I'rumbull, Conn. Shears
Bishop, E. B., New Orleans, La. Dredging machine
Bishop, George W., Baltimore, Md. Revenue stamp for liquor barrels
Bishop, George W., assignor to John Laburt, Stamford, Conn. Gate.
Bishop, George W., assignor to Lafayette Farrington, Stamford, Conn. Carpetcleaning maehinc. (Antedated May 18, 1868)
Bishop, J. W., et al. (See Fowler, Herbert E., assignor.)
Bishop, Lewis, Talladega, Ala. Cultivator and seeder.
Bishop, Samuel C., New York, N. Y. Compound for insulating telegraphi............................ electric wires
Bishop, Samuel C., assignor to Bishop Gutta PerchaCompany, New York, N. Y. Water-proof and damp-proof paper.

## Same...... Water-proof cloth

Bishop, Samuel C., and Willinm W. Marks, New York, N. Y. Apparatus for insulating telegraph wires.
Bishop, William K. and Oriel D., Harrison, Wis. Maehine for sawing staves. Bissell, Frank S. (See Tunnie, Gottfied, assignor.)
Bissell, Sylvester, and Andrew 13. West. (See Johnson, Alonzo, assignor.)
Bitner, Eli S., Loek Haven, Pa. Brick machine.
Bitseh, Valentin, St. Louis, Mo. Plane.
Bixler, Audrew H., Carlisle, Pa. Open ring
Black, James S., Oakland, Ill. Lamp-elimmey eleaner
Blaek, Levi, and Milton Gaffiney, Logan, Ohio. Device for saw earriages Blackburn, Thomas. (See Herbig, Adam, assignor.)
Blackinan, Ebenezer, and Alonzo C. Arnold. (See Arnold \& Blaekman.)
Blaekman, Sammel G., Waterbury, Conn. Car scat.
Blackstone, T. B., Chicago, In. Car eoupling.
Blackwell, George W., Lebanon, Ind. Farm gate
Blades, Wm. P., Baltimore, Md. Car brake
Blair, Elias, Bucyrus, Ohio. Corn-husking pin
Blair, George A., and A. L. Gladding, Johnsonburg, N. X. Mode of hanging earriage bodies.
Blair, J. B., Philadelphia, Pa. Gilding and ornamenting glass signs
Blair, Thomas S., Pittsburg, Pa. Manufacture of steel.
Blaisdell, A. H., Newton Corners, Mass. Carpenters gange
Blaistell, Elijall W., ir. (See Bowers, John, assignor.)
Blaistell, P. (See Capen, E. S., assignor.)
Blaisdell, R. P. (See Cook, Charles O., assicuor.)
Blaisdell, Wm. L., Port Byron, N. Y. Shaft for veliceles
Blake \& Johnson. (See Manville, Eli J., assignor:)
Blake, A. Milton, Canton, Ohio. Spring-bed bottom
Same....-- Spring for chairs
Blake, Amos S., Waterbury, Com. Padloek
Blake, David. (See Dodge, James, assignor) $\qquad$ (Reissue.)
Blake, E. K. W., Chicago, Ill. Velocipede
Blake, E. S., Pittsburg, Pa. Radiator
Blake, George, assignor to self and Thomas Connar, Whitby, Canada. Har. vester rake
Blake, G. W., assignor through mesne assignments to John Ashton Green and Heury A. Tweed, New York, N. Y. Belt fastening (Reissue).
Same. ........................................................ . same........ (Reissue) .
Blake, George W., New York, N. Y. Steam generator
Same...... Ventilation
Blake, Henry, assimnor to self, George W. Otis, and James Blake, East Pepperell, Mass. Belt knife.
Blake, Henry D., assignor to P. and F. Corbin, New Britain, Conn. Macline for riveting hinges
Same...... Maehine for making butt hinges
Blake, J. D., assignor to self and J. A. Sanborn, Laconia, N. H. Soap stand
Blake, John W., assignor to self' and Amaziah 'I. Howes, Jefferson, Wis. Sled knee
Blake, Lewis T., New Haven, Conn. Egat beater
Blake, Lyman R., Boston, Mass. Mode of eutting channels in boots and shoes.

Date.

Dec. 29, 1868.
July 28, 1868. Sept. 1,1868 Mar. 17, 1808 Sept. 8, 1868. Feb. 11, 1868. Mar. 3, 1868.

Apr. 7, 1868
Apr. 7, 1868.
Nov. 10, 1868.

Feb. 25, 1868.
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May 12,1868
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Aug. 11, 1868.
Mar. 17, 1868.
Mar. 24, 1868.
May 5, 1868.
Apr. 28, 1868.
July 28, 1868.
Јan. 21, 1868.

Alphabetical list of patentees for the year 1868-Continued.


## Date.

Feb. 11, 1868.
Mar. 31, 1868.
Aug. 11, 1868. Aug. 11, 1868. Mar. 3, 1868. May 12, 1868. July 14, 1868. Oct. 6, 1868.

June 23, 1868.

Feb. 4, 1868.
July 14, 1868.
Aug. 11, 1868.
Sept. 29, 1868.

May 5, 1868.
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Sept. 29, 1868.
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Mar. 24, 1868.
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Apr. 28, 1868.

July 28, 1868.
Apr. 28, 1868.
Sept. 1, 1868.
May 5, 1868.
Mar. 10, 1868.

Nov. 24, 1868.

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July 14, 1868. Sept. 1, 1868.

Jan. 7, 1868. Apr. 14, 1868.
June 30, 1868. Sept. 22, 1868.

Ang. 11, 1868. June 2, 1863. June 30, 1868. Sept. 15, 1868. Sept. 29, 1868.

Sept. 22, 1868.
Nov. 24, 1868.
Jan. 28, 1868.
June 30, 1868.
Nov. 3, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

75, 241
78,045
76, 619
76, 702

76, 983
84, 529
81, 245

75, 847
74, 979
73,074
80, 329
78,510
84, 047
2, 933
80, 854
75, 353
77, 798
83, 824
85, 203
75, 848

75, 117
85, 359
84, 792
83, 243
84, 048

82, 281
81, 870
78, 179
82, 483
80, 538
83, 032
81, 587
83, 597
82, 200
83, 908
82, 682
83, 450
74, 883
85, 0.54
80, 123

83, 128
84, 728

83, 909
83,910
82, 589
\%5, 354
83, 451
85,05
76,984
82, 075

80,124
75, 118

Name, residence, and invention or discovery
Date.

Blunt, Hiram S., New York, N. Y. Metronomes
Bly, Donglas, Maeon, Ga. Piston-roá adjuster.
Blymyer, William G., Findlay, Ohio. Printers’ galley
Mar. 10, 1868.
ing loeomotivo crank pins.
Boalt, Stephen. (See Mefford, David M., assignor.)
Boardman, Byron, assignor to self and Frank Douglas, Norwich, Conn. Device for turning mints
Boardman, Byron, Norwieh, Conn. Handle for files
Boardman, Silas R., Fort Wayne, Ind. Water elevator.
Boardman, Wm., et al. (See Holbrook, Charles W., $\begin{aligned} & \text { sssignor.) }\end{aligned}$
Boblet, L. L., et al. (See Boyd, Jesse C., assignor.)
Boeh, Willian, Newtown, N. X. Attaching door knobs to spindles
Bockman, Marens, Brooklyn, N. Y. Mechanieal novement
Boekman, Marcus, and Charles T. Ulmann. (See Clmann \& Bockman.)
Bockstaller, Georg, assignor to Lewis Schneider and W. W. McKay, New York, N. Y. Canc and nmbrella combined.

Bode, Friedrich Max, assignor to C. B. Mueller, Austria. Coffee roaster
Bodine, Joseph H., and Triman A. Hill, Mt. Morris, N. Y. Derice for operating water-wheel gates Same...... Water wheel
Borley, Joseph T., and Philander P. Lame. (See Lane \& Bodley.) Botley, Joseph T., et al. (See Smith, Samnel R., assignor.)
Botmer, John James, England. Preparing ceinent from slag.
. (Reissue) .
Bogan, Joseph, and J. B. McCray, Clarksville, Ohio. Ointment.
Bogel, Henry, Watertown, Wis. Knitting machine
Bogert, Isaac J., assignor to self and S. C. Crosby, Fayette, Iowa. Stump extractor
Bogert, John V., New York, N. Y., and M. R. Perkins, Portsmouth, N. H., assignors to selres and John F. Lowell. Sash fastener.
Boggs, T. G., Philatelphia, Pa. Medicine glass
Bogss, Wilbur F., assignor to self and John T. Bennett, Petersburg, Ill. Machine for measuring cloth.
Bohrer, Julins S. \& Company. (See Murphy, John D., assignor.)
Boicourt, J. S., and 'T. I. Barnes, Boonsboro, Iowa. Rotary steam engine
Boifeiullet, H. W., Savamah, Ga. Car coupling.
Boisselier, G. E., St. Louis, Mo. Comapression cock
Bold, Willian, Sheloggan Falls, Wis. Machine for dressing inill stones.
Bolinger, J. B., assignor to self and L. R. Fitch, Detroit, Mieh. Portable forge
Bolles, Albcrt S., and Sarah E. Mosman, administrators of E. P. Mosman, deceased. (See Mosman, E. P.)
Bollinger, Benjamin, and George G. Nodle, New Berlin, Ohio. Tnitting machine Bollinger, B. B., Lonisrille, Ohio. Register for knitting machine .
Bollinger, Cornelius, Harrisburg, Pa. Steam-engine piston. (Antedated May 14, 1868)
Bollinger, W. D., Cedar Rapids, Iowa. Axle for carriages.
Bollman, Wendel, and Edward Denmead. (Sec Demmead \& Boilman.)
Bolton, Simeon R., Prescott, Wis. Stocking darner
Same..... Wagon brake.......................
Bommer; Lorenz, New York, N. Y. Block and die for forming hat
Bond, $\Delta$ mos, assignor to self and A. D. Moore, Chicopeo, Mass. Feather renovator
Bond, C. W., assignor to self and John A. Gould, Biddeford, Maine. Bill file. Bond, Edward P., and Jacoh H. Ballard. (See Ballard \& Bond.)
Bond, Howard B., Houma, La. Apparatus for defecating eane juico
Boud, John, Versailles, Ill. Stirrup .
Bond, Joseph N. B., New Xork, N. Y. Boiler-feed low-water detector
Bond, N. O., Hyannis, Mass. Summer attachment for stoves and ranges
Bond, Samuel T., Edenton, N. C. Compound for destroying pain.
Bond, Thomas D., administrator of Singleton F. Bargee, deceased. (See Gam. lorill \& Burgee).
(Disclaimer.)
Same
sano.
(Extension.)
Bond, William H., and George G. Lee, Syracuse, N. T. Grooving machine
Bongardt, Johann, assignor to self' and L. H. Cohn, New York, N. Y. Process and composition for printing the grain of wood
Bonham, Isaac. (See Ballard, H. D., assignor.)
Bonnaterre, Joseph Francis, and Gustare De Villepoix. (See De Villepoix \& Bonnaterre.)
Bonnaz, Antoine, assignor to Emile Cornely, France. Sewing machine for embroidering.
same.
Same
Bonnell, Davil, Oswego, N. W. Grain dryer.
Bomell, W. M., Buffalo, N. Y. Lantern
Bomner, Patrick B., New York, N. X. Mode of soldering galranized iron
Bonnct, Charles E., assignor to J. P. Wilkinson \& Sons, Philadelphia, Pa. Composition for oruamental molding
Bonney, Charles S., Penn Yan, N. X. Thill conpling.
Saine ....... Farm gate.
Bonney, Lewis, and Joseph C. Snow. (See Tucker, John E., assignor.)

May 18,1868.
Mar. 17, 1868.
Apr. 14, 1868.

Apr. 21, 1868.
Dee. 1, 1868
Aug. 18, 1868

Mar. 24, 1868.
Mar. 3, 1868.
Jan. 7,1868
July 28, 1868.
June 2, 1868
Nov. 17, 1868

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Mar. 24, 1868.
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Dec. 8,1868.
Oct. $20,1868$.
Nov. 17, 1868.

Sept. 22, 1863.
Sept. 8, 1868.
May $26,1868$.
Sept. 29, 1868.
Aug. 4, 1868.
Oct. 13, 1868.
Sept. 1, 1868.
Nov. 3, 1868.
Sept. 15, 1868.
Nov. $10,1868$.
Oct. 6, 1868.
Oct. 27, 1868.
Feb. 25, 1868.
Dec. $22,1868$.
July 21, 1868.

Oct. 20,1868.
Dee. 8, 1868.

Nov. 10, 1868.
Nov. 10, 1868.
Sept. 29, 1868.
Mar. 10, 1868.
Oct. 27, 1868.
Dec. $22,1868$.
Apr. $21,1868$.
Sept. 15, 1868.
July $21,1868$.
Mar. $3,1868$.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 84, 990 | Bonsall, Sterling, and Louis Hillebrand, Philadelphia, Pa. Bell pull |
| 78, 919 | Bonte, Albert I. C., Cineinmati, Ohio. Tood-turning lathe |
| 83, 033 | Bookwalter, David, Gardincr, Ill. Corn-hnsking machine |
|  | Bookwalter, John W., and James S. Goode, executors of the estate of James Leffel, deceased. (See Leffel, Jamcs)................(Reissue.) |
|  |  |
|  | Same.................................. . same.. . . . . . . . . . . . . . . (Reissue.) |
| 80, 268 | Boon, Alonzo T., and Albert D. Perry, Galcshurg, Ill. Apparatus for earburcting cas and air |
| 80, 589 | Boon, Alonzo T., and James B. Finchure, Galcsburg, Il. Dentists' and barbers' ehair |
| 83, 825 | Booraem, W. E., New York, N. Y. Apparatus for |
| 2,907 | Booss, Frederiek, New York, N. Y. Muff............................... (Design) |
| 73, 225 | Booth, Edward 13., St. Lotis, Mo. Sheep w |
|  | Booth, J. H. (See Bean, A. 13., assignor.) |
|  | Booth, Stephen E., administrator of Sheldon S. Hartshorne. (See Hartshorne, Sheldon S.) |
| 84, 253 | Booth, Thomas, and C. C. Sanderson, Norway, Maine. Let-off mcehanism for |
| 82, 484 | Booth, T. ${ }^{\text {J., Jeffersou Line, Pa. Stump extr }}$ |
| 76,703 | Bope, Jaeob Wr., assiguor to self and George R. Chittenden, St. Louis, Mio. Dumping platform for harvesters. (Antedated April \% 1868) |
| 74, 290 | Borden, Jolin G., Brewster Station, N. Y. Maehine for soldering tin ea |
| 79,943 | Bordman, Benjamin, Malden, Mass. Coffee |
|  | Bordman, Joln J., and William P. Parrott. (See Parrott \& Bordman.) |
| 83, 687 | Borgert, John A., Hudson City, N. J. Pile dr |
| 78,360 | Borgfeldt, Niclolas H., and F. W. Ritterhoff, New York, N. Y. Maehine for granulating and finishing tobacen. |
| 82, 791 | Born, Peter, New York, N. Y. Folding eliair |
| 73, 71 | Eorton, Elijah, Morris, Ill. Deviee for operatiug pump |
| 76, 704 | Borton, Job, Antrim, Ohio. Coal-exearating machine |
| 84, 204 | Bortree, Lewis S., Grand Rapids, Mielı. Horse rako. |
| 76, 151 | Bosart, Louis W., St. Marie, Ill. Portable wire fence |
| 78, 783 | Same...... Portable fence |
| 83, 911 | Same. . . . . . . . . same |
| 82, 376 | Boschke, Albert, Boston, Mass. Dredgin |
| 79, 195 | Bosdevex, Edmond, Plitadelphia, Pa. Gra |
| 74, 194 | Bushenz, Mathias, Chili, Ill. Harrow |
|  | Boss, J. B., and C. C. Clark. (See Deeker, John, assignor.) |
| 81,587 | Bossicre, Georges, France. Decolorizing taming liquids |
| 80, 269 | Bostoek, Edward, Albany, N. Y. Tuek ereaser for sewing |
| 80, 270 | Same........................................ . . saı |
|  | Boston \& Sandwieh Glass Compary. (See Turpie, David, assignor.) |
|  | Boston Shoe Stud and Button Company. (See Walcott, IL. S., assignor.) Same. See Oliver, Willard F. assicnor.) |
|  | Boston Spring Bed Company. (See Willis, N. J., assignor.) |
|  | Bostwiek, H. E. (See Robio, I). C., assignor.) |
|  | Bostwiek, J. W. (See Heliker \& White, assignors.) |
| 73, 691 | Bostrell, D. K., Columbus, Ohio. Fruit-drying appa |
| 74, 291 | Same..... Range |
| 75, 119 | Boswell, Elihir, Mighland, Ohio. Corn liarvester |
| 81.246 | Boswortli, C. F., Milford, Conn. Attaehing wire to brims of |
|  | Boteler, John W., et al. (See Checkeni, Dominieo, assignor.) |
| 82, 916 | Bouché, Charles J., Lonisville, K.y. P'en raek |
| 80, 705 | Boucher, Hemry IL., Doylestown, Pa. Lamp. |
| 78, 254 | Boughton, John W., Appleton, Wis. Sign for |
| 79, 441 | Boughtou, John W., New York, N. Y. Paper |
| 73, 289 | Bounds, James, Bridgeport, Comm. Plier |
| 78, 858 | Same . . . . Box-top fastene |
| 73, 947 | Bouniol, Jules, Philarlplphia, Pa. Drawing elamp |
| 82, 201 | Bourke, Joseph, Great Britain. Skate |
| 80,901 | Bourn, Angustus O., Cranstor, F. I. Elbow support for flexible hose |
|  | Bounc, E. H., et al. (See Lceompte, S. D., assignor) . . . . . . . . . . . . . (Reissue.) |
| 79, 944 | Bouser, W. H., Paris, 111. |
|  | Bousficld, Edward T., and James Howard. (See Moward \& Bousfield.) |
| 74, 747 | Bouton, Sanuel F., and Nathan P. Ames, Chieago, Ill. Spring-bed bottom |
| 76,392 | Boutto, Therence, New Iberia, La. Apparatus for evaporating eane juie |
| ¢3, 244 | Bover, George C., Cincinnati, Ohio. Briek maehine |
| 74, 884 | Bowden, John and Walter, Bushwick, N. Y. Bellows........... |
| 82, 792 | Bowdle, T. J.. S. R. Lawder, and T. E. Johnston, Piqua, Ohio. Maehine for tenoning hlind slats. |
| 79, 305 | Bowen, A. E., Baltimore, Ma. Cru |
| 73, 161 | Bowen, George A., assignor to self and Samuel C. Parrott, Trenton, N. J. Watch . |
| 75, 355 | Bowen, George W., Fort Wayne, Ind. Well bo |
| 8!, 130 | Bowen, James 13., Cleanthus A. Reed, and Charles A. Whelan, Madison, Wis. Harvester rake |
|  | Bowen, P. C., and L. M. Lull. (See Lnll \& Bowen.) |
| 85, 360 | Bowen, Riehard E., Colden, N. X. Fenee post |
| 77, 162 | Bowen, Smith, et al. (See Springer, Joseph H., assignor.) |
| 82, 282 | Bower, Wesley L., Joliet, M11. I |

## Date.

Dee. 15, 1868.
June 16, 1868.
Oct. 13, 1868.

July 28, 1868.
Aug. 4, 1868.
Nov. 10, 1868.
Feb. 4, 1868.
Jan. 14, 1868.

Nov. 24, 1868. Sept. 29, 1868.

Apr. 14, 1868.
Feb. 11, 1868.
July 14, 1868.
Nov. 3, 1868.
May $26,1868$.
Oet. 6, 1868.
J an. 28, 1868.
Apr. 14, 1268.
Nov. 24, 1868.
Mar. 31, 1868.
Juno 9, 1868.
Nov. 10, 1868.
Sept. 22, 1868.
June 23, 1868. Feb. 11, 1868.

Sept. 1, 1868.
July 28, 1868.
July 28, 1868.

Jan. 28, 1868. F'eb. 11, 1868. Mar. 3, 1868. Aug. 18, 1868.

Oct. 13, 1868. Aıg. 4, 1868. May 26, 1868. June 30, 1868. Jan. 14, 1868. Jıno 16, 1868. Frb. 4, 1868. Sept. 15, 1868. Ang. 11, 1868.

July 14, 1868.
Feb. 25, 1868.
Apr. 7, 1868.
Oct. 20, 1868. Feb. 25, 1868.

Oct. 6, 1868. Juno 30, 1868. Jan. 7, 1868. Mar. 10, 1868.

Ang. 18, 1868.
Dec. 29, 1868.
$\Delta$ pr. 28, 1868.
Sept. 22, 1868.

## Alphabetical list of patentces for the year 1868-Continued.

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81, 131
75, 849
77, 575
73, 493
75, 356
76, 152
80, 125
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79, 806
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73, 290

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73,226
73, 227
76, 589
3, 102
3,228
72, 966
77, 711
73, 495
75, 726

74, 292

80, 802

Bowerman, Thomas H., and Calvin J. Dart, Cold Water, Mich. Sash fastening Bowers, Charlos F., Boston, Mass. Secret bed.
Bowers, Menry, Albany, N. Y. Draught and shaft tug
Bowers, Isaac W., Boston, Mass. Wood-bending inachine
Bowers, John, assignor to Elijah W. Blaisdell, jr., Clinton, Wis. Gato..........
Bowers, Peter H., Brooklyn, N. Y. Printing wall paper.
Bowers, Sylvester, Penn Yan, N. Y. Broiler..
Bowlsby, George W., Monree, Mich. Government revenue stamp
Same....... Revenue stamp.
Same.......Horse hay fork
Bowly, Franklin, Winchester, Va. Instrument for drawing ellipses
Bowman, George M., et al. (See Jones, J. M., assignor.)
Bowman, James T., et al. (See Warner, Daniel, assignor.)
Bowman, R. J., Mansfield, Ind. Wheel for vehicles
Bowman, Silas H. Half Moon Bay, Cal. Manufacture of brick.
Bowsher, Nelson P., Ligonier, Ind.' Power indicator.
Boyce, Elijah Y., Middlebury, Vt. Washing machino
Boyce, James Edward, and Robert Harrington, England. Umbrella (Patonted
in England June 17, 1867)
Boyd, Asahcl C., Grafton, Mass. Folding ehair
Boyd, Francis E., Boston, Mass. Feeding nail plates
Boyd, Francis E., and P. Shelton Tyler, Boston, Mass. Breech-loading fire-arm Same.
Boyd, George, et al. (See Camfield, Hampton R., assignor.)
Boyd, James, assignor to self and N. C. Garretson, Mamaroneck, N. Y. Window blind-slat holder
Boyd, James I., Indianapolis, Ind. Uterine supporter. (Antedated Oet. 31, 1868)
Boyd, Jesse C., assignor to self, C. P. Wilson, and L. L. Boblet, Milroy, Ind. Cultivator.
Boyd, Lewis R., Now York, N. $\mathbf{Y}$. Manufaeture of locking rings for closing fruit jars
Boyd, Robert. (See Gordon, Norman N., assignor.)
Boyd, Robert H., and William W. Grier. (See Grier \& Boyd.)
Boyd, Robert H., and John Gracie. (See Gracie \& Boyd.)
Same.
.same.
Boyd, Robert S., Smithlanl, Ky. Road scraper.
Boyd, Thomas, Allegheny City, Pa. Heating buildings.
Boyd, William, Hartford, N. Y. Machine for bending circles
Boyd, W. P., Thorntown, Ind. Gauge for mortising window sash
Boyden, George F., Providenec, R. I. Furniture protector
Boyden, W. H., Rockland, R. I. Dresser copper for warp-dressing machines.
Boydston, Benjamin S., Richmond, Ind. Ironing stand and elothes dryer. (Antedated Fel. 28, 1868)
Same......Lamp
Boycr, Johu G., assignor to Moses Wiant and George Gorr, Springfield, Pa. Stump extractor. (Antedated March 27, 1868)
Boyington, Wm. W., Chicago. III. Parement
Boyle, E. O., and Joun D. Wilkinson. (See Wilkinson \& Boyle.)
Boyle, James O. (See Collinson, Henry, assignor.)
Boyle, John. (See Miller, William, assignor.)
Boyle, J. S., et al. (See Flora, Orlando V., assignor.)
Boyle, Robert Kirk, assignor to self and Guiseppe Tagliabue, New York, N. Y. Printing telegraph instrument.
Boyle, Willian K., Brookville, Ma. Manuacture of artifieial stone. (Ante dated Sept. 7, 1868)
same......................................
Same...... Bladensburg, Md..
Boylson, Almena R., Chicago, Ill. Waist belt
Boylston. Franeis, New York, N. Y. Children's earriage

## Same

Boynton, Eben Moody, Grand Rapids, Mich
(Reissue)
Same Saw tanc
Boynton, H. Storrs, Cortland, N. X. Aljustable clothes dryer
Boynton, John F., assignor to Henri L. Stuart, New York, N. Y. Steam cene.

.(Rcissuc). pany, New York, N. Y. Converting iron into steel..................(Reissue).
Boynton, Joln W., East Hartford, Coin., and John A. MeGaw, Newark, N. J. Mode of removing burrs and other vegetable matters from wool
Boynton, N. A., assignor to self and Danicl S. Paris, New York, N. Y. Fender ring for heating-stoves..
Boynton, Ovette, Hinesburg, Vt. Lamp.
Boynton, W. (See Cronk, M. C., assignor.)
Brabrook, George, assignor to Reed \& Barton, Taunton, Mass. Name-plate for eoffin, \&c..
Brackenridqe, Philimpine S., administratrix of Edward Stieren, deceased. isee Sticren, Edward).
rackett, E. C., assignor to self and Henry C. Genitsen, Dedham, Mass. Toy.
Brackett, Fred., et al. (See Hoffman, Austin D., assignor.)
Brackett, Samuel A., et al. (See Locke, Charles S., assigmor.)
Brada, Charles, Charlestown, Mass. Reclining chair
Bradburn, Joh, and Peter Sweency. (See Swcency \& Bradburn.)
Bradbury and Goodsell. (See Heaton, Abram, assignor.)

Date.

Aug. 18, 1868.
Mar. 24, 1868.
May 5,1868.
Jan. 21, 1868.
Mar. 10, 1868.
Mar. 31, 1868.
July 21, 1868.
Mar. 31, 1868.
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July 28, 1868.
Jan. 14, 1868.

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Dec. 29, 1868.

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Nov. 10, 1868.
Jan. 14, 1868.
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June 16, 1868.
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Dee. 8, 1868.
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Sept. 29, 1868.
June 16, 1868.
May $19,1868$.

Sopt. 8, 1868.
Scpt. 15, 1868.
Oct. 6, 1868.
Nov. 17, 1863.
Oct. 6,1868.
Dcc. 8, 1868.

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Jan. 14, 1868.
A pr. 14, 1868.
Aug. 25, 1868.
Dec. 1, 1868.
Jan. 7, 1868.
May 12, 1868.
Jan. 21, 1868.
Mar. 24, 1868.

Fob. 11, 1868.

Aug. 11, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

83, 913
83, 914
77,352

82, 203
74, 293
79, 196
3, 002
74,885
7\%,576
79, 197
80, 443

83, 246
74,492
78, 419
82, 377
77, 306
77, 248
3, 024
76, 043
76,154
83, 756
76,530
74, 980
78, 180
79, 945
83, 358
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74,792
77, 577
80, 444
73, 292
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78,511
75, 242
76, 591
77, 712
75, 727
76, 044
83,914
78, 860
70, 544
81,589
80, 445
85, 056
85, 057
76, 045
79, 946

81, 063
80, 052
84, 609
85, 058

Bradley \& Hubbari. (See Evarts, Johı A., assignor.) Samo. same.
Same.
same.
radley, B. H., Waterbury, Com. Picture nail
Bradley, Charles C., Bronlicad, Wis. Dranght equalizer for wagons.
Bradley, C. H., Coatesville, Pa. C'lmm.
Bradley, Eber. (Sce Styer, Joseph T., assignor.)
Bradley, E. F., and Truman Piper. (See Piper \& Bradley.)
Bradley, F. A., assignor to self, Janes G. English, and E. F. Mersick, New Haven, Conn. Top-prop for earriages

Apr. : 7, 1868
Jan. 28, 1868
Oct. 13, 1868.
July 21, 1868.
Nov. 10, 1868
Ang. 11, 1868.
June 9, 1868

Nov. 10, 1868
Nov. 10, 1868.
Apr. 28, 1868.

Sept. 15, 1868
Fel. 11, 1863.
Juno 冗3, 1888.
A pr. 14, 1868
Feb. 25, 1863.
Мау 5, 1868.
Јиио $23,1868$.
July 28, 1868

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June 2, 1868
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Juno 30, 1868
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May 26, 1868
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Mar. 31, 1868.
Nov. 10, 1868.
Juno 16, 1868.
July 7, 1868.
Scpt. 1, 1868.
July 28, 1868.
Dec. $22,1868$.
Dec. $22,1868$.
Mar. 31, 1868.
July 14, 1868.

Ang. 18, 1868.
Jnly 21, 1868.
Dec. 1, 1868.
Dec. 22, 1868. (Autedated Dec. 11, 1868)
No.

## Name, resideace, and invention or discovery.

Brau, Joseph, Rochester, Pa. Apparatus for drying and pressing pantaloons. (Antedated Dee. 11, 1868)
Same.... . Apparatus for cleaning elothes. (Antedated Dee. 11, 1868)..... Brau, J. Tobias, Randolph Center, Wis. Wind whecl.
Bray, Benj., Salem, Mass. Spring roller for window eurtains, \&c... (Extonsion). Bray, Mellen. (See Talpey, Joseph A., assignor.)

Same...... (See Turner, Henry, assignor.)
Bray, Mellen, and N. C. Lombard. (See Lombard \& Bray.)
Bray, Wilson, Stockton, N. J. Refrigerator
Brayley, James, Buffalo, N. X. Shaft coupling.
Brayley, James, et al. (See Bronson, Levi, assignor.)
Brayley, James, and Mary Pitts, administrators of John A. Pitts, deceased. (See Pitts, John A).
(Extension.)
Brayton, George 13., Providence, R.I. Maehine for eutting eyelets $\qquad$
Brayton, Robert, Fremont, Ohio. Oil injector for steam and other enginery.
Breasted, Charles, Chicago, Ill. Barrel sifter.
Breathilt, J. 13., Cooper County, Mo. Nail extraetor
Brecht, Gustavus V., St. Louis, Mo. Clamp for hub-boring machines.
Breckenridge, M. P. Meriden, Conn. Sclf-regulating air valve for steam heaters
Bredt, Ernst, New York, N. Y. Button. (Antedated April 25, 1868)
Breed \& Company. (See Heneage, Robert, assignor.)
Breed, Daniel. (See Fisher, John F., assignor.)
Breed, D. F., Valparaiso, Iud. Wood-bending maehine
Brecd, F. W., and Robert Heneage. (See Hencage \& Brecd.)
Breevort, Henry, Brooklyn, N. X. Detaehable ball joint
Breitweiser, Heury. (See Adler, Max, assignor.)
Bremerman, Frederick, Indianapolis, Ind. Coupling for the hounds and poles of wagons.
Breneman, A. N., Laneaster, Pa. Shoe holder.
Breneman, C. K.. Ludington, Mich. Combined elothes raek
Brenton, Joseph L. (See Haskin, Henry P., assignor.)
Brett, John, Memphis, Mich. Machine for forming eaves troughs
Brett, Joseph, Geneva, Ohio. Mode of mulehing strawberry beds.
Brett, Thomas, assignor to self and W. H. Saxton, Geneva, Ohio. Rest for grinding harvester cutters.
Brettell, Edward W., Elizabeth, N. J. Permutation lock
Brettell, George E., Rochester, N. Y. Waste valve for pumps.
Bretz, John, William Sangster, and John F. Bretz, Springfield, Iil. Brick maehine.
Bretz, John, and William Sangster. (See Sangster \& Bretz.)
Brewer, C. W., Raeine, Wiseonsin. Piano hammer.
Same...... Chura.
Brewer, I., et al. (See Blinn, Alvord \& Brewer.)
Brewer, James F., Plantsville, Conn. Poker.
Brewer, John, Philadelphia, Pa. Expanding mandrel
Brewer, John, New Vienna, Ohio. Combined land roller and elod pulverizer.
Brewster, D. C., Kent, Ohio. Extension spoke
Brewster, Edward E. Cleveland, Ohio. Washing maehine
Brewster, Frank. (See Hoffman, Austin D., assignor.)
Brewster, Selah S., Manehester, Mich. Apparatus for removing boxes from wagons.
Briant, A. C., Lafayette, Ind. Animal trap.
Brickett, N. A. (See Johnson, John, assignor.)
Briekill, W. A., New York, N'. X. Feed-water heater for steam fire engines..
Briekley, J. F., Wiuchester, Ind. Pump.
Bridge, James P. (See Cowling, Eben L., assignor.) Same....... (See Drew, Thomas, assignor.)
Bridge, Lewis, and David Stuart. (See Stuart \& Bridge.)
Same............................................ same.
Samc. .......................................... same.
Bridgeport Brass Company. (Sec Doolittle, T. B., assignor.)
Bridgeport Knitting Company. (See Larkin, Samuel, assignor.)
Bridges, Albert, Newton, Mass. Car truek
assignor.
Brid oham, Samuel R. (See Marshal, Horace B., assignor.)
Bridgman, J. S., and E. G. Wellman, Rockport, N. X. Gas burner
Brierly, James, assignor to self and James Brierly, Worcester, Mass. Operating shattle box in looms.
Brierly, James L., Auburn, Mass. Pipe wrench and eutter
Brigden, Johu T., Hornellsville, N. Y. Machine for panehing tubes
Briggs, Charles, and Joseph Shirt. (See Shirt \& Briggs.)
Briggs, C. W., Springfield, Mass. Charcoal furnace.
Briggs, Elisha, jr., et al. (See Riee \& Briggs.)
Briggs, F. Markham, Livonia, Mieh. Lamp for destroying insects in trees
Briggs, Henry F., et al. (See Day, Lester, assignor.)
Briggs, Horaee C., West Auburn, Maine. Hoeing maehine
Briggs, James, Lyous, Olio. Sawing machine..
Briggs, Joshua, Peterboro, N. H. Piano-forte stool
Briggs, Leonard C., Boston, to self and George Buntin, Grosvenor Dale, Conn
Triggs, for looms.

Date.

Dec. $22,1868$.
Dcc. 22, 1868.

June 16, 1868. Dec. $3,1868$.

Sept. 15, 1868.
Jan. 14, 1868.

Dee. 8, 1868.
Dec. $15,1868$.
May 5, 1868.
June 30, 1868.
June 16, 1868.
Dec. 8, 1868.
May 5,1868.

Jan. 21, 1868.
Apr. 14, 1868.

Dec. 1, 1868.
Jan. 14, 1868.
Sept. 22, 1868.
Sept. 15, 1868.
July 21, 1868.
Apr. 21, 1868.
Oct. 20, 1868.
May 12, 1868.
Dec. 22, 1868
Sept. 8, 1868.
Dee. 29, 1868.
Dee. 29, 1868
June 23, 1868.
Oct. 6, 1868.
Nov. 17, 1868.
June 23, 1868.

July 21, 1868.
Feb. 25, 1868.
Aug. 18, 1868.
Dec. 15, 1868.

Mar. 10, 1868.

July 7, 1868.
July 28, 1868.
MIay 19, 1868.
Sept. 29, 1868.
Sept. 1, 1868.
July 28, 1868.
Nov. 17, 1868.
Aug. 11, 1868.
Apl. 28, 1868.
Aug. 18, 1868.
Oct. 6,1868.

Alphabetical list of patentecs for the year 1868-Continued.

| No | Name. residence, and invention or discorery. |
| :---: | :---: |
| 78,642 | Br |
| 85, 204 | Brigham, Charles F., Worcester, Mass. Runner attachment for |
| 83, 247 | Bright, Richard A., jr., Providence, R. I. Cigar machine. |
| 76, 592 | Brimblccom, John W., assignor to Willian Carleton, Lynn, Mass. Lamp burner. |
| 81, 590 | Brin, Arthur, France. Apparatns for carbinreting air and applying the same. |
| 84, 083 | Brinckerhoff, George E., Brooklyn, N. Y. Cataninial sack |
| 79, 631 | Briner, Henry and Emil, Manhattanville, N. Y. Stecl shank for boots and shoes. |
| 81,979 | Bringier, M. S., Ascension Parish, La. Mode of purifying water.. |
|  | Brininstool, S. B., et al. (See Peasc, C. C., assignor.) |
| 85, 205 | Brinkerhoff, Charlcs, Fishkill, N. Y. India-rubber fe |
| 74, 981 | Brinkerhoff, Jacob, Aubwrn, N. Y. Corn sheller |
|  | Brinley, W. B. (See James, Eben, assignor.) |
| 83, 452 | Brinser, S. C., Middletown, Pa. Horse rake. |
| 84, 048 | Brinton, Joseph M., Thornbury, Pa. Horse hay |
| 84, 935 | Same..... Thorubury Township, Pa. |
| 78, 048 | Briody, B., Detroit, Mich. Artificial limb |
| 83, 453 | Brisbane, Sarah H., Fordham, N. Y. Sciss |
| 83, 757 | Bristol, Charles B., Ncw Haven, Conn. Curry |
| ع0, 447 | Bristol, G. H., Romeo, Mich. Water elevator. |
| 82, 078 | Bristol, P. M., Ludington, Mich. Saw-sharpening |
|  | Brittingham, Wm. B. (See Gray, Robert D., assig |
| 81,873 | Britton, Hiram M., assignor to self aud Jocl F'. Richardson, Cincinnati, Ohio. Railroad-car hcater. (Antcdated March 9, 1868) |
| 78, 719 | Britton, Walter, Abington, Ill. Tire shrinking and punching m |
| 73, 075 | Broad, Elisha, St. Anthony's Falls, Minn. Cant hook |
| 81, 743 | Broaduax, Amos, Mont Clair, N. J. Apparatus for rendering lard, ta |
| 81, 744 | Same ......Rendering and refining lard, oils, \&c. ........................ |
|  | Broadnax, Amos, and Rollin B. Gray. (See McLeod, N. N., assignor) - . (Reissuc.) |
| 80, 904 | Brubst, Jacob, Fort Wayne, Ind. Mretallic hcel pattcrn.- |
| 77, 954 | Brocard, Hyppolyte, Francc. Packing for joints of steam and water |
| 81,247 | Brock, Elias. and Judson Schultz, assignois to Judson Schultz, Ellenville, N. Y. Machine for unhairing hides. |
| 81, 591 | Brock, G. H., Huntington, N. Y. Organ pipe. |
| 73,572 | Brock, Solomon, Brooklyu, N. Y. Paper filc |
| 76,394 | Brock, W. E., New York, N. Y. Dummy for displaying |
| 80, 590 | Brockington, S. C., Groton, Comn. Lamp. |
| 3, 020 | Brocksieper, F. W., assignor to Sargcant \& Company, New Haven, Conn. Bracket. |
| 3, 021 | Same.........-same......................... ...................... (Design). |
| 3, 022 | Same......... .same................................................ . . . (Desigı |
| 3, 023 | Same......... .same...... .... ..................................... . (Design |
| 3, 024 | Same..........same...................... ............................ (Design) |
| 3, 025 | Same......... -same........ ........................................ . (Design) |
| 3, 026 | (Design) |
| 3, 027 | (Design) |
| 3, 028 | Same..........same . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) |
| 3, 029 | Same......... .same ....................................... . . . . . . . . (Design) |
| 3, 030 | (Design) |
| 3, 031 | Same.........samc.................................................. (Design) |
| 3, 032 | Same..........same.................................................... (Design) |
| 3, 033 | Samc...... Card rcceiver. ................... . . . . . . . . . . . . . . . . . . . (Design) |
| 3, 034 | Same ...... Match safe ............................................. ( (Design) |
| 64, 659 | Brockway, Edwin, Haverstraw, N. Y. Boilcr fecder |
| 82, 685 | Brockway, Joseph W.. Ncw York, N. Y: Straw cutter |
| 80,054 | Brockway, R. W., and Henry Frederick, Akron, Ohio. |
| 76, 046 | Brodhcad, James F., Rondo |
| 76, 884 | Brodhead, Wessel, Mcadvillc, Pa. Carpenters' gau |
| 80, 905 | Brokenshire, John, Oswego, N. Y. Punp |
|  | Bromberg, S., et al. (See Thoma, Alois, assignor.) |
|  | Bromley, John \& Sons. (See Allinson, James, assignor) .................. (Design.) <br> Same...... (See Crabtreo, Benjamin, jr., assignor) <br> (Dcsign.) |
|  | Same......................same...................................... (Design.) |
|  |  |
|  | Same..................... . samo ........................................ (Design.) |
| 84, 675 | Brönncr, Julius, Prussia. Gas burner. |
| 82, 079 | Bronson, George H., New York, N. Y. Manufacturc of artificial fuel |
| 78, 571 | Bronson, Levi, assignor to self and James Brayley, Buffalo, N. Y. Shaft coup- ling ....................................................................................... |
|  | Bronson, Samucl N., et al. (See Hicks \& Doty, assignors.) |
| 77. 444 | Bronsou, Willis S., Hartford, Conn. Base-burning stove. |
| 77, 445 | Same......Fire grate |
| 85, 062 | Same...... Base-b |
| 83, 248 | Brooke, William E., Trenton, N. J. Shutter and blind operator |
| 73, 573 | Brooks, Almond, Columbus, Ind. Machine for supporting tin cans when being soldered |
| 79,308 | Brooks, Asa T., New Britain, Conn. Door bell ..................... |
| 77, 165 | Brooks, Asa T., assignor to Russell and Erwin Manufacturing Company, New Britain, Conn. - Koy-hole guard for door locks. |

Date.

June 2, 1868.
Dec. 22, 1868.
Oct. 20, 1868.
Apr. 14, 1868.
Sept. 1, 1868.
Nov. 17, 1868.
July 7, 1868.
Scpt. 8, 1868.
Dcc. 22, 1868.

Mar. $3,1868$.
Oct. 27, 1868.
Nov. 17, 1868.
Dec. 15, 1868.
May 19, 1868. Oct. 27, 1868.
Nov. 3, 1868.
July 28, 1868. Sept. 15, 1868.

Scpt. 8, 1868.
June 9, 1868.
Jan. 7, 1868.
Scpt. 1, 1868.
Sept. 1, 1868.
Aug. 11, 1868.
May 19, 1868.
Ang. 18, 1868.
Scpt. 1, 1268.
Ja1. 21, 186.
Apr. 7, 1868.
Aug. 4, 1868.
May 12, 1868.
May 12, 1868.
May $12,1868$.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May $12,1868$.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May 12, 1868.
May 12, 1868.
Feb. 18, 1868.
Oct. 6, 1868.
July 21, 1868.
Mar. 31, 1868.
Apr. 21, 1868.
Aug. 11, 1868.

Dec. 8, 1868. Sept. 15, 1868.

June 2, 1868.
May 5, 1868.
May 5, 1868.
Dec. 22, 1868.
Oct. 20, 1868.
Jan. 21, 1868.
Junc 30, 1868.
Apr. 28, 1868.

Alphabelical list of patentees for the year 1868-Continued.

No.

73,497
75, 728
82, 917
8:2, 283
83, 916
78,572
83, 827
77, 166
84, 676
76,593
76,594
79,309
80, 128
81, 469
82, 485 84, 794
78, 049
80, 906
74, 493
76, 297
76, 595

80, 129
76, 985
79, 807
80, 591
84, 166
82, 686
84, 255
84, 854
85, 063
78, 785
83, 758
78, 181
83, 917
81,745
83, 918
76, 986
82, 284
3, 211

3,115 .
85, 426
80, 803
73, 498
83, 249
72, 967
77, 446
77, 713

79, 102
78, 050
80, 055
82, 379
84, 286
78, 786

73,948

75,850

Name, residence, and invention or discevery.

Brooks, Eliphalet C., San Franeiseo, Cal. Spring attachment for vehicles
Breoks, George, and Samuel Clement, Detroit, Mieh. Machine for making "Exeelsior"
Brooks, George W.. Clinton, Mass. Centering square
Brooks, H. G., Now York, N. Y. Steam genorator.
Same .................................... - same
Brooks, Memry S., and J. S. Lehman, Martiekville, Pa. Mede of eonstructing iron posts for rail fence.
Brooks, Moratio N., Bloomington, Il. Combined water-elevator and dairy....
Brooks, Lorin, New Yorl, N. Y. Boot and shoo eonformator.
Brooks, Reuben, jr., and W. N. Manning, Rockport, Mass. Ruffing device for sewing maelines.
Brooks, K. M., Woodbury, Ga. Cotton press.
Same...... Cotton gin.........................
Same..... Griffin, Ga. Railroad rail
Same........ Serubbing brush.
Brooks, Thomas G., Oneida, Ill. Hames
Brooks, William D., Bethany, Pa. Horse hay fork.
Same......Elevator.
Brooks, W. P., Bloomington, Ill. Draught attachment for vehicles.
Broome, Nathaniel W., Baltimore, Md. Apparatus for curing tobacco.
Brose, D., and T'. Nevergold. (See Nevergold \& Brose.)
Brosius, Clarence, Haneock, Md. Skid for elovating and lowering barrels, \&c.
Brosius, John, Raueh's Gap, Pa. Safety pooket attachment
Brough, Joln, and Joseph Stekes. (See Stokes \& Brough.)
Broughton, John, New York, N. Y. Breech-leading fire-arm. (Antedated Oct. 14, 1867)
Brown \& Brothers. (See Hendrieks, Joseph E., assignol.)
Brown, A. C. (See Burdge, J. E., assignor.)
Brown, A. J., New Castle, Del. Combined wash stand and water closet
Brown, Adam S., Lebanon, Pa. Tube well............................
Brown, Albert, Troy, N. Y. Hot-water tank on
Brown, Albert C., Chieago, Ill. Weather strip.
Brown, Amos W., Lansinglurg, N. X. Brash
Brown, Anson R., Albion, Mieh. Mold for making aeupuneture instruments.
Same..... . Bandage for preternatural enlargements.
Same . . . . . Instrument for acupuncturation
Brown, Benjamin F., Woburn, Mass. Submerged pumps.
Brown, B. I., Dorchester, Mass. Hanging earriage bodies.
(Extension)
Brown, C., and L. A. Gerth, Peoria, Ill. Plow
Brown, Charles, Albermarle County, Va. Process of preserving timber from decay
Brown, Charles, Buffalo, N. Y. Hay and straw cutting machino.
Brown, Charles, assigner to self and Aaron G. Salmon, Adrian, Mich. Carriage
Brown, Charles, Buffalo, N. X., and David L. Miller, Madison, N. J. Baling press
Brown, C. D., Bainbridge, N. Y. Maehine for dressing hop poles
Brown, Charles E., East Randolph, Mass. Sewing machine.
Brown, Charles T., Warren, R. I. Projeetile. $\qquad$
Same..... Biecel-loading eannon
Brown, Charles H., and E. D. Chamberlain. (See Chamberlain Derer H
 Brown, Charles K., assignor to self, Charles A. Brown and Franklin Field, Troy, N. Y. Shirt eollar
(Design)
Same...... Maehine for coloring paper
Brown, Charles S., Pittston, Maine. Supporting attaehment for sails.
Brown, Collins B., Upper Alton, Ill. Harvester rako
.... (E
Brown, Comrad, Goshen, N. Y. Combined knob lateh and lock.......................
Brown, Conrad, New Albany, Ind. Compound for the eure of dropsy
Brown, C. W., and B. B. Taggart. (See J'aggart \& Brown.)
Brown, Darius C., Lowell, Mass. Harness for looms.
Same.... . . Harness fiame for looms
Brown, D. C., Lowell, and John Ashworth, North Andover, Mass., assignor to D. C. Brown. Maehine for making wire heddles for loom harness

Brown, David F. (See Thorp, Joseph W., assignor.)
Brown, David S., jr., New York, N. Y. Machine for eutting soap
Brown, E. (See Green, Wm. W., jr., assignor.)
Brown, Edmund, Burlington, Vt. Vegetable masher
Brown, Edmund D., Battle Creck, Mich. Pole for vehieles.
Brown, Elward, New York, N. Y. Connecting rod. (Antedated Sept. 16,1868).
Brown, Edward, Waterbury, Conn. Machine for making hinges. (Extension). Brown, Edward, New York, N. Y. Hinge machinc
Brown, Edward'L., Philadelphia, Pa. Process of combining wrought and east metal
Brown, Edward W., Stillwater, R. I. Loom .................................(Extension) -
Brown, Edwin, Roxbury, and Edwin W., assignors to Edwin W. Brown, Boston, Mass. Phetographie printing apparatus
Brown, Elias. (See Foster, Caleb, assignor.)
Brown, Elijah C., Crawfordsville, Ind. Corn and seed planter.
1)ate.

Jan. 21, 1868.
Mar. 24, 1868.
Oet. 13, 1868.
Sept. 22, 1868.
Nov. 10, 1868.
Juno 2, 1868.
Nov. 10, 1868.
Apr. 28, 1868.
Dec. 8, 1868.
Apr. 14, 1868.
Apr. 14, 1868.
June 30, 1868.
July 21, 1868.
Aug. 25, 1868.
Sept. 29, 1868.
Dec. 8, 1868.
May 19, 1868.
Aug. 11, 1868.
Feb. 18, 186S.
Apr. 7, 1868.

Mar. 14, 1868.

July 21, 1868.
Apr. 21, 1868.
July 14, 1868
Aug. 4, 1868
Nov. 17, 1868.
Oct. 6, 1868:
Nov. 24, 1868
Dcc. 15, 1868

Dee. 22, 1868
Dee. 8,1868
Juno 9, 1863.
Nov. 3, 1868.
May 26, 1868.
Nev. 10, 1868
Sept. 1, 1868
Nov. 10, 1868
Apr. 21, 1868
Sept. 22, 1868
Nov. 24, 1868

July 21, 1868.
Dee. 29, 1868
Aug. 11, 1868.
June 26, 1868
Jan. 21, 1868.
Oct. 20, 1868.
Jan. 7, 1868.
May 5, 1868.
May 12, 1868.
June 23, 1868.
May 19, 1868.
July 21,1868
Sept. 22, 1868.
May 14.1868.
Nov. 24, 1868
June 9,1868
July 25, 1868
Feb. 4, 1868.

Mar. 24, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

No.
Name, residenee, and inrention or diseovery.

Brown, Elijah C., Crawfordsville, Ind. Guide for corn and seed planter. Brown, Francis IF., Stamford, Conn. Neck-tie holder.
Brown, F. W., Philadelphia, Pa. Device for soldering lids of cans. (Antedated April 21, 1868)

## Date.

Mar. 24, 1868.
Feb. 11, 1868.
May 5, 1868.
Brown, George. (See Dodd, James, assimnor.)
Same...... (See Jenkins, Nicholas, assignor.)
Same ...... (See Burnham, Edward E., assignor.)
Brown, George A., Kalamazoo, Mich. Car-stake holder
Same......Spring-bed bottom...........................
Brown, George C., Philadelphia, Pa. Portable derrick................................
Brown, George F. H., assignor to the Union Comb Company, Leominster, Mass. Machine for sawing conbs
Brown, G. W., Rockford, Ill. Spiritometer
Brown, George W. \& Company. (See Alexander, John, assignor.)
Brown, Harvey, Harlem, N. Y. Portable cooking stove
Same.......Cooking stove
Brown, Henry, et al. (See Waldron, John J., assignor.)
Brown, Henry, and Garrettson Smith. (See Smitli \& Brown) ........ (Design.)
Same............................................... - sanne................. . (Design.)
Same..................................................... same.................. (Design.)
Same................................................ same.................. (Design.)
Brown, Henry D., Tipton, Iowa. Sheep-shearing chair. (Antodated April 25 , 1868)

Brown, Henry L., Afansfield Center, Conn. Silk-winding machine
Brown, Heury L., Adrian, Mich. Horse rako
Brown, Henry L., and A. Barr Irwin. (See Owen, John, assignor.)
Brown, Henry S., et al. (See Newell, Amos, assignor.)
same . . . . . ........................ . same.
Brown, Hiram, Lowell, Mass. Excavator
Brown, Hiram, Burton, Ohio. Fastener for lasts
Brown, Lua S. and Charles N., assignors to selves and J. Mason Gross, Providence, R. I. Saw. (Antedated Jau. 3, 1868)
Brorrn, Isaac W., assignor to self and George D. Nettleton, New Haven, Conn. Motive power.
Brown, Jairus, Portland, Mich. TuJere iron
Brown, Jairus, assimnor to self and Theodore 13. Hubbard, Portland, Mich. Reel.
Brown, James, Matteawan, N. Y. Trace fastening.
Brown, James, Pawtucket, R. I. Bearing for flycr in spinning machines.
Brown, James B., Peekskill, N. Y. Garden roller
Brown, James H., Mitchell, Ind. Pcach parer
Brown, James R., assignor to E. H. Asheroft, Boston, Mass. Pipe tongs.
Brown, Jesse, San Francisco, Cal. Sewer.
Brown, John, New York, N. Y. Hot-water apparatus
Brown, John, Utica, N. X. Caster for furuiture.
Brown, John HI, assiguor to Moses K. Moody, Watertown, N. Y. Machine for pegging shoes
Same ...... Machine-made channeled and piereed soles for boots and shoes. Brown, John I., and Joseph Taney. (See Tancy \& Brown.)
Brown, John W., Wooster, Ohio. Apparatus for domestic manufacture of gas
Brown, J. B. (See Hatchinson, George E., assiguor.)
Brown, Jonathan C. (See Smith, Henry C., assignor) $\qquad$ . (Reissue.)
Brown, J. II., Hudson, Wis. Bed bottom.
nor.)
Same ..................... -sanue.
Brown, J. R., and E. H. Asheroft. (See Asheroft \& Brown.)
Brown, Joseph S., and Leonard Woreester. (See Worcester \& Brown.)
Brown, Mereer, and John Herold. (See Herold \& Brown.)
Brown, Morgan W., TVest Farms, N. Y. Mode of preparing paper for wrapping tobaeco, snufi, soap and other articles. (Antedated Jau. $27^{\text {? }}$, 1868).

Samc...... New York, N. Y. Process for making transparent soap
Brown, N. B., Autwerp, N. Y. Windlass.
Brown, Nathan P' (See Horton, Wm. H., assignor.)
Drown, Nathaniel H., assignor to sclf and Joseph A. Veazie, Dcrry, N. H. Horserake
Brown, Neail N., Pliladelphia, Pa. Glass bottlo.
(Design)
Brown, O., and T. F. Berry, Capron, Ill. Carpenters gaugo
Brown, O. B., Malden, Mass. Toy boomerang pistol
Brown, Philip A., Indianapolis, Ind. Mold for forming roofing tiles
Brown, Richard. (See Letzkus, John, assignor.)
Brown, Robert, Norwich, Conn. Steam trap..
Brown, Samuel, assignor to self and C. P. Carver, Philadelphia, Pa. Feed attachment for machinery.
Brown, Silas H., Troy, N. X. Stop valve
Brown, Smith M. and Harvey J., Irolly, Mich. Ticket holder.
Brown, Smith S., Pawtucket, I.'I. Cheese cutter and box.
Same.......Curtain fixture.
Brown, Spencer I., and Charles II. Willets, New York, N. X. Corset spring. -
Same...... Toy gun..
(Design)
Brown, Thomas, Allegheny, Pa. Hydrant
Brown, Thomas F., jr., Concord, N. H. Skein holder

May 12, 1868.
Sept. 8, 1868.
Nov. 17, 1868.

Aug. 25, 1868.
Dec. 8, 1868.
Apr. 7, 1868.
Fob. 11, 1868.
Jan. 21,1868.
Apr. 23, 1868.
Oct. 27, 1868.
Ang. 18, 1868.
Nov. 17, 1868.
Oct. 6, 1868.
July 7, 1868.
June 23, 1 cis.
May 23, 1868.
Apr. 21, 1868.
Dcc. 22, 1868.

Dec. $22,1868$.
Sept. 15, 1868.
Fob. 18, 1868.

Feb. 11, 1868.
May $26,1868$. Aug. 25, 1868.

Apr. 14, 1868.
Feb. 11, 1868.
July 7, 1868.
$\Lambda$ pr. 21, 1868.
Dec. 20, 1868.
Aug. 4, 1868.
Dec. 22, 1868.
May 5, 1868. Apr. 21, 1868
Oct. 6, 1868
Oct. 6, 1868
Apr. 14, 1868
Juno 30, 1868.
June 23, 1868
Aug. 25, 1868.

## Alphabetical list of patentees for the ycar 1868-Continued.

| No. | Name, residence, and invention or diseovery. | Date. |
| :---: | :---: | :---: |
| 81, 472 | Brown, Thomas S., Pouglkeeps | Aug. 25, 1868. Aug. 25, 1868 |
| 81, 473 | Same......Harvester rake |  |
| 83, 359 | Brown, T. W., Peading, Pa. Ho | Aug. 4, 1868. |
| 80, 593 | Brown, Thomas W., England. Cotto | Jan. 7, 1868. |
| 72, 968 | 13rown, T. Yardley, Reading, Pa. Mode | Oct. 6, 1868. |
| 82,797 73,949 |  | Feb. 4, 1868. |
| 74, 661 | Brown, William, West Cambridge, Mass. Curtain fixture. (Antedated Feb. 6, 1868) | Feb. 18, 1863. Mar. 17, 1868. |
| 75, 517 | Brown, William, Addison, Mich. Farnı gate............................... | Aug. 18, 1868. |
| 81, 065 | Brown, William, Worcester, | Nov. 17, 1868. |
| 84,086 85,065 | Brown, William, England. Willen, N. Y. | Dee. 22,1868. |
|  | Brown, William H. (See Page, James T., assignor.) |  |
| 81, 592 | Brown, William P., Watertown, N. Y. Advertising | J Ja. 28, 1868. |
| 73, 870 | Browne, A. W., Brooklyn, N. Y. | Feb. 25, 1868. |
| $\begin{aligned} & 74,793 \\ & 82,285 \end{aligned}$ | Browne, A. W., assignor to Charles R. Squire, Brooklyn, N. N. Rotary steam engine | Sept. 22, 1868. |
| 81, 248 | Browne, A. W., Brooklyn, and W. F. Goodwin, East New York, N. Y. Mechanical movement. | $\begin{aligned} & \text { Aug. } 18,1868 . \\ & \text { May } 12,1868 . \end{aligned}$ |
| 77, 799 |  | Feb. 11, 1868. |
| 74, 2929 | Browne, George W., Brooklyn, N. Y. Row-1 | June 16, 1868. |
| $\begin{aligned} & 78,923 \\ & 82,286 \end{aligned}$ | Browne, John David, Cineinnati, Ohio. Mop | Sept. 22, 1868. |
| 82, 287 | Same.....-Sash pulley | $\begin{aligned} & \text { Sept. } 22,1868 . \\ & \text { Apr. } 7,1868 . \end{aligned}$ |
| 76, 298 | Brownell, A. C., Brooklyn, N | Sept. 22, 1868. |
| 82, 288 | Brownell, Stephen, Irving, N. Y. Ha | Mar. 17, 1868. |
| 75, 621 | Brownfield, Eugene T., Smithfield, Pa. Churn.................................. | Mar. 17, 1868. |
| 75, 622 | Same.....Apparatus for tempcring eream preparatory Browning, N. W... and William Howell. (See Lever, James S., assignor.) <br> Browning, Ross C. et al. (See Lugo, Orazio, assignor.) |  |
| 78,573 | Brownson, W. G., Wellsville, Ohio. Telegraphi | $\text { June 2, } 1868 .$ |
| 76, 709 | Broy, Daniel, Canton, Mo. Hand corn planter <br> Brubaker, Andrew J., and Albert Bliss, jr. (See Milingworth, Benjamin, assignor.) |  |
| 80,448 | Bruce, David, Brooklyn, N. Y. Typ | July 28, 1863. Nov. 10,1868 |
| 83, 828 | Same....Type-casting maehine ${ }^{\text {a }}$, |  |
| 3,236 | Bruce, David, assignor to David W olfe Bruce, Brooklyn, N. Y. Printers type. (Design) | Nov. 17, 1868. Nov. 17, 1868. |
| 3,237 | Bruee, David W., New York, N. Y. Ray-shaded printers' typo.......(Design) <br>  |  |
| 74,982 | Bruee, Rufus M , assignor toselfand Amos Call, Springfield, Mass. Planer ehuck | Mar. 3,1868. |
|  | Bruce, Sidney T., and Leslio Marmaduke. | Apr. 21, 1868. |
| 76, 938 | Brück, Otto, New York, N. Y. Pockct-book and fal-burrin | Apr. 28, 1868. |
| 77, 249 |  |  |
| 74, 043 | Brundage, E. F., assignor to <br> Nevada. Safety hook <br> Bruner,' J. Stanley. (See Crowley, Daniel, assignor.) <br> Bruno, J. D., et al. (See Ford, Bruno \& Ciarke.) | Feb. 4, 1868. |
| 77, 449 | Bruno, T., Saginaw, Mich. Maehine for sawing lath | May 5, 1868. |
| 72, 969 | Brunswick, E., Chieago, Ill. Billiard-cue raek.............. |  |
| 80, 056 |  | July 21,1868 |
| 73, 162 |  |  |
|  |  | une 2, 1868. |
| 78, 420 | Bryan, James M., Penningtonville, Pa. Le-bending and punching machine.. Bryan Thomas F. (See Jepson, Godfrey, assignor.) | une a, 1868. |
| 75, 623 | Bryant, Abner H., Wilmington, Del. Suspension egg | $\begin{aligned} & \text { Mar. } 17,1868 . \\ & \text { Sept. } 1,1868 . \end{aligned}$ |
| 81, 593 | Same.....Safety attaehment for egg earrier..... |  |
|  | Bryant, II. H., Boston, Mass. Fire-proof safe | y $14,1868$. |
| 79, 809 |  |  |
|  | Bryant, Hezekiah H. (See Warren, Gardner, assignor.) | July 28, 1868. |
|  | Bryant, N. F. (See Parrott, Wm. P., assignor.) |  |
| 84, 532 | Bryson, A. P., Prospeet, Pa. Churn |  |
| 79, 442 | Bryson, James D, and Alonzo Potter, New Castle, Pa. Spike machine. | Aug. 25, 1868. |
| 81, 474 | Bryson, James D., and J. H. Hartsuff, New Castle, Pa. Curbsor | Sept. $29,1868$. |
|  | Bryson, Jamest, Sehenectady, N. Y. Harvester | Mar. 3, 1868. |
| 76, 989 | Buchanan, Andrew, Brooklyn, N. Y. Quartz cru |  |
| 75, 852 | Buehanan, R. E., Carrollton, 11. Sa | Nov. $10,1868$. |
| 83, 919 | Buehanan, Walter, jr., Main Prairio, Cal. Fast | Nor. 17, 1868. |
| 84, 168 | Buehtel, Joseph, Portland, Oregon. Contact | Oct. 20, 1868. |
| 83, 250 | Buehter, H., Louis | Jan. 21, 1868. |
| 73, 575 | Buek, Charles E., Racine, Wis. Axi | Mar. 17, 1868. |
| 75,664 | uek, Charles H., St. Lomis, Mrington, Vt. Attachment for sew | Mar. 31, 1868. |
| 76,047 79,443 | unck, Eharles H., ${ }^{\text {Has, }}$, | June 30, 1868. |

Alphabetical list of patentees for the year 1868-Continued.


## Date.

Dec. 22, 1868.
Aug. 2J, 1868.
Doe. 29, 1868.
Sopt. 15, 1868.
May 12, 1868.
July 7, 1863.
Aug. 25, 1868.

Apr. 21, 1863
May 5, 1868
May 5, 1868
Apr. 21, 1868.

Doe. 8,1868 .
Jan. 28, 1868
June 2, 1868

Oct. 6, 1868
May 26, 1868.

Nov. 24, 1868.
Oct. 6, 1868
Apr. 14, 1868.
Feb. 18, 1868.

Dec. 8, 1863.
Sept. 29, 1868.
Mar. 31, 1868.
Jau. 28, 1863
Sept. 15, 1868.
Nov. 17, 1868
Sept. 29, 1868 July 7, 1868. Aug. 25, 1868. Jan. 7, 1868. Mar. 31, 1868. July 21, 1868 Oct. 27, 1868 Dec. 15, 1863 Dee. 20, 1863 Sept. 8, $1 \times 68$ Juno 16, 1868 Fob. 25, 1868 Feb. 18, 1868 July 7,1868 Apr. 28, 1863 Jan. 28, 1868
Mar. 24, 1868.
May $12,1868$.
Nov. 10, 1868
Jan. 7, 1868
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May 19, 1868.
Jan. 28, 1868.
Sept. 1, 1868

Dec. 29, 1868
Nov. 10, 1868
Dec.. 22,1868
Oct. 20,1868

## Alphabetical list of patentees for the year 1868-Continued.

| No. ${ }^{\circ}$ | Name, residenee, and invention or discovery. |
| :---: | :---: |
| 78,183 | Bureh, William C |
| 78, 256 | Burelian, F. J., assignor to self and L. S. Blake, Racine, Wis. Process of tanning lides and skins. |
| 74, 984 | Burehard, Anson, Now Brenton, Ill. Doublo hoe.................................. |
| 82, 918 | Burehard, John A., Beloit, Wis. Corn planto |
| 79, 201, | Burchard, John A., and Riehard Tattershall, Beloit, Wis. Gato. (Antedated Feb. 12; 1868) |
| 80, 271 | Burehardt, Charles T., Now York, N. Y. Car eoupling |
|  | Burdett, Paris \& Co. (See Paris, Daniel E., assignor.) |
| 76, 299 | Burdge, J. E., assignor to A. C. Brown, Cineimati, Ohio. Spinning maehine Burdge, J. E., and David A. Seott. (See Seott \& Burdge.) |
| 84, 087 | Inurdick, J. M., Ilion, N. Y. Hay spreader ....................................... |
| 78, 924 | Burdiek, Norman, assignor to self, Jacob H. Shear, and Joseph Packard, Albany, N. Y. Cupola furnaeo. |
| 84, 730 | Burdiek, Orrin H., assignor to self and David M. Osborne, Albany, N. Y. Harvester rako. |
| 77, 955 | Burdiek, S. P., Now York, N. Y. Buekle |
| 85,428 83,598 | Burditt, William and George H., Boston, Mass. Burcan, B. S. Congress, Ohio. Horse liay fork |
| 83, 598 | Burgan, B. S., Cougress, Ohio. Horse hay fork Burgee, Singleton E., and Horatio N. Ganbrill. (See Gambrill \& Burgee.) (Extension.) |
| 73,294 | .................same........... (Disclaimer.) <br> Burger, John, assignor to self and Albert Manvel, Elizabethport, N. J. Apparatus for raising sunken vessels. (Antedated Jan. 4, 1868). |
| 77\%,450 | Burger, Lewis, assignor to self and Isaac L. Hamburger, Springfield, Ill. Door direetory |
| 82, 289 | Burigess, Benjamin F., Norvell, Mich. Saw |
| 80, 330 | Burgess, B. F., jr., Boston, Mass. Window serublber-............................. |
| 83,599 | Burgess, C. T., England. Harvester rake. (Patented in England September 8, 1866) |
| 73, 230 | Burgess, H. W., Ithaea, N. Y. Strap holde |
| 79,547 | Burgess, William D., and George W. Zeigler, Maumee, Ohio. Plow .............. Burgie, H. C., and J. L. Collins. (See Collins \& Burgio.) |
| 81,980 | Burhaus, Albert, assignor to self and Henry H. Burhaus, Albany, N. Y. Potato digger |
|  | Burhenne, Gustavus, and T. M. Rusehhaupt. (See Rusehhaupt \& Burheme.) |
| 72, 972 | Burk, H. C., Mineral Point, Ohio. Meehanieal mo |
| 80, 131 | Burk, Thomas L., Greensburg, Ind. Fen |
| 76, 396 | Burke, John, Brooklyn, N. Y. Musieal ret |
| 73, 576 | Burke, T. J., Chicago, Ill. Conerete-briek press |
| 75, 518 | Burke, William H., assignor to self and James E. Wilson, Brightou, Mass. Car brake |
| 81,594 | Burkhart, J. W., Cameron, Mo. Hand spinnin |
| 74, 664 | Burkholder, Cornelius H., York Springs, Pa. Fly |
| 80, 386 | Burleigh, Charles, Fitehburg, Mass. Dr |
| 80, 387 | Same.....īrilling-maehine earriage |
| 80,706 | Burling, George W., Trenton, |
| 79, 727 | Burlingame, Wm. L., Leslie, Mieh. Lad |
| 81, 860 | Burnap, John A., Albany, N. Y. Pulley. |
|  | Burnap, William \#. (See Maris, Andrew J., assignor.) |
| 80, 272 | Burnett, Henry K., Poughkeepsie, N. Y. Harvester |
| 75, 358 | Burnett, James H., jr., Newa |
| 74, 297 | Burnett, Nelson W., South Hadley, Mass. Pattern square... <br> Burnett, William, San Franciseo, Cal., and John Absterdam, New York, N. Y. <br> Use of fusible disks in steam boilers..................................(Extension). |
| 78, 053 | Burnham, Charles, Philadelphia, Pa. Gas |
| 84, 855 | Burnham, Edward E., assignor to self and George Brown, Gloucester, Mass. Mode of preserving bait for fishing <br> Burnham, E. G., and A. M. Whito. (See Whito \& Burnham.) |
| 82, 689 | Burnham, John, Batavia, Ill. |
| 74, 044 | Buruham, John, assignor to self and David L. Hough, La Salle, Ill. Cultivator. |
| 78, 257 | Burnham, John W., and Wilson Conlon, Middletown Point, N. J. Potato digger. |
| 75, 121 | Burnlham, N. F., York, Pa. |
| 80, 804 | Burnham, Oramus W., Hillsborough, N. Y., and Henry F. Burnham, Aeworth, <br> N. H. Elevator for sirup pans. (Antedated Mareli 9, 1868) ........ ............ Burnham, Perez B. (See Mitehell, John B., assignor.) <br> Burnlaam, Samnel C. (See Harrism, Andrew J., assignor.) |
| 77.451 | Burns, Daniel, Bay City, Mieh. Combined low-water detector and safety valve. |
| 83, 921 | Burns, E. S., La Crosse, Wis. Tatting-shuttle winder |
| 85, 429 | Burns, Jabez, New York, N. Y. Kettle for eulinary |
| 78,512 | Burns, James, assignor to self, Richard MeCullough, and Johu Fanning, New York, N. Y. Maehine for shaving serews. |
|  | Burns, James W., Medway, Ohio. Letter paekag |
| 81, 134 | Burns, Paul M., Freetown, Mass. Wash boiler |
|  | Burr, Bartlett. (See Jenkyn, Thomas, assignor.) |
| 80, 132 | Burr, Henry A., Brooklyn, N. Y. Table for eomp |
|  | Burr, Henry C., and Jaeol 13. Smith. (See Smith \& Burr.) |
| 76,397 | Burr, H. G., Minneapolis, Minn. Hot-air fur |
| 81, 135 | Burr, Milo S. (See La Forme, J., assignor.) |
| 80, 707 | Burr, Remus D., Kingsboro, N. Y. |

## Date.

May 26, 1868.
May 26, 1868
Mar. 3, 1868
Oet. 13, 1868.
June 23, 1808. July 28, 1868.

Apr. 7, 1868.
Nov. 17, 1808.
June 16, 1868.
Dec. $8,1868$.
May 19, 1868.
Dee. 29, 1868,
Nov. 3,1868

Jan. 14, 1868.
May 5,1868. Sept. 22, 1868 July 28, 1868.
Nov. 3, 1868.
Jan. 14, 1868
July 7, 1868

Sept. 8, 1868
Jan. 7, 1868
July 21, 1868
Apr. 7, 1868.
Jan. 21, 1863.
Mar. 17, 1868.
Sept. 1, 1868.
Feb. 13, 1868.
July 28, 1868
July 28, 1863.
Ang. 4, 1868.
July 7, 1868.
Sept. 1, 1868.
July 28, 1868.
Mar. 10, 1868.
Feb. 11, 1868.
Feb. 10, 1868.
May 19. 1868.
Dec. 15, 1868.
Oct. 6, 1868.
Fel. 4, 1868.
May $26 ; 1868$.
Mar. 3, 1868.
Aug. 11, 1868.
May 5, 1868.
Nov. 10, 1868.
Dee. 29, 1868.
June 2, 1868.
Nov. 3, 1868.
Aug. 18, 1868.
July $21,1868$.
Apr. 7, 1868.
Aug. 18, 1868.
Aug. 4, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

85, 208
3, 214
74, 985
85, 430
78, 574
83, 923
79, 202
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85, 275
74,986
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80, 594
82, 592
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83, 251

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76, 598
75, 854
81, 057
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81, 747
75, 359
80, 388
77, 452
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85, 277
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80, 805
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75, 360
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76, 300
81, 337
83, 131
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74, 748
84, 259
84, 987
74, 887
85, 431

73, 499
78,575
84, 409
78, 513
76, 599

Burr, Sanford S., Dedliam, Mass. Folding bedstcad.
Burridge, W. H., and C. Leavitt. (See Leavitt \& Buridge.)
Burritt, Joseph C., and William H. Akins. (See Akins \& Burritt).... (Extension.) Burrough, Edward E., Baltimore, Md. Apparatus for making oxtracts and essences.

Name, residence, and iuvention or discovery.

Burrow, Walter, Great Britain. Rack for bottles.
Burrows, Fred. W., New York, N. Y. Tobacco pipe
. (Design)
Burrows, Henry, Lowell, Mass. Apparatus for dveing pieee goods
Burrows, William, Now York, N. Y. Combined bean compass and calipors. Bursoley, Barnabas. (Sce Perkins, Cliarles B., assignor.)
Burson, James, Yates, Ill. Paddle whcel. (Antedated Mas 23, 1868)
Burson, W. W.', Rockford, II. Automatic gate. (Antedated Oct. 31, 1868)...
Burson, W. W., and John Nelson', Rockford, Ill. Knitting machine. (Antedated Juno 12, 1868)
Burt, Georgo E., Harvard, Mass. Harvestcr
Same...................................... samo
Samo...... Machino for clcaning and assorting bristles ........ (Extonsion) Same....... Mowing machine
Burt, George E., assignor through mesno assiguments to Nathan H. Spoford, Boston, Mass. Machine for clcaning and assorting bristlos. (Division A, reissuo).
Same........................... same
(Division B, reissuo.)
Burt, George E., and Edwin A. Hildreth, Harvard, Mass. Hay spreader
Burt, George E., and Stanley B. Hildrcth, Harvard, Mass. IRatchot attachnont for liarvesters.
Burt, John, Sturgis, Mich. Skein-setter for axles.
Same....... Potato digger
Burt, John, assignor to self and Willett M. Slocum, Fall River, Mass. Wronch. Burtis, Danicl H. (See Sangster, James, assignor.)

Same..
.same.
Burtis, John II., Brooklyn, N. Y. Wash boiler
Same...... (See Staples, M. W., assignor) . ............................. (Reissuo.) Same....... (See Sanders, A. K., assignor.)
Burtis, William, New York, N. Y., Propeller shaft
Barton, Allen, Chicago, Ill. Post-hole auger.
Burtou, A. G., Rochester, N. Y. Lock for drawers, \&ce
Burton, Bethel, Brooklyn, N. Y. Manufacture of water-proof percussion caps, \&e Same...... Prining metallic cartridges.
Same....... Breech-loading fire-arm
Burton, C. S., Sencea County, Ohio. Staging
Burton, Henry, Richview, Ill. Bechivo
Burton, J. N., Senoia, Ga. Hat bnckle
Burton, Oscar F., Jersey City, N. J. Truck
Busehman, Vietor II., Baltinıore, Mrd. Raek for billiard eucs. (Antedated April 25, 1868).
Busey, W. G., Georgetown, D. C. Fertilizer.
Bush, C. T., et al. (See Dcitz, John M., assignor.)
Busl, Franklin, assignor to sclf and Jeptha Garrard, Cineinnati, Ohio. Still. Bush, P. P., and Gcorge T. Palmer. (See Palmer \& Bush.)
Bush, Samuel, and L. W. Hanson. (See Hanson \& Bush.)
Bush, W. E., Damascus, Pa. Car coupling
Bushby, Thomas, England. Pill-making machine. (Antedated Dee. 17, 1868) Buslnell, C. R., St. Anthony's Falls, Mimn. Head block.
Bushnell, Edwin L., Poughkeepsie, N. Y. Marvester-enttor sharpener
Bushncll, Ensign A., Horicon, Wis. Machino tor sharpening horseshoo calks. (Autedated July 18, 1868)
Bushnell, S., and T. D. MeCall. (See McCall \& Bushnell.)
Busse, Henry W., Chicago, Ill. Combined knob latch and door lock. Busscll, Erastus T., Indianapolis, Ind. Car spring
Busser, Jacob, Philadelphia, Pa. Shifting-bucket propeller.
Bussey, Esek, Troy, N. Y. Ovon
Bussey, John, assignor to self and John F. Gunkel, Cincinnati, O. Corkscrew
Bussey, W. C., San Francisco, Cal. Combination lock for doors.
Bussey, William C., and Charles Fleischel. (See Fleischel \& Busscy.)
Butler, A. L., Ripon, Wis. Farm gato...
Butler, Beanman, aud Charlos F. Ramsay, St. Johnsbury, Vt. Saw framo
Butler, Edward, et al. (See Swafford, Butler \& Hess.)
Butler, H. A., et al. (Sea Birgs, Granger \& Butlor.)
Butler, Henry H., Troy, Mich. Farm gatc
Butler, Jolu, Brooklyn, N. Y. Method of generating fixcd gases from hydrocarbon vapors
Butler, J. II., Scottsvillo, Ky. Fako
Butler, Manlove, Vernon, Ind. Animal trap
Butler, William A., New York, N. Y. Automatically-operating pan for water closets
Butler, W. H., and WM. McFarland. (Sce McFarland \& Butlor.)
Butterfield, Gcorge, and A. G. Treadwell, Boston, Mass. Chair-seat supportcr Butters, J. M. North Frycburg, Maine. Clothes drycr-
Buttcrworth, William H., Trenton, N. J. May spreader
Button, Elijah, Annapolis, M.d. Cork extractor
Butts, Henry L., Norwich, Conn. Filo for grooving rolls. (Autedated March $28,1868)$

Dato.

Feb. 18, 1803.

Nov. 10, 1868.
Dec. 22, 1868
Nov. 3, 1863
Mar: 3, 1868.
Dес. 29, 1868.
June 2, 1868
Nov. $10,1868$.
June 23, 1868.
Dec. 29, $1860^{\circ}$
Doc. 29, 1868.
F'ob. 6, 1868.
Mar. 3, 1868.

Doe. 1, 1868.
Nov. 24, 1808.
Dec. 1, 1868.
Ang. 4, 1868.
Scept. 29, 1868.
Dee. 29, 1868.

Oct. 20, 1868.
Nov. 3, 1868
Apr. 14, 1868.
Mar. 24, 1868.
Aug. 11, 1868.
Ang. 11, 1868.
Aug. 11, 1868.
Fcb. 18, 1868.
Sept. 1, 1868.
Mar. $10,1868$.
July 28, 1868.
May 5, 1868.
$\Delta$ pr. 21, 1868.
Mar. 31, 1868.

Oct. 20, 1868.
Dec. 29, 1868.
Nov. 10, 1868.
July 14, 1868.
Ang. 11, 1868.
Mar. 10, 1868.
Nov. 24, 1868.
Apr. 14, 1868.
May 5, 1868.
Fob. 18, 1868.
Apr. 7, 1868.
Aug. 25, 1868.
Oct. 20, 1868.

F'ob. $25,1868$.
Nov. 24, 1868.
Mar. 3, 1868.
Fob. 25, 1868.
Doe. 29, 1868.
Jan. 21, 1868.
June 2, 1868.
Nov. 24, 1868.
June 2, 1868.
Apr. 14, 1868.

Alphabetical list of patentees for the year 1868-Continued.
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81, 876
75,361
74, 298
77, 956
79, 203
79, 310
76, 992
78, 258
78, 422
83, 759
82, 082
3,205
82, 690

74, 496
80, 907
75, 855
73, 872
80, 450
83, 924
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77, 714
82, 380
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78, 514
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80, 331
74, 888
79, 949
80,908
84, 679

74, 749
76, 158
79, 103
82, 919
 Buxton, F., and George Crosby, Lake Village, N. H. Edge plaue for boots, \&c.
Buynitzky, Edwin L., Russia. Wash boiler.
Buyuitzky, Stephen N., and Julius Petsch. (See Petsch \& Buynitzky.)
Buzby, Albert G., Philadelphia, Pa. Steam safety valve.
Same...... Copying ink
Saine...... Railroad rail
Same....... Substitute for a billiard table
Same....... (See Sparks, J. C., assignor.)
Buzzell, Azro, West Fairlee, Vt. Carriage spring.
Same. . . . . . . . . . . . . . . . . . ......... - same .............. . . . . ............. (Reissue)
Buzzell, John G., assignor to self and Charles Cummings, Lynn, Mass. Carriage wheel
Byers, S. C., and J. Albertson. (See Albertson \& Byers.)
Byler, W. P., Leavenworth, Kansas. Combined corn planter, sower, revolving harrow, and cultivator.
Byrkit, A. R. and C. S., Fairfield, Iowa. Sewing inachino
Byrnes, James W., Washington, D. C. Composition pavement for streets
Byrnes, William M. (See Warren, Gardner, assignor:.)
Cabell, S. G., Quincy, Ill. Preventing incrustation of steam boilers
Cabell, S. G., assignor to solf and Peter T. Abell, Quincy, Ill. Track clearer for railroads
Cabell, S. G., assignor to Flora B. Cabell, Quincy, Ill. Fluting machine.
Cabourg, T., France. Boot-soling machine .
Cadey, Chauncey M., et al. (See Reiny, Frank W., assignor.)
Cadue, Philip, San Francisco, and W. H. De Vahı, Sacramento, Cal. Street pavement

## Date.

Sept. 8, 1868.
M21. 10, 1868.
Feb. 11, 1868.
May 19, 1868. June 2:3, 1868. June 30, 1868.

Apr. 21, 1868.
May 26, 1868.
June 2, 1868.
Nov. 3, 1868.
Scpt. 15, 1868.
Nov. 24, 1868.
Oct. 6, 1868.

Feb. 18, 1868.
Aug. 11, 1868.
Mar. 24, 1868.
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July 28, 1868.
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July 28, 1868.

Aug. 11, 1868.
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Sept. 22, 1868.
Oct. 27, 1868.
May 5, 1868.
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July 21, 1868.
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Dec. 15, 1868.
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Mar. 31, 1868.
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Jan. 28, 1868.
Mar. 3, 1868.
Jan. 21, 1868.
Mar. 10,1868.

Sept. 1,1868.
June 2, 1868.
Sept. 1, 1868.

July 28, 1868.
Feb. 25, 1868.
July 14, 1868.
Aug. 11, 1868.
Dec. 8, 1868.
Feb. 25, 1868.
Mar. 31, 1868.
June 23, 1868.
Oct. 13, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 83,689 | Cambridge, William C., assiguor to self and J. T. Griffin, England. Grate bar for furnaces. |
|  | Cameron, J. C. (See Cummings, David, jr., assignor.) |
| 78, 259 | Cancron, W. E., Green Island, N. Y |
| 85, 278 | Camfield, Hampten R., assignor to self, John H. Fitzsimmons, and Goorgo Boyd, Susquehanna Depot, Pa. Steam ports of steam ongincs. |
| 82, 593 | Cammerer, David, Cincinnati, Ohio. Beer cooler. |
|  | Cammeycr, Wm. H. (See Lowis, Samuel, assignor.) Saine. $\qquad$ same. |
| 74, 497 | Camp, B. J., Marion, Ohio. Sc |
| 3,126 | , |
| 82,381 | Camp, Johm, assignor to self and Henry Marshall, Olney, Ill. Lifting jack Camp, Tertius L., and Isaac H. West. (See West \& Camp.) |
| 81,596 | Campbell, A., Oxford, Ind. Animal trap |
| 74, 299 | Campbell, Abner, assignor to self and James Whitchill, Frederick, Md. System of indexing for records. |
| 78,424 | Camplucll, Alexander, Oxford, Ind. Corn cultivator |
|  | Camplocll, Andrew Dwight. (See Ward, Joseph E., assignor.) |
| 85, 279 | Campbcll, Angus, Downieville, Cal. Derrick............ |
|  | Campbcll, Benjamin F. (See Whittier, Charles, assignor.) Same.................................. same. |
| 80,595 | Campbell, Daniel, assignor to Henry and Robert II. Seymour, Elizaboth, N. J. Pruning shears. |
| 85, 280 | Campbell, Duncan McDougald, and John Stevens, Oswego, N. Y. Marblo-sawing machine |
|  | Campbell, Edward B., et al. (See Ackerman, Campbell \& Golden.) Campbell, Harver. (See Baker, David B., assiguor.) |
| 83, 036 | Campbell, James, Newtown, Ill. Plow |
| 73,776 | Campbell, James, Peoria, Ill. Velltilating |
|  | Campbell, James, et al. (See Schlingman, Glander \& Camp |
|  | Campbell, James, and Joscph R. Jordan. (See Jordan \& Cammbell.) |
| 73, 950 | Camplecll, John A., assignor to sclf and David Sharp, South Boston, Mass. Car brako. |
| 73,434 | Campbell, J. C. and M. V., Syracuse, N. Y. Compound for paveme |
|  | Campbell, John H., and William McFarland. (See McFarland \& Campbell.) |
| 73, 777 | Campbell, John S., Newton, N. J. Check-rcin |
| 84, 410 | Campbell, John T., Altoona, Pa. Nut pla |
| 82, 290 | Campbell, Lawrence, Marengo, Mich. Pruning |
| 81, 249 | Campbell, Manly T., Lima, Pa. Clothes dryer |
| 84, 088 | Campbell, Robert M., Cambridgeport, Mass. Sash sup |
| 2,908 | Camplell, Robert R., assignor to the Lowell Manufacturing Company, Lowell, Mass. Carpet pattern........................................ (Design). |
| 2,909 | Same...................... same. ..... . . . . . . . . . . . . . . . . . . . . . . (Desig ) |
| 3, 104 | Same.................... same |
| 79, 633 | Campbell, Rufus and Albion P., Hillsdale, M |
| 81,597 | Campbell, S. O., Leavenworth, Kansas. Co |
| 73, 778 | Campbell, S. Y., Quincy, Mass. Button for carriaghe curtain |
| 74,300$77 \%$786 | Campbell, Thomas A., New York, N. Y. Machiuc for oilin |
|  | Camplell, W. B., Abington, Iowa. Rotary steam engine |
| 78, 425 | Campleell, Wcsley B., assignor to self and Harrison Simith, Abington, Iowa. Rotary steam engive |
| 81,598 | Canary, Thomas L., Brownsburg, Ind. Base-ball tally bo Candce \& Company. (See Elliott, Lewis, jr., assignor.) |
|  | Candce \& Company. (See Elliott, Lewis, jr., assignor.) |
| 78,576 | Candce, A. B., and L. S. Taylor, assignors to Ætua Nut Company, Southingtou, Conn. Die for making axle nuts |
| $\begin{aligned} & 74,301 \\ & 78,454 \end{aligned}$ | Candee, C. E., Jerscy City, N. J. Paper c |
|  | Candee, George, Berlin Heights, Ohio. Feed-water licater for steam gencrators Candee, L. \& Company. (See Hotchkiss, H. L., assiguor.) |
| $\begin{aligned} & 82,799 \\ & 80,134 \end{aligned}$ | Canfield, F. P., Brighton, Mass. Hoistil |
|  | Canter, William, assignor to Samuel and Alexander Reinstein, New York, N. Y. Machine for manufacturing chenille |
| 74,302 | Canterbury, John M., Mexico, Mo. Field marker |
|  | Cantine, Lewis H., et al. (See Manley, Almon D., assignor.) |
| 79,63475,36376,600 | Capen, E. S., assignor to self and P. Blaisdell, Worcester, Mass. Loose pulle |
|  | Capewcll, George J., West Cheshire, Comı. Lamp bu |
|  | Same..... Machine for attaching buttons to fabrics. (Antedated Apr. 9,1868). |
| 79, 635 | Same..... . Glass-pressing mac |
| 74, 888 | Capps, Charles R., Hlliopolis, Ill. Animal trap |
| 84, 856 | Capron, Bork, Lce Conter, N. Y. Roofing compos |
|  | Capron, E. P. H., Springficld, Ohio. Farm |
| 78,05482,594 | Samo...... Road |
|  | Same...... Ladder |
| 76,888 | Capron, E. P. H., assignor to self, George H. Gerrish, and D. B. Rich, Springfield, Ohio. Brick machine. |
| $\begin{aligned} & 78,055 \\ & 81,250 \\ & 83,458 \end{aligned}$ | Capron, E. P. If. and Goorge V. (See Hubbell, Abijah, assignor.) |
|  | Carbnow, Aexander, Potsdam, N. Y. 1 Bolt |
|  | Card, Edward, North Providence, R. . . Stovioe button |
|  | d, E. S., et al. (See Weed, Henry J., assigı |
|  | Cardwell, Perrin H., and Janes S. Loster. '(See Lester \& C |
| 84, 533 | Carey, Menry C., et al. (See Moxoy, John G., assignor.) |
|  | Carey, Isaac, Warwick, N. Y. |

## Date.

Nov. 3, 1868.
May 26, 1868.
Dcc. 29, 1868.

Sept. 29, 1868.
Feb. 18, 1868 Sept. 22, 1868. Sept. 22, 1868.
Sept. 1, 1868.
Feb. 11, 1868
June 2, 1868.
Dcc. $29,1868$.

Aug. 4, 1868.
Dec. 29, 1868.

Oct. 13, 1868
Jan. 28, 1868.

Feb. 4, 1868.
Jan. 21, 1868.
Jan. 28, 1868.
Nov. 24, 1868.
Sept. 22, 1868
Aug. 18, 1868.
Nov. 17, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
July $14,1868$.
July 7, 1868.
Sept. 1, 1868.
Jan. 28, 1868.
Feb. 11, 1868.
May 12, 1868.
June 2, 1863.
Sopt. 1, 1868.
June 2, 1868.
Feb. 11, 1868.
May 5, 1868.
Oct. 6, 1868.
July 21, 1868.
Fcb. 11, 1868.
July 7, 1868.
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Apr. 14, 1868.
July 7, 1868.
Feb. 25, 1868.
Doc. 15, 1868.
Apr. 28, 1868.
May 19, 1868.
Sept. 29, 1868.
Apr. 21, 1868.
May 19, 1868.
Aug. 18, 1868.
Oct. $27,1868$.

Dec. $1,1868$.

## Alphabetical list of patentees for the year 1868-Continued.

No.
Name, rcsidenee, and invention or discovery.

Date.

Nor. 10, 1868.
Aug. 25, 1868
MaI: 24, 1868.
May 19, 1868. Јаи. 28, 1868.

July 14, 1868.
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Sept. 1, 1868.
Dce. 15,1868
Aug. 11, 1868.

Dec. 29, 1868.
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Jan. 7, 1868.
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Aug. 18, 186 S .
Jan. 28, 1868.
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May 12, 1868.
Dec. 8, 1868.

Oet. 27, 1868

Jan. 21, 1868.
June 23, 1868.
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Jan. 21, 1868.
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May 5, 1868.
Mar. 31, 1868
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July 7, 1868.
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Scpt. 29, 1868.
Dee. 22,1868
Oct. 6,1868.
Aug. 25, 1868.

# Alphabetical list of patentecs for the year 1868-Continued. 

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| $76,301$ | Carrington, E. O. and Edwin, West Meriden, Conn. Machine for grinding and cutting down augers |
| 80, 911 | Carroll, Jolun C., Litchfield, Inl. Oil cup for stean engines .................... |
| 80, 1:35 | Carroll, Joseph F., South Boston, A1ass. Ariists' stretehing |
| 76,601 | Carroll, P. P., Washington, D. C. Siving eradle. |
| 83, 460 | Sams..... Irening tablo |
|  | Carroll, W, and S. II. Rhoades. (See Rhoades \& Carroll.) |
| 78, 427 | Carroll, William T., Medway, Mass. Ring for spinning ma |
| 84, 795 | Carse, Menry, Pittsburg, Pa. Bottling machine |
| 85, 063 | Carsley, I. B., New York, N. Y. Alarm |
| 74, 197 | Carson, James T., Greensboro, N. C. Belt |
| 81, 340 | Carson, John S., Brook Haven, Miss. Churn das |
| 81, 341 | Same |
| 85, 104 | Carson, M. T., Clerel |
| 74, 795 | Carson, E. A., and W. T. Peter, Briensburg. Ky. Cattle |
| 75, 858 | Carstens, Nicolaus and Charles, New Yerk, N. Y. Weeding ma |
| 79, 810 | Carter, Albert, Ferestville, Conn. Machine for attaching spangles to hoops of skirts |
| 81, 342 | Carter, Benjamin F, Manville, R. T. Let-off mechanisu for looms . |
| 82, 692 | Carter, Charles, Auburn, N. Y. Mortising machin |
| 77, 167 | Carter, Charles P., Poughkeepsie, N. Y. Mechanical |
| 77, 455 | Same Thplement for sharpening |
| 73, 295 | Carter, Henry T., St. Louis, Me. Car truck. |
| 79, 104 | Same...... Portland, Maine. Car truck for chang |
| 83, 602 | Carter, James E., Portland, Maine. Non |
|  | Carter, John B., et al. (See Ritz, Adam G., assigner.) |
|  | Carter, T. J., et al. (See Smith, Andrew, assignor.) |
|  | (arter, T. J., et al. (See Smith \& Watson, assignors.) |
| 84, 934 | Carter, W., St. Louis, Mo. Bee house..... |
| 73,163 76,890 | Cartwright, James, Yomngstown, Ohio. Process of mixing iron and stcol Cartwricht Joseph assigion to self James Cartwright ir and W. K. Lewis |
| 76, 890 | Cartwright, Joseph, assignor to self, James Cartwright, jr., and W. K. Lewi Suuth Reading, Mass. Sheet-metal ean |
|  | Cartwright, Peter, and William H. St. Jehn. (See St. John \& Cartwright.) |
| 82, 490 | Cartwright, Thomas, Davenport, lowa. Kish |
| 73, 296 | Carusi, Samuel, Washington, D. C. Postage stan |
| 82, 205 | Carver, A. J., and E. P. Horn, Green Hill, Tenu. Ho |
| 74, 796 | Carver, C. H., Tamoton, Mass. Churn |
|  | Carver, C. I. (See Brown, Sammel, assignor.) |
| 84, 534 | Cary, Alanson, New York, N. Y. Furnace for desulphurizing steel and other: wire |
| 83, 927 | Cary, H. F., Boston, Mass. Machine for applying reinfereing patches to buttonlioles of collars. |
| 84, 796 | Cary, M., Racine, Wis. Medicine |
| 76, 994 | Cary, Sheldon and Spencer C., New Yo |
| 80, 806 | Caryl, A. Ir., Groton, Mass. May spreader |
|  | Case, A. N., and Morace Palmer. (S'e Pah |
| 78, 428 | Case, A. W., South Mamehester, N. H. Thrust bearing |
| 80, 136 | Case, D. W., Garden City, Minn. Water wh |
|  | Case, George M., et al. (See Corbit, Orput \& Cas |
| 77,252 | Case, II. J., and F. I. Johnson. Washing nachín |
| 80,596 | Case, Henry J., assignor to ILenry Richardson, Auburn, N. Y. Clamping knives or cutters of mowing machines while being ground. |
|  | Case, James A., et al. (See Lowrey, Case \& Chew.) |
| 81, 066 | Case, Jarvis, Lafayette, Ind. Cor |
| 3,144 | Case, Jarvis, assignor to self and Wm. Baldwin, Lafayette, Ind. Seed plauter. (Reissuc) |
| 76, 050 | Case, J. B., Fletcher, Vt. Lever purchaso |
| 75, 364 | Case, John M., Athers, Ohio. Angular slaft enup |
| 82, 034 | Same..... Werthington, Ohio..... - same |
|  | Case, Newton. (See Waters, II. N., assignor.) |
| 84, 535 | Case, O., and 13. D. Evans, Columbus, Ohio. Street la |
|  | Case, Rufus D., et al. (S'ee Barclay, John, assignor.) |
| 83, 815 | Case, Sehuyler S., Marion, N. Y. Chur |
|  | Cashe \& Company. (See Davis, Lewis II., assignor.) |
| 81, 251 | Cashe, Joseph, assignor to Casho \& Company, Newark, Del. Link for endles chain for horse-powers |
| 84, 341 | Casilear, George W., Washington, D. C. Method of preventing the alteration |
|  | Cass, N. H., Henryville, Ind. Medical compound for treating hor |
| 78, 925 | Cassard, George Carleton, assignor to self, L. and J. L. Cassard, Baltimore, Ma. Lard cooler |
|  | Cassel, Joln I, and William Quinn, Eatorn, Ohio. Beehive |
| 81, 751 | Cassel, Joseph B., Worcester Iownship, Pa. Lard press and sansago |
| 85, 212 | Cassiday, Charles H., assignor to self, Wilson Jewell, and Joseph White, Philadelphia, Pa. Toy. |
| 74, 989 | Cassidy, Johm, Montezuma, Iowa. Sled brako |
|  | Cassity, Martin P. M., administrator of Isaac II. Steer, deceased. (See Steer, Isaac H) <br> (Extonsion.) |
| 74, 304 | Castellaw, Alfred, Chester, Ill. Steak erusher....................................... |
|  | Casthelaz, John, and G. Disignoble. (See Designoble \& Casthelaz.) |
| 79, 951 | Castle, Alfred H., Ann Arbor, Mich. |

## Date.

Apr. 7, 1868
Aug. 11, 1868
July 21, 1868
Apr. 14, 1868
Oet. 27, 1868.
June 2,1868
Dec. 8, 1868
Dec. 22,1868
Feb. 11, 1868
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Oct. 6, 1868
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Nov. 3, 1868.

Dee. 15, 1868 Jan. 7, 1868.

Apr. 21, 1868.
Sept. 29, 1869
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Sept. 15, 1868.
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Nov. 3, 1868

Aug. 18, 1868.
Nov. 24, 1868
Aug 4, 1868.
June 16, 1868.
Apr. 14, 1868. Sept. 1, 1868.

Dec. 22, 1868.
Mar. 3, 1868.

Feb. 11, 1868.
Mar. 3, 1868
July 14, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Dato. |
| :---: | :---: | :---: |
| 80, 912 | Castle, Edmund, Lineolnton, N. C. Quartz | Aug |
| 75, 366 | Castle, Simeon 13., Cortland, N. Y. Elevat |  |
| 79, 053 | Castle, T. W. M., and J. B. Conner, Adriance, Ind. Printing.press | June 23.1868. |
| 76, 712 | Castle, W. H., Washington, D. C. Water |  |
| 75, 519 | Caswell, Ezra, Lyons, N. Y. Bed botto |  |
| 76, 891 | Cate, Norman S. (Nee St. John, George B., assignor.) Cato, O., Boston, Mass. Sash fastener. (Antedated April 9, 1868) | Apr. 21, 1868. |
| 73,951 | Catheart, James L., Georgetown, D. C. Steering appa | Feb. 4, 1868. |
|  | Same.....Attaching propellers to the | Apr. 2, 1868. |
| 75, 122 | Cattaneo, Angolo, Newark, N. J. Machine |  |
| 81, 252 | , | Aug. 18, 1868. |
| 73, 779 | Cauffman, B. F., Millerstown, Pa. Ca | Jan. 28, 1868. |
| 81, 752 | Same......Evaporator | Dept. 1, 1866. |
| 84, 610 | Cauldwell, James A., Horse Heads, |  |
| 81, 139 | Caven, William, Cincinnati, Ohio. Stove gra | Aug. 18, 1868. |
| 74, 990 | Cavort, Miehael P. (See Pratt, Daniel J., assignor.) <br> Cawl, Hugh, Donglass Corning, and James W. Wheeler, Troy, N. X. Plaiter for sewing machines. | Mar. 3,1868. |
| 78, | Cawthorne, Robert, Lyons, Iowa. Tire setter. | June 16, 1868 |
| 77, 35 | Center, J. C., Bath, Ill. Adjnstable harrow | Apr. 28, 1868. |
| 77, 715 | Chabot, C., Philadelphia, Pa. Sewing machine............................ | May 12, 1868. |
| 81, 067 | Chadwick, Edward W., assignor to self and Wm. P. Chadwiek, Edgartown, Mass. Car coupling.. | Aug. 18, 1868. |
|  | Chadwick, J. B. (See Wright, Rufus, assignor.) |  |
| 84, 049 | Chalwick, John H., assignor to self and George B. Peck, Bristol;R. I. Car coupling. | Nov. 17, 1868. |
| 74,499 | Chadwick, Joseph H., Wheaton, IIl. Carriage-spring brace. <br> Chadwiek, Joseph H. (See Chıbbuek, S. E., assignor.) <br> Chadwick, J. H., and S. E. Chubbuck. (See Chulbbuck \& Chadwiek.) <br> Chadwick, Thomas, and J. A. Hammer. (See Hammer \& Chadwick.) <br> Chadwick, William E. (See Monroo, Benjamin, assignor.) |  |
| 2: 947 | Chaffee, Charles S., and Charles H. Vandercook, Birmingham, Conn. Hoopskirt | Mar. 10, 1868. |
| 78, 260 | Chaffee, E. M., Providence, R. I. Rubber and gutta-perelia hose................ | May 26, 1868. |
| 75, 520 | Chaffee, W. T., assignor to self and Samuel M. Drinker, Richmond, Va. Grain separator | Mar. 17, 1868. |
| 80,709 | Chalfant, Tohn N., and Samuel L. Denney. (See Denney \& Chalfant.) Chalmers, James, assignor to James Chalmers, jr., England. Non-conductor of |  |
|  | hea | $\text { Aug. 4, } 1868$ |
| 83,461 | Chamberlain, D. H., West Roxbury, Mass. Elevator for buildings............... |  |
| 2, 847 | Chamberlain, Dexter H., assignor to E. D. Chamberlain and Charles H. Brown, West Roxbury, Mass. Hand stamp......................................(Reissue).: Chamberlain, E. L., and E. C. Pomeroy. (See Meyers, Nicholas, assignor.) | Jan. 21, 1868. |
| 77, 716 | Chamberlain, Henry, Dayton, Wis. Store window | May 12, 1868. |
| 83, 253 | Chamberlain, Nathaniel L., Boston, Mass. Haud stam | Oct. 20, 1868. |
| 78, 184 | Chamberlain, William A., Alexander, N. Y. Bed bottom............................. Chamberlain, William H., and Robert G. Jameson. (See Jameson \& Chamber- | May 26, 1868. |
| 74, 046 | Chamberlain, William T., assignor to self and James W. Chamberlain, Norwieh, Conn. Steam engine. <br> Chamberlayne, E. L., and E. C. Pomeroy. (See Meyers, Nicholas, assignor.) Same | Feb. 4, 1868. |
| 80, 332 | Chamberlin, Johu V., assignor to self, S. D. Paterson, and John V. Chamberlin, Cincinnati, Ohio. Lock for seeuring raimoad switches. | July $28,1868$. |
| 83, 362 | Chamberlin, Joseph E., Wilmington, Del. Jig | Oet. 27, 1868. |
| 74, 891 | Chamberlin, Stephen, Boston, Mass. Tip | Feb. 25, 1868. |
| 74, 500 | Chamberlin, Tavlor, and T. Eiwood Garrett, Philadelphia, Pa. Pump | Feb. 18, 1868. |
| 74, 991 | Chamberlin, William H., Miedina, N. Y. Potato dig | Mar. 3, 1868. |
| 83, 690 | Chambers, Andrew, Providence, R. I. Maehine for dry |  |
| 75, 244 | Chambers, B., jr., Washington, D. C. Letter balanee. |  |
| 83,254 74 | Chambers, Charles F., Hutsonville, Ill. Washing maehine....................... | Oet. 20, 1868. |
| 74, 045 | Chambers, James, Boston, Mass. Steam heating apparatus. (Antcdated Jan. 31, 1868) | Feb. 4, 1868. |
|  | Chanbers, James V., and Matthew Simms. (See Simms \& Chambers.) |  |
| 84,936 | Chambers, John D., assignor to self and Erasmus D. Rowland, Carthage, Mo. Corn planter. | Dee. 15, 1868. |
| 75, 859 | Chambers, John F., Calistoga, Cal. Washing mae | Mar. 24, 1868. |
| 76, 160 | Same | Mar. 31, 1868. |
| 83, 691 | Chambers, Thornas, St. Louis, Mo. | Nov. 3, 1868. |
| 84, 476 | Chameroy, Edmund A., France. Flnid meter. Chamness, Eli, and John Vaughn. (See Vanghn \& Chamness.) <br> Samo. $\qquad$ same. | Dee. 1,1868. |
| 3,104 | Champion, J. P., Phelps, N. Y. Apparatus for raising and seeuring the legs of horses to shoe them. | Sept. 1, 1868. |
| 74, 501 | Champlin, J. Henry, | Feb. 18, 1868. |
| 73, 231 | Chandler, Hiram C., Er | Jan. 14, 1868. |
| 81, 891 | Chandler, R. K., Ruther Glen, Va. Stoeking streteher Chandler, T W. (See Marshall, Hammond, assignor.) | Sept. 8, 1868. |
| 75, 624 | Chandler, William H., assignor to self, John Wheeler, and Earl D. Barden, North'Scituate, I. I. Machine for strapping and grinding cards.............. | Mar. 17, 1868. |

## Alphabetical list of patentecs for the year 1868-Continued.

## No.

 Name, residence, and invention or discovery.ع0,137
81, 599
73, 164
76, 051
78, 429
78, 643

76, 399
83, 038
73, 952
83, 928
72, 780
74, 892
80, 598

81, 600
82, 085
3, 186
3, 082
82, 382
77, 957
73, 297
75, 521
77, 168
84, 611
75, 367
82, 693
81, 982
84, 260
76,603

80, 333
73, 077
85, 069
79, 444
75, 522
82, 491
75, 860
74, 305
84, 342
80, 138
75, 524
78, 644
75, 525
76, 604
80, 451
77, 958
78, 720
81, 343
80, 452
76, 882
85, 365
80, 599
85,596

Chandor, L., assignor to Cassius M. Clay, Russia. Lamp.
Chaney, N. P., Potsdam, N. Y. Churn.
Chantrell, John, Bristol, Conn. Knitting machine.
Chapin, E. M., and Solon Rust, Pine Meadow, Conn. Carpenters plano.
Chapin, Heury S., Delli, Ohio. Railroad frog-
Chapin, L., Antwerp, N. Y. Cheese hoop
Chainn, Wm. H., et al. (See Worth, H. B., assignor.)
Chaplin, Edward. (See Payne, Edward, assignor.)
Chaplin, Joseph M., assignor to self, E. E. Allen, and F. M. Loveland, Morris ville, Vt. Potato washer and pan combined
Chaplin, J. M., Middleport, N. Y. Fence.
Chnpman, Abner, Delta, N. Y. Horse rako.
Chápman, C. C., and Almon Hunt. (See Hunt \& Chapman.)
Chapman, Chandler P., Madison, Wis. Wind wheel
Chapman, Edwin, and C. T. Allaire, Rochester, N. Y. Steam generator
Chapman, George T., New York, N. Y. Horseshoe.
Chapman, G. W., jr., assignor to self and W. A. Plantz, Iowa Falls, Iowa. Harrester cutter
Chapman, John T., and John B. Wood. (See Wood \& Chapman.)
Chapman, Joseph L., Philadelphia, Pa. Rolling mill.
Chapman, Luke, Collinsrille, Conn. Wrench.

> h....
$\qquad$
Chapman, Luman L., Philadelphia, Pa. Corset.......................................................
Chapman, Maro S., Hartford, Conn. Seroll to be applied to envelopes. (Design) .
Chapman, Nathan, Milford, Mass. Hay spreader
Chapman, O. D., Chieago, Ill. Tube well.
Chapman, Samuel A., Waterbury, Conn. Hinge
Chapman, S. B., New York, N. Y. Car whecl..
Chapman, William Z. W., New York, N. Y. Inhaling gas
Chappell, Isaae H., and James Montgomery, Decatur, Ill. Ciltivator
Chappell, N. L., New York, N. Y., and C. H. Pettit, Jersey City, N. J. Bung.
Chappell, William, Buffalo, N. Y. Chimney top
Charles, Lewis, Clear Springs, Md. Farm gate.
Charloville, Joseph, St. Louis county, Mo. Step-ladder
Charlton, James, Allegheny City, Pa. Fubber for wasling clothes. (Antedated April 1, 1868)
Chariton, William B., et al. (See Hargrave, Thomas C., assignor.)
Charlton, W. B., and T. C. Hargrave. (See Hargrave \& Charlton.)
Charnley, Sylvester, Portage City, Wis. Oil eup
Charters, John. (See Anthonv, C. F., assignor.)
Chase, A. J., Boston, Mass. Watch-key protector
Chase, Charles E., and Benjamin F. Devendorft, assignors to selves and Joscph S. Randall, W yoming Township, Mieh. Grubbing machine Chase, C. Thurston, Albany, N. Y. Inkstand.
Chase, Daniel G., Boston, Mass. Shuttle for looms.
Chase, Daniel L. F., Boston, Mass. Steam-engine governor
Chase, Frederie, Philadelphia, Pa. Zineing or timing bath.
Chase, Hemry, et al. (See Fay, George, assignor) $\qquad$ (Design.)
Chase Janes, Rochester, N. Y. Curtain fixture
Chase, Jefferson, Orange, Mass. Lock for barrel hoops
Chase, John, Farmington, Pa. Harrow
Chase, Joseph, Ripley, Ohio. Beehive
Chase, Justus, jr., Watertown, N. Y. Bake pan
Chase, Nathan B., and Washington Stickney. (See Stiekney \& Chase.)
Chase, S. E., Boston, Mass. Making horseshoe nails
Chase, Sidney E., Mendon, Mieh. Covering for shaft couplings.
Chase, Silas E., Boston, Mass. Shuttle for looms.
Chase, Willard W., assignor to self and Solon W. Abbott, Springfieli, N. H. Ash bin.
Chase, William P., assignor to R. Hoe \& Company, Boston, Mass. Bookbinders beveling machine.
Chatelin, Edouard, assignor to Ernest Franeillon, Switzerlaud. Wateh..........
Chatterton, R. D., Englaud. Snow clearer.
Chauvassaignes, Paul A. M., and Jaeques P. Lambrigot, France. Tolegraph instrument.
Checkeni, Dominico, assignor to self, John W. Boteler, and Charles K. Shorwood, New York, N. X. Toy.
Cheek, M. D., Memphis, Tenn. Baling press
Cheek, Nash, Chapel Hill, N. C. Burglar alarm lock. (Antedated July 30, 1868)
Cheeseman, Audrew M., assignor to self and John Watson, 'Trenton, N.J. Valvo seat
Cheever, B. H., and E. J. Smith. (See Smith \& Cheevor.)
Cheever, Jolin H. (See Forsyth, James B., assignor.)
Chenery, Isaac. (See Clapp, Erastus S., assignor.)
Cheney, Alonzo M1., and Handley B. Kimball, Charlotto, Mieh. Horso hay fork
Cheney, Ethan R., Sonth Boston, Mass. Die for making too calks for horseshoes.
Cheney, E. R. (See Weaver \& Allen, assignors.)
Cheney, J. W. II., Hartford, Conn. Cutting printers' leads
Cheney, Stephen, et al. (See Preston, K. H. C., assignor.)
Same................................ same.

Chenoweth, George E., Baltimore, Md. Balance feed-water valvo.

Date.

July 21, 1868. Sept. 1, 1868. Jan. 7, 1868. Mar. 31, 1863. June 2, 1868. Juno 9, 1868.

Apr. 7, 1868
Oct. 13, 1868.
Fob. 4, 1868.
Nov. 10, 1868.
Jan. 28, 1868.
Feb. 25, 1868.
Aug. 4, 1868.
Sopt. 1, 1868.
Sept. 15, 1868.
Sept. 1, 1868.
June 30, 1868.
Sept. 22, 1868.
May $19,1868$.
Jan. 14, 1868.
Mar. 17, 1868.
Apr. 23, 1868.
Dec. 1, 1868.
Mar. 10, 1868.
Oct. 6, 1868.
Sept. 8, 1868
Nov. 24, 1868.
Apr. 14, 1868.

July 28, 1868.
Jan. 7, 1868.
Dec. 22, 1868.
June 30, 1868.
Mar. 17, 1868.
Мат. 17, 1868.
Sopt. 29, 1868.
Mar. 24, 1868.
Feb. 11, 1868.
Nov. 24, 1868.
July 21, 1868.
Mar. 17, 1868.
June 9,1868.
Mar. 17, 1868.
Apr. 14, 1868.
July 28, 1868.
May $19,1868$.
June 9, 1868.
Aug. 25, 1868.
July $28,1868$.
Apr. 21, 1868.
Dec. 20, 1868.
Aug. 4, 1868.
Sept. 29, 1868.

Dec. $1,1868$.
Aug. 11, 1868.
Aug. 25, 1868.

Jan, 14, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

77, 959
79, 952
73, 781
82, 206
81, 601
77, 717

77, 253
83, 250
74,893

72, 974
73, 078
82,597
82, 086
78, 185
73, 782
84, 612
75, 665
76, 302
79, 312
82,598
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77, 254
77, 255
80,913
3, 298
75, 861
74, 306
79,445

84, 478
81, 602
77, 355
84, 089
84,731
81, 877
3, 074
81, 603
83, 363
75,368
80, 389
79, 446
77,456
78, 927
3, 187
3, 061
3,216
3,215

82, 800
75, 729
80, 057

76, 995
83, 761

| Namo, residenco, and invention or discovory. |  |
| :---: | :---: |
| Chenoweth, James B., and Edwin P. Baugh, assignors to Bangh \& Sons, Philadelphia, Pa. $\Delta$ pparatus for treating offal |  |
|  |  |
| Cherry, James N., and L. Riehardson Comstock. (See Comstock \& Cherry.) |  |
| Chescbrough, Robert A., New York, N. Y. Lubrieating oil: Same...Elevated railway |  |
|  |  |
| Chcsebrough, R. A., assignor to William H. Chesebrough, Now York, N. X. Heating railroad ears |  |
|  |  |
| Chesley, William, Cincinnati, Ohio. Globe valve. Chesterman, Edwin, Boston, Mass. Interfering strap for horses. Chesterinan, Edwin, assignor to sclf and Edwin A. Eaton, Boston, Mass. Boot |  |
|  |  |
|  |  |

## Dato.

May 26, 1868.
May 19, 1868. July 14, 1868.

Jan. 28, 1868.
Sept. 15, 1868.
Sept. 1, 1868.
May 12, 1868.

Apr. 28, 1868.
Oct. .20, 1868.
Fob. 25, 1868.

Jan. 7, 1868.
Jan. 7,1868.
Sept. 29, 1868.
Sept. 15, 1868.
May 26, 1868.
Jan. 28, 1868،
Dee. 1, 1868.
Mar. 17, 1868.
$\Delta$ pr. 7, 1868.
Јиме 30, 1868.
Sept. 24, 1868. Sept. 29, 1868. Sept. 15, 1868. Scpt. 15, 1868. Apr. 28, 1868. Apr. 28, 1868. Aug. 11, 1868. Dec. $29,1868$.

Mar. 24, 1868.
Feb. 11, 1868.
June 30, 1868.

Dec. 1, 1868.
Scpt. 1, 1868
A pr. 28, 1868. Nov. 17, 1868. Dec. 8, 1868. Sept. 8, 1868. Aug. 11, 1868. Sept. 1, 1868. Oct. 27, 1868. Mar. $10,1868$. July 28, 1868. June 30, 1868.
May 5, 1868.
June 1G, 1868.
Sept. 1, 1868.
June 2, 1868.
Nov. 3, 1868.
Nov. 3, 1868.
Oct. 6,18п8.
Mar. 24, 1868.

July 21, 1868.
Apri. 21, 1868.
Nov. $3,1868$.

## Alphabctical list of patentees for the year 1868-Continued.

No.

78,515
79, 456
70, 315
79, 314
74, 750
79,548
79,549
74, 195
83, 929
85, 366
78, 057
79, 204
72, 975
74, 804
73, 693

82, 599
80, 058
80, 914
79, 893
73, 435
74, 199
77, 553
75, 730
80,600
74, 502
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81, 314
83, 693
81, 753
75, 369
75, 862
80,453
\&2, 920
83, 603
82, 383
75, 370
74, 751
76, 396
80, 139
82, 471
80, 710

68, 430
80, 808
75. 7.31

82, 207
75, 732
84, 613
\%7, 255
79, 205

Namo, residcuce, and inrontion or discovery

Christy, Thomas J., Olney, M1. Harrester cutter. (Antedatcd May 25, 1868).
Chubl, $\Lambda$. L., Giand Rapids, Mich. Field rollor........................................ Chubb, Thomas J., Williamsburg, N. Y. Apparatus and process for making stecl. (Antedatcd Dcc. 30, 1867).
Samo...... Triding steel तirect from tho orc. (Antedated Jan. 15, 1868) .-
Chubbuck, S. E. and Isaac Y., assignors to selves and S. E. Chubbuck, jr., Roxbury, Mass. Piston
Chubbuck, S. E., assiguor to J. I. Chadrick, Boston, Mass. Machino for making tin-lined lead yipe.
Chabbuck, S. E., and J. II. Chadwick, assignors toJ.İ. Chadwick, Boston, Mass. Machine for making tin-iined lead pipo
Chumard, E. M., Pistston, Pa. Wagou brako
Samo ...... Brake for vehicies
Church, Asa H., Lubbarlstown, Mass. Toy..................................................
Church, D. M., assimor to self and Wiilian T. and 'I. E. Beard, Birmingham, Conn. Shut fle for sowing machines.
Church. Isaac, jr., Norwalk, Conn. Operating side ralves
Churchill, Daniel, Iowa. Ill. Cultivator
Chrerchill, Honry, and Jesse TV. Hatch. (See IIatch \& Churchili.) (Extension.)
Churchill, Olney, Canton, Par. Carriago jack
Cilley, G. IV., and G. H. Spalding, assighinrs through mesno assignmonts to the American Molded Collar Company, Norwich, Conn. Machine for molding paper collars
Cincimati Britannia Company. (See Woodworth, D. B., assignor.)
Citr Machine Company. (See Streeter, James S., assignor.)
City Mannfacturing Company: (See Chimock, George, assignor)
Clafiiu, Frank O, assignor to self and Albro R. Carinan, Brooklyn, N. Y. Implement for lasting boots and shoes.
Claceit, Z. S., Waskington, D. C. Corn planter.
Claner. Patrick G.. Augusta, Maine. Sheep shears
Clapp, Chatles. (See Cole. Calvin, assignor) -i..........................(Reissue.)
Clapp, Erastus S., assignor to self and Isaac Chenery, Montague, Mass. Spectacles.
Clapl, Seth E., assignor to self and Gcorge P. Clapp, Cambridge, Mass. Corkmil.
Clapp, Seth E., assigmor to self and Charles I. Ridgway, Cambridge, Mass. Curkscrem.
Clapp, Seth E., assignor to self and John J. Iudgway, Cambridge, Mass. Biscuit catter
Clapp, S. II., Malden, Mass. Brick kiln
Clart, Alrin B., Richmond, Ind. Post driver
Cluk. Alvin 13,, and Charles Davis, Iachmond, Ind. Washing machine
Clark, Anos F., an! Saxton J. Amold. (See Arnold \& Clark.)
clark, Audren, Lafiryette, Ind. Apple parer. corer, and slicer
 riages.
Clark, Chales, Dayton, Ky. Rope-making machino
Clark, Clarles B. Buffalo, iv. Y. Clamp for serub hrushes.
Samo......Blind hince. (Antedated October 18, 1867)
Samo....... Brush holder
Same...... Blind hinge
Same........-same.....
Same...... (See Ferguson, E. L. .a.-.............
Clask, C. B., and E. L. Fertuison, Buffalo, N. Y. Mop head
Clark, C. C., and J. B. Boss. (Sce Decker, John, assignor:)
Clark, Dominiens N., Eastport, Mainc. Railway chair and fastening.
Glark, Elwin E., Ann Arbor, Mich. Sewing machine …… .....
Clark, E. W., Tallahasseo, Fla. Double buclile.
Clark, George.in', Bostom, Mass. Apparatus for extinguishing fires.
(lark, Georgo D., and Charles I. Bacon. (See Tacon \& Clark.)
Clark, George D., assignor to self and Clark \& Cowles, Plainville, Com. Fastening for buitons..
Clark, Georgo P., and T. C. Robinson. (See Roljinson \& Clark.)
Clark, Men'y, Cedar Keys, Fla. Machine for fecing shects of paper to printing presses.
(Extension) Clarls, Menry C., and Iobert B. Little, Irovilence, I.I. Apparatus for conreyins and dumping coal
Clark. Menry F., Lowell, yich. Bea spring
Chark, Hezokiah MI., Cloveland, Ohio. Lamp
Olark, Ifolley M., Brewer, Mainc. Hani Make ..........................................
Clark, Inrace, assignor to Dwight L. Clark, Nortlanptni, Mass. Mctical compound
Clark, Isaae If. Boston, Mass. Application of carbonic acil in fire engines. (Antedated Nor. 27, 1868).
Clark, Jacob, Clarksville, Pa. Water wheel
Clark, James B. (See Wright, Menr'y, assignor.)
Clark, James B., Plantsville, Conm. Whiffetree plate
Clark, J. B., et al. (See Daris, Edward MT., assignor.)
Clark, James E., and O. F. Green. (See Greou \& Clark.)

## Dato.

Jun 2, 1868.
Juno 30, 1868.
Juno 30, 1868.
June 30, 1868.
Fob. 25, 1868.
July 7, 1868.
July 7, 1868.
Fel. 11, 1868
Nov. 10, 1863.
Dec. 29, 1868.
May $19,1868$.
Juno $23,1868$.
Jan. 7, 1868.
Feb. 25, 1868.
Jan. 21, 1868.

Sept. 20, 1863
July 21, 1868
Aug. 11, 1868.
July 14, 1863
Jan. $21,18 \mathrm{u} 8$.
Fub. 11, 1868.
May 5, 1868.
Mar. 24, 1868.
Aug. 4, 1868.
F'ch. 18, 1868.
June 9,1868 .
Aug. 25, 1868.
Not. 3, 1868
Sept. 1, 1868.
Mar. 10, 1868.
Mar. 24, 1868. July $28,1863$.
Oct. 13, 1868
Nov. 3, 1868.
Sept. $22,1868$.
Mar. 10, 1868.
Feb. 25, 1868.
Арr. 21, 1868.
July 21, 1868.
Scpt. $22,1868$.
Aug. 4, 1868.
Apr. 24, 1868.
Jumo ~, 1868
Aug. 11, 1868.
Mai: 24, 1868.
Sept. 15, 1868.
ITar. 24, 1808.
Dec. 1, 1868.
Apr. 28, 1868.
June 23, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

85, 165
80, 601
84, 853
75, 123
82, 801
80, 390
81, 068
81,983
76, 636
79, 206
80,393
76, 052
80,392
74,503
79, 899
80, 602
85, 213
82, 492
78, 058
.76, 303
73, 298
73, 502
84, 411
84, 343
3, 083

74,047
75,124
75, 371
85, 283

73, 875
72, 976
81, 140
80, 140
84, 170
78, 262
74, 048
81, 141
73, 436
77, 584
78, 645
78, 646
77, 585
75, 526
80, 391
78, 059
81, 142
77,586
74, 30\%
76, 997
79, 315
83, 039
82, 291

78, 361
73, 503
80,334
79, 729
82, 600

83, 930
81, $8 \times 8$

Name, residence, and invention or discovery.
Date.

Dec. 22, 1868.
Ang. 4, 1868.
Dec. 15, 1868.
Mar. 3, 1868.
Oct. $6,1868$.
July 28, 1868.
Aug. 18, 1868.
Sept. 8, 1868.
July 7, 1868.
June 23, 1868.
July 28, 1868.
Mar. 31, 1868.
July 28, 1868.
Feb. 18, 1868.
July 14, 1868.
Aug. 4, 1868.
Dec. 22, 1868.
Sept. 29, 1868.
May $19,1868$. Apr. 7, 1868.
Jan. 14, 1868.
Jan. 21, 1868.
Not. 24, 1868.
Nov. 24, 1868.
June 30, 1868.

Feb. 4, 1868.
Mar. 3, 1868.
Mar. 10, 1868.
Dec. 29, 1869.

Jan. 28, 1868.
Jan. 7, 1868.
Aus. 18, 1868.
July 21, 1868.
Nov. 17, 1868.
May 26, 1868.
Feb. 4,1868.
Aug. 18, 1868.
Jan. 21, 1868.
May 5, 1868.
June 9, 1868.
June 9,1868.
May 5, 1868.
Mai: 17, 1898.
July $28,1868$.
May 19, 1868.
Aus. 18, 1868.
May 5, 1868.
Feb. 11, 1868.
Apr. 21, 1868.
June 30, 1868.
Dct. 13, 1863.
Sept. 22, 1868.

May 26, 1868.
Jan. 21, 1868.
July as, 1868.
Tuly $7,1863$.
Sept. 29, 1868.

Nor. 10, 1868.
Sept. 8, 1868.

Alphabetical list of patentees for the year 1868-Continued.

## No.

Name, residence, and invention or discovery.

Clement, Austin E., Wapakoneta, Ohio. Chimney cowl
Clement, D. B., and S. S. Mickok. (Sce Hickok \& Clement.)
Clement, Nathan S., New Britain, Comu. Frrit basket
Clement, Samncl, and George Brooks. (Sce Brooks \& Clement.)
Clcuent, W. T., Northampton, Mass. Cutler'J. (Antedated Oct. 28, 1868)
Samc...... Manufacture of hoes
Clements, George R., Prescott, Wis. Dropper for harvesters
Clemons, Andrew B., Ausonia, Conn. Friction-clutch pulley.
Clemons, David, Scranton, Pa. Hames for harness.
Clemons, Georcr I., Springfield, Mass. Meel calk. (Antedated May 15, 1868)
Clemson, William, Middletown, N. Y. Saw
Same.
samo
Clendenen, H. Beverly, Ohio. Saw-filing machino
Clenighen. Robert. (See Ifadler, Amos, assignor.)
Cleretand, C. II., Silem, Ala. Suspender.
Same
same. .
Cleveland, William C., Cambridge, Mass. Spool guard
Clewley, Charles Wr., deceased, by George P' 'Tew, administrator, assignor to the Americau Eyclet Company, Providence, I. I. Eyelet machinc.
Cliff, George. Memphis, Mich. Loom..
Clifford, C., Fulton, N. Y. Vapor and steam condenser to bo applied to brewers boilers and like apparatus.
Clifford, Charles J., Ncw Hampshire, N. J. Apparatus for determining deviation of locomotive crank-pins from truo center.
Clifforth, Johu C. (Sce Cook, J. C., assignor.)
Clifford, Jom Ir., and Villiam M. Mall. (Sce Mall \& Clifford.)
Cliftord, Walter, Holly Springs, Jiss. Mode of carrying knapsack
Clifford, William, assignor to $A$. F. Jennings \& Company, and Thomas R. Coreny, Mina, N. Y. Wagon jack
Clifton, John G., Northfield, Ind. Buckle.
Clifton, Josepli II., New Castle, Pa. Cultivator
Clifton, Leauder, Barry, Ill. Cultivator.
Clime, John C., assignor to sclf and J. Moore IEndricks, Philadelphia, Pa. Bedstead.
Same. . . . . . Bedstead fastener
Clime, Jolin C., assimor to self and İenry C. Jing, Philadelphia, Pa. Bedstead
Cline, James, assignor to John Walls, Eaton, Ohio. Cloth-guiding attachment for sewing machines
Cline, J. J., Iligh ILill, Ohio. Animal trap.
Cline, William, Boston, Mass. Lugmage supporter for saddles
Clinton, Lyman, North Haven, Comn. Horse rake
Clinton Wirc Cluth Company. (See Waters. Charles H., assignor.) Same.
. - sanuo.
Clogston, Thomas S., Boston, Mass. Heating apparatus.
(Reissue)

Close, Ifenry M., Chariton, Iowa. Implement for sliapening the calks of horseshoes
Close, Thomas J. Philadelphia, Pa. Settce
Cloud, William If. (Sce Norton, F. I.. assignor.)
Clough, Jesse R., deceased, by Samuel II. Ifalstead, atministrator, Gorlfre J, $1 l l$. Wind mill
Clough, Nathan, Lowell, Mass., and James Baldwin, Manchester, N. IL. Shultlo Clongh, Theodore. Dobobs Ferr'y, N. Y. Lanim.
Clough, William, Cincinnati, Uhio. Process of deodorizing and refining saceharinc and other fluids.
Clongh, Willian Is., Cambridge, Mass. Paper file

Clump, George, assignon to sclf and William Euerle, IIamden, Comn. Apparatus for relieving choked animals.
Cluxton, I. M., Rising Sun, Ind. Ifeadulock for carriages.
Coates, Willian B., Philadelphia, Pa. Fireplaces
Coates, W. B., assisner to David Lyman, Philalelphia, Pa. Starehingaplaratus Coats, George Wr, and James Russell, Springficle, Mass. Machine for sticking card tecth.
(Extension)
Coats, Jaxson. Cincinnati, Ohio Condenser for spirit stills
Cobb, A. F., Chapel inill, alo. Beehre
Cobb, John Tr., Mchrose, and Edwin A. Hill, Quincy, Mass. Manufacture of rubber and other coated cloth and fabrics.
Cobb, John W., assignor of onc-half interest to Eiwin $\AA$. Hill, Mchrose, Mass. Jiachine for filling eylindrical molds for rubber goods.
(Reissue)
Cobb, William T. Whitestown, Ind. Tenoning machino-
Coburn, D. and C. W. Peason. (Sce Pearson \& Column.)
Coburn, Edwin, jr.. Lewiston, ILaine. 'Jooth pluargr....
Cochnan, Andrew J., Inslianapolis, Ind. Tenoning chisel.
Cochian, Jolm Webster, Nevy Kork, N. Y. Fixed-anmunition holder for cartlidge boxes.
Same
Brecch-loading fico-arm
Cochian, Milton B., Darenport, Lowa. Schonl desk and seat
Cochran, William J. assignor to self and John Cochran, Baltimore, Ma. Ameal-
ing pot for annealing car wheels.

Date.

June 30, 1868.
Sept. 291868.
Nov. 10, 1868.
Jan. 21, 1868.
Oct. 13, 1868.
Dec. 8, 1863.
Oct. 13, 1868. May 19, 1868. Mar. 24, 1868. Mar. 24, 1868. July 21, 1868.

July 21, 1868.
Sept. 8, 1868.
June 2, 1868.
Jume 23, 1868.
Apr. $28,1868$.
Dec. 15, 1868
Jan. 14, 1868.

Nov. 3, 1868.
Sept. 22, 1808.
July 28, 1868.
Sept. 15, 1868.
Nov. 10, 1868.
Mar. 17, 1868.
May 5, 1868.
Juие 9, 1868.
Scpt. 1, 1868.
A11. 14, 1868
July i4, 1868.
Nov. 1\%, 1868.

Jan. 14, 1868
Oct. 27, 1868.
Jnue 30, 1868
July 28, 1868.

Dec. 1, 1868.
Scpt. 15, 1868
Oct. 27, 1868.
Mar. 10, 1863
Aum. 18, 1868
Jume $\lesssim 3,1868$
Apr. 21, 1868
Oct. 20,1868
July 28,1868
Apri. 28, 1868.
May 25, 1868.
May 12, 1868.
Apri. 21, 1868.
Aug. 11, 1868
Nov. 17, 1868
IIay 19, 1868
Nar. 31, 1868
1pr. 28, 1868
Mar. 17, 1868
Ma1. 17, 1868
Mar. 17, 1868
Feb. 18, 1868
Nov. 3, 1868

# Alphabetieal list of patentees for the year 1868-Continued. 

No.

79, 550
83, 042
83, 832
79, 551
72; 977

74,505
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83, 463
80, 143
75,528
79, 106
83, 464
78, 186
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76, 893
77,587
83, 604
78, 861
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74, 308
73, 694
73, 953
S5, 166

76, 304
82, 80:
89 C03
79, 900
$.5,3 \%$

7\%, 000
75, 358
82, 602
2,963
2,964
2,965
3, 050
3, 051
78, 648
86,053
3, 299
84,895
84, 261

87, 801
74, 797
22, 978
79, 730
-6, 16 ?
76, 714
80,144
78, 649
78,649
$7 \%, 170$
$7 \% 170$

Name, residence, and invention or discovery.
Date.

July 7, 1868.
Oct. 13, 1868.
Nov. 10, 1868.
July 7, 1868.
Jan. 7, 1868.

Fel. 18, 1868

Nov. 17, 1868.

Oct. 27, 1868
July 21, 1868
Mar. 17, 1868
June 23, 1868
Oct. 27, 1868.
May 26, 1868.
Aug. 25, 1868.

Mar. 3, 1868
Apr. 21, 1868
May 5, 1868
Nov. 3, 1868
June 16, 1868
Auc. 18, 1838.
Feb. 11. 1868
Jan. 23, 1863
Feb. 4, 1868
Dec. 22, 1868

Apr. 7, 1868
Oct. 6, 1868
Oct. 6,1868
July 14, 1858.

Mar. 10, 1868.
Apr. 21, 1868.
Apr. 28, 1868.
Sept. 29, 1868.
Mar. 31, 1808.
Max. 31, 1868.
Mar. 31, 1868.
May 26, 1868.
May 26, 1868.
Tunc 9, 1868.
Mar. 31, 1868.
Dec. 15, 1868.
Fel. 25, 1868.
Not. 21, 1868.
May 12, 1868
Teb. 25, 1868
Jan. 7, 1868.
July 7, 1868
Mai. 31, 1868.
Apr. 14, 1863.
July 21, 1868.
June 0, 1868.
Alr. 28, 1868.
Apr. 28, 1868.

## No．

Collins，William T．，and N．P．Chipman．（Sce Clipman \＆Collins）（Design．）
77， 453 Collinson，Henry，assignor through mesue assigmments to James O．Boyle，Bos－ ton，Jass．Grate bar．
Colman，A．E．，New York，N．Y．Serubbines brmsh．
Colony，Ormond E．，and Osear B．Blake．（Sce Blake \＆Colony．）
84,996
80， 915
75,863

74,507
Colt，Leander，Niagara Falls，N．K．Aurer
Colton，daron，Sycamore，Ill．Damper for stove pipes
Colton，Aruna C．，and Lewis Dowe．（Sce Dowe \＆Colton．）
Colton，G．，et al．（See Roblins，Hemy I．，assimnor．）
Colton，Winslow M．，ant John M．May．（See May \＆Colton．
Colt＇s Fire－arins Manfacturing Company．（See Mhner，F．Alexander，assignor．）
Colvin，L．O．，Now York，N．Y．Cow－milking machinery
Same．．．．．．Cow－milking machine．
Colvin，Paschal，Pecatonica，Ill．Cheese rat
Colwell，Lewis，New York，N－Y．Valve for shgar pans
Colwell，Lewis and Joseph，et al．（See Shaw，W．Authons，assignor）．．．．．．．．．．．．．．．．．．．．）
80,916
Cole，Nathan N．，et al．（See Monne，Benjamin，assignor．）
Cole，Noah L．，Nourwich，Com．Lamp－lighting device．（Antedated Feb．as，1868） Cole，Seth L．，Sirooklyn，N．I．Gas bumer

Mill．17， 1868. Tuile こ， 1868. Jume i， 1868. Juno 30，1efis． Apr．14，1ع68． Apr．：28， 1868. Dec．1， 1868.

Dec．22， 1868.

Oct．20，1868． Jnly il， 1868. Tuly $28,1868$. Bept．2：1－68． Oct．20，1868． Aug． $1,1868$. Jan．21， 1863. July 7， 1868.

Apr．21， 1868.
Tune 16，1868．
Oct．2～， 1868.
Oct．13， 1868.
Mar．A4， 1263.
Nur．24， 1868.
Scpt．23， 1868.
Mar：10，1868．
Shept．：0， 1 \＆68．
July 23， 1868.

Dec．29， 1865.
गI：ル 亏， 1 ह6？．
July ご々，1848．
Fel．18， 1848.

Jan．14， 1868.
Jan．2r， 1 E68．
July 14， 1868.
Jan．： $1,186$.
A 1 ＇．7， 1868.
Ma1．24， 1868.
May 12， 1868.
Feb．4， 1868.

Dec． $22,1868$.

Feb．18， 1868.

Мस：ly 5， 1268.
Nov゙．10， 1868.
Dee．15， 1868.
A1は．11， 1868.
Mar．2t， 1863.

Feb．18， 1868.
June 30， 1868.
Jnly a8， 1868.
A pi：28， 1868.
Aug．11， 1868.

## Alphabetical list of patentees for the year 1858-Continued.

## No.

73, 504
74,309
83, 466
73, 505
79, 955
76, 715
74, 310
74, 798
74, 799
78,061
3,008
81, 879
74,667
73, 234
78, 062
7\%,961
83, $46{ }^{7}$
74, 992
3, 131
82, 603
75, 246
2,937
3, 214
84,732
76, 401
74, 311

82, 208
78, 063
74,800
74, 801
76, 163
3, 160
83,468
75, 628
83, 257
82, 804
80, 394
80, 146
77, 171
78, 929

Colwell, William S., Pittsburg, Pa. Plow
Sane.... . . Maehine for arossing staves.
Same...... Allegheny City, Pa. Stavo machine
Colwell, W. S., assignoi to James M. Hemphill, Pittsburg, Pa. Stave maehine.
Combs, Elizabeth A., Monroe, Wis. Bleaehing apparatus
Combs, George W., assiguor to self and J. B. Murray \& Sons, Canandaigua, N. X. Car brake.
Comery, Edward M., Mudson, Mass. Cast-off for sewing maehines
Comey, Albert, Cuyahoga Falls, Ohio. Clothes-line holder
Commins, Joln, Charleston, S. C. Mode of treating mineral phosphatos for the

## Same.

 manufacture of fertilizers
## Samo.


same $\qquad$ (Reissue)
Comp, Alfred H., Mt. Joy, Pa. Plane
Compton, Benjamin D., Dowagiae, Mich. Water wlicel
Compton, George N., Canton, Ohio. Pole attachment
Compton, Peter', Sullivansville, N. X. Bechive
Comstock, Charles C. Grand Rapids, Mieh. Raft dog
Comstoek, L. Riehardson, and James N. Cherry, Keokuk, Iowa. Refrigerator and cooler.
Comstoek, Thomas C., Harrodsburg, Ky. Implement
Comstoek, William. C., Essex, Conn. Ivory tablet
(Design).
Conant, Abel, Lowell, Mass. Sash fastener
$\qquad$
Conant, Charles W., Gardner, Mass. Roeking ehair
Conant, H. P., Boston, Mass. Hat raek
.....
Conant, Jotham S., assignor through me N. J. Sewing machine
(Design)
... (Reissue)
Conant, Leander T., Now Lisbon, Ohio. Wash boiler
Conant, Samuel F., Skowhegan, Maino. Hair erimper
Conant, Samuel F., and Horaee A. Manley, Skowhegan, Maino. Photographieprinting frame
Conant, Washington Irving. (See Cummings, Daniel M., assignor.)
Conday, Paul, assignor to self and Charles FI. Leisen, Philadelphia, Pa. Apparatus for brewing malt liquor
Condo, Daniel T., Beloit, Wis. Sad-iron holder
Condio, James, and Benjamin J. Harrison. (Sce Harrison \& Condie) - (Reissue.)
Condon, Sannuel E., Williamsburg, N. Y. Curling iron.
Samo..... Brooklyn, N. Y. Dust pan
Cono, E. G., Last Hampton, Conn. Sleigh bel
Samo
Same
Call bell
Conklin, Alexander, Hartford, Conn. Ieaming tool
Conklin, A. V., Bennington, Ohio. Beehive
Conklin, Henry N., Indianapolis, Ind. Door and gato eloser
Conklin, Isaiah B., Baltimore, Mrl. Stubble entter-
Conklin, John C., Xorktown, N. Y. Pickaxe
Conklin, Oliver P. (See Raymond, George, assignor.)
Conklin, Thomas B., Rockford, Ill. Drive well.
Conlin, James S., New York, N. Y. Shooting mallery
Coulon, Wilson, and Jolnı W. Burnhan. (See Burnham \& Conlon.)
Connar, Thomas. (See Blake, George, assignol.)
Connell, Andrew James, New York, N. Y. Method of mannfaeturing showcards, labels, \&e
Connelly, J. J., Chieago, Ill. Equalizer for vehieles
Conner, A. J., Lonisvillo, Ky. Churn
Conner, James, Richmond, Ind. Wood-bending machine
Conner, Jesso L. (See Elbertson, John, assignor.)
Conner, Joseph, jr., Chicago, Ill. Stair-eappet fastener and protector
Conner, J. B., and T. W. M., Castle. (See Castle \& Conmer.)
Conner, Williston, Rensselaerville, N. Y. Sap spile
S'ame..... Hop pole
Connet, A. M., Madison, Ind. Boring machine.
Comett, Matthew F., assignor to seli, T. G. Maiden, and Wm. C. Hendricks, Ladoga, Ind. Wood-turning lathe
Connolly, John P., Rarenswood, N. Y. Cuspador
(Design)
Commolly, Michacl, Newark, N.J. Spade
Conor, James E., Brooklyn, N. Y. Press
Conrad, Simon, Petaluma, Cal. Cultivator and harrow
Comradt, Augustus, Philadelphia, Pa. Handle of spoons or forks.
(Design)
Same..... . Fork or spoon liandlo
(Design)
Comrou, Georce, New York, N. Y. Water eloset
Samo-..... Water-closet antomatie supply regulator
Comby, 13. TV. (See Allen, George, assignor.)
Contessa, Trancis B., New York, N. Y. Cording attachment for sewing machines.
Convers, Jules, France. Making crank shafts
Converse, A. L., Sprinefield, Ill. Churn.
Converse, Charles J., Boston, Mass. Bottlostopper. (Antedated Dec. 11, 1868).
Converse, Morton E., Rimlge, N. H., and Abel T. Atherton, Lowell, Mass. Manufacture of pyrolignenus acid. (Antedated May 13, 1868).
Converse, Paschal, Jow Haven, Conn. Clock easo
(Design)
Same.
.samo.
(Design)

Date.

Jan. 21, 1868.
Feb. 11, 1868
Oet. 27, 1868.
Jan. 21, 1868.
July 14, 1868.
Apr. 14, 1868.
Feb. 11, 1868.
Feb. 25, 1868.
Feb. 25, 1868.
May 19, 1868. June 30, 1868. Sept. 8, 1868.
Feb. 18, 1868.
Jan. 14, 1868.
May 19, 1868.
May 19, 1868.
Oet. 27, 1868.
Mar. 3, 1868.
July 28, 1868.
Sopt. 29, 1868.
Mar. 10, 1868.
Feb. 18, 1868.
Nov. 24, 1868.
Dee. 8, 1868.
Apr. 7, 1868.
Feb. 11, 1868.

Sept. 15, 1868.
May $19,1868$.
Feb. 25, 1868
Feb. 25, 1868.
Mal. 31, 1868.
Ang. 18, 1868.
Oet. 20, 1868.
Mrax. 17, 1868.
Oct. 20, 1868.
Oet. 6, 1868
July 28, 1868
July 21, 1868.
Apr. 28, 1868.
June 16, 1868.

Nov. 3, 1868.
Sept. 23, 1868.
Apr. 14, 1868.
Feb. 18, 1868.
May 26, 1868.
Apr. 7. 1868.
June 9, 1868.
July 21, 1868.
Mar. 24, 1868.
Max. 3, 1868.
Dee. 8, 1868.
July 7, 1868.
Apr. 7, 1868 .
Jine $30,1868$.
Junle 30, 1868 .
May 5, 1868.
June 30, 1868 .
Mar. 31, 1868.
Oct. 6, 1868 .
May 5, 1868.
Dec. $2: 1863$.
May 20, 1868.
July 14, 1868.
Nov. 1\%, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

| No. | Name, residence, aud invention or discovery. | Date. |
| :---: | :---: | :---: |
| 77, 559 | Co | May 5,1868. <br> Fel. 18, 1868. <br> Oct. 20, 1868. |
| 74,669 | Conway, H: |  |
| 83, 2.88 | Conway, Villiam, Rushville, , X. Y. Seat lock for carriages.................. |  |
| 77,590 |  | $\begin{aligned} & \text { May } 5,1868 . \\ & \text { Nov. } 10,1868 . \end{aligned}$ |
| 83,93381,345 | Coogan, Edward, and Howard Milic, Wa ahi |  |
|  | Cook, Alonzo P., assignor to self Milk can | Aug. 25, 1868. |
| 78,788 | Cook, A. W. W, ani | June 9, 1868. |
| 80, 917 | Cookr, Charles O., assignor to self and R. P. Blaisdell, Rockford, Ill. Coopers' | Aug. 11, 1868 Dec. 29, 1868 |
| 85, 28.4 | Cook, Elisha il. |  |
| 73, 506 | Cook, E. Me. | Jan. 21, 1863. |
| 79, 950 | Cook, Georgo II. (See Clar | July 14, 1868. |
|  | Cook, George IV., Macoll, ill. |  |
| 74,99374,050 | Cook, Isaac, assignor through mesne assigmments to self and George thel, jr., St. Louis, Mo. Alljustable seat. | $\begin{array}{ll} \text { Mar. } & 3,1868 . \\ \text { Feb. } & 4,1868 \\ \text { Sept. } & 8,1868 . \end{array}$ |
|  | Cook, James, West Grotou, Mass. Tobaeco |  |
| 81,987 | Cook, James MT, Washington. D. C. Ca |  |
| $\begin{aligned} & 77,360 \\ & 76,994 \\ & 81,937 \end{aligned}$ |  | Apr. 28, 1868. Apr. 21, 1868. |
|  | Cook J. C. assimuor to self and John C. C'2 |  |
|  | Cook, John F., assigucr to Georye F. Page, Joseph Roberts, and George L. |  |
| $\begin{aligned} & 79,731 \\ & 73,165 \end{aligned}$ | Coolk, J. Mr., Lake Village, N. II. IV | $\begin{array}{\|l\|l\|l\|l\|l} \text { Dec. } & 15,1868 . \\ \text { July. } & 7,1868 . \\ \text { Jan. } & 7,1868 . \end{array}$ |
|  | Cools, J. S., West Grotol, Mass. Wlip - .......- |  |
|  | Cook, Ossian, and John S. Everitt. (See Ereritt \& Cook.) |  |
| $\begin{aligned} & 81,143 \\ & \begin{array}{l} 73,580 \\ 81,069 \end{array} \end{aligned}$ | bame | $\begin{aligned} & \text { Aug. } 18,1868 . \\ & \text { Jan. } 21,1868 . \\ & \text { Aug. 18, } 1868 . \end{aligned}$ |
|  | m, |  |
|  | Same ...... Bit for boriug wood |  |
|  | Cools, Warren, Arsenal, Pa. Rolling | Nor. 10, 1868.Feb. $25,1868$.Sept. $22,1868$.June $23,1868$.Mar. $3,1868$.May $5,1868$.May. $26,1868$.Sepit. $1,1868$. |
|  | Cook, W. C., Appleton, WVis. Inuming g |  |
|  | Cook, Williaun H., Bridgehanpton, |  |
|  | Cooke, Augusta, Qrauge, N.J. Toy |  |
|  | Cooke, , il., Morristown, ti shot |  |
|  |  |  |
|  | Cookssou, Johu C, Lewars, N. Ta. Distioliling |  |
|  | Cooley, A. 1. (See Elliott | Sept. 1, 1868 <br> Dec. 2y, 1868 <br> Jan. 7, 1868 <br> July 21, 1868 Aug. 11, 1868 <br> Atig. 11, 1868. |
| $\begin{aligned} & 81,754 \\ & 8,7585 \\ & 83,289 \\ & 70,147 \\ & 80,147 \\ & 80,918 \end{aligned}$ | P |  |
|  | Coonils, Whilliam II, Fort Wr arvie, lud. Ma |  |
|  | Couner, C. M1., Washington, I). C. P'erforat |  |
|  | Coons, II. P., Brooklyn, N, Y. Carburetel |  |
|  | ons, Robert, and Dasid Sarver. |  |
| $\begin{aligned} & 75,864 \\ & 79,104 \\ & 831,131 \\ & 84,412 \end{aligned}$ | Cooper, Edward A., Lancaster; N. Y. | Mar. 24, 1868 June 23, 1868. Oct. 20, 1868. |
|  | Same..... Buffilo, N. Y. Haruess sua |  |
|  | per, E. W., assignor to seli aud Lak |  |
| 78,930 |  | Nor. 24, 1868. |
|  | per, George, assignor to Victor E. Manger, New Xork, A. I. Lithographic | June 16, |
|  | Cooper, George, and Augustus Scluffert. (See Selhal | $\begin{aligned} & \text { Aug. 4, } 1868 . \\ & \text { Dec. 8, } 1868 \text {. } \\ & \text { Mar. } 17,1868 \text {. } \begin{array}{l} \text { uly } 28,1868 . \end{array} \end{aligned}$ |
| $\begin{aligned} & 80,604 \\ & 84,798 \\ & 75,629 \\ & 80,275 \\ & 82,921 \end{aligned}$ | Cooner, George W., Ogechec, Ga. Rice cultivator. |  |
|  | Cooper, Jolu, Dablin, Ind. Washing machi |  |
|  | Cooper, John, assignor to self and Bemett F. Dell |  |
|  | oper, John Le, assignor to self and Joshua E. Feclows, Preston, Comı. Metal- |  |
|  | Cooper, Joserlh Re | Dec.13, 1808.1868.Jan. $7,1868$.Oet. $13,1868$.Nov. $3,1868$.July$7,1868$. |
|  | Cuopere, William, Deposit, N. Y |  |
|  | Cuorper, William, Paris, |  |
|  | Coruer, William, Gal |  |
|  | 1, Willia, |  |
|  | Cooper, Willian H, and George cregory, assignors to Lawrence, Bradiey \& |  |
|  | artee |  |
|  | sime ${ }^{\text {a }}$ |  |
|  | Same...... Water clo |  |
|  | me...... Wat |  |
|  |  |  |
|  |  |  |
| $\begin{aligned} & 73,300 \\ & 7,439 \\ & 78,86 \\ & 78,57 \end{aligned}$ | Cope John | $\begin{aligned} & \text { Jan. } 14,1868 . \\ & \text { Jan. } 21,1868 . \\ & \text { Juue } 16,1868 . \end{aligned}$ |
|  | peland, Rid |  |
|  |  |  |
|  | mroe it, assignor to A. Carnes, Albiom, N. |  |
|  | iages.. | Ju |

Alphabetical list of patentees for the year 1868-Continued.
No.

80, 458
83, 833
78, 064

Copp, William H. (See Quiney, Edmund TV., assignor.)

Corbeil, Joseph, Lind, Wis. Potato bug elcaner
Corbett Virgil P.. Alexandria, Va. Potato digger. (Antedated Oct. 31, 1868)
Corbin, Freeman N., Champlain, N. Y. Whiffletree evener
Corbin, P. and F. (Sce Blake, Hemry D., assignor.)
Same....................... same.
Same ..... - (Sce Arnold, S. D., assignor)
(Design.)
Same....... (See Munger; W. T., assignor.)
Same....................... same.
Same....................... . same.
Corbin, S. W., assignor to self and J. B. Sands, Vallonia Springs, N. Y. Methor of tightening tires
Corbit, Christopher, Christiana, Pa. Mill step
Corbit, Gorge IV., James M. Orpat, and George M. Case, Malta, Ill. Churn.
Corby, A. B., Binghamton, N. Y. Chrurn
Cordier, V., assignor to Joln Gatliff and Clement Dietrieh, Franee. Paint oil. Corduan, Joseplh, assignor to self and R. W. Potter, Brooklyn, N. Y. Fluid indieator.
Corduan, Joseph, Brooklyn, N. Y. Lubrieating eomposition. (Antedated March 17, 1868
Corey, Thomas. (See Stearns, Caleb S., assignor.)
Samo ....................... same.
Same........................ same.
Corfield, William, Philadelphia, Pa. Distilling apparatus
Same ..............................................

Corliss, Charles, IIaverhill, Mass. Instrument for adding figures
Corliss, Charles, and Nelson Spofford. (S'e Spofford \& Corliss.)
Cornell, John B., New York, N. Y. Metallic eolumn
Cornell, John S., and Robert L. Reaney. (Sec Reaney \& Cornell.)
Cornell, Wesley, and Thomas L. Blakley, Buchanan, Mieh. Washing machino. . Coruell, William F., Adrian, Mieh. Surface gange Cornell, W Lliam F., assignor to self and Silas Hurlbut, Adrian, Mieh. Ratehet brace.
Same ...... Skate. (Antedated Nov. 7,1868 )
Cornell, W. S., New York, N. Y. Mannfaeture of ehcese.
Cornely, Emile. (Sce Bonnaz, Antoine, assignor.)
Same........................... same.
Cornely, Emil, Vashington, D. C. Washing machine
Corning, Donglass, et cll. (See Cawl, Corning \& Whecler.)
Corning, Edward. (See Febbard, Alonzo, assignor) -
Corns, James M., Black Rock, N. Y. Curtain fixture
Cormwall, I. E., New York, N. Y. Heating furnace
Corr, T. J., Carlinville, Ill. Flour and meal chest
Corrigan, John, Charlestown, Mass. Axle box for railway earriages.................................
Corrister, WilliauıD., New York, N. Y. Fluting maehine
Corriston, Jackson, Sandusky City, Ohio. Air sping.
Cor'y Maehine Company. (See Yost, G. IV. N., assignor.)

| no | .same. |
| :---: | :---: |
| Same | same. |
| Same | same. |
| Samo | . same. |
| Same | . same. |
| Same | same. |
| Same | same |
| Same | ame. |
| Same |  |

Corsett, Charles s., inidileville, Mich. Water wheel
Corson, Jaeob, Clinton, N. J. Grain sieve.
Corson, John, Washington, D. C. Collecting gold, silver, and other metals from their ores
Corson, William, Camden, Ohio. Portablo fenee
Cory, James, Wayne, Mich. Buekle
Cory, John F., Now York, N. X. Noiseless bell puil.
Cosiellt, C. F., jr., Philadelphia, Pa. Low-water deteetor for boilers.

Cothron, John, assignor to self and D. J. Mayes, Illiopolis, Ill. Post-hole borer.
Cotter, Harry C., and George G. Green, Fort Wayne, Ind. Safety switch loek...
Cotterill, Samuel 'L., assignor to Cotterill, Fenner \& Company, Dayton, Ohio. Tobacen dryer
Cotton, Arial C. (Sce Pardec, Isnae, assignor.)
Couch, John O., Middlefich, Conn. Clothes pin
Coulborn, Johm L. (See Perly, Samuel, assigior.)
Coulon, Frederick, Fock forl, Inl. Knife for eutting straw bands
Conlson, Jesse, Oskaloosa, Iowa. Fire alarm.
Coalt, Joseph II., San Fiancisco, Cal. Furnace and condenser for collecting quicksilver .
Coulter, Hemry, Philadelphia, Pa. Lamp burner.
Coulter, John, jr:, Xenia, Ohio. Lifting jack. (Antedated Jannary 31, 1868).... Coulter', William F., G. F. Trabue, and W. A. Lowrey, Hardinsburg, Ind. Cultivator
Courtleyow, Jacob, Chariton, Iowa. Machino for setting aid eooling tire.

## Date.

Tuly 28, 1868.
Nov. 10, 1868.
May 19, 1868.

Apr. 21, 1868.
Mar. 24, 1868.
A pr. 28, 1868. May $5,1868$. Sopt. 29, 1868.

Mar. 31, 1868.
Mar. 31, 1868.

Dec. 29, 1868.
Dee. 29, 1868.
June 23, 1868.
Feb. 11, 1868.
Nov. 17, 1868.
Aug. 18, 1868.
Ang. 18, 1868.
Nov. 17, 1868.
Mar. 31, 1868.

Jan. 28, 1863
Feb. 18, 1868.
Feb. 4, 1868.
Feb. 11, 1868.
Dec. 1,1868
Dee. $8,1868$.
Oct. $13,1868$.

Aug. 18, 1868.
Eeb. 11, 1868.
May $5,1868$.
June 9, 1868. Sept. 15, 1868. Not. $3,1863$. Jan. 14, 1858. June 9, 1868. Sept. 22, 1868. रuv. 10, 1868.

Nor. $3,1868$.
Jume 9,1898
دLar. 31, 1868.
Dec. 15, 1868.
May $5,1868$.
A1M. 14, 18 \&is.
Feb. 4, 1868.
Nov. 24, 1868.
Scpt. 29, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 81, 255 | Courtney, John P., and Charles Redmayne, Brooklyn, N. Y. Derice for applying cloth patches to paper collars. |
| 83, 935 | Courvoisier, Ph., France. Fastener for gloves ................................... |
| 74,201 | Covel, E. Hall, New Xork, N. Y. Clothes wringer.................................. |
| 74, 052 | Corel, E. Hall, assiguor to Home Manufacturing Company, New York, N. Y. Washing machine |
| 84, 460 | Covel, E. İall and William II., New York, N. X. Gas machine |
|  | Coveny, Thomas R., et al. (See Clifford, Wm., assignor.) |
| \%2,979 | Cover, Willian, Jenner's Cross Roads, Pa. Animal trap |
| 73, 581 | Covert, E. and J. C., Farmer Village, N. Y. Neck yoke |
| 74, 897 | Covert, J. C., Nerrark, N. J. Snap hook |
| 77, 463 | Covert, Lewis B., New York, N. Y. Extension step-ladde |
| 75, 247 | Covey, L. S., and Johu Dutfy, St. Croix County. Wis. Mop |
|  | Covillo, L., and B. MI. Pearne. (See Pearno \& Covey.) |
| 77, 593 | Covington, Samuel F., Cincinnati, Ohio. Register for railroad fare |
| 82, 806 | Cowan, William J., Cortland, N. Y. Potato digger |
|  | Coward, Rovert, and James Bingham. (See Bingham \& Coward.) |
| 79, 957 | Cowell, John, Ansonia, Conn. Toothed whecl |
| 82, 807 | Cowell, R. A., Cleveland, Ohio, Railmay-car coup |
| 80, 795 | Cowing, Henry, New Orleans, La. Agricultural mach |
|  | Cowles, C., \& Company. (See Downs, James H., assignor.) Same. ............................... same. |
|  | Cowles, L., et al. (See Fowler, Herbert E., assignor.) |
| 80,605 | Cowles, L. D., Romeo, Mich. Buckle |
| 75, 866 | Cowles, Samuel II., Oakrille, Coun. Car couplin |
| 85, 072 | Comles, William H., Cleveland, Ohio. Gat |
| 84, 733 | Cowling, Eben L., assignor to James P. Bridge, Boston, Mass. Preserving wood. |
| 80, 919 | Cox, David, Cincinnati, Ohio. Rocking and reclining chai |
| 79, 108 | Cox, David B., Troy, N. Y. Extension ring for lase of heatin |
| 80, 532 | Same..... Coal store |
| 80, 920 | Same..... Damper |
| 83, 044 | Cox. Gardner, Pierpont, N. Y. Water |
|  | Cox, J. H., and Amos Rank. (See Rank \& Cox.) |
| 81, 280 | Cox, James L., Manchester, N. H. Berl loun |
| 77, 25.9 | Cox, Jerome B., San Francisco, Cal. Apparatus for disintegrat |
| 80, 606 | Same ..... Apparatus for disintegrating grarel containing gold, |
| 75, 377 | Cor, John S., Delaware, Olio. Refrigerator coffins. |
|  | Cox, John W., and Alexander D. Shaw. (See Oliver, John S., assignor.) |
| 84, '734 | Cox, Nccdham, assignor to sclf, Christopher M. Mouts, and J. S. Moore, Salcm, |
| 73, 166 | Cox., S. H., and W. II. Pence, Mattoon, In. ${ }^{\text {In }}$ |
|  |  |
| 78, 432 | Cox, William Henry, Portland, Mainc. Sand-tlrowing |
|  | Cox, W. J., and J. M. Redfield. (See Redficld \& Cox.) |
| 78, 06.5 | Coy, F. W., Boston, Mass. Carponters' gaugo |
| 83, 607 | Coyle, Patrick H., Newark, N. J. Boiler-ttre |
| 3, 267 | Crabtree, Benjamin, jr., Philadelphia, Pa. Carpet pattern............. (Design) |
| 3,144 | Crabtrec, Bcnjamin, jr., assignor to John Bromley \& Sons., Philadelphia, Pa. Carpet pattern .............................................. (Desigu). |
| 3,145 | Same...........- saure ................................................... (Design) |
| 3,146 | Same . . . . . . . . . srme . . . . . .-............... . . . . . . . . . . . . . . . . (Design) |
| 3,147 | Same ............ - same |
| 75, 248 | Crabtree, John F. and William N., Visalia, Cal. Gun lock |
|  | Crabtree, John F., and Salmon Belden. (Sce Belden \& Crabtree.) Same. |
| 84, 092 | Cracraft, Z. S., Lacon, Ill. Means for securing slats to springs of bed bot |
| 80,459 | Crafts, James M., Boston, Mass. Ageing and purifying spitits |
| 77, 173 | Crasuc, Francis and George G., assignors throngh mesue assignments to William N. Higgins, F. O. Sands, W. M. Emerson, and W. T. McNally, Lewiston, Maine. Roller for drawing machines |
| 77,200 | Craig, Andrew J., Aslmore, Ill. Donble-shorel plow |
| 82, 923 | Same ....... Ashnore Station, Ill. Harrow |
| 74, 314 | Craig, Isaac E., Canden, Ohio. Manufacture of shcet iron. (Antcdated Jan. |
| 78, 652 | Craig, John W., Knoxville, Hll. Brace for |
| 84, 860 | Craig, Lee D., Nevada City, Cal. Hair-cutting |
| 73, 167 | Craig, William, Uniontown, Pa. Flour bolt . |
| 84, 172 | Craige, E. II., Brooklyn, N. Y. Paper file |
| 76, 403 | Craigie, Mugh H., New York, N. Y. Watcr closet. (Antedated April 1, 1868) |
| 84, 262 | Same. |
| \% 2,924 | Cramer Charles I Rutland N V Washing |
| 82, 090 | Cramer, E. D., Hackettstown, N. J. Secd coverer |
| 83, 835 | Cramer, Gustav, and Julius Gross, St. Louis, Mo. Posing apparatı.................... graphers. <br> Cramer, Isaac S., and Benamin J. Davis. (See Davis \& Cramer) |
|  | Cramer, Isaac S., and Benjamin J. Davis. (See Davis \& Cramer.) Cramer, Toel 13., et al. (See Criswold, Cramer \& Bly, |
| 75, 243 | Cramer, John D., San Francisco, Cal. Device for raising and lowering window |
| 80,3:9 | Cramer, Phili |
| 74, 053 | Cramton, Giles, Marslıall, Mich. Three-horse e |

Date.

Aug. 18, 1868.
Nov. 10, 1868.
Felo. 11, 1868
Felb. 4, 1868
Nov. 24, 1868.
Jan. 7, 1868.
Jan. 21,1868.
Fel. 25, 1868
May 5, 1868
Mar. 10, 1868.
May 5, 1868
Oct. 6, 1868
July 14, 1868.
Oct. 6, 1868
Aug. 4, 1868.

Aug. 4, 1868.
Mar. 24, 1868
Dec. 22, 1868
Dec. 8,1868
Aug. 11, 1868.
Jane $23,1868$.
Aug. 4,1868.
Aug. 11, 1868.
Oct. 13, 1868.
Sept. 8, 1868.
Apr. 28, 1868.
Aug. 4, 1868.
Mar. 10, 1868.

Dec. 8, 1863
Jau. 7, 1868

June 2, 1868.
May 19, 1868
Nov. 3, 1868
Dec. 1, 1868
Ang. 4, 1868.
Aug. 4, 1868
Ang. 4, 1868
Aug. 4, 1868
Mar. 10, 1868

Nor. 17, 1868.
July 28, 1868.

Apr. 28, 1868
Apr. 28, 1868
Oct. 13, 1868.
Fel. 11, 1868
Juue 9, 1868
Dec. 15, 1868
Jan. 7, 1868.
Nov. 17, 1868.
Apr. 7, 1868.
Nov. 24, 1868
Oct. 13, 1868,
Sept. 15, 1868
Nov. 10, 1868

Mar. 10, 1868.
July 28, 1868.
Fel. A, 186.

## No.

 80, 06084, 615
80, 921
79,553
3, 207
73, 302
83, 469
78,433
81, 346

84, 414
80, 061
84, 861
74,509
81, 606
73, 876
76, 404
81, 755
82, 470
84, 263
81, 986
74,315
80, 922
83, 695
76,717
76, 718
80, 607
73, 697
77, 962
78, 187
77, 261
75, 378
82, 294
74, 994
82, 495
73, $87 \%$
73, 507
81, 478
81, 256
75, 666
75, 667
77, 871
73, 508
84, 800
75, 250
76, 607
78, 066
78,067
78, 364
74, 995
77, 003

78, 265
73, 509
73, 510
73, 693
2, 910
74,510
68, 063
79, 448
74, 996
83, 135

79, 554
79, 811
84, 345

Namo, residence, and invention or discovery

Cramton, Giles, and Pratt A. Spicer, Marshall, Mich. Three-horse equalizer
Crampton, Joseph, New York, N. Y. Stcam-engine valve gear
Crance, Henry A., Lewisburg, Pa. Churn dasher
Crandall, Benjamin P., Now York, N. Y. Velocipede.
Same .................. ....... ................ - same ........................ (Reissue).
Crandall, F. H., Ontario, N. Y. Devico for straining wire fences
Crandall, Horace I., New Bedford, Mass. Cog wheel for gearing.
Crandall, William R., Deansville, N. Y. Hop box
Crandell, John, assignor to Lamb Knitting Machine Manufacturing Company, Chicopee, Mass. Treadle attachment for sewing machines. (Antedated Aug. 17, 1868)
Same ...... . Gathering attachment for sewing machines.
Crandell, John, and Elihn Wilder. (See Wilder \& Crandell.)
Crandell, William, Philadelphia, Pa. Shaft coupling.......
crane, Abort O. Boston, Mass. Heel 1
Crave, Cordial, Boston, Mass. Dryer...
Crane, Elisha, Elkhart City, Ill. Device for scarifying the soil preparatory to plowing.
Same...
Crane, Elliott H., Burr Oak, Mich. Compound for embalming dead bodies.............................................
Crane, E. W., and John A. Lieb. (See Lieb \& Crane.)
Crane, F. A., Zanesville, Ohio. Hay elevator.
Crane, James B., Dalton, Mass. Manufacturo of paper belting
Crane, John H., Charlestown, Mass. Flexible abrader and polishing machine Crane, John S., Lake Village, N. II. Button-hole cutter
Crane, Moses G., Newton, Mass. Electro-magnetic alarm
Crane, M. Z., New York, N. Y. Receptacle for watch keys and other articles
Crane, Richard T., Chicago, 7ll. Ventilator
Same.
Same...... Core bar.
Crane, Thomas, Fort Atkinson, Wis. Knitting machine
Same.......Coal stove
Same ...... Washing machine
Crane, TV. E., and W. L. Rogers. (See Rogers \& Crano.)
Crane, Wellsly W., Auburn, N. Y. Self-lubricating box for shafting
Crane, William J.. Carbondale, Pa. Creaser for cloth.
Crane, William W., Philatelphia, Pa. Door for furnaces
Cranmer, T. J., Vallicita, Cal. Self-loading battery guu
Cranna, William R., San Francisco, Cal. Lamp burner
Cranston, James F., Springfield, Mass. Priming metallic cartridge
Cranston, James F., assignor to self and S. W. Portcr, Springficld, Mass.
Machine for making and dipping matches.
Cranston, James F., assignor to the American Trading Company, Springfield, Mass. Construction of cartridqe shells .
Crapster, TVilliam W., Mechaniesburg, Pa. Hoisting apparatus .
Crary, Archibald C., Utica, N. Y. Power attachment to sewing machines.
Samo...... Apparatus for operating sewing machincs
Same....... Heating railroad cars.
Crary, E. M., and E. V. Machette, ir. (See Machette \& Crary.)
Crary, Palmyra, Lowville, N. Y. Curd breaker
Craven, Thomas C., Albany, N. Y. Hav spreader
Same . . . . (See Barnard, A. B., assignor.)
Crawford, Benjamin, Allecheny City, Pa. Hames
Same ..............Pittsburg, Pa. Steam gonerator
Crawford, E. F., Canaan, Ind. Combinod seeder an. evltivator
Crawford, Joln C., St. Charles, Ill. Washing machine
Crawford, Peter S., Nockford, Ill. Harness buckle.
Crawford, Robert, Mercer, Pa. Churn dasher
Crawford, W. O., North Star, Pa. Ventilator.
Crawley, Edwin, and Thomass L. Baylies. (See Baylies \& Cravtley.)
Creamer, A. L., et al. (See Worth, H. B., assiguor.)
Creamer, George N., assignor to self aud Johu B. Lalor, 'Trenton, N. J. Safety hatch.
Creamer, William G., Brooklyn, N. Х. Car brake
Same...... Car seat
Same ...... . Signal-rope guide
Same...... Car basket............................................................. (Design)
Same......-Seat-arm for railroad chairs.
Creed, A. J. Mopkinton. Towa. Liniment.
Cregier, D. C., Chicago, 11. Dredging machine
Crehore, Charles F., Newton Lower Falls, Mass. Process of treating paper for rarious purposes.
Cressey, George G., Philadelphia, Pa. Venting core. (Antedatcd Oct. 8,1868 )
Cressler, J. B., and Thaddens Donely. (See Doncly \& Cressler.)
Cresson \& Smith. (See Hublard, George W., assignor.)
Same...... (See Hubbard \& Smith, assignors.)
Same...... (See Smith, Scott A., assignor.)
Cresson, Charles M., Philadelphia, Pa. Preserving wood
Cresswell, Henry. (See Paine, Clinton J., assignor.)
Crew, Benjamin J., Philadelphia, Pa. Mustard plaster
Crider, John J., Greenfield, Ind. Grain screen

Date.

July 21, 1868.
Dec. 1, 1868.
Aug. 11, 1868.
July 7, 1868.
Nov. 24, 1868.
Jan. 14, 1868.
Oct. 27, 1868.
June 2,1868.

Aug. 25, 1868.
Nov. 24, 1868.
July 21, 1808.
Dec. 15, 1868.
Feb. 18, 1868.
Scpt. 1, 1868.
Jan. 28, 1868.
Apr. 7, 1868.
Sept. 1, 1868.
Oct. 27, 1868.
Nov. 24, 1868.
Sept. 8, 1868.
Feb. 11, 1868.
Aug. 11, 1868.
Nov. 3, 1868.
Apr. 14, 1868.
Apr. 14, 1868.
Ang. 4, 1868.
Jan. 28, 1868.
May 19, 1868.
May 20, 1868.
Apr. 28, 1868.
Mar. 10, 1868.
Sept. 22, 1868.
Mar. 3, 1868.
Oct. $29,1868$.
Jan. 28, 1868.
Jan. 21, 1868.
Ang. 25, 1868.
Aug. 18, 1868.
Mar. 17, 1868.
Mar. 17, 1868.
May 12, 1868.
Jan. 21, 1868.
Dec. 8, 1868.
Mar. 10, 1868.
Apr. 14, 1863.
May 19,1868.
May 19, 1868.
Маау $26,1868$.
Mai. 3, 1868.
Apr. 21, 1868.

May 26, 1868.
Jan. 21, 1868.
Jan. 21, 1868.
Jan. 28, 1868.
Feb. 4, 1868.
Feb. 18, 1868.
May 19, 1898.
Junc $30,1868$.
Mar. 3, 1868.
Oct. 20, 1863.

July 7, 1868.
July 14, 1868.
Nov. 24, $186{ }^{\circ}$.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Namo, residence, and inrention or diseovers. |
| :---: | :---: |
| 81, 881 | Cr |
| 76,405 | Crighton, William, and Henry Roesler, Fort Wayne, Ind. Brick ma |
| 84, 616 | Crispin, Silas, New York, N. Y. Cartridge box. |
| 78, 43 - | Crittenden, Lyman B., Pittsburg, Pa. Press for firish |
| 79319 | Crocker, Richard, Marshalltown, Iowa. Horseshoe-calk sharpene |
|  | Crocker, Samnel E. (See Raymond. George, assignor.) |
| 75, 737 | Crocker, Walter, Meadrille. Pa. Uterine and abdominal supporter |
| 74, 511 | Crockett, E. T., Guilford, Maine. Three-wheeled |
|  | Crockett, Jacob G. (Seo Hayes, John W., assignor.) |
| 76,895 | Crockett, Scldon L., and Benjanin T. Mills, assignors to Benjamin T. Mills, Lowell, Mass. Cam for card-stripping machine. |
| 74, 316 | Croftut, D. K., Birminglam, Comn. Horso yoko. |
| 73, 783 | Cromelien, Rowland, Washington, D. C. Paddle whee |
| 79,555 | Same...... Ca |
|  | Crommelin, T., et al. (See Stoner, John 13., assignor.) Same $\qquad$ |
|  | Same.........................same... . . . . . . . . . . . . . . . . . . . . . (Reissue.) |
|  |  |
|  | Same. . . . (See Stoner, Mendelson \& Crommeli |
| 75, 530 | Crompton, Georce, Worcester, Mass. Loom |
| 76, 406 | Same ......Harness operating mechanism |
| 77, 361 | Same...... Loom |
| 80,603 | S |
| 80, 810 | Samo |
| 81, 0 \%0 | Sai |
| 81, 347 | Same |
| 85, 432 | Same .-.... Looms for weaving figu |
|  | Same...... Loon |
|  | Same .-...- (See Shimn, John, assignor) ............................ (Reissue.) |
|  | Cron, P. and IS. Leidecker. (See Leidecker \& Cron.) |
| 78,863 | Cronk, M. C., assignor to self and W. Boynton, Luburn, N. F. Machine for grinding the knives of morring machines. |
|  | Crooke, John J., and IW. II. Van Gieson. (See Van Gieson \& Crooko.) <br>  |
| 78, 188 | Crooker, Martin M., assignor to self and Azro B. Allen, Rutland, Vt. Railroad |
| 73, 511 | Crosby, A. C., Piqua, Ohio. Jeweling wate |
| 74,898 | Crosby, A. J., and O. W. Crow, Bluffton, Ind. Apparatus for bleaching with sulphire fumes |
| 83, 765 | Crosby, C. O., New Haven, Conn. Tattin! |
| 72, 980 | Crosby, F. W., Toledo, Iowa. Method of roasting metall |
|  | Crosby, George, and F. Buxton. (See Buxton \& Crosby.) |
|  | Crosly |
| 84. 536 | Crosby, John Q.. Northlıoro, Mass. Lifting jack |
| 83, 936 | Crosbr, Mark, Boston, Mass. Parlor bedstead |
| 79, 958 | Crosby, Robert R., Boston, Mass. Lamp chim |
|  | Croshy, S. C. (See Bogert, Isaac J., assignor.) |
| 79, 210 | Uross, 4 bel J., Greenjort, N. Y. Clasp for hoop skirts |
| 80,533 | Cross, C. G., Chicago, Ill. Governor for stean engines |
| 73, 35.5 | Cross, E., Southbridge, Mass. Shuttle for looms |
| 78, 790 | Cross, Japhetlh, Adrian, Dich. Weather strip |
| 79, 054 | Cross, John G., Brattleboro, Vt. Railway |
| 80, 923 | Crossley, Menry, Brooklyn, N. Y. Lnbricator |
| 73, 51: | Crossley, Thomas, Bridgeport, Com. Namufarture of earpets and other fabrics fromi jute flas se (Antedated July - .). 186\%) |
| 83, 365 | Crossley, William, Chicago, Ill. Nachine for edging 1 |
| 72, 981 | Crossley, Willian G., Shellsburg, Wis. Combined sulky-plow and cul |
| 75, 3.31 | Crossley, William George, England. Y'docipede for land and water. |
| 82, 496 | Crouch, George, New York, N. Y. Trunk |
| 82, 606 | Same ..... Shawl strap |
| 76,305 | Cronse, Henry P., Hartland, Mich. Clothes drye |
| 79, 959 | Crouse, Rufus W., TVestminster, Mrl. P'ump |
| 77, 362 | Crow, L. J., and G. Sanderson, Frederickshorg, Ohio. |
| 82, 025 | Crow, O. W., and A. J. Crosby. (See Crosloy \& Crow.) |
|  | Crow, S. E., England. Hydro-carbon burnce. (Patented in England Juno 14 1867) <br> Croviler, 1 . II, and Zina Doolittle (See Doolittlo \& Crowier.) |
|  | Crowiler, A. M1, and Zina Doolittlo. (See Doolittlo \& Crowder.) |
| 84,801 | Clowell, Elisha, New York, N. Y. Artielo of prepared codfish |
| 74, 202 | Crowley, Daniel, assignor to self and J. Stanley Bruner, Pliladelphia, Pa Cleaner for drawing rollers. |
| 75, 127 | Crowther, John, Oxford, Mich. Cultivator. |
| 75, 379 | (ruikshamk, Robert, Latriencerille, N. J. Desk and seat |
| 75, 807 | Crimm, Istac, West Chester, Ohio. Harrow |
| 85, 368 | Crumling, Touias, Cross Roads, Pa. Scparator for threshing |
| 3, 070 | Crump, Sammel, and E. C. Mazard, New Yerk, N. Y. Label. ......... (Design) . |
| 83, 04. | Crmupton, Johm C., Philadelphia, Pa. Vise ....................................... |
| 78, 435 | Cubberles, G. B., Milwankee, Wis. File. (Antelated Mav 20, 1868) |
| 75, 868 | Cullen, fohn B., assignor throwh mesnie assignments to self, John P. Chester, and John A. Fulton, P'hiladelphia, Pa. Marine steam eoreruor... |
| 83, 366 | Cullen, John M., and A. J. Baird, Pittsburg, Pa. Drill ph |
| 72, 98: | Cullen, Thomas, San Franciseo, Cal. Cartridge for small |
| 82386 | Cullor, Michaol. Fredericksburg, Ohio. Washing machino |

Date.

Sept. 8, 1868.
Apr. 7, 1868.
Dec. 1, 1868.
June 2, 1868.
Junc 30, 1868.
Mar. $24,1868$.
Feb. 18, 1868.
Apr. 21, 1868
Feb. 11, 1868.
Jan. 28, 1868
July 7, 1868.

Mar. 17, 1868.
Apr. 7, 1868
Apr. 28, 1868.
Aug. 4, 1868
Aug. 11, 1868
Alıg. 18, 1868.
Ang. 25, 1868.
Nov. 12, 1868.
Dec. $29,1868$.

Juno 16, 1808.

Tray 26, 1868.
Jan. 21, 1868.
Fcb. 25, 1868.
Nov. 3, 1863.
Jan. 7, 1868.
Dec. 1, 1868 Nov. 10, 1868. July 14, 1868.
June 23, 1868. Aug. 4, 1868. Feb. 4, 1868 Juno 9, 1868. Junc 23, 1868. Ang. 11, 1868.
Jan. 21, 1868 Oct. 27, 1868 Jan. 7, 1868. Mar. 17, 1868. Sept. 29, 1868. Scpt. 20, 1868. А 1 н. 7, 1868. July 14, 1868. $\Delta$ pir. $28,1868$.

Oct. 13, 1868
Dec. 8, 1868
Felu. 11, 1868
Mar. 3, 1868
Mar. 10, 1868.
Mar. 24, 1868.
Dec. 29, 1868. Jnue 30, 1868 Oct. 13, 1868. Јии० $2,1868$.

Mar. 24, 1868.
Oct. 27, 1868
Jan. 7, 1868
Sopt. 22, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

77, 004
74,054
80, 609
74, 512
85, 369
85, 215
84, 537
84, 939
78, 864
76, 407

73, 235
85,216
84, 264
85, 217
2,908
79, 960
7\%, 719
83, 471
79, 320
80, 924
76,056
81, 607
73, 582
80, 395
84, 415
73, 303
80, 148
80, 460
82, $60 \%$
75, 869
73, 236
83, 766

82,49 \%
76, 168
74, 055
80, 811
82, 387
82, 808
76, 306
75, 128
79, 732

75, 630
84, 802
7\%, 174
76, 608
76, 057
\%7, 175
76, 408
81, 608
78, 791
-78, 189
84,265

Name, residence, and invention or diseovery.

Culley, Q. C., Ashtabula, Ohio. Cheese-turning eover
Culp, George W. D., East Enterprise, Ind. Hay press
Culp, Henr'y J., Goshen, Ind. Fence
Culver, A. M., Bedford, Ohio. Lifting jack.
Culver, C. D., Mauth Chunk, Pa. Railway-car brake
Culver, Hiram, Dansville, N. Y. Upsetting maehine.
Culver, Stephen, Newark, N. Y. Base-burning stove
Culver, W. B., Scranton, Pa. Hoisting and dumping apparatus.
Cumming, David, jr., New York, N. Y. Mcthod of locking nuts...
Cumming, David, jr., assignor to self and J. C. Cameron, New York, N. Y. Baling press
Cumming, William, and Daniel Fisher. (Sce Fisher \& Cumming.)
Cummings, Charles. (See Buzzell, John G., assignor.)
Cummings, Clara Z., Buffalo, N. Y. Corset. (Alltedated Dee. 28, 1867)
Cnmmings, Daniel M., assignor to self and Washington Irving Conant, Enficld, N. H. Composition for water-proof paint, \&e.

Cuminings, D. M., Wyman Pattee, and A. M. Shaw, Enfield, N. H. Divided axle for railways
Cummings, George L., New York, N. Y. Ice eutter. (Antedated Dee. 15, 1868)

Cummings, George N., assignor to Charles Parker, Providence, $\underset{\sim}{c}$ I. Eye glass........................................................................ (Reissue)
Cummings, James P., Newport, Ky. Fire plus
Cummings, Mareellus V., Winthrop, Maine. Mowing machine
Cummings, Royal, Newport, Vt. Printing press.
Cummings, Stephen H., Norway, Maine. Sad-iron handle.
Cummings, William, Sacramento, Cal. Belt buckle.
Cumnock, John, Salmon Falls, N. II. Mule for spinning
Cumningham, Peter, Eekley, Pa. Slotting auger
Cunningham, Washington, Oxford, N. X. Butter worker
Cuplin, Samuel, Iowa Falls, Iowa. Bechive
Same.
Cuppers, Gustavas, New York, N. Y. Mechanism for operating sewing maehines Curie, F. C., Laneaster, Pa. Manufacture of steel, and in eonverting iron articles into steel
Same-..... Manufacture of files and rasps.
Same....... Manufacture of hammers, axes, \&e
Curley, Thomas, Troy, N. Y. Cutain fixture.
Curll,'Pearee H., Elk Ridge Landing, Ma. Cart harness
Currie, Danicl, St. Charles, Mo. Rotary steam engine
Currie, J., et al. (See Martino, Bcesley \& Curric).
(Design.)


Currier, J. H. (See Parmele, D. J., assignor.)
Currier, John J., Gloucester, Mass. Chimney eowl
Curricr, J. W., Newbury, Vt. Sap bueket
Curtice, Ezra N., Spring Water, N. Y. Hay loader
Curtis, Andrew J., Monroc, Maine. Meat chopper
Curtis, Charlcs, Galesburg, 111 . Sced sower and harrower combined
Curtis, Charles B., Jordan, N. Y. Machine for grinding eutters of mowing machines
Curtis, Charles G., Plano, Ill. Sced sower and cultivator
Curtis, Francis, Newton, Mass. Roofing felt
Curtis, Franklin A., East Saginaw, Mieh. Water and fire-proof roofing eompound.
Curtis, Horace MI, et al. (Sce Darenport, Joseph D., assignor.)
Curtis, H. P., Washington, D. C. Lifting hook, guard, \&e., for stoves
Curtis, John, Cincimati, Ohio. Step eover and wheel fender for carriages. Curtis, Johu, Truro, Ill. Farm gate.
Curtis, Joseph, and'S. K. Lighter. (See Lighter \& Curtis.)
Cartis, Lewis P., assignor to sclf and Justin D. Barker, Marlboro, Mass. Leather trimmer.
Curtis, M. S. and W. D. Torrisbury, New York, N. Y. Hoso and pipe coupling. (Antelated March 16, 1868)..
Curtio, R. E., Great Bend, Pa. Cutlery
Cu'tis, Timothy A., Brookficld, Mass. Sole-cutting maehinc
Curtiss, Jonas P. Now Britain, Conn. Machine for grinding metal articles.
Curiss, Samuel T., assignor to self and Lymau P. Thompkins, El Paso, Ill. Chum.
Curtiss, T. E., Titnsrille, Pa. Lnbricating compound
Curtiss, Willitm H., Painesrille, Ohio. Thill coupling
Cushing, A., and G.'B. (See Mayo, John K., assignor).


Cushing, G. W. (See Anderson, Horatio, assignor.)

Date.

Apr. 21, 1868.
F'b. 4, 1868.
Aug. 4, 1868.
Feld. 18, 1868.
Dec. 29, 1868.
Dee. 22, 1868.
Dce. 1, 1868.
Dce. 15, 1868.
June 16, 1868.
Apr. 7, 1868.
Jan. 14, 1868.
Dee. 22, 1868.
Nov. 24, 1868.
Dee. 22, 1868.
Mar. 31, 1868.
July 14, 1868
May 12, 1868.
Oct. 27, 1868
June 30, 1868.
Aug. 11, 1868.
Mar. 31, 1868.
Scpt. 1, 1868.
Jan. 21, 1868.
July 28, 1868.
Nor. 24, 1868.
Jan. 14, 1868.
July 21, 1868.
July 28, 1868.
Sepit. 20, 1868.
Mar. 24, 1868.
Jau. 14, 1868.
Nov. 3, 1868.

Sept. 29, 1868.
Mar. 31, 1868.
Feb. 4, 1868.
Anç. 11, 1868.
Sept. 22, 1368.
Oct. 6, 1868.
Apr. 7, 1868.
har. 3, 1868.
Juls 7, 1868.
Mar. 17, 1868.
Dee. 8, 1868.
Ap1. 28, 1868.

Apr. 14, 1868.
Mar. 31, 1868.
Apr. 22, 1868.
Apr. 7, 1868.
Sept. 1, 1868.
June 9, 1868.
May 26, 1868.
Nov. 24, 1868.

No. 1. 146

81, 257
84,346

79, 211
75, 120
83, 473
83, 259
83, 136
76, 058
75, 668
81. 987

83, 836
74, 752
77, 005
83, 696
79, 3:21
79, 39?
83, 137
3, 1J4
80, 337
79, 212
78,436

80, 276
ع 3,260
80,812
75, 870

79,733
75, 380
75,871
77, 7:20
74,6\%

75, 738
80, 149
73, 513

79,323

77, 363
77, 963
79,556
79, 557
85, 218

79, 812
73, 081
82, 62-4
74,203
80, 397
78,190
74, 316
78, 191
81, 479

Cushing, L. W., and Stillman Whito, Waltham, Mass. Vane
Cushman, James A., Soneea Falls, N. Y. Mose-pipo nozzle.
Cushman, Iobert, Pawtueket, and John R. Dennis, Central Falls, İ. I. Pounce holder.
Cushman, Samuel, et al. (See Collier, Cushman \& Farrel.)
Custor, Christian, assignor to self and Charles K. Bullock, Philadelphia, Pa. Flour packer.
Custer, Groige, assigmor to self and William Mooro, Norristomm, Pa. Washing machine.
Custer, John, Corsiea, Ohio. Snb-soil plow
Custer, William, Shamondale, Ill. Cultivator
Cuthbert, 'Lhomas L., assignor to self, Nathaniel Levine, and Edward J. Marks, Charleston County, S. C. Boat-detaching apparatns.
Cutler, Benjamin P., Boston, Mass. Safety gnard for fire-arms
Cutler, Nathaniel E., et al. (See Hoar, Jolin S., assignor.)
Cutler, Ir., and G. C. Swallow, Elgin, Ill. Briek maehine
Cutler, William D., Philadelphia, Pa. Method of preparing, desiccating, and prescrring fish.
Samo...... Articlo of food prepared from fish and potatoes
Cintter, Amos, Chelsea, Mass. Paint brush.
Same...... Shutter fastening
Cutter, U. N., Woreester, Mass. Veloeipede
Cutter, C. N., assignor to Daris, Hill \& Company, Worcester, Mass. Metallic leed for masical instruments.

Cutter, J. O., and William W. Goss. (See Afers, Joseph D., assignor.)
Cutter, Thomas, assignor to Frank Semple, II. C. F'r'J, and John D. Reynolds, Birmingham, Pa. Feet and stems for glassware.
(Design)
Cutter, William P., Chelsea, Mass. Level.
Cutting, D. W., Cambridne, Vt. Stovo dium
Cuts, Alonzo K., et al. ÉSce IIarrison, Audrew J., assignor.
Curkendall. James Mi., DCotonrer, WYis. Morseshoe.
Cuyler, L. S., et al. (See Todd, Asalicl, jr', assignor.)

Dable, John, Chieago. II. Machino for unloading railroard ears
Dabney, G. A., San José, Cal. Washingr maehino.
Daboll, Charles M., New London, Comn. Drill stock
Daboll, Charles MI, assignor to Wilson Mantufacturing Company, New London, Comn. Brace for bits.
Dafoe, V. R. (See Wilson, James P., assignor.)
Dargett, ILenry I'., South Braintree, Mass. Siding boots and shoes
Dargett, William, 4th, Corlora, Ill. Corm planter
Dahı, George J. Stockton, Cal. Gang plow.
Dahl, J. D. F'., Milwaukee, Wis. Bed hottom
Dailey, E. E., Wrilliam II. Jolnson, and C. C. Dit Bois, Brooklyn, E. D., N. X̀. Lamp.
Dailey, John, et al. (Sce Lanaman, M. A., assignor.)
Daily, J. W., et al. (See Colbert, George H., assignor.)
Daily, Rolan, Canal 'Jownship. Pa. Car coupling.
Dike, J. P', Salem, Ohio. Apparatras for eraporating liquid
Dille, John D., Rochester, N. Y. Apparatus for discovering tho fissures in the sides of rrells.
Daley, James. (See Sweetland, Anthony P., assignor.)
Dalmeyer, John II., Fngland. Compound lens for photomaphic use. (Patented iu England Sept. 27, 1866)
Dalton, Helen J. et al. (Sce Yomm, Albert A., assignor.)
Dalton, Joseph, Brooklyn, N. Y. Kuitting machine

> Same.

Samo.
(Disclaimer)
Damerel, Willian, Brooklyn, N. Y. Uimbrella.
Dimon, A. M., and James Whitaker, assignors to Eaton \& Ayer, Lowell, Mass. Shlnttle
Sine..... Sinttle for looms.
Damon, A. M., and S. G. Lyford, Lotrell, Mass. Combination of name plate and letter chuto.
Damon, E., ir., et al. (See Lecompte, S. D., assignor)
(Reissue.)
Darmman. James, Lebanon, Pa. Kailroad switel.
Damron, William H., Robert II. Massey, and Lorenzo F. Whitman, Macomb, Mil. Cultivator and plow
Dann, (x. W., Racine, Wis. Padlock
Dana, II. P. W., Newport, K. I. Lime fastener

Danforth, D. A., assimnor to solf and Isaac Ayers, Elkhart, Ind. Wash boiler Dinforth, J. U. (Sec Skelly, J. H., assimuor.) Diviels, Albert II., Ilartford, Comn. Eye glass
Duniels, A. A. ., and $\Lambda$. W. Bucklaurl. (sce Fuckland \& Daniels.)
Damiols, David, Fitchburg, Mass. Componnd for destrovine inseets in trees
Diniels, D. G., assignor to self and $F$. Mortiner $A$ thinson, Cinemnati, Olio. Car sprilic
Daniels, Elizabeth L., Boston, Mass. Supporter for stoclings.
Daniels, Ephraim, ct al. (See Barson, Daniels \& Farrell.)

Dato.

Ang. 18, 1868
Aug. 18, 1868.
Nov. 24, 1863

Juno 23, 1868.
Mar. 3, 1868
Oet. 27, 1868
Oet. 20, 1868
Oct. 20, 1868
Mar. 31, 1868.
Mar. 17, 1808
Scpt. 8, 1868
Nov. 10, 1868
Feb. 25, 1868
A pr. 21, 1868
Nov. 3, 1868
June 30, 1868.
June 30, 1868
Oct. 20, 1868

Aug. 11, 1868
July 28, 1868
Jmo 23, 1868
Juno 2, 1868

July 28, 1868 Oct. 20, 1868 Ang. 11, 1868

Mar. ${ }^{2} 4,1868$
July 7, 1868
Mar. 10,1868
Mar. 21,1868.
May 12, 1868
Feb. 18, 1868

Mar. 24, 1868
Jnly 21, 1868
Jan. 21, 1868

Jumo 30, 1868
Ар․ 28, 1868
A ug. 5, 1868
May 19, 1868
Tuly 7, 1868
July 7, 1868
Dec. 29, 1868
July 14, 1868
Jan. 7, 1868
Oct. 6,1868.
Feb. 11, 1868.
Dec. 9, 1868
July 28,1063
May 20, 1868
Feb. 11, 1868
May 26, 1868
Aug. 25, 1868

## Alphabetical list of patentees for the year 1868-Continued.

No.

80,338
80,339
76, 059
84, 347
78,931
84, 862
83, 473
80, 925
85, 073
74513
83, 261
77,176
73,082
73,956
73, 957
2, 869
76, 409
76, 410
79, 449
46, 717
77, 006
80, 926
77, 594
81, 480

80,610
73, 168
82, 388
78, 069
79, 450
81, 258
79, 109
68, 070
4,514
34, '735
31, 882
77, 802
53, 837
82, 093
86, 169
74, 056
75, 130
83,697
78, 071
75, 381
81, 259
73, 169

75, 382
75, 533

84, 966
74,515

74,801
$93,36 \%$
76,720

Danicls, Henry A., Thomaston, Conn. Sawing machino.
Daniels, Phylander, Jackson, Mieh. Drmping ear
Daniels, S. S., Kendallsville, Ind. Machine for bending earriage eircles
Danks, Samuel, Cineimati, Ohio. Revolving puddling furnace for treating iron and stoel.
Damer, John, Canton, Ohio. Pencil sheath
Danner, J. B., and S. B. Hiles. (See Hiles \& Danner.
Darden, Joseph, Washington, D. C. Boot jaek.
Dare, John, Liberty, Ind. Washing machine.
Dare, Samuel G.. New York, N. Y. Carpet stretcher
Same......Chuck
D'Argy, E. A. Louis, France. System of flambeau-like lighting apparatus, \&o. Darling, Benjamin, Bridgewater, Mass. Bit stock
Darling, Martin, and Hala Gray, Marathon, N. X. Cultivator and potato ägger combined.
Darling, Samnel, Bangor, Maino. Straight edges
Same...... Pen wiper
Same..... Gas heater

Same...... Gas heater
Same ...... Manufacture of metallic squares .......................... (Reissue).
Same.......Inkstand
Same...... Vise
Same........ Railroad-car heating and ventilating apparatus.
Darling, Samuel, and John E. Hall, Bangor, Maine. Inkstand
Darraoh, S. A., Newburg, N. Y. Tender for heating and delivering metal bars.................... Darrah, IV. E., Baltimore, Md. Vapor burner
Darrow, Frank F., assignor to Darrow Mannfacturing Company, Bristol, Conn. Spittoori.
Darrow, George P., assignor to James L. Haven \& Company, Cineinnati, Ohio. Cast nut.
Darrow Manufacturing Company. (See Way, Joln A., assignor.)
Dart, Calvin J., and Thomas H. Bowerman. (See Bowerman \& Dart.)
Dart, Henry C., et al. (See Millward, Frank, assignor.)
Dart, Henry C., Edward, et al. (Sce Mardy, Dexter 1., assignor.)
Dasenbrook, Mark H., ant Justin E. Smith. (See Smith \& Dasenbrook.)
Datton, George 'T. (See Young, Albert A., assignor.)
Same
W. F . renovator
Davenport, F. S., Jerscyville, Inl. Low-water alarm for boilers
Davenport, Joseph, Massillon, Ohio. Arehed bridge
Davenport, Joseph D., assignor by John D. Thurston, his trustoe, to self, Horace M. Curtis, and Henry Martin, North Providenee, R. I. Clothes dryer Davey, John H., Rockford, Ill. Cultivator
David, Jacob, New York, N. Y. Curtain fixture
David, Jacob P. (See Riley, Christian F., assignor.)
Davil, Jonathan, East Enterprise, Ind. Farm gato
David, V. R., assignor to self and D. R. Pomeroy, Sandwich, Ill. Mothod of inserting artificial teeth
Davidge, J. B. F., New York, N. Y. Blower holder
Davidsoln, Arnold, St. Lonis, Mo. Railroad-car heater
Davidson, Hugh, New Salem, Ill. Wagon brako
Davidson, James W., Mt. Auburn, M1. Wheat drill
Davidson, John. (See Colburn, G. F. J., assignor.)
Daries, Charles B., Dayton, Ohio. Key-hole guard
Davics, Darid, England. Forging apparatus
Davis, A. B., Philadelplia, Pa. Box or base for scale beams
Davis, Abbot R., Cambridge, Mass. Wood for corering walls, \&c.
Samo....... East Cambridge, Mass. Card board for printing
Davis, Addison, Boston, Mass. Sash supporter
Davis, Andrew J., Hartford, Nich. Mop wringer
Davis, Anthony G., Watertown, Conn. Umbrella rmmer
Samo...... Umbrella
Davis, Anthony G., assignor to self and Augustus IN. Woolson, Watertown, Conn. Broom or brush holder
Daris, Anthony G., et al. (Sec Minor \& Frost, assignor.)
Samo ...... (See Blakeslee, Beecher \& Davis.)
Same ...... (Sce Blakeslee, Davis \& Beecher:)
Davis, Beniamin J., and Isaac S. Cramer, Sergeantsville, IN. J. Cribbing preventer. Davis, B. W., Fort Matison, Iowa. Horse ralie
Daris, Charles, and Alvin B. Clark. (Sec Clark \& Davis.)
Davis, C. A., and E. Worth. (See Worth \& Davis.)
Davis, Charles B., Dayton, Ohio. Devico for hanging picture and other frames Davis, Charles F., Arburn, N. Y. Grain drill
Davis, Charles F., et cl. (See Sterens, Caleb S.. assignor.)
Davis, Charles s, and Daniel E. Paris. (Sce Paris \& Davis.)
Davis, Eltrard MI, assignor to self. J. B. Clark, and J. A. Hunter, Pittsburg, Pa. Mode of secating latels on glassware
Davis, Elward M.. assiguor to Hemy II. and Benjamin F. Collins and Homer Wricht, Pittsburs, Pa. Fxuit, iar"
Davis, Eltrard P. North Attleboro, Mass. Hemmer
Davis. George L., et cl. (See Stone, Joseph M., assignor.)
Gome ............... (See Ashworth. Tohar. nssignor.)
simuc.
same.

## Date.

July $28,1868$. July 28, 1868.
Mar. 31, 1868.
Nov. 24, 1868.
June 16, 1868.
Dec. 15, 1868.
Oct. 27, 1868.
Aug. 11, 1868.
Dec. 22, 1868.
Feb. 18, 1868.
Oct. $20,1868$.
Apr. 28, 1868.
Jan. 7, 1868.
Felb. 4, 1868.
Feb. 4, 1868.
Feb. 18, 1868.
A pr. r, 1868.
Apr. 7, 1868.
June 30, 1868.
Apr. 14, 1868.
Apr. 21, 1868.
Aug. 11, 1868.
Nay $5,1868$.
Aug. 25, 1868.

Aug. 4, 1868.
Jan. 7, 1868.
Sept. 22, 1868.
May 19, 1868.
June 30, 1868.
Aug. 18, 1868.
Junc 23, 1868.
May 19, 1868.
Fcb. 18, 1868.
Dee. 8, 1868.
Sept. 8, 1868
May 12, 1868.
Not. 10, 1868.
Sept. 15, 1868
Mar. 31, 1863.
Feb. 4, 1868
Mar. 3, 1868.
Nov. 3, 1868.
May 19, 1868.
Mar. 10, 1868
Aug. 18, 1868.
Jan. ' 7, 1868.

Mar. 10, 1868
Mar. 17, 1868.

Not. 24, 1868.
Feb. 18, 1868.

Fcb. $25,1868$.
Oct. 27, 1868
Apr. 14, 1868.

## Alphabetieal list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| $\begin{array}{r} 3,152 \\ 84,538 \end{array}$ | Daris, Guy, Syracuse, N. Y. Oscillatin |
|  | Daris, Incmry Thomas, Great Britain. Damping trough |
|  | Davis, Hill \& Company. (See Cutter, C. N., assignor.) |
|  |  |
|  | Smmo.........................-same. |
|  | Davis, Irwin. (See Denio, Wm. L., assignor.) |
| 79, 055 | Davis, Isaac, Brooklyn, N. Y. Conncetiou for soft-metal pipes |
| 72, 983 | Daris, James, Buffalo, N. Y. Saty |
|  | Davis, James, et cl. (Sce Stout \& Richardson, assignors.) |
|  | Davis, Janes II., and Hiran F'. Snow. (Sea Snow \& Daris.) |
| 77, 464 | Davis, James P., Stiles, Wis. Mechanical movement |
| 82, 498 | Daris, Job A., Watcrtown, N. Y. Automatie boiler feeder |
| 82, 493 | Samo...... Shuttle for setring machino |
| 83, 608 | Samo...... . Stean generator |
| 84, 267 | Samo..... Clog |
| 80, 396 | Daris, John, Wilkesbarre, Pa. Stea |
| 83, 474 | Davis, Johu, Allegheny City, Pa. Tellurium |
|  | Daris, John, and William İenton. (See Benton \& Daris.) |
| 75, 383 | Davis, John S., Tifin, Ohio. Harvester |
| 85, 238 | Darid, Joseph II., Allegheny City, Pa. Stop valvo for steam and other euginery. |
| 76, 621 | Davis, Josiah P. N.. Point Arena, Cal. Shinglo machine |
| 79, 813 | Daris, Lewis II.. assiguor to Casho © Company, Newark, Del. Grain separator. |
| 75, 533 | Daris, L. L., Springfield, Mass. Spirit level |
| \%5, 534 | Same . . . . - Aljustable spirit level |
| 3, 19J | Same..... Spirit level |
| 73, 583 | Davis, Morgan O., Warrensburg, N. Y. Churn |
| 81, 348 | Davis, Nathan I., Frcetomn, Mass. Attaching gun bar |
| 70, 734 | Dasis, Ownen, Ňewton. Inwa. Bechive |
| 80, 461 | Davis, Orren R., Lewistown, Pa. Steam safety |
| 79, 324 | Davis, P., Newport News, Va. Letter pouch |
| 79, 325 | Davis, Rees, Utica, N. Y. Car replacer |
|  | Davis, Samuel H. (See Troxell, Johu P., assighor.) |
|  | Davis, Samul L., et al. (See Tingley, John, assignor.) |
| $\begin{aligned} & 83,046 \\ & 81,200 \\ & 84,803 \\ & 85,289 \end{aligned}$ | Davis, Stephen S., Edgerton. Wis. Gate |
|  | Davis, s. W., Wilmington, Del. Bit stock |
|  | Davis, Thomas B., New Fork, N. Y. Scoop |
|  | Davis, Thomas S.. Jersey City, N. J. Steam-engino exhaust ralvo Sane...... (See Knectller, John D., assignor.) |
|  | Davis, Wendell T., et al. (See Pike, Ozi M., assignor.) |
| $\begin{array}{r} 78,932 \\ 3,119 \end{array}$ | Daris, William, Detroit, Mich. Preserving meat, \&e |
|  | Daris, William, assignor to Willian, Samuel II, and Darid W. Daris. Detroit, Mich. Preserving meat, fruit, \&c. (Reissuc) |
|  | Davis, IV. C., \& Compary. (See Ripley, Ezra, assignor.) |
| 3,116 | Davis, Wm. C., assignor to W. C. Davis \& Company, Cincinnati, O. Cook stove. (Dcsign) |
| 3,117 | Davis, Wm. C., assignor to W. C. Davis \& Company, Cincimati, O. Cook stovo. (Design) |
| 82, 094 | Davis, W. II., Irooklym, N. Y. MIolding bells |
| 75,87277,262 | Darison, Fe, Richmonil, Va. Latho |
|  | Samo.....Nail ma |
| 80,15079,639 | Same. . . . - - -same |
|  | Darison, Gustavus A., Sau Leandro, Cal. Gaug |
| 80,8383,698 | Darison, James P., Rome N. Y. Potato diggel |
|  | Davison, Jasper N., and N. Spencer, ir., Butialo, Ill. Gang plow- |
| $\begin{aligned} & 83,698 \\ & 81,260 \end{aligned}$ | Davison. Joh S., and Nicholas Lorton, Cranberry, N. J. Cover for chambers and other ressels. |
| $\begin{aligned} & 78,933 \\ & 81,983 \\ & 82,295 \\ & 81,349 \end{aligned}$ | Dary, Davic, Englancl. Piston valve for stean hammers |
|  | Dawkins, Matt J., Brookston, Ind. Construction of wagon and carriage wheels. |
|  | Day, Aucustus, Detroit, Mich. Windlass. (Antedated Sept. 16, 1868) <br>  |
|  | Das, B. F., East Frectom. Pa. Automatic fly brush ................................ |
| $\begin{aligned} & 81,481 \\ & 74,997 \\ & 80,062 \\ & 83,475 \end{aligned}$ | Day, Clark D., Chatham, Comm. Blacking brush |
|  | Day, David B., New Yorls, N. Y. Fluating thern |
|  | Day, Elwin, Chicage, Ill. Cutlery- |
|  | Dar, Lester, assignor to self, Heniy F. Mriges, and Edward Belding, Buffalo, N. |
| 79,901 <br> 79,962 <br> 83 <br> 838 | Day, Milton, Ealtimore, Mid. Corn skeller ..... |
|  | Sane |
| $\begin{aligned} & 83,838 \\ & 82,695 \\ & 85,384 \end{aligned}$ | Day, Sammel. Delavan, Ill. Cultivator |
|  | Day, Sammel F., Ballston Spa, N. Y. Telegraphic instrument |
|  | Day, William d., Mohawk, N. Y., and Pardon B., Shelby, Minu. Wind mill |
| $\begin{array}{r} 79,451 \\ 76,465 \end{array}$ | Dayton, Charles L., Noth Buffalo, N. I. Row-loc |
|  | Dayton, Edwin, Meriden. Comm. Cement water nip |
| $\begin{aligned} & 77,80,3 \\ & 84,479 \end{aligned}$ |  |
|  | Dayton, Menry C., assignor to Richard II. Collins, Maysrille, Ky. Tobacco pipe. |
|  |  |
| 85, 370 | Deacon, Menry, Enoland. Tanufasture of chlorine . |
|  | Derenn, John, ant Carl Muller. (See Muller \& Deacon) - . . . . . . . . . . (Design.) |
| 73237 | Same......................-same .-.................. (Design.) |
| \% 237 | Deakin, John, assignor to self, D. aud C. Kelly, Glouecster, N. J. Loo |

## Date.

$\begin{array}{ll}\text { Oct. } & 6,1868 . \\ \text { Dec. } & 1,1868 .\end{array}$

Jume 23, 1868. Jan. 7, 1868

Mav 5,1868. Scpt. 29, 1868 Sept. 29, 1868 Nov. 3, 1868 Nov. 24, 1868. July 28, 1868. Oct. 27, 1868.

Mar. 10, 1868
Dee. 29,1868
Amp. 14, 1868
July 14, 1863
Mar. 17, 1868
Mar. 17, 1868
Sept. 22, 18:8.
Jan. 21, 1868
Aㄴ… 2-, 1868
July 7, 1868.
July 28, 1868
Jiuie 30, 1868.
June 30, 1868.

Oct. 13, 1868
Aug. 18, 1868.
Dec. 8, 1868
Dec. 29, 1868.

June 16, 1868.
Sept. 15, 1868

July $21,1808$.
July 21, 1868.
Sept. 15, 1868
Mar. 24, 1808
A1r. 23, 1868.
July 21, 1868.
July 7, 1868
Ans. 4, 1868
Nov. 3, 1868
Anc. 18, 1863
Junc 16, 1868.
Sept. 8, 1868 Sept. 22, 1863 Aug. 25, 1868.

Ang. 2J, 1868.
Miar. 3, 1268.
July 21, 1868.
Det. 27, 1868.
July 14, 1868.
July 14, 1868.
Nov. $10,1268$.
Oct. 6, 1888.
Mar. 10, 1818.
Tune 30, 1868
Ilay 5, 1863.
May 12, 1868.
Dec. 1,1868
Dec. 29,1868

Jan. 14, 186E

## Alphabetical list of patentees for the year-1868-Continued.

No.

2, 848
76, 307
74, 318
79, 451
83, 476
81, 147
84, 863
78, 0 72
75, 385
74, 671

78,934
74,998
77,007
3, 042
83, 262
80, 711
75, 386
75, 873
83, 133
81,756
74, 319
74. 753

78,363
\%6, 172
83.263

73, 170
81, 609
80, 857
75.87

77, 87,
\%\%, 003
7.5, 131

80, $46 \gtrsim$
82, 209
-73 410
74, 672
78, 260
18,580
76, 720
81,0\%1

84, 093
$7 \% 17 \%$
74, 057
84, 268
79,558
83, 139
77, 009
81, 350

74, 201
3,062
82,926

81, 757
76, 065
万, 1.010
84, 632

Name, residence, and invention or diseovery

Deal, George, Wilmot, Ohio. Horse rake.
..same.
Clothes dryer
Deal, Isaao N., Brooklyn, N. Y. Clothes aryer
Dean, Daniel, Brighton, Mieh. W. Wrent, Frent Trace fastener
Dean, Isaae IV., Franklin, Conn. Mode of preserving the roofs of biildings
Dean, James C., Chicago, Il. Briek machino
Dean, James E., Canaan, Coun. Milk can.
Dean, John, Baraboo, Wis. Hop-pieking tool.
Dean, Otis, assiguor to Robert W. Young, Riehmond, Va. Inkstand
Doan, Seth, et al. (See Eddy, Rollin S., assignor.)
Same..... (See Smith \& Eddy, assignors.)
Dean, Gaius S., Grand Rapids, Mich. Gauge wheel for plows
Dearborn, Jolin M., Boston, Mass. Animal trap
Deas, Georgo, New York, N. Y. Ventilator for hats
Deavs, Charles, New York, N. Y. Gas apparatus.
(Reissue)
DeBar'o, Reuben B., Philadelphia, Pa. Sawing maehine
Debarry, James J., Brooklyn, N. Y. Changeable stencil plato
Samo..... (See Ware, IV. Powell, assignor.)
DeBary, Julius, assignor to William Einstein, Germany. Grain dryer
DeBergue, Aucuste, Franco. Brake for locomotives.
DeLergue, Charles, Great Britain. Track lifter
DeBow, Garrett, and Thomas B. Moore. (See Moore \& DeBow.)
DeBretton, Geert, assignor to self and Joshua E. Voso, Now Orleans, La. Traveling trunk.
Deßas, Henry, and George Johnson, Cincinnati, Ohio. Machine for crozing barrels.
DeСamp, E. A., St. Lonis, Mo. Coal storo. (Antedated Jan. 24, 1868)
DeC'amp, William, assignor to self and A. R. E. Falek, Newark, N. J. Paringknife for boots and shoes.
Decker, Alexander C., Bushnell, Il1. Ditching machino
Decker, Charles, New Michiman, Ill. Beo house.
Decker, Edward B., Bediord, Inl. Tire shrinker..
Deckor, Henry S., Now Yorls, N. Y. Chimuey cowl
Decker, John, assignor to J. B. Boss and C. C. Clark, Sparta, N.J. Platform scale
Dederick, Levi, Albany, N. X. Hay press.
(Extension)
Dederick, Zadoc P., and Isaae Grass, Newark, N. J. Steam earriago
Deer, Menry and Solomon. (See Yeakel, Danicl S., assignor.)
Deetz, Edvard, Philadelphia, Pa. $\Lambda$ djustable sofa.
De Forest, David W., Brooklyn, N. Y. Mueilage bottle
De Forest, Thomas B., Birmingham, Conn. Machine for reducing and pointing wiro.

## Same.-... Corset.

Same...... Busk or stay for corsets
De Forest, Thomas B., and Thomas S. Gilbert, Birmingham, Conn. Corset spring Same ..... - Spriug for hoop skirts.
De Fleron, Jean Etieune Armide, et al. (See Pertuiset, Mundel \& Do Fleron.)
Defrees, William II., Andover, Mass. Forging machino
Defries, Coleman, England. Foot light for theaters
Do Galleford, J., assignor to self ant William E. Marston, Cohoes, N. Y. Tube cutter.
De Gerbeth, Flancois Louis, assignor to Thomas S. G. Ikirkpatrick, England. Manufacture of componnd oils. (Patented in Enclamd Nor. 11, 186\%).
De Give, L., and L. Bemelmaus. (See Bemelmans \& Do Give.)

De Grummond, W. J., Cincinnati, Ohio. Sash fastener
De Ilass, Charles, Washington, D. C. Mode of roofing buildings
De IIaren, Isaac, Allegheny City, Pa. Lid for tea kettles.
Dehlinger, Pan, Buffalo, N. Y. Hod eleratox
Dehno, Albert Ludwig Geore, Prussia. Machino for filtering and refining sugar Deibl, Troh MI, and James Bramble. (Sce Bramble \& Deilhl.)
Deily, William İ., Sycamore, Ill. Store-pipe damper
D.is, C., Canal Dover, Ohio. Seeding machine

Deitz, Joha M., assignor to self, C. T. Bush, and Sanford \& Sisson, Berne, N. Y. Brick twall.
Do Lacy, J. M., and P. M. Kafer. (Sce Kafer \& De Lacy.)
Delufielk, Clarence, Factory rille, N. Y. Water gatro.
Do la Granja, Elward, and Treffle Garcean. (See Garceau \& De la Granja.)
Delahents, Joseph I., Colnoes, N. Y. Knitted fabric
Delamater, C. II., et al. (See Hisler. Alexander K., assignor.)
Deland, Jianklin A., and Luke Phillips, Memphis, Mich. Mortising maehine Delazey, Alexander, and Asa Snyder. (See Snyder \& Delaney.)
De Laner, John C. (See Smith, George, assimuor.)
Delaney, Patrick H., and Cyms Peabody. (See Peabody \& Delaney.) Delano, Gylrenus G., Grand Blane, Mich. Antomatic cradle Delarigne, Johu C., New Orleans, La. Steam plow. Delille, Lewis, and Sammol Irery. (See Avery \& Delille.) Delinger, David C., Russellville, Ohio. Tobacco-land tying machine Delize, Simon. (See Deru, Alexander J., assignor.) De Loag, N. A., Now Scotland, N. Y. Wagon-tongue smpport Del Vecchio, Tames B. (See Enright, Johu, assignor.)

## Date.

Feb. 4, 1868. Apr. 7,1868. Feb. 11, 1868. Juno 30, 1863.
Oet. 27, 1868.
Aug. 18, 1868.
Dee. 15, 1868.
May 19, 1868.
Mar. 10, 1868.
Feb. 18, 1868.

June 16, 1868.
Mar. 3, 1868
Apr. 21, 1868.
July 21, 1868.
Oet. 20, 1868.
Aug. 4, 1868.
Mar. 10, 1868
Mar. 24. 1868
Oet. 20, 1868.

Sept. 1, 1868
Feb. 11, 1868
Feb. 25, 1868
May 26. 1868
Mar. 31, 1868
Oct. 20, 1868
Jan. 7, 1868
Sept. 1, 1868
Aug. 11, 1868
June 3, 1868
Mar. 24, 1868
May 12, 1868
Apr. 21, 1868
Mar. 3, 1868
July 23, 1868
Sept. 15, 1868
Jan. 21, 1868
Feh. 18, 1868
May 26, 1868
Juno 』, 1858
Apr. 14, 1868.
Aug. 18, 1858.

Nor. 17, 1868
Apr. 28, 1868
Feb. 4, 1868
TVov. 24, 1868.
July $7,1868$.
Oct. 20, 1868
Apr. 21, 1868.
Aug. 25, 1868
Feb. 11, 1868.
June 2, 1868.
Oct. $13,1808$.

Sept. 1, 1868.
Mar. 31, 1868.
Apr. 21, 1868.
Dec. $8,1868$.

# Alphabetical list of atentees for the year 1868-Contimned. 

No.

## Demarcst, Henry. (See Anderson, James W. C., assignor.)

De Milly, Lovis Adolph, Franco. Manufacture of solid fatty acids
Deming, F., assignor to John B. Atherton and Henry A. Wheoler, Bridgenort, Conn. Horse-hitching device
Deming, John. (See Silver, A. R., assignor.)
same. ...................... same.

76, 730
80, 463
Demming, Bernard, Cleveland, Ohio. Scroll-saw mill
De Morat, Alexauder John B., Philadelphia, Pa. Electro-magnetic engine De Mott, Henry, and William Bellairs. tSee Bellairs \& De Mott.) Dempster, R.i.and A. W. Cook. (See Cook \& Dempster.)
82, 389
78, 865
Demuth, William A., New York, N. Y. Glass light
De Navarro, J. F., assignor to the Emery Rotary Machine Company, Now York, N. Y. Device for attaching pumps to barrels

72,984
78, 267
80, 277
82, 927
82, 809
79, 460
Dengler, Freclerick, Nortlı Vernon, Ind. Car brake
Denham, R. C., Richmontl, Maine. Reofing fore and aft sails
Denio, Aaron, and Franklin Hort. (See Hoyt \& Denio.)
Denio, Elon, Baldwinsville, and Elon C., New Hartford, Conn. Hop hook Denio, Elon, and Heman Whipple. (See Whipple \& Denio.)
Denio, William L., assignor to self and Irwin Davis, Rochester, N. Y. Attaching rosettes to harmess
Denise, S. T., Red Bank, N. J. Plow
Denison, C. H., assignor to self, G. W. Ray, and V. N. Taylor, Springfich, Mass. Nachine for applfing eloth patches to paper collars.
Denmead, Edward, Marietta, Ga., and Wendel Bollman, Baltimore, Ma. Bridgo. Demn, Clayton, Frankford, Pa. Gridiron.
Denn, Clayton, and John Garsed. (Sec Garsed \& Denn.)
Dennen, A. MI., Folsom City, Cal. Liniment for rheumatism
Demnett, A. A., New Brunsirick, N. J. Fishing tackle
Denney, S. L., Christiana, Pa. Casing for railway-car stoves. (Autedated July 30, 1868).
Demney, Samuel L., Christiana, and John N. Chalfant, Chester Connty, Pa. Horse rake.
Dennis, Elijah W., Pooria, Ill. Cultivator. (Antedated March 25, 1868).
Dennis, Johu R., and Robert Cushman. (Sce Cushman \& Dennis.)
Demis, Moses, Barton, N. Y. Horse hay fork
Dennis, Paul, assignor to self and George Leggette, Schuylerville, N. X. Gato hinge.
Dennison, B. L., Boston, Mass. Attaching springs to tags. ............................ Dennisson, John A., assignor through mesne assignments to the Gould Machino Compans, Newark, N.J. Fire engine .................................-(Reissuc) Densmore, Byron, New York, N. Y. Gasket packing for steam and other engincr, -
Densmore, J. A., assignor to self and Miran Fuller, Boston, Mass. Car truck..
Denton, Albert A. (See Stevens, Charles L., assignor.)
Dentou, Charles, assignor to Ames Plow Company, Decatur, Hu. Harrester
Denton, Drake W.. Ithaca, N. Y. Roofing compound
De Pindray, Alfred, France. Boiler furnace
Depp, Thomas, San Marens, Texas. Stitching horse
De Pre, Jereniah, California, Mich. Combined feed trough and raek
De Puy. Alexander T., assignor to R. Hoe \& Company, New York, N. Y. Printers' walley
(Rcissue).
Derby, Harlan P (See Foster, C. A. assignor.)
Derby, Lyman, New York, N. Y. Thill fastener Same ..... Thill coupling
Derby, P. H. (Sce Moore, H. C., assignor.)
Derning, John. (See Silver, A. R., assignor.)
Deroziel, Louis, assignor to self and George Schaffer, New Tork, N. Y. Veloci-
74, 516
84, 263
77, 011
82, 296
76, 173
75, 132
83, 609
84, 245
73, 514

79, 057
73, 441
80, 928
80, 612
perle
Derr, Grorge Lewis, Miffintown, Pa. Mode of setting artificial teeth....
Derrick, Silas L., and Augustus B. Felgenaker. (Sec Felgemaker \& Derrick.) Derrick, William E., Jordan, N. Y. Horse hay fork
Derrick, William HI. (Sse Walton, Elisha W., assignor.)
Deru, Alexander J., assignor to Simon Delize, Belgium. Machine for preparing wool, cottom, \&c.
Deshart, Griftitl. (See Batty, Wm. T., assignor.)
Deshler, Jacob J., Allentown, Pa. Machine for converting reciprocating into rotary motion
Designoble, ( t , and Jolin Casthelaz, France. Explosive powder
Deshoyer, Isidore A guan, and Auguste Leon Bezy. (Sce Bezy \& Desnoyer.)
Dessau, Andrew Ferdinant, Washington, D. C. Piano-forte frames
Dessinger, J., and Robert Megimnity. (See Meginnity \& Dessinger.)
De St. Charles, Charles, Mexico. Coffec huller and polisher.
r...........

Destouy, August, New York, N. Y. Manufacturing boot .
Dest. Victor, Abel Clande Felix Niepec, assiguor to P. A. G. Niepee De St. Victor and M. L.J. Lavatcr, France. Process of multiplying copies from manuscripts.
De Susini, Joseph. (See Lauberau, Joseph, assignor.)
Deterding, Hemry F., Alton, Ill. Harvester ralse.
De Tray, F. 11., Odiu, Ill. Ditching and grading machine.
Detrick, J. S., Sin Francisco, Cal. Lathe chuck
Detrick, Jacob S., assignor to self and Willian R. Eckert, San Francisco, Cal. Counting register.

Datc.

Scpt. 8, 1868.
Apr. 28, 1868.
A pr. 14, 1868.
July 28, 1868.

Sept. 22, 1868.
June 16, 1868.
Jan. 7, 1868.
May 26, 1868.
July 28, 1868.
Oct. 13, 1868.
Oct. 6, 1868.
June 30, 1868.
May 19, 1868.
June 23, 1868.
Oct. 6, 1868.
July 21, 1868.
Aug. 11, 1868.
Nov. 10, 1868.
Apr. 7, 1868.
Dec. 22, 1868.
Feb. 25, 1868.
Oct. 27, 1868.
May 26, 1868.
Dce. 15, 1868.
Aug. 11, 1868.
June 30, 1868.
May 26, 1868.
Mar. 24, 1868.
Oct. 27, 1868.
Mar. 31, 1868.
Aug. 4, 1868.
May 12, 1868.
July 21, 1868.

Feb. 4, 1868.
Feb. 18, 1868.
Not. 24, 1868.
Apr. 21, 1868.

Sept. 22, 1868.
Mar. 31, 1868.
Mar. 3, 1868.
Nov. 3, 1868.
Nov. 17, 1868.

Jan. 21, 1868.
Junc 23, 1868.
Jan. 21, 1868.
Aug. 11, 1868.
Aug. 4, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

75, 669
78, 722
79, 963
83, 767

81, 758
84, 617
80, 813
77, 805
82, 928
77, 012
83,140
76, 412
84, 683
73, 515
77, 595
79, 735

85, 219
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76, 423
78, 713
3, 045
82, 095
83, 047

74, 596
72, 985
74,320
84, 998
73, 878
3, 127
83, 610
76, 722
84, 804
80, 712
75, 387
79, 814
84, 480
80, 814
74,517
79,815
85, 433
78, 192
78, 935
78,936
73, 958
81, 072
76, 414

75, 388
80, 153
74, 673
78,792
81, 148

Name, residence, and invention or discovery
Date.

Detrick, William. (See Whiterow, Wm. H., assignor.)
Detroit Stove Works Company. (See Dwycr, Jeremiah, assignor) ....(Design.)
Do Turk, J. D., Exeter, Pa. Cultivator teeth
Deturler, E., Milwankce, Wis. Spittoon
Detwiller, Jaeob J., Grecnville, N. J. Rocket-signal deviee
Deuel, William B., Ithaca, N. X. Mower-and-reaper-knifo sharpener Deuell, Edgar, and John Yates. (See Yatcs \& Deuell.)
De Vahn, W. H., and Philip Cadue. (See Carluc \& De Valn.)
De Valin, W. H., Sacramento, Cal. Wheel for carriages.
Same ..... . Steam, gas, and water stop cock
Devendorff, Benjamin F., and Charles E. Chase. (See Chase \& Dovendorff.)
De Veraux, James, Marshall, Mich. Rotary excavator
DeVillepoix, Gustave, and Joseph Franeis Bonnaterre, France. Liquid extraet from vegetables..
Devinc, Charles H., assignor to the Devine Brothers, Buffalo, N. X. Piano-forte bridge
Devlau, Patrick S., Hudson City, N.J. Material for journal boxes.
Devoe, B. Gr., and II. M. Hiekman. (See Hickman \& Devoe.)
Devoe, Frederick, New York, N. Y. Nozzle for eans
Dewe, John W., et al. (See Lalor, Thomas, assignor.)
Deweesc, G. W., Lima, Ohio. Cultivator
Dewey, E. B., Pontiae, Mieh. Lever grapnel
Dewey, Herbert E., Aurora, Ill. Horse hay fork
Dewey, Nathan, and George W. Fosdick, Dowagiac, Mich. Water wheel
DeWitt, Bennett F. (See Cooper, John, assignor.)
DeWitt, Frederick S., Rochester, N. Y. Swaging machine
DeWolfe, A ustin, et al. (See Pike, Ozi M., assignor.)
Dexter, Christopher. (See Whito, Stilman, assignor.)
Dexter, Fichard, and Hamor Gladhill, Woreester, Mass. Wool-oiling machine
Dexter, W. W., et al. (See Harrisou, Andrew J., assignor.)
Deyhle, Christian, Hartford, Conn. Saw set -
D'Hemeusc, Rudolph, San Francisco, Cal. Proeess of extracting gold from its ores .-
Same. . . . . Traction railway brako
Same...... Fcrmenting and oxidizing mash, malt, \&e ................................................
Dibble, F. J., Chicago, Il. Vise
Dieey, L. C., Montague, Mieh. Feeding roller for eireular saws
Dick, A dolph. (See Jones, Fredorick J., assignor.)
Dick, Charles James Adolphus, and Robert Breckenridge Baker. (See Baker \& Dick.)
Diek, David, Coming, N. Y. Wood-turning lathe
May 5, 1868
Jan. 7, 1868
Feb. 11, 1868
Dec. 15, 1868
Jan. 28, 1868
Sept. 22, 1868
Nov. 3, 1868
Apr. 14, 1868
Dee. 8, 1868
Aug. 4, 1868
Mar. 10, 1868
July 14, 1868
Dec. 1, 1868
Aug. 11, 1868.
Feb. 18, 1868
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May 26, 1868
Juue 16, 1868
June 16, 1868
Feb. 4, 1868
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Apr. 7, 1868.

Mar. 10, 1868
July 21, 1868
Feb. 18, 1868.
June 9, 1868.
Aug. 18, 1868.

June 16. 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

73, 784

75, 535
76, 415
79, 736
74, 205
80, 340
79, 737
79, 738
77, 721
75, 740
81, 988
76, 416
73, 304
84, 094
83, 264

76, 896

84, 416
3,052
80, 929
73, 238
73, 879
74, 206
79, 213

84, 095
73, 239
73, 516
73, 880
81, 149
75, 536
75, 537
73, 171
78, 516

81, 150

76, 170
79, 058
83, 048

74, 207
81, 351
80, 154
80,613
82, 501

74, 999
78,866

75, 389
78, 193
79, 214
2,904

2,905
85, 168
78, 724
85, 200
85, 291

Name, residence, and invention or diseovery.

Diedriehs, Charles, assignor to James S. Mason \& Company, Philadelphia, Pa Punehing and raising disks from metal
Diedriek, Theodore J., and John Polloek. (Sea Polloek \& Diedriek.)
Dichl, Jonas, East Freedom, Pa. Tanning and eoloring sheep skins
Dieterich, Lewis, Saudwieh, Ill. Brick maehiue.
Dietrieh, Clement, and John Gatliff. (Sce Cordier, V., assignor.)
Dietz, Andrew, New York. N. Y. Process of treating glue
Dietz, Charles A. F., New York, N.Y. Medieal compound
Dill, Heury B., et al. (See Reight, Charles A., assignor.)
Dill, William, Houma, La. Apparatus for elarifying sugar juiees.
Dillaway, Hiram, Sandwich, Mass. Glassware mold
Same...... Cooling glassware mold.
Dille, H. II., and S. L. Stoekstill. (See Stoekstill \& Dille.)
Dilley, Martin A., Mendon, Mieh. Hay raker and loader
Dilley, R. H., Regnier's Mills, Ohio. Watch case
Dillingham, John, Tumer, Maine. Door and safe lock.
Dillon, Count Arthur, France. Apparatus for raising sunken vessels
Dillon, Henry T., Big Lick, Va. Deviee for holding boots and shoes.
Dillon, Thomas, Highland, Ohio. Corn plow
Dimock, Ira, Florence, Mass. A pparatus for boiling eggs
Dimoek, Ira. (See Gresham, James, assignor.)
Same..................... . same.
Dimond, George H., et al. (See Donlittle, T. B., assignor.)
Dingwell, Robert, and William R. Andrews. (See Andrews \& Dingwell.) Dinsmore, David C., and David Bartholomew. (Sec Bartholomew \& Dinsmore.) Dirkes, Henry A., New York, N. Y. Ballast keel for boats. (Antedated April 7, 1868)

> Same . . . . (See Hirst, John, assignor.:)

Dismukes, Paul, Gallatin, Temm. Clover harvester.
Disston, Charles, assignor to Henry Disston, Philadelphia, Pa. Saw. . (Reissue) Same ..... . Saw
Disston, Henry, Philadelphia, Pa. Cireular saw
Same......Device for setting saws.
Same...... Machine for eutting rolls of rolling mills
Same...... Device for holding rotary eutters while being ground.
Same...... (Sce Baker, Jolın G., assiguor.)
Same....................... same.
Same........................same.
Disston, Samuel, Philadelphia, Pa. Attaching handles to cross-ent saws.
Disston, Thomas S., assignor to Henry Disston, Philadelphia, Pa. Saw-gumming maehine
Same.......Cross-eut saw
Same.......Saw-gumming machine
Ditmars, A. D., Lancaster, Pa. Mode of preparing coal riust for fuel
Ditmars, Oscar G., New York, N. Y. Medical compound
Same. $\qquad$ ..same
Dittenhaver, George, Napoleon, Ohio. Extension clothes post
Ditton, Francis, Auburn, N. Y. Halter buckle
Dittrick, R., and William Klemm. (See Klemm \& Dittrick.)
Dixey, Charles, et al. (See Doering, Justus, assignor:)
Dixon, Charles, Weelsport, N. Y. Fastener for vehicle seats
Dixon, Israel. (See Mock, C. H., assignor.)
Doan, Stephen O., and Abram Westbrook. (See Westbrook \& Doan.)
Doane, Charles I:, Williamsbure, N. Y. Window-slutter holder.
Doane, Henry L., Green Oak, Micl. Horse hay fork
Doane, Valeutine, jr., Harwich Port, Mass. Físh-bait catter
Doane, William H.. and G. V. Orton. (Sec Orton \& Doane.)
Dobbins, D. P., et al. (Sce Sangster, Richards \& Dobbins.)
Dobbins, D. P., Erie, Pa., Johu S. Richards and James Sangster, Buffalo, N. Y. Brick nachine
Dobbins, George R., Lowell, Mass. Boner-flue eleaner.
Dobbin, Jacob, Litehfield, Mich. Machine for eutting hoops for barrels
Dobson, Robert F., Goderich, Canada. Broom
Dobson, William, assignor to self and John W. Mount, Medina, N. X. Scroll saw
Docherty, James, and Peter Rink. (See Rink \& Doeherty.)
Doek, Gilliard, Wieonisco, Pa. Car wheel
Dodrl, James, assignor to self and Joseph Brown, Providence, R. I. Composition for preparing sizing..
Dodds, J. R., and Warren Portlock. (See Portlock \& Dodds.)
Dodds, William B., assiguor to Dodds, Macneale \& Urban, Cincinnati, Ohio. Door of fire-proof safes.
Dodge, Charles F., Williamsport, Pa. Sasli supporter
Dodge, D. Frank, Lowville, N. Y. Mail bag
Dodge, James, assignor to David Blake, Waterford, N. Y. Maehine for rolling, shaping, and forging file blanks, flyers, and other metallic articles of small dimensions
(Reissuc).
Dodge, John A., Auburn, N. Y. Harvester.
(Division B, reissue)
Same .............................. same
Dodge, Josiah, Grass Valley, Cal. Hoe
Dodge, LeGrand, Syracuse, N. Y. Shutter fastener
Dodge, Lewis, and Lewis J. Magnusson, Chieago, Ill. Concrete-block machine

Date.

Jan. 28, 1868.
Mar. 17, 1868.
Apr. 7, 1868.
July 7, 1868.
Feb. 11, 1868.
July 2R, 1868.
July 7, 1868.
July 7, 1868.
May $12,1868$.
Mar. 24, 1868.
Sept. 8, 1868.
A pr. 7, 1868.
Jan. 14, 1868.
Nov. 17, 1868.
Oet. 20, 1868.

Apr. 21, 1868.
Nov. 24, 1868. July 28, 1868. Aug. 11, 1868. Jan. 14, 1868. Jan. 28, 1868. Feb. 11, 1868. June 23, 1868.

Nov. 17, 1868.
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Jan. 21, 1868
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Aug. 18, 1868. Mar. 17, 1868
Mar. 17, 1868
Jan. 7, 1868
June 2, 1868

Aug. 18, 1868.

Mar. 31, 1868
June 23, 1868
Oet. 13, 1868

Feb. 11, 1868
Aug. 25, 1868.
July 21, 1868
Aug. 4, 1868
Sept. 29, 1868
Mar. 3, 1868.
June 16, 1868.

Mar. 10, 1868
May 26, 1868
June 23, 1868.

Mar. 31, 1868.
Mar. 31,1868
Dec. 22, 1868.
Jnue 9, 1868.
Dee. 29, 1868
Dec. $29,1868$.

## Alphabetical list of patentees for the year 1868-Continued.

## No.

79, 326
78, 725
84, 270
73,305
76, 723
84, 096
77, 597
72,986
3, 291
78, 726
3, 105
3, 106
3, 107
3, 132
3, 196
3, 197
3, 198
3, 199

76,308
78, 938
73, 699
75, 000
76, 417
76, 418
76,419
81, 759
81, 760
82, 390
82, 391
82, 608
77, 178
84, 051
73, 306
3, 158
77, 466
78, 653
76, 171
78,581
83, 265
83, 049
73, 172
78, 437
75, 390
80, 464
74,518
74,519
73, 700
81, 073
84, 712
78, 727
78, 939
81, 151
76, 420
78, 438
7.5, 133

2, 982
81, 610
34, 481 purposes.
-5, 391
73, 701
3, 084

Dotterer, D. H., Philadelphia, Pa. Apparatus for heating and ventilating railway cars

Doty, Charles, St. Louis, Mo. Apparatus for tanning in vaeuo, and for other
Name, residence, and invention or discovery.

## Date.

June 30, 1868
June 9, 1868.
Nov. 24, 1868.
Jan. 14, 1868
Apr. 14, 1868
Nov. 17, 1868
May 5, 1868
Jan. 7, 1868
Dee. 15, 1868 June 9, 1868.

July 14, 1868
July 14, 1868
July 14, 1868
July 28, 1868
Sept. 22, 1868
Sept. 22, 1868
Sept. 22, 1868
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Aug. 4, 1868
Apr. 7, 1868

June 16, 1868
Jan. 28, 1868
Mar. 3, 1868.
Apr. 7, 1868
Apr. 7, 1868
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Sept. 22, 1868.
Sept. 22, 1868
Sept. 29, 1868
Apr. 28, 1868.
Nov. 17, 1868.
Jan. 14, 1868
Oct. 13, 1868.
May 5, 1868.
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Mar. 31, 1868.
June 2, 1868.
Oct. 20, 1868.
Oet. 13, 1868.
Jan. 7, 1868.
June 2, 1868.
Mar. 10, 1868.
July 28, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
Jan. 28, 1868.
Aug. 18, 1868.
Dee. 8, 1868.
June 9, 1868.
June 16, 1868.
Aug. 18, 1868.
Apr. ${ }^{7}, 1868$.
June 2, 1868.
Mar. 3, 1868.
June 9, 1868.
Sept. 1, 1868.
Dec. 1, 1868.
Feb. 25, 1868.
Mar. 28, 1868.
Dec. 22, 1868.
Mar. 10, 1868.
Jan. 28, 1868.
Aug. 18, 1868.
No.

2, 897
77,598
78,940
75, 875
84, 173
73, 173
75, 392
74,674
82, 609
75, 876
84, 865
75,670
78, 013
78, 728
81, 761
74, 321
81, 611
79, 327
73, 584
78, 439
83, 260
75, 134
\%6, 421
84,052
77, 873
83, 050
76, 609
73, 585
79, 739
84, 271
73, 959

74, 520
75, $6 \% 1$
-6, 309
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77, 179
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73, 308
73, 881
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3,240
82,392
78,517
75, 877
75, 001
83, 938

73, 702
83, 611
73, 309
72, 987
80, 534
80,535
78, 041
75, 393
85, 220
84,539
79, 453
85, 371
78,194

Doty, William M. New Tork, N. Y. Washing machine $\qquad$ (Rcissue) Same...... Clothes pin
Dotr, W. M., assignor to self, Ezra P. and Ellis Doty, New York, N. Y. Washing machine
Doubleday, John M., Mont Clair, N. J. Tipping umbrella frames
Doubleday, William E. \& Co. (Śe Plummer, Hiran, assignor.)
Doud, Elihn, Oshkosh, Wis. Com sheller..
Doud, John W., Forestrille. Iowa. Cultivator
Dougherty, Richard C., et al. (Sec Warner, Daniel, assignor.)
Dougherty, S. B., assignor to self and John Ashcroft, Bordentomu, N. J. Safety ralve
Donghty, John II. New York. N. I. Blacking brush
Doughty, J. J., Lake City, Mimn. Heater and tilter for boilers
Douglas. Beriah, Appleton, Wis. 'Xoy railroad and car
Douglas, Charles H., Hartfort, Conn. Game of colors
Douglas, Frank, Norwich, Comn. Globe valvo.
Same...... W oorl-planing machino

## Same...... Planing machine for wood

Same...... Machine for turning rods Same ..... (Sece Boardman, Byron, assignor.)
Donglas, Joseph W., assignor to W. and B. Douglas, Middletown, Conn. Pump Same. . . . . Grindstone frame.
Douglas, N. I3., Cornwall, Vt. Hay loader
Donglas, William S., Richmond, Vt. Clothes wringer
Donglass, George, Bridgeport, Conn. Carriage spring
Douglass, John H., Meriden, Comn. Sash fastener.
Douglass, Joseph, McComellstown, Pa. Lifting jack and spike extractor Same ...... Device for moving cars.
Douthett, Benjamin, Pittsburg, Pa. Bcelivo
Douthett, William C., Rochelle, Ill. Churn
Same.................................. same

Dow, Albro S., and Elijah W. Wilcox, Cedarville, N. T. Neek yoko
Dow, Andrew, Brooklyn, N. Y. Apparatus for manufacturing sheet lead and lead pipe.
Dow, George LI, Freeport, Ill. Chin
Same...... Horse liay fork
Dow, J. Hall, and Daniel J. Riker, Chicago, Ill. Railway frog
Dowd, John and R. J. (See WFebster, R. A., assignor.)
Dowd, Martin. (See Maley, John, assignor.)
Dowe, Lewis, and Arma C. Colton, Sycamore, Ill. Stove-pipe drum
Dowling, George, Fair IIaren, Conn. Apparatus for lowering ships' masts Same …-Spritsail-boom sling
Downer, P. A., and A. P. Stervart, Monmouth Township, Iowa. Seeding machine
Downes, Nicholas, Syraeuse, N. Y. Stove drum
Same..... Filter and eooler
Downer, Steplien W., Piedmont, West Va. Freight car Same..... Address ease for railroad ears
Same...... Trunk label
Downs \& Company's Manfacturing Company. (See Pollard, Villian II., as signol:.)
Downs, James H., assignor to C. Cowles \& Company, New Haven, Conn. Coach lamp grass
(Design)

## Same.... . Coach lamp.

(Desig1)
Downs, John E., Lowell, Mass. Sash fastener
Doyle, William, Albany, N. Y. Cooking stove
Drake, F. II., Kenosha. Wis. Bag fastener
Drake, Gardner, Farmington, Maine. Car-brake shoe
Drake, J. 13., and Willian II. Mutson, assignors to selres and J. Sill, Montoursville, Pa. Derrick
Drake. Thomas N. (See Maitbr, Benj. K., assignor.)
Drake, Timothy, Hart ford, Comi. A(ljnstable hoe
Drapar, John B., Salem. III. Post anger
Draper, Ellwood, and W. C. Garretson. (Sce Garretson \& Draper.)
Draper, E. D., Hopedale, and Edward W. Glover, Medfort, Mass. Fire-proof safe
Draper, George, Milford, Mass. Let-off mechanism for looms
Same......IIopedale, Mass. Let-off for looms
Draper, James. (See Besser, S., assignor.)
Draper, Virgil, assiguor to Edmund J. Richards, North Attleboro, Mass. Appamatus for swaging swivel eyes of watch ehains.
Draper, William F., Hopedale, Mass. Loom
Draper, William O., Albert C. Sweetland, and George II. Draper, North Attlebore, Mass. Mode of imitating cluster jewelry
Drasch. Alois, Austria. Totating-ball motor.
Dreher, J. G., Pine Grove, Pa. Cheese cutter
Dresser, Thomas W.: San José. Cal. Furnace and condenser for reducing quicksilver and other ores
Same..... San Franeisen, Cal. Quicksilver furnace and condense
Drew, A. D. (Sce Beal. L. W., assignor.)
Drew, James W., Stockbridge, Mich. Tiegulating cannon lumber wagons

Date.

Mar. 17, 1868.
May 5, 1868.
June 16, 186s.
Mar. 24, 1868.
Not. 17゙, 1868.
Jan. 7, 1868

Mar. 10, 1868.
Feb. 18, 1868. Sept. 29, 1868 Mar. 24, 1868. Dec. 15, 1868. Mar. 17, 1868. Apr. 21, 1868 June 9, 1868. Scpt. 1, 1868.

Feb. 11, 1868.
Sept. 1, 1868. June 30, 1868 .
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June 2, 1868. Out. 20, 1868 Mar. 3, 1868 Apr. 7, 1868
Nov. 17, 1868 May 12, 1868. Oct. 13, 1868
Apr. 14, 1868.
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Fel. 18, 1868
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Nov. 3, 1868

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Aug. 4, 1868.

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Alar. 10, 1868
Duc. 22, 1868
Dec. 1, 1868
June 30, 1868
Dec. 29, 1868

# Alphabetical list of patentes for the year 1868-Continued. 

No.

78, 440
85, 434
83, 051
79, 328
75, 878
78, 074
-2, 810
82, 811
80, 155
80, 536
74, 806
84, 618
78, 942
75, 879
83, 939
80, 614
79, 640
85, 292
84, 272
75, 251
81, 074
81, 075
81, 076
79, 329
79, 641
85, 435
82, 812
82, 297
83, 267
82, 999
78, 582
79, 740
84, 097
77, 467
84, 174
2, 985
80,713
78, 867
78, 195
74, 323
77, 806
80,156
73, 083
82, 502
75, 741
76, 42:
80, 465
75, 5:38
75, 880
78, 075
73, 310
84,999
84, 175
3, 099
81, 269
82,813
'76, 310
82, 930
75394

Drew, Noah, Howell, Miel. Washing machine
Drew, Thomas, assignor to self and James P. Bridge, Newton, Mass. Compound for extinguishing tires
Dreyer, C. H., Nashville, Tenn. Pnmp
Drinker, Samuel M. (See Claffee, W. T., assignor.)
Drinkwater, James, Adams, Ohio. Horse hay fork
Dripps, Isaae, Fort Wayne, Ind. Railroad-ear ventilator
Same...... Railway-car stove
Same...... Railroat-car heater
Driscole, J. B., New York, N. Y. Hot-air furnace for heaters
Driscoll, J. W., and William G. Schmidlin. (See Schmidlin \& Driscoll.)
Driskell, E. B., Paris, 111. Lioad scraper
Driver, Samuel, assigno to self and Robert M. Driver, Philadelphia, Pa. Automatic boiler feeder
Droll, Francis E., St. Charles, Mo. Chanmeling tool
Drouhard, Jean Charles, and A. L. Roye, New York, N. X. Table
Drouycr, Jean Marie, Carondelet, Mo. Meat mincer
Drowne, Simeon W., Norwich, Comı. Loeling knob latch
,
Drummond, Thomas R., Hartford, Coun. Maeline for eutting slate
Drury, Oliver P., Niles, Mich. Harrester pitman
Dryden, George, W oreester, Mass. Maehine for boring wood
Dryden, W. A., assignor to self and John M. Turnbull, Monmouth, Iil. Cultivator.
Dubelle, Gustave, Boston, Mass. Composition for pavement
Du Bois, C. C., et cl. (See Dailey, Johason \& Du Bois.)
Du Bois, Mudson, Marlborough, N. Y. Clothes dryer
Du Bois, John, Williamsport, Pa. Lumber dryer
Same..... Deviee for moring vessels to and from rwharves or docks to water .
Same...... Dredging machine
Du Bois, Stafford A., Chicago, M1. Skate
Du Bois, William M., Ponghkeepsie, N. Y. Cathartie lozenge
Du Bois, William V., assignor to self, William A. and I. G. Sangster, Covington, Ind. Water indicator for boilers
Du Boys, E. M., France. Liquid meter. (Patented in France May 9, 1867) ...... Duburn, Anthony M., Chicago, Ill. Lantern.
Duce, Willian G., Baltic, Comn., and Albert C. Eddy, Providence, I. I. Filling fork for looms.
Dueharne, David, Meehaniesville, N. X. Apparatus for setting axles to wagons Duehesno, John, Lacon, n1. Side gear for threshing machines
Duehesne, Joseph J., Lacon, M1. Harrestcr
Dueloss, V. C., Mt. IIarmony, Ind. Plow.
Duerenx, Claude, New York, N. Y. Wagon brake
Dudley, W. C., and C. H. L. Roberts. (See Roberts \& Dudley.)
Duduit, Desso, New York, N. Y. Process for ageing and rcctifying copal varnish
Dueberg, Helmuth, Now York, N. Y. Brick machine.....................................
Dueberg, Helnuth, and Gustav A. Wedekind. (See Wedekind \& Helmuth.)
Duer, L. A., assignor to George W. Patterson, Deeatur, Ill. Hominy and pearling mill
Duff, James, Peoria, Ill. Drop press
Duffee, John L., Washington, D. C. Methot of mounting photographs and engravings
Duffy, John, and L. S. Coroy. (See Covey \& Dufy.)
Duffy, Mary A. New York, N. Y. Marking gange for sewing machines
Dnflot, Cesaire Pierre, fre, and Adolphe Pierre Viol. (Sce Viol \& Duflot.)
Dufournet, Jean Maurice, and Lonis Clemendot, Franee. Preserving the wood of coftias
Dugdale, James K., Whitewater, Ind. Wasing machine. (Antedated July 15, 1868)
Duhain, Louis, j1. (See Swan, William, assignor.)
Duhme, John II., Cincinnati, Ohio. Steam generator
Dujardin, P. A. J., France. Electro-magnetic printing telegraphs.
Dulaney, G. L., and J. A. Kanfman, Mechanicsburg, Pa. Railroad switch ...... Dumboiton, George, assignor to self and C. II. Slieer, Baltimore, Ma. Doubleaeting hinge.
Dummer, Sainuel R., New York, N. Y. Paeking for ear axles and boxes.
Du Motay, C. M. T., France, and Edouard Karcher, Prussia. Manufacture of flroride of silieium.
Dunaway, Elijah F., Cincinnati, Ohio. Clamp for door and sash
Dunbar, Alexander,' New York, N. Y. Horse eollar and hames
Dunbar, Alexander L.. Sheldon, III. Carpet streteher.
Dunbar, A. T., Allen, Pa. Horse hay rake
Dunbar, O. P., Norwalk, Ohio, and H. D., Hartiand, Vt. Steam valve Dumbar, Robert, Buffalo, N. Y. Water wheel................................. (P. Duncan, Robert B. West Roxbury, Mass. Bastie attachment for skits Duncan, William, Vinton, Iowa. Horseshoe-calk sharpener Dunckele. Horace L., Boston, Mass. Culinary ressch. Dundore, Isaae G. (See Wilson. Iranklin MI., assignor.)

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## Date.

June 2, 1868.
Dee. 29, 1868.
Oct. 13, 1868.
June 30, 1868.
Mar. 24, 1868. May 19, 1868. Oet. 6, 1868
Oct. 6, 1868.
July 21, 1868.
Aug. 4, 1868.
Feb. 25, 1868
Dce. 1, 1868.
June 16, 1868.
Mar. 24, 1868.
Nov. 10, 1868.
Aug. 4, 1868
July 7, 1868.
Dee. 29, 1868
Nov. 24, 1868
Mar. 10, 1868.
Aug. 18, 1868.
Aug. 18, 1868.
Ang. 18, 1868.
June 30, 1868
July 7, 1868.
Dee. 29, 1868
Oct. 6,1868
Sept. 22. 1868.
Oet. 20, 1868.
Oet. 13, 1868
June 2, 1868.
July 7, 1868.
Nov. 17, 1868
May 5, 1868.

Nov. 17, 1868.
June 16, 1868.

Aug. 4, 1868.
June 16, 1868.
May 26. 1868.
Fel. 11. 1868.

May 12, 1868.
July 21, 1868.
Jan. 7, 1868.
Sept. 29, 1868.
Mar. 24, 1868.
Apr. 7, 1868.
July 28, 1868.
Mar. 17, 1868.
Mar. 24, 186ร.
May 19, 1868.
Jaa. 14, 1868.
Dee. 15, 1868.
Nov. 17, 1868.
Ang. 2̄, 1868.
Aug. 18, 1868.
Oct. 6, 1868.
Apr. 7, 1868.
Oct. 13, 1868.
Mar. 10, 1863.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

Name, residence, and invention or diseovery
Date.

Dec. 22,1868

Nov. 3, 1868.
Sept. 1, 1868.
Dee. 15, 1868.
Feb. 4, 1868.
Mar. 10, 1868.
Mar. 3, 1868.
J 1110 23, 1868.
Nov. 10, 1868.

Jan. 7, 1868.
May $26,1868$.
Nov. 3, 1868.
Dee. 8, 1868.
May 19, 1868.
June 30, 1868.
June 30, 1868. Dee. 8, 1868. July 7, 1868. June 9, 1868. Aug. 11, 1868.

Feb. $25,1868$. July 21, 1868. Ang. 11, 1868. Mar. 24, 1868. Ang. 11, 1868. June $2,1868$. Oet. 6, 1868. Feb. 11, 1868. Feb. 11, 1868. Feb. 11, 1868. lieb. 11, 1868. Feb. 11, 1868. Feb. 11, 1868. May 26, 1868. Мау 26, 1868.

Sept. 8, 1868.
Oet. 20, 1868.
Apr. 7, 1868.
Mar. 3, 1868.
Mar. 3, 1868.
Nov. $10,1868$.
Nor. 24, 1868.

Jan. 28, 1868.

Nov. 3, 1868.
Dee. 15, 1868.
Nov. 3, 1868.
Oct. 27, 1863.
Mar. 10, 1868.
A pr. 7, 1868.
June 16, 1868.
Fol. 11, 1868
June 2, 1863.
Aug. 18, 1868.
Oct. $20,1868$.
Jıne 9, 1868.
Nov. 10, 1868.
$\Delta$ pr. 7, 1868.

Nov. 3, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

## No.

83, 839
81, 352
79, 216
82, 096
82, 814
83, 269
84, 483
82,298
74, 759
3, 009
3, 010
79, 217
80, 341
78,655
77, 263
76, 174
81, 077

82, 815
81, 482

3, 155
72, 988

75, 672
73, 785
79, 059
80, 615
74, 900
77, 964
81, 613
83, 142
83,14
82,503
78, 442
77, 468
85, 436
73, 586
77.014

74, 325
76,175
80,537
77, 015

75, 397
76, 176
83, 479
34,684
80,714
79, 741
83, 943
84, 807
82, 393
79, 816
73.587

76, 610
80, 278
76, 313
84,098
75, 882
3,233
~6, 424
77, 599
75, 252

Earl, Jamcs F., San Francisco, Cal. Harvester
Earl, Otis, Hermon, N. Y. Milking stool
Earl, William, jr., and Joscph K. Priest. (See Priest \& Earl.)
Earle, John E., New Haven, Conn. Cork screw.
Earlc, Nathanicl. (See Meaton, John C., assignor.)
Earley, J. Jacob, Fairficld, Ohio. Boring and mortising machine.
Early, Daniel S., Hummelstown, Pa. Cultivator.
Same...... Buggy-top fastening
Earnshaw, John, East Greenwich, R. I. Maehine for finishing eloth.
Eason, Gcorgc, Lyons, N. Y. Bcchive..
Easterdav, Elias S., Nokomis, Hll. Sulky cultivator
Easterly, J́amcs, Albany, N. Y. Base-burning stove same.................................. - same (Division 1, reissuc) (Division 2, reissuc).
Easterly, James, and John S. Perry. (See Pcrry \& Eastcrly.)
Eastlack, Charlcs F., Mantua, N. J. Pump..................
Eastman, George E., Washington Mills, N. X.
Eastman, H. G., Poughkecpsie, N. Y. Pen holder
Eastman, Henry W., Baltimorc, Md. Toilct attachment for bureaus
Eastman, I. S., Marlison, Wis. Rotary fan.
Easton, Elias, Prairieville, Mich. Farm gate.
Eaton \& Ayer. (See Damon \& Whitaker, assignors.)
Same................................ same.
Eaton, Allocrt G., Gouverneur, N. Y. Apparatus for tanning hides
Eaton, Alice M., Boston, Mass. Shoulder-braee and suspender combined
Eaton, B. G., et al. (See Hall, E. R., assignor.)
Eaton, B. G., and D. M. Golden. (See Hall, E. R., assignor.)
Same..... . (See Babeoek, Charles A., assignor.)
Eaton, Edwin A. (See Chesterman, Edwin, assignor.)
Eaton, Harrison, Amherst, N. H. Cooking stove
(Design).
Eaton, Jonathan Smith, Roxbury, Mass. Trunk.
Eaton, Robcrt B., and Danicl Ashwortl. (See Ashworth \& Eaton.)
Eaton, S. C., and B. W. Lacy. (See Willmarth, William C., assignor.)
Ean Claire Lumber Company. (See Pond, Levi W., assignor.)
Eaves, William T., and William. (See Brundage, E. F., assignor.)
Ebaugh, Henry H., Hereford, Md. Mucilage bottle.
Eberhard, William, assignor to self and A. P. Baldwin, Akron, Ohio. Washing machinc
Eberlurdt, Jacob, Newark, N. J. Hat blocking machiue.
Eberhart, Daniel, New Pittsburg, Ohio. Spark arrester.
Eberman, E. H., Lampeter Square, Pa. Railroad-rail joint splice
Eecleston, C. H. Oxford, N. Y. Looped pin for sceuriug artificial teotlo
Eeker, Lewi M, Oxhor, N. Loperial teeth
Eekert
Eekert, William R. (See Detrick, Jaeob S., assignor.)
Eekhardt, Albert Friedrich, Germany. System of sceding and manuring.
Eckler, Harmon P., Catskill, N. Y. Combined eultivator and hoe
Eckley, Milton, Olney, Ol. Machine for cleaning grain
Eddloman, George H., Atlanta, Ga. Sawing maehine
Edrlowes, A. K., Philadelphia, Pa. Window sash.
Eddy, Albcrt C., and Wi'iam G. Duee. (See Duce \& Eddy.)
Eddy, dlfonzo J., New Britain, Conn. Meat entter
Eddy, George W., Waterford, N. Y. Railway ear.
Same..... Warming ears on railways..
Eddy, Henry. (See Sprague, E. L., assignor.)
Eddy, John H., Taunton, Mass. Cupola furuace.
Eddy, Rollin S., assiguor to self, W. H. Smith, Seth Deane and Henry Merrill,
LaCrosse, Wis. Horse-power.
Eddy, Rollin S., and William H. Smith. (See Smith \& Eddy.)
Eddy, Walter A., East Randolph, N. Y. Seat for vehicles
Edey, Matthew C., New York, N. Y. Medical eompound -
Edge, Dnnean, St. Mary's, II. Beehive.
Edison, Fordiee W., Port Huron, Mich. Horseshoe.
Edinands, A. B., Melrose, Mass. Water meter
Edmands, B. F., Boston, and J. Hamblet, jr., Clarlestown, Mass. Escapement
for dial telegraph instruments.
Edmister, Alfred, Westfield. Ohio. Corn planter and cultivator
Edmonts, O. W., Bluffdale, Ill. Harrow
Edmundson, J. E., Bartlett, Ohio. Coffee roaster
Edson, Horaee M., Mt. Vernon, Ohio. Closing vulcanizing flaslis
Edson, Jacob, Boston, Mass. Nail extraetor
Same......-Scrubber
Samc..... . Stop for fore and aft sails.
Edson, Marmont B., and George P. Clarko. (See Clarke \& Edson.)
Eisou, Nathanicl T'., New Orleans, La. Washing machino.
Erlson, William, Boston, Mass. Sash fastener.
Elfwards, A., New Haren, Comn. Machine for felling trees.
Edwards, Amory, assignor to the Union Metallic Cartridge Company, Elizabeth,
N. J. Trade mark
(Desig11)
Edwards, David, New York, N. Y. Car replacer.
Edwards, Gcorge A., Centralia, Ill. Straw cutter.
Eौwards, James, et al. (See Williams, Forgio \& Edwards.)
Edwards, Jesse S., Medford, N. J. Maelino for distributing fertilizers.

Date.

Nov. 10, 1868.
Ang. 25, 1868.
June 23, 1868.
Scpt. 15, 1868.
Oct. 6, 1868.
Oct. 20, 1868.
Dcc. 1, 1868.

Sept. 22, 1868.
Feb. 25, 1868.
June 30, 1868.
June 30, 1868.
June 23, 1868.
July 28, 1868.
June 9, 1868.
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Mar. 31, 1868.
Aug. 18, 1868.

Oct. 6, 1868.
Aug. 25, 1868.

Aug. 11, 1868.
Jan. 7, 1868.

Mar. 17, 1868.
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June 23, 1868
Aug. 4, 1868
Feb. 25, 1868.
May 19, 1868
Scpt. 1, 1868.
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Dec. 29, 1868.
Jan. 21, 1868.
Apr. 21, 1868.
Fel. 11, 1868
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Ang. 4, 1868.
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Dee. 8, 1868.
Sept. 22, 1868
July 14, 1868
Jan. 21, 1868.
Apr. 14, 1868
July 28, 1868.
Apr. 7, 1868.
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Mrar. 24, 1868
Nos: 10, 1868
Apr. $\because, 1868$
May 5, 1868
Mar. 10, 1868

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 82, 698 | Edwards, John A., Waterford, Pa. Mille |
| 81, 990 | Edwards, Nathaniel, Newark, Ohio. Constri |
| 75, 883 | Edwarls, I. S., Sarannah, Mo. Corn planter |
|  | Edwards, Walter, et al. (See Luther, Lron \& Edwards.) |
| 83, 944 | Edwards, Williann H., Moline, Ill. Joint and coupling for eultiv |
|  | Eells, Henry B., and Charles G. Ross. (See Ross, H. Sehuyler, assignor.) |
| 80, 063 | Egbert, Robert S., Colfax, Cal. Manufacture |
| 75, 005 | Eggleston, A. R., and C. F. Swain, Milwaukee, Wis. Se |
| 81, 991 | Egleston, J. D., Camden, Comn. Means for sceuring springs for beds and seats . |
| 3, 259 | Egleston, Leonard, assignor to Rumsey \& Company, Sencea Falls, N. Y. Steam boiler punp.............................................................................. |
| 78,445 | Ehlers, Angustus R., Tannersville, Pa. Saw mill ............................ |
| 76,724 | Elnenherg. F. C. and Theodor, New York, N. Y. Thread-winding machine |
| 81, 078 | Ehret, Michacl, jr., Philadelphia, Pa. Prion |
| 73, 786 | Ehrliardt, L. H. G., assignor to George B. Upton, David D. Stackpole, and Samnel H. (Aookin, Englant. Gmpowder |
| 76, 725 | Elıman, Sammel, C'hicago, M1. Table-leaf support |
|  | Eichlholtz, John M., and John Frey. (See Frey \& Eichlıoltz.) |
|  | Eichinger, Michacl, and Joseph Heckel. (See Heekel \& Eichinger.) |
| 85, 002 | Eichler, F., New Lisbon, Wis. Portable pmup |
| 82, 394 | Eickencyer, R., Yonkers, N. Y. Apparatus for preserving beer, ale |
| 3,217 | Eickemeyer. R.. assignor to the Eickemejer Mat Blocking Company, Yonkers, N. I. Miachine for stretching hat bollies. .............................. (Reissne) |
| 74,326 | Eidmann, Philip, Pelina, Ill. Corn planter |
| 79,901 | Einhorn, Jacob, assignor to self and Jacob Eugster, New York, N. Y. Embroidering machine. |
|  | Einstein, William. (See DeBary, Julins, assignor.) |
| 73,311 | Eiswald. Theodor G., Providence, R. I. Safety plug |
| 80, 399 | Same..... - Low-water indica |
| 80, 400 |  |
| 81, 483 | Eiswald, 'r. (t., and James Barbonr, assignors to T. G. Eiswald, Providence, I. I. Low-water indicator |
|  | Eiswald, T. G., and Jenkins Jones. (S'e Jones \& Eiswald.) Elberson, F., and M. M. Gilbert. (See Giibert \& Elberson.) |
| 83,945 | Elbertson, John, assignor to self and Jesse L. Connor, Kirlisville, Mo. Car coupling. |
| 77, 016 | Elbertson, Jolm, Kirksville, Mo. Cartridge |
| 77, 807 | , |
| 83, 052 | Elder, Albert J., Kansas City, Mo. Sut |
| 84,803 | Same .... Safety bridge for railway cars |
|  | Elder, J. Lawrenee, et al. (See Kronig, Carl, assignor.).............. (Teissue.) |
| 73, 703 | Elder, R. G., New York, N. Y. Baking |
| 84, 619 | Elder, Samuel S., Springfield, Inl. Churn |
| 84, 099 | Eldredge, John V. D., Detroit, Mich. Take-up for |
| 75,398 | Eldridge, Hemry, Lymu, Mass. Boot and shoc. |
|  | Eldridge, Jacob. (See Hall, Earl J., assignor.) |
| 75, 006 | Lliot, Joln, Vermillion, Ill. Horse r |
|  | Llkins, Willian G. and O. N. (See Manuel, Charles C., assignor.) |
|  | Ellearl, Charles MI. (See Whorf, Charles F., assignor.) |
| 84, 100 | Lellenberger, Joseph, Easton, Ohio. Post driver. (Antedated Nor. 13, 1868) |
| 77, 469 | Ellershansen, Francis, Montreal, Canada. Process of converting cast iron iato cast steel and malleable irom. |
| 77, 722 | Same.... Furnaee and process tor the manufacture of iron and stee |
| 84, 053 | Ellershansen, Francis, Ellershanse, Augnstns E. Stayner, Halifax, Nova Scotia, and Adolph Guzman, New Yorl, N. Y. Manufacture of iron and steel..... |
| 81, 885 | Ellingen, Elward, Mineral Point, Wis. Coffin. ............................. |
| 74,060 | Elliot, D., and E. Seely, New York, N. Y. Washer for lock nuts |
|  | Elliot, George, and G. W. Harris. (See Larris \& Elliot.) |
| 72, 989 | Elliot, William H., New York, N. Y. Brewing |
| 76, 177 | Same.... . Preserving beer and other malt liq |
| 76, 611 | Same.......... Tortise and tenon for bedste |
| 84,809 76,178 | Same ...... Feather renovator |
| 76, 178 | Elliot, William II., New York, and Isaac Osgrood, Utiea, N. Y. Apparatus for dyeins and bleaching yarn and threal |
| 77, 431 | Elliott, Charles H., Yorli, Pa. Chmru... |
|  | Elliott, Ephraim. (See Pattee, dohn W., assignor.) |
| 73, 787 | Elliott, Ephraim, and Charles E. Newton, Lowell, Mass. Artificial leg Elliott ilirane (See Daumherty Wr F assimen) |
| 85, 372 | Elliott, Hirann. (See Dangherty, W, F., assignor.) |
| 73, 17.5 | Elliott, James, Milforll, W is. Tire-shninking machine... |
| 83, 840 | El'intt, Johm, and W. Lee, Chippewa, Ohio. Sheep ra |
|  | Elliott, J. Boyd, and John E. Sweet. (See Sweet \& Elliott.) |
| 77, 823 | Ellintt, J. S., assignor to self and A. B. Cooley, Philadelphia, Pa. Masp lock. |
| 85, 437 | Elliott, Johu T., Graud Rapids, Mich. Iforse hay fork............................. |
| 76, 731 | Eliontt, Lewis, jr., assignor to L. C'undeo \& Comprany, New Haven, Comn. Orershoe |
| 73, 588 | Elliott, Marius M, New England Village, Mass. Shoe sl |
| 77, 880 | Elliott, Robrrt, Chester, Pa. Railway-rail splice. |
|  | Elliott, IV.St. G., Morristown, N. J. Sewing machine |
| 76,612 | Ellis, Charles, Ganton, Mass. Serew-cnttin'p (hathe Moorchead \& Elliott.) |

## Date.

Oct. 6,1868.
Sept. 8, 1868
Mar. 24, 1868
Nov. 10, 1868
July 21, 1868
Mar. 3, 1868 Sept. 8, 1868.

Nov. 17, 1868 June 2, 1868 Apr. 14, 1868 Ang. 18, 1868.

Jan. 28, 1868
Apr. 14, 1868

Dec. 15, 1868 Sent. 22, 1868.

Dee. 1, 1868 Fel. 11, 1868

July 14, 1868
Jan. 14, 1868 July $2 s, 1868$ July $28,1868$.

Aug. 25, 1868

Nov. 10, 1868.
Apr. 21, 1868 May 12, 1862
Oct. 13, 1868
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Jan. 23, 1868
Dec. 1, 1868.
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Mar. 3, 1868

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May 5, 1868 May 12, 1868

Nov. 17, 1868
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Mar. 31, 1868.
Apr. 14, 1868
Dec. 8, 1868
Mar. 31, 1868
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Jan. 2\&, 1868
Dee. 29, 1868
Jan. 7, 1868
Nov. 10, 1868
May 12, 1868
Dee. 29, 1868
A pr: 14, 1868.
Jan. 21, 1868
Apr. 28, 1868.
Mar. 24, 1868.
Apr. 21, 1868

Alphabetical list of patentess for the year 1868-Continued.
No.


Date.

Јаn. 7, 1868.
June 9, 1868.
Feb. 4, 1868.
May 5, 1868.
Mar. 10, 1868.
Jan. 7, 1868.

Mar. 3,1868 .
Jan. 28, 1868
Oet. $20,1868$.
Apr. 21, 1868.
June 16, 1868.
Aug. 18, 1868.
Mar. 31, 1868.
Jan. 7, 1868.

Sept. 15, 1868.
May 19, 1868.
June $30,1868$.
Nov. 3, 1868.
Apr. 28, 1868.
Apr. 28, 1868.
Fel. 25, 1868.
June 9, 1868.

Jan. 18, 1868.
Feb. 18, 1868.
Mar. 10, 1868.
July 7, 1868.
July 7, 1868.
July 7, 1868.
Feb. 18, 1868.
Sept. 22, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
Feb. 4,1868.
Sept. 22, 1868.
Jan. 28, 1868.
Oct. 27, 1868.
Dec. $29,1868$.
Nov. 17, 1868.
Mar. 3, 1868.
$J$ une $30,1868$.

Nov. 10, 1868.
May 5,1868.
Jan. 28, 1868.
Aug. 18, 1868.
Jan. 28, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.
Name, residence, and iusention or discovery.

Emmons, Lucins I., Noblesville, Ind. Mop head.
Emmons, William, Sandwich, Ill. Concrete-brick machine
Emorr, Willian H., Ashburuham, Mass. 'Toy pistol. (Antedated Mar. 16, 1868)
Enderton, A. B. (Sce Whitman, L. MC., assignor.)
Enerle, William. (See Clmmp, George, assigmor.)
Engel. Frederick, Romeo, Mich. VVindow shutter
Encelhardt, Johan, assignor to E. E. Mendrick and Peter Dolan, Carbondale, Pa. Composition for blacking leather
Engoren, G. L., Brooklyn, N. X. Valve for steam engines. (Autedated May 27, 1868)
England, Menry J., Delhi, N. Y. Dirt scraper
Engle, S. D., Mazleton, Pia. Watch.

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Engledow T. S., Cedar Falls, Iowa. Heel for boots and shoes
(Reissue)
English, 1. C., et al. (Sec Schneider, I'. F., assimnor.)
English, 13. C., and Francis Fraps, Springfichd, Nass.
English, Menrv, Wilnington, Del. Chimmey top...... Spring-bod bottom
English, James, Syracuse, N. I. Shielding arcll for evaporating kettles.
English, James G., et al. (Seq Bradley. F. A., assignor.)
English, R. W., Buffalo, N. Y. Mop head.
Enholm, A. H., St. Louis, Mo. Motive power for seving machines.
Emis, George II., and William Mont. Storn. (See Storm \& Emnis.)
Ennis, W. and W. Duryea. (See Duryea \& Emis.)
Enos, John M., assignor to sclf and Thomas Swartwont, St. Joseph, Mich. Brick press.
Enos. Leri S., Almond, N. Y. Washing machine Samo.......Stove-pipe damper.-
Enos, Levi S., assignon to Nathaniel Sweet, Almond, $\underset{\sim}{ } \dot{Y}$. Alloy for metallic rooting.
Enright, Jolm, assignor to self and James R. Del Vecchio, Louisville, Ky. Passencer register.
Enright, John, assiguor to self, William Wall and Thomas Enright, Louisville, Ky. Core bar for pipes.
Ensign, Chanles H., et al. (Sce Barmm, Lafayette, assignor.)
Ensign, ILenry W., and A. R. Stanley. (See Stanley \& Ensign.)
Ensigu, William F., Troy, N. Y. Porinutation lock.
84, 177
74,063
84, 810
75, 742
84, 620
77, 966
81,614
3, 035
81, 762
73, 960
76, 063
83, 701
76, 126
77, 724
78, 519

78, 584
80, 93:3
78, $07 \%$
75, 254
73, 312
85, 374
79, 96.t
73, 240
81, 265
76, 727
74, 676
79, 332
85, 221
73,313
83, 613
74,064
82,504

73, 589
76, 732

Same-.... New York, N. Y......-. - same
Ensley, J. J., assignor to Thomas D. Ledyard, New York, N. Y. Illuminating gas. (Antedated Jan. 27, 1868).
Ensminger, George William, Richland, Iowa. Wiro fence.
Enszlin, Thcodore, Newburg, N. Y. Salve.
Enperson, W. L., Lonisville, K. M. Mortising machine.
Epuc, Barthel, Birmingham, Pa. Reversible knob latch. (Antcdated May 12, 1868)

Eralle, Jacob, South Bristol, N. Y. Checse press.
Erlison, Garrett, Brooklyn, N. Y. Medallion. $\qquad$ . (DCsigu) Ernst, Frederick, San Francisen, Cal. Revolving furnace for roasting ores. Frpelding, Lambert, et al. (See McCormick, Baker \& Erpelding.)
Erskine, Christopher $\Lambda$.. Palermo Center, Maino. Egg-preserving framo. Ertel, George, Liberty, Ill. Compressing and beater press.
Ervin, John, Princetown, Ind. Fireplaco
Erving, Luther, Brooklyn, N. Y. Lamp burner
Esale, J. H., and L. J. Jlams. (See Adams \& Esalo.)
Eschenlohr, Alois, Bavaria. Seamless leather strap and tube.
Escherich, Francis TI., Baltimoro, Md. Breech-loading fire-arm.
Eskildson, Henry W., and Janes Tyzick. (Sce Tyzick \& Eskildson.)
Espey, G. W., and H. DI. Mall. (Sce Hall \& Espey.)
Espick, Charles F., Plymouth, Iud. Chimmey elasp.
Same. . . . . Tuyere iron.
Esser, Phillip, and F. A. Steere, North Providence, R. I. Machine for setting button hooks.
Essig, Bartholome, Sacramento, Cal. Budstead fastening
Essig, Lewis, Canton, Ohio. Gite.
Estahrook, J. M., Milford, Mass. Serew peg for boots and shoes
Estell, Isaac, St. Louis, Mich. Saw set.
Estell, Samuel F., Richmond, Ind. Regnlator for timepieces
Same.-.... Animal trap
Esten, D. S., Monson, Mass. Hince for urates and doors. (Antedated Apr. 9, 1868) Esterly, George, Whito Water, Wis. Inarvester.

Same..... . Broadeast seeder and cultivator.
Sanc-.-. . . Seeding machine.
Esterly, Georgo W., et al. (Sce IIarlison, Job, assimnor.)
Estes, Dana, assignor to solf aml Carper W. Roeth, Newton, Mass. Portable shanla and seat. (Antedated Jan. 3, 1868)
Estes, Dexter, Stockholm, N. Y. Washing machine
Estes, Ifenry A., assignor to self and Georgo Sinith, Jerscy City, N. J. Horso hay fork. (Antedated Jan. 31, 1868)
Estes, James H., Boston, Mass. Miter machino. (Antedatod Sept. 16, 1868)
Estey, Jacob \& Company. (See Wells, Franklin A., assignor.)
Same ...... (Sce Fuller \& White, assiguors.)
Ethridge, Martin R., Locke's Mills, Maine. Boot and shoe
Ettenger, W., and II. P. Edmond, Richmond, Va. Hydranlic press.

Date.

Tune 2, 1868.
Apr. 14, 1868.
Mar. 24, 1868.

Oct. 13, 1868.
A pr. 21, 1868.
Juno 2, 1868.
Mar. 31, 1868.
Mar. 31, 1868.
Mar. 3, 1 ع68.
Apr. 7, 1868.
Sept. 15, 1868.
Nov. 17, 1868.
Mโar. 10, 1868.
Aug. 11, 1868.

Apr. 14, 1868.
Feb. 25, 1868.
July 14, 1868.
Мау 12, 1868.
Juие 23, 1868.
Oct. 13, 1868.

Oct. 20, 1808.
Nov. 17, 1868.
Feb. 4, 1868.
Dec. 8, 1868.
Mar. 24, 1868.
Dec. 1, 1868.
May 19, 1868.
Scpt. 1, 1868.
May $12,1868$.
Sept. 1, 1868.
Feb. 4, 1868.
Mar. 31, 1868.
Nov. 3, 1868.
Apr. 7, 1868.
May 12, 1868.
$J$ uno 2, 1868.

Jume 2, 1868.
Aug. 11, 1868.
May 19, 1868.
Mar. 10, 1868.
Jan. 14, 1868.
Dec. 20, 1868.
July 14, 1868.
Jan. 14, 1868.
Aug. 18, 1868.
Apr. 14, 1868.
Feb. 18, 1868.
June 30, 1868.
Dec. 22, 1868.

Jan. 14, 1868.
Nov. 3, 1868.
Feb. 4, 1868.
Sept. 29, 1868.

Jan. 21, 1868.
Apr. 14, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

## Eugster, Jacob. (See Einhorn, Jacob, assignor.)

Eunson, Robert G., and John Myers. (See Myers \& Eunson). .... (Extension.) Evans, B. D., and O. Case. (See Case \& Evans.)
Evans, George F., assignor to self and Gcorge P. Rilcy, Chelsea, Mass. Fanning machine
Evans, James S., Irondale, Mo. Process of screening charcoal
84, 866
82, 300
Evans, James W., New York, N. Y. Car spring
Evans, John, assignor to self and Thomas H. Smith, Philadelplia, Pa. Dovetail marker.
82, 301 Evans, Owen V., assignor to sclf and James Reynolds, Ripley, Ohio. Concrete-block-making machine
Evaus, Ralph, Brant, N. Y. Fruit picker.
Evans, S. W., and A. Agnew. (See Smith, Orren M..............)
76, 728 Evans, Thomas, Newark, N. J. Construction of ears for can and kettlc bails
Same.......Metallic ear for attaching bandles to pails and like vessels. (Reissue)

Ang. 25, 1868.
Dce. 15, 1868.
Sept. 22, 1868.
Apr. 21, 1868
Scpt. 22, 1868
June 30, 1868
Apr. 14, 1868.
Aug. 4, 1868
Evans, Thomas, and W. R. Thomas. (See Thomas \& Evans.)
84, 685
83, 481
73, 961
76, 314
76, 315
76, 316
79, 642
80, 816
73, 706
76, 317
77, 019
78, 365
74,524
78, 944
74, 327
79, 563
85, 438
79, 643
73, 517
78, 445

Dec. 8,1868
Oct. 27, 1868
Fcb. 4, 1868
Apr. 7, 1868
Apr. 7,1868
Apr. 7, 1868
Oct. 29, 1868
July 7, 1868
Aug. 11, 1868
Jan. 28, 1868
Apr. 7, 1868
Apr. 21, 1868
May 26, 1868.
Feb. 18, 1868.
June 16, 1868. Feb. 11, 1868 July 7, 1868.
Dec. 29,1868
July 7, 1868
Jan. 21,1868
Junc 2, 1868
Nov. 17, 1868
Mar. 24, 1868
May 19, 1868
July 28, 1868
Apr. 28, 1868
June 23, 1868

Dec. 1,1868
Aug. 25, 1868
Jan. 28,1868
Nov. 3, 1868 .

July 7, 1868
May $26,1868$.
Aug. 11, 1868.
May 5, 1868

May 19,1868.
Ang. 25, 1868.
Dec. 8,1868
Dec. $15,1868$.

Dec. 29,1868
Sept. 29, 1868
Mar. 3, 1868
June 9, 1868.
Dec. $22,186 \%$
Mar. 10, 1868.

Name, residenee, and inrention or diseorery.

Falc, A. R. E. (See DeCamp, Wm., assignor.)
Faleoner, John A., and Robert Graham, assignors throngh mesne assigumeuts to James H. Reniek, Jersey City, N. J. Briek maehino
Fales, Jenks \& Sons. (See Potter, Frederiek A., assignor.)
Fales, Joel F., Walpole, Mass. Machine for sewing carpet lining.

Falk, M., New York, N. Y. Paeking tobaceo
Faller, Adolph, New York, N. Y. Lonnge, burean, and table
Fallows, Janes, assignor to solf and John Pfeifer, Philadelphia, Pa. Beer eooler
Faloon, Matthew, Bloomington, Ill. Truss.
Same. ..... Abdominal supporter
Same..... Syringo.
Fandel, John, Boston, Mass. Milk-ean eover
Fanning, David H., Woreester, Mass. Hoop skirt
Fauning, Joln, et al. (See Burns, James, assignor.)
Fanning, John, assignor to Joln S. Andrews, Brooklyn, N. Y. Take-up for thread in sewing maehines
Fanshawe, John A., et al. (See Coles, Jaeques \& Fanshawe.)
Fareot, J. J. L., Frauee. Deviee for controlling engines.
Faries, Robert, Indianapolis, Ind. Supplemental jaw for wrenehes
Farley, G. W., assignor to self and W. H. Humphrey, Manchester, N. H. Iee ealk
Farley, Philip. (See Lavis, Charles H., assignor.)
Farley, Samuel, and Edward MeManama. (See Wyatt, Lorenzo D., assignor.) Farmer', Albert. (See Wainwright, Theophilus A., assiguor.)
Farmer, George P., Philadelphia, Pa. Trade marls
(Design)
Farmer, Heurv, Pontiae, Mieh. Potato planter
Farmer', John 'S., and Jolm Saxby. (See Saxby \& Farmer.)
Farmer, Moses G., Salem, Mass. Magnetic telegraph
Farmer, W. G., Burlington, Vt. Cutter head
Farnliam. Samuel M., Tully, N. Y. Oil or polish for leather
Farnsworth, Lither H., Hudson, Mass. A wl haft
Samo..... . Boot and shoe shavo
Faron, Edward, New York, N. Y. Briek machine
Farr, C. N., and William C. Wilmarth. (See Wilmarth \& Farr.)
Farran, Alonzo, \& Co. (See Lofitus, IR. G., assignor.)
Farrand, A. J., et al. (See Quiek, Opie \& Farrand.)
Farrar, IV. B., Greensboro, N. Y. Shutter and blind fastener
Farrel, John, New York, N. Y. Fire-proof safo.
Farrell, Joanna, et al. (See Barson, Daniels \& Farrell.)
Farrell, Jolm, Pittsbnrg, Pa. Manufacture of tin-lined lead pipe
Farrell, Johm L., and Samuel J. M. Clark. (See Clark \& Farrell.)
Farrell, Newell E., et al. (See Collins, Cushman \& Farrell.)
Farrenburs, Samuel, Taylorsville, Ind. Tool sharpener.
Farrer, Solon, New York, N. Y. Spoon.
Farrington, Lafayette. (Sce Bishop, George ī., assignor.)
Farrow, A., Carrollton, nl. Ganc plow
Farson, Enoeh S., Philadelphia, Pa. Chamber eommode. (Antedated Sept. 1, 1868)
Farmell, Levi D., Laneaster, and Artemus W. Goddard, Clinton, Mass. Fruit parer. (Antedated A pril 95,1868 )
Farwell, W. B., assignor to self and Charlos R. Abloott, New York, N. Y. Railroad ear heater.
Fasig, Danicl, Rowsburg, Ohio. Lifting jaek and eant hook
Fassauer, John, Wheeling, Iow゙a. Chmrn
Fassett, Amos, Sterling, Ill. Wagon stako. (Antedated Oet. 17, 1803)
Fassett, Nelson B., et al. (See Wallace, Luthor R., assignor.)
Fassett, Nelson B., assiguor to self and William Humphrey, Adrian, Mich. Rotary stean engine.
Fassler, Jerome, et al. (Sce Whiteley. Fasslor \& Kelly.)
Fassler, Jerome, and William N. Whiteley. (See Whiteley \& Fassler.)
Same................................................................
...... (Dis) assmann, H., New Orleans, La. Cotton-balo tio.
Fath, Valentine and Philip, and Julius Friclingsdorf, St. Louis, Mo. Soldering maeline.
Fatzinger, A. M., Washington, N. J. Paper clip
Faulkner, William, Vevay, Ind. Apiary..
Fauntleroy, William, New Larmony, Ind. Maehine for stnffing horse collars.
Faurot, Arthur, and William P. Marris, Brooklyn, N. Y. Curb for streets, roads, \& e
Favre, Louis Augnsto, Switzerland. Mode of soling shoes
Faweett, Samuel, Roeliester, N. Y. Cutter head
Fay, George, assignor to self, J. Henry Simonds, and Henry Chase, Boston, Mass Advertising panel
. (Designi)
Fay, J. A., \& Co. (See Lemman, John, assimnor.)
Fearn, John, Tompkinsville, N. Y. Boot heel. (Antedated Feb. 12, 1868)
Fedfer, Heinrieh, Lancaster, N. I. Liniment
Feely, John, Now York, N. V. Bookbinders' roll
Fegers, Charles, et al. (See Wiegel, Lembenter \& Fegers.)
Feibelman, Raehel, Columbus, Ind. Compound for curing felons and similar diseases
Feichert, Charles, New York, N. Y. Maehine for eovering molds for tassels.

Date.

Sept. $22,1868$.
Feb. 11, 1868
Dee. 29, 1868
June 9, 1868.
Mar. 24, 1868
July 21, 1868
Nov. 3, 1868
June 16, 1868
Jume 16, 1868
Jily 7,1868
A pr. 21, 1868.
Mar: 31, 1868

Sept. 22, 1868
Dec. 2n, 1868
Jnno 23, 1868
May $26,1868$.

Мау 26, 1868
Jan. 7, 1868
Ang. 25, 1868
Oct. 6, 1868
A pr. 21, 1863.
June 16, 1868
Dec. 22, 1868
Nov. 3, 1868.

Dee. 8, 1868
Apr. 21, 1868.
Fob. 25, 1868

Jnly 14, 1868.
Mav. 3, 1868.
Jan. 23, 1868.
Seqt. 15, 1868.
May 5, 1868.
Sept. 15, 1868.
Nov. 10, 1868
Sept. 1, 1868.
Nov. 3, 1868.

Sept. 1, 1868.

Mar. 3, 1868.
Dee. 15, 1868.
May $26,1868$.
Feb. 4, 1868.
Sept. 15, 1863.
Apr. 14, 1868.
Fel. 4, 1868.
Sept. 15, 1868.
Aug. 11, 1868.
Fob. 18, 1868.
Sept. 15, 1868.
Mar. 31, 1868.

Aug. 18, 1868.
Ang. 18, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

| No. |
| :--- |
| 76,899 |
| 82,816 |
| 77,703 |
| 83,369 |
| 80,343 |
| 85,294 |
| 73,962 |
| 78,272 |
| 79,965 |
| 80,538 |
| 76,615 |
| 72,990 |
| 76,066 |
| 76,733 |
| 77,969 |

74,329
79, 644
82, 817
78, 366
84, 868
81, 886
83, 270
79, 333
83, 370
74, 808
75,255
75, 141
76, 616
73, 590
81, 486
74, 067
75, 256

81, 487
79, 645
83, 145
80, 401
80, 344
82, 700
82,213
82, 214
82,215
74, 903
82, 932
83,841
79, 334
83, 055
80,934
84, 461
77, 266
78, 446
80,859
73, 591
72, 991
75, 402
2,862

Feightner, George, Wooster, Ohio. Machinc for forming fifth wheels
Felber, Jacob, St. Lotis, Mo. Maehine for mortising, slotting, and dovetailing Felgemaker, Augustus B., and Silas L. Dcrrick, Buffalo, N. Y. Portable pipe organ.

Name, residence, and invention or diseovery.

Felker, Leouard, Tewksbury, Mass. Combined hinge and fastener
Fellheimer, Louis, New York, N. Y. Clasp for hoop skirts.
Fellker, Amos, Bay City, Mich. Hanging saws.
Fellows, Alfred, Thomas B. Harrison, and Hugh Dyer, Maquoketa, Iowa. Loom indicator.
Fellows, A. J., Meriden, Conn. Tape box
Fellows, Alvin J., New Haven, Comn. Tape measure.
Fellows, Joshua E. (See Cooper', Jolin L., assignor.)
Fellows, Thomas S., Walnut Lake, Minn. Weather strip
Felt, Luther W., Keene, N. Y. Machine for cutting corks.
Felt, Vanderlyn II., Roehester, N. Y. Harvester rake..
Felter, P. S., Cincinnatus, N. X. Door loek.
Feltes, Gcorge W., Carwondalc, Ill. Wood lathe.
Felthoff, Henry, and Lueas D. Tingley, Prince William, Ind. Mold for making drain tiles.
Fendrich, Xavier, and B. Oertly. (See Oertly \& Fendrich.)
Saine . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . same.

Fenimore, Wesley, Philadelphia, Pa. Dust eap for watches
Fenn, E. J., Medina,Ohio. Horse hay fork
Fenn, George, Boston, Mass. Wash boiler.
Fenn, Silas T., and J. B. Sweetland. (See Swectland \& Fenn.)
Fenn, William A., West Meriden, Conn. Covered dish
Fenn, William A., Woleott, N. Y. Attaehing knobs to their spindles...........
Fenner, John S., assignor to the Inman Manufacturing Company, Warren, R.I. Machine for sizing and polishing braid. Same
Fenner, Mandana D., Rochester, N. X. Pump for oil wells.
Fenner, R. R., assignor to self and Eli Halberstadt, Urbana, Ill. Feed-water heater for steam generators $\qquad$ Shecp shearing and tagging table

> Same.... Hay knife

Fenton, II. T., Philadelphia, Pa. Steam generator.
Ferger, Charles, Now York, N. Y. Oil cup

Herson, Albert I., Sharon, $\mathcal{P}$. Proes of recutting files.
Fercuson, Edwin. (See Foley, Richard, assignor.)
Ferguson, E., Newbern, N. C., assignor to Isaac H. Ferguson and Mitehell, Allen \& Co. Injcctor for steam generators.
Ferguson, E. L., assignor to sclf and Chavles B. Clark, Buffalo, N. Y. Lamp braeket
Ferguson, E. L., and C. B. Clark. (Sce Clark \& Ferguson.)
Ferguson, Joseph H. (See Perkins \& Richards, assignors.)
Ferguson, Levi, Lowell, Mass. Loom for weaving pile fabrics.
Ferguson, Lorenzo D., Dansville, N. Y. Roofing compound
Ferguson, M. W. (See MeCormick, John G., Es,ignor.)
Ferguson, Robert E., Chieago, Ill. Washing machine.
Ferguson, T. M., Rainsboro, Ohio. Apparatus for sealing fruit eans
Ferguson, William H., and George W. Gish. (See Gish \& Ferguson.)
Fernald, Edwin, Turner, Maine. Deviec for holding tools against grindstones. Ferreira, Joseph H., Newark, N. J. Floor clamp.
Forrell, Ludlow \& Rodger's. (See Woliston, Philip N., assignor.)
Ferren, Horace B., Batavia, N. Y. Device for measuring the feet of horses
Same................................................. same...
Same......Device for attaching sho
is, F. R., Dora, Ind. Water wheel.
Ferris, E. R., Dora, Holland, Mich. Stump extractor.
Ferris, Samucl S., assignor to self and William O. Robbins, New York, N. Machinery for making shect glass. Ferry, E. R., New Haven, Conn. Bridle.

Same...... Safety bridle.
Ferry, Louis Desire Jeandron, France. Shoe for bathing and other purposes....
Ferry, Willard, and Joel E. Giles. (See Giles \& Ferry.)
Fessenden, George F., Arlington, Mass. Toy target
Fessenden, O. G. and S. G., Stamford, Conn. Ticket holder for railroad cars, \&e Fessler, August, assignor to Joseph R. Von Wessely, Austria. Hand stamp ... Fetzer, John G., assignor to Fetzer \& Woodson, Brunswick, Mo. Plow...... Feuerstein, Martin, Williansburg, N. Y. Sausage filler Feust, S., and S. Sichel. (See Sicliel \& Feust.)
Fewkes, Jesse, assignor to the Silver Lake Manufacturing Company, Newton, Mass. Expansion pulley for braiding machines. .
Fiedler, Moritz, assignor to self and Johu Klein, Roehester, N. Y. Filing machine.
Field, Ben, Albion, N. Y., and George M. Pullman, Chicago, Il., said Fielit assimnor to said Pullman. Sleeping car........................................ (Reissue).
Field, Benton J., and John C. Guerrant. (See Guerrant \& Field.)
Same............................................................
Field, Franklin, et al. (See Brown, Charles K., assignor)
(Design.)

## Date.

Apr. 21, 1868.
Det. 6, 1868.
May 5, 1868.
Oct. 27, 1868.
July 28, 1868.
Dee. 29, 1868.
Feb. 4, 1868.
May 26, 1868.
July 14, 1868.
Aug. 4, 1868.
Apr. 14, 1868.
Jan. 7, 1868.
Mar. 31, 1868.
Apr. 14, 1868.
May 19, 1868.

Feb. 11, 1868.
July 7, 1868.
Oct. 6, 1868.
May 26, 1868.
Dee. 15, 1868.
Sept. 8, 1868. Oet. 20, 1868. June 30, 1868.

Oct. 27, 1868.
Feb. 25, 1868.
Mar. 10, 1868.
Mar. 3, 1868.
Apr. 14, 1868
Jan. 21, 1868.
Aug. 25, 1868.

Feb. $4,1868$.
Mar. 10, 1868.

Aug. 25, 1868.
July $7,1868$.
Oet. 20, 1863.
July 28, 1868.
July 28, 1868.
Oct. 6, 1868.
Sept. 15, 1868.
Sept. 15, 1868. Sept. 15, 1868. Feb. 25, 1868.
Oet. 13, 1868.
Nov. 10, 1868.
June 30, 1868.
Oct. 13, 1868.
Ang. 11, 1868.
Nov. 24, 1868.
Apr. 28, 1868.
June 2, 1868.
Aug. 11, 1868.
Jan. 21, 1868.

Jan. 7, 1868.
Mar. 10, 1868.
Feb. 11, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 79, 110 | Field, |
| 85, 078 | Field, James D., Wataga, Ill. Pape |
| 77.725 | Field, John Lyon, Great Britain. |
| 81, 887 | Field, J. S., Brooklyn, N. Y. Culinary appa |
| 82, 101 | Field, Orrin, Independence, Iowa. Beehire |
| 7\%, 267 | Field, William D., Providence, R. I. Door lo |
|  | Fields, E. F., and F. M. Abbott. (See Abbott \& Fields.) |
|  | Fields, J. J., and A. H. King. (See Joslin, H. W., assignor)......... (Reissuo.) Fiells, F., and Clarles A. Brown. (See Brown, Charles K., assignor.) |
| 84.812 | Fielk, F., and Charles A. Brown. (See Brown, Clarles |
| 75, 888 | Fifield, Joseph C., assignor to W. N. Ely, Low |
|  | ooms |
| 78, 657 | Filkins, John, Sandwich, Ill. Mop wri |
| 80, 160 | Filkins, R. A., North Adams, Mass. Steam-engiue |
| 80, 935 | Filler. (riles E., St. Louis, Mo. Coal stove |
| 77, 875 | Fillingham, Fred., Ithaca, N. Y. Rigging for j |
| 84, 178 | Filson, Suyder, and Willian E. Kinert, Blufftom, Ind. Corn |
| 75, 142 |  |
| 76, 4:7 | Finch, Lewis, Vienna, Ta. P |
|  | Finchure, Janes B., and A. T. Boon. (See Boon \& Finchnre.) |
| 78,367 | Findler, M. Isadora, New York, N. X. Waist belt or girdle. (Antedated May |
| 85, 295 | Fininler. |
|  | Fink, Alisert, Louisville, Ky, Bridge. . . . . . . . . . . . . . . . . . . . . . (Extension.) |
| 81, 355 | Fink. Peuben, and Jacob B. Morshock, Lancastor, Pa. Thill conp |
| 77, 022 | Finkle, Charles E., assighor to self and R. O. Glover, New York, N. Y. Metallic base and molding for leating purposes |
| 84, 813 | Finlay, James, New York, N. Y. Knee boot for horses |
| 77, 601 | Fiuley: John E., Memphis, Tenn. Churn |
| 74, 677 | Finler, Perry, Memphis, Tenn. Shaft and pole coup |
| 77, 268 | Same ..... Clothes pin.... |
|  | Finler. Samuel. (See West, J. Burns, assignor.) |
| 84, 940 | Finn, Edward, Berlin, Wis. $A$ |
| 74,330 | Fim, Felis A., Salt Point, N. Y. Threshing machi |
| 77, 876 | Fim, James C., assignor to self, William Howell, and Charles A. Duy, Philadelphia, Pa. Decorating walls. |
|  | Finu, James C., et al. (See Howell, Finn \& Duy.) |
| 77, 726 | Finn, John, Decorah, Iowa. Can former. (Autedated April 24, |
| 75, 889 | Finu, J. L., Elyria, Ohio. Telegraph insulator. |
|  | Fime, A. L., et al. (See Hermance, C. W., assignor.) |
| 81, 266 | Fimegan, Joln A., Charlestown, Mass. Self-adjusting curb for hydrants |
| 84, 686 | Firman, II. S., Now York, N. Y. Apparatus for doolorizing, desiccating, and mixino manures |
| 75, 743 | Firman, Leroy B., Chicago, Ill. Electric commutator |
|  | First National Refined Iron and Stcel Manufacturing Company. (See Absterdam, John, assignor) |
| 77, 727 | Firmenich, J., Buffalo, N. Y. Manufacture of vinegar........................... |
|  | Fischer, C. F., and C. W. Maas. (See Maas \& Fischer.) |
| 75, 890 | Fischer, Ferdinaud, Cambridge, Mass. Machine for stuffin |
| 84, 869 | Fischer, Mcrman, Chieago, Iill Blank book.... |
| 74, 068 | Fischer, Valentine, New York, N. Y. Machine for forming sheet-metal moldings. |
| 85, 222 | Fischer, William, New York, N. Y. Wind musical |
| 75, 007 | Fish, Benjanin, Mechanicsburg, Pa. Tuye |
| 2, 870 | Fislı, Janies MI., assignor to Harriet M. Fish, New Iork, N. Y. Machine for weighing and bagging grain <br> . (Reissue) |
| 73, 442 | Fish, Johm C., Barnstable, Mass. Tree feeding |
| 83, 056 | , Same ..... Carriage-curtain fastening. |
| 77, 365 | Fish, Rufus A., Worcester, Mass. Fish h |
| 84, 179 | Same.-....... |
| 77, 808 | Fish, Willian II., jr., Searstale, Pa. Coru plan |
|  | Fishburn, E. G. (See Keffer, Peter, assignor.) |
| 76,318 | Fisher, Alfred, Nashua, N. H. Pump |
| 73, 177 | Fisher, Charles A., Geneseo, Ill. Hay knif |
| 82,505 82 8239 | Sisher Charles R Chelsea Mass. . ${ }^{\text {Sam }}$ |
| 73, 789 | Fisher, Daniel, and William Cumming, Oil City, Pa. Car repla |
| 73, 314 | Fisher, D. S., Cedar Spring, Ind. Harvester |
| 76, 617 | Fisher, George B., Chicago, Inl. Brick machine |
| 85, 169 | Fisher, Meury, Aurora, Ind. Self-guarding hoo |
| 76, 618 | Fisher, Isaac, St. Louis, Mo. Lasp |
| 77, 772 | Same...... Vise |
| 81,764 80,715 | Same....-same.................. |
| 80,715 84,870 | Fisher, John, Middletown, Pa. Plow <br> Fisher, John F., assignor to self and Daviel Breed, Green Castle, Pa. Machine for distributing fertilizers |
|  | Fisher, J. H., et al. (Sec Olney, Logan \& Fisher.) |
| 79,461 | Fisher, Major H., Bridgeport, Conn. Machine for making rasps |
|  | Fisher, R. H., Beaver Falls, Pa. Knıfe handle.........................(Design).. |
| 79, 061 | Fisher, R. I., assignor to the Beaver Falls Cutlery Company, West Meriden, Conn. Cutlery |

## Alphabetical list of patentees for the year 1868-Continued.

## No.

85, 296

74, 069
79,062
80, 161

84, 871
73, 790
76, 900
84, 348
75, 257

80,616
74,331
75, 143
75, 539
76, 901

76,902
85, 079
80, 936
83, '770
3, 230
76, 619
79, 646
72, 992
73, 518

78, 795
74, 809
73, 708
79, 063

82, 302

77, 473
77, 360
3, 183

73, 315
72, 993
84, 737

84,102
75, 891
76, 428
82, 818
78,109
77,367
78, 447
2, 861
73, 701
74, 070
74,526
76, 7.34
79, 743
81, 155

Fisher, Ti. H., assignor to the Beaver Falls Cutlery Company, Beaver Falls, Pa. Knife
Fisher, Smith, and William Sharp. (See Howell, Lovi T., assignor.)
Fisher, Thcodore A. and Anson F., Beardstown, Ill. Tunnel exeavator
Fisher, William, and Edmrind W. Quincy. (See Quincy \& Fisher.)
Fisher, W. T., Lenoirs, Tcnn. Bevel square
Fisher, Willian T., Roane County, Tcun. Shoemakers' tool
Fisk, Clark \& Flagg. (See Heath, Henry, assignor.)
Same..... (See Pototsky, Augustus, assignor.)
Fisk, David, and John M. Blodgett, Clyde, N. Y. Shoemakers' beach
Fisk, Georgo C., et al. (See Hitchcock, Robert, assignor.)
Fisk, Henry G., and T. J. Flagg, New York, N. Y. Necktie
Fisk, Henry G., et al. (See Heath, Henry, assig̣nor.)
Fisk, L. B., Loekport, N. X. Wreneh for earriage whecls
Fisk, Milton, Sparta, Tenn. Horse-power.
Fisk, Milton A., assignor to Edward M. Wesson, Springfield, Mass. Marncss trimming
Fisk, Quincy A. (See Smith, Charles B., assignor.)
Fiske, D. A., Delavan, Wis. Churn.
Fiske, Edward R. (See Smart, Hiram F., assignor.)
Fiske, Isaac, Woreester, Mass. Cornet, \&c.
Fiske, Samuel L., Philadelphia, Pa. Tenter-bar for shaping articles of cloth.
Fitch, Elisha S., and James Averill. (Sce Averill \& Fitch.)
Fitch, George, Randolph, N. Y. Churn
Fiteh, L. R. (See Bolinger, J. B., assignor.)
Fithian, Lemucl S., assignor to self, James M. Hopkins, and Jefferson W
Southmayd, East New York, N. X. Deviee for multiplying revolntions around an axis.
........................
Same......Deviee for multiplying motion ol
Edwin
.
Fitz, Edwin M. (See Switzer, John J., assigno
Fitzqerald, Daniel, New Xork, N. X. Fire and burglar proof safe
Fitzgibbons, Manriec, New York, N. Y. Wooden box
same.... Material for the manufaeture of boxes and other artieles. (Reissue) Fitzhenry, Edward, Boston, Mass. Machine for dressing and seouring leather. Fitzhugh, B. G., Ellieott City, Md. Car platform bridge
Fitzhugh, B. G., assignor to sclf and Willian G. Maxwell, Sykesville, Md.
India-rubber door spring.
Fitzpatrick, Luke, and Jaeob Sehinneller, Temperanceville, Pa. Chain maehine. Fitz Simmons, John H., et al. (Sec Camfield, Hampton R., assignor.)
Fitzsimmons, Thomas. (See Ofeldt \& Almqvist, assignors.)
Flad, Henry, St. Lonis, Mo. Watcr meter-
Flagg, James H., Perkinsville, Vt. Frame for carriage tops.
Flagg, J. Mclledge, Providence, R. I. Stamp moistencr.
Flagg, Lysander, and W. Uhl. (See Sutton, Sedgwiek A., assignor.)
Flagg, Thomas J., New York, N. Y. Neektie and watch guard eombined
Flagg, T. J., and Henry G. Fisk. (Sce Fisk \& Flagg.)
Flagg, Thomas J., et al. (See Heath, Henry, assignor.)
Flagler, T., and W. B. Hale. (See Hale \& Flagler.)
Flanders, Frederiek, Franklin, N. H. Whip goad.
Flanders, Joseph F., deceascd, by Sarah W. Flandors, administratrix. Newburyport, and Jeremiah A. Marden, Boston, Mass. Leathor-splitting maehine.

Cxtension)
Flanders, W. A., Shelby, Ohio. Bcehive.
Flannigain, Andrew, Trappe, Md. Ieo breaker
Flansburgh, John D., assignor to Thomas, Roberts, Stevenson \& Company. Philadelphia, Pa. Cook-stove platc. (Autedated Lug. 11, 1868) -.......(Design) Flansburgh, John D., and William Johnston. (See Johnston \& Flansburgh.) Flather, Edward, Bridgenor't, Coun. Baggage eheek
Fleckenstine, Leonard, Manor Township, Pa. Holder for gun scrubber Fleiseh, J. H., and H. Bendix. (Sec Bendix \& Fleiseh)................ (Reissue.) Fleisehel, Charles, and William C. Bussey, San Franeiseo, Cal. Door loek. Fleiseher, Kund J. (See Kupfer, Carl, assignor.)
Fleming, Abel, and Edward Bevan. (See Beran \& Floming.)
Fleming, Caroline F., Belleville, Ill. Washing machine. (Antedated Oct. $2{ }^{2}$ 冬 1868)

Fleming, Harvey, Vienna, N. J. Wood-boring maehine.
Fleming, Ira W., et al. (See La Baw, Hutehinson \& Fleming.)
Fleming, James, assignor to Garduer \& Fleming, Philadelphia, Pa. Adjustable seat for earriages
Fleming, Joseph I3. and Daniel J., Xenia, Ohio. Construction of powder kegs.
Fleming, J. H., Groton, Ohio. Churn
Fleming, Ransom, Vietory, N. Y. Double sliding or turning gate.
Fleming, Richard C., Philadelphia, Pa. Vent for barrels.
Flesehe, Charles A. and John Perpente, New Haven, Conn. Searf pin. (Design) Flesh. William, and J. J. Roeper. (See Smith \& Brown assignors).. (Desion) Fletcher, Addison C., New York, N. Y. Bale fastener. (Antedated Jan. 16, 1868) -

Same...... Cotton-bale tie. (Antedated Jan. 23, 1868).
Same........Grate bar
Sime........ Samo.
Same. ....... . same.
Samo ..... same

Date.

Dec. 29, 1868.

## Feb. 4, 1868.

June 23, 1868 July 21, 1868.

Dee. 15, 1868.
Jan. 28, 1868.
Apr. 21, 1868.
Nov. 24, 1868.
Mar. 10, 1868.
Aug. 4, 1868.
Feb. 11, 1868.
Mar. 3, 1868.
Mar. 17, 1868.

Apr. 21, 1868.
Apr. 21, 1868.
Dee. 22, 1868. Aug. 11, 1868. Nov. 3, 1868.
Dec. $15,1868$.
Apr. 14, 1868.
July 7, 1868.
Jan. 7, 1868.
Jan. 21, 1868.

June 9, 1868
Feb. 25, 1868.
Jan. 28, 1868
June 23, 1868.

Sept. 22, 1868.

Aug. 28, 1868.
Мау 5, 1868.
Apr. $£ 8,1868$
Sept. 1, 1868.
Jan. 14, 1868.
Jan. 7, 1868.
Dec. 8, 1868.

Nov. 17, 1868
Mar. 24, 1868.

Apr. 7, 1868
Oct. 6,1868.
May 26,1868.
Apr. 28, 1868.
Jume 2, 1868.
Jan. 28, 1868 .
Jan. 28, 1868.
Feh. 4, 1868.
Feb. 18, 1868.
Apr. 14, 1868.
July 7, 1868.
Aug. 18, 1868 .
No. Name, residerice, and invention or discovery.

Date.

Nov. 17, 1868.
Aug. 11, 1868.
Feb. 11, 1868
Feb. 11, 1868.
Nov. 3, 1868
Jan. 14, 1868.
July 7, 1868.
July 14, 1868
Mar. 3, 1868
Mar. $3,1868$.
Apr. 14, 1863.
May 12, 1868.
Mar. 24, 1868.
Mar. 24, 1868
Dec. 15, 1868
Jime 16, 1868.
Sept. 29, 1868.
Dec. 22, 1868
July $28,1868$.
Dec. 22, 1868
Apr. 14, 1868.
Juue 9, 1868.
Sept. 29, 1868.
July 7, 1868.
July 7, 1868
July 7, 1568.

May 26, 1868
Nov. 3, 1868.
Dec. 22, 1868.

Feb. $25,1868$.
Apr. 21, 1868
Ang. 11, 1868.
Aug. 18, 1868.
May 5, 1868.
Apr. 21, 1868.
Nov. 10, 1868.
July 14, 1868
July 14, 1868.
Nov. 17, 1868.
Fcb. 25, 1868.
Oct. 6, 1868.
Sept. 1, 1868.
Apr. 14, 1868.
Aug. 4, 1868.
Sept. 15, 1868.
Aug. 11, 1868.
Oct. 13, 1868.
Feb. 4, 1868.
Apr. 7, 1868.
Apr. 7, 1863.
Jan. 21, 1868.
Aug. 18, 1868.
Juиe 16, 1868
July 28, 1868.
Mar. 31, 1868
Dec. 29, 1868.
June 3, 1868.

## Alyhabetical list of patentees for the year 1868-Continued.

## No.

82, 820
76,068
76, 905
84, 103
79, 746
84, 484
77, 970

83, 949
78,950
77, 023
75, 258
77, 474
73, 963
84, 687
78,201
75, 403
76, 069
83, 842
81, 617
81,765
83, 616
83, 617
83, 618
83, 619
76, 070
77, 603

S0, 860
85, 397
77, 810
76, 737
\%\%, 024
78, 797
30, $8: 2$
30, 716
77, $4^{175}$
73, 519
3, 043
80, 468
79, 336
73.792

73, 178
75, 259
80, 937
79, 220
82,613
75,146

75, 892
73, 964
82, 333

83,703
74, 214
77, 182
83, 146
76,980
75, 893
79, 747
73, 884
78, 585

Name, residence, and invention or discovery

Foote, Charlcs G., Indianapolis, Ind. Rotary cngine. (Antedated Sopt. 21, 1868) Foote, E. N., et al. (See Foote, Monroe B., assignor.) Foote, James H., Pittsfield, Mass. Slate frame

$$
\begin{aligned}
& \text { Same..... Dinner pail } \\
& \text { Same..... Candle eap }
\end{aligned}
$$

Foote, M. B., Northampton, Mass. Fastening for gloves
Foote, Momroe B., assignor to self, William M. Gaylord and E. N. Foote, Northampton, Mass. Door loek.
Footner, William, assignor to William J. Footner, Chicago, Ill. Consolidating eoal dust for fuel.
Forbes, David. (See Gerard, Gcurge L., assignor.)
Forbes, Dunean, Chicago, Ill. Folding lonnge..
Forbes, Henry I., Cambridge. Mass. Mosquito killer.
Forbes, H. H., and H. C. Sears, New Bedford, Mass. Carriage seat
Forbes, Marshall L., assionor to the Meriden Britannia Com seat.............. den, Conn. Plating spoons and other articles.
Forbes, Simeon B., New Cumberland, West Va. Double-shovel eultivator.
Forbush, Walter H., Buffalo, N. Y. Numbering maehine...
Force, James P. and John E., Constantine, Mich. Fastening for horse eollars. (Antedated Nov. 21, 1868)
Ford, A. H., Williamsfield, Ohio. Device for upsetting tires
Ford, Charles, Forest City, Ill. Corn husker
Ford, Charles S., Philadelphia, Pa. Gas burner
Forl, Edward, San Franeisco, Cal. Quartz crusher
Ford, Elias T., Stillwater, N. Y. Frietion elutch.
Samc .... . . Potato digger.
Same.-..... Manufaeture of paper
Same...... Machinery for the manufacture of paper
Same...... . Vrencli
Sanıe....... Finger bar for harvesters
Ford, Mrs. John, SaIem, Oregon. Back and abdominal supporter
Ford, J. B. (See Babbs, J. S. L., assignor.)
Ford, Jolm F., Boston, Mass. Window safety guard. (Antedated April 28,1868 )
Ford, Johnson P., and Samuel Belden. (See Belden \& Ford.)
Ford, P. C. (See Howell, Edward, assignor.)
Ford, Samuel, and Albert A. Freeman. (See Freeman \& Ford.)
Ford, William H., J. D. Bruno, and I. C. Garke, New Orleans, La. Distilling spirits from grain.
Ford, Wm. H., and Samuel Logan, assignors to Wheclock, Finlay \& Company, New Orleans, La. Disinfeetant, or ozone generator Ford, William S., Clinton, Ill. Bridle bit..
Foreman, Daniel and Miehael, Dalton, Ohio. Draught bars
Foreman, E. L., Rantoul, Ill. Ditching maehine.
Foreman, Johm, Pottstown, Pa. Truss framed bridge
Forester, L. B., Clyde, Mich. Hose eoupling
Forgy, S. P., Allensville, Ky. Beehive
Forker, William H., Meadville, Pa. Paint brush
Formhals, Ferdinand, San Franeiseo, Cal. Maehine for collecting and eondensing metallie vapors
Same
Fornerook, Henry, Watertown, Wis. Hop-pole cleaner
Fornerook, Henry, F. J. Shepperd, and Andrew Garton, Watertown, Wis. Hop pieker
Forney, Emanuel, Fishersville, Pa. Harrow
Forrest, David, Eastport, Maine. Sewing maehine
Forrest, John, assignor to self, John Archibald, and Johu Taylor, Lawrence, Mass. Maehinery for printing yarn.
Forshee, Walter, and Jesse L. Judd, Marathon, N. Y. Machine for tinners' use Forsyth, James B., assignor to self and John H. Cheever, Boston, Mass. Lining Hexible and other hose and tubes with India-rubber, \&e
Forsyth, James I'., Wheoling, West Va. Maehino for dressing barrel hoops
Forsyth, O., and J. H. Truex, Rochester, N. Y. Weighing scale. (Antedated Feb. 20, 1868)
Fort, Cornelius V. (See Hergesheimer, George, assignor.)
Fort, Cornelius V. (See Hergesheimer, George, assimnor.) Fortier, John, Fairport, N. Y. Car coupling.
Fory, M. R., New York, N. Y. Maehine for felling trees
Fosdiek, Cliarles R. (See Maltby, Benj. K., assimor.)
Fosdiek, George TV., and Nathai Dewey. (See Dewey \& Fosdiek.)
Fosdiek, Levi, assignor to David Reigel, Tiskilwa, Ill. Plow
Fosket, Willian, assignor to the Meriden Cutlery Company, Meriden, Conn. Apparatus for grinding eutlery
Foss, George F., assignor to self and Samuel C. Hopkins, East Boston, Mass. Bean-pot lifter and carrier
Foss, Maria J., Charlestown, Mass. Combined skirt and hose supporter........ Foster, Alfred S., Indianapolis, Ind. Steam generator.
Foster, Azariah, and Moses Leavitt. (See Leavitt \& Foster.)
Foster, Benjamin W., assignor to F. L. and C. L. Sheldon, Auburn, N. Y. Maehine for making earriage axles.
Foster, Caleb, Wappinger's Falls, N. Y. Enameler motal comb
Foster, Caleb, assignor to Elias Brown, Wappinger's Falls, N. Y. Comb.
Sane...... Die for cntting the teeth of metallic combs.

Date.

## Oct. 6, 1868

Mar. 31, 1868
Apr. 21, 1868.
Nov. 17, 1868
July 7, 1868.
Dec. 1, 1868
May 19, 1868.
Nov. 10, 1868
June 16, 1868
Apr. 21, 1868.
Mar. 10, 1868
May 5, 1868
Feb. 4, 1868.
Dec. 8, 1868.
May 26, 1868.
Mar. 10, 1868.
Mar. 31, 1868
Nov. 10, 1868
Sept. 1, 1868
Sept. 1, 1868
Nov. 3, 1868
Nov. 3, 1868
Nov. 3, 1868.
Nov. 3, 1868
Mar. 31, 1868.
May 5, 1868.

Aug. 11, 1868.
Dee. 29, 1868.
May 12, 1868.
Apr. 14, 1868.
Apr. 21, 1868.
June 9, 1868.
Aug. 11, 1868.
Aug. 4, 1868.
May 5, 1868.
Jan. 21, 1868.
July 21, 1868.
July 28, 1868.
June 30, 1868
Jan. 28, 1868.
Jan. 7, 186\%.
MLar. 10, 1868.
Aug. 11, 1868.
June 23, 1868.
Sept. 29, 1858.
Mar. 3, 1868.
IIar. 24, 1868.
Feb. 4, 1868.
Sept. 22, 1868.

Nov. 3, 1868.
Feb. 11, 1868
Apr. 28, 1868
Oct. 20, 1868
Mar. 31, 1868.

Mar. 24, 1868
July 7, 1868.
Jan. 28, 1568
June 2, 1868.

## Alphabetieal list of patentees for the year 1868-Continued.



Date.

Jaly 14, 1868
Apr. 28, 1868
Dec. 15, 1868
Dec. 29, 1868
Oct. 13, 1868
Nov. 24, 1868.
Sept. 22, 1868
Sent. 22, 1868
Nov. 3, 1868
Nov. 17, 1868
Nov゙. 17, 1868
Dec. 1, 1868

May 26, 1868
May 5, 1868
Dec. 8, 1868
Feb. 11, 1868
Apr. 14, 1868
Oct. 27, 1868
Dec. 8, 1868
Dec. 15, 1868
Mar. 10, 1868.
May 19, 1868.
Oct. 27,1868
June 30, 1868
Ang. 18, 1868
Apr. 28, 1868

Apr. 28,1868
Apr. 7, 1868
June 2, 1868
Mȧr. 3, 189s
Apr. 21, 1 e58.
Sept. 8,1868.
Mar. 31, 1868.
Ang. 18, 1868
May 19,1863
July 14, 1868 Oct. 6, 1868 Juиe 30, 1868 Fel. 11, 1868 Oct. 6, 1868. Aug. 18, 1868 Jan. 21, 1868

Mar. 17, 1868. Sept. 15, 1868 Sept. 8, 1868
Aug. 11, 1868

Apr. 21, 1868.
June 16, 1868
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July 7, 1868.

Ang. 4, 1868
Dee. 1, 1868
Apr. 14, 1868
Nov. 17, 1868
Scpt. 29, 1868
Dec. 8, 1868

Jau. 7, 1868.
Apr. 28,1868
Feb. 18, 1868

## Alphabetieal list of patentees for the year 1868-Continued.

## No.

79, 337
83, 147
74,336
81, 766
83, 271
74, 072
75, 746
73, 087
77, 026
5, 269
3, 299
80, 158
81, 488
83, 620
79, 111
81,993 Frazer, Kasson, Syracuse, N. Y. Welge buekle for harness
73, 885
84, 104

73, 793
73, 963
84, 485

79, 968
76, 431
75, 405
74, 811
83, 272
74, 527
78, 658
80, 717
85, 223
3, 243
78, 448
85, 224
76, 432
78, 869
82, 104
73, 709
85, 376
2,898

80,345

80, 718
80, 862

81,356
73, 710
82, 934
82, 614
77, 271

83,148

84, 739

73, 966
74, 904
78,586


## Date

June 30, 1868.
Oct. 20, 1868. Feb. 11, 1868.

Sept. 1, 1868.
Oct. 20, 1868.
Feb. 4, 1868.
Mar. 24, 1868.
Jall. 7, 1868.
Apr. 21, 1868.
Dee. 1, 1868.
Dec. 29, 1868. July 21, 1868. Aug. 25, 1868.
Nov. 3, 1868.
June 23, 1868.
Sept. 8, 1868.
Jan. 28, 1868.
Nov. 17, 1868.

Jan. 28, 1868
Feb. 4, 1868.
Nov. 24, 1868.

July 14, 1868. Apr. 7, 1868

Mar. 10, 1868.
Feb. 25,1868
Oct. 20,18 8
Feb. 18, 1868
June 9, 1868
Aug. 4, 1868
Dec. 22, 1868
Nov. 17, 1868
June 2, 1868.
Dec. 22, 1868
Apr. 7, 1868
June 16, 1868
Sept. 15, 1868
Jan. 28, 1868.
Dee. 29, 1868.
Mar. 17, 1868
July 28, 1868.

Aug. 4, 1868.
Aug. 11, 1868.
Aug. 25, 1868.
Jan. 28, 1868
Oct. 13, 1868.
Sent. 29, 1868.
Apr. 28, 1868.

Oct. $20,1868$.

Dec. 8, 1868
Feb. 4, 1868.
Feb. 25, 1268.
June 2, 106\%

## Alphabetical list of patentecs for the year 1868-Continued.

No.

82,615
$74,9 \mathrm{~J}$
80,938
i8, 368
2, 834
76, 739
3, 221

73,529
84, 912
74,812
74, 073
78, 731
80,939
73, 967

73, 963
80, 719
73, 316
73, 521
74,906
78, 659
80, 469
3, 135
74, 813
77, 027
75,587
81,541
81, 619
79, 969
84, 542
80, 540
75, 260

77, 972
83, 950
81, 357
81, 489
76, 071
81, 486
74,814
79, 648

81, $76 \%$
33, 273
85,377

80,162
82, 216
82,702
74,815
81, 943

76,740
78,952
78, 798
73, 074

Friseh, John, Albany, N. X. Kitehen implement
Fritz, Herman, Cleveland, Ohio. Elcetro-medieal battery
Frost, A., Seymour, Ind. Apple eorer and cutter
Frost, Henry S., and Charles M. Minor: (See Minor \& Frost.)
Frost, Isaae N., Peoria, M1. Churn
Frost, Pinekney, Springfield, Vt. Scythe fastening $\qquad$
Frost Ther (Reissuc) per for shifting belts.
Fry, Henry C., assignor to sclf, Frank Senple, and John D. Reynolds, Pittsburg, Pa. Ornamentation of glassware.
$\qquad$ . (Design)
Fry, H. C., et al. (See Cutter, Thomas, assignor.)
Fry, John, Brookfield, Ill. Sawing machine.
Fry, John, Latrobe, Pa. Muzzle for shot guns
Fry, John C., Siduey, Ohio. Bed bottom.
Fry, J. H., and N. W. Hess. (See Hess \& Fry.)
Fry, Olney, jr., Albany, Oregon. Se ding maehine
Fry, William T., Nerv York, N. Y. Breast pump -
Same....... Flask or bottle.
Fry, William T., assignor to George II. Jones and Henry C. Berlin, New York N. Y. Wetting or wiping instrument for slates, \&e. (Antedated Jan. 23,1868 )

## Same.

same. (Antedated Jan. 24,1868 )
Frye, John F., Lowell, Irass. Ventilator.
Fryer, Robert MI., assignor to the Universal Pump and Manufaeturing Company, New York, N. X. Pump.
Fryer, Robert M. and Andrerr R., assignors to the National Gas Light Company, New York, N. Y. Manufacture of illuminating gas
Fryer, William I., assignor to self and John P. Witlock, West Troy, N. Y. Stove hearth
Fuehs, G., and J. Luigart, Logansport, Ind. Beer eooler. .
Fuel Saving Furnaee Company. (Sec Babbitt, J. L., assignor.)
Fuhrmanm, Henry G., Brooklyn, E. D., N. Y. Adjustable filter for faucets.....
Fulford, John H., et al. (See MeKnight, William, assignor.)
Fuller, Albert, New York, N. Y. Fancets.
(Rcissue)
Samo..... (See Buckland \& Daniels, assiguors.)
Fuller, Andrew, and Louis P. Reichert, Buffalo, N. Y. Refrigerator
Fuller, B. G., Baltimore, Md. Hydrant...
Fuller, C. W., Earlville, 11 . Culinary vessel
Fuller, Daniel, and Delos Swain, Oakwood, Mich. Land roller. (Antodated Nov. 28, 1868)
Fuller, Frank, New York. N. Y. Garden implement. (Antedated May 5, 1868)
Fuller, Frank H., South Boston, Mass. Lamp burner
Fuller, Frank II., and O. S. Severance, South Boston, Mass. Lamp-wick tubo
Fuller, George P., Philadelphia, Pa. Washing and wringing machine.
Fuller, Gny P., Adrian, Mich. Knitting maehine $\qquad$
(Reissue.)
Fuller, Henry W (S'e Rose, Isract M., assignor)
Fuller, Hiram. (Sce Densmore, J. A., assignor.)
Fuller, H. W., New York, N. X. Creasing apparatus for sewing machines. (Antedated May 5, 1868)
Fuller, II. W., Brooklyn, N. Y. Tuck creaser for sowing machines. (Antodated May 11, 1868)
Fuller, Jin B., Norwich, Conn. Machine for drawing and spinning cotton.....
Fnller, Jim B., assignor to self, James P. Upham, and Edwin T. Rice, Norwich, Conn. Drawing fibrous substances
Fuller, Leonard F., Providence, T. I. Steam-engine governor
Fuller, Levi K., and Heury K. White, assignors to J. Estey \& Company, Brattleboro, Vt. Reed musical instrument
Fuller, Merritt B., Sanborn, N. Y. Hay raker and loader.
Fuller, Myron S., and Hiram Russell. (See Russell \& Fuller.)
Fuller, Peter J., Clarksville, N. Y. Hop-vine support
Foller, Thomas Richard and Samuel S. (See MeMturray, James S., assignor.)
Fuller, Warren \& Company. (Sce Ifarwood, Luther WV., assignor.) (Design.)
Fuller, Willard II., Chicago, Ill. Apparatus for amalgamating gold and silver. (Antedated Ang. 28, 1868).
Fullerton, Frank, Williamsport, Pa. Tonic bitters
Fullerton, George A., Lrmn, Mass. Steam-pipe coupling for railroad ears.
Fulmer, George W.. and Genre W. Bell. (See Bell \& Fulmer.)
Fulton, A., and T. S. Huntington. (See Huntington \& Fulton.)
Fulton, John A., at al. (See Cullen, Johu B., assignor.)
Fulton, Lorenzo, Edinbure, Ind. Low-water indicator for steam generator.
Funk, Elliot H., Newark, Ohio. Churn dasher.
Funke, Herman. (Sec Morgenstern, Wm., assignor.)
Funkhouser, Joseph, Rockingham County, Va. Abdominal supportor
Funston, A. C., Philadelphia, Pa. Toy-
Furber, Charles, England. Dressing-glass reflcetor
Furbash \& Gage. (See Quinn, W. J., assignor.)
Same...... (Sce Knowltou, Charles M., assignor.)
Furman, O. P., Addison, N. X. Wood-planing machine
Firman, William II., Maspetli, N. Y. Pisciculture
Furney, Elliott E., Chicopee, Mass. Caster for furnituro
Fuselier, Alfred A., Algiers, La. Ditching machine
Fyler, O. R., and Charles Benedict. (See Benedict \& Fyler.)

## Date.

Sept. 29, 1868
Feb. 25, 1868.
Aug. 11, 1868.
May 26, 1868
Jan. 14, 1868.
Apr. 14, 1868
Nov. 3, 1868.
Jan. 21, 1868
Dee. 15, 1868.
Feb. 25, 1868.
Feb. 4, 1868.
June 9, 1868
Aug. 11, 1868.

Fel. 4, 1868
Fob. 4,1868.
Ang. 4, 1868
Jan. 14, 1868.
Jan. 21, 1868.
Fob. 25, 1868.
June 9, 1868.
July 28, 1868.
Sept. 22, 1868.
Fob. 25, 1868.
Apr. 21, 1868
June 2, 1868.
Dec. 1, 1868
Sept. 1, 1868.
July 14, 1868
Dee. 1, 1868
Ang. 4, 1868.
Mar. 10, 1 ع68.

May 19, 1808
Nov. 10, 1868
Aug. 25, 1868.
Aug. 25, 1868
Mar. 31, 1868.
Dee. 1, 1868.
Feb. 25, 1868.
July 7, 1868.

Scpt. 1, 1868
Oct. 20, 1868.
Dec. 29, 1868

July 21, 1868.
Sept. 15, 1868
Oct. 6, 1868.
Fro. 25, 1868
Dec. 15, 1808.

Apr. 14, 1868.
June 16, 1868.
June $9,1868$.
Feb. 4, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 82, 217 | Gabriel, George, assignor to self and Philip Wisenberger, Pittsburg, Pa. Apparatus for detaehing horses from carriages. |
|  | Gaffucy, Milton, and Levi Black. (See Black \& Gaffney.) |
| 83, 373 | Gaffney, Thomas J., and Charles H. Dunks, Detroit, Mich. Spring-bed bottom.. Gage \& Furbush. (Sce Quinn, W. J., assignor.) <br> Same...... (Sec Knowlton, Charles H., assignor.) |
| 76 | Gage, C. W., Homer, N. Y. Fruit gatherer.......................................... |
| 3,128 | Gage, William, assignor to self and Audrew Whitclcy, Buffalo, N. Y Har- |
| 3,289 | Same Harvester ............. ..................... (Division E, reissue) |
| 73,794 | Gail, G. W., Baltimorc, Md. |
|  | Gaillardon, Jacques. (See Rivot, Louis Edouard, assignor.) <br> Same............................... same. <br> Same................................ same. <br> Same............................... same. |
| 84, 349 | Gaines, James W., Clarksville, Texas. |
| 74, 679 | Gaines, Riehard, and Melchi Scott, Fairfield, Iowa. |
| 76, 622 | Gaines, Robert John, Portland, Conn. Hose eoupling |
| 85, 299 | Gaines, Samuel M., Glasgow, Ky. Method of teaching the rudiments of chem- |
| 76,433 | Gaither, Joln C., Somerset, Pa. Machine for printing addresscs on newspa- |
| 80,720 | Galbraith, Edward A., Boston, Mass. Compound for cxtinguishing firc.......... |
| 79, 221 | Galbraith, Edward A., assignor to self and Paul P. Todd, Boston, Mass. Lamp burner |
| 81,159 | Gale, D. A. T., Poughkcepsie, N. Y. Roaster for nu |
| 79,464 | Gale, Horace P., Washington, Vt. Manufacture of sugar .............. |
| 78,538 | Galc, James M, and Irving M. Avery, New York, N. Y. Cooking app |
| 83, 274 | Gale, Morgan, Mexico. Construetion of piekaxes <br> Gale, Warren, Peekskill, N. Y. Straw eutter ........................... (Extension). <br> Same................................. same.. <br> (Extension) |
| 74,33\% | Gallagher, Eugene, Brooklyn, N. X. Device for trans |
| 77, 272 | Gallagher, Willian, Shullsbury, Wis. Plow |
| 81,621 | Galli, Joseph, San Franciseo, Cal. Machine |
| 65, 894 | Galligan, Charles E., Paw-Paw, Mieh. Stump extra |
| 76, 741 | Galusha, W. M., assignor to sclf and N. H. Batehcller, Arlington, Vt. Adjustable seroll index for gear-eutting machines |
| 84, 874 | Gamage, Theodore A., Boston, Mass. Menstri |
| 74, 680 | Gamble, G. W. C., Millersburg, Iowa. Merlieal eompound. Gambrill, Horatio N., Baltimore, Md., and Singleton F. Burgee, deceased, by Thomas D. Bond, administrator, Washington, D. C. Carding machine........................................... (Diselaimer). <br> Same same ............................................ (Extension). |
| 80, 619 | Ganiard, E. G., New York, N |
| 77,028 | Ganney, Hcnry, Louisville, Ky. Watch k |
|  | Gano, J. H. (See Snell, Daniel, assignor.) |
|  | Same. M. Milwarkee, Wi. ${ }^{\text {Sam. Bag tic. (Antc }}$ |
|  | Same......New York, N. Y. Hand lamp. |
| 73, 522 | Gano, T. M., Allegheny City, Pa. Brick machine. (A |
|  | tsburg, Pa. Briek m |

Date.

Sept. 15, 1868
Oet. 27, 1868.

Apr. 7, 1868
Sept. 22, 1868 Nov. 10, 1868 Jan. 28, 1868.

Nov. 24, 1868.
Felo. 18, 1868
Apr. 14, 1868.
Dec. 29, 1868.
Apr. 7, 1868 Aug. 4, 1868

June 23, 1868 Aug. 18, 1868 June 30, 1868 June 2, 1868
Oct. 20, 1868
Feb. 18, 1863 July 8, 1868 Feb. 11, 1868. Apr. 28, 1868 Sep. 1, 1868 Mar. 24, 1868

Apr. 14, 1868
Dee. 15, 1868 Feb. 18, 1868

Aug. 7, 1863.
Aug. 18, 1868
Aug. 4, 1868
Apr. 21, 1868

Mar. 3, 1868
Nov. 3, 1868 Jan. 21, 1868 July 28, 1868

Mar. 31, 1868
June 16, 1868
Dee. 15, 1868
July 7, 1868
Mar. 10, 1868
Oct. 6, 1868
Sept. 8, 1868
Fcl. 4,1868
Dee. 8,1868
June 16, 1868

Aug. 4, 1868
Mar. 31, 1868
Mar. 31, 1868.
Aug. 11, 1868
Dee. 22, 1868.
Jan. 7, 1868
Apr. 14, 1868
Feb. 25, 1868
Scpt. 22. 1868
Apr. 28,1868
May 19, 1868
Aug. 4, 1868

# Alphabetical list of patentecs for the year 1868-Continued. 

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 82, 935 | Garfield, Joel, Groton, Mass. Ratchet and pawl mechan |
| 76, 742 | Garibaldi, G. G., Buffalo, N. Y. Mosaic floor |
|  | Garlinghouse, George B. (See Cluxton, T. M., assignor.) |
| 76,743 | Garlinghouse, George B., and J. C. Moore, Madison, Ind. Hay raker and loader |
| 79, 112 | Garlinghouse, George B. and Cyrus B., North Madison, Ind. Harvester pitman |
| 82, 509 | Garloch, William A., and William D. Richards, Belpre, Ohio. Ice-cream freezer |
| 3, 003 | Garnhart, J. H., St. Louis, Mo. Trade mark ........................... (Design) . |
|  | Garrard, Jephtha. (See Sloop, Hardin, assiguor.) |
| 79,567 |  |
| 85, 300 | Graranic bat |
| 81, 358 | Garretson, Eli H. Ottawa, Ill. Expanding |
| 83, 621 | Garretson, John G., Cincimati, Ohio. Loom. ( 1 |
|  | Garretson, N. C. (See Boyd, James, assignor.) |
| $\begin{aligned} & 78,274 \\ & 82,823 \end{aligned}$ | Garretson, O. S., Buffalo, iv. Y. Window-sash fa |
|  | Garretson, W. C., and Ellwood Draper, assignors to W. C. Garretson, Oskaloosa, Iowa. Branding stamps |
| $\begin{aligned} & 78,799 \\ & 85,440 \end{aligned}$ | Garrett, George, Elizhart, Ind. Cultivator .... |
|  | Garrett, George H., assignor to Richard P. Garrett, St. Lonis, Mo. Molding pipe |
| 74,076 | Garrett, Henry, Richmond, Mo. Butter worker |
|  |  |
|  | Garrigues, R. H., administrator of L. A. Dole, deceased. (See Dole, L. A.). . (Extension.) |
| 73, 711 | Garrison, Wilson, and Charles H. Stevens, Syracuse, N. Y. Halter Same...... (See Stevens \& Garrison.) |
| 83, 951 | Garsed, John, and Clayton Denn, assignors to John Garsed, Frankford, Pa. Machine for packing tea, coffee \&c |
| $\begin{aligned} & 76,907 \\ & 84,622 \\ & 81,621 \end{aligned}$ | Garsed, Joshua, Frankford, Pa. Hand truck.......... |
|  | Same..... Stean-engine register. (A |
|  | h, G. S., Mill Hall, Pa. Wagon a |
|  | Garton, Andrew, et al. (See Forncrook, Shepperd |
| $\begin{aligned} & 83,622 \\ & 83,623 \\ & 75,407 \\ & 84,815 \\ & 73,593 \end{aligned}$ | Garvey, James, and Matthew H. Kimball, San Francisco, Cal. Bell puln |
|  |  |
|  | Garvin, Benjamin, and R. J. Pettibone, Oshkosh, Wis. Joint for pipes |
|  | Garvin, Edward F., New York, N. Y. Instrument for treating fistula, |
|  | Garwood, J. Cr. S., Vermillion, Ill. Harrow, cultivator, and planter com |
|  | Gary, Joseph E., and Joseph H. Monre. (See Moore \& Gary.) Same same. |
| $\begin{aligned} & 74,908 \\ & 83,149 \end{aligned}$ | Gaskill, Melvin J., Pleasant Plain, Ohio. Fence |
|  | Gaskin, Manuah C., Union Vale, N. Y. Plastic com |
| $\begin{aligned} & 78,080 \\ & 83,624 \end{aligned}$ | Gaston, Menry A., Stockton, Cal. Cultivator |
|  | Same. .....Seeding machine |
| $\begin{aligned} & 73,886 \\ & 83,952 \end{aligned}$ | Gaston, J. C., Cincinnati, Ohio. Sto |
|  |  |
|  | Gaston, Robert, and W. C. Rhinehart. (See Rhinehart \& Gaston.) |
| $\begin{aligned} & 83,695 \\ & 83,374 \end{aligned}$ | Gatchell, Joseph, Rahway, N. J. Machine for bending elliptic springs |
|  | Gately, Dennis C., assignor to the New York Bolting and Packing Company, Newtown, Coun. Vuleanized India-rubber belting. (Antedated Oct. 2, 1868) |
|  | Gates, II. II., et al. (See Marris, Aaron B., assignor.) |
| 82, 703 | Gates, Josepli P', Lincoln, Ill. Shaft couplin |
|  | Gates, Thomas. (See Howe, John C., assimnor.) |
| 85, 301 | Gates, William, David J. Lloyd, Frankfort, and Samnel Miller, South Hammond, N. Y., assignors to Willian Gates. Machine for making paper |
|  |  |
| 80, 402 | Gates, William, assignor to self and George W. Homan, Now Haven, Coun. |
| 74, 909 | Apparatus for electro-plating <br> Gathright. J. B., Louisville, Ky. Tree for sile saddles |
|  | Gatliff, John, and Clement Dietrich. (See Cordier, V., assignor.) |
| 75,89578,95380 | Gatlin, William S., and Benjamin R. Hubbard, Green Top, Mo. Gang plow |
|  | Gatling, Richard J., Indianapolis, Ind. Priming metallic cartridge |
| 80, 940 | Gattman, I. M., New York, N. Y. Manufacture of carbonate and other salts of soda |
|  | Gattman, Leonard. (See Reckards, Willia |
| 79, 903 | Gaudin, Clarles, Zoe Granier, and J. Granier, San Francisco, Cal. Fire kindliner |
| 80,06874,3382,911 | Gault, W. C., Ruggles, Ohio. Stock muarl-gate |
|  | Granse, William, Greensboro, Ind. Ditehing machine |
|  | Gautier, C., Washington, D. C. Trade mark . . . . . . . . . . . . . . . . . . . . (Design) |
| 74,339 | Gauweiler, John F., and Jost Stengel, Croton, Mich. Fire alarm |
|  | Gavett, J. W. (See Hatch, Nehemiah L., assimoz.) |
|  | Gavit, Nelson, Philadelphia, Pa. Machinery for cutting paper....(Extension) |
| $\begin{aligned} & 79,064 \\ & 82,510 \end{aligned}$ | Gayhart, Martin, Young America, Wis. Trace buckle |
|  | Gaylord, E. L., Terryville, Conn. Carriage spring |
|  | Gaylord, Willian M., and E. N. Fonte. (See Foote, Monroe B., assignor.) |
|  | Gaynor, Stiles \& Co. (Sce Richmontl, Charles, assignor.) |
| 78,52184,1674 | Gear, Samuel T.. Whitestone, N. Y. Door and window eatch |
|  | Gears, Erans, Harrisburg, Pa. Brick machine |
| $\begin{aligned} & 74,528 \\ & 73,523 \end{aligned}$ | Gebliard, August, Indianapolis, Ind. Spring mattress |
|  | Ge'shart, Lewis, Orangevillo, Ohio. Cide |

## Alphabetical list of patentees for the year 1868-Continued.

No.

76, 624
83, 953
77, 273
73,594
79,748
82, 616
82, 617
84, 105
82, 305
85, 378
82, 105

82, 106
81, 359

84,106

80, 065

77, 973
76, 744
82, 218
73, 242
82, 704
73, 089
73, 795
7\%, 974
80, 471
78, 369
79, 339
76, 321
73, 595
84, $10 \%$

78, 660

78, 732
\%5, 438
82, 398
78, 449
84, 623
2, 963
76, 434
84, 818
79, 650
84, 740

Gecmen, Joseph, Chicagn, 7ll. Apparatus for sprouting malt Same.......Bcer cooler
Geddes, Willian, and Frederiek H. Laforgo. (See Laforge \& Geddes.) Gedney, James E., Petaluma, Cal. Trestle
Gec, Jamcs, and James Hinds. (See Hinds \& Gce.)
Geo, Williain, New York, N. Y. Apparatus for filling syphon bottles Geer, George, Galesburg, 11. Cherry stoner
Gciscr, Petcr, Waynesboro, Pa. Writing table and chair
Samc...... Horse-power .
Gciscr, Peter and Daniel, Waynesboro, Pa. Threshing machine
Geisler, Frederick A., Bristol, R. I. Baloy walker.
Samo....... Mowing machino.
Goissenhainer, Charles A. and George W., Pittsburg, Pa. Liquid meter Geissler, J. L., et al. (See Hictcl \& Geissler.)
Gcist, Joaehim F. C., et al. (See Sebald, Dunlap \& Gcist.)
Genet, E. J., et al. (See Ruggles, Solomon W., assignor) $\qquad$ Genitsen, Henry C. (See Brackett, E. C., assignor.)
Gennert, Thcodore, New York, N. Y. Manufacture of beot sugar.
(Reissue.)

Genseh, Wilhclm August, New York, N. Y. Lamp wick.
Gent, Joseph F. (See Pedrick, Joscph B., assignor.)
Gentncr, Frederick. (See Bauschtliker, F., assignor.)
Genung, Charles V., Du Quoin, Il. Rotary pump
Gcorge, A. M., and Samuel Shepcrd. (See Sheperd \& Georgo.)
Same................................................. same.
Same............................................ . same ................... (Reissue.)
George, Dennis J., and Norman Millington. (See Millington \& George.) (Extension.)
George, John, et al. (See Portcr, Benjamin, assignor.)
George, Robert, Mineral Point, Wis. Furnace for roasting and treating ores..
George, William E., Wrentham, Mass. Machine for pressing hats.
Gerald, Amos S., assignor to B. B. Belchcr, Kendall's Mills, Maine. Curtain fisture
Gerald, George L., Thorndike, Mass. Horseshoe-calking vise
Gcrard, Frank, Lincoln, Ill. Hopper attachment for wagous
Gerard, George L., New Harcn, Conn. Bed bottom.
Gerard. George L., assignor to self and David Forbes, New Haren, Conn. Bucklo. (Antedated Dee. 28, 1868).
Gerdes, Albert, and Julius Reielie, New York, N. X. Barbers' ehair.
Gerdom, E. J., and C. W. Sehindler, Albany, N. Y. Lubricating compound.
Same...... Oil cup for lubrieating shafts.
Same....... Lubrieator.
Same....... Lubrieating eompound
Gerfen, Frederiek, West Hemphill Township, Pa. Hay cutter
Gerhart, P. S., Philadelphia, Pa. Register for railroad cars.
Germann, Michael, Cincinnati, Ohio. Gas cooking apparatus
Gerner, Henry, New York, N. Y. Steam generator
Gorow, Joseph U., Brooklyn, N. Y. Sash lock
Gerrish, George H., et al. (See Capron, E. P. H., assignor.)
Gerry, J. H., and O.P. Rice. (See Rieo \& Gerry.) Gerth, L., and C. Brown. (See Brown \& Gerth.) Gerts, George E., et al. (See Lumbard, Menry, assignor.) Same
Gessner, Ernst, Saxony. Fulling same
Gest, Joseph J., Cineinnati, Ohio. Car spring
(Reissue)
Getty, Andrew C., et al. (See Ruggles, Solomon W., assiguor)
(Reissue.)
Geyer, Lonis A., et al. (See Milloehan, A., assignor.)
Geyser, John B., assignor to Mitchell, Steverisou \& Company, Pittsburg, Pa.
Parlor stove.
(Design).
Gibbons, John, West Troy, N. Y. Tool for turning cylinder rings for cotton gins
Gibbons, T. P., Baltimore, Md. Lamp feeder
Gibbs, A. C., and A. E. Rogers. (See Rust, F. W., assignor.)
Gibbs, D. L., assignor to R. Ball \& Company, Worcestor, Mass. Mortising maeline
Gibbs, D. L., Woreester, Mass. Base of a mortising machine..................................................................... Same...........
Gibbs, Edwin, Painesville, Ohio. Deviee for bending scrolls
Gibls, E. and'O. W., Riohland Center, Wis. Bed bottom
Gibbs, George and William, Canton, Ohio. Singletrce
Gibbs, Gilbert, Fairview, Ind. Farm gate
Gibbs, II. II. (See Herriek, Gcorge W., assignor.)
Gibbs, James E. A., Steel's' Taveri, Va. Door lock
Same......(Sce Hanger, James E., assignor.)
Gibbs, John, Brooklyn, E. D., N. Y. Lamp
Gibbs, Joshua, Canton, Ohio. Maehine for grinding plow castings...........................................
Same...... Plow
Gibbs, Lewis, Canton, Ohio. Bracket shelf and drawer.
Gibbs, Mason, Homer, Mich. Harvester rake
Gibbs, S. F., and George F. Perkins. (See Perkins \& Gibios.)
Gibbs, S. W., Albany, N. Y. Base-burning stove
Gibson, Abram J., assignor to self, Benjanin J. Thurston, and Thomas A. Harrow, Cineinati, Ohio. Mode of construeting the lieating and lighting apparatus on railway ears

## Date.

Apr. 14, 1868
Nov. 10, 1868
Apr. 28, 1868
Jan. 21, 1868
July 7, 1868. Scpt. 29, 1868 Sept. 29, 1868
Nov. 17, 1868.
Sept. 22, 1868
Dee. 29, 1868
Sept. 15, 1868.

Sopt. 15, 1868
Aug. 25, 1868
Nov. 17, 1868

July 21, 1868
June 30, 1868.
Oct. 6, 1.868
May 19, 1868.
Apr. 14, 1868.
Sept. 15, 1868.
Jan. 14, 1868.
Oct. 6,1868.
Jan. 7, 1868
Jan. 28, 1868
May 19, 1868.
Jaly 28, 1868.
May 26, 1868.
June 30, 1868.
Apr. 7, 1868
Jan. 21, 1868.
Nov. 17, 1868.

June 9, 1868.
Oct. 20, 1868.

July 14, 1868.
June 16, 1868.
Sept. 15, 1868.
May 12, 1868.
Sept. 1, 1868.
Dec. $\quad$ \&, 1868.
Nov. 17, 1868.
June 9, 1868.
Mar. 10, 1868.
Sept. 22, 1868.
June 2, 1868.
Dec. 1, 1868.
June 2, 1868.
Ang. 14, 1868.
Apr. 7, 1868.
Dec. 8, 1868.
July 7, 1868.

Dec. 8, 1868.

Alphabetical list of patentecs for the year 1868-Continued.
No.

75, 673 85,225

3, 099
81, 490
80, 066
82, 705
80, 472
80, 4\%2
*9, 970
84,543
-5, 409
82, 395
81, 888
7\%, $0: 9$
7, 030
78, 955
73, 796
76, 435
80, 473
73, 797
75, 896
79, 821
74, 340
72,995
3, 111
53, 969

74,341
82,511
81, 768
80, 941
81, 360
84, 741
80, 723
ع0,541
76, 073
84, 742
83, 705
80, 403
76,074
-79
820
79, 822
85, 441
82, 10 \%
83, 954
7\%, 477

83,150

78, 589
75, 747
82, 706
79, 340
83, 955
81, 622
83, 4 ع2
84, 350
79, 465
82, 399
82, 400
3, 174
74, 077
82, 306
85, 084
84, 108

Giluson, A. J., Cincinnati, Ohio. Broiler
Gibson, A. J., assignor to self and Thomas A. Harrow, Cincinnati, Ohio. Apparatus for purifying and ageing liquors
Gibson, John, jr., Albany, N. Y. Street-car heater.
(Reissue) Samo..... Fucl size indicator Same. . . . . (Sce Sclkirk, Alexander, assignor.)
Gibson, John B., Cincimati, Ohio. Valvo cock....
Gibson, Samucl, Safo Harbor, Pa. Scrubbing brush.
Gibson, Thomas, Rochester, N. Y. Fruit jar
Gibson, W. H., and P. H. Lawler. (See Lawler \& Gibson.)
Gibson, William Walker, North Britain. Apparatus for decorticating and cleaning cereals
Gidly, Robert, Freedom Plains, N. Y. Rock-drilling machine
Cifferd, Charles. (See Loomis \& Johnson, assignors.)
Gifford, Francis M., assiguor to self and John C. Selden, Erie, Pa. Whip lock.
Gifford, Potter \& Company: (See Benjamin, E. H., assignor.)
Gilbert, Charles M., Philadelphia, Pa. Bedstead fastening
Gilbert, Colgate, assignor to J. J. Gilhert, Buffialo, N. Y. Starch soparator Gilbert, D. A., Morristown, Vt. Shoe lacer

Same.... . . Butter tub
Same. . . . . . . same.
Gilbert, Edward F., LYons, N. X. Screen attachment for wash stand Gilbert; Harlow, New"York, N. Y. Register
Gilbert, H. M., and F. Elberson, Ada, Ohio. Hanging eaves troughs
Gilbert, James, W ralnsing, Wis. Corn planter
Gilbert, J., and P. M. Sofield, Newark, N. J. Manufacture of wash bowls. Gilbert, J. C., Galcsburg, H11. Chum.
Gillucrt, John M., Troy, N. Y. Stufting for mattresses, sofas, and seats.
Gilbert, Lucien M., Warren, Mass. Scissors sharpencr
Gillucrt, N. S., assignor to S. B. Rowley, Philadelphia, Pa. Fruit jar. (Reissuo). Gilbert, S. P., Racine, Wis. Pump piston
Gilbert, 'Thomas S., and Thomas B. De Forest. (See De Forest \& Gilbert.) Same
same.
Gilbcrt, William, Catskill, $\overline{\mathrm{N}}$. Machine for cutting turf or sods
Gilluert, Willian, Detroit, Mich. Brick kiht
Gilluert, W. F'., Derby, Conn. Carriage shacklc
Gilbertson, Henry A', New York, N. Y. Hose tender
Gilbut, Samucl H., and John D. Gruncberg. (See Gruncberg \& Gilbut.)
Gilderslecve, Isaac H., White Watcr, Wis. Basc-burning stove
Giles, Joel E., and Willard Fcrry, Mcad's Mills, Mich. Potato diggcr
Gill, Elias, New York, N. Y. Extension-wardrobe framc
Gill, Henry, Mansfield, Ohio. Machine for threshing and cleaning grain
Gill, R. 'T., Ponghkcepsic, N. Y. Combincd hay spreader and cocker
Gill, Scth, San Pablo, and David C. Woods, Sall Francisco, Cal. Ship's davit
Gillan, William M, Mt. Parnell, Pa. Horse hay fork
Gillespic, J. E., assignor to self and Gcorge S. Lincolu \& Company, Fartford, Conn. Governor
Gillespie, Thomas, Panlding Conuty, Ohio. Sorghum cvaporator
Gillett, George D., Mcridian, N. Y. Attaching pad hooks to pads
Gillett, George W., Chicago, Ill. Combincd tank and closet attachment to cooking stoves.
Gillett, H. H., Warsaw, Mo. Mill pick
Gillett, J. C., Holly, Mich. Sawing machine
Gillett, James R., Westficld, Mass. Whip,
Gillett, John H., and George W. Sonthwick. (See Sonthwick \& Gillett.)
Gillett, Lorenzo D. (See Jones, 'T. J., assignor.)
Gillett, Lorenzo D., Rochester, and Henry W. Imman, Detroit, Mich. Rcin holder.
Gillett, Thomas W., dcceased, by Rebccea R. Gillett, administratrix, Chicago, 111. Apparatus for corking lottles
(Extension)
Gillette, George W. (See Kistler, W. F., assignor.)
Gillilan, A. E., Marion, Iowa. Churn
July 10, 1868.
Jume 2, 1868.
Mar. 24, 1868.
Oct. 6, 1868.
June 30, 1868.

Not. 10, 1868.
Sept. 1, 1868.
Oct. 27,1868
Nov. 24, 1868.
Juno 30, 1868.
Sept. 22, 1868.
Sept. 22, 1868.
Oct. 27, 1868.
Feb. 4, 1868.
Sept. 22, 1868.
Dсс. 22, 1868.
Nov. 17, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

## No.

79, 065
82, 512
83, 706
83, 275
79, 823
72, 996
75, 148
83, 151
73, 444

73, 179
77, 274
77,275
82, 707
82, 708
83, 152
81, 769
82, 618
75, 674
77, 276
84, 689
73, 798
77, 478
84, 743
75, 149
83, 276

84, 544

75, 675
79, 749
3, 055
3,163
80,346
76, 184
83, 483
76, 075
2, 912
74, 816
74, 817
77, 184
79, 066
80, 620
82, 108
80, 724
79, 82
78, 733
73, 317
79,75
75, 41
77, 811
85, 37 ?
75, 897
73, 524

Name, residence, and invention or discovery

Ginther, Jacob, Mier, Ill. Horse rake
Ginther, Jacob, assignor to self, William Friend, and William Seibert, Mier, IIl. Combined roller and harrow
Girond, Henry, France. Gas regulator
Girty, Georgo, Rainier, Oregon. Lubricator for steam engines
Girvin, Kelly, and John S. Thomson. (See Thomson \& Girvin.)
Gisborne, Frederick N., and Herbert Allman, England. Lamp-chimney attachment.
Gish, George W., and William H. Ferguson, Davicss County, Ky. Medicine for the cure of hog cholera
Gish, Jolin J., Milton, Ohio. Hoc-snout slitter
Gitchell, John M., assignor to J. F. Morse, Haverlinl, N. II. Seed planter
Gitt, Daniel D., Arendtsville, Pa. Running gear for vchicles
Given, John, et al. (See Sloan, John, assignor.)
Gladding, A. L., and George A. Blair. (See Blair \& Gladding.)
Gladding, C. E., Troy, Pa. Horse hay fork
Gladding, C. F., and Henry A. Ellis. (See Ellis \& Gladding.)
Gladding, James W., Normal, Tll. Clothes-line holder
Glander, Deterick, et al. (See Schlingman, Glander \& Campbell.)
Glanding, James, assignor to self, David M. Wilson, and Edward S. Lowry Philadelphia, Pa. Manufacture of packing for steam engines.
Glasgow, H. C., Cleveland, Ohio. Car coupling
Same.................................. same.
Glasgow, William, jr., and John G. Wood, St. Lonis, Mo. Manufacture of shot
Glasser, Frank, Mystic Bridge, Conn. Drill
Glasson, Sammel, New York, N. Y. Reamer and tap
Gleason, Asa E., Newton, Mich. Grain platform for harvesters. (Antedated March 9, 186\%)
Gleason, Christopher C., assignor to self and L. M. Kimball, Wauconda, Ill Spring and body brace for vehicles
Gleason, E. P., New Xork, N. Y. Gas-lighting device
Gleason, Joel, Whitestonc, N. Y. Construction of soldering irons
Gleason, O. T., Farmington, Maine. Velocipede
Date.

June 23, 1868.
Sept. 29, 1868.
Nov. 3, 1868.
Oct. $20,1868$.

July 14, 1868.
Jan. 7, 1868.
Mar. 3, 1868.
Oct. 20, 1868.
Jan. 21, 1868.

Jan. 7, 1868.
Apr. 28, 1863.

Apr. 28, 1868.
Oct. 6, 1868.
Oct. 6, 1868.
Oct. 20, 1868.
Sept. 1, 1868.
Sept. 29, 1868.
Mar. 17, 1868.
Apr. 28, 1868.
Dec. 8, 1868.
Jan. 28, 1868.
May 5, 1868.
Dec. 8, 1868
Mar. 3, 1863.
Oct. 20, 1868.

Dec. 1, 1868.
Glenn, J. A., West Middlesex, Pa. Horse lay fork
Glenn, J. R., and John T. Ewan. (See Ewan \& Glenn.)
Glidden, Carlos, et al. (See Sholes, Glidden \& Soule.)
Same................................ same.
Glimsetal, M. T., and George 1. Pierce. (See Pierce \& Glimsetal.)
Glover, A. B., Birmingham, Conn. Machine for heading bolts $\qquad$
Same...... Nut machine
. (Reissue.)
Gleim, J. H., St. Louis, Mo. Binding mereantile books
Glen, Eugene. (See Dick, Joseph, jr., assignor.)
Same. same.
Same.

Mar. 17, 1868.
July 7, 1868.
July 28, 1863.
Oct. 20, 1868.
July 23, 1868.
Mar. 31, 1868.
Oet. 27, 1868.
Mar. 31, 1868.
Feb. 4, 1868.
Feb. 25, 1863.
Fob. 25, 1868
Apr. 28, 1868.
June 23, 1868.
Aug. 4, 1863.
Sept. 15, 186\%.
Ang. 4, 1868.
July 14; 1863.
June 9, 1868.
Jan. 14, 1868.
July 7, 1863.
Mar. 10, 1868.
May 12, 1868.
Dec. 29, 1 с 68.
Mar. 24, 1268.
Jan. 21, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

85, 226
85, 085

78, 734
74, 910
80, 280
74,215
73, 596
81, 269
77, 277
80, 474
81, 270
81, 995
82, 307
81, 153

79, 825
80, 621
77, 278
82, 825
75, 541
80, 347
81, 770
78, 275
77, 479
80, 475
82, 513
80, 067
78, 450

72,997
74,078
81, 080
81, 160
82, 514
73, 970
3, 141
83, 626
84, 182
74, 529
85, 086
75, 150
83, 277
83, 278
84, 819
80, 515
75, 676
81, 271
81, 491
:31, 424
78, 888
75, 677

76,903
83,484

Name, residenee, and invention or diseovery.

Golay, Samuel, assignor to Henry B. Sears, Switzerland. Dressing mill stones.
Gold \& Stock Telegraph Company. (See Calahan, Edward A., assimnor.)
Gold, Steplien J., Cornwall, Conn. Warming houses by steanı....(Extensiou)
Golden, D. M., and B. G. Eaton. (See Babeock, Charles A., assignor.) Same........................ (See Hall, E. R., assignor.)
Golden, D. M., et al. .same.
Golden, Niran, et al. (Sce Ackerman, Campbell \& Golden.)
Golder, Jackson, Fort Recorery, Ohio. Poultry ceop
Golding, James IF, assimnor to self and Patrick Martin, Engrind. Cylindrieal eutter for leather and other materials
Goldsborough, Jolın. (See Sill, C. B., assignor.)
Gohlsmith, George ї., Waverly, ill. Sheet-metal-folding machine
Goldthwaite, Aaron, j1: (See Morse, Edward S., assignor.)
Golightly, H. S., aud C. S. Twitchell, New Maven, Conn. Folding ehair
Gommenginger, Bartholomew, and Charles W. Trotter, Rochester, N. Y. Stove and furnaee grate
Gonner, Nicolas, and Herman Bader, Cape Girardeau Jo Cistern filterer
Gooeh, Charles, Cineinnati, Ohio. Iee-eream freezer
Same.......Skate. (Antedated Aug. 8, 1868). Same..... . (See Lane, C. M., assigno1.)
Gooeh, J. H., Cheraw, S. C. Cotton-bale tio.
Good, Adam, and Simon Strouse, Titusville, Pa. Valve.
Good, Adam, jr., and Simon Strouse, Titasville, Pa. Counection for wooden rods.
Good, Christian, Areanum, Ohio. Smoke house.
Good, D. Gr., and Noah H. Timan. (See Tilman \& Good.)
Goodale, Benjamin H., Newhuryport, Mass. Wind wheel
Goodale, W. G., Centralia, M1. Fruit erate.
Goode, James S., and John V . Bookwalter, excentors of tho estate of James Leffel, deeeased. (See Leffell, James)............ . . (Reissue.)

| Same. | samo. | . (Reissue.) |
| :---: | :---: | :---: |
| Same. | same | . (Reissue.) |
| Same. | . same | ( Reissuo.) |

Goodell, A. D., Florence, Mass. Bit stock. (Antedated Jnly 3, 1868)
Goodenough, John, Jerseyville, In. Blaeking-brush seraper.
Goodenough, M. A., New York, N. Y. Feather duster.
Goodenough, William E., Newark, N. J. Saw set.
Goodes, E. A., assignor to self, E. L. Miller, and W. H. Morford, Philadelphia, Pa. Funnel and grater.

## Same...... . Nutmeg grater

Same..... . Flour dredge.
Goodhart, Alexander, Newville, Pa. Link.
Goodhue, L. B., St. Louis, Mo. Furnace for melting crass.
Goodin, John, Centralia, Ill. Boring and drilling machino.
Same..... . . Wrench
Goodling, Henry T., York, Pa. Hoisting machino
Goodrich, Alfred, Burnt Prairie, M1. Stump extractor
Goodrieh, E. D. (See Spaulding, E. D., assignor.)
Same..... (See Sanderson, George O., assignor.)
Goodrich, George D., Jolict, Ill. Manufacture of clay pipes
Goodrich, II. A., and Joseph Amos, Joliet, Ill. Manufacturo of glass pipes.
Goodrieh, Harry C., Chieago, Ill. Tension devieo for sewing machines.
Same.......Tuck ereaser for sewing machines.
Goortrich, W. R., and A. P. Seymour. (S'ee Seymonr \& Goodrich.)
Goodrum, Thomas, Providence, R. I. Calipers. (Antedated Sept. 16, 1868)
Goodrum, 'Thomas, assignor to Willian E. Green ant Charles W. H. Day, Provi-
denco, R. I. Apparatus for turning tho leaves of musie.
Goodrum, Thomas, assignor to Albert J. Manchester. Portablo book elamp. (Reissue)
Goodspeed, II. C., New York, N. Y. Sash supporter.
Goodwin, Charles, Bearlstown, Ill. Wind mill.
Goodwin, C. E., Portland, Mich. Farm gato.
Goorlwin, Gcorge B. and Samuel McCord, Milwankee, Wis. Dumping ear
Goodwin, Lizzie C., and Ira H. Stockwell. (See Stoekwell \& Goodwin.)
Goodwin, Richard J. P., Manchester, N. II. Sad iron.
Goodwin, S. A., Buffalo, N. Y. Wash boiler Same.

- same.

Goodwin, William, Boston, Mass. Steam enginery.
Goodwin, William B., Etfingham, Ill. Corn planter
Goodwin, William F., East New York, N. Y. Meehanical movenient
Same.... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . samo.
Samo..............................
Groorwin, William Ir, assignor to Samuel Johuston, East Now York, N. $\dot{Y}$. Marvester.
Goodwin, William F., assignor to self and Charles R. Squire, East Now York, N. Y. Marvester

Goodwin, William F., East New York, and A. II. Snith, Washington, D. C., assiguors to William F. Goodwin. Harvester.
Goodwin, W. F., and A. W. Browno. (See Browne \& Goodwin.)
Goodwin, William Wallaco, Camden, N. J. Dry gas metor. (Antodated Nov. $5,1867)$
Goodwyn, George W., Petersburg, Va. Rotary steam engino.

Date.

Oct. 20, 1868.
Oct. 2, 1868.

Dec. 22, 1868.
Dec. 22, 1868.
Juno 9, 1868.
Feb. 25, 1868.
July 28, 1868.
Feb. 11, 1868.
Jan. 21, 1868.
Ang. 18, 1868.
Apr. 28, 1868.
July 28, 1868.
Ang. 18, 1868.
Sept. 8, 1868.
Scpt. 22, 1868.
Aug. 18, 1868.

July 14, 1868.
Aug. 4, 1868.
Apr. 28, 1868.
Oct. 6, 1868.
Mar. 17, 1868.
July 28, 1868. Sept. 1, 1868. May 26, 1868.
May 5, 1868.
July 28, 1868.
Scpt. 29, 1868.
July 21, 1868.
June 2, 1868.

Jan. 7, 1868.
Feb. 4, 1868.
Aug. 18, 1868.
Aug. 18, 1868.
Sept. 29, 1868.
Feb. 4, 1868.
Sept. 29, 1868.
Nov. 3, 1868.
Nov. 17, 1868.
Fel. 18, 1868.
Dee. 22, 1868.
Mar. 3, 1868.
Oet. 20, 1868.
Oct. 20, 1868.
Dee. 8, 1868.
Sept. 29, 1868.
Mar. 17, 1868.
Aug. 18, 1868.
Aug. 25, 1863.
Jan. 14, 1868.
Juno 9, 1868.
Mar. 17, 1868.

Apr. 21, 1868.
Oct. 27, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

No.

78,081
73, 243

73, 244
75, 748

80, 542
77, 878
76,903
83, 843
73,525
82, 709
79, 222
80, 163

80, 068
73, 090
76, 745
82, 936

80, 281
84, 876
78, 801
73, 526
80, 622
73, 318

83, 844
82, 826
79, 971
76, 746

81, 889
84,820
75, 131
80, 942
3, 011
81, 890
83, 375
7\%, 480
83, 845
73, 152
Name, residence, and invention or discovery.

Goodwyn, George W., Petersburg, Va. Churn,
Same....... (See Robinett, James, assignor.)
Goodyear, Andrew, Albion, Mieh. Machine for scolloping leather
Goodyear, Ellsworth D. S., North Haven, Conn. Proccss of treating India-rubbcr.
Goodyear, Robert A., Now Haven, Conn. Neck-tie fastening. (Antedated Dce 28, 1868)
Googins, W. C., Portland, Maine. Heating stove and furnace. (Antedated Mar. 18,1868 )
Gookin, Samuel H., et al. (See Ehrhardt, L. II. G., assignor.)
Gookin, W. D. (See Chipman, W. W., assignor.)
Gordon, Edwin, Boston, Mass. Chemieal fire engine
Gordon, Matthew, Washington, Iowa. Combined corn-stalk cutter, cultivator, \&c..
Gordon, Norman N., assignor to self and Robort Boyd, Rochcster, N. X. Thill coupling
Gordon, R. H., sr., Brooklyn, Ohio. Combincd hoe and garden rake
Gordon, Solomon J., and O. B. Potter. (See Sweet \& Elliott, assignors.) Gordon, William W., and D. Pettengill, Delhi, N. Y. Trace buckle
Gorely, Charles P., Boston, Mass. Letter box.
Gorgas, C. R., Brooklyn, N. Y. Pessary
Gorham Manufacturing Company. (See Wilkinson, George, assignor).........................................
Same. ................................................ . . same.................... (Design.)
Samc. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . same . . . . . . . . . . . . . . . . . . . . . . . (Design. (Design.)
Same.................................................... . same....................... (Design.)
Samc....................................................... .same..................... (Design.)
Same..................................................... same.................... (Design.)


Gormley, Matthew, Wilna, N. Machino for cutting off nails. (Antedated July 7, 1868)
Gormly, I. A., Bucyrus, Ohio. Field fenee
Same............................. . same.
$\qquad$ Gornall, Rieliard, Baltimore, Ma........................ Steam
$\qquad$
July 21, 1868. Jan. 7, 1868. Apr. 14, 1868. Oct. 13, 1868

July 28, 1868. Dcc. 15, 1868.

June 9, 1868.
Jan. 21, 1868.
Aug. 4, 1868 .
Jan. 14, 1868.

Nov. 10, 1868.
Oct. 6,1868
July 14, 1868.
Apr. 14, 1868.

Sept. 8, 1868.
Dce. 8,1868.
Mar. 3, 1868.
Aug. 11, 1868.
May 5, 1868.
Sept. 8, 1868 .
Oet. 27, 1868.
May 5, 1868.
Nov. 10, 1868.
Mar. 3, 1868.

Sept. 1, 1868.
Oet. 27, 1868.
Oet. 2\%, 1868.
May 5, 1868.
July 28, 1868.
Gracie, John, and Charles Lockhart. (See Loekhart \& Gracie.)
May 19, 1868.
Jan. 14, 1868
Mar. 27, 1868
Jan. 14, 1868.
Mar. 24, 1868.

Aug. 4, 1868.
May 12, 1868
Apr. 21, 1868
Nov. 10, 1868
Jan. 21, 1868.
Oct. 6,1868
June 23, 1868
July 21, 1868
-
(Reissue.)
(Reissuc.)
(Reissue.)
(Reissue.)
(Reissue.)
Grace John R., Brooklyn, N. Y. Life boam $\qquad$
Graeey, Robert, Pittsburg, Pa. Bolt-heading maehine
Saine...... Die for bolt making
Graeie, Jolin, and Robert H. Boyd, Pittsburg, Pa. Lamp burner
Graeie, John, Pittsburg, and Robert H. Boyd, Hulton Station, Pa. Lamp ehim-

## Date.

same.
same.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 83, 279 | Gr |
| 84, 821 | Graetz, Gustav, Alexandria, Va. Match for lighting cigars and for other purposes |
| 85, 170 | Samo..... Combined match and cigar bo |
|  | Graff, Joseph. (See Shaunon, William, assignor.) |
|  |  |
| 83, 485 | Graff, William, Philadelphia, Pa. Bottle |
| 74, 342 | Graham, Alvaro B., Waukegan, Ill. Harv |
| 76,43680,404 |  |
|  | Graham, David M., Evansville, Ind. Gas machine ...........) |
|  | Graham, James, and Leonard S. Scott. (See Scott \& Graham.) |
| 85, 004 | Graham, John, Grafton, West Va. Sigual lanteru. |
| 78, 590 | Graham, Lewis, Plymouth, Ill. Wagon seat |
|  | Graham, Robert, and John A. Falconer: (See Falconer \& Grahanı.) |
| 80, 405 | Graham, Smith, Fennimore, Wis. Gang plo |
| 75, 542 |  |
| 76, 437 | Graham, W. H., La Crosse, Wis. Cooking ran |
| 82, 109 | Gram, Ernst W., assignor to self, Peter Berg, and A. P. Swineford, Negaunce, Mich. Rock-drilling machine. |
|  | Granger, H., et al. (See Biggs, Granger \& Butler.) |
| 82, 516 | Granger, James, Zanesville, Ohio. Propelling appa |
| 78,95684,487 | Granger, Lewis, Memphis, Mich. Spring-bed botton |
|  | Some Wash boiler |
| 80,623 | Granger, Niles, Saratoga, N. Y. Glass furn |
|  | Granier, Zoe and J., and Charles Gaudin. (See Gaudin \& Granier.) |
|  | Grant, Benjamin S., et al. (See Ward, Moses N., assignor.) |
| 85, 171 | Grant, Edward M., Macon, Ga. Wronght-iron bridge pier. |
| 84, 113 | Grant, E. M., J. B. Van Dyne, and T. R. Pugh, Nashville, Tenn. Railroad |
| 75, 411 | Grant, John, Northampton, Mass. Grinding knives for planer |
| 73, 712 | Grant, Robert, Brooklyn, N. X. Apparatus for charging water with carbonic acid. (Antedateil Jan. 17 1868) |
| 2,970 | Somo Clarein water witlı corbonic acid -...................... |
| 77,604 | Grant, Royal Clark, Middleport, Ohio. Nail machi |
|  | Grass, Isaac, and Zadock P. Dederick. (See Dederic |
|  | Grassmuck, Charles W., and Thomas L. Rankin. (See Rankin \& Grassmuck.) |
| 74, 681 | Graves, Amerou, Roscoe, 011 . Apparatus for handling animals in slaughtering. |
| 76, 438 | Graves, Alvah, Marcellus Falls, N. Y. Potato digger |
| 77, 279 | Sam |
| 75, 261 | Graves, Benjamin F., Groton, Mrass. Milking ma |
| 79, 568 | Same..... Teat eup for milking |
|  | Graves, O. J. (See Verry, George, assignor.) |
| 74, 343 | Graves, R. C., Barnesrille, Ohio. Roofing compo |
|  | Graves, S. S. (See Pike, O. M., assignor.) |
| 81, 711 | Graves, William S., Oborlin, Ohio. Fence-post driver |
| 80, 725 | Gray, A. G., assirnor to self and Jamcs T. Magee, St. John, N. B. Machine for cutting and folding sheet metal <br> Gray, Charles M. (See Hender'son, Menry A., assignor.) <br> Same...... (See Nohl, Eugene W., assignor.) |
| 76, 747 | Gray, Edward, Cuyahoga Falls, Ohio. Hospital bed |
| T7, 605 | Gray, Elijah H., W inchester, Hl . Clothes-line hoot |
| 76, 748 | Gray, Elisha, Cleveland, Ohio. Telegraph apparat |
|  | Gray, George L., and William Ledlie. (See Ledlio \& Gray.) |
|  | Gray, Hala, and Martin Darling. (See Darling \& Cray.) |
| 84, 624 | Gray, Henry H., assignor to self and Moses B. Pardce, Haverstraw, N. Y. Brick machine. |
|  | Gray, Hugh. (See Kirkley, James, assignor.) |
| 73, 091 | Gray, James, Albany, N. Y. Base-burning hot-air furnaco |
| 3, 044 | Same......Base-burning stove..................................... (Reissue) |
| 84, 109 | Same. |
| 79, 067 | Gray, James, Newark, N. J. Sad iron. (Antedated June 13, 1868) |
| 82, 110 | Gray, James II., Boston, Mass. Lubricating pulleys. (Antedated Sept. 8, 1868) Gray, James H., et al. (See Talloott, S. J., assignor.) |
| 84, 110 | Gray, John, San Franeisco, Cal. Hydro-carbou burner |
| 84, 877 | Same..... .Tile for floors, sidewa |
| 73, 319 | Gray, John H., and Charles WV. Calhoun, Florence Township,Mich. Potato dimger. |
| 76,322 | Gray, Joseph W., assignor to Saladeo, Fee \& Company, Clermont County, Ohio. Steam-engine governor. |
| 82,937 | Gray, Josiah, Chicago, Ill. Railway frog |
|  | Gray, Oliver 3. (See La France P P. A., assignor.) |
| 77,031 | Gray, N. A., Cleveland, Ohio. Steam plow....................... |
| 75, 153 | Gray, Robert D., assignor to self and William B. Brittingham, Lafayette, Ind. Rotary valve for stean enginery. |
| 78,082 | Gray, Rollin B., and Amos Broadnax. (See McLeod, N. N., assignor). . (Teissue.) Gray S. I. Chillicothe Olio Harness for vicious herses |
|  | Gray, Solomon S., Boston, Mass. Machine for planing lumber "out of wind." (Disclaimer). |
|  | Same........................................ (Extension) <br> Gray, Solomon S., et al. (See Shaw, Henry F., assignor.) <br> Same................................... same. <br> Gray, Solomon S., and James A. Woodbury. (See Shaw, Henry F., assignor.) <br> Same. |
| 83, 707 | Gray, Thomas, London, England. Preparing resin-size for use in paper making. (Patented in France June 30, 1868) |

## Dato.

Oct. 20, 1868
Dcc. 8, 1868.

Dec. 22, 1868.

Oct. 27, 1868 Feb. 11, 1868 Apr. 7, 1868 July $28,1868$.

Dec. 15, 1868 June 2, 1868.

July 28, 1868
Mar. 17, 1868
Apr. 7,1868.
Sept. 15, 1868
Sept. 29, 1868
Juue 16, 1868
Dec. 1, 1868
Aug. 4, 1868.

Dec. 22, 1868.
Nov. 17, 1868.
Mar. 10, 1868.
Jan. 28, 1868
June 9, 1868.
May 5, 1868.

Feb. 18, 1868
Apr. 7, 1868.
Apr. 28, 1868.
Mar. 10, 1868.
July 7, 1868.
Feb. 11, 1868
Sopt. 1, 1868.
Aug. 4, 1868.

Apr. 14, 1868.
May 5, 1868.
Apr. 14, 1868.

Dec. 1, 1868.
Jan. 7, 1868.
July 21, 1868.
Nov. 17, 1868.
June 23, 1868.
Scpt. 15, 1868.
Nov. 17, 1868.
Dec. 15, 1868.
Jan. 14, 1868.
Apr. 7, 1868.
Oct. 13, 1868.
Apr. ${ }_{2} 1,1868$.
Mar. 3, 1868.
May 19, 1868
Aug. 6, 1868
Aug. 17, 1868.

Nov. 3, 1868

## Alphabetical list of patentees for the year 1868-Continued.

| No. |
| :---: |
| 77,185 |
| 84,944 |issuc.)

Green, A. P., Steuben, Ohio. Elastic coupling for secaing machines, \&c Green, Clay \& Company. (See Jacobi \& Klein, assignors.) Green, Cyril W., and Curtis O. Luco. (See Luce \& Grecn.)

81,624
74, 079

## 77, 3\%0

3,177

3, 178
78, 951
81, 081
73,425
73, 887
82, 401
84, 351
74, 818
81, 625
74, 344
81, 772
82, 111

82112
84, 352
77, 186
76, 910
76, 625
76, 466
84, 878

81, 362
80, 943
74,819
81, 891
76, 749

74, 682
79, 651
81, 892
79, 467
79, 652
80, 944
75, 749
81, 620
75, 155
76,750
77, 032
81, 492
2,939

Green, Duby, New York, N. Y. Distilling apparatus for spirits Green, Ephraim R., and Henry D. Phillips, jü, Trenton, N. J. Brick machine. Green, F. D., assignor to self and Georgc Zimmer \& Company, Williamsport,

Pa. Machine for cutting panels.
Green, Georre C., and E. W. Woodruff. (See Woodrnff \& Grecn.)

Green, George F., Kalamazoo, M. Cotter. (See Cotter \& Green.)
Green, J., and C. Baggerman. (See Baggerman \& Green.)
Green, Jacol, assignor to self, Thomas H. and Hiram Willson, Charles R.
Adams, and Samuel Munn, Norristown, Pa. Melting and smelting furnacc.
(Division A, reissuc)
Same...... Furnace for treating iron and for other purposes. (Division
B, reissue)
Grcen, John A., North Waterford, Maine. Horsc-power Green, N. S., Utica, Wis. Snow plow.. Green, Nelson W., Cortland, N. Y. Method of constructing artesian wells.

Same...... Cortland Village, N. Y. Connecting stove pipes................... Green, O. F., Green, Parley Cradford Pa Combined hammer and nail-holder. Green, R. W., and J. W. Hilton. (See Hilton \& Green.) Green, Samuel, New York, N. Y. Truss
$\qquad$ Green, samuel, New Io Int. Combinct latch and
Green, Thomas, and Jacob Sommer, Metamora, Til. Cultivator
Green, William, Holly, Mich. Potato disger and separator
Same...... Liftins jack. (Antedated Scpt. 7, 1868) Green, William E., and Charlos W. H. Day. (See G
Green, W. H. (See Robbins, Henry R., assignor.) Green, W. H. (See Robbins, Henry R., assignor.)
Green. William W., jr., assignor to self and E. Brown, Janesville, Wis. Device for holding doors open.
Greene, Chauncey O., Troy, N. Y. Mode of preventing the corrosion of castiron vesscls..


Grecne, D. M., Troy, N. I. Thormometric stcam gango.
Greene, Francis, Troy, Pa. Door keyGreenc, I. G. (See Dorn, R. II., assignor.)
Greene, J. Ashton, Brooklyn, N. Y. Fastening India-rubber tires on carriage wheels.
Greene, John Ashton, and Henry A. Iweca. (See Blake, G. W., assignor.) (Reissuc.)
Same................................................................ assignor.)

Grecne, Twoed \& Conipany. N. Y. Heater range
Grcenfield, Henry, New York, N. Y. Mode of cancoling postage and revenue stamps
Greenhalgh, James, Woonsocket, R. I. Harness mechanism for looms
Grecnhat, Joscph B., Chicago, Ill. Grain binder.
Greenleat, Gcorge D., and Darius C. Larkins, Depa
treating milk......
Greenleaf, William. (See Balmer, James, assignor.)
Greenleaf, Z. G., Bath, Mainc. Bait and vegetable cutter
Greenwood, John, Rochester, N. Y. Machine for cutting staves
Greenwood, J. 'T., Beloit, Wis. Gas heater
Grecntvood, M., \& Company. (See Zeuncr, Charles, assignor)............................) Greer, Gcorge W., and Frank F. Landis, Lancaster, Pa. Grain thresher and separator.
Grecr, Joseph H., Rochester, Pa. Cooking stove
Gregg, Benjamin, Bennington, Vt. Bed bottom.
Grego, Henry P., Cincimati, Ohio. Corn planter
Gregame . . . . Brush holder and mop head.
Gregory, C. B., Beverly, N. J. Fireplace.
Same....-. Coal stove.
Same...... Hot-air furnace.
Gregory, George, and William II. Cooper. (See Cooper \& Grogory.)
Gregory, George W., Watertown, N. X." Pulley attachment for raising weight. (Mcissu2).

Dato.

Apr. 28, 1868
Dec. 15, 1868.

Mar. 3, 1868.

Jan. 14, 1868.

Sept. 1, 1868.
Feb. 4, 1868.
Aug. 25, 1868.

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Jume 30, 1868

Dec. 15, 1868.

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June 30, 1868.
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Mar. 24, 1868.
Sept. 1, 1868.
Ma1: 3, 1868.
Apr. 14, 1868.
Apr. 21, 1868.
Aug. 25, 1868.

May 19, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.
 Gridley, James H., assiguor to S. F. Dickinson, Washington, D. C. Mop wringer. Gridley, Nelson C. (See Kasson, Amasa C., assignor.) Same-............................... same. Same............................... . same. Same-.....................................
(Reissue.)
Gridley, Wilmer D., Now Britain, Conn. Curtain fixture
Gridley, Wilmer D., New Britain, Conn. Toy pistol
Grier, William W., and Robert II. Boyd, assignors to Horaco I. Lore, New York, N. Y. Drill bit
. (Reissue) .
Griffen, J. F., and J.E. Winants. (See Winants \& Griffen.)
Griffin, Charles E., Roseville, Ill. Scsthe
Griffin, Charles E. (See Clarke, Nicholas P., assignor.)
Griftin, Heber C., assignor to self, George W. Griffin, and John N. Howe, Franklin, N. H. Billiard ene.

## Date.

Oct. 6, 1868.
Feb. 11, 1868.
Feb. 11, 1868.
Jau. 7, 1868. Aug. 25, 1868. Nov. 17, 1868. Jan. 28, 1868. Mar. 17, 1868. Nov. 10, 1868. Mar. 17, 1868.

Mar. 24, 1868.
Oct. 13, 1868.
Sept. 29, 1868.
Dec. 29, 1868.

Mar. 24, 1868.
Griffin, J. T. (See Cambridge, William C., assignor.)
Griftin, Patrick H., Albany, N. I. Key for liydrant cocks
Grifting, C.S. S., Unionville, Conn. Portable fence
Griffith, Amos V., Boston. Mass. Clothes dryer-...
Griffith, Jethro J., Pliladelphia, Pa. Artificial tecth
Griffith, J. S., Philadelphia, Pa. Toy entitled Silyl's Cave. (Antedated Dec. 8, 1868)
Griffiths, Charles W. (See Jelley, Gcorge, assignor.)
Griffiths, Harry S., Brooklyn, N. Y. Suspension ring
Griggs, Heary C., Waterbiny, Comm. Campaigu badge.
Griggs, Hemry C., assignor to Holmes, Griggs \& Smith, Watcrbury, Conn. Buckle.
Grimes, C. T., Garrard Countr, Ky. Plow
Grimes, Peter. (See Harvey, Wm. T., jr., assignor.)
Grimes, William C., Philadelphia, Pa. Fire detector. (Antedated April 18, 1868) Same .......Pressure blower
Grimm, John, and H. B. Arnoldt. (See Arnoldt \& Grimm.)
Grimshaw, W. D., Newark, N. J. Stamp and dio for sheet metal
Grindrod, John, and Thomas Lovelidge. (See Lovelidge \& Grindrod.)
Griscom, Lewis, Mahanoy Plane, Pa. Lathe...
Gríscom, W. M. (See Oaks, W. A. C., assignor.)
Crist, Thomas, Pliladelphia, Pa. Reflecting gas burner. (Antedated May 19, 1868)

Griswold, A. M., Momence, Ill. Cultivator
Grisimold, Del. M., et al. (See Beggar, Plood \& Griswold.)
Griswoli, Edwin, Jocl B. Clamer, and William Blay, Helona, Montana Torritory. Equalizing donbletrec.
Griswold, G. G., New York, N. Y. Umbrella. (Antedated March 12, 1868)...
Griswoll, George G., et al. (See Bevans, Ira N., assiguor.)
Griswol., John W., Philadelphia, Pa. Grate for stoves and fumaces $\qquad$
Griswoll. John W., aud Edgar L. Thompson, Pliladelphia, Pa. Grate bar .
Griswol:. V. M., Peekskill, N. Y. Filtering and pouring bottle
Griswold. W. C.. Now York, N. Y. Hat-blocking machine
Griswoln. W. C., Brooklyn, N. Y. Machine for stretching hat bodies.
Griswolk. W. C., Brooklyn, N. X., Augustns Pelisse, Newark, N. J., and Albort H. II \%k, Now York, N. Y. Machine for blocking lats.

Gritzner, M. C., Grand Duchy of Baden. Sowing machine for working button holes
Groff, Michael G., V ngansvillo, Pa. Horse-power
Grol, Jolm M., Benevola, Md. Mat.
Gross, 13. F., Trenton, Tenn. Tanning compound
Gross, Henry, Tiffin, Ohio. Window sash
Gross, Menry, and Michael Stoll. (See Stoll \& Gross.)
Gross, J. Mason. (See Brown, lra S. and Charles N., assignors.)
Gross, Julius, and Gustav Cramer. (See Cramer \& Gross.)
Gross, Philip P., and Joseph II. McPhecters. (See McPheetcrs \& Gross.)
Grosvenor, Jonathan P., Lowell, Mass. Sawing machine.
Samo...... Molding machine.
Same...... Machine for planing and molding.
Grotz, Renig, Chicago, Ill. Barrel-heading, circling, and beveling machino. . .
Grove, John H. S., and A. W. Hager. (See Hager \& Grove.)
Grove, Josepli M., and Henry Kedrick, Anderson, Ind. Machino for bonding sheet metal
Grover, Reuben C., Newton, Mass. Manufacture of cdeo tools
Grover, William, Holyoke, Mass. Counting attachnent for thread-winding machines.

Oct. 6, 1868.
Apr. 28, 1866.
June 9, 1868.
Aug. 11, 1868.
Dea. 22, 1868.
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Oct. 27, 1868.
Apr. 21, 1868.
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May 5, 1868.
Sept. 8, 1868.
Sept. 15, 1868
Jan. 14, 1868.
JulE 28, 1868.
Oct. 6, 1868.
Feb. 25, 1868

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discoveryo |
| :---: | :---: |
| 76,439 | Groves, John, and Enoch B. Tarner, Providenco, R. I. W |
| 75, 009 | Grow, M. D., Fort Dodge, Iowa. Water wh |
| 81, 162 | Grübcl, George, New Orleans, La. Tap an |
| 81, 494 | Gruey, Joseph, Keudallville, Ind. Water |
| 77, 034 | Gruger, John P., and Charles Makinson, Lancaster, Pa. Cord holder |
| 82, 712 | Grundmann, Theodore, Clevelaud, Ohio. Apparatus for the manafacture of vincgar |
| 75, 898 | Gruncberg, John D., and Samuel H. Gilbert, Spring Mills, N. J. Coating metal. |
| 75, 899 | Grunert, W., and G. E. Bingham, assignors to selves and O. L. Packard, Milwaukee, Wis. Portable upright thue brazicr. |
|  | Grupp, Sebastian, and Christian Oefinger. (See Ocfinger \& Grupp.) |
| 75, 156 | Grussi, John, Cleveland, Ohio. Flat,iron |
| 83, 772 | Gsantner, Otto, East Orange, N. J. Elevated |
| 83, 153 | Gudenoge, Karl, San Francisco, Cal. Bill |
|  | Gudtner, David. (See Hemstreet, P. P., assignor.) |
| 2, 791 | Gucnther, Godfrey, Chicago, Ill. Manufacture of glue...(Division A, reissue).. |
| 2,972 | Same...... Article of glue............................ (Division B, reissue).. |
| 3,129 | Same...... Mode of drying glue...................... (Division A, reissue).. |
| 3,130 | Same...... Machinery or apparatus for drying........ (Division B, reissue).. |
| 79,113 | Guernsey, W. B., Ncw York, N. Y. Bo |
| 78,591 | Guerrant, C. Watson, Leakesville, N. C. Combined square and calip |
| 73, 527 | Guerrant, John C., and Benton J. Field, Leakesville, N. C. Rat trap |
| 83,708 | Same......Engraving machine |
| 79, 972 | Guest, John H., Brooklyn, N. Y. Elcetro-magnetic temp |
| 79, 973 | Same..... Electro-magnetic burglar |
| 75,157 | Guger, John N., Peoria, Ill. Tug and chain carrier |
| 78, 276 | Guild, George M., Boston, Mass. Sounding board |
|  | Guild, Jamcs. (See Miner, Albert C., assignor.) |
| 3,212 | Guild, J. H., Rupert, Vt. Float valve.. |
| 81, 272 | Gullmann, C., Poughkeepsie, N. Y. Mop head and wringer |
| 78, 958 | Guillod, Edward, assignor to Bryan, Dillingham \& Company, Titusville, Construction of drilling jars. |
| 84, 353 | Samc......Drilling jar |
| 78, 277 | Gumfory, Michael, West Middlesex, Pa. Trace tug |
|  | Guning, James F. J., and Isaac T. Mcycr. (See Mcyer \& Guning.) |
|  | Gunkel, John F. (See Bussey, John, assignor.) |
| 85, 442 | Gumm, Edwin F., Charleston, S. C. Breech-loadin |
|  | Gum, John, and John B. Chiristman. (See Christman \& Grunn.) |
| 74, 348 | Gum, M. W., La Salle, Ill. Harrow. |
| 74,349 | Gunning, James F. J., Ncw York, N. Y. Clasp for hoop |
| 34, 418 | Gunther, Gustav Julius, London, England. Armor plating for vessels. (Patented in England October 25, 1867) |
| 76, 751 | Guseman, W. D., Morgantown, West Va. Fircplace |
| 2, 934 | Sam |
| 79, 653 | Gustin, Jesse E., Elmira, N. X. Detaching pullex |
| 35, 302 | Guthrie, Joseph T., Pittsburg, Pa. Railway-car |
| 33, 709 | Guthrie, Warren H., Brooklyn, N. Y. Machine for trimming wall papcr. (Antedated October 24, 1868) |
| 35, 005 | Gutzkow, Frederic, San Francisco, Cal. Preparation of sulphates and the manu- |
| 32,938 | Guy, B. F. and J. V., Macomb, Inl. Cultivator p |
| 30 | Guy, George, Bay City, Mich. Steam gene |
| 33, 488 | Guy, Jolm R., assignor to Rice \& Guy, Springfield, Ohio. Coupling for railroadtrain heaters. |
| 32,939 | Guyer, Earl, Wolcott, Vt. Butter tub |
|  | Guycr, Henry. (See Lipps, John P., assignor.) |
| 73, 713 | Guyol, Theodore, New Orleans, La. Metallic tie for cotton bales |
| 76,440 | Guyon, Francisque T. M. A., France. Printcrs' furniture |
|  | Guzman, Adolph, et al. (See Ellershausen, Stayner \& Guzman.) |
|  | Gwyer, F. S., and L. H. Mace. (See Maco \& Givyer.) |
| 73,322 | Gwymn, Stuart, New York, N. Y. Solution for treating vegetable fiber for the manufacture of vegetable parchment |
| B1, 495 | Gwynn, Stuart, assignor to Spencer M. Clark, New York, N. Y. Preparing oil. |
| 81, 496 | Gwynn, Stuart, New York, N. Y., and S. M. Clark, Washington, D. C., assignors to Spencer M. Clark. Apparatus for the purification of oil |
|  | Gyroscopic Top Company. (See Arnold, C. P., assignor) ...............(Design.) |
| 80,726 | Haag, Harrison, assignor to self and Gcorge W. Yager, Bernville, Pa. Machine for making wheels |
|  | Haag, Jocl and A. N. Wolf. (See Wolf \& Hang.) |
| 80, 945 | Haas, Emil, and Max A. F., Mendota, Ill. Liquid coo |
|  | Haas, Gcorge A., and T. B. Luzicr. (See Luzier \& Haas.) |
| 81, 627 | Haas, Joseph, El Paso, Ill. Seeding mach |
| 83, 280 | Haas, Martin, New York, N. Y. Compound for destroy |
| 82, 940 | Habberley, John W., South Maldon, Mass. Anchor |
| 73, 597 | Hachenberg, Gcorge P., Coxsackic, N. Y. Vegetablc |
| 79, 068 | Hachenbcrg, William, White Pigeon, Mich. Washing machine |
| 83, 489 | Hacker, Charles, Euphemia, Ohio. Spring-bed botton |
| 77, 035 | Hacker, V. A., Knoxville, Tenn. Scrubber |
| 82, 518 | Hackett, Allin, Pittsficld, Maine. Saw mill......................... |
| 80, 166 | Hackett, Ephraim, assignor to self and R. West, Concord, N. H. Chafe |
| 77, 280 | Hadden, John L., Philadelphia, Pa. Water cooler |

Date.

Apr. 7,1868. Mar. 3, 1868 Aug. 18, 1868. Aug. 25, 1868. Apr. 21, 1868.
Oct. 6, 1868. Mar. 24, 1868.

Mar. 24, 1868.
Mar. 3, 1868.
Nov. 3, 1868.
Oct. 20, 1868.
June 9, 1868. Junc 9, 1868. Sept. 22, 1868. Scpt. 22, 1868. June 23, 1868. June 2, 1868. Jan. 21, 1868. Nov. 3, 1868. July $14,1868$. July 14, 1868. Mar. 3,1868. May 26, 1868.
Nov. 24, 1868. Aug. 18, 1868.

Junc 16, 1868.
Nov. 24, 1868.
May 26, 1868.

Doc. 29, 1808.
Feb. 11, 1868. Feb. 11, 1868.

Nov. 24, 1868. Apr. 14, 1868. May 19, 1868. Jaly 7, 1868. Dec. 29, 1868.
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Jan. 14, 1868. Aug. 25, 1868.

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Alphabetioal list of patentees for the year 1868-Continned.
Na.

3, 139
85, 303
73, 714
75, 412
78, 278
74, 912
84, 057
81, 893
75, 543
82, 519

73, 093
83, 154
79, 341
84, 419
81, 89
83, 059
74, 216
78, 959
81, 774
82, 828
81, 895
77, 813
82, 309
84, 354
79, 114
77, 607
81, 896
76, 324
72, 342
82, 114
2, 913
80, 476
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3, 234
3, 2.5
3, 206
2, 931
2,986
2,997
2,998
72, 999
79, 115
75, 010
75, 011
76, 076

75, 907
80, 477
79, 569
75, 262
82, 829
77, 0,30
77, 608
81, 163
73, 801
73, 802
76, 752
80, 725

Hadfiold, George, Cincinnati, Ohio. Modical vacuum chamber
..(Reissue)
Haslficld, John G., Cineinnati, Ohio. Modo of treating disoases by vacuum. (Antedated Dcc. 15, 1868)
Madficld, Joseph, New York, N. M. Machine for eutting soap
Hadficld, J. G., Cincimnati, Ohio. Surgical cup
Hadlcy, Amos, assignor to solf and Robert Clenighon, Washington, D. C. Door indicator
Hadley, Artcmus N., Richmonil, Ind. Insolo for boots and shocs
Hadley, C., et al. (See La Malt, Listerman \& Hadley.)
Hadley, Charles F., assignor to Clifford Arick, Clicopee, Mass. Clunck
Hadley, George D., assignor to sclf and Gardner Wators, Cincinnati, O. Globe valvo
Hadwen, Arthur, Rochester, N. Y. Potato digger
Hacck, F., Belgium. Apparatus for distilling spirits. (Antodatod Sopt. 16, 1868).

Haeffely, Edward, and James C. Ayer. (See Ayer \& IIacffoly.)
Haehnlen, Theodore D., Philadelpliia, Pa. Reciprocating-ball toy
Haessel, Jacob, St. Louis, Mo. Combincd plow and liarrow
Haenpcl, Anton, and John Reinhardt, Pliladelphia, Pa. Loeomotivo steam engine. (Antedated Junc 13, 1868)
Hafelfinger, F., and R. N. Eagle, Washington, D. C. Corn huskor, sheller, and stripper.
Hafenegger, Joseph, San Francisco, Cal. Explosive eompound
Hafner, John $\Delta$., Commerce, Mo. Horse-power.
Hagaman, Stinson, Weissport, Pa. Machine for bereling edges of slates. (Antedated Jan. 27, 1868)Samo....... Machine for rounding slate frames

Same....... Machine for polishing wood
Same-..... Machine for grinding and polishing sehool slates
Hagan, Edward, New York, N. Y. Servico pipo for buildings.
Hagar, E. L., Empire City, Colorado. Chart roller.
Hagemann, G. A., Matrona, Pa. Manufaeture of bromino from bittorns
Hager, A. W.i. and John H. S. Grove, Waverly, Iowa. Dog-power.
Hagerty, William, Monongahela, Pa. Hull of stcamboats.
Hahn, John A., and Charles Vogler, Degraff, Ohio. Shoomakers' boneh
Haigh, Thomas, assignor to self and Charles M. Lightner, Harrisburg, Pa. Churn
Haight, M. C., Geneva, N. Y. Skate
Haight, William S., Watcrford, N. Y. Apparatus for hopping beer.
Haignoy, John, and Frank M. Mcdman, East Boston, Mass. Clothes pin.
Hailcs, William, Albany, N. Y. Stove..................................................
Hailes, William, assignor to J. F. Rathbone \& Company, Albany, N. Y. Damper
Samo...... Stovo........ ..................................................... (Design)
$\qquad$
$\qquad$ Same . . . . . same ............................................................... (Design)
Hainemann, Sampson and Simon, and David Steiner, Now York, N. Y. Trade mark ..(Design) Haines, Jonathan, assignor through mesne assigumonts to himself, Pokin, 111 . Grass larrester............................ (Division D, rcissue).

> Samo. ......samo
> (Division D, rcissue)
> .same
> (Division C, reissue)

Haines, Samuel B., Lewistown, Pa. Harvester
Hainque, Martial, assignor to self and John Lowth, San Francisco, Cal. Drill stoek
Hainsworth, F., Chicago, Inl. Apparatus for rontilating water closets.
Hainsworth, Jonathan, Chicago, Ill. Stcam blower. (Antedated Ticb. 24, 1858) Halberstadt, Eli. (Sce Feuncr, R. R., assignor.)
Halbert, A. W., assignor to self and J. Ir. Stark, Taylor, N. Y. Sewing machine.
Halc, A. R. (See Tobey, Elisha H., assiguor.)
Same..................... samc.

Hale, C. S., and O. C. Hubbell, Cleveland, Ohio. Spring bottom for boots and shnes.
Hale, Edwin, Boston, Mass. Hand nail-driver for boots and shoes.
Hale, Elias J., Foxcroft, Maine. Lantorn.
Hale, Hcnry \& Co. (See Moore \& Johnson, assignors.)
Hale, M. B., and 'T'. Flagler, Grass Lake, Miclı. Mode of attaching animals to carriages
Hale, Henry J.. Indianapolis, Ind. Bed bottom.
Male, Joscpit, Somerville, Mass. Maehine for bending wood
Hale, Joscph, Somerville, and William Hall, Brookline, Mass. Rein shaeklo.
Hale, J. M., and William C. McGowan. (See McGowan \& Hale.)
Hale, Oliver B., Malone, N. Y. Portable eooking stovo.
Hale Patent Washing Company. (See Haskell, E. P., assignor.)
Hale, Robert, Chicago, Ill. Jaby holder
Same...... Couch or cradle.
Hale, W. I., assignor to sclf aud W. M. Logan, Ashloy, Mil. Post-holo-boring machine Hall, Alexander W., Jew York, N. Y. Wash boiler.

## Date.

Sept. 29, 1868.
Doc. 20, 1863
Jan. 28, 1868
Mar. 10, 1868
May 26, 1868 Fol. 25, 1868

Nov. 17, 1868.
Sept. 8, 1868.
Mar. 17, 1868.
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Oct. 6, 1868
Apr. 21, 1868.
Мау 5, 1868.
Aug. 18, 1863.
Jan. 28, 1868.
Jau. 28, 1868.
Apr. 14, 1868
Aug. 4, 1868.

Alphabetical list of patentees for the year 1868-Continued.
No.

Hall, Alfred B. (See Mignault, John B., assignor.)
77, 609
83, 847
74, 080
79, 826
Hall, Andrew M., Falmonth, Maino. Potato digger
Hall, A. W., East Lebanon, N. H. Frictioll clutch.
Hall, Charles C., Portland, Maine. Steam heating apparatus.
Hall, Charles S. and Charles F. (See Wing, Samuel, assignor)
(Reissuo.)
76, 753
79,116

73, 752
84, 274
77, 610
76,441
78,735
74, 683
77, 728
81, 497
83, 378
79, 751
77, 187
75,413
78,279

75,414

83,490
81, 628
3, 063
77, 188
80, 478
80, 946
81, 629
81,365

80,728
81, 630
74, 684
82, 520
76, 754
2,959
2,960
2,961
2,962
78,592
755, 415
78, 662
80, 624
78, 593
81, 897
2, 888
77, 729
80, 625

80, 406
81, 998
85443
84, 692
83, 627
83, 628

75, 631
84, 112
85, 304
81, 082
Hall, D. C., Hannibal, Mo. Atmosplieric churn
(Peissua)
Hall, David E., Detroit, Mich. Joint clamp.
Tylor, assignors)
Hall, D. W., and W. M. Jonos. (See Jonos \& Tyler, assignors) . . . . . (Reissue.)


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Hall, Earl J., Indianapolis, Ind. Wind wheel. $\qquad$
Hall, Earl J., assignor to self and Jaoob Eldridge, Indianapolis, Ind. Pump..
Hall, Edwin A., Sugar Branch, Ind. Floor clamp.
Hall, Elton \& Company. (See Rich \& Bassett, assignors.)
Hall, E. R., assignor to self, D. M. Goldon, and B. G. Eaton, Utica, N. Y. Clothes dryer.

Dato.

May 5, 1863.
Nov. 10, 1863.
Fel. 4, 186.
July 14, 186.
Apr. 14, 1808.
June 23, 1868.

Mar. 24, 1868.
Nov. 24, 1868.
May 5, 1868.

Apr. 7, 1868.
June 9, 1868.
Feb. 18, 1868.
May 12, 1868.
Aug. 25, 1868.
Oot. 27, 1868. July 7, 1868. Apr. 28, 1868.
Mar. 10, 1868.
May 26, 1868

Mar. 10, 1868.

Oct. 27, 1868.
Sept. 1, 1868.
June 2,1868.
Apr. 28, 1868.
July 28, 1868.
Aug. 11, 1868.
Sept. 1, 1868.
Aug. 25, 1868.

Aug. 4, 1868
Sept. 1, 1868
Feb. 18, 1868
Sept. 29, 1868.
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Aug. 4, 1868.
Juno 2, 1868.
Scpt. 8, 1868.
Mar. 3, 1868.
May 12, 1868.
May 19, 1868.
Aug. 4, 1868
July 28, 1858.
Sept. S, 186.
Aug. 28, 1868.
Dec. 28, 1868.
Dec. 8, 1868.
Nov. 3, 1EGB.
N゙ov 3.18.8.

Mar. 17. $18 t t^{\circ}$.
Nov. 17. 1868.
Dec. 29, 186 .
Aug. 18, 1868

## Alphabetical list of patentees for the year 1868-Continued.

No.

## 74, 081

84, 545
80, 823
74, 217
77, 730
81, 775
84, 113

Name, residence, and invention or discovery. Halstead, Sa
Halsted, Griffin B., New York, N. Y. Mode of constructing molasses cups of sheet metal
Han, A. W., Stockport, N. Y. Lifting jack for carriage thills
Ham, Robert, and C. O. Greene. (See Greene \& Ham.)
Ham, Rufus, and Joseph Durgin, Bangor, Maine. Dumping cart.
Hamar, Alexauder, New Yorí, N. Y. Smelting and desulphurizing iron ore.
Same....... Iron furnace
Same....... Making iron.
Same.......Roasting iron ores by waste gases.
Hamblet, J., jr., and B. F. Edmands. (See Edmands \& Hamblet.)
Hamburger, Isaac L. (See Burger, Lewis, assignor.)
Hamill, E. B. et al. (Sec Rowe, Mitchcll \& Hamill.)
Hamilton, Albert, and Richard Whiting. (See Whiting \& Hamilton.)
Hamilton, Celeste H. E., and Louis J. Chollct. (See Chollet \& Hamilton.)
Hamilton, Edward, assignor to self and Matthew D. Rapp, Chicago, Ill. Bridge. (Antcdated May 9, 1868).
Hamilton, James, et al. (See King, Jacob, assiguor.)
Hamilton, Jonathan R., Portland, Orcgon. Corn shcller
Same...... Lamp-chimney cleaner

Hamilton, J. R., Dexter, Maine. Valves at the end of tubes........................
Hamilton, O. Court, and Harvey McKinney, 'Turtlc Creek, Pa. Fruit gatherer Hamilton, R., et al. (See Beun, Walter C., assignor.) same........................... same.
Hamilton, S. M., Baltimore, Md. Planing machine. Same.................................... same
Hamilton, Thomas F., New Haveu, Conn. Imitation stone for buildiug purposes.
Hamilton, William, Chicopee, Mass. Device for oiling fast and loose pulleys
Samo...... Hose coupling
Hamilton, William, Toronto, Canada. Lock nut
Hamilton, William, Philadelphia, Pa. Pan-folding machine
Hamilton, W. G., New York, N. Y. Mctal for, and mode of, manufacturing car wheels
Hamiltou, William M., Wenona, Iil. Bed bottom
Hamilton, W. N., Odessa, Dcl. Grain drill
Hamlin, Edward, Dclanco, N.J. Swage for saw tceth
Hamliu, Emmons, Winchester, Mass. Melodeon, \&c.
ILamlin, E. B., St. Louis, Mo. Paint can
Hamlin, William E., jr., Providence, IR. I. Heel plate for boots and shoes.
Hamlin, William P., Exira, Iowa. Liuiment
Hammel, A. F., St. Louis, Mo. Breast yoke for harucss.
Hammer, George, assiguor to self and Alfred Butz, Philailelphia, Pa. Corkcutting machine
Hammer, Gundier E., Rochcster, Minn. Stove-pipo thimblc.
Hammer, G. F'., Cincinnati, Ohio. Machine for polishing wood
Hammer, J. A., and Thomas Chadwick, Newton, Lowa. Wash boilcı
Hammond, Ererctt C., assignor to self and O. II. and Ira G. W. Pennock, Oswego, N. Y. Center-board winch.
Hammond, Goorge H., Davenport, N. Y. Clothes dryer.
Hammond, Henry, Hartford, Conn. Dic for forming slots in screws.
Hammond, Henry L., Providence, R. I. Carriage jack
Hammond, John, Lattisburg, Ohio. Machine for handing hides
Hammonl, J. F., North Sudbury, Mass. Straw cutter.
Hammond, J. T., and J. H. Hill. (Śe Lill \& Hammond.)
Hammond, Theophilus, Petersburg, Ind. Harness for lreaking horses .
Hamon, A., France. Machine for forming tin-lined lead pipe
Hampshire, Johu D., Paper Mills, Md. Corn harvester.
Hancock, Ame 13., Suspension Bridge, N. Y. Fan.
Hancock, Benjamin F., Monroe, Wis. Auimal trap
Hancoek, F., and F. B. Norton. (See Nortou \& Haucock.)
Hancock, Henry J., New York, N. X. Clothes dryer Sane...... Sewing-machine frame
(Design) Same...... Sewing machine
Hancock, John T., Boston, Mass. Steam-boiler furnaco .......................................................
Hancock, Thomas, and John H. Leaman, Richmond, Va. Machine for cleaning grain.
Hand, Johu R., assignor to self aud Johnson Orr, College Corner, Ohio. Cultivator
Handforth, Benjamin, Chicago, Ill. Curtain fixturc
Hanford, Edwin TV. (See Mead, Ira W., assignor.)
Hanger, James E., assignor to self and J. E. A. Gibbs, Staunton, Va. Cross-bar lock for doors, \&c
Hanigan, Hugl, and William S. Bullock. (Sce Bullock \& Hanigan.)
Hanley, William, and Levi B. Raymond. (See Raymond \& Hanley.)
Hanlou, George, William, Alfred, Edward, and Frederick, New York, N. X. Ve locipede.
Hannah, Willian, Middlefield Couter, N. X. Horse hay fork:

Date.

Feb. 4, 1868.
Dec. 1, 1868.
Aug. 11, 1868.
Feb. 11, $18 \mathrm{fi8}$.
May 12, 1868.
Sept. 1, 1868.
Nov. 17, 1868.

May 20, 1868.
Jan. 14, 1868.
Jan. 14, 1888.
Mar. 3, 1868.
Nov. 10, 1868.
July 14, 1868.
Sept. 1, 1868.
Sept. 8, 1868.
Dec. 8, 1868.
Mar. 24, 1868.
June 30, 1868.
Dec. 29, 1868.
Aug. 25, 1868.
Dec. 22, 1868.
Sept. 29, 1868.
Oct. 27, 1868.
Dec. $22,1868$.
July 21, 1868.
Nov. 10, 1868.
Scpt. 1, 1868.
May 12, 1868.
Oct. 6, 1868.
Nov. 10, 1868.
Sept. 8, 1868.
Apr. 14, 1868.
Oct. 6, 1868.
Nov. 24, 1868.
Aug. 4, 1868.
Jan. 28, 1868.
Nov. 3,1868.
Aug. 11, 1868.
Jan. 7, 1868.
Apr. 14, 1868.
Nor. 17, 1868.
Oct. 20, 1868.
Nov. 24, 1868.
Apr. 23, 1868.
Apr. 14, 1868.
Aug. 11, 1868.
Oct. 27, 1868.
Jall 14, 1868.
Jan. 28, 1868.
Feb. 4, 1868.
Nov. 10, 1868.

June 16, 1868.

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# Alphabetical list of patentees for the year 1868-Continued. 

No.

80, 168
79, 344
84, 355
73, 325
79, 069
84, 547

80,407

77, 037
77, 977
85, 382
83, 281
78, 663
78,280
73,245
82, 714
74, 350
75, 901
85, 305
75, 902
73, 715

79, 222
75, 263
85, 227
80, 730
83, 958
77, 373
81, 7\%8

81, 779
85, 306
78, 083
84, 356
73, 889
74, 083
81, 083
82, 941
7\%, 978
73, 09
82, 942
76, 185
82, 522
79, 468
73,000
73, 971
84, 184
81, 164

74, 820
73, 246
73, 181
84, 823
75, 416
83, 493
73, 09
78, 961
80,948

Name, residence, and invention or discovery.

Hannan, James, and Ellery P. Ralph. (See Ralph \& Hannan.)
Hannan, James S., et al. (See Miehel, A., assignor.)
Hannen, H. S., Philadelphia, Pa. Manufacture of white lead
Manover, Major E., and D. D. Bailey, Lamoillo, Ill. Cultivator
Hansbrow, Thomas, doceasod, (Luey A. Hansbrow and B. B. Redding, executors,) Sacramento, Cal. Pump.
Hansel, John W., Peoria, Dl. Window-sash fastener
Hansen, C. O., Memphis, Tenn. Bevel squaro.
Hanson, C., Owatomna, Minn. Harcow.
Hanson, L. O. (See Paige, W. H., assignor.)
Same. .... . (See Hiteheock, Robert, assignor.)
Hanson, L. W., and Samuel Bush, Springfield, Mass. Hoso compling
Happersett, Jaeob C. and Daniel W., and George W. Flowers. (See Flowers \& Happerset.t.)
Haraden, Harvey D., Hartford, Vt. Clothes pin
Same...... Hub for earriage wheels
Harbaugh, Eli, Washington, Iowa. Fastening and strengthening for horse col lars
Harbaugh, F. R., Philadelphia, Pa. Erg lolder
Harbster Brothers \& Company. (See Oaks, W. A. C., assignor.)
Hareourt, Joseph F., Cineinnati, Olio. Taeklo bloek
Harden, Froderiek, Conshohoeken, Pa. Safety valvo.
Harden, John, Chieago, Ill. Auti-friction bearing for maehinery
Hardenbergh, Charles M., and William A. Leo. (See Leo \& Hardenborgh.)
Hardenstein, A. O. H., assignor to self and Marcellus A. Foute, Clinton, Miss. Explosive projeetile.
Hadesty, Benjamin T., Sunderlandville, Md. Tobacco-hill preparer
Hardin, Wm. E., Bowling Green, Mo. Plow.
Harding, E. B., Northampton, Mass. Truss
Harding, Eliza J., St. Louis, Mo. Abdominal and uterine supporter
Hardines, George, ot al. (See Lalor, Thomas, assignor.)
Harding, Gustavus P., England. Apparatus for drawing tapered tubes. (Patented in England Sept. 14, 1865)

Same...... (See Clistoph, Hawksworth \& Harding.)
Harding, Jacob, assignor to Henry I. Allen \& Company, Schooleraft, Mich. Hames fastener
Harding, Thomas, Springfield, Ohio. Harvester rake
Harding, Thomas \& W. N. Whiteley. (See Whiteley \& Hiarding.)
Hardy, Anson, Boston, Mass. Indicator for permutation loeks
Fardy, Clinton R., Lexington, Ind. Car coupting..
Hardy, Cyrus H., assiouor to self and B. L. White, Bath, Maine. Saw horse
Mardy, Dexter D., assignor to Henry J. Behreus, Henry C. and Edward Hart, Cineinnati, Ohio. Kotary engine
Hardy, Dexter D., assignor to Thomas H. Foulds, Cineinnati, Ohio. Sulmerged rotary pump
Hardy, Dexter D., et al. (See Millward, Frank, assignor.)
Hardy, Dexter D., et al. (See Milward, Frank, Lssignor.) Mass. Loeking lateh
Hardy, John, 2d, Andover, and Byron B. Floyd, Lawrenee, Mas Hardy, Uriah W., Abingdon, II. Gate.
Hare, C. C., Louisville, Ky. Corniee for buildings
Hare, S. J., Louisville, Ky. Hot-air furuaeo.
Harger, David, Des Moines, Iowa. Car eoupling
Harcer, David, assionol to self, D. H. Xoung, and A. S. Vorse, Des Moines Iowa. Composition for roofing
Hargrave, T. C., Boston, Mass. Wheel and axle for railroad ears
Hargrave, Thomas C., assignor to self, William B. Charlton, and H. K. Moore, Boston, Mass. Device for changing speed in machinery
Harorave T C and W B Charlton Boston, Mass. Low-water indieator
Hargrave, W. O., Iipon, Wis. Cultivator
Harkrader, David M., Chili, nll. Combined harrow and caltivator.
Harlan, E. T., Star City, Ind. Churn.
Harlan, S. C. (See Hopsou, Albcrt S., assiguor.)
Harlin, John, New York, N. Y. Lubricator-
Harlow, Charles F., assignor to self and Doxtor S. King, Boston, Mass. Machine for entting and trimming bristles, felt, fur, wool, \&c
Harman, I. R., assiguor to self and Thomas J. Meginnis, Whitestown, Ind. Sawing maehine
Harmar, W. T., New York, N. Y. Horsoshoe
Harmon, Abram A., Oluey, Ill. Cultivator
Harmon, B. H., and D. J. Stridevant, Clifton Springs, N. X. Method for removing tin and other eoatings from sheet motal.

Same .... . . (See Sturdevant \& Harmon.)
Harmon, Silas B., Portland, Maine. Carriage thill
Harmyer, Louis, Cineinnati, Ohio. Composition for presorving wood, metal, eanvas, \&e.
Harper, C. A., Wheeling, Ind. Cultivator
Same ............................. . . same
Harper, John, Hillsboro, Iowa. Hay raker and loader
Harper, Smith, Leipersville, Pa. Físhing net
Harican, D., and J. Whitney, Winchester, Mass. Worm for gear.
Harrington, David, Woreester, Mass. Friction-eluteh pulley.
Same...... .Loose pulley

July 21, 1868
Juno 30, 1868.
Nov. 24, 1868.
Jan. 14, 1868
June 23, 1868.
Dec. 1, 1868.

July 28, 1868.

Apr. 21, 1868.
May 19, 1868.
Dee. 29, 1868
Oct. 20, 1868
June 9, 1868
May 26, 1868.
Jan. 14, 1868

Oet. 6, 1868
Fel. 11, 1868
Mar. 24, 1868
Dec. 29, 1868
Mar. 24, 1868

Jan. 28, 1868

June $23,1868$.
Mar. 10, 1868
Dee. 22, 1863
Anc. 4, 1868
Nov. 10, 1868.
Apr. 28, 1868
Sent. 1, 1868
Sept. 1, 1868
Dec. 29, 1868
May 19, 1868
Nov. 24, 1868.
Jan. 23, 1868
Teb. 4, 1868.
Aug. 18, 1868
Oct. 13, 1868.
May 19, 1868
Jan. 7, 1868
Oet. 13, 1868
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Sept. 29, 1868.
June 30, 1868.
Jan. 7, 1868
Fel. 4, 1868
Nov. 17, 1868
Aug. 18, 1868.
Feb. 25, 1868
Tan. 14, 1868
Jan. 7, 1868
Dec. 8,1868
Mar. 10,1868
Oet. 27, 1868
Jan. 7, 1868
June 16, 1868.
Aug. 11, 1868.

Alphabetical list of patentees for the year 1868-Continued.
No.

Name, residence, and invention or discorcry.

Harrington, David, assignor to sclf and S. A. Wood, Worcester, Mass. Lubricating pulloys
Harrington, Jackson, assignor to self and A. C. Lippitt, New London, Conn. Gear-cutting tool.
Harrington, L., Saugatuck, Mich. Ironing tabie.
Harrington, Richard C., Newark, N. J. Door lock.
Harrington, Robert, and James Edward Boycc. (See Boycc \& Harrington.)
Harris, Aaron B., assignor to sclf, W. D. Bryant, and H. H. Gates, Morrisville, Vt. Butter tul
Harris, Alexander W., Now York, N. Y. Suspender.
Harris, C., and P. W. Zoincr, Cinciunati, Ohio. Stove
(Design)
Harris, Charles J., Warren, R.I. Spinning machine. $\qquad$
Harris, David A., Ithaca, N. Y. Wood-planing machinc.
Harris, E. P., Conneautville, Pa. Sced planter.
Harris, E. S., and W. H. H. Joncs. (See Jones \& Harris.)
Harris, Trancis M., Winncmac, Ind. Washing machinc
Harris, George R. (See Finch, Edward T., assignor.)
Harris, George W. (See Carey, Wilson W., assignor:)
Harris, George W., and George Elliot, Aurora, Ind. Car spring
Harris, Hiram, Circleville, Ohio. Snow plow
Harris, H. J., Shreveport, La. Pyrotechnic signal
Harris, James, Janesville, Wis. Harvestcr.
Samc...... Evaporator
Harris, James 'T., Swampscott, Mass. Leather roller
Harris, Joln K., Springticld, Ohio. Harness.
Harris, L. P., Crestlinc, Ohio. Apparatus for clarifying saccharine juices.
Harris, Samtel, Springfield, Mass. Grain separator
Harris, Samuel and David A., Shippensburg, Pa. IForse hay fork ... (Reissue) .
Harris, Sandy, Philadclphia, Pa. Weighing scale
Harris, William C., A. Robert Roseman, and Hubbil B. Hutchins, Philadelphia, Pa. Carriage for advertising
Marris, W. M., and W. B. Gould. (See Goukl \& Marris.)
Harris, William P., and Oliver Taurot. (See Taurot \& Harris.)
Harris, W. S., et al. (See White, C. N., assignor.)
Harrison, Andrew J., assignor through mesne assignments to self, W. W. Dex ter, Alonzo K. Cutts, and Samuel C. Burnham, jr., Jancsville, Wis. Watch. ( Antedated Jan. 28, 1868)
Harrison, Benj. J., and Jas. Condie, Now York, N. Y. Folding chair...(Reissue)
Harrison, Caleb, Milwaukce, Wis. Rotary steam engine. (Antedated June 27, 1868)

Harrison, Charles, New York, N. Y. Cock or faucet
Same. ..... Slow-closing valve for water closets
Harrison, Edward, New Haven, Conn. Grinding mill
(Extension)
Samo-.............................................. same
Sane............................................... same
Harrison, Job, assignor to self, George W. Esterly, and C. C. Lewis, White Water, Wis. Cooking stove fire chamber.
Harrison, Joseph, jr., Philadelphia, Pa. Low-water detector
Samo...... Steam gencrator
Harrisou, Joseph G., New York, N. Y. Soap culp. . .
Harrison, Joseph John and Edwari, Great Britain. Brake for yarn beams of looms
Harrison, Thomas B., et cul. (See Fellows, Harrison \& Drer.)
Harrison, Thomas B., and John H. Murris. (See Morris \& Harrison.)
Harrison, Thomas J., assignor to self and George Allin, New York, N. Y. Machine for bending pipe
Harrison, William N. and John J., Ilornby, N. II. Corn planter
Harrison, William O., Crittenden, Vt. Harvester.
Harrison, William S., Germantown, Tenn. Washing machine
Farroun, $\Delta l e x a n d e r$, jr., South Onondaga, N. Y. Harness. (Antedaterl March 4, 1868)
Harrow, Thomas A. (Sec Gibson, A. J., assignor.)
Harrow, Thomas A., and Benjamin F. Thurston. (See Gibson, A. J., assignor.) Harry, John T', et al. (S'e Symons, Harry \& Stephens.)
Harsen, Willian, Green Point, N. Y. Steam pump.
Harsha, James, Circlevillc, Ohio. Plow and harrow combined.
Harsha, Mortimer S., assignor to self and Edwin Mereleth, Batavia, Ill. Washinc machine
Harsin, George, and T. M. Kirkpatrick, Kirkville, Iowa. Iand lomn
IIarsin, George, and C. 'I. Sanders, Kirkville, Iowa. Machine for shearing shoep Hart, Abraham, et al. (Sec Moxey, John G., assignor:)
Hart, Carmi, Bridgeport, Conn. Machine for cutting vencers......(Extension).
Hart, Edward H., New York, N. X. Fur cuff.
Hart, Francis P., assignor to self and Samucl Keneagy, Strasburg, Pa. Breaking the surge on harness or vehicles.
Mart, George, New Bedford, Mass. Traveler for firling sails.
Mart, George D., Muncie, Pa. Cultivator. (Antedated May 11, 1868)
Hart Grain Separator Company. (See McCulloch, Thonas H., assignor.)
Mart, II. C., and M. M. Foster. (See Foster \& IIart.)
Samo.
same.
Hart, Isaac C., Galesbrurg, Ill. Thill coupling
Hart, Isaac W., and Omer Norton, New Britain, Conn. Carpet fastencr

Dato.

July 7, 1868.
Sept. 22, 1868.
Oct. 27, 1868
June 16, 1868.

June 16, 1868
June 16, 1868
Nov. 3, 1868
Aug. 11, 1868
Fcb. 11, 1868
May 26, 1868
Jan. 21, 1868

Aug. 25, 1868.
Nov. 24, 1868.
Scpt. 29, 1868.
July 28, 1868.
Nov. 24, 1868
June 23, 1868
May 26, 1868
Jan. 7, 1868
Mar. 10, 1868
Jime 16, 1868
July 21, 1868
Fcb. 18, 1868

July $28,1868$.
Mar. 10, 1868.
July 14, 1868.
Sept. 8, 1868.
Dec. $15,1868$. May 18, 1868. Sopit. 1, 1868. Dec. 29, 1868.

June 2, 1868 Mar. 24, 1868. Ang. 4, 1868. July 28, 1868.

Sept. 15, 1868.

July 21, 1868 June 2, 1868. July 21,1868 Nov. 17, 1868.

Mar. 17, 1868.

Feb. 4, 1868.
Jan. 7, 1868
Nov 17, 1868
Feb. 11, 1868. Sept. 22, 1868.

Mar. 16, 1868.
May 5, 1863.
Dec. $29,1868$.
Mar. 3, 1868
May 26, 1868.

Feb. 11, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invontion or discovery. | Date. |
| :---: | :---: | :---: |
|  | Hart, Jeffery, et al. (See Monach, James, assignor.) Same $\qquad$ |  |
| 3,100 | Hart, John, Lancastor, Pa. Bottle..................-................... (Desigu) . | July 14,1888. |
| 84, 488 | Hart, Thomas M., New Bedford, Miass. Woodon washer for carriages. (Antedated Nov. 14, 1868) | Dec. 1,1868. |
| 78, 204 | Hart, William C., assignor to self and Charles S. Jones, Nantucket, Mass. Lounge | May 26, 1868. |
|  | Hart, William H., and George S. Murford. (See Adt, John, assignor.) |  |
| $\begin{array}{r} 76,186 \\ 82,831 \end{array}$ | Hart, William H., jr., Philadclphia, Pa. Mode of packing neck ties . | Mar. 31, 1868 |
|  | Harter, Elam, Dowagiac, Mich. Aנtomatic grate Hartford Carpet Company. (See Malkin, Levi G., assignor.) ........... (Dasign.) | Oct. 6, 1868. |
|  | Same................................ . same........................ (Dosigni) |  |
|  | Same..................-............. - same......................... (Design.) |  |
|  |  |  |
|  | Same........................-same.................................. (Design.) |  |
|  | Same.......................- same................................. (Design.) |  |
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|  | Same.........................s.same......................................... . (Design.) |  |
|  | Same.......................-same................................. (Design.) |  |
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|  | Same....................... same................................... . (Design.) |  |
|  | Same....................... - . same...............................-. (Dcsign.) |  |
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|  | Same........................ same..................................... (Dosign.) |  |
|  | Same..................................same.................................................................................................... |  |
|  | Same.........................-s. same............................................ (Design.) |  |
|  | Same........................s.same...................................- (Design.) |  |
|  | Same........................ same.................................. (Design.) |  |
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|  | Same........................ - samo................................- (Desigri.) |  |
|  | Same....................... - same..................................... (Desigr.) |  |
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|  |  |  |
|  | Samo.......................-. samo..................................... - (Design.) |  |
|  | Same...............-......... same...............-................. (Design.) |  |
|  | Same.........................same................................- (Design.) |  |
|  | Same........................sam0.................................. - . (Design.) |  |
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|  | Same........................- same.......................................... - (Design.) |  |
|  | Same.......................-same.................................. (1)esign.) |  |
|  | Same.......................-same..............................-... (Design.) |  |
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|  |  |  |
|  | Samo.........................s.sam0...................................- (Design.) |  |
| 73,528 | Hartford, D. Frank, assignor to self and Edraund Tarbell, Boston, Mass. Pipo and rod cutter | Jan. 21, 1868. |
|  | Hartley, Thomas, et al. (See Swceney, Mathews \& Hartley) . . . . . . . (Reissue.) |  |
| 75, 013 | Hartman, Andrew, Railroad gate ................................................. | Mar. 3, 1868. |
| $\begin{gathered} 76,627 \\ 3,076 \end{gathered}$ | Hartman, Charles R., Vincennes, Ind. Subsoil plow ................................. | Apr. 14, 1868. |
|  | Same............e al. (See Baierle, Hartmana \& Reeso.) |  |
| 81, 631 | Hartnett, John M., assignor to Robert L. Fabian, Waukogan, Ill. Corn husker Hartshorn, Charles E. (See Pino, Benj., assignor.) | Sopt. 1, 1868. |
| 75,418 | Hartshorn, Henry M., assignor to self and Daniel Fobes, Malden, Mass. Lampshade. | Mar. 10, 1868. |
| 2,955 | Hartshorn, Sholdon S., assigner to tho West Haven Backlo Company, West Haven, Conn. Bucklo | May 26,1868. |
|  | Hartshorn, Sheldon S., deceasod, by Stephen E. Booth, administrator, Orango, Conn. Bucklo.............................................................. (Extension) - | Nor. 5, 1863. |
| 80, 171 | Hartsock, A. C., Douglas, Ill. Mill-stono dress | July 21, 1868. |
|  | Hartsuff, J. H., and J. D. Bryson. (See Pryson \& Hartsuff.) |  |
| 77, 038 | Hartupeo, Andrew, Pittsburg, Pa. Gra - var ......... | Jur. 21, 1868. |
| 79,656 74,219 |  |  |
| 74,219 | Hartwig, Charles F., assignor to self ant teorge h. Kelsey, New Haven, Conn. <br> Hose coupling. | Feb. 11, 1868. |

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discorery. |
| :---: | :---: |
|  | y, Charles R.. Now York, N. Y. Air-heatin |
| 73, 003 | Harvey, Charles T., Tarrytown, N. Y. Elevated r |
| 79, 753 | Samo............................. |
| 79, 754 |  |
| 79, 755 | Sam |
| 79, 756 | Same...... Railroad |
| 79,757 | , |
| 74,189 | Harvey, Edmund A., Wilmington, Del. Carriage slaft and pole coupling. Haryey Edward (See Welistor John T, aseignor) |
| 78, | Harvey, E. K., Quincy, Ohio. hevolving harr |
| 83, 85 | Same..... Corn |
| 75, 159 | Harvey, Joln, Scranton, Pa. Hat ho |
|  | Harrey, L. D., and William Shea. (See S |
| 74, 353 | Harrey, P. J., Chicago, Ill. Spring-bed bottom |
| 74,220 | Harvey, William, Albany, N. X. Padlock. (Antedated Sopt. |
| 79, 570 | Harvey, William, Volga City, Lowa. Sulky cult |
| 82, 943 | Harvey, William T., jr., assignor to self and Peter Grimes, Philadelphia, Pa. Saw handle. |
|  | Harwood, Georgo S., and Geurge H. Quiney. (See Sampson, Thomas, assignor.) |
| 3,222 | Harwood, Luther W., assignor to Fuller, Warren \& Company, Troy, N. Y. <br> Plato of a cook-stove <br> (D'csign). |
| 75, 264 | Haseltine, John, assignor to self and Person Noyes, Warren, N. H. Composition for stufting leather |
| 77, 979 | Haseltine, John, assignor to Charles L. Whiceler, Mcthuen, Mass. Pad for horses' hoofs. |
| 3, 207 | Hascnelever, Frederick A., New Tork, N. Y. Trado mark.......... (Dosign). |
|  | Haserot, J., and John Maddin. (See Maddin \& Hascrot.) |
| 84, 185 | Haskell, E. P., assignor to the Hale Patent Washer Company, Now Bedford, Mass, A rle box |
| 79, 974 | Haskell, Jacob W., Boston, Mass. Tool holde |
| 82, 310 | Haskell, John W. C. and J. E., Chicago, Ill. Trumk caster. (Antedated Scpt. $11,1868)$ |
| 85, 091 | Haskin, Henry P., assignor to self and Joseph L. Brenton, Roscoe, Ill. |
| 75, 544 | Haskin, Uri, jr., Pittsburg, Pa. Spiral gearng |
| 75, 545 | Haskins, Franklin, Ware, Mass. Shuttio |
| 3,100 | Haskins, John, Boston, Mass. Rubber fabric. |
| \&2, 944 | Same...... Elastic gor |
| 78, 964 | Haskins, Joseph T., assignor to self and E. Rowe, Rockport, Mass. Warping chock <br> Haskins, J. W. (See Martin, George W. assignor.) |
| 83, 283 | Haslam, Septimus, jr., assignor to self and Joln B. Talcott, New Britain, Conn. <br> Machino for producing reciprocating motion in knitting machines, \&.c...... |
| 77, 611 | Haslam, Walter, New Britain, Conn. Seaning machine.............. |
| 83, 494 | Hassam, John M., Mt. Vernon, Maine. Apple corcr and |
|  | Hastie, Goorge, and Ferdinand Moore. (see M |
| 73, 096 | Hastings, Charles, Dowagiac, Hich. Beehive Same . . . . . (See Hoar, John S., assignor.) |
| 73, 598 | Hastings, Georgo, jr., Wheeling, WVest Va. Ro |
|  | Hastings, Michael, amd lialph G. Packard. (See Packard \& Hastings |
|  | Hastings, W. J., et al. (See Franlilin, Hastings \& Holford.) |
| 82, 945 | Haswell, A. J., Cirelcville, Ohio. Heating stove and fircplacc. (Antedated Oct 6.1868 ) |
| 74,354 | Hatch, Edward, Charlestown, Mass. Clasp for belts |
| 74, 355 | Same .... . Combined eollar and bosom |
| 82, 115 | Hatch, Frank, La Crosse, Wis. Window sereen |
| 78, 802 | Hatch, Isaac C., Camden, N. J. Brick-drying app |
|  | Hatch, James, and Otis Adams. (See Adams \& Hatch. |
|  | Hatch, Jesse W., and Henry Churchill, Rochester, N. Y. Machine for cutting boot and shoe solgs <br> (Extension). |
| 80, 172 | Hatch, Moscs M., Portland, Maine. Apple corcr. (Antedated July 8, 1868) |
| 85, 032 | Hateh, N. L., Cape Elizabeth, Maine. Hay loader |
| 76, 187 | Hatch, Nehemiah L., assignor to self and J. W. Gavett, Cape Elizabeth, Meat chopper |
| 85, 093 | Hateh, Nehemiah L., assignor to self and Charles Dyer, Cape Elizabeth, Maine. |
| 83, 629 | Hatel, Warner, Plainfield, Ill. Furnace for heati |
| 73, 004 | Hatfield, T. J., Warsaw, Ind. Vegetable cutter |
|  | Hathaway, A., et al. (See Blood, Hathaway \& Beach.) Same-................................ |
|  | Hathaway, Addison, and Jonas Kendall. (See Kcndall \& Hathaway.) Same. $\qquad$ same. |
| 79,345 | Hathaway, Alfred, Charlestown, Mass. Paper shears |
| 74, 085 | Hathaway, B. G. H., Rock Stream, N.Y. Harvester |
| 74, 685 | Same...... . . . . . . . - . . . . . . . . . . . . . . - - |
| 83, 630 | Hathaway, Dexter, Wyoming, Wis. Grain se |
| 74,531 | Hathaway, Jasper R., Westficld, N. Y. Burial |
| 83, 495 | Same...... Composition for manufacture of bu |
| 81, 632 | Hathaway, Joscpl, Woodstock, Vt. Water wheel |
| 75, 755 | Hathaway, Richmond, Chicopee, Mass. Caster for sewing machine |
| 78,523 | Hathaway, Richmond, assignor to self and Levi O. Allen, Chicopee, Mass. Cloth |

## Date.

Jan. 10, 1868.
Jan. 7, 1868.
July 7, 1868
July 7, 1868.
July 7, 1863.
July 7, 1868
July 7, 1868.
Feb. 4, 1868.
May 26, 1868.
Nov. 10, 1868
Mar. 3, 1868.
Feb. 11, 1868.
Feb. 11, 1863
July 7, 1868.
Oct. 13, 1868

Nov. 3, 1868.
Mar. 10, 1868.
May 19, 1868.
Sept. 22, 1863.

Nov. 17, 1868.
July 14, 1868.
Sept. 22, 1868
Dec. 22, 1868.
Mar. 17, 1868.
Mar. 17, 1868.
Aug. 25, 1868.
Oct. 13, 1868.
Juno 16, 1868.

July 28, 1868.
May 5, 1868.
Oct. 27, 1868.
Jan. 7, 1868.
Jan. 21, 1868.

Oct. 13, 1868.
Feb. 11, 1868.
Feb. 11, 1868.
Sept. 15, 1868.
June 9, 1868.

Dec. 31, 1868.
July 21, 1868.
Dec. $22,1868$.
Mar. 31, 1868.
Dec. $29,1868$.
Nov. 3, 1868.
Jau. 7, 1868.

June 30, 1868.
Fob. 4, 1868.
Feb. 18, 1868.
Nov. 3, 1868.
Feb. 18, 1868.
Oct. 27, 1868.
Sept. 1, 1868.
Mar. 24, 1868.
Juno 2, 1868.

Alphabetical list of patentces for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 80, 731 | Hathorn, George H., and James E. Nute. (See Nuto \& Hathorn.) |  |
|  | Hattan, | ug. 4, 1 |
|  | Hatting, J. B., and H. Me Manus. (See McManus \& Hatting.) |  |
| 73, 804 | Hatton, Jamcs, New York, N. Y Metallic land | Jan. 28, 1868 |
|  | Hauberger, Thomas E. (See Witsil, G |  |
| 73, 005 | Hauck, ${ }^{\text {Sam }}$ | Jan. 7, 1868 |
| 2,862 | Sáme......-Brooklyn, ¢. Y. Oil can | Jan. 28, 1868 |
| 75, 903 | Same...... Williamsburg, N. Y. Hingo | Mar. 24, 1868. |
| 75, 904 |  | Mar. 24, 1868. |
|  | Haueisen, Engen, et al. (See Nulsen, Haneisen \& Wagner.) |  |
| 81, 165 | Hauer, Henry, Philadelphia, Pa. Padding or stuffing for ho | Nov. 17, 1868. |
|  | Haugh, Benjamin F., Indianapolis, Ind. Bolt for prison doo | Ang. 18, 1868. |
|  | Haughwout, E. V., \& Company. (See McCleish, James, assignor.) |  |
| 79, 117 | Havanagh, Bernard, Ncw York, N. Y. Wash-basin overtlow and diseharge pipe. (Antedated June 13, 1868). | June 23, 1868. |
| 83, 631 | Havell, George, Newark, N. J. Skate |  |
| 83, 852 | Havell, Henry, Newark, N. J. Machino for bending earpot-bag frames. (Antodated Oetober 24 1868) |  |
| 79,346 | Havely, Peter C., and William W. Coggshall, Rensselaervillo, N. Y. Hammer. Havemeyer, Theodore A., et al. (See Kronig, Carl, assigner.) | une 30, 1868. |
| 74, 086 | Haven, Asa S., Barre, Mass. Device for preventing cows and ealves from sucking the teats, and for lcading cattle <br> Haven, James L., \& Company. (Sce Darrow, Gcorge P., assignor.) <br> Haven, James L., and James L. Branson. (See Albertson \& Byers, assignors.) | Feb. 4, 1868. |
| 73, 890 | Havens, Jesse, A | Jan. 28, 1868. |
| 77, 879 | Havens, Jesse, assignor to self and George Palmer, Auburn, N. Y. Stump extractor. | May 12, 1868. |
| 82, 405 | Haverly, James, and Charles A. Tibbitts, La Porte, Ind. Thill eoup | Sept. 22, 1868. |
| 81, 500 | Haviland, Benjamin, Hndson, N. Y. Ch | Aug. 25, 1868. |
| 80, 732 | Hawes, C. M., Now York, N. Y. Pattern for trimming hat brims | Aug. 4, 1868. |
| 77, 281 | Hawcs, J. H., Boston, and George H. Bliss, Wcst Stockbridge, Mass. Bachine for cleaning emery |  |
| 77, 282 | Same...... Belt clasp. (Antedated April 25, 1863) | $\Delta$ рг. 28, 1868. |
| 78, 873 | Hawes, J. H. G., Nowark, N. J. Combined in | June 16, 1868. |
| 76, 077 | Hawes, L. K., Whitewater, Wis. Bed bottom | Mar. 31, 1803 |
| 78, 284 | Hawkins, Frederiek, Chicago, Ill. Conerete-briek mach | May 26,1868. |
| 80, 733 | Hawkins, George H., New York, N. Y; Machine for blocking and stretehing hats. | Aug. 4, 1868. |
| 81, 999 |  | Sept. 8, 1868. |
|  | Hawkins, Horaee B. (See Woodward, Davis B., Hawkins, Horaee R., Akrou, Ohio. Horse rake. | M |
| 73, 00 | Hawkins, Johu E., Lansingburg, N. Y. Toy | Jan. 7, 1 |
| 74, 221 | Hawkins, Wétsel E., assignor to Simpson, Hall, Miller \& Company, Walliugford, Conn. Butter dish. | Fob. 11, 1868. |
|  | Hawkins, William 11. (See Whitworth, John, assignor) ...... ....... (Reissne.) |  |
| 84, 626 | Hawks, Elizabeth, Vineland, N. J. Fieating |  |
| 81, 366 | Hawks, Francis H., St. Louis, Mo. Attaehing soles to boots and shoes | \ug. 25, 1868. |
| 78, 874 | Hawks, Thomas, Roehester, N. Y. Composition for the mannfaeture of beer, ale, porter \& |  |
| 78, 875 | Same...... Coneentrated malt extract | 16, 18 |
| 78, 370 | Hawksley, G. W., and Matthew Wild, England. Combination of a pudding furnaee with a steam generator | May 26, 1868. |
|  | Hawksworth. William, et al. (See Christoph, Hawksworth \& Harding.) |  |
| 81, 781 | Hawley, B. R., Normal, M1. Tubnlar a |  |
| 75, 160 | I | Nov. 17, 1868. |
|  | Hawley, Lewis I., Salina, and Amos Westcott, Syraeuse, N. Y: Dovice for eooling milk | Mar. 3,186 |
|  | Hawley, Sammel R., ct al. (Sce Stout \& Richardson, assignors.) |  |
| 74,22274,223 | Hawley, William H., Utiea, N. X. |  |
|  |  | , |
| 82, 832 | Same ...... Grappling iro | 6, 1868. |
|  | Haworth, J. R., and J. L. Wilson. (See Wilson \& Hawortl.) |  |
| 84, 489 | Hawthorne, Edward, Morntain View, Cal. Fire eseape | Jan. 7, 1868. |
|  | Hawxhurst, George, Somersville, Cal. Mode of preventing corrosion in boiler tubes in sea-going vessels <br> Har, A lexander, administrator of Mario Amedee Charles Mellior, deenased. (See Mellier, Marie Amedee Charles) <br> (Extension.) | Dee. 1,186 |
| 82, 946 | Hay, Cyrus, Stoneham, Mass. Boot and shoe bottoming - . . . . . . . . . . . . . . . . . | Oet. 13, 1868. |
| 76, 442 | Hayeock, B. A., Richland, Towa. Lining of furnaees | Apr. 7, 1868. |
| 75, 419 | Hayden, Charles, Collinsville, Conn. Subsoil attaelment for | Mar. 10, 1868. |
| 83, 959 | Same ....... | Nov. $10,1868$. |
| 84,186 | Hayden, George H., New Market, Ala. Sad | Nov. 17, 1868. |
| 3,292 | Hayden, Henry H., assigior to Holmes, Booth \& Haydens, New Xork, N. Y. Fork or spoon handle. <br> (Design). | Dec. 15, 1868 |
| 3,300 | me..... Handle of a fork or spoon .............................. ( (Design) | Dee. 29, 18 |
| 73,59 | Mayder, Hiram W., Waterbury, Conn. Lam | Jan. 21, |
| 73, 600 |  | Jan. 21, 1868. |
| 83, 380 | Hayden, Joel, jr., Haydensville, Mass. Chuek valve for steam and other enginery. |  |
| 73, 97 | Hayden, Martin, Detroit, Mie | Feb. 4, |
| 73, 9 | Samc......Sceding mach |  |

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residenco, and invontion or discovery. |
| :---: | :---: |
|  |  |
| 81, 367 | Hayden, William B.. Columbus, Ohio. Wire streteher for fencos |
|  | Hayen, Jaeob F. (Sce Ponton, John, assignor.) |
| 2. 101 | Hayes, Charles I., and Martin Newman, assignors to Goorgo and Charles Placo, New York, N. Y. Cireular-sarv mill.....................................(Reissue). |
|  | Hayes, Daniel, Cambridge, Mass. Clasp hook ................................. |
| 74, 821 | Hayes, Edward, et al. (Sce Lennox, Robbins \& Hayes.) |
|  | Hayes, George E., Buffalo, N. Y. Vuleanizing vessel ................. (Roissuo) |
| 73, 326 | Hayes, Georgo E., assignor to the Buffalo Dental Manufaeturing Company, Buffalo, N. Y. Steam compressor for vuleanizing flasks..... |
|  | Hayes, Jabez W., Newark, N. J. Fruit box or |
| 2,894 |  |
| 82, 31 | Hayes, Jolm P., Philadelphia, Pa. Rango. (Antedated Sopt. 818 |
|  | Hayes, John W., assignor to self and Jacob G. Crockett, Kittery, Mainc. Governor |
|  | Hayes, Nathaniel, and Washington Blythe. (See Blythe \& Hayes.) |
|  | Hayes, Virgil, Campluell G. Waldo, and Harlan A. Main, Tekonsha, Mich. Grain binder. |
|  | Haynes, F. K., Hanover, N. H. Lamp shade . <br> Haynes, Henry S. (See Ritchel, Charles F., assignor.) <br> Haynes, S. A., and George Wells. (See Wells \& Haynes.) |
|  |  |
|  |  |
|  | Haynie, G. W., Olney, III. Car eoupling. |
| 78, 66 | Haynie, Jacol D., New Antioeh, Ohio. Corn cove |
| 78,60 | Hays, Asahel, Guy's Mills, Pa |
|  | Hays, Ledia, Ames, Lowa. Pad billet................. |
| 2,914 |  |
| 78,08 | Haythorn, Fredorick, Philadelphia, Pa. Spinning fran |
|  | Haythorn, J., and J. Martin, Thompsouville, Conn. Carding maehino |
| 81, 084 | Haythorn, Joseph, and Charles E. Priee, Thompsonville, Conn. Alarm for earding machine |
|  | Hayward, B. F., Nebraska City, Neb. Hen's nest <br> Hayward, Daniel, deceased, by Caleb Swan, executor, Easton, Mass. Manufacture of India-rubber. <br> .(Extension) |
|  |  |
| 75, 421 | Hayward, D. E., Malden, Mass. Scrub brush .-....................... |
| 80, 263 | Hayward, Henry, Now York, N. Y. Felted fabrie. |
| 79, 904 | Hayward, William, and John Lees, Danville, Pa. Fagot or pile for manufacturing railroad rails |
|  | ard, E. C. (See Crump, Samucl, assignor, |
| , 0 |  |
| 83, 496 | Head, George B., Albany, N |
|  | Head, Smith, Malifax, Pa. Shingle maehin |
| 73,529 | Headington, Nieholas, Cineinnati, Ohio. Railroad-rail |
| 73, 097 | Heafer, Napoleon B, Bloomington, 111. Briek press.. |
|  |  |
| 81, 166 | Heald, Chester, Marshalltown, Io wa. Sleigh. |
|  | Healey, Joseplh, jr., Detroit, Mieh. Stove-pipo damper -.........)Hearn, Fleming Gr., and William Bisbee. (See Bisbeo \& Hearn.) |
|  |  |
|  | Heath, A. R., and A. Morehouse. (See Morehouse \& Heath.) |
| 80, 950 | Heath, George W., 3urlington, Pa. Horse hay fork |
|  | Heath, Henry, assignor to Henry G. Fish, Thomas I. Clark, and Thomas J. Flage, New Jork, N. Y. Drawers |
|  | Heath, Henry, assignor to Fisk, Clark \& Flagg, Now York, N. Y. Cloth drawe |
|  | Heath, J. Wilson, Momplis, Temn. Earth-boring auger ......... |
| 78, 086 | Heath, Watson A., Apalaehia, N. Y. Horso hay rako |
| 73, 008 |  |
| 75, 265 | Same ............................. same. |
| 2, 0 |  |
| 74,686 | eatherington, Jaeob, Bellair, Ohio. Ex |
| 82, 313 | Heaton, Abram, assignor to self and Bradley \& Goodsell, Bridgeport, Comn. Water meter |
|  |  |
|  | Heaton, Edward, Now Haven, Conn. Shank spring <br> Same...... Metallie shank for boots and shoes <br> (Reissuo) |
|  |  |
| , 53 | Heaton, John C., assignor to self and Nathaniel Earlo, Fitehbusg, Mieh. Car eoupling |
| 83, 960 | Heator, Julius S., Ovid, Miel. Revolving tablo. Heavner, A. J., Time, Ill. Churn. |
| 73, 327 |  |
|  | Heblard, Ira. (See Rist, J. W., assignor.) <br> Samo................... same. <br> Samo .................. samo. |
|  | Heberling, John ank William L., Mount Pleasant, Ohio. Root euttor .......... . Heck, John. (See Rowell, Warren, assignor.) |
|  |  |
| 70, 224 | Heekhart, George W., assignor to self and Christian Kramor, Columbiana, Ohio. Hames coupling |
|  | Heckel, Joseph, and Miehael Eiehinge, Decatur, Hil. Composition for eovering wooden bridges, buildings, \&e |
|  |  |

Date.

Sept. 8, 1808
Aug. 25, 1868.

Aug. 25, 1808 Juno 30, 1868 Feb. 25, 1868

Sept. 29, 1868.
Jan. 14, 1868
Feb. 4, 1868 Mar. 10,1808 Sept. 22, 1868.

July 21, 1868

Dee. 8,1808
May 19, 1868.

Mar. 10, 18є
June 9, 1868
June 9, 1868.
June 9, 1868
Feb. 4, 1868
May 19,1868
Mar. :4, 1868.
Aug. 18, 1 ¢68
Sept. 22,1863
Aug. 28,1868
Mar. 10, 1808
July 21, 1868.
July 14,186 .
June 23, 1868
Oct. 27, 1868
Apr. 28,1868
Jan. 21,1858.
Jan. 7, 1868
June 9, 1868
Aug. 18, 1863
July 7, 186z.

Ang. 11, 1868.
Feb. 4, 1868
A pr. 23,1868
Mar. 31, 186
May 19, 1888
Jan. 7, 1868
Mar. 10, 1 fitz
May 26, 1868
Feb. 18, 1868
Sent. 22, 1868
July 28, 1808
Mai. 10, 1868.
May 19, 1868.
Feb. 17, 1868.
Nov. 10, 1868.
Jan. 14, 1863.
May 26, 1868.

Apr. 21, 1868.

June 33, 1868.
Sopt. 8, 1808.
Apr. 7, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No,
Name, residonco, and invention or diseovery.

Heeker, Israel. (See Smith, Wm. H., assignor.)
Heela Works Company. (See Soymour \& Goodrieh, assignors.)
84, 118
75, 267
77,484

79, 469
73, 891
82, 406
80, 951
77, 731
78, 087
76, 444
79, 225
78,971

76,757

75, 680
3, 277
75, 161
82, 947
85, 445
73, 601
81, 368
80, 952
80, 953
73, 247
84, 824
73, 182
78, 205
81,633
80, 954
81, 501
75, 756
75,546
78, 088
73,098
78, 371
80, 070
77, 190
80, 174
79, 975
81, 369
73, 602
81, 370
73, 716

84, 945
74,356
83, 156
78, 089
80, 071
80, 410
78, 206
73, 183
83, 961
74, 357
78, 285
78, 738
85,007
84, 669
80, 072
73, 328
Hedden, D. B., Newark, N. J. Chair. (Antedated Nov. 5, 1868)
Hedenberg, John W., Chieago, II. Cotton-balo tie

- Nov. 5, 1868)

Hedges, Isaae A., and Joseph M. Story, assignors to Lane \& Bodley, Cineinnati,
Ohio. Machine for sawing lath
Hedman, Frank M., and John Haigney. (See Haigney \& Hedman.)
Hedriek, Henry, and Josoph M. Grovo. (See Grove \& Hedriek.)
Hedstrom, John M., and Albert I. Thinoll. (See Thunell \& Hedstrom.)
Heermans, Theodore, Pleasant Hill, Mo. Coffeo roaster
Hefft, Christofer, Tazewell County, 111 . Cnltivator
Heflin, Archabald T., Monmouth, Ml. Cultivator.
Hegerman, G. E., Brooklyn, N. Y. Tin ean..
Heigus, Levi. (See Sthore, Charles, assignor.)
Heikes, David M., Franklin Township, Pa. Clover separator and huller
Hein, G. A., Waterford, Pa. Water-spout fastening
Heindl, J. J., New York, N. Y. Basket grato for furnaces
Heine, H., New York, N. Y. Steam generator.
Heine, Lonis, Philadelphia, Pa. Steam bath. (Antedatod June 13, 1868)
Heinemann, Jaeob. (See Silbermann \& Unger, assignors.) Same.
samo.
Heinemann, Theo. William, New York, N. Y. Modo of purifying, seasoning, and preserving wood
Heinrieh, Joseph, et al. (See Palmor, Charles I., assignor.)
Heins, F. W., New York, N. Y. Washing maehine.
Heiser, Francis C., Brooklyn, E. D., N. Y. Snuff box
Heisler, Jonathan, Sehuylkill Havon, Pa. Tonie or bitters.
Heitzman, J., and S. Seheibloin. (See Sehciblein \& Heitzman.)
Heliker, Martin, and O. A. White, assignors to selves and J. W. Bostwiek, Norwalk, Ohio. Churn dasher.
Heliker, M. R., Norwalk, Ohio. Churn dasher.
Helm, Henry, Pittsburg, Pa. Washing machino.
Helmer, James L., Rome, N. Y. Gate for water wheels
Helms, Charles H., Poughkeepsie, N. X. Maehino for searifying leather
Same. .... . Heel trimmer
Helton, M. W., and J. H. Redfeld, Bloomington, Ind. Automatic alarm for grist mills
Hemingway, H. N., Rochester, N. Y. Bed spring
Heminway, Samuel T., Saratoga Springs, N. Y. Burglar-alarm loek.
Hemphill, James, Pittsburg, Pa. Steam-eugino slido valve
Hemphill, James M. (See Colwoll, W. S., assignor.)
Hemstreet, P. P., assignor to self and David Gudtner, Galesburg, Ill. Fire heater
Henderson, E. C. and R. A., Albia, Iowa. Mill-stone maehine
Henderson, Henry A., Avoea, N. Y. Gate
Henderson, Henry A., assignor to self and Charles M. Gray, Avoca, N. Farm gate.
Henderson, Isaae W., Leavenworth, Kan. Pen holder for ruling machino
Henderson, L., Manson, N. C. Cotton cultivator. (Antedated May 12, 1868).
Henderson, I.' F., Freeport, Ml. Portable fence.
Henderson, Miehael, Detroit, Mich. Car brako and starter Same. -.... Potato digger
Henderson, Smith S., North Cohocton, N. Y. Wagon brake
Henderson, William H., assignor to William H. Snider, West Point, Ill. Churn.
Hendriek, Charles E., Chieopeo, Mass. Feather renovator. Same.-.-............................................ $\operatorname{sam\theta }$
Hendriek, E. E., and Peter Dolan. (See Engelhardt, Johan, assignor.)
Hendriek, H. H., Dayton, Ohio. Steam-engine globe valve.
Hendricks, Joscph E., assignor to Brown \& Brothers, Waterbury, Conn. Lamp
Hendricks, J. Mooro, Philadelphia, Pa. Rico-hulling machino Samo...... (See Clime, John C., assignor.) Samo... .............. . . same
Hendrieks, William C., et al. (See Connett, Matthew F., assignor.)
Hendrickson, Benjamin, Huntington, N. Y. Gato latch
Hendry, Thomas C., Union Point, Ga. Combined squaro and gango
Hendry, T. C., assignor to self and R. B. Smith, Union Point, Ga. Anger handlo
Hendy, Joshua, San Franciseo, Cal. Coneentrator.
Heneage, Robert, assignor to self and Ira R. Amsden, Bnffalo, N. Y. Insolo for
boots and shoes.
Heneage, Robert, assignor to Breed \& Company, Buffalo, N. $\underset{Y}{ }$. Slate frame
Heneage, Robert, and F. W. Breed, Buffalo, N. Y. Railroad-car ventilator.
Heneage, R., and Henry Spendelow. (See Spendolow \& Heneage.)
Henfield, George H., San Franciseo, Cal. Car-axle box.
Same-.....Journal box
Henion, S. J. (See McDaniel, A., assigior.)
Henkle, Curran W., Washington C. H., Ohio. Corn planter.
Henley, Henry, Halbort's Bluff, Ind. Dryor.
Same. .... New Garden, Ind. Press.
Henley, Henry, Shoals, and John J. Reinhart, Loogootoo, Ind. Grain dryer
Henlon, Samuel Warren, Selma, Ala. Suspender. (Antedated June 1, 1868)..
Hennasy, Michael, assignor to self and John Adams, Crawford, N. J. Claw bar
Henning, Gottlieb, and Horman P. Willie, Buffalo, N. Y. Boot heel.
(Design)

Date.

Nov. 17, 1868.
Mar. 10, 1868.
May 5, 1868.

June 30, 1868.
Jan. 28, 1868.
Sept. 22, 1868. Aug. 11, 1868.

May 12, 1868. May 19, 1868. Apr. 7, 1868. June 23, 1868. June 16, 1868.

Apr. 14, 1868.
Mar. 17, 1868.
Dee. $8,1868$.
Mar. 3, 1868.

Oet. 13, 1868.
Dec. 29, 1868.
Jan. 21, 1868.
Aug. 25, 1868.
Aug. 11, 1868.
Aug. 11, 1868.
Jan. 14, 1868.
Dee. 8, 1868.
Jan. 7, 1868.
Máy 26, 1868.

Sept. 1, 1868. Aug. 11, 1868. Aug. 25, 1868.

Mar. 24, 1868.
Mar. 17, 1868. May 19, 1868. Jan. 7, 1868. May 26, 1868. Jnly 21, 1868. Apr. 28, 1868. July 21, 1868. July 14, 1868. Aug. 25, 1868.

Jan. 21, 186 . Ang. 25, 1868. Jan. 28, 1868.

Dee. 15, 1868.
Feb. 11, 1868.
Oet. 20, 1868.
May 19, 1868.
July 21, 1868. July 28, 1868. May 26, 1868.

Jan. 7, 1868,
Nov. 10, 1868.
Fob. 11, 1868.
May 26, 1868.
Juno 9, 1868.
Dec. 15, 1868.
Dee. 1, 1868.
July 21, 1868.
Jan. 14, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residonce, and invention or discovery. |
| :---: | :---: |
| 3,227 | Henry, B. Tylcr, assignor through mosne assignments to the Winchester Arms Company, New Havon, Conn. Magazine firo-arm <br> (Reissuo) |
| 84, 187 | Henry, Charles, Brooklyn, and John, Morrisania, and Edmund McLoughlin, New York, N. Y. Mothod of etching rolief platos for surfaco printing |
| 74,087 | Henry, Johu S., and Abraham H. Reist, Manhoim, Pa. Bolt and rivet cutt |
|  | Henry, Robert, et al. (See Allairo, Seaman, assignor.) |
| 73, 603 | Henry, Samucl B., Bridgeport, Conn. Articlos made of mold Henshaw, Henry, et al. (See Folger \& Henshaw.) |
| 2,867 | Honshaw, J. K., assignor througli mesno assignments to the Middlotown Tool Company Midalotome Cont Self-motising hook <br> (Rcissue) |
| 83, 060 | Henson, William S., Now York, N. Y. Engine |
|  | Henzel, Reichert, Wolfi \& Company. (See Valotton, Louis D., assignor.) |
| 82, 314 | Hepworth, S. S., Boston, Mass. Ccntrifugal machine |
|  | Herbert, Alfred, and Charles E. Stonc. (See Stone \& Herbert.) |
| 83,381 81,782 | Herbert, Henry, Jersey City, N. J. Bucklo |
| 84, 059 | Herbig, Adam, assignor to self and Thomas Black |
| 74, 224 | Hergcsheimer, George, assignor to self and Cornolias V. Fort, Philadelphi Brush bridle |
|  | Herig, J., and James M. Johnson. (See Johnson \& Herig.) |
| 77, 039 | Herman, J. Henry, Boston, Mass. Railroad rail |
| 73, 717 | Hermanco, Charlcs W., Saratoga, N. Y. Stone-di |
| 84, 188 | Hermanco, C. W., assignor to W. P. Ostrander, A. II. Pearsall, 13. and A. L. Fimne, Schuylerville, N. Y. Stone-drilling machino.. |
| 76, 189 | Hermanco, Lovi, Hudson, N. Y. Stone-drilling mac |
| 73, 805 | Merndon, John T., Bancroft, Mo. Cultivator |
| 78, 372 | Herold, John, and Mercor Browu, Froderick, Md. Polis |
| 77, 816 | Herr, August W., Chicago, III. Firo-proof safo |
|  | Herr, C. 13., et al. (See Grobinger, Henry B., assi |
|  | Herr, Christian G. (See Bakor, Lenry, assiguor.) |
|  | Herr, Levi, West Lampeter, Pa. Traco faste |
| 78, 667 |  |
| \&2, 715 | Herrick, George W., assignor to self and H. H. Gibbs, Stuyvesant, vice for casting lugs and dovetails. |
| 79,348 | Herrick, Harvey, Dixon, Ill. Corshined stove pipe, oven, and w |
| 80, 073 | Herrick, Hiram, Boston, Mass. Piano-forto |
| 76, 915 | Herrick, Isaiah, Merrimack, N. M. Modo of churning buttor |
| 77,485 | Herrick, John I., Milwankce, Wis. Street car. (Antodated April 23 |
| 3,244 | Herriet, Julius, assignor to David Wolfo 13ruce, Now York, N. X. Ornament printors' typo. ............................................. (Design) |
| 3,245 | Same..... Oruamented typo for printers. |
| 75, 162 | Herring, Georgo W., Bangor, Maino. Cant |
| 81, 502 | Herrington, $\Lambda$. E., and John D. Richards, Big Prairio Rondo, Michigan. Co planter |
|  | Helrington, Charlcs, et al. (See Wiggins, Gcorge, assignor.) <br> Herrington, E. S, and J. Ruhl. (See Ruhl \& Herington.) |
| 84, 278 | Herriott, T. M., and Samuel Myers, South Pittsburg, Pa. Bal |
|  | Herrinam, L., and Henry A. Rust. (See Rust \& Horrmann.) |
|  | Herrosec, Charles 'T. (See Kloo, Lonpold, assignor.) |
| 32, 833 | Hersey, Clarles H., Boston, Mass. Rotary pump |
|  | Hersey, Thomas, et al. (See Ward, Mos |
|  | Hershock, Jacob B., and Reuben Fink. (See |
|  |  |
| 79, 905 | Hertle, Emil T., and Richard Thompson, New York, N. Y. Machinery for making wiro heddles |
| 76, 628 | Merrey, M. M., Madison, Ohio. Jack |
| 73, 806 | Herver, I. H. A., Cleveland, Ohio. Skating r |
| 75, 268 | Hess, Charles, Lyons, Iowa. Gang plow |
| 78, 286 | Hess, Cliarles, assignor to Robert T. T. Spence, Lyons, Iowa. Churn. dated May 14, 1868 |
| 82,116 | Hess, Daniel, Blandvillo, Ky. Brick machino |
|  | Hess, J. F., \& Brother. (Soe Best, M. L., assignor.) |
| 82, 948 | Hess, John I., Philadolphia, a. Hot-air furnaso. (Anted |
|  | Hess, Johm M., et al. (See Springer, Joseph H., assign |
|  | Hess, John R., et al. (See Swafford, Butler \& Hess.) |
|  | Hess, N. W., and J. H. Fry, Fort Wayne, Ind. Was |
| 79, 118 | Hester, A. B., North Vornon, Ind. Sash ba |
| 80, 734 | Hester, Eben, Suffield, Comn. Belt puuch |
| 75, 758 | Hester, James, Kuoxville, M1. Modo of socuring checks and dr |
|  | Hetzcll, J. G., and Hatfield Hopper. (See Hopper \& Hotzoll.) |
|  | Heuermanu, John, Davenport, Lowa. Coupl |
| 85, 094 | Heupecke, William, Black Creek, Pa. Wator wh |
| 80, 735 | Hewcs, Omer, Kaukakco City, Ill. Car coupling |
| 75, 907 | Hewes, S. E., Albany, N. X. Extension and step ladi |
| 82, 221 | Samo................... . Step-ladder joint |
| 81, 167 | Hewctt, Henry W., Now York, N. Y. Steam safoty |
| 73, 184 | Hewett, Clark R., Waupun, Wis. Straw cntter and |
|  | Hewett, R. L., et al. (See Barnard, Nye \& Hewett.) |
|  | Hewctt, S. B., jr., Eagle Grove, Iowa. Wire-fence koy |
| 76, 629 | Hewett, William, Trenton, N. J. Swing carriago |
| 77,374 | Hewit, Silas, Scneca Falls Village, N. Y. Flour p |

## Date.

Dec. $8,1868$.
Nor. 17, 1868.
Feb. 4, 1868.
Jan. 21, 1868.

Fcb. 11, 1868.
Oct. 13, 1868.
Sopt. $22,1868$.
Oct. 27, 1868.
Sept. 1, 1868.
Nov. 17, 1868.
Fcb. 11, 1868.
Apr. 21, 1868.
Jan. 28, 1868.
Nov. 17, 1868.
Mar. 31, 1868.
Jan. 28, 1868.
May 26, 1868.
May $12,1868$.

Mar. 24, 1868. Juno 9, 1868.

Oct. 6, 1868. Juno 30, 1868. July 21, 1868. Apr. 21, 1868. May 5, 1863.
Nov. 17, 1868.
Nov. 17, 1868.
Mar. 3, 1868.
Aug. 25, 1868.

Nov. 24, 1868.
Oct. 6, 1868.

July 14, 1868.
Apr. 14, 1868. Jan. 28, 1868. Mar. 10, 1868.
May 26, 1868.
Sept. 15, 1863.
Cct. 13, 1868.
Jan. 14, 1868.
June 23, 1868.
Ang. 4, 1868.
Mar. 24, 1868.
Sopt. 15, 1868.
Dec. $22,1868$.
Aug. 4, 1868.
Mar. 24, 1868.
Sept. 15, 1868.
Ang. 18, 1868.
Jan. 7, 1868.
Mar. 24, 1868.
Apr. 14, 1868.
Apr. 28, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

83, 853
84, 879
77, 284
79, 571
80,544
78,237
78, 739
74,533

80, 074
81, 634
82, 949
74,913
79,976
80, 627
2, 858
76, 446
79, 759
75, 547
76, 190
75, 014
73, 893
83, 962
75, 422
75, 908
82, 950
76, 630
82, 834
83, 963

77, 375

75,548
83, 497
74, 687
77, 732
84, 060

80,349

73, 718
83, 061
77, 817
77, 880
76, 447
80, 736
83, 632
79, 226
79, 349
80, 284

74, 225
74,688
76, 914
80. 175

Name, residenco, and invention or discovery.

Hewit, Silas, Senoca Falls Villago, N. Y. Churn. (Antedated Oct. 31, 1868)
Hewitt, E. W., Pecatonica, Ill. Sulky harrơw
Hewitt, Frederic, Newark, N. J. Pulley
…................................................
Hewitt, John W., and George R. Lynch, Allegheny City, Pa. Furniture caster Hewitt, William, England. Composition for preventing incrustation in steam boilers.
Hewson, Robert, San Franciseo, Cal. Parlor skate
Heyen, D. H., Now York, N. Y. Propeller
Heyer, W. D., Ncw Orleans, La. Hemmer, marker, \&c., for sewing machines. (Antedated Feb. 7, 1868)
Heyl, F., and J. Kirchfeld. (See Kirchfeld \& Heyl.)
Heyl, John A., assignor to self and John H. Wiggins, Boston, Mass. Horsoshoo
Heyl, John A. assignor to solf, Joseph G. Loring, and John H. Wiggin, Boston, Mass. Railway switch.
Heylin, L. C., Philadelphia, Pa. Compartment cane
Heywood Brothers \& Company. (See Howe, Martin V. B., assignor.)
Heywood, Levi, Gardncr, Mass. Rattan machine
Same...... Machine for shaving rattan
Same....... Machine for bending wood. .........
Same..... (See Howo, Martin V. B., assignor.
Heywood, Levi, assiguor to Heywood Brothers \& Company, Gardncr, Mass. Chair.
(Desirg)
Heywood, R. W., Baltimore, Ma. Portable head rest for car seats
Hibell, John, England. Annealing pots and satucers
Hickey, Patrick, assignor to self and Robert Porter, Philadelphia, Pa. Can for putting up alkalies.
Hickman, F. M., Rolling Prairie, Ind. Gato
Hickman, G. G., Coatesville, Pa. Bottle.
Hickman, G. G., assiguor to self and George Windle, Coatesrille, Pa. Shutter fastening.
Hickman, H. M., and B. G. Devoc, Vandalia, II. Harrow
Hickok, D. K., Morrisvillo, Vt. Clothes pin
Same...... Carriage and sleigh top.
Same....... Potato washcr. (Antedated Sept. 30, 1868)
Hickok, S. S., Methuen, and D. B. Clement, Boston, Mass. Ball castor.
Hickok, W. O., Harrisburg, Pa. Paper-ruling machine.
Hickok, W. O., and Georgo W. Reisinger, Harrisburg, Pa. Tool holder for lathes.
Hicks, Benjamin W. (See Lane, George, assignor.)
Hicks, David, and Siduey Doty, assignors to selves, Jerome B. Sweetland, Charles E. Adams, Samuel N. Brouson, and Alonzo Barbour, Pontiac, Mich. Rafter hook for hoisting apparatus
Hicks, Edw. J., and Gurdon G.Wolfe. (See Colby \& Scorcr, assignors.) (Design.)


Same...... . (See Vedder, Nicholas S., assignor)
same........................
Hicks, James N., Barry Center, N. Y. Horse rake.
Hicks, Phili, Chicago, Ill. Truck and wagon r
Hiemenz, Nicholas, Buffalo, N. Y. Beer cooler.
Hietel, Julius, John Wenzel Hietel, and J. L. Geissler, Philadelphia, Pa. Watch escapemeat
Higgins, Elias S. (See Weild, Wm., assignor.)
Higgins, J. D., Greenville, Conn. Hand punch
Higgins, Julius E. (See Merriam \& Luce, assignors.)
Higgins, Oliver, and G. W. Gardner. (See Gardner \& Higgins.)
Higgins, Orlando M., assignor to self and Freeman Higgins, Lowell, Mass. Stovepipe coupling.
Higgins, Rozander S., Olney, Iil. Plow.
Higgins, S. R., Palmer, Mich. Hay raker and loader
Higgins, Walter, San Francisco, Cal. Carriage spring
Higgins, W. F., and Jerome Perry, Watsonville, Cal. Gang plow
Higgins, William N., et. al. (See Cracue, Francis and George G., assignors.)
Higginson, George, Newark, N. J. Support for car-scat backs.
Hight, Orion R., Dowagiac, Mich. Window sash and frame
Highton, William, assignor to Moses Pond \& Company, Malden, Mass. Hot-air register.
Highley, Charles, Port İyron, N. Y. Churn and ice-cream freczer
Milbright, Frederick L., assignor to self and Charles E. Woodman, Newark, N.J. Cigar
Hildreth, Edwin A., and Georgo E. Burt. (See Burt \& Hildreth.)
Hildreth, Eugenius A., Wheeling, West Va. Composition of matter for forming ornaments, \&ec.
Hildreth, Georgo W., Lockport, N. Y. School desk
Hildreth, J. W., Boston, Mass. Leather-polishing machine
Hildreth, Stanley B., and George E. Burt. (See Burt \& Hildreth.)
Hiles, S. B., and J. B. Danner, Saltilloville, Ind. Straw cutter .

Date.

Nov. 10, 1868.
Dcc. 15, 1868.

Apr. 28, 1868.
July 7, 1868.
Aug. 4, 1868.
May 26, 1868.
June 9, 1868.
Feb. 18, 1868.

July 21, 1868.
Sept. 1, 1868.
Oct. $13,1868$.
Fcb. $25,1868$.
July 14, 1868.
Aug. 4, 1868.

Jan. 14, 1868.
Apr. 7, 1868.
July 7, 1868.
Mar. 17, 1868.
Mar. 31, 1868.
Mar. 3, 1868
Jan. 28, 1868.
Nov. 10, 1868.
Mar. 10, 1868
Mar. 24, 18 C8.
Oct. 13, 1868.
Apr. 14, 1868.
Oct. 6, 1868.
Nov. 10,1868.

Apr. 28, 1868.

Mar. 17, 1868.
Oct. 27, 1868.
Feb. 18, 1868.
May 12, 1868.
Nov. 17, 1868.
July 28, 1868.

Jan. 28, 1868.
Oct. 13, 1868.
May 12, 1868.
May 12, 1868.
Apr. 7, 1868.
Aug. 4, 1868.
Nov. 3, 1868.
Juno 23, 1868.
June 30, 1868.
July 28, 1868.

Feb. 11, 1868.
Feb. 18, 1868.
Apr. 21, 1868.
July 21, 1868.

Alphabetical list of patentoes for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
|  | Hill, A. L., Decatrir, 71. Fastening chock hooks and terrets. Samo.......Breast strap. |
| 79, 977 |  |
| 83, 157 | Samo...... Fastening fer check hooks and terrets |
|  | Hill, Alva T., and Jonathan Sprague. (See Spraguo \& Hill) |
| 74, 757 | Hill, A. V., Limostene, N. Y. Werk trimmer for boots and shees. (Antedated Fob. 12, 1868) |
|  | Hill, B. B., Chicopee, Mass. Hand stamp .....................................(Reissuc) <br> Hill, Charles J., assignor to Joseph Shepherd W yon and Alfrad Benjamin Wyon, England. Machine for producing reducod copies of medals, \&c. (Patented in England April 5, 1867) |
| т6, 631 |  |
| 84, | Hill, Colinins F., Hamilton, Ohio. Spirit levol. (Antodated Dec. 8, 1868) .......... |
|  | Hill, David R. P., Morgantown, West Va. Paint oil <br> Hill, Edwin A. (See Cobb, John W., assignor.) <br> Hill, Edwin A., and John W. Cobb. (See Cebb \& Iill.) |
|  |  |
|  |  |
|  | Hill, Francis H., Chicago, Ill. Coffin .................... |
|  | Hill, Frank A., Marysville, Cal. Seeding machino. <br> Hill, Georgo P. B., Virginia City, Nev. Process of oxtracting procious metals from ores, \&c. |
| 82, 315 |  |
| 14 | Hill, Joscph, Newark, N. J. Kuife or fork handlo........................... (Design) <br> Hill, Joseph Stacy, and James Willard Xatterson. (See Patterson \& Hill.) <br> Hill, Justin H., Clinton. Ill. Cultivator |
|  |  |
|  |  |
| 79, 120 | Hill, J. H., and'J. T. Hamnoond, Clinton, Ill . Corn planter. Hill, Lucian, assignor to Latrson Hill, North Brookfield, Mass. Crimping clamp. Hill, Lysander. (See Ellsworth, E. A., assignor.) |
| 81,503 |  |
| 73, 89 | Hill, Lysander and Adolaido R., Alexandria, Va. Cradlo. |
|  | Hill, Mario L., New Tork, N. X. Shee <br> Hill, Porter, Millport, N. Y. Churn .. |
|  |  |
| 76,632 | Hill, S. B., assignor to sclf and Levi B. Taylor, Chicopeo, Mass. Brace for bits. |
|  | Hill, S. B., assignor to sclf, Levi B. Taylor, and Charles B. Lang, Chicopce, Mass. Tassel fastener. (Antcdated July 18, 1868) |
|  |  |
|  | Hill, Truman A., and Joseph H. Bodine, (See Bodine \& İili.) <br> Sano |
| 83, 6 | Hill, Thomas M., Richmond, Ind. Animal trap...................................... |
|  | Hill, Warren, Springficld, Mass. Ticket punch <br> Hillabeld vartin Syractse Ind Saw mill (Anterato...................... |
|  |  |
| 2966 |  |
|  | Hillebrand, Louis, and Sterling Bonsall. (See Bonsall \& Mill cbrand.) <br> Same. $\qquad$ . same. |
| 79 | Hillis, W. D., Elgin, Ill Fence......................................................... |
|  | Hillman, William G. (Ses Ramsey, Jamos S., assigueHills, Amariah M., Hockanum, Conn. Lawn mower |
|  |  |
|  | Samo................ (Reissue).. <br> Hills, L. D. (See Smith, John C., assignor.) |
|  |  |
| 76 | Hilton, A. J. H., Beston, Mass. Fruit jai and clamp. (Antedated March 10, 1868) |
|  |  |
|  | Milton, J. W., and R. W. Green, Bradford, Pa. Axe............................... |
|  | Hilton, Richard H., assignor to Mitchell \& Allen, Newbern, N. C. Machino for clcaning cotton |
| 77,881 | Hilton, Robert V., John G.Webster, and Hiram E. Whceler, Lowell, Mass. Chisel bandle |
|  | Himes, 'Theodero, New Albany, Ind. Dress protector |
| 74, 358 | Himmelberger, Yyson, Heidclberg Township, Pa. H |
|  |  |
|  | Hinds, James, and James Gco, Conolngue, Ill. Cultivator |
| 76, 448 | Hinds, Justin, Salom, and G. H. Lodge, Swampscott, Mass. Stean-ongino piston Hinds, Russell P., Chicago, Ill. Paint composition. |
|  |  |
| 76, 449 | Hinds, Warner, Worcester, Mass. Horseshoe. |
| 82, 030 |  |
| 79, 351 |  |
| 78, 030 |  |
| 80,176 | Hinklc, Philip, San Francisco, Cal. Bed bottom..................................... |
| 119 |  |
| 74, 823 | Himman, J. W., Berlin, Wis. Harness-pad treo ............................... |
| 103 |  |
|  | Hinternesch, H. D., Baltimoro, Md. Saw mill. <br> Hinton, John, and Georgo Mercer. (See Mereer \& Hinton.) <br> Hinz, Henry P., Dunton, III. Potato digger |
|  |  |
|  | Hipple, Hrank K. (See Knorr, Jacob, assignor.) (See Ramuz, Ulysso Humbert, assignor.) |
|  |  |
| 84,490 | Hirst, Jehn, assignor to self and Henry A. Dirkes, Jamaica, N. Y. Car brake. (Antedated Nov. 13, 1868) |
| 75, 909 | Hirst, Robcrt, Hudson, N. Y. Pcn.......... |
| 80, 955 |  |
| 79, 978 | Hise, Uenry, Chicago, Ill. Traco bucklo............................................ |
| 719 | Hitcheock, Alonzo, New York, N. Y. Modo of producing a vibrating swell in orcans. Same .... Treadio for machinery |
| 79,572 |  |
|  |  |

## Alphabeiical list of patentees for the year 1868-Continued.

| No. | Name, rosidonee, and invontion or discovery. |
| :---: | :---: |
| 84, 120 | Hi |
|  | Hiteheoek, H. C. (See Mansfield, F. W., |
| 73, 009 | Hiteheoek, Joln G., New York, N. Y. May ork |
|  | Mitehcoek, J. G., and H. P. Wetmore. (See Wetmore \& Hitcheoek.) |
| 74, 534 | Hiteheoek, M. T., Springfield, Mass. Car ventilator |
| 80, 411 |  |
| 77, 910 | Hiteheoek, Robert, Springfiela, Mass. |
| 74, 359 | Hitchcoek, Robort, assignor to self, Georgo C. Fisk, and Lovi O. Hanson, Springfiekl, Mass. Link joint for ear seats. |
| 74, 914 | Hitcheock, Robert, and George A. Jones, Now York, N., X. Gearing for lamp trains. |
| 82, 951 | Hitelings, Benjamin, Lynn, Mass. |
| 74, 824 | Mitehings, E. W., Pottsdam, N. Y. Grain |
| 82, 316 | Hiteshent, William H., Perrysburg, Ind. Hay raker |
| 74, 689 | Hitt, Edgar, Katonah, N. Y. Carriage |
|  | Hittinger, Miehael. (See Rawson, George W., assignor.) |
| 82, | Mixon, P. V., Tio |
| 76,910 | Hoadley, Joseph M., Birmingham, Conn. Croehet noedle. (Antedated April 8, 1868) |
| 76, | Hoadley, Robert, and Honry S. Shipman, Ansonia, Conn. Lamp burner |
| 75, 911 | Hoagland, Christopher, Delavan, Wis. Cultivator ............................. |
| 83, 159 | Hoagland, Georgo H., Port Jervis, N. Y. Railroad axle. (Antedated Oet. 10, 18ึ98) |
| 2, 96 | Hoagland, Joseph C., Fort Wayne, Ind. Trade mark .-............... (Design) |
| 75, 633 | Hoagland, Josiah Y., Auburn, N. Y. Machine for grind |
| 76, 758 | Hoamland, Samuel M., assignor to self and Daniol Kostonbander, Catawissa, Pa. Horse hay fork |
| 74,360 | Hoar, John S., assignor to self, Nathaniel E. Cutler, and Charles Hastings, West Acton, Mass. Chuek for planing maehino |
| 3, 095 | Hoard, John W., assignor to Hemry W. Holly, Broollyn, N. Y. Marking slate. (Reissue) |
| 82 | Hobart, B. H., and D. C. Chapman, Troy, Pa. Fastening horse collars |
| 80,6 | Hobart, Joseph, Boston, Mass. |
| 79,352 | Hobbs, A. J., Van Wirt, Ga. Medieal |
| 78, 96 | Hobbs, Augustus R., Elizabeth, N. J. Fanning at |
| 76, 452 | Hobbs, Augustus R., and Nathaniel F.Wright, Elizabethport, N.J. Fan |
| 81, 504 | Hoblus, Lewis F., Quiney, Mass. |
| 82, 716 | Hobbs, Micah, Natiek, Mass. Sole-eut |
|  | Hobson, W. J., and A. M. Southard. (See Southard \& Hobson.) |
| 79 | Hochbrunn, C., New York, N. Y., Flower framo |
| 73, 829 | Hochstein, Anthony, Williamsvillo, N. Y. Harrow |
| 83,717 | Hockncyer, H., Toledo, Ol |
| 82, 001 | Hoekert, S. L., assignor to G. W. Perrine, Milwaukeo, Wis. Abdominal supporter |
|  | Hockett, Asa, and Albert C., Plainfield, Ind. Tilo |
| 76, 759 | Hoddiek, Frederiek, assignor to George A. Prinee \& Co., Buffalo, N. Y. Reed |
| 81, 783 | Hodges, J. W., assignor to self and A. W. King, Plymouth, Ill. Device for binding loads of hay upon wagons |
| 73, | Hodges, Leonard L., Boston, Mass. Piôture-frame supporte |
| 3, 164 | Hodgkins, Thomas J., jr., Peekskill, N. Y. Baso of |
|  | Hodgkins William, 3d. (See Niekerson, Charles N., assignor.) |
| 78, 96 | Hodgson, Isaae, Indianapolis, Ind. Construetio |
|  | Hoe, R., \& Co. (See MeDonalk, Wm., assignor) ............................. (Reissue.) |
|  | Same....... (See De Pry, Alexander T., assignor)................... (Reissue.) |
| 81, 273 | Hoeft, Wilhelm, Fountain City, Wis. W |
| 82, 407 | Hoeller, C., Cineinnati, Ohio. Stove-pipe elb |
| 82, 118 | Hoermann, Arnold, Now York, N. Y. Screw-eutting die. (Antedated Sept. 4,1868) |
| 78, 740 | Hofer, John C., Bell Air, Ohio. Cooper |
| 77, 486 | Hoftheins, Reuben, Dover, Pa. Reaping maehine. (Antedated April 22, 1868) |
| 78, 091 | Hoffman, Austin D., assignor to self, H. M. Carpenter, G. F. Townsend, and Fred. Braeket, Minneapolis, Minn. Churn. |
| 83, 498 | Hoffman, Austin D., assignor to self and Frank Brewster, Minneapolis, Minn. Till alarm. |
| 81, 371 | Hoffman, Charles T., Now Orleans, La. Combined potato planter and |
| 78, 092 | Hoffman, James, Belvidere, N. J. Gaugo frame for slittiug |
| 80, 350 | Samo.....- Tanners |
| 79, 760 | Hoffman, Lewis G., Albany, N. Y. Parlor iee-eroe |
| 74, 089 | Hofriman, William J., assignor to George V. Hoffman, Croton Falls, N. |
| 75,912 | Hoffinann, F. E., Prussia. Apparatas for erushing and pulverizing stones and other hard substances. |
| 3.237 | Hoffmann, Friedrich E., Prussia. Cireul |
| 76,451 | Hoffstaetter, Ernst, New York, N. Y. Maehin |
|  | Hofheimer, Henry, and Baruh Ney. ${ }^{\text {S }}$ See Ney |
| 760 | Hogan, Benjamin, Alwany, N. Xhiat en |
|  | Hogeland, Israel, Indianapolis, Ind. Clothes |

## Date.

Nov. 17, 1868.
Jan. 7, 1868.
Feb. 18, 1868 July 28, 1868. Mar. 24, 1868.

Feb. 11, 1868
Feb. 25, 1868.
Oct. 13, 1868.
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June 23, 1868. July $14,1863$. Oet. 6, 1868.

Sept. 8, 1868.
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Apr. 7, 1868.
Mar. 24, 1868.
Nov. 3, 1868.
Dee. $8 ; 1868$.

## Alphabetical list of patentces for the year 1868-Continued.

| No. | Name, residence, and invention or discorers. |
| :---: | :---: |
| 84, 121 | Hogle, Sidney S., Berea, Ohio. Sceding mach |
| 75, 269 | Hoit, L. B., Cedar Falls, Iowa. Straw cuit |
| 77, 376 | Same...... Milking stool and pail |
| 83, 282 | Hokc, Samuel, Mt. Pleasant, Md. Chimncy |
| 79, 123 | Holbrook, Amos, Lynu, ذLass. Book binding |
| 81, 934 | Holbrook, Benjamin F., and Ebenezer B. Rum |
| 75, 015 | Holbrook, Charles W., assignor to sclf, William Boardman, and Charles G. Bayler, <br> New York, N. Y. Mydranlic press <br> Holbrook, Frank F. (See Mathews, Elbridge G., assignor.) <br> Holbrook, Gilbert F., and Charles F. Carr. (See Carr \& Holbrook.) |
| 77, 044 | Holcomb, Charles C., Madison, Wis. Gate and door latch. |
| 76,760 | Holden, Cyrus B., Worcester, Mass. Horso rako. |
| 76,917 | Holden, L. E., Cloveland, Ohio. Fruit can |
| 76, 325 | Holden, Stephen B., assignor to self and William A. Newton, Scdalia, Mo. Car seat. |
|  | Holder, Daniel C. (See Taggart, John, assignor.) |
| 74, 361 | Holdcrman, Henry Abraham, North Manchester, Ind. Frnit mill and |
| 80, 737 | Holdmann, Wilhelm, New Eork, N. Y. Method of separating fibcrs from mulbcrry trees |
| 84,548 | Holdredge, C. H., Westerly, R.I. Box for carriage wheels |
|  | Holdredge, Sidney L. (See Callender, Mills L. |
|  | Holford, J. A., et al. (See Franklin, Hastings \& Holford.) Holland, Charles. (See Frear, George A. assicnor.) |
| 80,077 | Holland, Franklin G., Washington, D. C. Metallic paint. (Antodated July 8 , |
| 73, 010 | Holland, James, Conshohocken, Pa. Bon |
| 76, 453 | Holland, James, Brooklyn, N. Y. Sl |
| 76, 454 | Holland, John H., Hanenck, Mielh. Pen |
| 76,634 | Holland, Lewis M1, Galesburg, M1. Cultivator |
| 83, 965 | Holland, Timothy, New York, N. Y. Lubricator |
| 78,594 | Holland, Timothy, and John P. Cody, Cincinnati, Ohio. Li |
|  | Hollenberger, S. S. (See Colbert, George II., assignor.) |
| 78, 288 | Holliday, Charles, England. Machincry for printing on fa |
| 77,980 | Hollingsworth, James H., assignor to self, Albert Rementcr, and W. C. Russcll, Philadelphia, Pa. Rcfrigerator |
| 75, 913 | Hollingsworth, John W., and Horatio D. Weaver, Mt. Vernon, Ind. Ice crusher. |
| 84, 744 | Hollister, Josial, E., Calais, Vt. Elovator |
| 79, 124 | Hollister, J. F., Plano, Ill. Globe joint |
| 73, 330 | Holly, Henry W., Norwich, Comm. Implement for drawi |
| 73. 331 | Samo...... Implement for dyers and bleachers |
|  | Same ...... (See Hoar, John W, , assignor).. |
|  | Holly, J. H., and J. H. McElroy. (See McElroy \& Holly.) Holnan, Audrew J. (See Van Doren, Isaac, assignor) . . . . . . . . . . (Reissue.) |
|  | Hohnan, Andrew J. (See Van Doren, Isaac, assignor) - . . . . . . . . . . (Reissue.) |
| 3,031 | Holnan, D. S., Conmeautville, Pa. Seed planter........................(Rcissue) |
| 75,016 | Holman, George, Watcrville, N. Y. Revolving fi |
| 73,185 | Holmes, A. P., Great Falls, N. H. Bobbin. |
|  | Holmes, Booth \& Haydens. (See Atwood, Lewis J., assignor.) Same........................................... . samo. |
|  |  |
|  | Same...... (See Haydon, Henry H., assignor) ......................... (Design.) <br> Same same (Dcsiont) |
| 80,179 | Holmes, Charles E. L., Watorbury, Conn. Machine for drying and scouring sheet metal <br> Same...... (See Ingraham, John, assignor.) |
|  | Holmes, D. E., and William M. Russell. (See Russell \& Holmes.) |
| 81, 505 | Holmes, Daniel M., Williamsburg, N. X. Machinc for making gingor snaps, \&ce |
| 80, 481 | Holmes, Edward aud Britain, Butfalo, N. Y. Machine for crozing and howcling barrels |
|  | Same...... Machine for leveling the stav |
| 80, 483 | Same...... Machine for jointin |
| 81, 274 | Same...... Power windlass for making cask |
| 78, 373 | Holmes, Elijah, Lymm, Mass. Vegctablo and frut |
|  | Holmes, Griggs \& Smith. (See Griggs, Henry C., assignor.) |
| 84, 881 | Holmes, Isaac V., Now York, N. Y. Mctallic lath |
| 82, 718 | Holmes, James, Belfast, Maine. Stave machino |
| 76, 192 | Holmcs, John, Johnson, Vt. Dumping wagon |
| 74, 535 | Holmes, J. Burt, Cincinnati, Ohio. Canony for |
|  | Holmes, John B., New York, N. Y. Derriek |
| 75, 914 | Holnes, Lewis, Kecne, N. H. Moat broiler |
| 82, 317 | Holmes, Lather W., Grand Lcdge, Mich. Arrangement of mechanism ing punches. |
| 73, 605 | Holmes, Orsamus, Now Lenox, Il. Grain sopa |
| 76, 326 | Holmes, Robcrt, Detroit, Mich. Base-burning stove ............................. |
| 76, 761 | Holmes, Robert, assignor to the Middletown Plate Company, Middletown, Conn. Iec pitcher |
| 83, 854 | Holmcs, Samuel, England. Vapor burner. (Patented in England Marelı 23 , 1868). ......................................................................................... |
| 82, 002 | Holmes, William, Clarksville, N. Y. Horse hay rakc |
|  | Holmes, W. W., and H. E. Fowler. (See Fowler \& Holmcs.) |
| 78,524 | Holms, Lavrence, Paterson, N. J. Filter |
| 77. 285 | Holske, William F., Now York, N. Y. Tubular |

## Dato.

Nov. 17, 1868
Mar. 10, 1868
Apr. 28, 1868
Oct. 20, 1868 June 23, $18 \mathrm{G}^{2}$ Sopt. 8, 1868

Mar. 3, 1808.

Apr. 21, 1868
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Aug. 4, 1868
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July 21, 1868
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June 2, 1868.
Apr. 28, 1868.

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82, 524
83, 160
79, 072
81, 275
81, 637
80, 956
78, 741
82, 003
83, 499
77, 733
81, 905

73,362
77, 041
78, 967
75, 634
75, 915
82, 952
82, 953
78, 452
80,738
81, 168
83, 382
76,762
r8, 093
80, 863
79, 830
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79, 471
75, 423
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82, 222
76, 635

77,612

81, 372
83, 634
73, 332
82, 408
76, 078

80, 739
77, 613
82, 223

78, 094
75, 424
83, 855
81, 085
73, 446
83, 162
84, 279
80, 180
75, 271
75, 272
76, 763

Holt, Andrew J. Pern, Ind. Seed planter
Holt, John L., Providence, R. I. Toy.
Holt, M. L., et al. (See Abbott, Tuttle \& Holt.)
Holt, Sidney, Baraboo, Wis. Hop stripper
Holt, S. A., and C. H. Williams, Hudson, Mass. Peg food stop for pogging machines
Holt, S. R., Worthington, Ohio. Process of making vinogar
Holt, Thomas, Austria. Steam senerator. (Patented in Lugland June 10, 1867).
Holton, Francis H., Brooklyn, N. Y. Nursing nipple.
Holton, George, Chicago, IIl. Smoko stack
Holtzscheiter, Leonard, assignor to A. B. Shipley, Philadelphia, Pa. Box opener Holzer, Edward R., Philadelphia, Pa. Scaffold
Holzhauser, William, Buffalo, N. Y. Ventilator
Homan, George W. (Sce Gates, William, assignor.)
Home Mrnufactaring Company. (See Covel, E. Hall, assignor.)
Homesley, A. R., et al. (Sec Williams, E. P., assignor.)
Honeywell, Isaiah, Toledo, Iowa. Beehive.
Hood, C., and L. Muller. (Sec Muller \& Hood.)
Hood, George G., and John D. Kelly, Providcnee, B. I. Washing machine
Hood, Jocl S. and J. H., Washington, D. C. Porpetual registor. (Antedated June 6, 1868)
Hood, Jolin H., Danville, N. Y. Composition for roofing
Hook, Albert H., et al. (Sce Griswold, Pelisse \& Hook.)
Hook, Gilman, West Harwich, Mass. Marino paint
Hooker, Horace B., Rochcster', N. Y. Skate. (Antedatod Oct. 6, 1868)
Same

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\text { (Antedated Sept. } 28,1868 \text { ) }
$$

Hooker, William C., Abington, Ill. Gate
Hooker, William D., San Francisco, Cal. Valve for stoam enginos
Same...... Direct-acting engine.-
Hoop, P.,jr., and R., Berlin Cross Roads, Ohio. Hot blast apparatus for paddling and other furnaces
Hooper, Benjamin F., Newark, N.J. Coac, pad
Hooper, Henry O., Diamond Springs, Cal. Jachine for polishing wood
Hooper, James E., Woodberry, Md., and Benjamiu Arnold, East Greonwich, R.I. Spinning machine.
Hooper, R. H., West Roxbury, Mass. Working the pedals of piano-fortes, \&c Hooton, J. S., New Carlislc, Ind. Apparatns for heating and purifying feedwatcr for steam generators.
Same. Beehive
Hoover, George, Richmond, Ind. Trammel for steel rails
Hoover, Henry C., Greca Castle, Pa. Carriage-bow setter
Hoover, James, assignor to self and James Sayler, Gratis, Ohio. Fly trap
Hoover, Winfield H., North Benton, Ohio. Car compling.
Hoover, W. Upton, Daysville, Ky. Plow
Hope, Erwin T., Philadelphia, Pa. Elevator
Hopewell, John C. (See Ryncr, Wm., assignor)
(Reissuo.)
Hopkins, B. A., Sodus, N. Y. Fced-water heater for steam boilers

Hopkins, C., Philadelphia, Pa. Tool for rejoweling watches
Hopkins, George M., Albion, N. Y. Low-water indicator
Hoplins, Henry S., Boston, Mass. Pump piston
Hopkins, James M., et al. (See Fithian, Lemuel S., assignor.) Samc............................................ same.
Hopkins, Samucl B., and Edward II. Auderson, assignors to solves and J. M. Satterfield, Easton, Md. Vapor burner
Hopkins, Samuel C. (See Foss, Gcorge F., assignor.)
Hopkins, Samuel P., Port Deposit, Maryland. Churn dashor and lid
Hopper, Hatficld, and J. G. Hetzell, Newark, N. J. Slate cutter. .
Hopper, Thomas C., Philadelphia, Pa. Dry gas moter -
Hopson, A. S., Plainview, Minn. Clethes dryer.
Hopson, Albert S., assignor to sclf and S. C. Harlan, Plainviow, Minn. Horseshoe
Hopson, W. L., et al. (See Williams, E. P., assignor.)
Hormann, F., and F. Rohrbacher. (Sce Rohrbacher \& Hommann.)
Horn, Alfred, Silver City, Ner. Amalgamator
Horn, Benjamin, Sergeantsville, N. J. Miloage register
Horn, Charles L., jr., and Lconard Mancy, assignors to Leonard Mancy, St. Morgan, II. Gang plow
Horn, E. P., and A. J. Carver. (Sec Carver \& Horn.
Horn, Isaac A., Cincinnati, Ohio. Plate for artificial teoth
Horne, W. L., Batavia, II. Steam water elevator
Horner, Edwin J., Wilmington, Del. Car spring.
Morner, George W. (See Poindexter, Benj. P., assignor.
Horncr, Samnel E., Shiloh, N. J. Thill coupling-
Horner, W. 'I., Buffalo, N. Y. Well tabe.
Horning, Frank M., East Pike, N. Y. Steam generator
Horr, John F. (See Julien, John, assignor.)
Horrobin, William T., Bennington, Vt. Molding machinery
Horrocks, William, Poughkeepsie, N. Y. Mode of attaching carriage tops
Horsford, E. N., Cambridge, Mass. Preparation of acid phosphate of lime
Samc...... Manufacture of acid phosphates to be used in food
Same........Method of preparing acid phosphate of lime

Dato.

Sept. 29, 1868.
Oct. 20, 1868.
June 23, 1868.
Ang. 18, 1868 Sopt. 1, 1868. Aug. 11, 1868. June 9, 1868. Scpt. 8, 1868. Oct. 27, 1868. May 12, 1868. Sopt. 8, 1868.

Feb. 11, 1868.
Apr. 21, 1868.
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June 2, 1868.
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Jan. 14, 1868
Sept. 22, 1868
Mar. 31, 1868

Aug. 4, 1868
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Sept. 15, 1868
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Aug. 18, 1868
Jan. 21, 1868
Oct. 20, 1868
Nov. 24, 1868
July 21, 1868
Mar. 10, 1868
Mar. 10, 1868
Apr. 14, 1868

Alphabetical list of patentees for the year 1868-Continued.
No.

Horsford, E. N., assignor through mesno assimnments to the Rumford Chemical Works, Providence, R. I. Pilverulent acid for use in the preparation of soda powders, farinaceons food, and for other purposes......................(Reissue) .
Horsford, E. N., and George F. Wilson. (See Wilson \& Horsford.)
Same - - - . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . same.

Horst, Jaeob W., Annville, Pa. Namuro fork
Horton, B. F., Ithaca, N. X. Horse rake.
Morton, Calvin, Somerville, Mass. Trunk.
Horton, Chase B., Sand Bank, N. I. Flour bolt
Horton, Elijah, Okce, Wis. Waron spring.
Horton, E. D., et al. (Sce Hurd, P. H., assignor.)
Lorton, Jacob C., New York, and James Milligan, Brooklyn, N. Y. Spirit meter for distilleries.
Horton, J. C. C., Gillespic, Ill. Water clevator.
Horton, Lewis, mul Josiah A. MeGaw, Manchester, M. H. Trunk eastor.
Horton, Marcus L., Worcester, Mass. Furnaee
Horton, S. E. (See Emmett, Wm., assignor.)
Horton, Van Rensselaer W., Palmyra, $\bar{N}$. Y. Farm gato
Horton, William H., Providence, R. I. Lamp burnel
Horton, William H., assiguor to self and Nathan P. Bromn, Chelsea, Mass. Lamp shade. (Antedated Dec. 27, 1867).
Horton, W. W., Katonah, N. Y. Raek for hats and dishes.............................
Hosford, Elilu, Chicago, Ill. Coal stovo
Same. .-. - Range.
Hoskin, Robert, assignor to Edward C. Sampson, Brooklyn, N. X. Fi. Floor oil. cloth pattcru
(Design)
Moskins, Josepli S. Spring Hill, Mo. Hemp-breaking maehine.
Hosmer, Alfred, Watertown, Mass. Stall for horses.
Hosmer, Silas, Concord, Mass. Tanning apparatus
Hotchkiss, A. A., Hamnibal, Mo. Fastening for wagon bodies.
Hotchkiss, B. B., New York, N. Y. Riffing orduanco.
Motchkiss, H. L., assignor to L. Caudee \& Company, New Haven, Conn. Overslive.
Motchkiss, Leander, assignor to Elisha Turner, Torrinerton, Conn. Frnit pieker
Motehkiss, Ophelia C., Cortlandville, N. Y. Ironing table.
Hotz, N., Green Point, N. I. Coffee pot. (Antcdated Aug. 5, 1858)
Hotz, Nicholas, Green Point, N. Y. Still. .
Houck, Charles S., Green Point, N. Y. Capstan for hoisting machines
Houck, J. O., Lowa City, Iowa. Deriee for supporting wagon tongues.
Hourh, David L. (See Burnham, John, assignor.)
Ioughtaling, Ambrose L., assignor to George W. Philip, Philmont, N. X. Drawing and twisting head for spinning -
Moughtling, Ira, Houghton, Mich. Horse eoliar.
Moughton, Abner S., and Conrtland B. Wilson. (See Wilson \& Koughton.)
Houghton, Alfred, Seville, Ohio. Hoise liay forli.
Moughton, Charles, et al. (See Palmer, Charles W., assignor.)
Loughton, J. S., Philadelphia, Pa. Compound for coating the outsido walls of buildings.
Moughton, J. S., and Charles B. Rees, Philartelphia, Pa. Ventilating fruit houses
House, James, Turin, N. Y. Seed sower. .
Honse, Mark W., Clevelaud, Ohio. Lanp.
House, Royal E., Binghamton, N. Y. Electro-phonetic telograph.
Honsman, Michael and Simeon, Inmtington, Ind. Com sheller.
Monston, William H., New York, N. Y. Machino for settiog and distributing type.
Monts, Christopher M., et al. (See Cox, Needham, assignor.)
Hover, II. F. (See Everitt, Elisha E., assignor.)
Horer, Lewis, Chicago, Ill. Iron door
Hovey, Samuel D., Brooklyn, N. Y. Iubber liead for pencils.
Hovey, William H., Molly, Mich. Mode of seenring tires to wheels
Hovey, William H., Springfichl, Mass. Brick machine
How, Thomas P., Brooklyn, N. Y. Copring press.
How, W. Storer, Cineimati, Ohio. Vial. (Antedated April 22, 1868)
Howard, Adolphus, Wellsville, N. Y., and G. F., Chieago, Ml., assignors to George F. Howard. Machine for washing leather.
Howard, Alonzo J. F., Milford, Mass. Bont crimper.
Moward, A. J. F., assignor to sclf and E. Mam, Milford, Mass. Boot erimper. Howard, A. J. F., and Eldridge Mann. (See Mann \& Howard.)
IIoward, C. A., Pontiac, Mich. Horse hay fork.
Howard, Cornclius A., assignor to self and Riehard McCloy, İew Haven, Conn. Compression cock.
Howard, C. H., assignor throngh mosne assigmments to self and Horace N. Jortan, Lewiston, Maine. Warping frame.
Howard, Edward, Boston, Mass. Stem winding watch
Same..... . Dust ring for watches.
Howard, Francis M., and Danicl W. Avery, St. Panl, Ind. Ditching and grading machine.
Howard, Frank A., Belfast, Maino. Machino for mitcring Samo...... (Ser, Allard, Isaac, assignor.)

No.

81, 170
78, 454
81, 638
80, 181
77, 734

75,019
73, 333
83, 966
77,488
80, 351
83, 164
80, 4.86
77, 489
81, 088

82, 839
74, 690

73, 720
73,721
76, 458
82, 409

85, 384
79, 761
-5, 682
3, 074
76, 194
82, 224
83,967
77, 615
84,4ఇ8

82,119

73, 606
74,538

85, 228
83, 165
-6, 918
83,064
77, 616
74, 758
79, 353
78,455
83,065
80, 178
74,091
82, 225
73, 809
79, 833

3, 075
79, 979
79,980
82,621

Name, resideneo, and invention or discovery.

Howard, Georgo C., Philadelphia, Pa. Maehine for finishing eloth
Howard, Henry, Springfied, Mass. Valve gear for steam leating apparatus.
Howard, James, and Edward I. Bousfield, England. Steam generator.
Howard, Samuel, Great Britain. Machino for pressing hats
Howard, William, Watertown, N. Y. Cheeso vat
Howard, William B. (See Thompson, James K., assignor.)
Same.........................................same.
Howard, William O., New York, N. Y. Shot cartridgo. (Antedated Fob. 22, 1869)
Howarth, John, Salem, Mass. Cupola furnace
Howe, Dexter. (See Witt, Daniel, assignor.)
Howe, D. D., Beavor Dam, Wis. Railway-car eompling
Howe, Frank E., Now York, N. Y., and Lindsey I., Boston, Mass. Combined eoal hopper and platform seale..
Howo, Henry, Oneonta, N. Y. Bolt entter
Same.... . . Harvester.
Howe, Henry R., Hartwick, N. Y. Car eoupling.
Howe, Jarvis, Milford, Mass. Boot form.
Howe, John C., assignor to self and Thomas Gatos, Woreester, Mass. Meat cutter.
Howe, John N., et al. (See Griffin, Heber C., assignor.)
Howe, Joseph, Mt. Pleasant, Iowa. Brace for carriages
Howe, Lather, Alamo, Mieh. Fence for collecting rain water for stock
Howe Manufaeturing Company. (See Piper, Truman, assignor.)
Same...... (See Piper \& Bradley, assignors.)
Howe, Martin V. B., assignor to self and Levi Heywood, Gardner, Mass. Woodbending maehine.
Howe, Martin V. B., assignor to Reywood Brothers \& Company, Gardner, Mass. Tilting-chair seat
Howe, Orxin P., Augusta, Maine. Pliotographic transfer
Howe, Oziel A., Jersey City, N.J. Maeline for making horseshoos
Howe Seale Company. (See Roynolds, Wm. W., assignor.)
Howe, T. J., and M. F. Lowth. (See Lowth \& Howo.)

> Same .-. . . . . . . . . . . . . . . . . . . . . . . . . same.

Howell, Charles P., Covington, Ky. Hoo
Howell, David B., Now York, N. ¥. Hanging stords
Howell, Edward, assignor to self and P. C. Ford, Ashtabula, Ohio. Thill strap.
Howell, F. A., New York, N. Y. Show-easo frame
( Designi .
Howell, George, Philadelphia, Pa. Mode of filling marshes
Howell, George, and William Smith, assignors to George Howell, Philadelphia, Pa. Device for filling marshes
Howell, Levi T., assignor to self, William Sharp, and Smith Fishor, Camden, N. J. Retaining doviee for doors.

Howell, Theodore, and Charles P. Oliver, Newark, N.J. Trame for stretching hides and leather.
Howell, William, and N. W. Browning, Webster City, Iowa. Compound for hardening and uniting iron and steel in the manufacture of plows, \&c.
Howell, Wm., et al. (See Iinn, James C., assignor.)
Howell, William, James C. Finn, and C. A. Duy, Philadelphia, Pa. Floor eovoring
Howell, W. H. (See Rich, Otis N., assignor.)
Howell, W. T., Alfred, N. Y. Plow
Howenstine, David J., assignor to self and Paterson V. Wilkins, Marshallville, Ohio. Horse hay fork.
Howes, A. D., and Albert Moore. (See Moore \& Howes.)
Howes, Amazial T. (See Blake, John W., assignor.)
Howes, Fxederic, Boston, Mass. Anchor
Howitt, William, and William Simpson. (See Simpson \& Howitt.)
Fowland, Amasa, Sandy Hill, N. Y. Vat for eylinder paper machines
Howland, A. B., and A. K. Murray. (See Murray \& Howland.)
Howland, George B., Gardner, T11. Gate latch
Howlett, Francis, West Rupert, Vt., and Chavles R. Sherman, Salem, N. Y. Gearing for grindstones
Hoxic, Horace S. Adrian, Mich. Plow conlter
Hoxsie, David H., Providenco, R. I. Implement for making eyelets
Hoy, H. C., et al. (Seo, Slagle, Miller, \& Hoy.)
Hoyt, Alfred, New York, N. Y. Match safe.
Hoyt, Asa, Chicago, Ill. Pavement for strects and walks
Hoyt, Charles W., Sonth Norwalk, Conn. Pump..
Hoyt, Franklin, and Aaron Denio, Montpelier, Vt. Water wheel
Hoyt, F. A., Manover, Wis. Flour safe and sifter
Hoyt, George A. (See McGregor, T. B., assignor.)
Hoyt, John, Hughsonville, N. Y. Water wheel
Hoyt, S. Grant, Now York, N. Y. Ice pick
Hoyt, William H., assignor to self and Nathan Seeley, Bethel, Conn. Machine for sizing lat bodies
Hnbbard, Benjamin R., and William S. Gatlin. (See Gatlin \& Hubbard.)
Hubbard, Calvin L., assignor to the New Havon Steam Heating Company, New Haren, Conn. Screen.
(Design)
Hubbard, C. W., Pittsburg, Pa. Saw handlo.
Hubbard, George W., Lowvillo, N. Y. Hammer

Dato.

Ang. 18, 1868.
June 2, 1868.
Sopt. 1, 1868.
July 21, 1868. May 12, 1868.

Mar. 3, 1868.
Jan. 14, $1 \varepsilon 68$.
Nov. 10, 1868.
May 5,1868.
July 28, 1868.
Oct. 20, 1868.
July 28, 1868.
May. 5, 1868.
Aug. 18, 1868.
Oct. 6, 1868.
Feb. 18, 1868.

Jan. 28, 1868.
Jan. 28, 1868.
Apr. 7, 1888.
Sept. 22, 1868.

Doc. 29, 1868. July 9, 1868. Mar. 17, 1868. Tune 30, 1868. Mar. 31, 1868.

Sept. 15, 1868.
Nov. 10, 1868.
May 5, 1868.
Nov. 24, 1868.

Sept. 15, 1868
Jan. 21, 1868.
Feb. 18, 1863.

Dec. 22, 1868.
Oet. 20, 186R.
Apr. 21, 1868.
Oct. 13, 1868
May 5, 1808.
Fel. 25, 1868.
June 30, 1808.
June 2, 186s.
Oct. 13, 1868,
July 21, 1868.
Fob. 4, 1Е68.
Sept. 15, 1868.
Jan. 23, 1868.
July 14, 18 68.

Trune 30, 1868.
July 14, 1868.
July 14, 1868.
Sept. $29,1868$.

## Alphabetical list of patentecs for the year 1868-Continued.

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73, 100
75, 275
80, 546
83, 635
-6, 459
84, 491
82, 410
82,411
82, 412
82, 413
82, 414
8: 2,415
74,539
74,825
80, 958
75, 761
77, 379
79, 981
79, 762
74,540
77, 286
78, 456
78, 208
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85, 385
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80, 804
76, 461
74, 826
76, 327
75,104
75, 425
83, 283
81,089
78, 457
84, 82\%
78, 374
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74,365
74,226
85, 097
84, 061

73, 249
75,165
76, 195
81,507
82, 840
81, 090
74,366

Name, residence, and invention or discovery.

Hubbard, George W., assignor to Cresson \& Smith, Philadelphia, Pa. Shaft coupling
Hubbard, George W., and Scott A. Smith, assignors to Cresson \& Smith, Philadelphia, Pa. Grinding mill
Hubbard, George W., and Scott A. Smith, Philadelphia, Pa. Hanreer for shafting
Hubbard, II. J., Clieopee, Mass. Bobbiu.
Mubbaxd, Joseph, and George H. Fox. (See Fox \& Hubbard.)
Hubbard, L. D., Worcester, Mass. Bench or table
Hubbard, L. H., Canton, Ohio. Washing machine
Hubhard, Moses G., Syracuse, N. Y. Gearing for harresters Same
same.
Hubbard, Moses G., assignor to the Hubbard Mower Company, Syracuso, $\bar{N}$. $\bar{X}$. Harrester
Same. . . . . . . . . . same

Samo............. . same
Hubbard, N. W., New York, N. Y. Horseshoo
Hubbard, S., Quincy, Il. Toy gun
Hubbard, Theodore B. (See Brown, Jairus, assignor.)
Hubbard, William W., Manchester, N. H. Scroll-sawing machine.
Mubbeli, Abijab, assignor to self, E. P. H., and Georgo V. Capron, Sharon, Conn. Machine for hilling grain.
Hubbell, A. Y., Elmira, N. X. Manufacture of sad irons
Hubbenl, O. C., and C. S. Hale. (See Hale \& Hubbell.)
Hubbell, Sanders,jur., West Salem, Ohio. Catch for inoney Irawers
Hubbell, William Wheeler, Philadelphia, Pa. Quartz mill
Hubert, Joseph, Buffalo, N. Y. Construetion of tan rats.
Huckins, Daniel J., et al. (Seo Warner, Daniel, assignor.)
Hudson, Charles H., Roxbury, Mass. Apparatus for difiusing liquids
Hudson, Edward P., Ňew York, N. K. Furuace for roasting ores
Hudson, James, et al (See Shellenback \& Auguspurger, assignors.)
Hudson, Sidney, Milford, Mich. Grain register.
Mudson, Thomas S., Boston, Mass. Inkstand, sponge cup, and pen rack, (Design)
Same...... East Cambridge, Mass. Dio for forming letters and figures on the edges of typo blocks
Hue, Leon V., and Charles Roziero, France. Method for molding designs.
Hues, Alexander G. (Sce Phillips, George B., assignor.)
Huftman, David, Luray, Va. Devico for sharpening saws
Huffiman, Samuel, Westficld, Ill. Animal trap.
Huftnagle, Alfred, Philadelphia, Pa. Key-holo guard
Huffuagle, Georgo W., New Hopo, Pa. Oyster knifo
Huggins, George A., et al. (Sce Wilder, John B., assignor.)
Mugoins, Georgo A., assignor to self and H. W. Shepard, Mannsville, N. Y. Milk ean
Hughes, David W., Quiney, Ill. Plow
Hughes, E., ctal. (See Trimblo, Georgo, W., assignor.)
Hughes, George, executor, \&e. (See Parrott \& Bordman.
Hushes, Henry O., Judson, Mo. Beehiro
Hughes, John, Newark, N. J. Harness pad
Same....... Gig saddle. (Antedated October 3, 1868)
Mughes, J. M., Menomonec, Wis. Medical compound
Hughes, N. G., Wajuesburg, Pa. Corn planter. (Antedated Jan. 27, 1868)
Hughes, N. G., assignor to self and Thomas Bradon, Waynesburg, Pa. Fruit picker
Hughes, Soymour, San Franciseo, Cal. Ore erusher and grinder
Hughes, William C., Seio, Mieh. Self-raising flour
Uughson, S. S., Newark, N. J. Sifter
Hugmin, R. B., Cleveland, Ohio. Pen rest
Same....... Clothes wringer
Mnie, H. R., Hayward's, Cal. Gang plow
Hulbert, H. C., and Alonzo Follett, Brooklyn, N. Y. Hat
Hulbert, Samnel, Ogdensburg, N. Y. Plow
Hulett, T. G., Niagara, N. Y. Cable slacklo for bridges
Hull, I., Birmingham, Conn. Skirt former
Hull, F., and Company, et al. (See Lattin, John R., assignor) $\qquad$
Iull, F. A., Belvidere, 1ll. Car coupling
......... assignor
(Reissue.)
Hull, Georgo S., Washington, Iowa. Fruit mill.
Hull, Harvey, West Exeter, N. Y. Hay loader
Hull, H. C. (See Richmoud, Isaac C., assignor.)
Hull, Heury E., and Burlin T. Merritt, Sag Marbor, N. Y
Window frame.
Hull, Isaac, assignor to self and J. Ferguson Morsell, Stamford, Conn. Roin holder.
Hull, Jolin A., and John Spear, (See Spear \& Hull.)
Hull, John S., Cincinnati, Ohio. Soda fountain.
Same...... Hydro-earbon burner.
Samo...... Gas heater
Mnll, Liverus, Charlestown, Mass. Manufacture of whips from India-rubber Samo...... Whip handle
Hull, Stephen, Ponghkeepsio, N. X. Harvester rake
Hull, Thomas, and Alexander H. Vail, assignors to selves and E. Wright Vail, Poughkcepsic, N. Y. Lubricating compound

Date.

Jan. 7, 1868
Mar. 10, 1868 Aug. 4, 1868 Nov. 3,1868

Apr. 7, 1808
Dec. 1, 1868 Sept. 22, 1868 Sept. 22, 1868

Sept. 22, 1868 Sept. 22, 1868 Sept. 22, 1868 Sept. 22, 1868 Feb. 18, 1868 Feb. 25, 1868

Aug. 11, 1868
Mar. 24, 1868
Apr. 28, 1868
July 14, 1868 July 7, 1868 Feb. 18, 1868

Apr. 28, 1868 June ~, 1868

May 20,1868.
Feb. 18, 1868
Apr. 7, 1868
Apr. 21, 1868
Oct. 27, 1868
Feb. 25, 1868
Ang. 11, 1868
Mar. 24, 1868.

July 14, 18G8
Jan. 21, 1863

Dec. \&, 1863
Feb. 18, 1868
Oet. 13, 1868
Dec. 29, 1868
Feb. 4, 1868
Aur. 11, 1868
A pr. 7, 1868
Feh, 25, 1868
Aрг: 7, 1868
Miar. 3, 1868
Mar. 10, 1808
Oct. 29, 1868
今ug. 18, 1868
Tune 2, 1868
Dec. \&, 1868
May 26,1868
Tuly 14, 1868
Felb. 11, 1808
Fch. 11, 1868
Dec. 22, 1868
Nov. 17, 1868.
Jan. 14, 1868
Mar. 3, 1868.
Mar. 31, 1868.
Aug. 25, 1868.
Oet. 6, 1868.
Aug. 18, 1868.
Feb. 11, 1868.

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74, 827
79, 908
79, 344
78, 096
73, 894
77, 380
73,011
74,541

83, 774
83, 384
74, 093
84, 112

78,969
79, 909
83, 385
74, 094
84, 189
75, 426
78, 742
77, 982

77, 983
82,319
82, 320
74, 095
Kunt, E. J., Concord, N. H. Machine for cutting cards.
Hunt, Edmund S., Weymouth, Mass. Manufacture of fans.
85, 447
2, 837
2, 838
77, 883
76, 920
77, 735
77, 043
81, 639
79, 910

77, 617
80, 629
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83, 856
83, 711
75, 762
78, 876
85, 008
76, 462
76, 921
79, 125
79, 658
84, 695
Name, residence, and inrention or diseovery.

Hulse, James H., Baltimore, Md. Frame for stretehing pants. (Antedated April 8, 1868)
Humann, August, New Xork, N. Y. Button-hole cutter
Humaston, John P., assignor to self and Hamilton E. Towle, New York, N. Y. Loom
Humes, Joseph G., Gravois Mills, Mo. Flour bolt
Humes, J. P. Winucbago City, Minn. Medical compound.
Mumiston, Willis, Troy, N. Y. Apparatus for molding candles.... (Extension). Hrunmer, Uriah, White Oak, Pa. Manure drag
Humphery, Josiah, Washington, D. C. Sad-iron holder
Same...... (See Colby, Daniel C., assignor.)
Humphrey, D. S., East Townscnd, Ohio. Field fence
Humphrey, Eugcne, Boston, Mass. Saw
Humphrey, William. (See Tassett, Nelson B., assignor.)
Humphrcy, W. H. (See Farlcy, G. W., aßsignor.)
Humphrey, W. P. (See Towndrow, Josephus smith, assignor.)
Humphreys, John, Chicopee, Mass. Adjustable gearing for lathes
Humphreys, R. W., Clarksville, Tenn. Steam generator
Iumphreys, Thomas H., Trenton, N.J. Vise.
Humphries, Guy C., Washington, D. C. Can opener
Hundt, J. O., and R. K. Slaughter. (See Slaughter \& Hundt.)
Hunkius, Edgar J., and Harrison S. Snow. (See Snow \& Hunkins.)
Humnewell, F. (See Wool, Jamcs, assignor.)
Hunsberger, Jonathan, Worcester Township, Pa. Horse rake
Hunt, Almon, and U. C. Chapman, Macomb, Ill. Wagon seat. .
Hunt, Amos B., Matteson, N. Y. Elevator.
Huut, Cyrus D., Fair Haren, Mass. Nail-plate foeder
Same......Nail-eutting plate.
Hunt, C. S., Terrc Bonne Parish, La. Stopping and starting ears Samc...... Heating deviee for chairs, \&e.
Hunt, C. S., Terre Bonne Parish, and J. B. Knight, New Orleans, La., assignors to C. S. Hunt, William F. Pratt, and Peter M. Peterson. A pparatus for collecting marsh and other gases
Same ...... Illuminatiug gas.
Hunt, David, jr., Worcestcr, Mass. Voloeipede..
Hunt, D. W., San Francisco, Cal. Wood pavement

Hunt, Eliza D., New York, N. Y. Washing machine....
Hunt, Frankliu Bcnjanin, Richmond, Ind. Straw cutter
kunt, Trankiu Benjamin, Richmond, Ind. Straw cutter-................(Reissuc)
Hunt, Franklin B., assignor through mesne assignments to himself, Richmond,
Ind. Straw cutter
Hunt, George W., Hopkinton, Mass. Sleeping car
IIunt, H., Delavan, Wis. Gate
Same.................. same
Hunt, Hixson, and Benjamin Ruttcr. (See Rutter \& Hunt.)
Hont, H. C., Amboy, Ill. Head-rest. (Antedated April 10, 1868)
Hunt, John C., and Horatio H. Bingham. (See Bingham \& Hunt.)
Hunt, John C., and Joseph Temple, Terrc Haute, Ind. Tool for laying off furrows for mill-stone dressing
Hunt, Joshua, assignor through mesne assignments to the Ameriean Patent Chromatic Printing Press Company, Richmond, Ind. Inking apparatus for color printing.
Hunt, Leavitt, iV cathersficld, Vt. Sulky plow
Hunter, Andrew, San Fraucisco, Cal. Machine for separating and concentrating sulphurcts. (Antedated July 25, 1868)
Hunter, A. G., Vales. Manufacturc of soda and potash
Same...... Manufacturc of carbonates of soda and potash
Samc....... Manufacture of zinc
Same...... Manufacture of soda and potash.
IIunter, David, North Bennington, Vt. Water regulator for paper-pulp machines
Hunter, Edward, Philadclphia, Pa. Spcctacles
Hunter', Jerry A., New London, Va. Machine for straightening tobaceo.
Hunter, J. A., et al. (See Davis, Edward M., assignor.)
Hunter, J. F., et al. (See Cahill, Gcorge, assignor.)
Huntcr, J. Morvison, Morristomn, N. J. Sole for boots, \&o
Hunter, J. S., Hartford, Conn. Stcam-generator water gaugo.
Hunter, Robert, New York, N. Y. Propeller
Same..
Toy fish
Hunter, Samuel, Audrew County, Mo. Sawing machinc
Hunter, Thomas A., and Jolm Blewitt, New York, N. Y. Lamp
Hunter, William C., Ncwport, Ky. Washing machinc
Hunter, W. R. S., assiguor to self and II. 'T. Rockwell, Mlackberry Station, $I 1$. Bed bottom
Huntington, Frank A., San Francisco, Cal. Carriage spring
Huntington, Samuel W., Augusta, Maine. Lamp shade
Samc.
Same
Same........................
Same...... Scissors and shears
.Same....... .Shearing machine.
$\qquad$ .(Reissue)

Date.
$\Delta$ pr. 21, 1868.
Feb. 25, 186:3.
July 14, 1868.
June $30,1868$.
May 19, 1 1ec.
Apr. 3, 1868.
Jau. 28, 1883.
Apr. 23, 1868.
Jan. 7,1868.
Feb. 18, 1863.

Nov. 3, 1868.
Oct. 27, 1868.
Feb. 4, 1863.
Nov. 17, 1868.

Junc 16, 1868.
July 14, 1868.
Oct. 22, 1868.
Feb. 4, 1868
Nov. 17, 1868.
Mar. 10, 1868.
June 9, 1868.

May 19, 1868. May 19, 1863. Sept. 22, 1863.
Sent. 22. 1863.
Fclo. 4, 1868.
Dec. $15,1868$.
Dec. 29, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
May 12, 1868. Apr: 21, 1868. May 12, 1868.

Apr. 21, 1868.
Sept. 1, 1868.

July 14, 1868.
May 5, 1868.
Aug. 4, 1863
Jan. 28, 1863.
Apr. 28, 1868.
May 5, 1868.
May $26,1868$.
Dec. 29, 1868.
Apr. 28, 1868
May 26, 1863.

June 16, 1863
Jau. 14, 1868
July 7, 1868
Aug. 11, 1868.
Dee. 1,1868
Nor. 10, 1868
Nov. 3, 1868
Mar. 24, 1803.
June 16, 1863
Dec. 15, 1868
Apr. 7, 1868
Apl. 21, 156?
Junc 23, 1863
July 7, 1868.
Dee. 8,1868.

# Alphabetical list of patentecs for the year 1868－Continued． 

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80， 547
79， 911
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82， 841
75， 919

Huntington，T．Romeyn and William W．，Minneapolis，Minn．Railroad gate． Huntington，T．S．，and A．Fulton，Bellefontaino，Ohio．Passonger register． Huntley，G．R．，Taunton，Mass．Faucet．
Huntlcy，Hosea H．，Qnincy，Ill．Stean－boiler furnace．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． Hunton，Jonathan，assignor to self and L．Frecland，Haversack，N．J．Hodo of casting plow shares．
Huntoon，Lafayette．（See Baldrin，C．TV．，assignor．）
Hrntoon，Reuben K．，and J．Angustus Lynclı．（See Lynch \＆Huntoon．） Hnntoon，Reubeu K．，et al．（See Marden，Jeremiah A．．assignor．）
Hunziker，Gaspar，Summit，Miss．Apparatus for distilling wood
Hunt，Fleury，and Constant Baudouin，New York，N．Y．Hat．（Antedated May 22，1868）

Name，residence，and invention or discovery．

Y．Refining petroleun．
（130 $k$ ，
（Reissue）．
Hurd，Asa，Yonkers，N．Y．Bucklo
Hurd，A．B．，Watkins，N．Y．Combined measure and weighor．
Hurd，Edwin，Virginia Citr，Nevada．Oil cup．
Hurd，Hosea B．，assignor to self，John N．，and Sam．Hurd，Aurora，Ill．Car－ riage－pole support
Hurd，Oscar Z．，and Marmon F．Lishbaugh．（See Lishbangh \＆E Hird．）
Hurd，P．H．，assignor to Clara Hurd and E．D．Horton，Croton，Mich．Baby creeper or walker
Hurd，William C．，New York，N．Y．Manufacture of paint
Hurff，Aaron，Swcdesboro，N．J．Ventilator
Hurford，Gcorge S．，and William H．Hart．（See Adt，John，assignor．）
Hurlbut，Sidncy S．，Cordova，Ill．Grain separator．
Hurlbut，Silas．（Sce Comell，Wm．F．，assiguor．） Same．．．．．．．．．．．．．．．．．．．．．．．．．．．same．
Hurst，Charles，New York，N．Y．Car replacer
Hurst，Daniel V．，Petersburg，Va．Fly net for horses．
Hurt，J．M．，Black and White，Va．Plant protector．
Huse，Stephen W．（See Calvert，Frank，assiguor．）
Huss，John Adam，Louisville，Ky．Machine for cleaning entrails．
Hussey，Daniel，Nashua，N．H．Let－off mechanism for looms
Same．．．．．Differential－gear elevator．
Mussey，M．L．M．，New York，N．Y．Postal scale．
Hnsted，Frank H．，Buffalo，N．Y．Base－burning stovo
Huston，J．，jr．，and O．W．Stanford，Sharonville，Ohio．Fastening for carriage curtains．（Antedated March 23，1868）．
Hutchings，Johu W．（See Voiles．J．E．，assignor．）
Hutchings，Sabin，and J．D．Leach．（Sec Leach \＆Hutchings．）
Same－．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．same
Mutchins，A．，and Thomas Ucker．（See Ueker \＆Intchins．）
Hutchins，Carleton B．，Ann Arbor，Mich．Compound for covcring roofs and other structures．
Hutchins，Hubbil B．，et al．（See Harris，Roseman \＆Hutchins．）
Hutchins，Seth T．，assignor to Horace A．Lathrop，North Anson，Maine．Spokc－ shaves
Hutchinson，Aaron T．，et al．（See La Baw，Hutchinson \＆Fleming．）
Hutchinson，Alfred，assignor to self and Stephen II．Markley，Pliladelphia， Pa．School clesk and seat．．
Hutchinson，Charles B．，Anburn，N．Y．Machine for jointing staves．
Hutchinsou，C．S．Burlington，N．．J．Apparatus for distilling spirits．
Hutchinson，Edwin F．，Auburn，Maine．Land roller．．
Hutchinson，George E．，assignor to sclf and J．B．Brown，Cleveland，Ohio．Toy cannon．
Hutchinsou，James，Fond du Lac，Wis．Hop press．
Hutchinson，James S．（S＇e Johnson，Thomas，assignor．）
Hutchinson，John，aud Jeffrey Hart．（See Monach，Janies，assignor．）
Hutchison，D．S．，San Francisco，Cal．Plate for artificial teeth．
Hutson，Ezra，Brockport，N．Y．Push jack for railroad cars．
Hutson，William II，and＇J．J．Drake．（See Drake \＆Hutson．）
Hutwohl，Franz，New York，N．Y．Furniture edge．
Hyatt，Eugcne．（See Ransom，Louis，assiguor．）
Hyatt，1．L．，Rockford，Ill．Tax calculator．
Hyatt，John W．，jr．，Albany，N．Y．Composition for billiard balls and other articles
Hyde，A．T．，Rochestcr，Minn．Bitters．
Hyile，Henry H．（See Simonds，Warren A．，assignor．）
Hyde，J．Burrows，New York，N．Y．Mode of preserving frnits，meats，veg－ etables，and other perishable substances．
Hyde，J．Littlc．（See Chimnock，Charles，assignor．）
Hyde，Stephen，New York，N．Y．Surcingle．．
Hyneman，Isaac．（See Motte，Simon，assignor．）
Hyslop，John，jr．，and Charles E．Phillips，Abington，Mass．Combined lifter and tongs．
Ickes，Isaiah，Massilion，Ohio．Music book
Iden，James C．，Buckingham Township，Pa．Safety pocket．
Ilenburg，Hermann，assignor to MacKellar，Smiths \＆Jordan，Philadelphia，Pa．
Printers＇type．
（Design）
Same．．．．．．．．．．．．．．．．same．
Ilgenfritz，G．W．，and M．Schall，York，Pa．Oil－tank car．

## Date．

Aug．4， 1868.
July 14， 1868
Mar．こ4，1668．
Oct．6，18t8．
Min．24， 1868.

June 9， 1868.
Junc 9， 1868.
Oct．6， 1808.
Fel．11， 1868
Oct．6， 1268.
Sept． $2.2,1868$.
Apr．28， 1808.

Mar．10， 1868.
Sept．22， 1808.
Aug．18， 1868.
May 5， 1868.

Mar．3， 1808.
July 21， 1868.
Oct．27， 1868.
Nov．～f， 1868.
Apr．14， 1868.
Nov．17．1858．
Feb．4，18́8．
Apr．21， 1868.
Mar．31，1ع08．

June 30，1868．

Jan．28， 1 ®68．

Dec．15， 1868.
Mar．3， 1868.
Aur．4， 1868.
Apr．21， 1868.
June 23， 1868.
Mar．3， 1 еç．

Tine $\Omega, 1868$.
Jail． $7,1868$.
Mar．25， 1868.
Mily 1ヵ， 1868.
Apr．14． 1868.
Aug．25， 186.

Oct．6，1868．
May 26， 1868.
Mar 10，1868．
Dec．29，1ヶ68．
Apr． $28,1868$.
Dec． $1,1868$.
Dec．1， 1868.
July 7，1868．

Alphabetical list of patentees for the year 1868-Continued.
No.

73,895
83, 500
80, 352
73, 334
73, 335
$73,7 \cdot 4$
75, 275
73,336
77, 045
2, 849
74, 542
74,915
80, 961
75, 763
85, 098
2,968
2,969

84, 492
75,549
82, 955

73, 810
81, 092 84, 421 78, 209
33, 166
73, 896
81, 374
81, 784
73, 608
83, 066
85, 172
85, 173
85, 174
85, 175
73, 167
73, 612
75, 635
79,983
83, 168
73, 897
77, 884
83, 169
73, 013
77, 193
84, 696
80,962
73, 898
83, 501
83, 502
74, 692
76, 766
81, 509
82,956
82, 957
76,767
85, 009
85, 449
80, 487
84, 629
74, 368
74, 369

Name, residence, and inrention or discovery.
Date.

Jan. 28, 1868
Oct. 27, 1868. July 28, 1868. Jan. 14, 1868 Jan. 14, 1868. Jan. 28, 1868 Mar. 10, 1868 Jan. 14, 1868 Apr. 21, 1868.

Fcb. 4, 1868
Feb. 18, 1868.
Feb. 25, 1868
Aug. 11, 1868
Mar. 24, 1868.
Dec. 22, 1868
Mar. 31, 1868
Mar. 31, 1868
Sept. 2, 1868
Dcc. 2,1868

Dec. 1, 1868
Mar. 17, 1868.
Oct. 13, 1868.

Jan. 28, 1868
Aug. 18, 1868
Nov. 24, 1868 May 26, 1868 Oct. 20, 1868

Ja11. 28, 1868
Aug. 25, 1868
Scpt. 1, 1868
Jan. 21, 1868
Oct. 13, 1868
Dec. 22, 1868
Dec. 22, 1868
Dcc. 22, 1868

Dec. 22, 1868
Oct. 20,1868.
Jan. 7, 1868
Mar. 17, 1863.
Jaly 14, 1868
Oct. 20, 1868
Jan. 28, 1868.
May 12, 1868
Oct. 20, 1868
Jan. 7, 1868
Apr. 28, 1868
Dec. 8, 1868.
Aug. 11, 1868
Jan. 28, 1868
Oct. 27, 1868
Oct. 27, 1868.
Fel. 18, 1868.
Apr. 14, 1868.
Aug. 25,1868
Oct. 13, 1868.
Oct. 13, 1868.
Apr. 14, 1863
Dec. 15,1868
Dec. 29, 1868
July 28, 1868
Dec. 1, 1868
Fel. 11, 1868.
Feb. 11, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Jaekson, John, Otrego, N. Y. Carriago spring.
Jackson, J. C., Roeliester, N. Y., and F. J., Danbury, Conn. Bedstead fastening Jackson, Meigs, Clarksbnrg, West Va. Bottlo. $\qquad$
Jackson, Noah and A. W., Napoleon, Ohio. Rotary stoan eugine. $\qquad$ Design).
Jaekson, Peter H., Now York, N. Y. Steering apparatus
Jaekson, R. (See Lidren, Cluristopher, assignor.)
Same.....................same.
Jackson, W. I., Salem, Mass. Mannfacture of gunpowder
Jackson, W. H., Brooklyn, N. Y., and George Merrill, Newburyport, Mass., assignors to the Merrimac Loom Company. Loom
Jacob, George W. Quincy, Ohio. Vegetable slicer
Jacobi, Maurice Herrmann, and Eugene Klein, assignors to Green, Clay \& Company, Russia. Galvano-plastic process for precipitating iron on molds, \&e...
Jacobi, Otto, Philadelphia, Pa. Manufacture of whito lead.
Jacobs, Edward R., et al. (See Murrill, John W., assignor.)
Jacobs, Jolm, Oneida, Ill. Collar block. (Antedated Jan. 24, 186z)
Jacobs, Marion, Stur,
Jacols, Thomas, assiguor to self, James E., and Joln İ. Kennedy, Philadelphia, Pa. Passenter register.
Jaeols, W. W., Hagerstown, Md. Vapor burner Same-..... Lamp
Jacobus, P. N., Flatbrookvillo, N. J. Serew.
Same...... Screw driver aud eountersiuk
Jacoby, F.. St. Louis, Mo. Apparatus for extraeting wort and similar liquids. Jacqnes, James A., et al. (See Coles, Jacqucs \& Fanshawe.)
Jacrer, Gustav L., Now York, N. Y. Water meter
Jalourean, Alfred Fauvin, Frauco. Machino for manufacturing telographic cables.
James, Arthur, England. Envelope for needles.
James, Charles H., assignor. (See Nason, Joseph, assignor.)
James, David A., Cincimati, Ohio. Method of expressing liquids from solids.
James, Eben, assignor to self and W. B. Brinley, T'yngsboro, Mass. Machino for makiner boxes
James, Josepin H., assignor to self and Seth Baxter, Wareu, I. I. Buekle
James, Thomas Ri, St. Louis, Mo. Tram for ganging mill stones.
Jamesou, Abiezer, Trenton, N. J. Roofing material
Same...... Vise...
Jameson, D. W., Warren, Ohio. Machine for grinding tho cutters of mowiag machines
Same...... Machine for holding the cutters of mowing machines whilo being ground
Jameson, Jacob, Philadclphia, Pa. Process and apparatus for the inanufacture of iron and steel
Jameson, Robert G., and William H. Chamberlain, Bristol, N. H. Horseshoo..
Jamison, Jacob. (See Martin, John, assignor.)
Jamison, John P., New York, N. Y. Boot
Janison, S. S., jr., Saltsburg, Pa. Car replacer
Same.....-Steam-engine valve gear.
Same...... liotary steam-engino
Janeway, George J., et al. (See Stelle, David D., assignor)
(Reissue)
Same...... (See Mcl Donald, 'Thomas E., assignor.)
Janeway, John, Indianapolis, Ind. Bedstead tastener
Janeway, John L., Elemin éton, N. J. Gato.
Same - ................................. - same
Jamey, Eli II., Alexandria, Va. Car eoupling.
Janvin, George W., Great Falls, N. II. Wagon
Jaques, Abram C., Leaventrorth, Kansas. Plow
Jaques, Frank T., and Charles E. Smith. (See Smith \& Jaques.)
Jaques, John S. and Frank T. (See Smith, Charles E., assignor.)
Jarboe, John William, Green Point, N. Y. Paper eask.
Jareeki, Charles, assignor to Jarecki \& Company, Erio, Pa. Piston for deep-well pumps
Jarnagin, James A. (See Shields, M, M., assiguor.)
Jarrett, Thomas T., Iorsham, Pa. Hay-clevatin! fork..............(Extonsion)
Jauriet, Charles F. assignor to self and A. I. Ambler, Chieago, Ill. Steam generator
Jauss, David F., Harrisburg, Pa. Chimney eowl.
Jay, James M., Canton, Ohio. Machine for eutting glaziers' points.
Jeaser', Bartholomow A., Bower's station, P'a. Composition for preserving wood Jefieries, C. A., and E. F. Ohds, Dexter, Mich. Truss
Jeffiers, Aaron P'. Mr, Allegan, Mich. ''ool-holder for grindiug
Jefiers, Albert, Lyna, Mass. Machino for molding, rounding, and chaneling soles of boots and shoes
Jeficrs, Milton C., New York, N. Y. Combined fodder cutter and eorn-husking machine.
Jeffery, William W., Greenview, and Cyrus Snyter, Middetown, II. Automatic car coupling
Jefts, Willard, Battlo Creek, Mich. Leg of a tahlo.
(Design).
Jelley, George, assignor to Charles W. Grifiths, lioxbury, Mass. Kinitted fahric
Jencks, Georgo L., assignor to tho Ilorence Sewning Machine Company, Florence, Mass. Sewing machine.

Date.

Oct. 20, 1888.
May 5, 1268 Mar. 24, 1268.
Aug. 4, 1868
Apr. 28, 1868.

June 23, 1868
May 5, 1868.
May 26, 1868.
Sept. 29, 1868
May 12, 1868.
Feb. 4, 1868
Dee. 8,1868.
Aug. 4, 1868
Oet. 20, 1868
Dec. 22, 1868.
Aug. 4, 1868
Aug. 18, 1868.
Scpt. 1, 1863
July 28, 1868.
Juno 23, 1868.
Oct. 20, 1868
Apr. 28, 1868
Nov. 24, 1868
May 12, 1868
Oct. 27, 1868
Jan. 28, 1868.
Apr. 28, 1868
Oct. 13, 1868
Nov. 17, 1868
Mar. 31, 1868
Dec. 8, 1868
Sept. 22, 1868.
Apr. 14, 1863
Apr. 14, 1868
Арr. 14, 1868

Aug. 4, 1868.
Mar. 10, 1868
Mar. 31, 1868.
Apr. 21,1868
July 28, 1868
July 14, 1868.
Apr. 14, 1863.
Nov. 10, 1868.
May 13, 1868.
Oct. 6, 1868
Apr. 21, 1868.
Feb. 18, 1868.
Aug. 18, 1868.
Fcb. 25, 1868.
Nov. $3,1868$.
Oct. 20, 1868.
Fob. 11, 1868.
Nov. 10, 1868
$\Delta$ pr. 21, 1868.
July $21,1868$.
Feb. 18, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 84, 124 | Jenkins, Benjamin A., La Crosse, Wis. Iron window s |
| 73, 811 | Jenkins, Charles R., Philadelphia, Pa. Curtain fixtur |
| 76, $7 \% 2$ | Jenkins, Edward T., Ravenswoor, N. Y. Devico for closing tho mouths of jars, cans, \&e. (Antedated April 7, 1868) |
|  | Jenkins, Jabez. (See Tongue, Samuel J., assignor.) ${ }_{\text {Jenkins, James D. Charlestown, Mass. Carbureted airlamp.................. }}$ |
| 73, 900 | Jenkins, James D., Charlestown, Mass. Carburcted |
|  | Jeukins, J. W. (See Bullard, E. W., assignor.) |
| 82, 844 | Jcukins, Nathaniel, Boston, Mass. Steam globe |
| 83, 637 | Same..... Composition for the sole |
| 75, 022 | Jenkins, Nicholas, assignor to self, George Browne and Cherles F. Bliss, New York N Y Slide for extension tables (Antedated Feb 00 1868) |
| 84, 493 | Jenkins, William F., assiguor to self and James M. Myers, Indianapolis, Ind. Wash boiler |
| 80, 548 | Jenkinson, George B., Newark, N. J. Tr |
| 83, 285 |  |
| 74, 760 | Jenks, Barton H., Brideslurg, Pa. Breech-loadi |
| 84, 423 |  |
| 84, 424 | Same......-Rceling machinery. (Antcdated Nov. 14, 1868) |
|  | Jenks, Barton HI. (See Senior, Mathew, assignor) .................... (Reissue.) |
| 84,630 | Jenks, Gcorge A., assignor to self and James Maguire, Chicago, ,71. Butt hinge. |
| 77, 195 | Jenkyn, Thomas, assignor to Bartlett Burr, Thefford Center, Vt. Sawing machine |
| 82,322 | Jenuess, J. Rienzi, Norw |
|  | Jenness, Richard S., et al. (See Wright, Hoi |
| 81, 173 | Jennings, Aaron, West Cairo, Ohio. Shovel plow |
| 73, 725 | Jennings, Asa A., Webster, N. X. Dump |
| 82, 526 | Jennings, Augustus and Isaac, Fairfield, Conn. Pape |
| 81, 510 | Jemnings, A. F., Sherman, N. Y. Abdominal supporter |
|  | Jenkins, $\Lambda$. F., \& Company. (See Clifford, W |
| 82, 720 | Jcnnings, E., jr., New York, N. Y. Suspender and shoulder-braco |
| 83, 387 | Same..... Shoulder-brace and suspender |
| 79,659 | Jennings, Isaac, Fairfield, Conn. Paper-makin |
| 80, 631 | Jemuings, Lewis, Brooklyn, N. X. Artesian punp. (Ante |
| 78, 744 | Jennings, Lyman, Winchendon, Mass. Shingle machinc |
| 73, 978 | Jennings, Martin V., Centralia, Mo. Washing machine |
| 73, 337 | Jcnnings, Palph S., Philadelphia, Pa. Card and cribbage |
| 3, 086 | Samc......New York, N. X. Medallion scarf xing - . . . . . . . . . . . (Design) |
| 3, 087 | Same...... . . . . . . . . . . . . . . . . . . . . . . same . . . . . . . . . . . . . . . . (Design) |
| 3, 133 | Same..... . Shirt collar............................................... (Design) |
| 3, 134 | Same...... Shirt cuff................................................. (Design) |
| 3, 135 |  |
| 3,149 | Same......Sca |
| 3, 150 | Same........same |
| 84, 823 | Jenny, Nicholas, jr., Pittsburg, Pa. Carriage loop and |
| 83, 969 | Jepson, Godfrey, assignor to self and Thomas F. Bryan, Chelsea, Mass. Do walled piteher |
|  | Jerauld, Henry C. (See Oothoudt, Josiah, assignor.) |
| 2, 839 | Jerome, Charles T., Minncapolis, Minn. Fire annihilator............ (Reissue) |
| 3,208 | Jessop, Joseph H., Cambridge, Mass. Trado mark..................... . (Design) |
| 85,387 | Jessop, J. W., Harveysburg, Ohio. Cultiv |
| 81, 906 | Jcssup, Gilbert, Shortsville, N. Y. Cotton-seed planter. (Antedatcd Aug. 27, 1868) |
| 74, 371 | Jewell, C. S., Black's Mills, N.J. Weeding implement. |
| 79, 835 | Jewell, J. Grey, Washington. D. C. Window-sash |
|  | Jewell, Marshall. (See Babcock, Holland, assignor).................................... ${ }^{\text {a }}$. |
|  | Jewell, Wilson, and Joseph White. (See Cassiday, Charles, assignor.) |
| 78, 210 | Jewett, David, assignor to self and Albert Leach, Lynn, Mass. Axle box for railroad cars |
| 78, 458 | Jewett, Edward, Rindge, N. H. Veneer-cutting machine (Antedated May 18, 1868). |
| 78, 877 | Jewett, F. A., Shrewsbury, Mass. Churn |
| 7\%, 492 | Jewett, Jasper S., Ottawa, Ill. Fence gato |
| 81, 640 | Same |
| 74, 227 | Jewett, Sewell E., Haverhill, Mass. Operating w |
| 79,660 | Jillson, C., Worcester, Mass. Mold for making strawberry ri |
| 77, 620 | Jincks, Melvin, Dansville, N. X. Lamp |
| 77, 984 | Samc....... Mateh safe. <br> Jobes, William, et al. (See Peol Waiter, assignor.) |
| 85, 450 | Jocelyn, A. H., New York, N. Y. Binding book... |
| 82, 527 | Jocckel, William H., Now York, N. Y. Reversible railway chair |
| 76, 773 | Johns, Henry W., New York, N. Y. Compound for roofing and other purp |
| 81, 641 | Same..... Fabric for roofing and other purpo |
| 82, 845 | Johnson, Alijah, West Newton, Ind. Saw set |
| 84, 551 | Johnson, A. B., Washington, Ind. Horse rak |
| 77, 493 | Johnson, Alluert H., Hartford, Conn. Bosom p |
| 81, 786 | Johnson, Albert W., Now York, N. Y. Whip |
| 81, 642 | Johnson, Alfied S., assignor to self and Enoch Van Wio, Waupran, Wis. Ca riage coupling - |
| 83, 388 | Johnson, Alfred S., assignor to self and Lyman B. Balcon, Waupun, Wis. Beehive protector. |
| 85, 229 | Johnson, Alonzo, assignor to Sylvester Bissell and Andrew B. West, Springfiold, Mass. Calculating apparatus. |

## Date.

Nov. 17, 1868. Jan. 28, 1868

Apr. 14, 1868.
Jan. 28, 1868
Oct. 6, 1868.
Nov. 3, 1868.
Mar. 3, 1868.
Dec. 1, 1868
Aug. 4, 1868
Oct. 20, 1868
Tel. 25, 1868
Nov. 24, 1868
Nov. 24, 1868.
Dec. 1, 1868
Apr. 28, 1868
Sept. 22, 1868
Aug. 18, 1868
Jan. 28, 1868
Sept. 29, 1868
Aug. 25, 1868.
Oct. 6, 1868.
Oct. 2\%, 1868
July \%', 1868
Aug. 4, 1868
June 9, 1863
Felb. 4, 1863
Jan. 14. 1868
Jone 30, 1868
Tune 30, 1868
July 28, 1868.
July 28, 1868
July 28, 1868
Ang. 4, 1868.
Aug. 4, 1868.
Dec. 8, 1868.
Nov. 10, 1863.
July 14, 1868
Sept. 22, 1868.
Dec. 29, 1868
Sopt. 8, 1863
Feb. 11, 1868
July 14, 1868

Мау 20, 1868.
June 2, 1868.
June 16, 1868.
May 5, 1868.
Sept. 1, 1868
Feb. 11, 1868
July 7, 1868.
May 5, 1868.
May 19, 1868.
Dcc. 29, 1868.

Scpt. 29, 1868
Apr. 14, 1868.
Sept. 1,1868.
Oct. 6, 1868.
Dec. 1, 1\&́68
May 5, 1868.
Sept. 1, 1868.
Sopt. 1, 1868.
Oet. $27,1868$.
Dcc. 22, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residenee, and invention or diseorery. | Date. |
| :---: | :---: | :---: |
|  | Johnson, Alonzo, and James A. Loomis. (See Loomis \& Johnson.) |  |
| $\begin{aligned} & 82,323 \\ & 79,574 \end{aligned}$ | Johuson, C. A., Des Moines, Iowa. Culinary ressel | July ${ }^{\text {a }}$, 1868. |
|  | Johnson, Charles D. (Sce iranderille, E. W., assiguor.) |  |
| 78,745 | Johuson, Chester I | June 9,1863. |
| 82, 958 | Johnson, Daniel I., Yorkvillo, Mich. |  |
| 74, 761 | Johnson, Daviel IV., Bloomslurgr, Pa. Wh | Feb. $25,188^{\text {a }}$. |
| 76, 774 | Johnson, Erastus, Wilkins, Pa. Lubricator | Apr. 14, 1868. |
| 78,746 |  | June 9, 1 sc8. |
| 81, 907 | Johnson, Frank G., Port Richmond, N. Y. Watch, regulating adjustment Johnson, F. I., and H. J. Case. (See Caso \& Jolunson.) | sopt. 8,186". |
| 82, 418 | Johnson, Frederick L. Wallingford, Comn. Combined 1 | Sept. 22, 1868. |
|  | Johnson, George, and Henry Do Bus |  |
| 75, 921 | Johnson, G. A., Oxford, Conn. Dress tri | MTar. 24, 1863. |
| 81, 375 | Johnson, Gcorge F., Marshall, Iowa. Cor'11 sheller Johnson, Henry, et al. (See Jones, J. M., assignor.) |  |
| 79, 127 | Johnson, H. C., assignor to self and C. H. Johnson, Delaran, Wis. Store-pipe |  |
| 77 | Jolnson, Isaac D., Kennett Squaro, Pa. Cheel | Apr. 23, 1868. |
| 3, 067 | Same <br> Johnson, Isaac G., et al. (See Cahill, George, assignor.) | Aug. 4, 1868. |
|  |  | Apr. 7, 1868. |
| 83, 970 | Jolunson, James L., and J. Wilson Foust, Evansburg, Pa. Hand spinuing ma- |  |
|  | Johnson, James M1., and J. Merig, Cleveland, O | Nov. $10,1808$. Sopt. $8,1868$. |
| 73, 014 | Johnson, Jereniaht F., Nerv York, , , Y. Fastening | Jan1. 7, 1868. |
|  | Johnson, Jesse, West Fallowficld Township. Pa. Bott cutter-................. |  |
|  | apolis, Ind. Grain drier ........................... .................. | 8. |
| 81, 787 | Johnson, Jesse F., Monrovia, In |  |
| 75, 550 | Johnson, Job. Brooklyn, N. Y. Oy Sainc...... (Sec Iugcrsoll, Simon, |  |
| 73, 901 | Johnson, John, Barrington, N. | Jan. 28,1868. |
|  | Johnson, Johm, Saco, गraine. Heati |  |
|  |  |  |
| 84,948 | Same......Device for pumping |  |
| 85, 176 | Johnson, John, assiguor to the New England Steam Heating Company, Saco, |  |
|  | Same |  |
|  | Johnson, John, New York, N. Y. Steam-ralve ca |  |
| 79, 836 | Johnson, John, Atkiuson, Ill. Store-pipe damper. | July $14,1868$. |
|  | Johnson, Johm. (Sec Mc earlaud, David, assigyor.) |  |
|  | doinson, enameling mold | June 9,1868. |
| 73, 902 | Johnson, John B., Laurel, Ind. Car coupl | Jank. $28,1868$. |
|  | Johnsou, John C., Philadelphia, Pa. Soda fountaiu. | Jan. 28, 1868. |
|  | Johuson, John C., Louisville, K y. Crystal fountain. (A | Alpr. $10,1868$. |
| 80, 549 | Johnson, J. U., Springhield, Mass. Boot protector. (Antodated July 24, 186 |  |
|  | Johnson, L. A., New York, N. Y. Guide for | Aug. 25, 1888. |
| 82, 781 | Johnson, Luman F., Buffalo, N. X. Furnace do |  |
| 76, 464 | Johnsm, Lyman H., assignor to self and Chaucey Johnson, Braniord, Comn. corn luyter |  |
|  | Jolnson, Moses, Three Rivers, Mich. Pota | June 30, 1868. |
| 85, 451 |  | Dec. 29, 1868. |
| 73,727 85,100 | Johnson Moses A., Lowcll, Mass. Felted | Jan. 28, 1868. |
| -73,979 | Jolmson, Nathan, S., Maquoketa, Iowa. Con | Feb. 4, 1868. |
| 73, 3 | Johnson, Nelson, Jaspor, N. Y. Swage | Jan. 14, 1868. |
|  |  |  |
| 75,167 | Johnson, Niels, Berlin, Wis. Machine for bor |  |
| 82, 528 | Johnsou, P. C., and Edwin Froggott, Central City, Col. Construction of horse- |  |
|  |  | Jant. 28, 1868. |
| 79,651 | Johuson, Richard P., aud Eli J. Sumner, Walash, Ind. | July |
| 81,377 | Johnson, S. M., Lockport, N. Y. Sad-iron heater Johnson, Thomas. (See Cole, Charles L. assiguo | Aug. 25, 1868. |
| 82, 120 | Johison, Thomas, assigior to self and Jamos S. Hutchinson, Tewk |  |
|  |  | Sept. $22,1868$. |
|  | Johnson, Thomas Richard, Montreal, Canada. Ventilating hats.................. | Sopt. 1, 1868. |
| $\begin{aligned} & 81,643 \\ & 82,121 \end{aligned}$ | Johnson, Thomas W., New York, N. Y. Apparatus for concentrating | Sept. 15, 1868. |
| 83,289 | Same ${ }^{\text {Same.... Apparatus for maki }}$ |  |
| 78, 670 | Johnson, Timothy W., Granger; Ohio Farm g |  |
|  | Johnson, Warrell, and Thomas I. White. |  |
|  | Johnson, William, Mil |  |
|  | Johnson, William | May 19, 1863. |
| 80, 744 | Jo | Oct $20,1868$. |
|  |  |  |

## Alphatetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| 80,964 | Johnson, William J., Now Orleans, La. Car brak |
| 73, 530 | Johuson, William S., Henderson, Ky. Buggy top |
| 73, 339 | Johnson, W. W., Nashville, Tenm. Maehine for poin |
| 81, 644 | Johnston, Charles W., Neponset, 711. Tinncrs' fire po |
|  | Johnston, F. E., et al. (See Bowdle, Lawder \& Joh |
|  | Johnston, James, and Edmund P. MeCarthy. (See McCarthy \& Johnston |
| 79,575 |  |
|  | Same...... (See Shaw \& Manz, assignors)........................... (Reissue.) |
|  | Samc .-.... (Sce Groodwin, Wm. F., assignor.) |
| 2,951 | Johnston, Samucl, assignor through mesne assigaments to himself, Buffalo, <br> N. Y. Combined rake and reel for harvesters <br> (Reissue.). |
| 75, 025 | Johnston, William, Appleton, Wis. Bedstead fastenin |
| 79, 474 | Same...... Clothes drye |
| $\begin{array}{r} 83,286 \\ 84,949 \end{array}$ | Johnston, William, Cincinnati, Ohio. Wind |
|  | Johnston, William, Appleton, Wis. Bcdstead fastening -....... Johnston William, and J H, Moore (See Moore \& Johnston.) |
| 84, 19 | Jobnston, William, and J. D. Flansburgh, Philadelphia, Pa. Apparatus for |
| 80,965 | roasting coffice |
|  | Johnstone, George, Philadelphia, Pa. Knitting machine. (Antedated Aug. 1, 1868) |
|  | Joline, David, and John W. Russell. (See Russell \& Joline.) |
| $\begin{aligned} & 80,353 \\ & 77,737 \end{aligned}$ | Jonas, Richard, New York, N. Y. Ointment for horses, eattle, \&c............... |
|  | Jones, Alvarado, assignor to self and A. A. Sage, Westford, Wis. Harrow teeth |
|  | Jones, Benjamin J., et al. (See Sweet, Eli, assignor.) Joncs Charles S. See Hart Wm. C assimnor) |
| 73, 340 | Jones, Daniel, San Francisco, Cal. $\Lambda$ xle for wago |
| 77, 621 | Jones, David 1 ., Springfield, Mass. Tweezers, wateh key, \&c. (Antedated April 20 1868) |
| 73, 609 | Jones, David D., Scranton, Pa. Clo |
| 83, 971 | Jones, Edgar A., and Julius A. Bidwell, Sturges, Mich. V |
|  | Jones, Eleazer, and Collins Potter. (See Potter \& Jones.) |
|  | Jones, E. B., et al. (See Spencer, A. C., assignor.) |
| 77, 048 | Jones, Elijah O., Brandon, Mich. Land roller |
|  | Joncs, Florentine A. (See Elson, Julius, assign |
| 76,082 | Joncs, Frederick J., assignor to self and Adolph Dick, Detroit, Mieh. Belt hook. |
| $\begin{array}{r} 78,805 \\ 3,076 \\ 84,830 \\ 74,695 \end{array}$ | Jones, George, New Haven, Conn. Sprinkler and |
|  | Same...... Coffeo urn. |
|  | aine. .-......same |
|  | Joncs, George A., New York, N. Y. Train for |
|  | Joncs, George $1 .$, and Robert Hitcheock. (See Hitchcoek \& Jones.) |
| 83, 972 | Jones, G. D., Brooklyn, E. D., N. Y. Machine for eutting sugar into |
|  | Jones, George II., and Henry C. Berlin. (See Fry, Wm. 'T., assignor.) Samc. $\qquad$ |
| 77, 383 | Jones, George L., Chicopee, Mass. Bread |
| 82, 324 | Jones, George Newton, Oshkosh, Wis. Car |
|  | Jones, Georse W., and Nelson Peterson. (See Peterson \& Jones.) |
|  | Jones, Herbert, and N. B. Hall. (See Hall \& Jones.) |
| 80,825 | Jones, Horace C., Dowagiac, Mich. Basket |
| 79,475 | Jones. Horace K., Kensington, Conn. Balancing polish |
| 79, 984 | Same .-..- $\Lambda$ ttaehment for balancing polishing |
|  | Jones, I. M., et ail. (See Cody, Bartlett \& Jones.) |
| 74, 096 | Jones, Isaac B., Xenia, Ohio. Sawing maehine |
| $\begin{array}{r} 82,846 \\ 76,775 \end{array}$ | Same...... Combined ditching and boring m |
|  | Jones, James W., Cumberland, Ma. Apparatus for making extracts from bark and other materials |
| 82, 226 | Jones, Jenkins, and 'I. G. Eiswald, Providence, IR. I. Railway snow plow |
| $\begin{aligned} & 74,372 \\ & 73,531 \end{aligned}$ | Jones, John, Newark, N. J. Smoothing iron...-............................... |
|  | Jones, John A., assignor to self and E. A. F. Mars, Baltimore, Md. Roofing compound |
| $\begin{aligned} & 78,806 \\ & 81,908 \end{aligned}$ | Joncs, John Allcock, England. Manufaeture |
|  | Same |
| 82,529 | Jones, Jolm K., et al. (See Sloan, John, assignor.) <br> Jones, Joseph A., assignor to self and John Donaldson, Baltimore, Md. |
|  | ing compound |
| 82, 530 | Jones, J. Blackburn, Sparta, Ill. Carriage wheel |
| 80, 968 | Jones, Mis. J. D., Jersey City, N. J. Sieve |
|  | Jones, J. E., Wiretown, N. J. Elastie lanyard.................................... |
| 80, 865 | Jones, J. M., assignor to sclf, Henry Johuson and George M. Bowman, Palmyra, N. Y. Printing press |
| 75, 023 | Jones, J. T., assiguor to the Singcr Manufacturing Company, New I ork, N. Y. Friction driver |
| 75,02475,764 | ame |
|  | Joncs, J. W. $\Lambda$., Memphis, Tenn. Street-railway |
| 85,01075,022 | Jones, Lewis, Funk's Grove, 11. Pulverizer, leveler, and in |
|  | Jones, Marcus $\Lambda$., Frankfort, Ky. Bread-making machine |
| 77,494 | Jones, Martha, Amelia County,, a. Corn husker, sheller, Jones, Morgan. (See Snyder, Edward, assignor.) |
| $\begin{aligned} & 73,341 \\ & 80,967 \end{aligned}$ | Jones, Moses J., Fredonia, N. X. Saw frame |
|  | Joncs, Norman C., New York, N. Y. Bale |

Date.

Aug. 11, 1868.
Jan. 21, 1868
Jan. 14, 1868.
Sept. 1, 1868

July 7, 1868

May 26, 1868 Mar. 3, 1868. June 30, 1868 Oet. 20, 1868
Dcc. 15, 1868

Nov. 17, 1868.
Aug. 11, 1868
July 28, 1868.
May 12, 1868

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Nov. 10, 1868.

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Mar. 31, 1868.
June 9, 1868
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Dec. 8, 1868.
Feb. 18, 1868.
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Apr. 28, 1868
Sept. 22, 1868.

Ang. 11, 1868
June $30,1868$.
July 14, 1868.
Feb. 4, 1868.
Oct. 6, 1868.
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June 9, 1868
Scpt. 8, 1868.
Sept. 29, 1868.
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Aug. 11, 1868.
Dec. $29,1868$.
Aug. 11, 1868.
Mar. 3, 1868.
Mar. 3, 1868.
Mar. 24, 1868.
Dec. $15,1863$.
Mar. 21, 1868.
May $5,1868$.
Jan. 14, 1868.
Aug. 11, 1863.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 73, 903 | Jones, Plineas, Newark, N. J. Clip and ferrule for |
| 74, 373 | Same Rein lolder |
| 76, 193 |  |
| 79, 763 | Jones, Robert H., San Francisco, Cal. Fireman's extension ladder ........ |
| 82, 122 | Jones, Mrs. R. L., Sacramento, Cal. Composition for making designs upon fabrics. (Antedated May 6, 1868). |
| 82, 531 | Jones, Samuel W., Blufiton, Ind. Corn p |
| 83, 504 | Jones, T. B., Radnor, Ohio. Fruit box |
| 74,374 | Jones, Thomas J., Scranton, Pa. Pud |
| 74, 543 | Jones, Thomas J., Rochester, Mich. Press for packing fruit........ |
| 74, 544 | Jones, T. J., assignor to self and Lorenzo D. Gillett, Rochestor, Mich. Neck yoke |
| 76, 776 | Jones, Thomas L., Natchez, Miss. Slide valve of combined ligh and low pros- |
| 79, 230 | Jones, Willian |
| 84, 425 | Jones, W. Ashley, Dubuque, Iowa, and J. L. Sherman, Cassville, Wis. engine water heater. |
| 78, 671 | Jones, William C., Orangeville, Ohio. Sheep-shearing tabl |
| 79, 128 | Jones, William H., Boston, Mass. |
| 80, 74.5 | Jones, W. H. H., and E. S. Harris, Morrison, Ml. Terret. |
| 3,191 | Jones, W. M., and S. E. Taylor, assignors through mesne assiguments to W. M. Jones and D. W. Hall, Horicon, Wis. Seeding machine........................ ............. (Division B, reissue). |
| 3,107 |  |
| 73, 102 | Jones, William MI., San Francisco, Cal. Device for sharpening horseshoe calks Jones, W. N., et al. (See Snyder \& Jones.) |
| 73, 532 | Jones, W. O., Portland, Maine. Conbined rule and squaro.. |
| 80, 968 | Same...... Hoisting gear.......... |
| 79,355 | Jordan, D. P., Chicago, Ill. Letter box |
|  | Jordan, George H., and Joseph W. Bradly. (See Bradly \& Jordan.) Jordan, Horaco N. (See Howard, C. H., assignor.) |
| 79,356 | Jordan, John B., Aurora, Wis. Cleaning and borin |
| 85, 310 | Jordan, John W., Lexington, Va. Butt |
| 8.5, 011 | Jordan, Joseph R., and James Campbell, West Alexandria, Ohio. corn crib and threshing floor |
| 73, 610 | Jordan, Orlau L., Dowagiac, Mich. Concrete bublding-block |
| 3,272 | Jordan, Peter A., assignor to Mackellar, Smiths \& Jordan, Philadelphia, Pa. Printers' typo. <br> (Design) |
| 83, 505 | Jordan, Thonias B., assignor to B. IH. Bartol, England. Sto |
|  | Jordan, William, Galena, M1. Stilt shat |
| 81, 788 | Tordan, William, A., New Orleans, La. Ha |
| 74, 829 | Jorey, James, Westville, Conn. Horseshoo-....... |
| 79, 231 | Joseph, Benjamin, assignor to self and William McNioce, Philadelphia, Pa. Pessary. |
|  | Joslin, Blinn D., and Renben A. Newhall, North Brownvillo, Mich. Beir |
| 79, 123 | Joslin, Crilman, Boston, Mass. Elevator |
| 3,112 | Joslin, H. W., assignor through mesne assignmonts to J. J. Fields and A. H. King, New York, N. Y. Manufacture of rubber-coated leather.....(Reissue). |
| 74, 545 | Joslin, Rufus, Providence, R. I. Picker for looms. |
| 84, 631 | Joslin, William C., Putnam, Conn. Machine for red |
| 76, 199 | Same...... Machine for rolling cots in drawing Journey, John K. (See Spies, A. B., assignor.) |
| 80, 550 | Joy, David, assignor throngh mesno assignments to J. Vaugh Merrick, and John E. Cope, Great Britain. Steam hanme |
| 83, 638 | Joyce, Eliza, New Tork, N. Y. Low-water indicator.. |
| 81, 378 | Joyce, J. L., New Haven, Comm. Button bo |
| 75, 765 | Joyce, J. O., Dayton, Ohio. Water wheol. |
| 83, 858 | Samo......Pump. |
| 3,190 84,697 | Same...... Rotary pump............. |
| 73, 980 | Jubb, W. H., Norwalk, Comm. Compound for destroying burrs |
|  | Jubb, William II., and William Vinc. (See Vine \& Jubb.) |
|  | Judd, E. M. (Sce Manville, E. J., assignor.) |
| 3,136 | Judd, F. M., and Rodney L. Smith, assignors to Tarner, Seymour \& Judds. Wolcottrille, Conn. Twine holder. <br> Judd, Frank S., et al. (See Schartau, Eilert O., assignor.) <br> (Design) <br> Judd, Jesse L., and Walter Forshee. (See Forshee \& Judd.) |
| 75, 923 | Judd, Morton, New Havou, Conn. Saslı and door button... |
| 73, 342 | Judge, Arthur 1., Baltimore, Md. Expanding wheel hub |
| 75, 766 | Judge, Edward S., Baltimore Md. Mode of producing an extra surface on papier maché. |
| 80,184 | Judsun, Agur, Newark, N. J. Sleeping |
| 81, 645 | Judson, Anson, Brooklyn, N. Y. |
| 84, 698 | Same...... Lathe eluck. <br> Judson Frederick Castleton X Y Wo......... |
| 81,174 81,646 | Judson, Frederick, Castleton, N. Y. Wa same...... Machine for grinding rea |
| 84,831 | Judson, Ffeury P'., Be |
|  | Judson, R.; and G. C. Smith. (Sce Smith \& Judson.) |
| 76, 466 | Judson, Robert F., Kalanazoo, Mich. Draft equalizer for doub |
| 75, 924 |  |

Dato.

Jan. 28, 1868
Feb. 11, 1868
Mar. 31, 1868
July 7, 1868.
Sept. 15, 1868
Sopt. 29, 1868
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Nor. 17, 1868
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Dec. 8, 1868.
Aug. 18, 1868.
Sopt. 1, 1868.
Dec. 8, 1868.
Apr. 7, 1868.
Mar. 24, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Name, residence, and invention or discovery.

Judson, Thomas S., assignor to self and Henry A. Alden, Matteawan, N. Y. Tie strap
Judson, Whiteomb, and William H. Prescott. (See Prescott \& Judson.)
Juelson, Arne D. Woostcr, Ohio. Rneker for child's carriage.
Julicu, Henri, Ottawa, Canada. Address-printing machine.
Julien, John, assignor to self and John F. Morr, Christianburg, Ohio. Whip socket.
Jung, J. Gcorge, Newark, N.J. Method of constructing chains.
Jürgens, Jürgen L., New Orleans, La. Fire escape.
Justi, J. A. W., Savannah, Ga. Smoke stack for locomotives
Justice, P. S. (See Shaw, Thomas, assignor.)
Same..................... same.
Kaempfer, S. O., et al. (See Palmer, Harvey D., assignor.)
Kaestner, Charles, assignor to self and Jacob Becker, Chicago, Ill. Barbers chair
Kafer, Peter M., Trenton, N.J. Tube for steam gonerators
Kafer, P. M., and J. M. De Lacy, Trenton, N. J. Water heater for fire eugines Kaiser, A.C., Vienna, Mo. Knife cleaner
Kaiser, Charlea, New York, N. Y. Rotary steam engine
Kaiser, Frank, Buffalo, N. Y. Grinding mill
Kaiser, Gottlob, New York, N. Y. Pcrmutation lock
Kaiser, Gottlob, assignor to self and Vossnack \& Steins, New York, N. X. Still for spirits
Kanm. Jacob J. (See Willson, H. F., assignor.)
Kane, Charles, Pittsburg, Pa. Die for heading bolts. (Antedated Jan. 16, 1868) Kanc, Daniel, Tivoli, Iowa. Threshing machine.

See Du Motay \& Karcher.) Karnes, A. (See Copp, Monroe M., assignor.)
Kassing, Henry, New York, N. Y. Machine for cutting veneers
Kasson, Amasa C., assignor to self and Nelson C. Gridley, Milwaukee, Wis. Tea and coffee pot
Same ...... Culinary vessel
Same.......Brashing for tool handles.
Same.......Tea and coffee pot.
(Reissuc)
Fastcudike, J. Louis, Albany, N. Y. Cooking stove.
Kathan, F. L., and E. D. Rummer, Roscoe, Ill. Boot crimp
Kanfiman, Ernest, assignor to Reed \& Barton, Tamnton, Mass. Ice pitcher (Reissue)
Kautfman, J. J. (Sce Arter, David, assignor.)
Kaufman, Daniel, Boiling Springs, Pa. Fence
Kaufman, J. A. and G. L. Dulaney. (Sce Dulaney \& Kaufman.)
Kaufman, Simon, Fairbury, Ill. Stay for collars.
Kaufinan, Ernest, and Anthony Weber, assignors to Ernest Kaufman, Philadelphia, Pa. Butter cooler.
Kaulbcck, Charles, assignor to self and Watson W. Roberts, Boston, Mass. Manufacture of hinge hooks.
Kar, Benjamin 1). and Henry E., Fall River, Mass. Adjnstable box for ar bors, \&e
Kay, James, Salem, Ind. Whecl plow
Kaye, John, Louisville, Ky. Hemp break
Kaylor, Edward, Perrysville, Pa. Machine for making nuts.
Kaylor, George W. (See McAnlcy, Charles D., assiguor.)
Kazenmayer, Albert, and Louis Valois, Newark, N.J. Burglar alarm
Kear, George W., and John K. Sax. (See Sax \& Kcar.)
Kcarney, James. (See Thurston, Thomas E., assignor.)
Kearney, William, Union Township, N. J. Hydraut
Keasor, John L., Laconia, N. H. Gang plow.
Keats, William and John, Encland. Mode in the manufacture of boots and shocs (Patented in England April 14, 1863)
Kcek, Henry, Canaan, Ohio. Grain and hay elevator
Keefer, Miehael, Millstone Point, Ma. Rock drill
Kecler, G. W., New Haven, Ohio. Plow
Keeler; J. F., Pittsburg, Pa. Platform seale. .
Same...... Scale beam
Same-..... Hollow-headed scale beam
Same....... Platform scale
(Reissue)
Keoler, Timothy, and George S. Avery, Danbury, Conn. Variable eccentric
Kceler, Trumaa P., Worcester, Mass. Adjustable hammer and drop
Ficen, Samuel, East Bridgewater, Mass. Butter worker.
Kcency, Harris, Danville, and Charles H. Sce, New Florence, Mo. Corn planter Kecny Milton. (Sce Wickham, Horace J., assignor.)
Keep, James M., New York, N. Y. Spring pen rack.( Antedated July 22, 1867) Keep, William H., Stockton, Cal. Pump.
Kecp, William J., Buffalo, N. Y. Shield for smoothing irons
Keferstein, E. J. (See Lieber, Karl, assignor.)
Feffer, Peter, assignor to self, William and Isaac W. Levan, Reading, Pa. Machine for stretching hat bodies
Keffer, Peter, assignor to self and E. G. Fishburn, Reading, Pa. Car brake.
Keil, William, Hastings, Minn. Game table
Keiler, Levi, Catawissa, Pa. Caleulating machine. (Antedated Jan. 6, 1868).
Kcim, William J., New York, N. Y. Spiral ow winding stairs.
Kcith, Arza B., North Bridgewater, Mass. Machine for cutting hcel seats.

Date.

Mar. 17, 1868.
Mar. 10, 1868
July 28, 1868.
Oct. 20, 1868.
Nov. 24, 1868
Sept. 22, 1868
Oct. 27, 1868.

June 2, 1868.
Mar. 10, 1868
Jan. 7, 1868.
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Nov. 24, 1868.
Sept. 29, 1868.
May 19, 1868.
June 2, 1868.
Jan. 28, 1868.
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Feb. 25, 1868.
Apr. 28, 1868.
Nor. 17, 1868.
Dcc. 22, 1868

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Feb. 11, 1868.
June 30, 1868.
Nov. 17, 1868.
Jan. 21, 1868.
Nov. 10, 1868.
Sept. 8, 1868.
Jan. 21, 1868.
Nov. 10, 1868.
Oct. 27, 1868.
Scpt. 15, 1868.
Dec. 1, 1868.
Feb. 11, 1868.

Sept. 22, 1868.
Mar. 24, 1868.
Feb. 11, 1868.
Jume 23, 1868.
Dec. 15, 1868.
Oct. 13, 1868.
Feb. 18, 1868.
May 19, 1868.
June 9, 1868.
July 14, 1868.
Apr. 28, 1868.
May 26, 1868.
Fob. 18, 1868.
July 7, 1868.
Jan. 21, 1868.
Sept. 1, 1868.
May 12, 1863.
Mar. 17, 1868.
Oct. 27, 1e68 July $21,1863$. dan. 21, $180^{\circ} \mathrm{B}$.
July $14,1868$.
May $26,1868$.

## Alphabetical list of patentees for the year 1363-Continued.

No.

3, 343
78, 67:
78, 212
78, 099
79, 476
83, 503
73, 534
75, 551
79, 232
84, 195
82, 847
82, 930
77, 0.49
80, 551
81, 909
78, 673
74, 376
74,377
84, 426
83, 068
75, 429
84, 832
73, 981
89, 490
78, 749
84, 360
77, 887
74, 378
84, 196
81, 511
81, 789
81, 910
83, 775
83,776

74,547

82, 722
76,777
74, 379
83,510
$84,03:$

81,495
80,633
83, 288
77, 980
7 73, 004
79, 131

79, 132
3, 053
76, 467
83, 860
73, 344
7.5, 926

80,354
82, 124
85, 330

82, 125
80, 412
80,412
74,007

Namo, residenco, and inrention or discorory

Keith, Edmund, Buftalo, N. Y. Shingle machine.
Keith, Eli, Wabash, Ind., and Alfred A. Eylar, Pontiac, Ill. Composition for tanning
Keith, E. H., Bridgewater, Mass. Maehino for molding wood serews.
Keizer, Lewis R., et al. (Sec Murrill, James Ir., assiguor.)
Feller, C. F., Novada, Ohio. Nachine for taking tho toll from grain in grist mills
Keller, Isaac, Randolph, Ohio. Horse-power
Keller, Jacob H. B., Chambersburg, Pa. Cultivator.
Keller, Peter, Now York, N. Y. Gas check..
Keller, Poter P., et al. (See Cabill, George, assignor.)
Keller, Sebastian, Elizabethtown, Pa. Portable feneo
Kellott, Robert James, Sau Francisco, C’al. Ticket puncli
Kelley. Edward G., New York, N. Y. Petroleun still
Kelley, Henry H., Philadelphia. Pa. Sash fastener
Kelley, J. B., and N. P. Kinesley, Brandon, Tt. Spring-bod botiom.
İelley, James M., et al. (Sce Frer. F. E., assignor.)
Kelley, J. W., Cleveland, Ohio. Mode for attaching whip) sockets Sane...... Whiftletroo.
Kelley, Thomas B., Dundec, Ill. Ico boat
Felley, Zeno, New Bedford, Mass. Bomb lance for lilling whales.
Kellogg, A. W. (See Sherman, Edwin F., assignor.)
Kellogg, Charles, Detroit, Mich. Apparatus for boring links Same. .... . Machine for forming eyes on metal rods
Kellorer, C. A., Elyria, Ohio. Corn planter.
Kellors, C. H. B., Tontogany, Olio. ITorse hay fork.
İ̈llogg, Daniol, Jackson, Mich. Gas heater.
Same..... Tpsilanti, Micl. Clothes boiler
Kellogg, E. H., Mukwonago, Wis. Flour bolt
Kellogr, Henry, New Haven, Conn. Hat. (Antodated July 14, 1868)
Kellorgs, J. Dwight, jr., Northampton, Mass. Churn dasher
Kellogr, Lucien H., Monroe, Ohio. ILorseshoo
Kellogs, Miner K., Baltimore, Md. Postage and revente stamp
Kellogs, Theodore D., Now York, N. Y. Method of preserving bait for fishing. Same. . . . . Refrigerator
ich. Brick machine
Iíllun, Villiam C., San Francisco, Cal. Escapement
Same........... . ............................ samo .
Same...... Clock escapement.
Same .............. same
Kelly, A.J. (Sce Folmer, John F., assignor.)
Kelly, D. and C. (See Deakin, Joln, assimor.)
Kelly, D. A., et al. (See Smith. Kelly \& Mmidock.)
Felly, John, San Francisco, Cal. Construction of sea walls
Kelly, John C., and Thomas Kerr. (See Kerr \& Kielly.)
Kelly, John D., and Georgo G. Hood. (See Hood \& Kelly.)
Kelly, John Stafford, New York, N. Y. Washing machino
Kelly, Lewis L., Delaware Station, Ind. Nachine for tanning
Kelly, Miohael, Now Iork, N. Y. Fence
Kelly, Michael, St. Charles, Mo. Railroad switch
Tielly, Michael, assiguor to self, William Lalor and James Slammon, New York, N. Y: Metallic feneo

Kelly, O. S., ct al. (S'ee Whiteley, Fassler \& Kolly.)
Kelly, Robert C.. West Meriden, Comn. Coat support
Kolsey, George I. (Sce Hartwig, Charles Ir., assighor.)
Felshaw, John, Lafayette, Ind. Stean generator
Kenaga, Sammel C., Kankakee City, Ill. Dnmping platform
Kendall, Adoniram, Butfalo, N. Y. Cut-off valve gear
Iíendall, A. S., Guilford, Maine. Horse rake
Kendall, Jonas, South Framingham, aud Addison Mathaway, Lenox, Mass., as signors to Andrew T. Serven. Machine for grinding glass plates, \&c
Same...... Machine for polishing glass.
Kendall, J. B. (See Frost, Thomas TV., assignor.)
Kendall, Joseph W., Philadelphia, Pa. Foot for tubs, buckets, \&e . . (Reissue)
Kendall, Joshua T., Concord, N. H. Machine for boriug wagon liubs.
Kendall, Richard A. and Thomas, Mincral Point, Wis. Railway-track cleaner
Kondig, B. E., et al. (See Grebinger, It oury B., assignor.)
Kendig, Christian, Sate Harbor, P’a. Clanp for filing saws. (Antedated Jau. 2, $1808)$
Kendrick, Andrew W., Laeonia, N. H. Bed bottom
Kendrick, Peter, Trenton, N. J. Machine for flattening and bending chain links.
Same...... Device for blocking chains
Kendrickon, Paul H., Boston, Mass. Valve for steam and othor enginery
Keneagy, Samuel. (See Hart, Francis P., assignor.)
Kenfielt, Montgomery, and William Nash. (Sec Nash \& Fienficld.)
Kennard, Thomas S., Exeter, N. II. Invalid rost
Kennedy, De Laney, New York, N. Y. Hay spreader
Kenncdy, Do Laney, assignor to Henry J. Kemedy, New York, N. V.. Chain

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Jณn. 14, 1S68.
Juno 9, 1868
May 26, 1868

May 19. 1868
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Mar. 17, 1868
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Oct. 20, 1863
May 1?, 1368
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Nov. 10, 1368

Jan. 14, 1868
Mar. $24,1868$.
July 28, 1868
Sept. 15, 1868
Dec. 29, 1868.

Sept. 15, 1868
July 28, 1863.
Fob. 4, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.



## Date.

Jan. 7, 1888

Dec. 1, 1868 Sept. 29, 1868 Oet. 6, 1868 May 12, 1868. Dee. 15, 1868 Apr. 14, 1863. Nov. 3, 1868.

Sept. 15, 1868. July 21, 1868 Aug. 18, 1868. Nov. 3, 1868. Aug. 11, 1868. Nov. 24, 1868.

Fob. 25, 1868

Feb. 18, 1868
Jan. 14, 1868
Apr. 28, 1868
Junc 2, 1868
Feb. 18, 1868.

Dec. $22,1868$.
June 9, 1868.
May 12, 1808.
Feb. 25, 1858.
Apr. 21, 1868.
A14. 11, 1838.
Apr. 7, 1868.
Dee. 20,1868 .
Aug. 11, 1868.
A11. 21, 1868.
May 20, 1868.
Aus. 4. 1898.
Aug. 18, 1868.
Apr. 7, 1868
July 14, 1868
July 14, 1868.
Mía. 24, 1868.

Aug. 11, 1868.
Ang. 18, 1868.
Sept. 15, 1868
Sept. 22, 1862
Oct. 6, 1838.

Apr. 28, 1263. A Mr. 28, 1863 Sept. 8, 1842 Oct. 20, 1868. Oct. 2\%, 1868.

June 30, 1868.
Sept. 22, 1868.

Oet. 27, 1868.
Aug. 25, 1888.
Ams. 18, 1868.
Nov. 24, 1868.
Fel. 11, 1868.

Alphebetical tist of patentces for the year 1868－Continued．

No．

Kilner．James Maze，England．Apparatus for towing vessels．（Patonted in England April 4，1867）
Kilreet，Willian H．（See Bailey，Benj．A．，assiguor．）
73， 729
2， 952
79，837
73，535
75，026
84， 699

80，972
85,312

83， 174
84，553
76， 083
74,833
80， 635
85452

78， 972
81，570
84，282
73，252
74，230
79， 838
80， 286
2， 925
2，926
81， 790
3， 000
3， 001
7\％， 198
81， 278
81， 197
78，202
89，006
75，552
83， 861
74,549
85， 012
82， 849
82，2：29
75，927
83， 290
77，051
77，622
82， 120
76， 469
77， 495
85， 102
78， 808
81， 791
3， 136
75，9288
75， 839
83， 973
79， 478
\％\％， 890
85， 103
75,430
80，827

Kimball，Charles H．，Quiney，Mass．Casket for preservation of corpses
Kimball，Charles P．，Portland，Maino．Exterior of the body of a sleigh．（Design） Samo．．．．．．Car seat
Kimball，E．W．，Mudson，N．Y．Bottom for coal hods．
Kimball，George G．，et al．（See Fowler，David Wr．，assignor．）
Kimball，George P．，San Francisco，Cal．Construction of vehicles
Kimball，Handley B．，Charlotto，Mich．Mode of applying erystal frosting to glass
Kimball，Handley B．，and Alonzo M．Cheney．（Sce Cheney \＆Kimball．）
Kimball，H．N．，et al．（See Utloy，Kimball \＆Rernolds．）
Kimball，I．M．（See Gleason，Christopher C．，assignor．）
Kimball，L．W．，Pittsford，Vt．Door panel
Samo．．．．．－Moldings，cornices，and tho liko，from paper
Kimball，Matthew H．，and James Garroy．（See Garrey \＆Kiniball．）
Same．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．
Kimble，Samuel D．，Allegheny City，Pa．Carriage brake．
Kime，Henry，Marshallown，Lowa．Calk sharpener－
Kime，Samucl，McVeyton，Pa．Shaft bearing or mill－stone hush
Kindig，Danicl，Nowville，Pa．Composition for cleaning mill stones
Kindleberger，T．J．，Eaton，Ohio．Water wheel．
Kinert，William E．，Blufftou，Ind．Churn．
Kinert，William E．，and Snydor Filson．（See Filson \＆Kinert．）
King，A．H．，and J．J．Eiclds．（Sce Joslin，II．W．，assignor．）
King，A．W．（See Hodges，J．W．，assignor．）
King，Charles，New York，N．Y．Timepicec
King，Charles B．，Gallatin，Tenn．Potato slicer
King，Chester，East Cloveland Ohio．Water elevator
King，Dexter S．（See Marlow，Charles F．，assiçnor．）
King，Ferdinand，assiguor to self and Charles W．Neudecker，Richmond，Ta． Generating illuminating gas

## Samo．．．．．．．Gas generator

King，Francis L．，Worcestor，Mass．Machine for dressing stone Samo．
same
King，Gamaliel，assignor through mosno assignmonts to Charles C．Pratt，West－ field，Mass．Corering whips．．．．．．．．．．．．．（Division 1，reissue）． Same．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．same
（ （Division 2，reissuc）
King，Gcorge，and Lyndhurst T．Shope，Frederick City，Md．Seeding machine King，George E．，New Eork，N．Y．Fluting machine．．．．（Division A，reissue）． Same．．．．．．．Fluted pufting．
（Division $B$ ，reissue）
King，Gideon，Eminence，Ky．Hog－scalding tank
King，G．W．，Saratoga Springs，N．Y．Tagina injector
King，Georgo W．，Goorgetown，D．C．Telegraph instrument．
King，Heury，assignor to self and Francis Stappers，Waterbiny，Conn．Giato bar．
Fing，H．A．，Nevada，Ohio．Bechivo．
King．Menry C．（See Clime，John C．，assignor．
King，Menry Ṅ．，Adrian，Mich．Adjnstablo jaw for rises
King，Isaac，Germantown，Ohio．Bochive．
King．Jacob，assignor to self，James Hamilton，and B．Stokely，Indianapolis，Ind． Ditching machine．
King，James M．，Quincy，Minn．Apparatus for tightening bolts．
King，John F．II．，Port Richmond，N．Y．Signal flag for vessels．（Antedatal Sept．25，1868）
King，Johu II．，Smithficld，Ind．Gato
King，Julius，Hoboken，N．J．Piston packing
King，Lewis，Oriskany Falls，N．Y．Weeding hoc
King，Martin，and Warren W．White．（See Whito \＆King．）
King，M．A．，New York，N．Y．Muff．
King，P．W．，Lowville，N．Y．Animal trap
King：Robert，J．，Laucaster City，Pa．Oscillating steam engino．
King，Sanuel M．，Lancaster，Pa．Sawing machino
King，Samuel U．，Windsor，Vt．Wood－turning lathe
King，Simeon II．，Tuabridre，Vt．Leather－cutting machine
King，Walter，Richmond，Mo．Morse－power．（Antedated May 27，1868）
King，Watson，Springfield，Il．May rako
King，Watson，assignor to James La Fayetto ling and Willian W．Watson， Springfield，Ill．Forse rako
（Rcissue）．
King，William，Now York，N．Y．Fur collar
Kingman，B．I．，and N．V．B．Shepard，Chicago，Ill．Spring－bod bottom Kingsley，N．P．，and J．B．Kelley．（Sce Kelley \＆Kingsley．） Kington，Francis A．，Mendon，Ill．Wagon lock．
Kington，William N．，Bowensburc，Ill．Saw clamp
Kinman，Ira，assiguor to Sarah Kinman，Freeport，Ml．Cnrtain fixturo
Kinney，C．A．，and Charles Parker，Corry，Pa．Slingle machine．
Kinney，George，Bristol，Ind．Horse hay fork
Kinney，Israel．（See Mercier，Jolnn，assignor．）
Kinnoy，Isracl，assignor to Edward McGivern and John Webbor，Detroit，Mich． Wagon seat．

Date．

July 21．1868，
Jan．28， 1868
Mar．17， 1868.
$J$ uly 14， 186.
Jan．21，1と6z．
Mar．3， 1868.
Dec． 8,1868 ．

Ang．11， 1868.
Dec．29， $1 \times 63$.

Oct．20， 1868.
Dec．1，1：68．
Miar．31， 1868.
Feb．25， 1868.
Aug．4，1868．
Dec．29， 1868.

June 16， 1868.
Aucr．25， $186^{2}$.
Nov．$\sim 4,1068$.

Jan．14， 1863.
Feb．11， 1808
July 14， $180^{2}$
July $28,1868$.
May 12,1868
May 12， 1 と68 Sept．1，1868 June 23， 1868 June 23,186 Apr． $2 \cdot 3,1 \sim 6:$ Aug．18， 1868 Nov．17， 1868.

May 26，1868 Sept．8， 1568

Mar：17， 1808
Nor．10， 1868
Fob．18， 1868
Doc． 15,1868
Oct．6， 1868
Scpt．15， 1868
Mar．21， 1868
Oct．20， 1568.
Apr．21， 1868
May 5， 1868
Sopt．8， 1868
Apr．7，1868．
May 5，1868
Dес．2ぇ， 1868.
Jиио 9，1と68．
Sept．1， 1868
Scpt．22， 1868
Mini．24， 18 fi
July 14，1868
Ang．11， 1868.
Jume 30， 1868.
May 12， 1868
Dec．22， 1868
Mar．10， 1863.

Aug．11， 1868

# Alphabetical list of patentees for the year 1868-Continued. 

Name, residence, and invention or discovery
Dato.

Apr. 7, 1868.
Kinscl, Charles M., Columbus, Ga. Bracelet
Kinsey, Henry, F. W. Kissell, J. E. and J. M. Smith, Ligonier, Pa. Hay cutter. Kinsley, Rhodolphus, Springficld, Mass. Tobacco press. (Disclaimer; filed July 6,1868 .)
Kinsman, John. (See Melcher, George B., assignor.)
Kint, Danicl, Hasleton, Iowa. Combincd sceder, cultivator, and harrow
Kintz, George W., West Henrietta, N. Y. Potato digger.
Samo...... Washing and wringing machine
Kinyon, Alonzo. (See Parker, Joscpl1, assignor.)
Kinzer, George W., Lindon Station, Ohio. Combined planter and cultivator
Kinzer, Jacob, Pittsburg, Pa. Reversible latclı.
Kipp, A., jr., Sing Sing, N. Y. Steam and fire regulator.
Same..... . Rotary stcam engine..
Kirby, Thomas B., Flowerficld, Mich. Animal trap
Kirby, William A., Auburn, N. Y. Marvesting machino..(Division A, reissue) Samc. .-. . . . .- . . . . . . . . . . . . . . . . . . . . . . same.
(Division $B$, rcissue)
Same..
Harvester rako
Kirchfeld, J., and F. Heyl, Riegelsville, Pa. Match box.
Kirchhof, Charles, Newark, N.J. Blast gun.
Kirchner, Nicolans, Philadelphia, Pa. Device for fastening shoes.
Kirk, Alexander C., Scotland. Blowing enginc
Kirk, Arthur, Allegheny City, Pa. Distilling petroloum. (Antedatcd Fob. 10, 1868).
Kirk, Gcorge B., Newark, N.J. Pipe and bolt cutter
Kirk, Henry H., Springfield, Tenn. Distillery.
Kirk, Joscph S., Pittsbure, Pa. Food for animals
Kirk, S. W., Coatesville, Pa. Lock nut
Kirk, Thomas A., and Joseph B. Spurgin. (See Spurgin \& Kirk.)
Kirk, W. A. L., Mamilton, Ohio. Workmen's time register. Same..... Head block.
Kirk, W. A. L., assignor to Owcns, Lane, Dyer \& Company, Hamilton, Ohio. Swage for saws
Kirkham, E. H., Boston, Mass. Clothes sprinkler
Kirkham, George B., New York, N. Y. Strap holder
Kirkham, Michael, Eminence, Ind. Shield plow
Kirkland, William P., assignor to sclf, Johu L. and Edgar M. Murplyy, San Francisco, Cal. Drain and water pipe.
Kirkley, James, assignor to sclf and Hugh Gray, Chicago, ill. Car-brake attachment
Kirkpatrick, Alcxander, Nowark, N. J. Implement for shielding plants from a hoe
Kirkpatrick, John D., Urbana, Ohio. Filtering burning flaid
Samo..... Preventing hogs from rooting -
Kirkpatrick, Thomas S. G. (Sce Dc Gerweth, Francois Louis, assignor.)
Kirtland, George, assignor to S. Smith, New Haven, Conn. Lightning rod
Kissam, John W., New York, N. Y. Scalc dish.
(Design)
Kissell, F. W., et al. (Sce Kinscy, Kissell \& Smith.)
Kistler, W. F., assignor to self and George W. Gillctte, Chicago, Ill. Cooking stove

Aug. 4, 1868.
Not. 24, 1868.
Nov. 24, 1868.
Jan. \%, 1868.
Mar. $3,1868$.
Apr. 21, 1868
Ang. 11, 1808
Scpt. 8, 1868.
Dec. 29, 1868
Sept. 15, 1868
Juno 16, 1868.
Aug. 4, 1863.
Feb. $25,1888$.
May 5,1868.
Mar. 3, 1868.
Jame 30, 1868.
Fcb. 25, 1868
Junc 23, 1868
Nov. 17, 1868
Nov. 3, 1868.
Jan. 21, 1868
May 12, 1868
Nov. 24, 1868.
Junc 23, 1863
Aug. 4, 1868
Nov. 24, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Niame, residence, and invention or disonvory. |
| :---: | :---: |
| 75,769 | Kloman, Andrew, Pittsbarg, Pr. Pilo for girder |
| 75, 70 | Same..... Mating pilos for girder beams. |
|  | Samo...... (Sce Thomas, Loopold, assignor.) |
| 83, 974 | Fuagge, Walter, Clarendon, Jamaica. Manufacture of sugar. \&Antedatod Nor. ก. 1868 |
| 73, 905 | Knapp, A. H., Newton Center, Mass. Spring for bed bottoms, chairs, \&ic |
|  | Knapp, Aarn WV. (See Mnore, Halser, assignor.) |
| 77, 29.4 | Kuapp, Heury F., New York, N. Y. Collar machine |
|  | Knapp, Johm C., et al. (See Obrecht, Menry, assignor.) |
| 73, 612 | Knaner, Christian F., Pittsburgh, Pa. Curtain fixture ........................... |
| 83, 641 | Kneedler, John D., assignor to self and Thomas S. Daris, Collinsvillo, Ill. Gang plow |
| 80, 287 | Kneeland, William C., Brooklyn, N. Y. Manufacture of cigars |
| £2, 850 | Kneip, George, New York, N. X. Fountain pen |
| 76, 202 | Knell, George, Moorestown, N. J. Chair and |
| 83,975 | Knepler, Jacol M., Jersey Shoro, Pa. Harrester |
| 78, 385 | Knick, Jamees L., Lexington, I11. Implement for extracting hedgo plants and weeds. |
| \%0, 4¢0 | Knight, Henry, et af. (See Lockhart, Roberts \& Hnight.) <br> Finight, James, Pliiladclphia, Pa. Indicator for street-railway |
| 80, 288 | Fnight, J. A., Durham, Maino. Fruit picker |
|  | Knight, J. B., and C. S. Hunt. (See Hunt \& Knight.) |
|  | Tnisely, A. J., and M. Nre. (See Nro \& Knisely.) |
| 75, 71 | Innisely, Christian, Chicago, Inl. Burglar alarm |
| 76, 203 | Knokel, Andrew, Monroe, Wis. Hot-air furna |
| T6, 204 | Sanc...... Coa |
| 79,481 | Knoblock, Ph., Wrandotte, Kansas. Car coupling |
| -4, 382 | Knoch, William, Allegheny City, Pa. Axle for ve |
| 22, 961 | Knorr, Jacob F., assignor to Frank K. Hipple, Philadelphia, Pa. Harness saddle trec. (Anterlated Oct. 3, 1868) |
| 83, 802 | Tnott, Richard, Suisun, Cal. Morse-power fastenel |
| 77, 739 | Knowles, George G., Wakefield, I. I. Hay spreader |
|  | Knowles, H. M., et al. (See Lecompto, S. D., assignor.) |
| 79, 986 | Knowles, L. J., Warren, Mass. Belt shipper for looms |
| 81, 279 | Knomles, M. Mr., Elmira, N. Y. Extension linder |
| 184, 554 | Knowles, Martin V. B., Wakefiold, R. I. Chalk-line |
| 7-1, 550 | Knowles, Thomas, Robert, and Samuel, Jersey City, N. J. Harrostor |
| \&0, 187 | Knowles, William, Rocliville, Ind. Shawl pir |
| 83, 511. | Knowles, Wilson W., Plantsvillo, Comn. Thill coupling. (Antedated Oct. 17, $1868)$....................................................................................... |
| 79, 840 | Knowlson, A. M., Troy, N. Y. Suppository machino |
| 75, 027 | Luowlton, A. A., St. Albans, Vt. Mold for artificial to |
| 75, 431 | Same................................... same |
| 81, 792 | Fnowlton, Charles H., assignor to Eurbish \& Gage, Canden, N.J. Cam for operating shuttle boxes |
| 76,779 | Knowlton, Dallas, Liberty, Maino. Stove-pipe drum |
| 73, 306 | Knowlton, Ernest J., Aun Arbor, Mich. Bath |
|  | Knowlton, freorge II. (See Thompson \& Burbank, assignors.) |
| 83, 713 | Knowlton, Henry C., Garlner, Mass. Chair seat. |
| 3, 263 | Same...... Clarair-seat bow |
| 73, 251 | Knowltou, II. W., Saratoga Springs, N. T. Machino for husking corn. (Auto dated Jail 1 1868) |
| 73, 530 | Knowlton, John L., Philadelphia, Pa. Circular-saw mill |
| 76, 471 | Same.....-Saw mill......... |
| . 2, 840 | Knox, C. H., Mrt. Pleasant, Inwa. Clothes wringer |
|  | Knox, John, and Joseph Collins. (See Collins \& Knox.) |
|  | Knox, Samuel A. (See Sessions, Francis E., assigu |
|  | Knox, William, and William C. McGill. (See McGill \& Knor.) |
| 84, 5.55 | Koberle, Joseph, St. Louis, Mo. Button. |
| 77, 624 | Koch, August, Baltimore, Md. Cooler and refrigerator |
| -75, 553 | Koclr, John, Brookline, Mass. Furniture drawer and fa |
| 81, 650 | Koch, John, and David Seachrist, Colnmbiana, Ohio. Hames daste |
| '77, 893 | Koehler, Joseph, New York, N. Y. Fishing apparatus |
| 74,383 | Koeller, Hermann, and William Uecke, Camp Point, Ill. Hand soed plan |
| 73, 188 | Koenig, Gottliel, Plymoath, Mich. Spring-bed bottom |
| 74, 699 | Koenig, Gottlieb, and George Otto, Plymouth, Mich. Potato digger |
| 78, 293 | Koffent, John, Appleton, Wै is. Plow . .................... |
| 76, 472 | Kohl, W. M., Cincimati, Ohio. Stereoscopo |
| 84, 600 | Kohler, Christiam, Galena, In. Car coupling |
| \%6, 927 | Kohler, John, New York, N. Y. Lifting jack |
| 79,577 | Kohler, Joseph, Cincinnati, Ohio. Auimal trap |
|  | Kohni, Tobias, (See Trapp, Wm. W., assignor.) <br> Same...................... same. |
| 76, 780 | Same...... See Wegman, Franz R, assignor.) |
| 76, 473 | Komp, A., New York, N. Y. Machino for attaching spanglos to hoops of skits. |
| 79,482 | Same......-Eyeleting machine |
| 82, 127 | Knan, M. A. Catskill, N. X. Adjustable carriage |

## Date.

Mar. 24, 1868. Mar. „24, 1868.

Nor. 10, 1868.
Jan. 38, 1868.
Apr. 28, 186 \%.
Jan. 21, 1868.
Nor. 3, 1868.
July 23, 1868.
Oct. 6, 1868.
Mar. 31, 1868.
Nov. 10, 1863.
Apr. 28, 1868.
June 30, 1858.
July 25, 1863.

Mar. 24, 1868.
Mar. 31, 12632
Mar. "1, 180
Iuno 30, 1 148.
Feb. 11, 1868
Oct. 13, nas嘘:
Nov. 10, 1868.
May 32 12.95.
Jnly TA, 18GR.
Aug. b8, 1863.
Dee, 111868:
Feb. 18, 1568.
Jus 21, 18GR.
Oct. 27, 1868.
July 14, 1868 .
Diar: 3, 1848.
Har, 10, 1868.

A pr. 14, 1863.
Јад. 28, 1868.
Now. 3, 1868.
M.OF. .24, 186i3.

Jan. 14, 1868
Jan. 21, 1868.
Apr: 7, 1868.
Junk 14, 1863.

Dre. 1,1868
May $5,1868$.
Mar. 17, 1868.
Sept. 1,1868.
M2y 12, 1868
Feb. 11, 1868.
Jan. 7, 1868.
Feb. 18,1868.
May 26, 1868.
Am: 7, 1868.
Dic. 8, 1863.
Apr: 21, 1868.
July 7, 1868

Aps. 14, 1868.
Apr. 7, 1868.
Juиe 30, 1868.
sept. 1511868

Alphabetical list of patentees for the year 1868-Continued.
No.

## ,

 Koplin, William, New Castle, Pa. Spike machine77, 199
82, 231
77, 490
82, 232
79, 234
74, 551

81, 178
76, 205
77,295

79, 764
77, 819
81, 793

84, 285
82, 128
78,101
85, 154
84, 198
81, 380
79, 578
81, 512
76, 331
80, 747
81, 794
3, 182
2,919

83714
76, 637
81, 651
77, 987
81, 912
84, 884
85, 455
81, 381
81, 795
83, 175
84, 497
84, 951
78, 527
77, 053

81, 179
77, 625
2,915

81, 797
81, 382
84, 632
83, 069
77, 200
77, 054
3, 153
79, 765
80, 976
โ9, 483
83,512
-6, 781
2, 831
84, 633
77, 497

Kopp, Julius, Hobokeu, N. J. Attachmont for cas burners.
Kostenbander, Daniel. (See Hoagland, Samuol M., assignor.)
Kraflit, Hack, Mulberry, Pa. Horso hay fork
Kraft, B. F., Roalling, Pa. Fancet.
Kraft, Froderiek A., Philadelphia, Pa. Zineing iron
Kramer, Charles F., Mondovia, Wis. Settee, bed, and table.
Kramer, Cluristian. (See Hockart, George W., assignor.)
Samo...................................
Kramer, Frederiok, St. Louis, Mo. Sash fastener
Kraus, Frederick, Philadelphia, Pa. Hollow auger.....................................
Krauseh, C. W. Theodore, Pliladelphia, Pa. Belt eoupling. (Antedated April 21, 1868)
Krausse, E. B., and William M. Page. (See Page \& Krausse.)
Krant, Henry, St. Louis, Mo. Apparatus for atomizing liquids.......................
Kreamer, J., and D. M. Swartz. (See Swartz \& Kreamer)
Krebs, Charles, West Springfield, Mass. Countersink
Kreischor, Balthasar, Now York, N. Y. Burning, ki
Same...... (See Christiansen, John, assignor.)
Kreps, Heury, and Charles O'Bryan. (Sce O'Bryan \& Kreps) .......... (Reissue.) Kriek, Francis, assignor to solf and Eli Sinks, Fidelity, Ohio. Lifting jack.... Kriebel, Andrew, Horeford, Pa. Lifting machine.
Kriechbaum, John G., Youngstown, Ohio. Safe-door lock
Krieg, Julius, New York, N. Y. Piano-stool screw.
Krighaum, Gilos, D. A., Zanesvillo, Ohio. Apparatus for holding shoop
Kriteh, Jaoob, Cleveland, Ohio. Die for making clevis blanks.
Kroeger, William, Allegheay City, Pa. Spring. (Antedated June 24, 1868)
Kroger, A. E., Norwalk, Conn. Horseshoo.
Krom, Stephen R., New York, N. Y. Apparatus for separating ores and minerals Same.....-Apparatus for concentrating ores and minerals.
Same....... Machine for separating ores. (Aatedated Aug. 5, 1868) .......... Same..................same ...........................................(Roissue) Kronig, Carl, assignor to Theodoro A. Havemeyer, J. Lawrenoo Elder, and Charlos F. Loosey, New Xork, N. Y. Manufaeture of sugar mollds and othor articles
(Reissue)
Kruger, Charles Ernost, New Xork, N. Y. Photographie rest.
Krumm, Martin, jr., Columbus, Ohio. Constructiou of fence posts.
Kruse, Lois, Sabula, Iowa. Holdback.
Kuehu, Carl, assignor to Joseph R. Von Wessely, Austria. Mode of ntilizing tin serap or waste.
Kuhn James, Mt. Pleasant, Pa. Face tester for mill stomes
Kuhnle, Chatles F., Washington, D. C. Dovetailing machine.
Kuhns, B., Dayton, Ohío. Seed plauter
Kune, Julian, and G. A. Mariner. (See Mariner \& Kune.)
Kuneman, Jacob, Canton, Ohio. Joiner's' elamp
Kupfor, Carl, assignor to self and Kund J. Fleiseher, Madison, Wis. Piane for cutting blind slats
Kurtz, Jesse B. Davislurg, Pa. Horse hay fork
Kustel, Guido, San Franeiseo, Cal. Mode of working gold and silvor ore
Kuttuer, J. H., Hompstead, Texas. Suspeuder for seissors.
Laass, Emil, Syracuso, N. Y. Areh of furnaces for evaporating kettles, Laßaw, Goorge W., Jorsey City, N. J., Aaron T. Hutchinson, Harlem, N. Y., and Ira W. Fleming, Jersey City, N. J. Miter gauge
Laburt, John. (See Bishop, George W., assignor.)
Lacey, Daniol P.. assiguor to Robert R. Ball, Oxfordville, Wis. Sash holder ...
Lacey, E. F., and D. K. Woodbury, Danville, IIl. Hames.
Lacey, H. A. (See Acker, George S., assiguor.)
Laeour, Louis, San Franciseo, Cal. Bottle
(Design)
Laey, B. W. (See Wilmarth \& Farr, assignors.)
Lacy, B. W., and S. C. Eaton. (See Wilmarth, William C., assignor.)
Lacy, John S., jr., et al. (See Exelby \& Marshall, assignors.)
Lada, Benjamiu, Ottumwa, Iowa. Horseshoe.
Ladd, Frank. (See MeLea, Wm. J., assignor.)
Ladd, George P. (See Lyman, George G., assiguor.)
Ladenberger, F. D., Glen T3eulah, Wís. Wagon brake
Laemmel, Moritz, Bay Ridge, N. Y. Mcehanioal movement
Lafetre, James, New York, N. Y. Cake mixer
Laferer, A., and R. K. Laraway, Battlo Creek, Mieh. Equalizor.
Lafferty, Hugh W. and Robert, Gloncester, N. J. Coutrifugal hydro-e.jector.
Same...... Centrifugal machine for draining sugar, \&e. ..........(Reissue)
Lafferty, Robert M., assignor to self, J. E. and J. P. Prutzman, Three Rivers, Mieh. Preparing cotton seed for planting.
Lafler, J. A., Albion, X. X. Brick machine.
Laflin, Perley, assignor to self and John J. Sprague, Warron, Mass. Shuttlo... Samo.....-Autematie car eoupling
Laforge, Frederick H., and William Geddes, Waterbury, Coun. Maohine for straighteuing and romnding shaftiog
La Forme, Francis, J., assignor through mesuo assignnents to Miln S. Burr, Boston, Mass. Nursing bottle.
(Reissue)
La France, P. A., assignor to self and O.B. Gray, Elmira, N. X. Wash powder Lagowitz, Jacob, Newark, N. J. Traveling bag

Date.

Apr. 23, 1868. Sept. 15, 1868.

May 5, 1863.
Sept. 15, 1863.
June 23, 1863.
Feb. 18, 1868.

Ang. 18, 1863.
3Tar. 31, 1868.
Apr. $28,1888$.
July 7, 8868.
May 12, 1868.
Supt. 1, 1868.
Nov. $14,1863$.
Sept. 15, 1868.
May 19, 1863.
Dec. 29, 1868.
Nov. 17, 1868.
Aug. 25, 1863.
Jaly $7,1868$.
Aug. 25, 1868.
Apr: 7, 1863.
Aug. 4, 1868.
Sept. 1, $18 t z$.
Nav. 3, 1883.

Apr. 14, 1868.
Nov. 3, 1863.
Apr. 14, 1868.
Sept. 1, 1863.
May $19,186 z$.
Sort. 8, 18G\%.
Dee. 15, 1863.
Dee. 29, 1868.
Aug. 25, 1868.
Sent. 1, 1368.
Oct. 20, 1868.
Dec. 1, 18́az.
Dee. 15, 1863.
Juno 2, 1863.
Apr. 21, 1868.
Aug. 18, 1868.
May 5, 186z.
Feb. 4, 1868.

Sept. 1,1868.
Ang. 25, 1868.
Dee. 1, 1863.
Oct. 13, 1862\%.
Apr. $28,1863$.
Apr. 21, 1:6z.
Oct. 6, 1863.
July 7, 1868.
Ang. 11, Betie.
Jume 30, 1 ع6远.
Oct. 2i, 1260
A1r. 14, 1863.
Jan. 14, 1863.
Dec. 1, 1863.
Lay 5, 1ec8.

Alphabetical list of patentecs for the year 1863-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 84, 364 |  |
| 84, 199 | La Halt, S. C., P. Listoman, and C. Hadley, Collinsville, Ill. Wagon-top bow. (Antedated Nov. 9, 1868) |
| 77,988 | Lailley, T. T. S., United States Army. Tompion for fire-arms. (Antedated May 1, 1868) |
| 2, 850 | Laird, Andrew J., deceased, by Mary Jane Laird, administratrix, Middletown, <br> Pa. Horse hay fork. <br> . (Reissne) |
| 74, 918 | Laird, Hugh, Mechanicsburg, Pa. Tuycro. |
| 78, 294 | San |
| 82, 176 | Laird, R. S., and W. F. Ston |
| 75, 929 | Laist, Otto, Cincinnati, Ohio. Manufacture of |
| 79, 235 | Lake, Ezra B., Bridreport, N. J. Ships' fen |
| 73, 730 | Lake, IKenry, San Francisco, Cal. Japan-paste |
| 79, 841 | Lake, Jegemy, et al. (See Reed, Lake \& Sisson.) |
|  | Lake..... Stove-pipe drum........ |
|  | Lalor, John B. (See Creamer, George N |
| SQ, 637 | Lalor, Thomas, assignor to John Dewi, George Harding, and Bartholomew Lalor, Toronto, Canadla. Indieator lock |
|  | Lalor, William, et cl... (See Kelly, Michael, assignor.) |
| 74, 919 | Lamb, Alford, assignor to self, William II. Morse, and Mary E. Layman, Jeffersonville, N. Y. Washing machine. |
| 3, 162 | Lamb, Alford, assignor to self, Mary E. Layman, and William H. Morse, Jeffersonvillo, N. X. Washing machine. <br> (Reissue) |
| 74, 920 | Lamb, James, Hubbardstowu, Mass. Rocking chair ............ |
| 77,626 | Lamb, James, Aurora, Ind. Shaft coupling..... Same..... (See Richmond, Peter, assignor.) |
| 72,346 | Lamb, James, Aurora, and Francis Livings, East Enterprise, Ind. Scaffold for buildings |
| 72,602 | Lamb, Jolm, Jeffersonville, N. Y. Washing machine. <br> Lamb Knitting Machine Manufacturing Company. (See Crandell, John, assignor.) <br> Same <br> ......................................................... same. |
| 75 | Lamb, Willi |
| -82, 129 | Lambert, Jean, assignor to self and C. Rumpff, Now York, N. Y Aniline dye... |
| 76, 207 | Lamibert, Richard C., assignor to David Whittemore, Raynham, Mass. Heel-cutting machine. |
| 80, 228 | Same...... Machine for trimming the edges of boots and shoes. <br> Lambrigot, Jaeques P., and Paul A. II. Chaurassaignes. (Sce Chauvassaignos \& Lambricot.) |
| 79,292 | Lanient, J. II. and D. A., Troy, Pa. Frnit picker |
| 75, 636 | Lamont, James, Pittsburg, Pa. Fence and trellis |
|  | La Mothe, B. J., New York, N. Y. Railroad ear .-.................(Exteusion).. |
| 79, 766 | Lamphere, Charles T, Greenficld, Mass. Eye proteetor or chip arrester for lathes |
| 74, 700 | Lamplugh, Isaac, Peoria, Ill. Pruching apparatus... |
| 83, 177 | Same...... Method of welding tires. (Antedater Oct. 3, 1808) Lampman, D. C. and B. H. Hobart. (See Hobart \& Lampman.) |
| 73, 982 | Lampson, Daniel, Lrons, Iova. Washing machine |
| 79,579 | Lamson, Henry P., Lowell, Mass. Sewing machine |
| 79, 912 | Lanagan, M. A., assignor to self, Jolm Dailer, Robert Russell, and Indrew ALercein, Brooklyn, N. Y. Machine for punching and shearing. |
| 74, 552 | Lancaster, Israel, Baltimore, Md. Harvester |
| 75, 773 | Same............................ . same. |
| 75. 774 |  |
| 80, 188 | Same...... Harrester |
| 84, 268 | Lander, J. C. and R. R., Mazo Ma |
| 77, 740 | Landis, Frank F., Lancastor, Pa. Padlock. (Antedated May 7, Laudis, Trank F, and Georre TV. Greer (Sec Grece \& Landis.) |
| 73,016 | Landis, Isracl L., Laneaster, Pa. Farm gate. |
|  | Landis, Israel L., et al. (See Arudt, Theophilus, assignor.) |
| 83, 715 | Landis, J. K., Pahnyra, Pa. Car coupling |
|  | Lane \& Bodley. (See Hedges \& Story, assignors.) |
| 79,359 | Lane, Azel, Addison, N. Y. Machine for dressing mill stones..................... |
| 78,974 | Lane, C. MI., assignor to self and Charles Gooch, Cincinnati, Ohio. Combination tool for measuring and marking |
| 2,872 | Lane, Dennis, Montpelier, Vt. Head block |
| 79, 484 | Same.................................. same |
| 80, 491 |  |
| 74,384 77055 | Lane, George, Now York, N. Y. Door hing |
| 76,633 | Lais, George, assignor to self and Benjamin W. Hieks, New York, N. Y. Ice ritcher |
| 73, 983 | Lane, Johm, Chicago, Inl. |
| 76, 208 |  |
| 80, 189 | Same..... - same. (Antedated March 31, 1868) ............. |
| $\begin{aligned} & 80,552 \\ & 82,130 \end{aligned}$ | Same...... Apparatus for welding together the lay and land |
| 76, 474 | Lane, John D., assignor to Horace Everett, New York, N. Y. M tin boxes |
| 73, 814 | Lane, Philander P., and Joseplh T. Bodley, Cincinnati, Ohio. Sawiz |
|  | Lane, P. P., et cub. (See Smith, Samnel R., assignor.) <br> Lane, WV. J, assiguor to sclf and J. G. Lane, Washington N. Y Coffe mill |
| 73, 347 | Lane, W. J., assiguor to sclf and J. G. Lane, Washington, N. Y. Coffee |

Date.

Nov. 24, 1868.
Nov. 17, 1868.
May 19, 1868.
Feb. 4, 1868.
Feb. 25, 1868.
May $26,1868$.
Oct. 20, 1868.
Mar. 24, 1868.
June 23, 1868.
Jan. 28, 1868.
July 14, 1868.
July 21, 1868.

Aug. 4, 1868.

Feb. 25, 1868.
Oct. 20, 1863.
Feb. 25, 1863.
May 5, 186z.

Jan. 14, 1868. July $7,186$.

Mar. 24, 1868. Sept. 15, 1868.

Mar. 31, 186 . Aug. 11, $184 \mathrm{i}^{2}$.

Tmue 30, 18iz.
17ar. 17, 186\%.
Apr: 3, $1=68$.
July 7, 1868.
Fel. 18, 1-63.
Oct. 20, 18゙G.
Feb. 4, 186?.
July 7, 1868.
July 14, 1868.
Felb. 18, 186
Mal: 24, 186.
Mar. 24, 1868. Inty 21, 180. Nov. 24, 1868. May 12, 1868.

Jan. 7, 1868.
Nov. 3, 186 s.
June 30, 1868.
June 16, 1868 Fob. 18, 1868. June 3n, 1858. July 23, 1863. Fell. 11, 1868. Apr. 21, 1868.

Apr. 14, 1808.
Fob. 4, 1863.
MLar. 31, 1868.
July 21, 1868.
Aug. 4, 1efr.
Sept. 15, 1868.
Apr. 7, 1868.
Jan. 28, 1863.
Jan. 14, 1868.

## Alphabotical list of patentees for the year 1868-Continued.

| No. |
| :---: |
| 82,533 |
| 77,820 |

80,638

83, 178
79,767
76, 085
75,280
84,952
73, 613
81, 652
82,534
84,556
78, 378
78, 102
84,561
82, 233
77, 741
81, 797
81, 513
77,386
81,653
73, 815
84, 834
3, 105
3,105
82,420
80, 866

83, 976
81, 913
75, 930

83,716
80, 190
75, 931

73,348

79, 987 83,977
2, 946
76,906
73,816
77, 150
77, 387
82, 421
83, 863
74, 701
83, 978
78, 597
76, 209
82, 010
2, 859

83,864

2,983

Lane, William S., Beaver Dam, N. Y. Sheep-shearing device
Laney, Enos S., assignor to self and Enos Laney, Waterloo, N. Y. Finger for shittle-stop rod in looms.
Lanfair, John Y., Queensbury, N. Y. Water wheel
Lang \& Lanster. (See Lauster, Petor, assignor.)
Lang, Charles B., et al. (See Hill, S. B.. assignor.)
Lang, Charles F., Venedy, Ill. Fruit gathercr.-................................ Washington, D. C. Screw-cutting latho.
Lang, William, Brooklyn, E. D., N. Y. Umbrella.
Langlon, Sylvester Larned, New Orleans, La. Locomotive engine. (Antedated Feb. 28, 1868)
Lange, Frederick, assignor to self and Egmond Lichtenberger, Chieago, $I l l$. Stroet lamp
Langeubach, Joseph, Dorchester, Iowa. Ox yoke
Langlam, John, jr., Philadelphia, Pa. Tool for slitting boards
Langlois, Victor, France. Steam generator
Langston, Thomas, Brooklyn, N. Y. Lantern
Langstou, Thomas, assignor to E. Miller \& Company Meriden Conn. Lantern
Langtry, George C., and Henry Weston. (See Westou \& Langtry.)
Lanuay, Louis F., Indianapolis, Ind. Machino for washing bristles, \&c.
annay, Louis F., and William F. Parks, Indiauapolis, Ind. Combined bristle washing and combing machine -
Lanning, M. F. White House, N. J. Whiffetree swivel
Lape, Goorge T., Summit, N. Y. Bridge. (Antedated April 28, 1868)
Same-.....Construction of arches, tunnels, \&c
Lapham, Abraham, Farmington, Mich. Fenco
Lapham, Andrew F., New York, and Frank E. Pratt, Mott Haven, N. X., assignors to Malcolm C. Turner. Clothes wringer-..................................... Lapham, Rufus, Boston, Mass. Apparatus for extinguishing fires. (Antedated Ang. 20, 1868)
Laplace, John F., Hamburg, Coun. Dearing for shafts
Laporta, R., New York, N. I. Horscshoe
Laraway, R. H., and A. Lafever. (See Lafever \& Laraway.)
Larkin, George G., West Amcsbury, Mass. Carriage-circlo coupling. . (Reissie). Same.......Carriago shackle.
Larkin, Samuel, assignor to tho Bridgoport Kuittiag Company, Bridgeport, Conn. Knitting machino.
Larkins, Darius C., and Georgc D. Greenleaf. (See Greenleaf \& Larkins.)
La Rof, I. T., Richmond, Ill. Machinc for bundling wool
Larsen, N. P., Chicago, Ill. Burglar alarm
La Ruc, R. M., Andursonville, Ind. Saddle and liarness.
La Rue, S. H., aud J. P. Scott. (See Scott \& La Rue.)
Lary, John T. (See Smyth, D. M., assignor.)
Lassoe, V. F., et al. (Sce Neumann, Lassoe \& MacCord.)
Latch, E. B., assignor to self and Edmund Lincoln, General Wayne, Pa. Steamcngine slide valro
Latcher, John W., Albany, N. X. Curry comb. (Antedated July 18, 1868)....
Jatham, Joseph A., New Haven, Conn. Garter..
Lathrop, Horaco A.' (See Hutchins, Seth 'T., assiguor.)
Lathrop, J. S., et al. (Sce Spence, Gideon O., assiguor.)
Samo...............................
Lathrop, Levi B., San Jose, Cal. Threshing machino and grain separator ....... Latta, A. B., deceased, by Finley Latta, administrator, Cincinnati, Ohio. Steam generator.
(Extension).
Latta, A. T., Camden, S. C. Animal and bird trap.
Latta, Jacob, and Lewis Snyder, Bethlehem Center, N. X. Sled brako
Lattin, John R., assignor to E. Wooster \& Company and F. Hull \& Companf, Birminglam, Coun. Skirt hoop ........
Laub, Petcr C., assignor to self and Samuel Shaffer, Allentown, Pa. Churn.... Laubach, William H., Philatelphia, Pa. Gas engino .

Same...... A pparatns for carbonizing gas
Samo....... Valvo for gas engines.
Same....... Fire extinguisher

Lanbach, W. H., assiguor to self and Georgo H. Mcllen, Philadolphia, Pa. Machine for grinding cuttcrs of mowing machines
Lanbercau, Joseple, assignor to Joseph do susini, France. Toy watch
Laufenburge, Michacl, Two Rocks, Cal. Shoe for separators.
Laughlin, John, Gettysburg, Pa. Straw entter
Lanster, Peter, assignor to Lang \& Lanster, Allegheny City, Pa. Jug top.
Lautenschlager, Gustave,Cincinnati, Ohio, and George L. Gott, New York, N. X. Tobacco pipe
Lauterback, H. C. (See WVenzel, Philipp, assignor.)
Laux, Jacob, Cleveland, Ohio. Sleigh rumner
Lavater, M. L. J. (See De St. Victor, A. C. F. N., assiguor.)
Lavender, Benjamin A., Halifax, N. C., and Henry Lowe, deceasen, Baltimore, Md., by Kate Lowc, administratrix. Wreating canc fiber for paper and other purposes
(Extension) .
Lavender, Benjamin A., Halifax, N. C., and Hemry Lowe, Baltinore, Itio, assignors through mesne assignments to Sidhey C. Long, T. Schamachor, and Jackson Warner. Obtaining eane fiber from cano
(Reissue).

Datc.

Scpt. 29, 1868.
May 12, 1868.
Aug. 4, 1868.

Oct. 20, 1868.
July 7, 1863.
Mal: 31, 1868.
Mar. 10, 1868.
Dec. 15, 1868
Jan. 21, 1868
Scyt. 1, 1868.
Sept. 20, 1868.
Dec. 1, 1858
May 26, 1868.
May 19, 1868.
Dec. 1, 1868.
Sept. 15, 1863.
May 12, 1863
Sept. 1, 1868
Aug. 25, 186.
Apr. 28, 1863.
Sept. 1, 1868.
Jau. 28, 1868.
Dec. 8, 1868.
Sept. 1, 1868.
Sept. 22, 1868.
Aug. 11, 1868.
Nor. 10, 1868.
Sept. 8, 1868.
Mar. 24, 1868.

Nov. 3, 1868.
July 21, 1883.
Mar. 24, 1868.

Jan. 14, 1363.
June 3, 1368.
July 14, 1863.
Nov. 10, 1863.
May $26,1838$.
Mar. 31, 1863.
Jan. 28, 1868.
Apr. 21, 1395. Арг. 28, 1863. Sept. 22, 1863. Nov. 10, 1868.

Tel. 18, 1868. Nov. 10, 1868. June 2, 1868. Mar. 31, 1868. Sept. 8, 1363.

Feb. 11, 1868.
Nov. 10, 1868.
$\Delta$ pr. $3,1868$.
June 9, 1868.

Alphabetical list of patentecs for the year 1858-Continued.

No.

77, 821
74, 385
83, 513
73, 817
74, 921
85, 013
76, 782
85, 104

79, 988
83, 979
83, 179
89, 851
76, 639
75, 685
75, 281
75, 775
77. 627

74, 231
85, 105
74, 099
82, 724

79, 989
75, 432
82, 131

84, 885
84, 886
79, 580

73, 818
80, 748
81, 514
76,086
77, 742
79, 360
85,106
85, 014
82, 422
77, 498
81, 180
84, 287
80, 289
78, 975

82, 135
83,514
79, 134
79, 361
84, 835
73, 614
79, 664
73, 984
2, 851
85, 107
83, 180

81, 181

Name, residence, and invention or discovory.

Lavere, Gilbert, Bridgeport, Conn. Lamp burner
Lavey, J. E., and W. A. Long. (See Long \& Laver.
Lavis, Charles H., assiguor to Philip Farley, Philadelphia, Pa. Tube-hole eutter.
Law, Hervey, Chathain, N.J. Machine for eutting paper
Lat, William, Englaud. Hook and eye...
Lawbaugh, G. W., Geneseo, Ill. Haruess-pad press Same.

## same

Lawder, S. O., et al. (See Bowdio, Lawder \& Johnston.)
Lawler, P. II., Rochester, N. Y. Shingle machine
Lawler, P. M., and W. I. Gibson, assigu ors to selves, G. Shelton, and Quineey Van Voorlis, Rochester, N. Y. Gas maeline
Lawreuce, Bradley \& Pardee. (See Cooper \& Gremory, assignors.)
Lawrence, Charles H., assignor to self and N. P. Tyler, New York, N. Y. Printers' galley.
Lawrence, E. B., and C. Quick, Lakerille, Ohio. Corn planter
Lawrenee, Edwin S., Worcester, Mass. Manufaeture of eard clothing
Lawreuee, J. R., and I. G. Johnson, Cutler, Mainc. Boring faneet.
Lawrence, Nathan, assignor to Reed \& Barton, Tamen, Mass. Butter dish
Lawrenee, T. A., and J. I. Murfey, New Jork, N. Y. Combined sweat-band fastencr and size mark for hats.
Laws, A. D., Bridgeport, Conu. Lamp-wiek tubo
Laws, Samuel S., New York, N. Y. Sigualing apparatis
Lawshe, Peter F., Rochester, Minu. Self-sealing burial caso
Lawson, James S., Diseo, Mich. Hanil corn plauter
Lawson, Joah, Allegheny City, Pa. Steam-engine slide ralro.
Lawson, Peter B., and James A. Ball. (See Ball \& Lawson.)
Lawton, Williant A., New York, N. Y. Gas torch
Lay, John L., Bufialo, N. Y. Toy hoop
Laynan, Mary E., et al. (See Lamb, Alford, assignor.) Same. same
Lazear, H. Y., Now York, N. X. Gas heater $\qquad$
Lazell, A. E., West Meriden, Coun. Hygrometer
 Philadelphia, Pa. Centering device
Leach, Alliert. (S'e Jewett, David, assignor.)
Leach, J. D., and Sabin Hutchings, Penobscot, Mainc. Fishing tackle
Same...... Rerolving pile hook
Leach, J. D., Penobseot, Maine, and E. S. Wardwell, Bueksport, Pa. Cloak and eoat suspeuder
Leach, Lewis, and Archibald Riee. (See Riee \& Leael.)
Leaeh, Richard, Linwood Station, Pa. Picker for looms
Leach, Thomas, assignor to Reed \& Barton, Taunton. Mass. Iee piteher.
Leach, William aud Joseph, New Harmony, Ind. Winding frame for earding engines
Leach, Willian H., assignor to self and Samuel I. Pressey, Dorehester, Mass. Scissors sharnener
Leaeh, William II., assignor to self aud Bradford Stetson, Uxbridge, Mass. Tool post for lathe or planing maehine.
Leaeh, William II., assignor to Bradford Stotson, Uxbridgo, Mass. Moling leather.
-........
Leachman, William Bradshaw, England. Rotary steam engine
Leaman, Johı H., and Tlomas Hancock. (See Haneock \& Leaman.)
Leary, Lemuel W., Norfolk, Va. Portablo and stationary lantern
Leas, Johu L., assignor to self and Andrew B. Lerew, York Sulphur Springs, Pa. Corn planter.
Leather, Samuel, England. Loom for weaving garments.
Leatherman, Joseph, Napolcon, Ohio. Flood gate
Leavitt, C., and W. H. Burridge, Cleveland, Ohio. Cotton gin
Leavitt, David S., Grand Rapids, Mrich. Table, beuch, \&e. .
Leavitt, Moses, and Azariah Fioster, Ottawa, Il. Washing aud wringile nab. chine
Learitt, Samuol D., et al. (Sec Baker, Loring J., assignor.)
Leavitt, William D., aud Heary Shaw. (See Shaw \& Learitt.) Same.
(Reissue.)
Leber, Henry, Stafford County, Va. Churn-.
Leckrone, Benjamin, Somerset, Ohio. Bechive.
Leeky, R. H., Allegheny City, Pa. Lathe dog. (Antedated June 6, 1868)
Same......-Pipe wreneh. (Antedated June 13, 1868)
Leelcre, Franeois, Boston, Mass. Apparatus for making paper boxes
Leeocq, Jules, New York, N. Y. Truss and abdominal supporter
Leeoeq, Louis J., Franee. Car coupling .
Leeompte, Samucl D., Leavenworth County, Kansas. Car eoupling
Lecompte, S. D., assignor to E. H. Bourne, E. Damon, jr., and H. M. Knowles,
Cleveland, Ohio. Instrument for opening sealed and other eans... (Reissue).
Le Count, C. TV., Norwalk, Conn. Drill
Ledlie, Villiam, and George L. Gray, Jefferson, Hil. Hand seed drill...............
Ledyard, Thomas D. (See Ensley, J. J., assignor.)
Ledyard, T. S., et al. (See Todd, Asahel, jr., assignor.)
Same............................ same.
Lee, A. V., Clayton, Ala. Medicine for fever and ague.

Date

May 12, 1868.

Feb. 11, 1 ffis.
Oet. 27, 1863.
Jau. 22, 1263.
Fel. 25, 1863.
Dee. $15,1268$.
$\Delta$ pr. 14, 1868.
Dee. 고, $1 \varepsilon 68$.
July 14, 186z.
Nov. $10,1868$.
Oct, 20, 1863.
Oct. 6,1ч63.
Apr. 14, 1868.
Mar. 17, 1868.
Mar. 10, 1868.
Tar. 21, 1868.
May $5,1868$.
Feb. 11, 1868.
Dec. 22, 1863.
Fel. 4, 1868.
Oct. 6, 1868.

July $14,1808$.
Mar. 10, 18063.
Sept. 15, 1868.
Dee. 15, 1868.
Dec. $15,1868$.
July 7, 1868.
Jan. 20, $1 \stackrel{\circ}{68}$.
Aug. 4, 1893.
Ang. 25, 1868.
Mar. 31, 1868.
May 12, 1363.
June 3), 1868.
Dec. 22, 1868.
Dec. 15, 1863.
Sept. 22, 1SGz.
May 5, 1868.
Aus. 18, 1868.
Nov. 24, 1863.
July i2, 1868.
June 16, 1863.

Spot. 15, 1868.
Oct. 27, 1863
June $23,1868$.
June 30, 1868.
Dec. 8, 18 Giz .
Jann. 21, 1868
Tuly z, 1868
Fitb. 4, 1868.
Fel. 4, 1868.
Dec. 22, 1668
Oct. 27, 1868.

Alphavetical list of patentees for the year 1868-Continued.

Nา.

76,475
79, 236

2,863
2,864
77, 663
78,528
73, 103
3, 146
78,593
83, 642
84, 064
80, 290
79, 075
75, 171
74, 762
85, 108
79, 076
83,643

75,932
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3, 168
3, 169
3, 170
3, 171
78, 879
74,702
77, 296
85, 231
2,912
78, 103
81, 280
77, 499
80, 413

3, 077
74, 232
82, 132
78,976
78, 295
81, 383
76, 087
78, 104
80, 414

85,315
2,970
83, 644
78, 296

77,822

8:, 133
84, 200
83, 645

Name, rosidoneo, and invention or diseovery

Lee, Charles, Sandy, Ohio. Fence
Lue, Charles L., Titelıville, Ohio. Combined cultivator and planter Leo, Daniel. (See Choato, Tra, assignor.)
Lee, George G., and William II. Bond. (Nee Bond \& Lee.)
Leo, Goorgo W., assignor to Adarn R. Roeso, Phillipsburg, N. J. Seed planter
Leo, George W., and Adam R. Roeso, assignors to Adam I. Roeso, Phillipsburg, N. J. S'eeding maehine.
(Reissue).
Loo, H. A., Wor'eoster, Mass. Molding maehine
Lee, James, New York, N. Y. Lamp-ehimney eleaner. (Antedated May 22, 1868)

Reissue)
Lee, Joel, Galeshurg, Ill. Washing maehine
Same...... Hydro-carbon burner
Leo, John, Massillon, Ohio. Gate. (Anterlatod May 27, 1868)
Loo, John A., Chattanooga, Tenn. Animal trap
Lee, Ralph R., and Georgo H. Wren, assignors to solves and John C. Northall, Mahanoy City, Pa. Valve for steam engines.
Leo, Samuel M., New London, Iowa. Car brako
Leo, W., and Jolm Elliott. (Sce Elliott \& Lee.)
Lee, William A., and Charles M. Hardenbergh, Minneapolis, Minn. Hot-air furnaco..
Leeeh, Hary K, Harrisburg, Pa. Pailroad switeh
Leceh, W. W., Pittsburg, Pa. Animal trap.
Leek, Philander, Щartford, Conn. Door for earriages, \&e. (Antedated Dee. 11, 1868)

Lsermo, E. O. Gold Mill, Nev. Safety-guard for mining shafts
Lees, David, Blair County, Pa. Manufacturo of oxide of zine from sulphureted ores.
Loes, John, and William Hayward. (See Hayward \& Lees.)
Leoto, N. F., Middletown, Ohio. Lamp shado.
Le Ferre, John, Charlestown, Mass. Method of forming earriage axles.
Leffel, James, deceased, by James S. Good and Joln W. Bookwalter, exeentors Springfield, Ohio. Water wheel.........(Division A, of reissue of No. 1, 791) Same..................same..............(Division B, of reissue of No. 1, 791). Samo.......Case for water wheels...... (Division A, of reissue of No. 1, 792). Same...... Gate for water wheels..... (Division B, of reissue of No. 1, 792 ) . Leffel, Thomas, assignor to self and Henry C. Barnett, Springfield, Ohio. Water whoel
Lefferson, James B., Now York, N. Y. Bung
Lefferts, Marshall. (See Allen, J. Lathrop, assignor.)
Leffingwell, Elisha, Sempronius, N. Y. Maehino for trimming teazles. (Antedated April 16, 1868)
Loffler, Joha, Roehester, N. X. Building block and artificial stono
Loforgeo, J. A., and H. P. Stafford. (See Stafford \& Leforceo.)
Legé, Charles L., San Antonio, Texas. Medical preparation.......... (Reissue)
Logg, Isaac IV., Long Eddy, N. Y. Deviee for pulliag hop poles.
Legg, J. I., Long Eddy, N. Y. Curtaiu fixture.
e............
.........
Legr, J. J., and I. W., Long Eddy, N. Y. Curtain fixture.
Logg, Samuel P., Springfich, Mass. Hydro-carbon burner.
Loggett, Samuel. (See Wright, Edward S., assignor.)
Loggetto, Georgo. (See Dennis, Paul, assignor.)
Lorrandaine, A., Franee. Bottle
(Design)
Lehman, Jossph' S., Mt. Joy, Pa. Bag-holding apparatus. Same...... Bag-holding deviee and truek
Lohman, J. S., and Henry S. Brooks. (Sce Brooks \& Lebman.)
Lohman, Loander, Harrisburg, Pa. Bottle loek.
Lehman, Louis S., and Robert A. Lueas. (See Lucas \& Lehman.)
Lohman, William, Newville Pa. Composition to be applied to leather
Lohmann, John, Crown Point, Ind. Bridge guard or barrier.
Lehmanu, Julius, Bloomington, Tll. Compound for welding and refining irnn and steel
Lehmann, Leopold, Monce, IIl. Tin ware
Lohnbenter, Joseph, ct al. (See Wiogel, Lehnbonter \& Fegers.)
Lohnert, Carl, assignor to Joseph M. Weilhart, Boston, Mass. Opening and elosing slutters.
Lehr, Fordinand A. (See Okoy, Joseph, assignor.)
Leib, John, Akron, Olio. Washing maeline.
Leibby, Andrew. (See Obricter, Jolnu, assimmor.)
Leibrandt, Frederick, and W.L. MeDowell, Philadelphia, Pa. Stove . . (Design) . Leich, August. (See Stilson, Lyman B., assignor.)
Leideekor, M., and P. Cron, Rochester, N. Y. Barber and dental chair
Leigh, Edwin, St. Louis, Mo. System of pronouncing orthography. (Anterlated May 19, 1868)
Leigh, Gideon, and William C. Ray. (See Ray \& Leigh.)
Leigh, Thomas Joseph, England. Furnaee for buruing fuel for heating metals, and for other purposes
Leighton, George A., Lawrence, Mass. Sewing machine.............................................
Leighton, Georgo W., and C. O. Cole, Portland, Maine. Out-haul for boows. .
Leighton, Joseph J., Boston, Mass. Box.
Leighton, Rovert F., and Solomon Severy, Melrose, Mass. Writing slate

Date.

Apr. 7, 1868.
Jume 23, 1868.

Feb. 11, 1868.
Feb. 11, 1868.
July 7, 1868.
Juno 2, 1868
Jan. 7, 1868.
Oet. 6, 1868
Junio 2, 1868.
Nut. 3, 1868.
Nov. 17, 1868.
July 28, 1868.
June 23, 1868.
Mar. 3, 1868.
Feb. 25, 1868.
Dee. 22, 1868.
June 23, 1868.
Nov. 3, 1868.
Mar. 24, 1868
May 20, 1868.
Oet. 27, 1868
Oct. 27, 186s.
Oct. 27, 1868
Oet. 27, 1868.
Truno 16, 1868
Feb. 18, 1868.
Apr. 28, 1868.
Dee. 21, 1868 .
Apr. 7, 1868.
May 19, 1863.
Aug. 18, 1868.
May 5, 1868.
July $28,1868$.

June 30, 1868
Feb. 11, 1868.
Sept. 15, 1868.
June 16, 1868.
May 26, 1868.
Aug. 25, 1868.
Mar. 31, 1863.
May $19,1863$.
July 28, 1868
Dee. 29, 1863.
Mar. 31, 1868.
Nov. 3, 1868.
May $26,1868$.

Mar 12, 1868.
July $2,1868$.
Sept. 15, 1868.
Not. 17, 1868.
Nov. 3, 1868.

Alphabetical list of patentees for the year 1868-Continned.

| Ň. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 75, 433 | Leighton, William, W |
|  | Leisen, Charles E. (Sce Conday, Paul, assignor.) |
| \&5, 109 | Leland, Windsor, and Volney E. Rusco, Ćficago, Ill. Device for suspending slanchtered animals. |
| 75, 554 | Lemaistre, H., Belgium. Belting |
| \% 6 , 800 | Lemman, John, assimnor to J. A. Fay de Co. Cincinnati, Ohio. |
| 80.829 | Lemon, M., and J. E. Williams. (Sce Willian |
|  | Lemmor, Patrick, Lymu, Mass, Machme for beanming hides |
| 10, 880 | Lemox, Patick, Huram If. Kobbins, and ¿dvard Hayes, Lyn for beaming hides. |
| 74, 703 | Lent, C., Washington, D. C. Hay and cotton press |
| 81,515 | Leonard, Andren M., and Belmont Perlins, Anm Arbor, Mieh. Chalk holder for billiard tables |
|  | Leonard, Benjanin S. (See Perkins, Howard, assignor.) |
| 78,97\% | Leonard, Franklin, Cleveland, Ohio. Die for forging ere bo |
| T8, 970 | Leonard, Ifenry W., and Heury 1. Phillips. (Sce Phillips \& Leonard.) |
| 80, 356 | Leonard, J. C., and J. J. Gobar, Clinton, Mo. |
| 74,553 | Leonard, Martin and Stephen C., Obertin, Ohio. Animal tether |
| 79, 990 | Leonard, Mhilip, Sharon, Pa. Machine for dressing gxindstones, |
| ¢0, 415 | Lepp, Mitchell, Albany, N. I. Card rack |
|  | Lerew, Andrew B. (Sce Leas, Joln L., assiguor:) |
| 82, 852 | Leroy, Charles, Mexico, N. I. Apparatus for attac |
|  | Lesher, H. S., Galesburg, Ill. Animal trap |
| 80, 355 | Leslie, J. Fo, and Edwin A. Tibbets, Wobum, Mass. Nor |
| 77, 884 | Leslie, Willian O., Philadelphia, Pa. lbrick mathine |
| 77, 895 | Same.... . Mavchine for dressing sto |
| 79, 362 | Same...... Brick machin |
| 80, 977 | Same.......Brick p |
| 81, 094 | Same...... Apluaratus for drying hricks |
| 81, 516 | Lester, James S., and Perrin II. Cardwell, Knorville |
|  | Lester, Johnson, et al. (See MeDonald, Thomas Ei, assiguor:) |
| S1, 095 | Letehworth, William P., Buftalo, N. Y. Machine for bending |
| 82, 234 | Letherbury, John W. L., Sandoval, In. Tree box |
|  | Letson, Johnson, et al. (See Stella, David D., assi |
| 80, 291 | Letzkns, John, assignor to self and Richard Brown, Allegheny City, P'a. Teeth for gear wheels |
|  | Levan, William and Isaac W. (See Kefter, Peter, assignor.) |
| 74, 554 | Levee, Elias. Trest Point, Lowa. Sulky plow. |
|  | Lerer, Janas S., assignor to Ross C. Browning, Philadelphia, Pa. Bo |
| 80, 719 | Levering, W. W., New York, N. Y. Writing and dravii |
| 78, 381 | Leverts, Alexander, Bridgeport, Conn. Luming cornice |
| 74, 704 | Lerette, Gibert M, Indianapolis, Ind. Combined elock and : |
|  | Levin, Xathaniel, et ul. (See Cuthbert, Thomas L., assignor.) |
|  | Levis, Samuel G., Kellyrille, Pa. Making thick |
| 82, 134 | Lery, John J., New Iork, N. Y. Playing |
| 84, 126 | Lewander, Charles, Bostou, Dass. Caster |
| 75, 933 | Lewin, George W. Woreester, Mass. Lath |
| 79, 581 | Lewis, Alphens, Virginia, Alontana Territory. Ona |
| 76, 640 | Lewis, A. If., North Creenbush, N. Y. Derice for fettering l |
| 85, 456 | Lewis, Benjamin B., Bristol, Conn. Calendar clock |
|  | Lewis, C. C., et ctl. (See Harrison, Job, assignor.) |
|  | Lewis, Charles E. F., and John Allen. (See Allen \& Lewis.) |
| 74,835 | Lewis, Ebenezer E., Geneva, N. Y. Harvester |
| 74, 100 | Lewis, Mlward C., Anburn, N . Y . Seat elasp or |
| 73, 985 | Lewis, George, Westfield, Ohio. Weod-turning la |
|  | Lewis, Crouge F . (Sce Seawell, C. H., assignor.) |
| 77, 890 | Lewis, Gcorge F., I'hiladelplia, Pa., and F. D. Stuart, Wa Cyliudrical-plate printing uachinery |
| 84, 01 | Lewis, G. W., Dansrille, N. Y. Bolt trimmer |
| 79,363 | Lewis, Homer, Bemington, Vt. Spirit lexel |
| 76, 641 | Lewis, Jerry, Albion, N. Y. Store polish or blaeking |
| 82, 330 | Lewis, Jesse B., Lineoln, Ohio. Skimmer for sorghum |
| 81, 799 | Lewis, J. D., and J. T. Udall, Concord, In. Sulky plow |
| 85, 316 | Lewis, John, New York, N. Y. Shingle |
| 85, 457 | Lewis, Lewis W., Sharpsburg, Pa. Metal sque |
| 78, 460 | Lowis, Mosec, Odell, Ill. Harvester cutter |
| 80, 978 | Lewis, Nelson, Troy, N. Y. Spider................................. |
| 3,115 | Lowis, I. W., assignor to S. B. Rowley, Philadelphia, Pa. Sealing preservo cans. $\qquad$ (Rcissue) |
| 75, 028 | Lewis, Saunul, Brooklyn, N. Y. Snow cle |
| 75, 020 | Same....-Ice-planin! |
| 79,913 | Lewis, Samuel, assicrnor to William II. Cammeyer, Brooklyn, N. Y. Snow plowr. (Antedated July 6, 1868) |
| 80, 492 | Same . . . . Portablo and adjustable still-water dam................ |
| 83, 181 | Lewis, Stephen R., Fockford, Iil. Turuing lathe ................ |
|  | Lewis, Theodore G.. and Goorgo B. Snow. (See Snow \& Lowis.) |
| 73, 104 | Lewis, William M., New Yorls. N. Y. ${ }^{\text {I }}$ |
| 76, 210 | Lewis, William J., Pittsburg, Pa. Dio for heading |

Date.

Mar. 10, 1868.

Dec. 22, 1868
Mar. 17, 1868
Jiun 16, 1868.
Aug. 11, 1868.
May $26,1868$.
Felb. 18, 1868.
Aug. 25, 1868.
Juno 16, 1868.
Juno 16, 1868 July 28, 1868 Feb. 18, 186. July 14, 1863. July 28, 1868.

Oct. 6, 1868.
Sent. 1, 1868. July 28, 1868. May 1: 1868. May 12, 1868. Juno 30, 1868. Aus. 11, 1868. Aug. 18, 1868. Aug. 25, 1868.

Aug. 18, 1868.
Sept. 15, 1868.

July 28, 1868.
Fel. 18, 1868.
Nov. 10, 1868.
Aug. 4, 1868.
May $26,1838$.
Feb. 18, 1868.
งเม. 31, 1868.
Sopt. 15, $1806^{\circ}$.
Nov. 17, 1868.
Mar. 24, 1868.
July 7, 1868.
Apr. 14, 1568.
Dec. $20,1868$.

Feb. 25,1868.
Fob. 4, 1868.
Feb. 4, 1868.

May 12, 1868.
Dee. 8, 1868.
June 30, 1868.
Apr. 14, 1868.
Sopt. 22, 186.
Sept. 1, 1868.
Dec. 20, 1868.
Dec. 2?, 1868.
Jumo こ, 1898.
Aug. 11, 1868.
Sept. 6, 1868
Mar. 3, 1868.
Mar. 3, 1868.
July 14, 1868.
Tuly 23, 1868.
Oct. عu, 1868.
Sept. 1, 1868.
Tau. 7, 1308.
3Tar. 31,1868.

Alphabeticill list of patentees for the year 1868-Continued.

| No. | Name, residence, nud invention or discovery. | Dat |
| :---: | :---: | :---: |
| 79, 237 | Lewis, William"J,, and Henry W. Oliver, jr., Pittsburg, Pa. Manufacturing bolster plates. | Juno 23, 18C8 |
| 82, 725 |  | Oct. 6, 1868. |
|  | Lewis, W. K., et al. (See Cartwright, Joscplh, assigno Lewis, W. M. (See Reiber \& Schrader, assignors.) |  |
|  | Lewry, B. M., and A. Stresscr. (See Stresser \& Lew | May 12, 1868. |
| 77, 897 | Leyburn, E. J., Lexington, Va. H Samo.... Wrench .............. | Oct. 13, 1868. |
|  | Libbey, H. W., Cleveland, Ohio. Modo of suspendi |  |
| 75,030 | Same | Mar. 3 , |
| - 75,031 | Same...... same | Mar: ${ }^{\text {a }}$, |
| 78, 881 | Same | June 16, 186 |
| 76,211 | Libly, Asa S., and Lyunan R. 1 Blako. (See Blako | Mar. 31, 1863. |
|  | Libby, John C., Biddeford, Mainc. |  |
|  | Lichtenbergcr, Egmond (See Lanve, | July 17, 1868. |
| $\begin{aligned} & 75,435 \\ & 74,836 \end{aligned}$ | Liddell, Noycs and Mor | Mar. 10, 1868. |
|  | Lidren, Christopher, assiguor to ter rake..... | 8. |
| $\begin{aligned} & 8,533 \\ & 8,5,55 \\ & 85,015 \end{aligned}$ | Samo...... Harvester | Scb. 18, 1868 |
|  | Lich, John A., and E. W. Crane, Newark, N.J. Safety attachment <br> Licber, Karl, assignor to E. J. Keferstein, Prussia. Modo of preparing carbonated and caustic alkalics, \&c. | Dec. $15,1868$. |
| 76, 928 | Lic bhaber, Joscph, Bava | Apr. $21,1868$. May 1, 1868. |
| $\begin{aligned} & 78,589 \\ & 84,857 \\ & 83,182 \\ & 7,172 \end{aligned}$ | Liebrich, Conrad, Philadelphia, Pa. Trunir-lock has | Juio 2 |
|  | Lighter, S. K., and Josoph Curtis. Mamilton, Olio. (Anted | Dec. 15,1868 |
|  | Lightfoot, Johu, Eugland. Printing certain texilo fabrics and yarns......... |  |
|  |  | 8. |
| $\begin{aligned} & 77,388 \\ & 7,105 \\ & 70,177 \end{aligned}$ | Lighthall, Jomm and Reub | $\begin{aligned} & \text { Apr. 28, } 1868 . \\ & \text { Jan. } 7,18.68 . \end{aligned}$ |
|  |  |  |
|  |  | Mar. 3, 1868 <br> Apr. 21, 1868. |
| 76,929 | - Condousor |  |
| \%, 0 | Ligon, E. T., Demopolis, Ala. Formatiou of joints of stecl or iron plates. (An- | Mar. 31, 1868. |
| $\begin{aligned} & 83,717 \\ & 7,55 \\ & 78,214 \end{aligned}$ | Same......Rail | Nov. 3, 1868 |
|  | Lilley, William, Wasl | May 26,1868 |
|  | Lincoln, David C., North |  |
|  | Lincoln, Willian, et al. |  |
|  | Lincoln, William, and Rufus S. Merrill. (See Liscom, Lev |  |
| $\begin{aligned} & 83,070 \\ & 8,14 \\ & 8,747 \\ & 79,991 \end{aligned}$ |  |  |
|  | Iindley, Thomas H., Taunton, Mass. M |  |
|  | Linnley, Thomas J., Modora, Ind. |  |
|  | Lindley, William, et al. (See Ritz, A |  |
| $\begin{aligned} & 78,382 \\ & 84,558 \end{aligned}$ | Lindon, William, New Haven, Con Same............................... | Dee. 1, 1868 |
|  | Lindsey, Gcorgo B. (See Long, H. E., assig |  |
|  | Lindsley, Edward, Cloveland, Ohio. Pant |  |
| -80, 639 | Lindsley, E | Sopt. 8,1888 |
| 84, 857 | Same . . . . Fanning | Doc. 1, |
| -76, 78.476 | Lindsley, İaac, Pawtuclict, R. I. Hair cl | Apr. 7, |
|  | Samo..... Woveu fabric for floor matt | Apr. 14, |
| $\begin{gathered} 78,980 \\ 75,556 \end{gathered}$ | Lindsler, J. E., Goshen, Ind. Weather strip | June 16 |
|  | Lincss, Joseph, Chicago, Ill. Window sash. ( | Mar. 17, 1868. |
|  |  |  |
|  | Ling, Joseph, U. S. Army. Apparatus for cooling liquids o | Dec. 15, 1868. |
| 8,87181,517 | Linuemamn, Johan, Dchmark. Sp |  |
|  | Lins, Clarlcs E., Ashland, Pa. Ho |  |
| 76, ${ }^{8170}$ | Linscott, C. | Apr. 21, 1868. |
|  | Linton, John R2. (See |  |
|  | Linton, Iohn R. and O.E. (See Parsons, |  |
| $\begin{aligned} & : 81,182 \\ & 81,183 \\ & 8181,384 \\ & : 81,288 \end{aligned}$ | Linton, Wm. J., Detroik, Mich. Tool hold | $\text { Aug. 18, } 1868 .$ |
|  | Same.......- Dovice for locking lo | Aug. 25, 1 |
|  | L.mville, T. H., Philadelphia, Pa. Bridg | Nov. 24, 1 |
|  |  | June 30,1868 July 23,1868 |
| 80, 292 | Lippiatt, Thomas, Now York, N. Y. Roso-ngino lathe. (Antedated July 11, |  |
| 85, 110 |  | July 28,1868 Dec 20 |
|  | Lippincott, Joln, and Janos Bakewcll. (See Colburn, Daniel W., assignor. |  |
| 77, 283 | :Lippincott,-IVilliam H.; Pittsburg, Pa. Vulcanite billiard bal | May 12, |

# Alphabetical list of patentees for the year 1868-Continued. 

| No. | Name, residence, and invontion or discovery. |
| :---: | :---: |
| 3 147 | Lippineott, Willizm J., assignor to John Lippincott, Thomas, Benjanin P. and B. Bakowell, jr., Pittsburg, Pa. Machino for grinding and polishing saws. <br> Lippitt, A. C. (See Harrington, Jackson, assignor.) <br> Same........................... same. |
| 80, 191 | Lipps, John P., assiguor to solf and Heury Guyer, Nowark, N. J. Car replacer or tuide rail |
| 85, 458 | Lipps, Johu S., Now York, N. Y. Manufacture of illuminating gas .............. Liscom, Levi, et al. (Soe Morrill, Rufus S., assignor.) |
| 76,212 | Liscom, Leri, assignor to self, Rufus S. Merrill and William Lincolu, Boston, Mass. Bridge |
| 28,297 | Lisk, Aloxander, Philadelphia, and Adam Woolever, Allentova, Pa. Converting cast iron into wrought irou and stoel <br> Listeman, P., et al. (See La Halt, Listeman \& Hadloy.) |
| 79,238 | Lister, I. Stono, Philadelphia, Pa. Axlo box |
| 3, 070 | Little, Andrew, Now lork, N. Y. Printers' typo ..................... ( ( Desion) .. |
| 3,273 80,293 | Samo..................................................................................... |
| 80,293 |  |
| 76,332 | Little, Isaac IV., Nowbury, Mass. Ox yoke |
| 83, 646 | Little, John L., Atkinson, N. H. Stove-pipe tl |
| 84,493 | Littlo, J. R., West Roxbury, Mass. Stay for shirt bo Little John W (See TVilson, Georme W. assicnor.) |
|  | Little, Robert B., and Ifenry C. Clark. (See Clark \& Littlo.) |
| 76, 477 | Little, Thomas D., Salisbury, N. H. Attachnent for heads of |
| 80, 077 | Littlefield, Clement, Kemnobunk, Mraine. Instrument for measuring |
| 2,881 | Littlefield, Dennis G., Albany, N. Y. Baso-burning |
| 77, 056 | Same .....Coal store -................................ |
| 78, 981 | Yittlefield, Joseph H., Cambridge, Mass. Com |
| 74, 101 | Livermore, R. F., Starksboro, Vt. Sap spout |
| 74, 239 | Livermore, 'L'. S., Leicester, Hass. Balt coupling Liviners Francis, and James Lamb) (See Lamb \& Livings.) |
| 76, 931 | Liviugston, Frank, Marathon, |
| 73, 731 | Livingston, Stephen M., Clarerack, N. Y. Lay raker and loader. (Antedated Jail. 17, 1868) |
| 73, 537 | Livingstone, William, Now York, N. Y. Water |
|  | Lloyd, David J., et al. (See Gates, Lloyd \& Miller.) |
| 80, 192 | Iloyd, Ifeury C., Cincimati |
|  | Lloyd, Isaac, et al. (See Patton, Wm. P., assignor.) |
| 74, 386 | Lloyd, Samuel, Washington, D. C. Heating and verit |
| 77, 8- | Lobb, Johm A., Independence, Mo. C |
| 84, 499 | Lobdell, Calvin, Fort Mill, Ill. Cultivator an |
| 73, 842 | Lobdell, George G., Wilmington, Del. Cast-iron ca |
| 75, 28.2 | Lobdell, James F., Conter Lisle, A. X. Horso hay fork ............................ |
| 82, 963 | Locher, Courarl, Oroville, Cal. Agricultural locomotivo Lochner Martin. (Sce Bender \& Teller, assiguors.) |
| 82, 331 | Lockard, Samuel, Lagrange, Ind. Piston-rod packing |
| 82, 536 | Locke, Charles S., assignor to John Hall, Ronsselaor Tuto, and Samuel A. Brackett, Watertown, Mass. Toy gun. (Antedated Sept. 17, 1868) |
| 75, 934 | Locke, Edward A.. Boston, Mass. Cask label |
| 73, 538 | Locke, E. A., and W. N. Weodeu, Baston, Mass. |
| 81, 915 | Samo......lamp shad |
| 84, 289 | Same ........ Modo of packing lamp |
| 77, 057 | Locke, IT. C., Somersvillo, Tonn. Corn |
| $\begin{aligned} & 82,726 \\ & 82,727 \end{aligned}$ | Locke, Josiah Rr., San Erancisco, Cal. Carriago spri Same..............................same.. |
| 76, 333 | Locke, Richard Bu, assignor to tho Selflighting Gas Burner York, N. Y. Gas burner |
| 84, 065 | Locke, Sylvanus D., Janesrillo, Wis |
| 82, 135 | Lockhart, A. W., Sacramento, Cal. Device for conducting grain to threshing machines |
| 3,002 | Lockhart, Charles, and John Gracic, Pittsburg, Pa. Still for petroloum, \&c., (Division A, reisspo) |
| 3, 003 | Samo..... Still for petroloum, \&c . . . . . . . . . . . . . . . . (Division 33, reissue). |
| 80, 294 | Samo.....-Still for hydro-carbons ............................................ |
| 80,357 | Loekhart, Enoch, Frank Roborts, Louisvillo, Ky., and Honry IKnight, Brooklyn, N. Y. Branch cement pipo |
| 76, 478 | Lockliart, G. W., Charlestown, Ind. Hay press..................................... |
| 75, 637 | Lockwood, C. H., Hawleyville, Comn. Guido for hat lining in sewing m chines. |
| , 385 | Lockwood, Charlos S., Nowburg, N. Y. Derrick................................ |
| 24,556. | Lockwood, E. W., and B. T. Froderick, Marshalltown, Iowa. Cast-iron sleigh rumner <br> Lockwood, John F., and Miram S. Maxim. (Sce Maxim \& Lockwood.) |
| 76032 | Lockrood, Samuel E., Westbury, N. Y. Compound punching and upsetting apparatus |
| 73, 34, | Lockwood, William E., Philadelphia, Pa. Fastoni |
| 73, 350 | Same..... Apparatus for arying onvolop |
| 77, $3 \times 3$ | Lockwood, W. H., Brooklrn, N. Y. Ventilating show |
| 79, 443 | Loder, W. A., Rochestcr, N. Y. Fruit jar.............) |
| 83, 183 | Lodge, Thomas, New Lisbou, Ohio. Shiftiug bug |

## Tata.

Oct. 6,186s.

July 21, 1863.
Dec. $29,1868$.

Mar. 31, 1808
May 26, 1868.
Juno 23, 18G8.
Juno 16, 1868. Dec. 1, 1863. July 2a, 1808. Oet. 31, 180 ${ }^{2}$. Apr. 7, 1803.
Nof. 3, 1868.
Dec. 1,1868.

Apr. 7, 1863. July 21, 1868. Felb. 2̄̄, 1EGZ. Apr. $21,1868$. June 1G, 1863. Feb. 4, 1^68. Juno 23,1863

Apr. 21, 1868.
Jan. 23, 1868
Jan. 21, 1s68
July $21,186 \%$.
Feb. 11, 1868.
May 12, 1868.
Dee. 1, 18G2.
July 14, 1868 .
MLai. $10,1808$.
Oct. 13, 1868.
Sept. $22,186 s$.
Sept. $22,1868$.
Ha1. 24, 1868.
Jan. 21, 1868.
Sent. 8, 186z.
Nov. 24, 1868.
Apr: 21, 1863.
Oct. 6, 1863.
Oct. 6,1868.
A pr. 7, 1868
Nov. 17, 1863.
Sopt. 15, 1868
Juno 23, 1868.
June 23, 1868. July 23, 1868.
July 28, 1868.
Apr. 7, 1868.
Mar. 17, 1808.
Aug. 25, 1868.
Feb. 18, 1863.
Mar. 3,1868.
Jan. 14, 1868
Jan. 14, 1868.
Apr. 28, 1863.
July 14, 1868.
Oct. 20.1864

Alphabetical list of patentees for the year 1868-Continued.

No.

ع1, 654
84, 634
75, 033
78, 298

78, 299
78, 982
73, 819
78,105
78, 106
80, 553
81, 655
80, 750
75, 935
85, 390
83, 778
84, 635
85, 314
75, 936

80, 751
78, 300
81, 184
77, 743

78,383
81,386
83, 291
77, 898
75, 937
83,515
79,582
73, 732
81, 281
78, 215
82, 7:28
78, 530
83, 292

80,752
3, 223
84, 953
73, 351
74,387

78, 107
82, 012
83, 516
75, 034
77, 989
73, 415
77, 628
80, 295
85, 391
\%4, 837
84, 127
75,686
84, 365
79, 240
§,944
80, 979
3, 184

Name, residenco, and invention or discovery.

Loftus, R. G., assiguor to self and Alonzo Farran \& Company, Chelsea, Mass. Proeess of treating petrolemm to romove the moro volatile portions.
Logan, James B., Richview, Hl. Gang plow
Logan, J. A. J., Moline, Ml. Reflector
Logan, James Ir., I2olla, Mo. Sawing machine. (Antedated May 18, 1868)..... Logan, R. R., et al. (See Olney, Logan \& Fisher.) Logan, Samuel, and Willianı II. Ford. (See Ford \& Logan.) Logan, W. M. (See Halo, W. I., assig110r.)
Loi, Nardo I'., Now York, N. Y. Pipe meneh
Loiseat, Emile, and C. F. Reguin, Nashville, Tonn. Artificial fael Loller, William B. (See Morgan, A. O., assignor.)
Lombard, Daniel, Boston, Mass. Maehine for lulling eoffeo
Lombard, N. C., and Mellen Bray, assignors to Mellen Bray, Boston, Mass. Machino for forming sheet-metal ware
Lombard, S. Howard, Winona, Minn. Dough kneador.
Long, Charles B. and V. A. N., Worcester, Mass. Knife ring
Long, Charles R., Louisville, Ky. Boring maehino.
Long, Davis E., Pawtueket, R. I. Curtain fixture.
Long, H. E., assignor to W. A. Long and Goorge B. Lindsey, Plymonth, Ind. Printers' galley
Long, H. M., Williamsville, N. Y. Gate attachment
Loug, Henry W., Couneil Bluffs, Iowa. Wagon jack
Long, Jacob, Shaver's Creek, Pa. Explosivo projeetile
Long, J. E., Norway, Maino. Staging.
Long, James P., Osargo, Iowa. Combined broadeast seeder, eultivator, androller Lony, John, et cll. (See Nock, E. B., assignor.)
Long, Joseph P. (See Bailey, Lyman M., assignor.)
Long, M. W., Bangor, Maine. Stove oven
Long, Nelson, Watortown, N. Y. Apparatis for rolling dongh.
Long, R. II, assignor to self and R. 'I. Trall, Cineimnati, Ohio. Window ventilator.
Long, Sammel N., assignor to self and Lineoln B. Bearse, South Chatham, Mass. Caster for furnitnre

Long, W. A., and J. E. Lavoy, Plymonth, Ind. Grain ear
Loner William C., and Harvoy A. Lownsbery, Loekport, N. X. Filter
Longaero, M. C., Clevoland, Ohio. Step ladder.
Longanecker, John, Now Pittsburg, Ohio. Stump extraetor
Longloy, Samucl M., et al. (See Ruggles, Solomon W., assignor) ..... (Roissue.)
Longton, Thomas Carr, Tronton, N. J. Oil oup.
.............
Loomis, A. W., Atwater, Ohio. Gange for stone ware
Loomis, Hiram G., Hartford, Conu. Level
Loornis, James A., and Alonzo Johnson, assignors to Charles Gifferd, Springfeld, Mass. Calenlating machino.
Loomis, Jason 1., Chelsea, Mass. Bastle
Loomis, Jolı S., Brooklyn, N. Y. Maehino for polishing wood
Loomis, Kellogg H., New York, N. Y. Anti-frietion steam-engine valvo
Loomis, Mahon, Washington, D. C. Plate for artificial teeth .....(Extension). Loomis, O. E., assignor to self and E. K. Sherman, Ellonburg, N. Y. Soap..... Loomis, Sanuel L., assignor to self and Charles E. Walter, Byron, N. Y. Sash holder
Lonsey, Charlos F., et al. (See Kronig, Carl, assignor)
(Reissue.)
Loraino, J. W., Philadelphia, Pa. Hanger for shafting
Lord, Charles S., and William N. Walker, Otter River, Mass. Cook stovo. (Design)
Lord, Eli W., and Willard Thompson, Homer, N. X. Churn dasher
Lord, Horaee, Hartford, Conn. Cartridge retraetor.
Same....-. Breoch-loading fire-arm.
Lord, Jolin. (See Sladdin, Josoph, assignor.)
Loring, Joseph G., et al. (See Heyl, John A., assignor.)
Lorenz, Josepl, Cineinnati, Ohio. Organ pipe.
Lorton, Nicholas, and John S. Davison. (See Davison \& Lorton.)
Losie, John M., Indianapolis, Ind. Spring-bed bottom.
Lossen, Joseph Theodoro, Bavaria. Governor for steam and other enginery.... Lothrop, Eben W. (See Vogel, Kasimer, assignor.)
Lothrop, Menry O., Milford, Mass. Steam-engine eut-off
Samo.-.... Steam engine.
Lothrop, Menry O., assignor to sclf, Crawford and Joseph R. Pierce, Milford Mass. Coating heel and too iron for boots and shoes
Lothrop, Llewellyn D., Dover, N. H. Fishing taeklo
Lotridgo, Benjanin F., Now York, N. Y. Bolt.
Lotz, William H., Chieago, Ill. Folding loungo.
Louden, Henry W., Ephrata, Pa. Egg beater.
Louden, William, Codar Township, Iowa. Elevator
Londen, William, Fairfield, Iowa. Hay elevator
Longh, John, Buekingham Village, Canarla. Dressing saw teeth
Loughborough, William S., Rochester, N. Y. Water-proof-leather cement
Louis, Lafayette, Provideneo, R. I. Melodeon
(Reissue)
Sane..-.- Boston, Mass. Tremolo
Same.... Piano with melodeon and tremolo attaolment. (Divisiou $A$, reissue)

Dato.

Sopt. 1, 1868
Dec. 1,1868.
Mar. 3, 1868.
May 26, 1808.

May 26, 1868.
June 16, 1868
Jan. 28, 1863.
May 19, 1868.
May 19, 1868.
Aug. 4, 1868.
Sept. 1, 1868.
Aug. 4, 1868.
Mar. 24, 1868.
Deo. 29, 1868.
Nov. 3,1868.
Dee. 1, 1868.
Dee. 29, 1868.
Mar. 24, 1868.

Aug. 4, 1868.
May 26, 1868.
Aug. 18, 1868
May 12, 1868.
May 26, 1868
Aug. 25, 1868.
Oet. 20, 1868.
May 12, 1868.
Mar. 24, 1868.
Oct. 27, 1868.
July 7,1868.
Tan. 28, 1868.
Aug. 18, 1868.
May 26, 1868.
Oct. 6,1868.
Apr. 28, 1868.
June 2, 1868.
Oet. 20,1868.
Aug. 4, 1868.
Now. 3, 1868.
Doe. 15, 1868.
Jan. 14, 1868.
Feb. 11, 1868.

May 19, 1863.
Sopt. 8, 1868.
Oet. 27, 1868.
Mar. 3, 1868.
May 19, 1868.
Jan. 21, 1868.
May 5, 1868.
July 28, 1865.
Dec. 29, 1868.
Feb. 25, 1868.
Nor. 17, 1868.
Mar. 17, 1868.
Nov. 24, 1868.
J и $223,1868$.
Ma, 26, 166z.
A uig. 11, 1868.
Nor. 10, 1868.

Alphabetical list of patentes for the year 1863-Continued.

| No. | Name, residenco, and invention or discovery. |
| :---: | :---: |
| 3, 185 | Louis, Lafayette, Boston, Mass. Wind musical instrumont... (Dis. B, |
|  | Lonis, Thomas J., and Frauk Rahn. (See Wilsou, John 'T., assiguor.) |
| 79, 93\% | Lomp, James C., Galveston, Ind. Stove pipe |
| 83, 391 | Lourrentz, Michael J., assignor to self and John Myors, jr., Leavenworth, Kansas. Lamp-chinnoy cleancr. (Antedatel Oct. 17, 186 i ) |
| 75,938 | Loutrol, Cytus II. (See Franciz, Lowis, assignor.) <br> Loratt John, Tarrytown T. T. Tachino for winding button-hole twist \&e |
| 3,186 | Samo.....Newark, N. J. Skato |
| 76, 213 | Love, G. Wr., Jackson County, Mo. Soap...... |
|  | Love, Horate T. (See Grier \& Boyd, assignors.) |
| 2,901 | Lovo, John C., assignor through mesne assignments to W. H. Lovo, R. II. and W. If. Childs, Philadelphia, I’a. Lamp burner (Reissue) |
| 80, 073 | Love, Milton, Corry, Pa. Machine for saving eream whilo churning |
| 83, 184 | Lovo, Obadiath, Sarenburg, Pia. Fenco |
| 81, 916 | Love, Robort, Moboken, N. J. Varnish for metal, wood, and paper, or other fabric |
|  | Love, I. Vincent, and W. S. Thompson. (Sea Thompson \& Love.) |
| 75, 939 | Love, Samuel, Indianapolis, Ind. Apparatus for tilling railroad tanks with water |
| 81, 801 | Lovejoy, Lorenzo, Mallen, Mass. Well tubo |
|  | Loveland, 1. M., and E. E. Allen. (S'ee Chaplin, Joseph M., assignor.) |
| 79,485 | Loveless, C. B., Syracuse, N. Y. Vapor buruer |
| 81, 636 | Samo . . . . Manufacturo of illumimating ga |
| 76, 214 | Lovelidgo, Thomas, and John Grindrod, Philadelphia, Pa. Skī |
| 82, 854 | Lovell, Amos B., Pomfret, N. I. Elastic aprou tor paper machine |
| 81, 917 | Lovell, M. Ȧ., Erio, Pa. Lamp-chimney cleaner |
| $8{ }^{\text {8 }}$, 016 | Lovio, Albort, assignor to Charles F. Steiabach, Philadelphia, Pa. Curtain fisture |
|  | Low, Willian H. (See Marchbank, John, assignor.) |
| 75, 776 | Lowdermill, Elliott A., Grand Junction, Tenn. Medical comp |
| 80, 980 | Lowo, David H., Boston, Mass. Hydro-carbou burner |
| 83, 865 | Samo.... - Vapor burner. |
| 84, 4:3 | Samo .... . Sall-iron heator |
| 84, 889 | Same...... Gias heater |
| 81,656 | Lowe, Edvin, Buriows, Ind. Hand loom |
|  | Lowo, Henry, and Benj. A. Lavender. (Še Lavender \& Lowe) ... (Extension.) Samo...................................................samo........... (Reissue.) |
|  | Lowe, N. 31. (See Fuster, Dan P, assignor.) |
| 82, 424 | Lowe, R. H., Upper Alton, Ill. Plane for cutting olind |
|  | Lowell, Charles. (See Joungr, William, jr., assignor.) |
|  | Lowell, Johm F . (See Bogert \& Porkins, assignors.) |
|  |  |
|  | Samb - . . . . . . . . . . . . . . . . . . . . . . . . . . . . . - samo................. (1)esign.) |
|  | Samo...... (See Noy, Elomir, J., assignor) ........... .............. (Desigin.) |
|  |  |
|  | Same - .................. - samo...................................... . (Design1.) |
|  |  |
|  |  |
|  |  |
|  | Same ..................-sam0............................................ (1Designi.) |
|  | Same .......................samo.................................................. (Design.) |
|  | Samo .......................sanı.................................................. (Desiyu.) |
|  | Samio ................... samo...................................... . . (1)esign.) |
|  | Samo ................... - samo...................................... (Dosigu.) |
|  | Same ................... sam11........................................ (1Desigu.) |
|  | Sane .................. - - samo............................................. (Design.) |
|  | Samo .................. - samo......................................... ( (Dosign.) |
|  | Samo .................. . samo........................................ (1)esign.) |
|  | Samo ...................samo............................................ (1Desigu.) |
|  | Same ................... - same...................................... . (Desigu.) |
|  | Samo . . . . . . . . . . . . . . . . samo....................................... . . (Desigu.) |
|  | Same ....... . . . . . . . . . . . same........................................ (Desigu.) |
|  | Samo .................. .saıno......................................... - . (Design.) |
|  | Samo . . . . . . . . . . . . . . . . samo. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design.) |
|  |  |
|  | Samo ................... samo............................................ (Design.) |
|  | Lowman, IT. L., Nov York, N. Y. Machino for forming oyes of pick-axes, dc. |
| 83, 779 | Lown, David, P'oughkecpsie, N. Y. Churn |
|  | Lownsbory, Harvey A., and William C. Long. (See Long \& Lownsbery.) |
| 75, 174 | Lowrey, John 'T., Janes A. Caso, and lichard Chow, High Banks, Ind. Corn planter |
|  | Lowrey, J. W., Dayton, Ohio. Cooking stovo |
| 74, 388 | Lowrey, Robort O., Saratoga Springs, N. Y. Spring-bod bottom....................... |
| 77, 990 | Same...... Salem, N. Y. Modo of treating loather, cloth, and the like, to render them water and firo proof. (Antedated May 12, 1868). |
| 77, 991 | Same......Plastic compound for roofing and othor purposes. (Antedated |
|  | May 12, 1868) ..................................................... |
| 77,992 | Same.......Fibrous compound for roofing and other purposes, (Antodated May 12, 1868). |

## Dato.

Nov. 10, 1868
July 14, 1868.
Oct. 27, 1868
Mar. 24, 1868.
Nor. 10, 1863
Mar. 31, 1863

Mar. 24, 1868.
July 21, 1863.
Oct. 20, 1868
Sept. 8, 1868.

Mar. 24, 1868.
Sept. 1, 1868.
June 30, 1863.
Doc. 1, 1863.
Mar. 31, 1868.
Oct. 6, 1868.
Sopt. 8, 1868.
Dec. 15, 1868.
Mar. 24, 1863.
Aug. 11, 1868.
Nor. 10, 1868.
Nov. 24, 1868.
Dec. 15, 1263
Sept. 1, 1868.

Sopt. 22, 1863.

Jnne 30, 1868.
Nov. 3, 1868.

Mar. 3, 1868.
July 28, 1868.
Fob. 11, 1868.
May 19, 1868.
May 19, 1868
May 19, 1868.

## Alphabetical list of patentees for the year 1858-Continued.

No.

Name, residence, and invention or discorery,

Lowrey, Robert O., Salem, N. Y. Modo of prodincing floor cloth, lcather cloth,
and the likc. (Antedated May 12, 1868).

Samo...... Manufacture of water-proof fabrics

Same...... Composition for the manufacture of water-proof paper and
other articles

(Reissuo)
Samo...... Shoe.

Same...... Mode of water-proofing paper, cloth, \&c

Same...... Artificial gum for coating and water-proofing

Lowrey, W. A., et cll. (See Coulter, Trabue \& Lowrcy.)

Lowrey, William L., Saratoga Springs, N. X. Mauufacturc of illuminating gas
Lowry, Edward S., and David H. Wilson. (See Glanding, James, assignor.)
Lowry, Joseph L., Pittsburg Pa. Steam engine. (Antcdated Feb. 20, 1868)
Samc.......Pumping engine. (Antedated Feb. 24, 1863)

Lowry, Thomas J., Conneautville, Pa. Mold for building blocks
Lowth, John. (See Hainque, Martial, assignor.)

Lowth, M. F., and T. J. Howe, Owatonna, Minn. Cultivator tooth

Same...... Cultivator

Samo.......Grain drill.

Lozicr, Abraham W., New York, N. Y. Hay loader

Samo...... Horse hay fork

Same-.....Hay loader -......................

Lucas, Elijah, Winslow, Ind. Grain separator

Lucas, Halsey B., Middletown, Comn. Skate fastening

Lucas, Hiram, Rowsburg, Ohio. Apparatus for tanning leather

Lucas, James G., Newark, N. J. Work-table appliance

Lucas, James G., assignor to self and Arctus L. Sawin, Newark, N. J. Ma
chine for bending wood. (Antedated June 4, 1888)

Lucas. Robert A., and Louis S. Lehman, Wooster, Ohio. Fruit dryer............

Luce, C. O., Braudon, Vt. Horse rake.
Luce, Curtis O., and Charlcs Merriam. (See Merrian \& Luce.)
Luce, Curtis O., and Cyril W. Green, assignors to selves and Cyrenius M. Willard, Brandon, Vt. Stone-quarrying machine
Luce, Orrin, Cortland, N. Y. Trunk hinge
Lucc, Orrin, assignor to self and Martiu Luce, Virgil, N. Y. Hay raker and loader.
Luce, R. S., and O. E. Pickett. (See Pickett \& Luce.)
Luce, Shubael K., assignor to self and Charles O. Luce, Marion, Mass. . Chimney seraper.
Lucey, Timothy, Salem, Mass. Driving hoop
Lucey, Timothy, and James E. Murplyy, Salem, Mass. Lining boots and shoes. Luckett, Samuel B., Corydon, Ind. Cloth-measuring apparatus.
Lucop, Charles, and Johu Carr. (See Carr \& Lucop.)
Ludden, William A., Brooklyn, N. Y. Bottle lock.
Luders, Thomas L., Olney, Ill. Bobbin aud thread lolder for spinning machines Ludington, Zalmon, Uniontown, Pa. Peat machine
Ludlow, H. G., Troy, N. Y. Stop valve for steam and other enginery
Ludlow, W. I., Cleveland, Ohio. Fruit bag..
Same...... Seat for harvesters.
Lago, Orazio, assignor to John F. Collins, Ncw York, N. Y. Apparatus for distilling spirituous liquids.
Lugo, Orazio, assignor to David Lyman, Ross E. Browning, and Mason C. Weld, New York, N. Y. Process of preserving animal substances
Luigart, J., and G. Fuchs. (See Fnchs \& Lhigart.)
Luli, Joseph W., Glen Hope, Pa. Revolving cylinder for tanning hides.
Lull, Lucius M., and James T. Starr, Walunt Grove, Il. IBreech-loading ordnance. (Antedated Feb. 6, 1868).
Lull, L. M., and P. C. Bowen, Altoona, Pa. Washing machine.
Lull, Plinlo, Norwich, N. Y. Apparatus for remoring hides from animals.
Lumbard, Henry, assignor to self', George E. Gerts, and John Sclmidt, Chicago,
Ill. Broom.
Same......Tumbler brush.
Lummus, William W. (See Marshall, Horace B., assignor.)
Lumsden, Nicholas, San Francisco, Cal. Boot and shoo.-
Lumsden, Wm. C., et al. (See Tappey, Lumsten \& Steel.)
Lund, John. (See Williams, M. T., assignor.)
Lundgren, John, and Henry Want. (See Want \& Lundgren.)
Lundy, C. A., Marshalltown, Iowa. Straw cutter.
Lurmann, F. W., assignor to George Asmus, New York, N. Y. Blast furnace. (Reissue)
Lurvey, J. J.. North Prairie, Wis. Divider for harvesters
Lushbaugh, Harmon F., and Oscar Z. Hurd, Mt. Pulaski, Ill. Animal trap..... Lusk, Thomas E., et al. (See Porter, Benj., assignor.)
Lusk, William J., Fentonville, Mich. Frame.
(Design)
Lusted, Charles, New York, N. Y. Snow plow
Lusten, Samuel, Linesville, Pa. Compound for tanning
Luther, Ellis, West Troy, N. Y. Horse rake
Same.-
samc
Luther, Ellis, Platt Lyon, and Waiter Edwards, West Troy, N. X. Finishing loose-hinge butts
Luther, Wheaton, Niagara Falls, N. Y. Process of bleaching cloth, yarn, ©c...

Date.

May 19,1868 May 19, 1868.

May 19, 1868.
May 26, 1868.
Ang. 4, 1808.
Aug. 4, 1868.
Aug. 4, 1868
Mar. 10, 1868
Mar. 10, 1868. July 28,1868

Mar. 10, 1868.
Sept. 22, 1868
Oct. 6, 1868.
June 23, 1868
Dec. 1, 1868.
Dec. 1, 1848.
July 14, 1868
May 26, 1868
Aug. 11, 1868
Oct. 15, 1868
June 16, 1868
Dee. 29, 1868
Jan. 28, 1868.

Dec. 29, 1868
Nov. 3, 1868.
Mar. 31, 1868

Sept. 15, 1868
Sept. 22, 1868
Mar. 31, 1868
Nov. 24, 1868.
Dec. 22,1868
Oct. 20, 1803
Dec. 22, 1868
Dec. 22, 1868
Apr. 28, 1868
June 2, 1863.
Jan. 21, 1868
Aug. 18, 1868.
Apr. 14, 1868
Feb. 18, 1868
July 21, 1863
Apr. 14, 1868
Jan. 7, 1868.
Mar. 24, 1868.
May 26, 1868.

Mar. 10, 1868
Nov. 24, 1868.
Oct. 20, 1868
Nov. 24, 1868.
Jan. 28, 1868.
Jan. 7, 1868
Oct. 13, 1868
Fob. 25, 1868
Oct. 6, 1とis.
Јnc. 22,1868
Jan. $\gtrsim, 1868$.

## Alphabetical list of patentees for the year 1sü-Contmued.

| No. | Name, rosideneo, and invontiou or discorory |
| :---: | :---: |
| 75, 557 | Luther. W. T., Ruchester, N. Y. Bottlo far |
| 74, $9: 23$ | Lutton, T. C., deceasod, by Carolino L. Lutton, administratriz, Philadelphia, Pa. Machine for slearing yarn. |
| 73,615 | Lutz, Abralam, Orangovillo, Ill. Machino for sawing loops...... .... |
| 74, 102 | Luzier, '1. J3, and Georgo A. Hass, Philadolphia, 1a. La |
| 80, 932 | L.yall. James, Now York, N. Y. Loon |
| 79, 136 | Lyder, John W., and Henry shrore, Allianco, Ohio. Modo of spliciug belting. Lyford, S. G., and A. M. Damon, (See Damon \& Lyford.) |
| 81, 802 | Lyman, Albort, Troy, N. \. Reservoir for cooking stove |
| 83, 866 | Lyman, Alfrod E., North Hampton, Mass. Weeding hoo |
| 75, 777 | Lyman, C. C., Edonboro, Pa. Auimal trap |
| 79,583 | Samo...... Scale. <br> Lyman, Darid. (See |
|  | Samo..... - (See Lugo, Orazio, assignor.) |
| 77, 058 | Lyman, Georgo G., assignor to self and Georgo P. Ladd, Indopondonco, Iowa. Harvester. |
| 82, 013 | Lyman, Henry D. Kalamazoo, Mich. Iorsesloo.. |
| 84,637 | Lyman, Johu N., New York, N. I. Revolving stay-log |
| 83, 186 | Lymam, IF. T., Smringfeld, Mass. Rotary steam engino |
| 75, 553 | Lymam, William J., East Hampton, Mass. Portablo chamber |
| 799, 994 | Samo. Lyman, Wi |
| 80,296 | Samo |
|  | Samo-....- (See Weilig, John, assignor.) |
| 60, 297 | Lyman, William W., assignor to tho Mferiden Britanaia Company, Wost Meriden, Comn. Butter dish. |
| 83, 517 | Lynam, John T., Jeffersonville, Ind. Grain drill.... |
|  | Lyncl, Augustus, et al. (See Marden, Jeremiah A., assignor.) |
| 80, 643 | Lynch, George F., Milwankee, Wis. Liotary cultivato |
|  | Lynch, George R., and John W. Hewitt. (See Hewitt \& Lymel.) |
| 3202 | Lyuch, Isaae F. A. A., assigior throngh mesne assigments to Benjamin B. Savary and Froderick O. Raymond, Roxbury, Mass. Woather strip for doors and windows |
| 81, 657 | Lynch, John, Columbia, S. C., Adhesive pla |
| 76, 479 | Lymeh, J. Augustus, Boston, Mass. Paper dam |
| 82, 332 | Lynch, J. Augustus, and Rouben K. Huntoon, Boston, Mass. Governor for steam eugines. |
|  | Lynch, William $\Pi_{\text {L }}$. and Roswell Judson. (See Judson \& Lynch.) |
| 74,389 | Lynde, Jolm D., Philedelphia, Pa. Water indicator for boilers.................. |
| $\begin{array}{r} 3,159 \\ 81,387 \end{array}$ | Lyne. Clarles, Philadelphia, Pa. Permmblator body.................. (Design).. Same |
| 77, 885 | Lyon, Arthur, Warren Shumard, and Jasper N. Robbins, Goshen, Ohio. Saw set. |
| 62, 6:3 | Lyon, Baxter, assignor to self and Dana L. Cohembia, Mt. Ploasant, Ill. Rerolving harrow |
|  | Lyon, Charles, and Willian Bradshaw. (See Bradshaw \& Lyon.) |
| 80, 554 | Lyou, J: B., East Cleveland, Ohio. Fruit jar |
| 77,059 | Lyou, James W., Brooklyn, N. T. Lamp-sharle smpporter |
| 82, 964 | Lyon, John J. P., Ipsilanti, Mich. Apparatus for producing reciproeating motion |
|  | Lron, Platt, et al. (See Luther, Lyon \& Edwards.) |
| 75, 035 | Ljon, Virgil II., Plainfield, Ind. Fruit gat |
| 3, 060 | Samo.-....................................... |
| 83, 981 | Lyou, Warren, New Tork, N. Y. Punchin |
| 73,616 | Lyons, James B., assignor to the Lyons Peat, Coal, and Machino Company, New Havel, Conn Tachine for molding peat |
| 74, 103 | Lyons, J. R., Miontrose, Pa. Horso hay fork |
| 80, 359 | Lyons, Lafayette, Bennington, Vt. Water whool |
| 80.983 | Lyons, Thomas, Iartford, Cmm. Door bell |
| 83, 293 | Lytle, A. J., West Union, Ohio. Button-hole cutter |
|  | Lytle, Charles A. (See Hancock, Benjamin A., assignor.) |
| 75,638 | Maas, C. W., and C. Jischer, Germany. Machine for stan |
| 78, 109 | Malbett, John II., Jersey City, N.J. Chickon coop |
| 76, 785 | Mabbett, J. I., Titusville, Pa. Bed bottom |
| 73, 35: | Mabbett, Truman, jr., Vinelaud, N. J. Berry box |
| 77, 050 | Mabbett, Truman, sr., Vincland, N. J. Fruit crate |
| 76, 481 | Maberry, Francis E., Haverhill, Mass. Washboard |
| 79, 241 | Mabrey, John, Jefferson City, Mo. Fever and aguo |
| 79,365 | Macadam, James, Little Falls, N. Y. Curd mill. (Anterated doel. ®8, 1863) |
|  | MacCorl, C. W., et al. (See Noumann, Lassoc \& MacCord.) |
| 78,110 | Macdanicl, O., New Iork, N. Y. Fruit basket |
| 3, 239 | Samo..... Process for cleaning wooland other fibers. (Dirision A, reissue) - |
| 3, 240 | Same...... Process for cleaning woolen and other fabries. (Division P , |
| 3,247 | Macdonald, Robert, New York, N. Y. Lady's collar and euff |
|  | MacDougall, John, et al. (See Vandor Weyde, P. H., assigimor.) |
| 75, 558 | MacDuff, Jamos B., Now York, N. Y. Modo of forming raisod ornaments on wood |
| 75, 175 | Maco, L. I., Westehester, and F. S. Gwyer, Now York, N. Y. Bottom for ice boxes in refrigerators <br> Mace Theodoro. (Sce Miles, Iurches, assignor.) |

## Dato.

## Mar. 17, 1868.

Fob. 25,1868
Jan. 21, 1863
Feb. 4, 1863
Aug. 11, 1803.
Juиe $23,1363$.
Sopt. 1,1863. Nov. 10, 1868 M1ar. $2=1833$ July 7, ledz.

Apr. 21, 1863
Sept. 8, 1868 1) Oct. 20, 1868. Feb. 18, 1868 Juy 14, 1868 Juno 16, 1863 July 28,1808

July 28, 1863
Oct. 27, 1868
Aug. 4, 1868.

Nov. 17, 1863
Sept. 1, 1262
Apr. 7, 1868
Scpt. 22,1868
Feb. 11, 186
Aus. 11, 1863.
Aug. 2J, lebz
May 12, 1863
Sept. $29,186 ३$
Aug. 4, 1868.
Api. 21, 1868
Oct. 13, 1868
Mar. 3, 1868
Aus. 4, 1863.
Nov. 10, 1868.
Jan. 21,1863.
Fen. 4, 1813
July 28,1863
Ang. 11, 1868.
Oct. 20, 1868
Mar. 17, 1868.
May 19, 1863
Apir. 14, 1888.
Jan. 14, 186.
Apr. 21, 1868.
Ave. 7, 18G8.
June 23, 1868.
June 30, 1868.
May $19,1868$.
Doc. 22, 1868.
Dec. 22, 1868
Nov. 17, 1868.

Mrar. 17, 1868
Mar. 3, 1868.

## Alphabelical list of patentees for the year 1868-Continued.

| No. | Name, residunce, and invention or discovery. |
| :---: | :---: |
| 75, 778 | Macferran, James, Philadolph |
| 74,705 | Macferran, Jamcs, assignor to solf and Samuel Macferran, Phiadclphia, Pa. Blacking case and closet |
| 84,366 | Macferran, Samuel, Philadelphia, Pa. Removable head for boxes, \&c <br> MacGregor, James, jr., deceased, by James Buell, executor, New York, N. Y. Coffec pot $\qquad$ (Extension). |
| 3,176 | MacGreger, James, jr., assignor to George R. Chittenden and Charles A. Smith, Troy, N. Y Coffeo pot |
| 84,638 | Machete, E. V., jr., and E. M. Crary, Philadelphia, Pa. Coment ................ |
| 2,965 | Mack, Francis A., Niles, Mich. Wcll tube............................ (Reissne) .. |
| 80, 079 | Mack, Frederick S., Galesburg, Inl. Floon |
| 76, 217 | Mack, George TV., Mamtramck, Mich. Fecd-watcr hoater for şteam generators. |
| 82, 426 | Mack, Johm C., Bristol, Conn. Cupboard and tabl |
| 85, 460 | Mackay, D. D., Whitestono, N. Y. Egg beat |
| 81, 803 | Same...... Flooring clamp |
|  | MacKellar, Smiths \& Jordan. (See Jordan, Jeter A., assignor)...... (Design.) |
|  | Same...... (See Ilenberg, Hermann, assignor)......................... (Design.) |
|  | Mackellar, Smith \& Jordan. (See Ruthren |
|  | Mackenzie, P. W., Orangeville, N. Y. Machine for blowi |
| 85, 113 | Mackerley, Benjamin, Paint, Ohio. Governor for steam and other engine |
| 75, 686 | Mackey, Aloxander, New York, N. Y. Centrifugal machine for draining sugar. Mackey, Andrew, et al. (See McKillop, John, assignor.) |
| 83, 294 | Mackimnon, John A. Cleveland, Ohio. Holdback for carria |
| 78,984 | Mackintosh, W. S., Pittsburg, Pa. Axle roller |
| 82,965 | Same...... Allegheny City, Pa. Grate bar |
| 79, 366 | Macklott, O. C., St. Yaul, Minn. Lathing machin |
| 74, 390 | Maclure, John, Newark, N. J. Manufacturing harness |
| 85, 114 | Macomber, H. R., Shopiere, Wis. Wind mill |
| 84, 890 | Macy, Egbert, assignor to John H. Keyser, Now York, N. Y. Cover for fnel magazine iu base-burning stoves |
| 77, 297 | Macy, John, Pine, Oregon. Tire shrinker |
| 80, 6.44 | Macy, Philander, Rochester, N. Y. Valro arrange |
| 79,665 | Madden, John, Cleveland, Ohio. Wrench |
| 73, 017 | Madden, Jehn, and J. G. Maserot, Cleveland, Ohio. |
| 82, 966 | Madden, Samuel, Erueka South, Cal. Car couplin |
| 79,584 | Madison, James R., and Milam Thomas, Oneida, Il. Wagou pole. (Antedated June 30 1868) |
| 77,061 | Macdel, Charles IB., and Jacob Wolff, Chicago, Inl. Skate fastening |
| 74, 734 | Maes, F. W., Prussia. Backle |
|  | Magce, James T. (Sce Gray, A. G., assignor.) |
| 76, 089 | Magee, John, Chelsea, Mass. Lamp burner |
| 78, 217 | Magee, John, assignor to the Magee Furnace Company |
|  |  |
| 80, 194 | Same |
| 80, 867 | Same |
| 85, 461 | Magce, Robert B., Venango City, Pa. Temp |
| 77,062 | Maginn, William, New York, N. Y. Pcucil case |
|  | Magnnsson, Lewis J., and Lewis Dodge. (S'e Dodge \& Maguusson.) |
| 84, 128 | Magoffin, John, St. Louis, Mo. Womb suppor |
| 80,645 | Magoon, A. J., Providence, R. I. Stove grate |
| 83, 518 | Magowan, Allen, Boston, Mass. Wringer rol |
| 73,735 | Magrane, Menry S., Hoboken, N. J. Button faste |
| 74, 391 | Magruder, Thomas J., Marion, Ohio. Harness trimm |
|  | Magnire, James. (See Jonks, Georgo A., assign |
|  | Maguire, Thomas. (See Dutton, Thomas, assignom) |
|  | Maguire, Thomas, and Thomas Dutton. (Sce Dutton \& Maghire.) |
| $\begin{array}{r} 77,500 \\ 84,292 \end{array}$ | Mahan, Charles, Grand Island, Cal. Farm wagon... |
|  | Mahler, Theodore W. Rome, N. Y. Water wheel. (Antedated Nov. 9, 18G8) |
| 77, 208 | Mahlon, James TV., Brooklyn, N. Y. Gas incter |
| 75, 341 | Mahon, Isaac B., Dunkirk, Ohio. Cultivator and gang |
| 83, 187 | Maharin, Stephen, assignor to self and William Montgomery, Clayton, III. İ tary cultivator |
| 81,518 | Maiden, T. G., et al. (See Conuett, Matthew F., assignor.) |
|  | Main, Deloss L., Brooklyn, Mich. Churn. |
|  | Main, Harlan A., et al. (See Hayes, Faldo \& Main.) |
| 80, 830 | Maine, , cobeus C., Boston, Mass. Folang |
| 78, 599 | Maitland, Thomas, Williamsport, Pa. Tooth brus |
|  | Makinson, Charles, and John P. Gruger. (See Grager \& Makinson.) |
| 78,600 | Malcolm, R. J., Cincimati, Ohio. Apparatus for genorating gas |
| 73, 907 | Males, Samnel, Cineimati, Ohio Urinal. |
| 84, 500 | Maley, John, assignor to self and Martin Dowd, Middletown, Ohio. Machine for crozing barrels |
| 81,562 | Malick, Wesley, Tidionte, Pa. Machine for pointing hooks, staples. Eo |
| 2, 884 | Malkin, Levi G., assignor to the Hartford Carpet Company, New York, 工̌. X. Carpet pattorn. |
| 2, 865 |  |
| 3, 16.5 | Same..............same . .......................................... (Desigu) |
| 3,160 | sign) |

## Date.

Mar. 24, 1868.
Feb. 18, 1868. Nov. 24, 1863.

Apr. 10, 1868.
Oct. $27,1868$. Dec. 1, 1868. June 2, 18cz. July 21, 1868. Mar. 31, 1868. Sept. 22, 1068. Dec. 29, 1868. Sept. 1, 1868.

Dec. 31, 1868. Dec. 22, 1868. Mar. 17, 1868.

Oct. 20, 1868. June 16, 1868. Oct. 13, 1868. June 30, 1868. Feb. 11, 1868. Dec. 22, 1868.

Dec. 15, 1868.
Apr. 281868.
Aug. 4, 1863.
July 7, 1863.
Jan. 7, 1868.
Oct. 13, 1868.
July 7, 1868.
Apr. 21, 1868. Jinl. 28, 1868.

Mar. 31, 1868.
3ray 26, 1868. July 21, 1868. Aug. 11, 1803. Dec. 23, 1863. Apr. 21, 1863.

Not. 17, 186s.
$\Delta \pi \mathrm{g} .4,1863$.
Oct. 27, 1868.
Jan. $28,1868$.
Feb. 11, 1868.

May 5, 1868.
Nov. 24, 1868.
Apr. 23, 18c3.
Mar. 24, 1863.
Oct. 20, 1868.
Aug. 25, 180ะ.
Oct. 20, 1868.
Joh. 4, 1863.
Juno 2, 186.
Tune 2, 1858.
J:an. 8.1863.
Dec. 1, 1868.
Dec. 1.1863.
Jan. 23, 1868.
Jan. 23, 1868.
Ang. 95, 1368.


Alikeluctical list of patentecs for the year 1868-Continned.

| No. | Ňone, residenco, and inveution or diseorery. |
| :---: | :---: |
| 80, 29 | Mallary, George II., Now York, N. Y. Machine for making paper hags |
| 83, 648 | Mallart, (r. H., assignor to solf, Alesander L. Yan Buren, Herbret Reed, Willian II. Clark, and John A. Standish, Poughkoepsic, À. X. Paper-bag ma- |
| 73, 540 | Mallet, J. T. \., assignor to Jean Mario Onesime Tamin, France. Process of producing oxygen and chlorine |
| 81, 519 | Mallet, S. E., Corry, Pa. Cream saver |
| 83, 519 | Mallon, James, Lockport, Ill. Cuti |
|  | Mallory \& Sanford Flax and Hemp Machine Dressing Company. (See Sanford, Gelston, assignor.) |
|  | Mallory, Burton. (See Andrews, Willian H., assignor.) |
| 3,102 | Mallory, D. D., Baltimore, Md. Trade mark............................ (Design).. |
| 74,392 | Mallory, George, Ibrid |
| 83, 649 | Mallory, John, Pem Yan, N. Y. Broile |
| 74, 393 | Mallory, W. S., Batavia, N. X. Jailroad |
| 81,804 | Malone, William R., Masou, West Va. Check valve for mump |
| 83, 295 | Samo......-Safety valvo ....... |
| 73, 3 ¢6 | Maltby, Benjamin K., assignor to Thomas N. Drake, Cincinnati, Ohio. Coffeo roaster. |
| $\begin{aligned} & 79,847 \\ & 84,954 \\ & 84,639 \\ & 84,955 \end{aligned}$ | Maltby, Benjamin K., assignor to Charles R. Fosdick, Ciuciunati, Ohio. Eye cup |
|  | Maltby, Plilo, Clereland, Ohio. Wrist-pin turner |
|  | Maltpress, John, Edgerton, Wis. Cirate for lurick |
|  | Manchester, Albert I., Westport, Mass. Propa |
|  | Manchester, Albert J. (See Lioodrum, Thomas, assignor) - . . . . . . . . . (Ticissne.) |
| $\begin{aligned} & 74,105 \\ & 85,462 \end{aligned}$ | Mancliester, Joel, New York, N. Y. Animal |
|  | Mancy, Leonard, St. Morgan, M1. Whiffletreer atta |
|  | Mancy, Leonard, and Charles L. Homı, jr. (See ILorn \& Mancy.) |
| S1, 201 | Mandeville, E. W., assignor to self and Charles D. Johnson, Ithaca, N. Y. Lowwater alarm for boilers |
| 73, 541 | Manderille, George A., and William E. Pine, Newark, N. J. Jrachine for blockiner and stretclines hats |
| 75, 036 | Manlicim. Charles, assignor to E. İ. Perry, New York, N. Y. Catame |
| 73, 617 | Mauico, Elward, assignor to John P. Manico, Great Britain. Marine foundation. (Patented in England Oct. 23, 1867) |
| 77, 620 | Manlef, Almon D., assignor to self and Lewis II. Castine, Washington, Mich. Hoisting and transferring pulley |
|  | Manley, Horace A., and Samuel F. Conant. (See Conant \& Manley.) |
| $85,115$ | Manley, William R., New York, |
|  | Mamn, E. (See Howard, A.J. F., assigno |
| 31, 09 | Mann, Eldridge, and A.J. F. Howard, Milford, Mass. Boot crimp |
| 2, 948 | Mann, James H., Lewistown, Maine Axe label...................... (Desimı) |
| 84, 891 | Mam, Poter A., and Griftith P. Terry, assignors to Androw B. Uline and (G. G. Kidder Albany, N. Y. Seal bolt for railway cars |
| 8,004 | Manner, G. C., Now York, N. Y. Piano-forte. |
| 81, 186 | Manning, E. B., Middletown. Comm. Tea aud |
|  | Manning, Edward D. (See Richards, Thomas, assignor.) |
|  | Manuing, Meury A., et cal. (See Blakemere, Charles C., assignor.) |
| 80, 493 | Manning, J. A.. Ashtabula, Ohio. Car eoup |
| 83, 392 | Maming, Stephen N., Kankake City, Ill. Alpharatus for illustrating spherical tricollometry |
| \%3, 018 | Manning, William, Chelmsford, Mass. |
|  | Maminir, W. N., and Renbon Brooks. (See Brooks \& Man |
| 78,75083,18879,242 | Manstield, F.W. assignor to self and II. C. Hitcheoek, Fitchburg, Mass. San-horse |
|  | Mansfield, If. N. J., Malone, M. I. P'i |
|  | Mansur, R. M., Augusta, Maine. Carpet stretcher and tack holder |
| 79,367 | Samo..... Washboard |
|  | Samo -...-.-(See W ilson, Putuam, assignor.) |
| 78,30277 | Mantey, T. F., Now Orleans, La. Extension ladder |
|  | Mantey, Wrilliam, New Orleans, La. Tap for eutting sce |
| $\begin{aligned} & 78,387 \\ & 81,918 \end{aligned}$ | Manton, Joseph P. Providence, IR. I. IInlder for lathe plamers |
|  | Manuel, Charles C., assignor to self, William G. and O. N. Elkins, North Troy, <br> Vt. Strump extractor. |
| -1, 233 | Manuel, David, assignor to self and Willard Manuel, Boston, Mass. Machine for making wire springs. (Antedatod Jan. 24, 186is)... |
| 77,63078,1174,394 | Mancel, David A., Napa City, Cal. Side-hill plow |
|  | Manuel, George W., San Francisco, Cal. Gang plow |
|  | Manville, E. J., assignor to self and E. M. Judd, Waterbury, Conn. Machino for making sowing-machine needles |
| 79,368 | Manville, Eli J., assignor to Blake \& Juhuson, Waterbrey, Conn. Device for stop-motion for revolving slafts. |
|  | Manz, John, and Willian T. Shaw, (See Shaw \& Manz.) |
| 77, 29985,01781,187 | Mapes, II. Collins, Rushville, N. Y. Iforso hay fork |
|  | Marable, T. E., Petersburg, Va. Toy pistol....................................... |
|  | Marable, T. E., assignor to self and S. A. Plummer, Petersburg, Va. Catter attachment for plows |
| 74, 838 | Maranville, Galusha, assignor to D. A. Wilson and Ebenezer Gould, jr., Hampton. N. Y. Meehanism for operating stationary maehinery |
| $\begin{aligned} & 1,388 \\ & 70,090 \end{aligned}$ | Maranville, II., Akron, Ohio. Steelyard ......................... |
|  | Marble, Ezra P., Sutton, Miass. Sh |
|  | Marblo. George W., and A. W. Clark. (See Claxk \& Marblo.) |

## Date.

July $28,1868$.

Nov. 3, 1868
Jan. 21, 1868
Aug. 25, 186z
Oct. 27, 1808.

Tuly 14, 1868 Feb. 11, 1-tiz Nov: 3, 1e68. Fob. 11, 1e63 Sicht. 1, 1:tiz Oct. $20,18 t i z$.

May 26,1868 July 14, 1 e6z. Dece. 15, 1868. Dec. 1, 1868. Dec. 15, 1868.

Feb. 4, 186. Dec. 20, 1868

Nov. 17, 1868.
Jin. 21, 1869.
Mar. 3, 1868.
Jaw. 21, 1868.
May 26, 1868.
May 20, 1868
Dec. 22, 1863.
Ang. 18, 1868.
Mar: 10,1 186.
Dec. $15,18 G 8$ June 23, 1 '(i8. Aug. 18, 1863.

July 28,18 亿3.
Oct. 27, 1868
Jan. 7, $1=$ ü.
Jume 9, 1868
Oct. 20, 18is
Junc 23, 1868.
June 30, 1863 .
May 26, 1868
May 19, 1858
May こ6, 1863.
Sept. 8, 1868
Tob. 11, 1868
May 5, 1843.
May 19, 1868.
Feb. 11, 1868.
June 30, 1868.
Apr. 28, 1868.
Dec. 15, 1868.
Aug. 18, 1868.
Feb. 25, 1863.
Ang. 2a, 1868.
Mar. 31, 1868.

# Alphabetical list of patentecs for the yoar 1868-Continued. 

No.

80, 417
73, 822
76, 482
76, 483
77, 300
80, 984
84, 892
73, 618
73,353
82, 720

74, 234
74, 235
81, 282
78,985
82,333
78, 462
78, 112
82, 730
73, 108
82, 856

82, 537
78, 461
76,334
76335

73,354

77, 432
82, 857
82,538
77, 631
76, 336
76, 484
82, 731
78, 303
83, 718
78, 986
84,563
78, 601
74, 396
73, 619
83, 296
76,218
$-9,585$
7\%',995
78, 218
79, 137
70, 768
79, 844
79,845
81, 097
78, 219
83, 189

Marble, Lansing, assignor to self and Townsend North, Vassar, Mieh. Basket. (Reissue)
Marbnrg, Louis H., assignor to self and C. L. Marburg, Baltimore, Md. Paeking tobaceo
Mareelin, Jrles, et al. (See Milloehau, A., assignor.)
Marcelin, Paul, and Joseph Saunders, Green Point, N. Y. Pan for concentrat ing sulphurie aeid
Same................................. Slow frame
March, Seth, Norfolk, Va. Plow framo
Mareh, Sisler \& Co.
samo
Mareh, Sisler \& Co. (See Mart
Marchant; R. M. Railroad rail ......................................................
Marchbank, John, dssignor to William H. Son, Lansingburg, N. X. Faueet. Mares, J. J., West Moriden, Conn. Lamp burner
Marey, J. J., assignor to E. Miller \& Co, West Meridon, Conn. Oil can
Marey, L. J, Newport, R.I. Magic lantera.
Same..... Lamp burner
Marey, T. M., Windham, Ohio. Wagon box
Marden, Franeis B., Bangor, Maine. Combined potato planter, hoe, and potato digger
Marden, Jeremiah A., assignor to William N. Ely, Chelsea, Mass. Let-off for looms
Marden, Jeremiah A., assignor to Augustris Lyneh \& Rouben K. Huntoon, Boston, Mass. Governor for steam engines
Marden, Jeremiah 4 ., and Joseph F. Flanders. (See Flanders \& Marden) (Exten.)
Marden, Jeremiah A., and John H. Abbott. (See Abbott \& Mardon.)
Marden, Samuel, Newton, Mass. Devieo for obtaining motion by means of frietion.
Same.......Car brako
Mareau, Dumont, Hubbardstown, Mass. Easy ehair
Marengo, Joseph and Alexander, Jurlington, $\forall t$. Jachine for making eigars and eigarettes.
Margerum, Mahlon R., Tronton, N. J. Cofin. (Antodated Sept. 9, 1868)........
Margutti, Carlo, Italy. Railway.......................................................... serving powder.
Mariner, G. A., and Julian Kune, Chicago, Ill. Analgamator
Marinus, T: J., Indepeudenee, Iova. Curtain fixture.
Maris, Andrew J., assignor to self and William H. Burnap, New York, N. X. Indieator for steam boilers.
Markham, Homer C., and Charles G. Riggs. (See Riggs \& Markham.)
Markham, Homer C., and Charles
Markillie, Thomas R., Winehester, Ill. Tightoning wheel tires. (Anteated May 27, 1868)
Markland, Thomas T., jr., Philadelphia, Pa. Nane plate for street lamps.....
Same. ..... Street lamp
Markley, Stephen H. (See Hutehinson, Alfred, assignor.)
Marks, Edward J., et al. (See Cuthbert, Thomas L., assignor.)
Maris, G. F., Petersburg, Va. Mill shape or mold for manufacturing tobacco.
Marks, I., \& Company. (See Nateher, Gabriel, assignor.)
Marks, William W., and Samuel C. Bishop, (See Bishop \& Marks.)
Marland, Obadial, Boston, Mass. Construetion of safos
Marmaduke, Leslic, Arrow Rock, and Sidney T. Bruee, Marshall, Mo. Mode of attaching and detaching poles of earriages
Marquis, John, assignor to self and ole Bergerson, San Franeiseo, Cal. Steam propeller-plow and eultivator. (Antedated Sept. 16, 1868)
Marquis, William C., Burgettstown, Pa. lat trap.
Marr, Mary E. J., Jofferson, La. Child's bed.
Same..... Churn dasher.
Marret, A. I., Water Works, Ky. Manufaeturo of artifieial stone
Marriott, Franklin W., Richwood, Ohio. Corn and seed planter.
Marsden, Robert, Englaud. Apparatus for rolling metal. (Patented in England, March 13, 1865.
Marsh, Delavan, D., deceased, by John Young, administrator, Sunapee, N. II. Invalif bedstead.
Marsh, George W., Clinton, N. C. Plow
Marsh, Henry F. (See Clark, William E., assignor.)
Marsh, Isaae, jr., New Orleans, La. Composition tile or slab for floors, \&c... Marsh, J. L., Kiehmond, Ind. Churn dasher.
Marsh, James S., Lewisburg, Pa. Marvester rako
Marsh, John, Seneea, Ill. Ditehing maehine. (Antedated Sept. 28, 1868)
Marsh, John W., Oxford, Mass. Combination tool
Marsh, S. W., Roehester, N. Y. Water wheel.
Marshall, C. K., New Orleans, La. Artiele for food from potatoes
Same......Metallie door and shutter. (Antedated May 14, 1868)
Same....... Metallie horse eollars. (Antedated June 6, 1868)
Same........ Draw bridge
Same...... Hot-air Hue in stoves. (Aute Jated July 4, 1868)
Same...... Coal grate and stove. (Antedated June 27, 1868)
Same..... Station indicator. (Aistedated Aug. 6, 1868)
Marshall, David, Pittsburg, Pa. Socket board for reed instrumants.................... Marshall, E. B., Atlanta, Ga. Wheelbarrow.

Dato.

Mar. 10, 18 frs.
Feb. 11, 186.

Apr. 28, 1868.
May 12, 1868.
Apr. 28, 1868.
July 28, 1868.
Jan. 28, 1368.
Apr. 7, 1868.
Apr. 7,1868.
Apr. 28, 1868
Aug. 11, 1868.
Dee. 15, 1863.
Jan. 21, 1868.
Jan. 14, 1868
Oct. 6,1868.

Feb. 11, 1868
Feb. 11, 1868.
Aug. 18, 1868.
June 16, 1868.
Sept. 22, 1868
Juno 2, 1868
May 19, 1868
Oct. 6,1868.
Jan. 7, 1868.
Oet. 6,1868
Sept. 29, 1868.
June 2, 1868
Apr. 7, 1868.
Apr. 7, 1868.

Jan. 14, 1868.

Apr. 28, 1808.
Oct. 6,1868.
Sept. 29, 1808.
May 5,1868
Apr. 7, 1868.
Apr. 7, 1888.
Oet. 6,1868.
May 26, 1868.
Nov. 3,1868.
Jume 16, 1868.
Dec. 1,1868.
May 19, 1868
Feb. 11, 1868
Jau. 21, 1833
Oet. 20, 1868.
MIar. 31, 1868.
July 7, 1568.
May 19, 1868.
May 26, 1868.
June 23, 1868
July 7, 1868
July 14, 180
July 14, 1868.
Aug. 18, 1868
May 26, 1800
Oet. 20. 1568.

Alphabetical list of patentees for the year 1868-Continued.

| No. | idence, and invention or disco | Dato. |
| :---: | :---: | :---: |
| 83, 190 | Marshall, E. B., Atlanta, Ga. Sta | Oct. 20, 1868. |
| 80, 418 | Marshall, George, Brooklyn, N. Y | nly 28, 1868. |
| 83, 780 | Marshall, G. T., Unadilla, Mich. Salting trough for stock.................. | ov. 3, 1868. |
| 79, 486 | Marshall, George W., and Richard Exelby. (See Exelby \& Marshall.) <br> Marshall, Hammond, assignor to self and T. W. Chandler, Atlanta, Ga. Plow. Marshall, Henry. (See Camp, John, assignor.) | June 30, 1868. |
| 74,559 | Marshall, Horace 13., assignor to self and Sammel R. Bridgham, Watdoboro', Me. Brake for vehicles. | Feb. 18, 1868. |
| 77, 063 | Marshall, Horace B., assignor to self and William W. Lummus, Waldoboro', Me. Boot and shoe | A pr. 21, 1868. |
| 82, 732 | Marshall, James Garth, England. Apparatus for washing, bleaching, and cleansing farns, bobbins, and other materials | Oet. 6, 1868. |
| 75, 942 | Marshall, John, Hartland, Mich. Boiler | Mar. 24, 1868. |
| 85, 179 | 'Marshall, Joln, assignor to John Christopher Roes Weguelin, Greenwich, England. Safety gange for boilers. (Patented in England Feb. 25, 1867)......... | Dec. 22, 1868. |
| 79, 13 | Marshall, John E., and J. W. Schracder, Baltimore, Md. Hoisting apparatus. | June 23, 1868. |
| 84, 20 | Marshall, Joseph W., Williamsburg, N. Y | ov. 17, 1863. |
| 75, 438 | Marshall, Major B., Drawbridge, Mrd. Animal tra | Mar. 10, 1568. |
| 73, 355 | Marshall, William Marot, Philadelphia, Pa. Refloc | Jan. 14, 1868. |
| 3, 01 | Same...... Medallion hearl of ceneral Grant |  |
| 79, 667 | Same...... Air carburet | July 7, 1868. |
| 79, 846 | Marshall, William M., assignor to self and J. B. Alexander, Philadelphia, Pa. | July 14, 1868. |
| 80, 753 | Same......Foot-muff | uir. 4, 1868. |
| 80, 754 | Same...... Gilding an | ug. 4, 1868. |
| 81,658 | Marston, Mrs. A. F., Clinton, La. Culinary vessel....... Marston, Charles L. (See Porter, T. W., assignor.) Same..... - (Sce Porter, T. W. and H. K., assignors.) -.................- - same. | Sept. 1, 1868. |
| 74,839 | Marston, F. TV., and P. H. Niles. (See Niles \& Marston.) <br> Marston, Oliver H., Sandwich, N. H., and Moses L. Morso, Stonoham, Mass. <br> Device for fastening shoe lacings <br> Marston, William E. (See DeGalleford, J., assignor.) | Feb. 25, 1868. |
| \%6, 786 | Martin, Alexander, assignor to self and George Ott. Match box | Apr. 14, 1868. |
|  | Martin, Alexander C., and Willian Ritchie, Mamilton, | Nov. 10, 1868. |
| 79, 586 | Martin, A. J., Catskill, N. Y. Hay and nanu | July 7, 1:68. |
| 76, 787 | Martin, Anthony M., and John C. Blocher, Bloomrille, Ohio. | Apr. 14, 1868. |
| 73, 356 | Martin, B., Prairie-du-Chien, Wis. Pocket grain | Jan. 14, 1868 |
| 84, 956 | Martin, B. T., Charlotte, Mich. Harrow |  |
| 74, 397 | Martin, Charles, England. Reduction of refractory iron ore | Fel. 11, 1868. |
| 82, 539 | Martin, Charles, William Barrett, and Thomas S. Webb, England. Treatment and reduction of titaniferous iron ore. |  |
| 73, 620 | Martin, C. W., Mt. Pleasant, Iowa. Buckle. <br> Martin, Edward G., et al. (See Rue, Samuel, jr., assignor.) <br> Same | Jan. 21, 1868. |
| 3, 096 | Martin, Edward J., and S. McCambridge. (See McCambridge \& Martin.) <br> Martin, Emile and Pierre E., France. Process for refining and converting cast iron into cast steel and other combinations of iron and carbon. .... (Reissne). | Aug. 25, 1868. |
| 80,555 | Martin, George W., Boston, Mass. Boot and sloe, and clog for the feet. | Ang. 4, 1868. |
| 80, 299 | Martin, George W., assignor to self and J. W. Haskins, Boston, Mass. Manufactmre of articles of soft rubber. |  |
| 80, 300 | Same...... Cane seat. ................................................... |  |
| 78, 88 | Martin, Henry, Galveston, Ind. Machine for Martin. Heury et al. (See Davenport Joseph | June 16, 1863. |
|  | Martin, Hemry, assignor to James II. Reuick, Keyport, N. J. Briek machino. | 68. |
| 73, 109 | Martin, Henry $\Lambda$., assignor to Joseph II. Adams, Rosbury, Mass. Fibrons material for the manufacture of rope, cord, and for covering wire, cord, \&c...... Martin, Henry H., and Johnson Orr. (See Orr \& Martin.) | Jan. 7, 1868 |
| 76,337 | Martin, Henry H., and Johnson Orr. (See Orr \& Martin.) Martin, Tguace, Newark, N. J. Brick machine......... |  |
| 77, 301 | Martin, Jacob, Cairo, Inl. Steam slid | Арr. 28, 1868. |
| 83, 191 | Martin, J., and J. Haythorn. (Sec Maythorn \& Martin.) <br> Martin, James, assignor to IIenry Martin, Jersey City, N. J. Brick Martin, J. C. (See Snlleuberger, W. II., assignor.) | Oct. ${ }^{0} 0,1868$. |
| 75, 176 | Martin, James H., Columbus, Ohio. Scaffolding for buildings. (Antedated Feb. 22, 1868) | Mar. 3, 1868. |
| 80, 080 | Martin, John, assignor to self and Jacol Janison, Philadelphia, Pa. Refrigerator- | July 21, 1868. |
|  | Martin, Joseph T., New York, N. X. Crapp | May 5, 1868. |
| 73, 019 | Martin, Lyman, Indianapolis, Ind. Line reed | Jam. 7, 1868. |
| 78, 304 | Martin, Mark M., Cochran, Ind. Railway-car | May 26, 1868. |
| 84, 893 | Martin, Oliver M., Ann Arbor, Mich. Chring han, Martin, Patrick. (See Golding, James H., assignor.) | Dec. 15, 1868. |
| 80,646 | Martin, Peter, Forest Grove, Oregon. Janufacturing and purifying spirits. (Antedated A pril 4, 1868) | Aug. 4, 1868. |
| 77, 744 | Martin, Robert H., Staten Island, N. Y. Safety hatch. (Antedated April 25,1868 ) - | May 12, 1868. |
| 76, 485 | Martin, William, Tarr Farm, L'a. Well tube | Apr. 7, 1868. |
| 76, 219 | Martin, William II., Brooklyn, N. Y. Method of creating dranght in chimneys by means of stean. | Mar. 31, 1868. |
| 74, 393 | Martin, Willian J., Catawissa, Pa. Attachment fo |  |
| 73, 008 | Martin, W. W., Allegheny City, Pa. Lubricatin | Jan. 21, 1868 |
| 73,908 3,013 |  | Jan. 28, 1868 May 5,1868 |
| 3,013 | Martine, Charles Fr., Boston, Mass. Weather glass.......................... (Design) <br>  | $\begin{aligned} & \text { May } 5,1868^{\circ} \\ & \text { Juie } 5,186 . \end{aligned}$ |

## 12 P

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Namo, residoneo, and invontion or discovery. |
| :---: | :---: |
| $\begin{gathered} 84,293 \\ 2,953 \end{gathered}$ | Martine, Cornelius W. L., Scoteh Plains, N. J. Water elewator. Martino, J., J. Beesley, and J. Currio, assignors to Orr, Painter \& Company, <br> (Design) |

Dato

Nov. 24, 1868.
Mar. 17, 1868.
Mar. 31, 1868.
May 12, 1868.
Sept. 1, 1868.

May 5, 1868.
July 7, 1868.
Fel. 11, 1868.
Mar. 31, 1868.
May 12, 1868.
May 5, 1868.
Nov. 10, 1868.
Doe. 1, 1868.
Oet. 27, 1868.
Nov. 9,1868
Apr. 21, 1868.
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Apr. 28, 1868
Sept. 8, 1868
Jan. 7, 1868
May 12, 1868.
July 7, 1868
June 3, 1868
June 30, 1868.
Mar. 24, 1868.
Nov. 17, 1868.
Feb. 11, 1868.
Mar. 31, 1868.
Sept. 8, 1868
Sept. 15, 1868
Sept. 15, 1868
Feb. 4, 1868
Nov. 24, 1868
June 30, 1868.
Apr. 7, 1868.
Dee. 15, 1868
June 2, 1868
Juno 30, 1868.

Feb. 18, 1868.
Apr. 7, 1868.

A pr. 14, 1868.
Mar. $3,1868$.
Oct. 6, 1868.
Oet. 20,1868.
July 21, 1868.

Mar. 17, 1868.
Sept. 8, 1868.
May 19, 1868.
Dee. 1, 1868.
Mar. 31, 1868.

77, 996
84, 501
76, 092

Alphabetical list of patentees for the year 1868-Continued.

Name, residenee, and invention or discovery.

Mathews, S. F., Mchanicsbure, Pa. Gas regulator
Mathews, Thomas C., Yates City, Ill. Helge trimuer.
Mathews, William, Troy Township, Ohio. Purifying sorghum juice
Mathews, W. W., Yates City, Ill. Gang plow.
Same...... Treble-tree.
Mathervson, E. WV., Norrich, Comin. Gange
Mathewson, Nathan F., Barrington, R. I. Mowing machine
Matlack, Mahlon, Bridesbure (Philadelphia,) Pa. Apparatus for the manufacture of lampblack
Matos, Louis A., Philadelphia, Pa. Balance
Matson, M. II., Horse Heads, N. X. Water wheel
Matteo, Milton D. (See Barrett, Asa, assignor.)

- Matterson, Henry S., Stonkton, Cal. Secder and cultivator

Matteson, Dou Carlos, Stockton, Cal. Gang plow
samo..
(Reissun)
Matteson, Dou Carlos, and Truman T. Williamson, Stockton, California. Culti vator teeth

Samo...... Plow
(Reissue)
Same...... Horse hoe
(Rcissuo).
Matteson, Elisha, assignor to self and James M. Trippe, Brooklyn, N. X. Buoyant propeller
Matthes, Hemry, Cambridgeport, Mass. Stcam gauge
Matthewman, Gcorge, Brooklyn, N. Y. Press
Matthews, Charles W. (Sez Thorn, J. W., assignor.)
Matthows, E. G., Boothbay, Maine. Dory boat lnee
Matthers, Hugh W., Chicago, Ill. Threshing maehine and separator. (Reissuc).
Matthews, John, jr., New York, N. Y. Bottle-filling apparatus
Matthews, Levi, Antrim, Ohio. Clothes pin .
Matthews, Luciene G., New Albany, Ind. Book-binding
Mattherss, Reuben B., Fitchburg, Lass. Machine for facing grindstones
Matthews, William, and James Moore, Philadelphia, Pa. Cover or door for gas retorts, furnaces, \&C
Matthias, Sylvester. (See Myers, William I., assignor.)
Matthiessen, F. O., Jersey City, N. J. Vacuum-pau apparatus
Matthiessen, F. O., and Walter Elmenhorst. (See Elmenhorst and Mattluessen.) Mattingly, John G., and Benjamin F., Louisville, Ky. Whisky still.
Mattison, L. J., et al., exeeutors of D. J. Gcorge, deceascd. (Sce Millington \& (ieorge)
(Extcision.)
Mattson, Morris, New York, N. Y. Nasal irrigator $\qquad$

Same ....... Euema syringe
samo..
(Extension)
Same....... Breast pump.
Samo............same
Manch, Herrman, Providence, $\mathbb{R}$. I. Instrument for attaeling buttons to fabrics
Maudelbaum, L. H., New York, N. Y. Fluted trimming
Manger, Victor E. (See Conper, George, assignor.)
Manrice, Charles, Now Jork, N. X. Lithographic press. (Antedated Feb. 13, 1868)

Maury, Thomas F., Washington, D. C. Tooth brush
Mauser, Wilhelm and Paul, and Samuel Norris. (See Norris \& Manser.)
Max, David, assignor to self and Thomas Waltz, Nowton, Ill. Cloth-measuring machine.
Maxey, Edward G., deceased, by Lonisa J. Maxey, administratrix, Troy, Ind., and William R. Mason, Levisport, Ky. Hay and cotton press.
Maxey, James W., Plymouth, Ind. Modo of producing motion for sawing machines
Maxey, Nathan, Plymonth, Ind. Bed bottom
Maxfield, Charles A., New York, N. Y. Machine for forming paste-board boxes. (Antedated April 23, 1868)
Maxfield, Iiram, et al. (See Wiggins, George, assignor.)
Maxham, Norman, assignor to sclf and C. G. Robbins, Hancock, Vt. Hub and axle
Maxim, Hiran S., New York, N. Y. Gas machine
Maxim, Hiram S., and John F. Lockwood, New York, N. Y. Gas machine
Maximilian, M. K., Ncw York, N. Y. Sofa bedstead
Maxson, Nathan, Wilmington, Ohio. Fence.
Maxwell, Catharine, and I. Ncwton Pcirce, Philadelphia, Pa. Preparation of stcel corsets, hoop skirts, \& c
Maxwell, Willian G. (Sce Fitzhugh, B. G., assignor.)
May, John M., Janesville, aud Winslow M. Colton, Stoughton, Wis. Mop wringer.
May, William, Binglamton, N. X. Hand truck
Samo ...... Door stop
Mayall, Miles, Roxbury, Mass. Machine for oiling wool
Mayall, Miles, assignor through mosne assiguments to (xeorge W. Mayall, Roxbury, Mass. Carpet lininç. (Autedated June 27, 1868)
Maybce, Norman and Abram, Monroe, Mich. Scraper.
Mayer, John B., Buffato, N. X. Clock
Mayer, John 13, assignor to self and Tobias Witmer, Buffalo, N. Y. Striking meehanism for clocks

Dato.

May 26,1868
June 30, 1868
May 12, 1868
Felb. 11, 1868
Mar. 10, 1868
May 19, 1868
May 5, 1868
Mar. 24, 1868
June 2, 1868
Apr. 28, 1868
Jan. 7, 1868
Juno 2, 1868
Sept. 8, 1868
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July 7, 1868
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Apr: 7, 1868
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Jan. 21, 1868
May 5, 1868

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Jume 2, 1868
Sept. 1, 1868
Oct. 6, 1868
Dee. 1, 1868

Apr. 28, 1868
Fob. 4,1868.
Nov. 3, 1868
Jan. 28, 1868
Scpt, 15, 1868
May 26, 1868.
Sept. 15, 1868

# Alphabetical list of patentees for the year 1868-Continued. 

No.

Name, residenee, and invention or diseovery

Mayes, D. J. (See Cothron, John, assignor.)
Mayes, D.J., and Peter Rasar. (See Rasar \& Mayes.)

Mayliew, James M., Providenee, R. I. Chafing roller for wagons
Mayhew, John W., San Francisco, Cal. Shackle bearer
Mayloy, Edward C., Roehester, N. Y. Skate fastening
Maynard, Albert M., Savoy, Mass. Water wheel
Maynard, D. P., Worcester, Mass. Folding bureau bedstead
Maynard, Edward, Tarrytown, N. Y. Double-barrelled firc-arm
Mayo, David C., Richmond, Va. Press for packing shred tobacco
Mayo, John K., assignot of one-half interest to A. and G. B. Cushing, Now York, N. Y. Material for various structures. (Division A, reissue)

Aug. 18, 1868

Aug. 18, 1868
Aug. 18, 1868
Aug. 18, 1868
Aug. 18, 1868
Aug. 18, 1868.
Aug. 18, 1868.
Aug. 18, 1868
Oct. 13, 1868
Jan. 28, 1868
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May 26, 1868.
Aug. 25, 1868.
Nov. 3, 1868
May 26, 1868
Jan. 28, 1868
Feb. 18, 1868.

Dce. 8, 1868. June 23, 1868. Aug. 4, 1868. Aug. 11, 1868.

Jan. 14, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
Feb. 25, 1868.
Mar. 17, 1868.

Sept. 1, 1868.
July 28, 1868.
July 28, 1868.

Dce. 1, 1868.
May 5, 1868.
Apr. 14, 1868.
Feb. 4, 1868.
Jan. 15, 1868.
Apr. 3, 1868.
Feb. 18, 1868.
Apr. 7,1868
Apr. 7, 1868.
Jan. 14, 1868.
Aug. 11, 1868
May 26, 1868
Nov. 3, 1868
May 26, 1868
Mar. 31, 1868
Apr. 28,1868
Atag. 4, 1868
Mar. 31, 1868
Dee. 22, 1868

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
| 78, 751 | McCloskey, John, assignor to Henry McGuckia, New York, N. Y. Cooking rango |
|  | McCloy, Richard. (See Howard, Cornelins A., assignor.) |
| 2,975 | McClure, Henry, assignor to self and James Ellis, Terre Haute, Ind. Steam boiler furnace. . . . . . . . . . . . . .................................................. . (Reissue). |
| 83, 074 | McClure, Wilson, Sinking Spring, Ohio. Animal trap. <br> McCluskey, John, and G. W. R. Bayley. (Sce Bayley \& McCluskoy.) |
|  | Same........... . . . . . . . . . . . . . . . . . . . . . same. |
| 81, 188 | McCollester, B. F., California, Mo. Shove |
|  | McCollom, John, and Samuel Friend. (Sec Friend \& McCollom.) |
| 83, 867 | MeCollum, Peter, Fayette, Mo. Gate |
| 73, 111 | McConaughey, Thomas B., Newark, Dcl. G |
| 82, 140 | McComell, J. R., Marengo, Iowa. Sulky plort |
| 85, 319 | MeConnell, Robert Y., aud George Pringle, Ronchester, N. Y. Stree |
|  | McCord, Smmuel, and George B. Goodwin. (Sce Goodwin \& McCord.) |
| 74, 924 | McCord, William, Sing Sing, N. Y. Horsc rake. (Antedated Feb. 14, 18 |
| 80, 556 | McCorkell, Robert, Philadelphia, Pa. Cultivator. (Antedated July 15, 1868) |
| 79, 997 | McCorkle, S. B., Greenville, Tenn. Horse collar stufting machi |
|  | McCormick, A. W., aud Samuel S.MeNanghton. (See Babcock, Wm. TV., assignor.) |
|  | MeCormick, C. H., \& Brother. (See McCormick, Baker \& Erpelding, assigıors.) |
| 73, 623 | McCormick, J. B., St. Louis, Mo. Harvester rak |
| 79,914 | McCormick, Joln G., assignor to self and M. W. Fergusou, Louisville, Ky. Apparatus for feeding fuel to furnaces. (Antedated July 3, 1868) ............... |
| 82, 114 | McCormick, L. J., William R. Baker, and Lambert Erpeldiing, assignors to C. H. |
| 82, 520 | Same . . . . Harvestcr. ................................ |
| 76, 490 | McCormick, Mark T., Mea |
|  | McCoun, Henry T., et al. (See Sherman \& Russell, assignors |
| 73, 190 | McCown, Harvey and Luther M., Enon Valley, Pa. Hay el |
| 82, 427 | Samo |
| 77, 998 | McCoy, E. B., assignor to sclf and R. Cook \& Sons, Winsted, Conn. Carpenter's bench dog. (Autedated May 4 1868) |
| 77, 899 | McCoy, John, assignor to self and W. T. Snell, Philadelphia, Pa. Metal can or |
|  | case for putting up alkalies. |
| 78, 223 | McCracken, Stephen B., Detroit, Mich. Spring-bed bottom. (Antedated May 12, 1868) |
|  | McCiray, J. B., and Joseph Bogan. (See Bogan \& McCray.) <br> MeCreary John and George it Morris. (See Morris \& McCreary) |
| 80,360 | McCreary, Thomas, assignor to self, George M. Sullivan, and Jolin McCreary, Mattewan, N. Y. Carriage clip................................... |
|  |  |
| 76,093 | McCreiglit, Alexander, Tranquillity, Olio. Carving mac |
| 81, 660 | Same. . . . - Corn plow |
| 82,970 | Same...... Saw muill |
| 85, 392 | McCullaagh, Henry, Marietta, Pa. Collar for pipe |
| 73, 736 | McCulloch, Thomas H., assignor through mesne assignments to the Hart Grain Separator Company, Monmonth, Ill. Grain separator |
| 77,900 | McCallon, Franklin P., and William Woodcoek, Philadelphia, Pa. Oil cup for steam pressure |
|  | McCullough, Richard, et al. (See Burns, James, assignor.) |
| 73, 910 | McCune, John, Arburn, Ind. Spin |
|  | MeCurdy, Daniel W., et al. (See MeKnight, Wm., assignor.) |
| 81,923 | McDaniel, A., assignor to self and S.J. Henion, Dubnque, Iowa. Spring-bed bottom. $\qquad$ |
| 73, 359 | McDermott, James, Frederick, Md. Elastic printing apparat |
| 76,223 | McDonald, Hugh, Allegheny City, Pa. Treating cinder for fixi |
| 85, 320 | Same......Pittsburg, Pa. Shield for puddling furnaces |
| 79,343 | McDonald, Jacob, Buffalo, N. Y. Beehive |
| 83, 394 | MeDonald, John, New York, N. Y. Brick kiln |
| 74, 109 | McDonald, John K., Newark, N. J. Eye glass. |
| 76, 224 | Same..... - Door and package holder |
| 81, 098 | MeDonald, Joseph. Oshkosh, Wis. Cant hook |
| 77, 504 | McDonald, O. P., Carbondale. Ill. Attachment for pendulum |
| 82, 142 | McDouald, Robert R., Clearfield, Pa. Hames fastene |
| 84, 430 | McDonald, Thomas E., assignor to P. P. Runyon, Johnson Letson, and Gcorge J. Janerray, New Brmswick. N.J. Cultivator. |
|  | MeDonald, T. E., et al. (See Stelle, David 1., assignor) .............. (Reissue.) |
| 81,601 | McDonald, Villiam, Calais, Maine. Hanging cirenlar saws |
| 2, 899 | McDonald, William, assignor to R. Hoe \& Co., New York, N. Y. Machino for mitering printers' rules $\qquad$ (Reissne) |
| 75, 286 | McDonough, Henry, New York, N. Y. Chinru dasher |
| 75, 780 | McDongall, Hugh, assignor to self, Lobert Stnart, and Coll MeDougall, Chicago, Ill. Wooden pavement |
| 73, 021 | McDongall, James T., San Franeisco, Cal. Apparatus for collecting precious metals. |
| $83,868$ | Same |
| 74,564 | Dongall, S. T., Brooklyn, |
| 77,635 79,670 | Same.......Gas heater |

## Date.

June 9, 1868.

Juno 9, 1868 Oct. 13, 1868.

Aug. 18, 1868.
Nov. 10, 1868
Jan. 7, 1868
Sept. 15, 1868.
Dec. 29, 1868
Feb. 25, 1868
Aug. 4, 1868
July 14, 1868.

Jan. 21, 1868
July $14,1868$.
Sept. 15, 1868
Oct. 27, 1868
Apr. 7,1868

Jan. 7, 1868
Sept. 22, 1868.
May 19, 1868.
May 12, 1868.
May $26,1868$.

July 28, 1868.
Jan. 7, 1868
Mar. 31, 1868.
Sept. 1, 1868.
Oct. 13, 1868.
Dec. 29, 1868.
Jan. 28, 1868.
Мау 12, 1868.
Jan. 28, 1868.
Sept. 8, 1868
Jan. 14, 1868.
Mar. 31, 1868.
Dec. 29, 1868.
June 23, 1868.
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Sept. 15, 1868.
Nov. 24, 1868.
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Mar. 17, 1868.
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Mar. 24, 1868.
Jan. 7, 1868.
Nov. 10, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
May 5, 1868.
July 7, 1868 .

# Alphabetical list of patentees for the year 1868-Continued. 

No.

79, 671
75, 442
73, 737

77, 066
77, 067
81, 389
85, 321
78,987
79, 487
83, 395
80,196
77, 999

7\%,505
79, 672
79, 673
79, 140
76, 491
82, 016
79, 141
84,502
84, 642
78, 224
77, 828

76,338

82, 334
82, 625
75, 177
76, 645
76, 646
77, 506
84, 295

74, 110
79, 769
81, 806
85, 322
81, 099
83, 306
73, 738
82, 428

Name, residenco, and invention or discovery.

McDougall, S. T, Brooklyu, N. Y. Clothes pounder
McDowell, Theodore, assignor to T. \& A.MeDowell, Light Street, Pa. Modo of producing hot blast in furuaces
McDowell, W. L., Pliladelphia, Pa. Ash-pit cover for stoves. (Antedated Jan. 14, 1868).
McDowell, W.L., and Frederick Leibrandt. (Ses Leibrant \& McDowell).. (Design.)
McDuff, P., Atchison, Kansas. Fence post
McDuffe, Horaco G., Bradford, Vt. Planing machine. (Antedated April 18, 1868).

McElevoy, G. H., Ncweastle, Pa. Fire-place
MeElroy, J. H., and J. H. Holly, Warwick, N. Y. Door fastener.
McElroy, Patrick J., East Cambridge, Mass. Nursing bottlo
 McEwen, Petcr, Jorscy City, an

McFadden, Georgo, assignor to sclf and Richard Austin, Thomaston, Conn. Combinod dress and satchel holder.
McFadden, John, Cadiz, Ohio. Truss supporter ......................
McFarland, Abncr, and John P. Butz. (See Butz \& McFarland.)
McFarland, Abncr, and John P. Butz. (See Butz \& McFarland.)
McFarland, Abncr, and Peter Richmond. (See Richmond \& McFarland.)
MeFarland, David, Worcester, Mass. Railroad truck
McFarland, David, New York, N. Y. Low-water indicator and steam-pressuro alarnu
McEarland, David, assignor to John Johnston, Now York, N. Y. Low-water de tector and stoam-pressuro alarm
McFarland, Josiah, Clinton, Il. Fire kindler ..... Cainpbell, New York, N. $\bar{Y}$ McFarland, Wher slats
 McFarland. William, and W, H. Fillian, Jackson, Ill. Fenco for crossing streams $\qquad$
McGann, Henry, Clevoland, Ohio. Float for boilcrs.
Same..... Automatic boiler feoder. .
Samo...... Device for fecding boilcrs.
McGarry, Michacl, Westficld, N. Y. Washboard.
McGarvey, Michacl, and Jasper VanWormer. (See Van Wormer \& McGarvey.)
McG Same
McGaw, John $\Lambda .$, and Jolm W. Boynton (See Boynton \& McGaw.)
McGaw, Josiah A., and Lewis Horton. (See Horton \& McGaw.)
McGcary, James, Salem, Mass. Proccss for making gas.......
McGee, James, and W. C. Stickney, (See Stickney \&
Same........................................................ Janan \& McGee.)
McGee, J. P., Trenton, Tenn. Lamp burner
McGce, Patrick, North Providence, IR. I. Let-off mechanism for looms
McGec, Samucl, Madison, N. J. Boring faucet
McGill, William C., Cincinnati, Olio. Lamp burner
Same...... Conductor's register
Same...... Blacking brush. ...........................................................................
McGill, William C., and William Knox, Cincinnati, Ohio. Safety stovo for railroad ears.
McGivern, Edward, and John Wobber. (See Kinney, Israel, assignor.)
McGronegal, H. G., New York, N. Y. Pavement.
McGowall, John H., Cincimati, Ohio. Tobacco compress.
McGowan, Thcodoro J., Cincinnati, Ohio. Pump.
Samc...... Hydranlic pressure regulator
McGowan, William C., and J. M. Hale, Georgia Plains, Vt. Fly net for windows McGown, R. I., and Walter Flctcher, Alliance, Ohio. Railway switch stand. McGrath, R. M., Lafayette, Ind. Thimble skeins.
McGregor, F. B., assignor to sclf and Gcorge A. Hoyt, Pontiac, Mich. Piano. (Antedated Scpt. 14, 1868)
McGuckin, Henry. (See McCloskey, John, assignor.)
McGuffin, Shamnon, Rising Sun; Ind. Tea and coffec pot
McGuiness, P.J., New York, N. Y. Britle bit
Sanc...... Martingalo.
McGuire, Edwin, and Samuel W. Barr. (See Barr \& McGuirc.)
McGuire, William, Chess Springs, Pa. Farm gate.
McHenry, TVilliam. (See Reesc, Leolf \& Harry, assignors.)
Mchloy, Hiram, Poplar Ridge, N. Y. Forwatd axlo for carriages
Mcllvain, Jeremiah, Churchville, Md. Auti-friction box for shafting............ Mcinroy, Winam R., Houghton, Mich. Apparatus for measuring cloth. (AntcMcIntire, George R., Hou
McIntiro, J. N., Now York, N. X. Billiard cue. (Antcdated Oct. 6, 1868)..... McIntosh, J. L., assignor to sclf. James Blenkinsop, and William H. Vaughn, Boston, Mass. Pinking tool. (Antedated Scpt. 7, 1868) McInturff, C., Greenville, Tenn. Car comping
McIsaac, Patrick, Waterloo, Iowa. Corn planter and plow combincd Mcyvor, William Graham, England. Windlass
McKay, William, assignor to self and Charles E. Baylcy, Newburyport, Mass. Mast hoop

Dato.

July 7, $18 \mathbf{6} 8$.
Mar. 10, 1868.
Jan. 28, 1868.

Apr. 21, 1868.
Apr. 21, 1868.
Aug. 25, 1868.
Dсс. 29, 1868.
June 16, 1868.
June 30, 1868.
Oct. 27, 1868.
July 21, 1868.
May, 19,1868.

May 5, 1868.
July 7, 1868.
July 7, 1868.
Juno 23, 1868.
Арг. 7, 1868.
Scpt. 8, 1868.
June 23, 1868.
Dcc. 1, 1868.

Dec. 1, 1868.
May 26, 1868.
May 12, 1868.

Apr. 7, 1868.

Scpt. 22, 1868
Sept. 29, 1868
Mar. 3, 1868.
Apr. 14, 1868.
A pr. 14, 1868.
May 5, 1868.
Nov. 24, 1868.
Feb. 4, 1868.
July 7, 1868.
Sept. 1, 1868
Dec. 29, 1868.
Aug. 18, 1868
Oct. 27, 1868.
Jan. 28, 1868.
Sept. 22, 1868.
May 5, 1868
Jano 2, 1868
Dec. 1, 1868
Aug. $25,1868$.
Sept. 8, 1868.
Dec. 29, 1868
Feb. 25, 1868.
Apr. 28, 1868
Oct. 27, 1868.
Scpt. 22, 1868
Dec. 8,1868
Jan. 7, 1868.
Jan. 14, 1868.
Doc 2, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No. 84, 837
3, 191
3, 192
77, 392
83, 869
82, 971
78,988
「5, 560
79, 674
3, 208
74, 565
83, 781
3, 071
75,287
82, 626
74, 111
84, 838
78, 533
85,116
85, 164
75, 288

85, 465
75, 561
74,566
81, 662
82,143

80, 361
78, 809

77, 393
83, 870
76, 789
81, 390
2,853
79, 840

74, 926
83, 984
3,06:

74, 112
79, 998
78, 602
74, 399
76, 790
84, 894
75, 639
83, 075
83, 871
74,567
76, 094
82, 972
77, 508
81, 391
75, 178
77, 509
74, 927
74, 707
78, 388

81, 807

Name, residence, and invention or discovery.

Mckay, TV. W., et al. (See Bockstaller, George, assignor.)
McKay, W. W., Ossian, lowa. Rotary horse brish.
McKee, Joseph'D., Philadelphia, Pa. Pattern for knitted fabric
(Design) Same.
Mckee, William, Neponset, Ill. Signal box
(Design)
McKee, William, and Charles H. Jordan, Washington, D. C. Blind hinge.
McKelvey, Peter B., Albany, N. Y. Machine for cutting soap
McKendree, Albert C., Conncaut, Ohio, Ladder.
McKensie, William, and Peter McEwen. (See McEwen \& McKensie.)
McKenzio, Alexander, Henry, 111. Insect destroyer
McKenzie, Duncan, Brooklyn, N. Y. Wooden pavement Same
.samo
(Reissue)
Mckonzio, Edwin, Watertown, N. Horso hay fork.
McKenzie, Georgo, Zanesvillo, Ohio. Wagon brake
McKenzie, George S., Cleveland, Ohio. Trade mark
(Design)
McKeuzie, J. C., Adrian, Nich. Brick machine
Samo...... Pug mill
Mckibben, John, Lima, Ohio. Snap hook
Same...... Bridle. (Anterlated Dec. 1, 1868)
Mckillop, James, assignor to Andrew Mackey and John Ward, jr., Brooklyn, N. T. Safetr bridlo

MeKim, D. F., Austin, Nev. Feed-water heater for steam generators
Mckinley, John II., New York, N. Y. Hames fastener.
McKinley, William R., Lucas County, Iowa. Machino for marking ground for planting
MeKinney, Harvey, and O. Court Hamilton. (Sce Hamilton \& McKinney.)
Mokinney, William S., Cincinnati, Ohio. Shaft coupling
MicKinsey, John, Millville, N. J. Vermifuge.
Mckittrick, James, Watertown, N. Y. Paint and varnish brush
Mcknight, J. II., Oakwond, Micli. Gate
McKnight, Willian, assignor to self, John H. Fulford, and Daniel W. McCurd 5 , Clearfield, Pa. Tenoning machino.
McLagon \& Stevens. (See Root, Jolin, assignor.)
McLane, E., Young America, Ill. Smnt machine
McLane, J. J., Sagetown, M1. Chum.
McLaughlin, Francis. (See Xoung, Albert A., assignor.)
Samo..
same.
McLaughlin, Thomas, Millville, N.J. Shield for nipples
McLaughlin, W. A., New York, N. Y. Machine for cutting out garments.
Mchea, William J., assignor to self and C. F. Young, Buffalo, N. I. Gas re flector
McLea, William J., assignor to self and FrankLadd, Le Ioy, X. Y. Bail ear for pails
MeLean, James H., St. Louis, Mo. Dredging maehine .................. (Reissuo)
McLean, James P., New York, N. Y. Retining and smelting ores. (Antedated July 3, 1868)
McLellan, George F. (Sce Pole, Benjamin C., assignor.)
MeLood, Alexander, Covington, Ky. Railway switch stand
McLeod, Norman, Clio, S. C. Eeed cuttor
MeLeor, N. N., assignor, through mesne assignonents, to Ainos Broadmax and Rollin B. Grar, St Lonis, Mo. Hose enupling
(Reissue).
McLoughlin, John and Edmund, and Charles Henry. (See Heary and IfcLoughlin.)
Mclucas, William, Reinersville, Ohio. Corn planter
Same...... Donble corn planter
$\qquad$ McMahan, Claburn S., Centerville, Tud. Pump .
McMahan, G. M., Mont Sterling, Ky. Window and door blind and awning Same...... Door
McMranama, Edward, and Samuel Farley. (See W Yatt, Lorenzo D., assignor.) McJIanus, H., and J. B. Hatting, Now York, N. Y. Plate or salver'.
MicMaster, A. D., Rochestcr, N. Y. Fruit jar
MeMaster, D. W. C., Southborough, Mass. Line holder
McMillan, E. G., Norwalk, Ohio. Narm fence
Mcajillan, Stewart, Fletcher, Ohio. Fanning mill
Ic Millen, Arthur W., assignor to self and Alexandor Adams, Chicago, inl. Cast-iron chimney
McMillen, G. M. L., Dayton, Ohio. Horse rako
McMullen, Adam, and John H. Rock, Sterling, Iil. Harme.........
Me\Iullin, Thomas, assignor to self and Miles Mondenlall, Ussood, Int. Coupling belts.
MeMiurray, James S., assignor to self, Thomas Richard Filler, and Samuel Street Fuller, Toronto, Camada. Car coupling McMurray, Robert, Brooklyn, N. X. Sand sereen
Mc Martry, John, Lexington, Ky. Starting cars
McNally, W. T., et cul. (See Cracue, Franeis, and George G., assigiors.) McNamara, David S., Troy, N. Y. Shoe
McNamara, James, assignor to self and C. D. Page, Buffalo, N. M. Maehine for dressing briek. (Antedated May 18, 1868)
MeNaughfon, Samuel S., and A. W. MeCormick. (See Babcoek, Wm. W., ass'r.) MeNeal, H. B., et al. (See Springer', Jacob, assignor.) McNeely, D., and C. J. Cady, Spurgeon, Ind. Cultivator

Date.

Dec. 8,1868
Sept. 1, 1868.
Sept. 1, 1868. Apr. 28, 1868. Nov. $10,1868$. Oct. 13, 1868 June 16, 1868

Mar. 17, 1868.
July 7, 1868. Nov. 24, 1868. Feb. 18, 1868
Nov. 3, 1868.
June 16, 1868.
Mar. 10, 1868.
Sept. 20, 1868.
Feb. 4, 1868.
Dec. 8, 1868
Juno 2, 1868.
Dec. 22, 1868.
Dec. 29, 1868.
Mar. 10, 1868.
Dec. 29, 1868.
Mar. 17, 1868.
Feb. 18, 1868.
Sept. 1, 1868.
Sept. 15, 1868.
July 28, 1868.
June 9, 1868.

Apr. 28, 1868.
Nov. 10, 1868.
Apr. 14, 1868.
Aug. 25, 1868.
Feb. 4, 1868.
July 14, 1868.
Feb. 25, 1863.
Nov. $10,1868$.
Aug. 4, 1868.

Feb. 4, 1868.
July 14, 1868.
June 2, 1868.
Feb. 11, 1868.
Арг. 14, 1868.
Dec. 15, 1868
Mar. 17, 1868.
Oct. 13, 1868.
Nov. 10, 1868.
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Mar. 31, 1868
Oct. 13, 1863.
Alay 5, 1868
Aug. 25, 1868
Mar. 3, 1868
May 5, 1868
Fob. 25, 1868.
Feb. 18, 1868
May 26, 1868

Sept. 1, 1868
No.

74, 400
76, 932
83,076
75, 690
82, 336

Name, residence, and invention or discovery.

McNeil, D. C., Osceola, Mo. Sympathetic ink
Same...... Camp stove and oven
McNeil, Willian S., Springfield, Mass. Hammer and mallet.
McNeil, William S., assignor to Thomas II. White and Warren Johnson, Spring. field, Mass. Culinary steamer
McNeil, W. S., and O. S. Cadwell, jr., Springfield, Mass. Railroad-car heater ... McNeill, $\Lambda$ aron, Cincinnati, Ohio. Safefy attachment for pocket-books.
MeNeven, John, New York, N. Y. Corset, abdominal, and skirt supporter MeNichol, Archibald, et al. (See Baker, Loring J., assignor.) McNiece, William. (See Joseph, Benjamin, assignor.)
McPlheeters, Joseph H., and Philip P. Gross, Palmyra, Mo. Corn shellor
McPherson, James, Brooklyu, N. Y. Steam-engine cut-off
McPherson, S. D. Normal, Ill. Compound for making pictures transparent
McQuaid, Hugh, Canyon City, Oregon. Preventing incrustation in seam boilers
MclRobert, Charles S., Plymouth, Mich. Carpet stretcher
McSherry, Daniel E., Dayton, Ohio. Wheat drill
McTarnahan, Francis, Santa Clara, Cal. Gang plow
Mc Vaugh, Jantes H., and Daniel W. Dyer. (See Dyer and McVargh.)
McVay, Jason, and Jason S. Carey. (S'ee Serviss, Wm., assignor.)
McW horter, F. S., St. Georges', Del. Grain-weighing and tallying machine .
MeWillians, Gabriel, Fostoria, Ohio. Chmm
Mead, Albcrt G., and Charles J. Addy, Boston, Mass. Stamping press
Mcad, Henry E., Centreville, Mich. Stump extractor
Mead, Ira W., assignor to self and Edwin W. Hanford, Bridgeport, Conn. Spike drawer.
Mead, N. I., Waterport, N. X. Fire-frame attachment
Mcader, George, Prairio Center, Ill. Corn harvester. (Antedated April 19, 1868)
Moador, James D., Independence, Iotra. Moth-ly trap for beehives
Meaker, J. W., Chicago, Ill. Apparatus for counting money
Same...... Appaiatus for assorting coin
Same...................... same
Meakin, George F. L. and Peter Ashcroft. (See Ashcroft \& Meakin.)
Mealcy, John, Fairville, N. B. Sehool desk
Mealey, Lewis M., Alpha, Ohio. Paper sack knife
Mears, E. A. F. (See Jones, John A., assignor.)
Mears, John H., Oshkosh, Wis. Mop wringer
Mccay, Samuel P., Kilbourne, Ohio. Horse rake
Meddock, Francis M., Mainsville, Ohio. Device for heating railroad cars
Meech, Harrison B., Fort Edward, N. Y. Manufacture of artificial leather
Meek, A. W., Waterloo City, Ind. Gate.
Mecker, Charles S., and George M. White. (See Whito \& Meeker.)
Meeker, Ellis R., Elizabeth, N. J. Tmplement
Mefford, David M.: assignor to self and Stcphen Boalt, Norwalk, Ohio. Preserv ing fruit
Meginnis, Thomas J. (See Harman, I. R., assignor.)
Meginnity, Robert, and J. Dessinger, Detroit, Mich. Tobacco-dressing machine Mehrmann, Ferdinand, Fountain City, Wis. Combined spur aifd crecper.
Meier, Theodore G., assignor to the St. Louis Cotton Factory, St. Louis, Mo.
Trado mark.
(Design)
Same..........................................................................................
Meigs, Edmund H., assignor to Roys \& Wilcox Company, East Berlin, Conn. Tinsmith's stako

## Same....... Hand-axe

Meigs, Henry, jr., Bergen Point, N. J. Priming metallic cartridges
Meigs, Joo V., Washington, D. C. Breech-loading fire-arm. (Antedated Aug. 5, 1868)
Meikle, George S., Sterling, Ill. Shellac rarnish
Meikle, Thomas, Louisville, Ky. Maehine for making plow clevis
Meineke, J. J. D., Milwaukice, Wis. Forward gear for carriages.
Meinhardt, Christian Gotthold, assignor to self and Benjamin F. Bell, Altoona, Pa.
Propeller.
Same...... Ship's davit.
Melcher, George B., assiguor througl mesue assignments to Jolin Kinsman, Salem, Mass. Window-blind fastener
Meleher, J. F., Bloomington, Ill. Machine for bending wood
Melcher, John W., Oshkosh, Wis. Car conpling
Meleher, N. If. (See Palmer, Alonzo, assignor.)
Meley, Jonathan, Trenton, Tenn. Grave mound
Mellen, Dustin F. Manchester, N. H. Apparatus for distilling pine wood ....
Mellen, George II. (See Laubaeh, WV. H., assignor.)
Mellen, George H., Chieago, Ill. Combined baby jumper and cradle
Mellier, Maric Amedee Charles, deceased, by $\Lambda$ loxander Hay, administrator,
Philadelphia, Pa. Making paper pulp..................................(Extension)
Mellinger, Charles, Cornwall, Pa. Furnaee for roasting ores
Same. ...........................................................................

Mellish, IIenry, Walpole, N. I. Maehine for making wooden bowls
Mellon, Peter H., St. Lonis, Mo. Quilting frame.
Mellor, Alfred, et al. (See Meyer, Berek A., assignor:)
Mcllor, C. H., Philadolphia, Pa. Molding machine.
Melvell, William, Paterson, N. J. Maehine for heading bolts
Melville, Frank, New York, N. X. School slate

Date.

June 30, 1868
Aug. 11, 1868 Sopt. 8, 1868.

Mar. 24, 1868 Aug. 25, 1868. Apr. 21, 1868. Aug. 11, 1868.

July 7, 1868.
June 30, 1868
Mar. 31, 1868.
Oct. 6, 1868.
Feb. 4, 1868.
Dec. $15,1868$.
Dec. 8, 1868

Oct. 20, 1868.
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Apr. 14, 1868
Nov. 3, 1868.
July 7, 1868
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Apr. 28, 1868
Sept. 1, 1868.
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Oct. 27, 1868
July 21, 1868.
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Apr. 28, 1868.
July 28, 1868.
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Apr. 7, 1868.
Oct. 13, 1868
May 5, 1868.
June 30, 1868.
July 24, 1868.
May 19, 1868
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dall. 28, 1868.
June 16, 1868.
Aug. 4, 1868.
July 21, 1868,
Oct. 6,1868.

Alphabetical list of patentees for the yoar 1868-Coutinued.

| No. | Name, resideneo, and invontion or diseovery. |
| :---: | :---: |
| 75, 039 | Melvin, David Neilson, Buffalo, N. Y. Furnace for generating stea |
| 73, 112 | Melvin, E. O., Brooklyn, N. I. Grain me |
|  | Mendelson, L., et al. (Sce Stoner, John B., assign |
|  |  |
|  | Same ..... - (See Stoner, Mendelson \& Cro |
|  | me...... (Sce Stoner, John B., assignor) ........................ . (Reissuo.) |
| 76, 339 | denhall, D., Fairfield, Iowa. Ha |
|  | Mendenhall, Miles. (See MeMullin, Thomas, assignor.) |
| 85, 466 | Mendenhall, Noah, Greensburg, Ind. Corn and seed plan |
| 80, 42 | Mencely, George R., West Troy, N. Y. Attaching bell |
| 77, 704 | Mengel, Merman, Philadelphia, Pa. Instrument for moasuring and laying out garments |
| 77, 396 | Mercer', George, and John Hinton, St. Louis, Mo. Apparatus for tempering saw. plates and similar artieles of steel. <br> Mercer G. II. et al. See Grenier, Francois, assignor.) |
|  | Mercer, G. II., et al. (See Grenier, Francois, assignor.) |
| 75, 180 |  |
|  | Mercier, Edward, assignor to self and Henry W. Bailey, |
| 73, 024 | Railroad sw |
|  | Meredith, Edwin. (See Harsba, Mort |
| $76,791$ | Meriam, John N., assignor to North, Meriam \& Company, Cambridgeport, Mass. A pparatus for stirring and cooling lard |
|  | Meriam, Rufus N., Worcester, Mass. Wood-pl |
|  | Meriden Britanmia Conplany. (Sec Forves, Marshall L., assignor.) <br> Same...... (See Wileox, Horace C., assignor) ......................... (Design.) <br> Same...... (See Foote, Charles C.. assignor.) <br> Samo...... (See Lyman, William W., assignor.) <br> Same...... (See Wilcox, D. C., assignor.) |
|  | Meriden Cutlery Company. (See Fosket, William, assig |
| $\begin{aligned} & 81,926 \\ & 81,283 \end{aligned}$ | Meriman, Emelie J., New York, N. Y. Corset. (Antedated Sept. 4, 1863) ...... |
|  | Merlett, John, assignor to self and John Smalley, Bound Brook, N. J. Breechloading fire-arm. (Antedated Aug. 7. 1968) |
| 77,511 | Merrell, Jay C., Medina, N. Y. Wash-boiler |
| $\begin{aligned} & 83,985 \\ & 73,452 \end{aligned}$ | Merrell, William, Kent, Ohio. Iron fence post |
|  | Merrell, William G., assignor to self and Cyrenus Wheeler, jr., Anb Harvester rako. |
| 75, 945 | Merriam, Charles, and Curtis O. Luce, assignors to selves and Julius C. Higgins, Brandon, Vt. Hand stamp. |
| $\begin{aligned} & 81,522 \\ & 85,018 \end{aligned}$ | Merriam, D. H., Fitchburg, Mass. Stone-cutting machine |
|  | Merrick, J. M., jr., assignor to the New England Vulcanite IIide Company, Boston, Mass. Material for the manufacture of boxes, picture frames, buttons, inkstands, insulators, and other artieles |
| 78, 675 | Merriek, J. Vanghan and W. H., Philadelphia, Pa. Hoisting app Same...... (See Joy, David, assignor.) |
| 84, 130 | Merrick, Silas, New Brighton, Pa. Conlin |
| 76,495$.73,624$ | Merrick, William H., Pliiladelphia, Pa. Ap |
|  | Merrifield, Charles E., Indianapolis, Ind. Gate latch |
| 80, 649 | Merrill, Benjamin F., West Lebanon, N. M. Gaug |
| :78, 676 | Merrill, E. H. and II E., Akron, Ohio. Apparatus for |
| 75, 640 | Merrill, Elijah W., West Buxton, Mainc. Harvester |
| 82,145 | Merrill, Genrge, Newburyport, Mass. Carving |
| 82, 430 | Merrill, Georgo, assignor to Samuel Blish, Newburyport, Mass. Ca cline. |
|  | Merrill, George, and W. II. Jackson. (Sce J |
| 82, 735 | Merrill, Helem, New York, N. Y. Filter for saccharine and other liquids. (Antedated Sept. 30, 1868) <br> Merrill, Henry, et ct. (See Eddy, Rollin S., assiguor.) <br> Same ..... (See Smith \& Eddy, assignors.) |
| 77, 069 | Merrill, Ithamar B., Dexter, Me. Blaekiug for 1 |
| 83,07874,763 | Mertill, Joshna, Boston, Mass. Machine for bending |
|  | Merrill, Mary, Marengo, mll Knifo and fork seourer |
| 78, 000 | Merrill, Rufus S., assignor to self, Levi Liscom, and William Lineoln, Boston, Mass. Bridce |
| 79, 488 | Merrill, Rufus S., assignor to self and William Carleton, Boston, Mass. Lamp burner. |
| 73, 912 | Merrill, R. S., and William Carleton, Boston, Mas |
|  | Merrill, Rufus Spaulding, et al. (See Richmann, Christian, assignor. Same...... (See Fowle, Joseph W., assignor.) |
|  | Merrill, Rufus S., and William Lincoln. (See Liseom, Levi, assignor.) |
| 83, 872 | Merrill, S. I., assignor to D. U. Young and M. C. Merrill, Ealmouth, Me. Medical plaster |
| 75, 691 | Merrill, S. T., Beloit, Wis. Bleaching paper |
|  | Merrimae Loom Company. (See Jackson \& Merrill, assignors.) |
| $\begin{aligned} & 78,225 \\ & 84,749 \\ & 74,569 \end{aligned}$ | Merriman, Alanson II., New Britain, Conn. I'ress spiudle adjus |
|  | Merriman, ITenry, Blonmington, Ill. Coal chuto |
|  | Merriman, John A., Chicago, Inl. Corn slelle |
| 81, 303 | Merritt, Burlin T., and Henry E. Hull. (See Inll \& Merritt.) |
|  |  |

Date.

Mar. 3, 1868.
Jan. $7,1868$.

Apr. 7, 1868
Dec. 29, 1868.
July 28, 1868.
May 5, 1868.
Apr. 28, 1808.
Mar. 3, 1868.

May 5, 1868
Jan. 7, 1868.

Dec. 22, 1868.
Apr. 21, 1868.

Sopt. 8, 1868
Aug. 18, 1868
May 5, 1868.
Nov. 10, 1868.
Jan. 21, 1868
Mar. 24, 1868
Aug. 25, 1868.

Dec. 15, 1858
June 9, 1863
Nov. 17, 1868
Apr. 7, 1868
Jall. 21, 1868.
Aug. 4, 1868.
Junio 9, 1868.
Mar. 17, 1868.
Sept. 15, 1868.
Sept. 22, 1868.

Oct. 6, 1868.

Apr. 21, 1868.
Oct. 13, 1868.
Fub. 25, 1868.
May $19,1868$.
June 30, 1868.
Jan. 28, 1868.

Nov. 10, 1868.
Mar. 17, 1868.
May 26, 1868.
Dec. $8,1868$.
Feb. 18, 1868.
Aug. 25, 1868

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residenco, and invention or diseovery. |
| :---: | :---: |
| 76, 792 | Merritt, |
|  | Merrynan, Joseph M... and William C. Bartlit. (See Bartlit \& Merryman.) Morsean W Thd Amos Shipler (See Shipley \& Mersereaul) |
| 2,973 | Mershon, A. H., Philadelphia, Pa. Furnace door:-.................... (Design) |
| 77,512 | Mershou, Albert H., Philadelphia, Pa. Dismper for hot air furnaces |
|  | Mersiek, E. F., et al. (See I3radley, F. A., assignor.) |
| 84, 958 | Mervesp, J. J., New York, N. Y. Horse |
|  | Messenger, Charles, Cleveland, Ohio. Di |
| 74, 928 | Messenger, Q. F., Easton, Pa. Corn harvester |
| 73, 741 | Metealf, George, Leland, Ill. Brick maehino. |
| 79, 490 | Metcalt, Jamos A. Lawrence, Mass. Shuttle |
| 78, 677 | Metealf, Martin, Grand Rapids, Mich. Machino for grooving and swaging sheet |
| 81, 809 | Same...... Hot-air furn |
| 73, 254 | Metealf, Oliver, Salem, Ind. Animal |
| 81,927 | Metherell, John, Rockford, Ill. Millstone |
|  | Metropolitan Rotary Engino Company. (See Millochau, Adolph, assignor.) (Reissue.) |
|  | Metropolitan Washing Machine Company. (See Spaulding \& Scott, assignors.) (Reissue.) |
|  |  |
| 79,489 | Mets, E., assignor to self and A. Cram, Rochester, N. I. Wood bending machine |
| 82, 860 | Metten, George R., Cleveland, Ohio. Meehanial movemen |
| 77, 513 |  |
| 82, 018 | Metzler, Henry T., assignor to Louisa Metzler, New York, N. X. Sv |
| 78,678 | Meyendorff, Adolph A., New York, N. Y. Distilling ap |
| 2,916 | Meyer, Charlos T., assiguor to Edward C. Sampson, Bergen, N. J., Tloor oil |
| 2,917 | Same . . . . . Carpet or floor oil cloth pattern............ . . . . . . . . . . (Design). |
| 2,918 | Samo.................. samo........................................ (Design).. |
| 2,974 | Same...... Tloor cloth pattern....................................... (Dosign).. |
| 2,975 | Same ............ same . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) - |
| 3, 036 | Samo......Floor oil eloth pattern................................... (Design).. |
| 3,037 | Same............same.............................................. (Design). |
| 3, 038 | Same............same.............................................. . (Design) . |
| 3, 039 | Same........... . samo............................................. . (Design) . |
| 3, 088 | (Design) - |
| 3,089 | Same........... .samo............................................... (Design). |
| 3,090 |  |
| 3, 091 | (Design).- |
| 3,092 | Samo............samo...-........................................... (Design) . |
| 3, 093 | Samo............same .............................................. (Design).. |
| 3, 161 | Same..... . Floor oil cloth........................................... (Design) - |
| 3, 162 | Same............samo............................................... (Design).. |
| 3,163 | Same ............ same............................................... (Design).. |
| 3,248 | Same..... . Floor cloth pattern...................................... (Design) .. |
| 3,293 | Same ............ same.............................................. (Design).. |
| 3, 294 | Same............ same............................................... . (Design) . |
| 3,295 | Same........... same ....................................-....... . (Design) - |
| 2,966 | Meyer, Frederick, Newark, N. J. Machine for grinding seale pivots (Reissue) . . |
| 76, 226 | Meyer, Henry, Grafton, Wis. Machine for dressing |
| 82, 019 | Meyer, Henry, Riehmond, Ind. Stovepipe drum. |
| 83, 986 | Myer, Isaae T., and James F. J. Guning, New York, N. Y. Hoop |
| 81, 189 | Meyer, Jacob, Bloom Township, Ohio. Shovel plow |
| 79, 849 | Meyer, John, Portland, Maine. Maehine for separating irou from sus |
|  | Meyer, L. Otto P., Newtown, Conu. Vuleanizing India-rubber and other gums. (Extension) |
|  | Same......Treating caoutchouc and other vulcanizablo gums. (Extension) |
| 78,308 | Meyer, Martin, Philadelphia, Pa. Refrigerator |
| 3. 209 | Meyer, Victor, assiguor to Edward C. Sampson, Kearney, N. J. Floor-cloth pattern.................................................................................... (Design). |
| 3,210 |  |
| 81, 190 | Meyer-- Berek A., assignor to Alfred Mellor and II. N. Rittenhouse, Prussia. Article of food for the siek. |
| 82, 020 | Meyercordt, Philipp, Chioago, Ill. Sewer pi |
| 81, 191 | Meyers, Nicholas, assignor to E. L. Chamberlayne and S. C. Pomeroy, Buffalo, N. Y. Sowing machino.. |
| 83, 398 | Same |
| 84, 959 |  |
| 73, 543 | Michael, Willian E., assignor to self and Abraham Setley, New Holland, Pa. Means for stuffing seats. |
| 84, 204 | Michel, A., assignor to self, James S. Harman, and Napoleon Moisan, St. Louis, Mo. Wash boiler |
| 76, 933 | Miehel, F. P., Rochester, N. Y. Pump piston. (Antedated April 14, 1868) |
| 80, 650 | Miehell, Lucius E., Cincinnati, Ohio. Curtain fix |

Daze.

Apr. 14, 1868,
Mar. 31, 1868. May 5, 1868.
Dec. 15, 1868.
Nov. $24,1868$.
Feb. 20, 1868.
Jan. 28, 1868.
June 30, 1868.
June 9, 1868.
Sept. 1, 1868.
Jan. 14, 1868.
Sept. 8,1868.

June 30, 1868.
Oct. 6, 1868.

May 5, 1808.
Sopt. 8, 1868.
June 9, 1868.
Feb. 4, 1858.
Feb. 4, 1868
Feb. 4, 1868
Mar. 31, 1868
Mar. 31, 1868.
May 12, 1868
May 12, 1868.
May 12, 186s.
May 12, 1868.
June 30, 1868.
June 30, 1868.
June 30, 1868.
June 30, 1868.
Junc 30, 1868.
June 30, 1868.
Aug. 25, 1868.
Aug. 25, 1868.
Aug. 25, 1868.
Nov. 17, 1868
Dee. 15, 1868.
Dec. 15, 1868
Dee. 15, 1868 Juno 2, 1868. Mar. 31, 1868. Sept. 8, 1868. Nov. 10, 1868. Aug. 18, 1868 July $14,1868$.
Feb. 10, 1868.
Mar. 26, 1868.
May 26, 1868.
Sept. 22, 1868.
Aug. 18, 1868.
Sept. 8, 1868.
Ang. 18, 1868
Oct. 27, 1868
Dee. 15, 1868.
Jan. 21, 1868.
Nov. 17, 1868.
Apr. 21, 1868.
Aug. 4, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. |
| :---: | :---: |
|  | Michie, Peter S. (See Alcxander, Johu F., assignor.) |
| 81,810 | Middleton, Johu L., Zanesville, Ohio. Churn |
|  | Miduleton, Reuben S., and Menry Rothfelder. (S'ee Recd, G. W., assignor.) |
| 83, 195 | Middleton, William A., Harrisburg, Pa. Bracket and ra |
| 80,870 | Same....... (Sce Nebinger, G. R., assignor.) <br> Middletoin, Villian A. and John A. Haller, Marrisbure, Pa. Horso |
|  | Middletown Plate Company. (See Holmes, Robert, assignor.) <br> Middletown Tool Company. (See Henshaw, J. R. assignor). <br> (Reissue.) |
| 73,02〕 | Mieler, John G., I'lymouth, Mich. Sleig |
| 77, 901 | Migeon, A. F., assignor to the Union Hardware Company, Wolcottsville, Comn Skate |
| 82, 021 | Mighell, Reuben C., Plano, Ill. Gate |
| 73, 824 | Mignault, John B., assignor to self and Alfred B. Iall, Boston, Mass. Filc-cntting machine. |
| 84, 566 | Milbank, Isaac M.. Greenfield Hill. Conn. Breeelh-loading fire-arm. |
|  | Milburn, Joseph P., Washington. D. C. T |
| 82, 540 | Milburn, N. L., St. Louis, Mo. Elovator |
| 77,514 | Miles, Charles M., and George W. Remsen, Lincoln, I)el. Lamp |
| 82, 973 | Miles, Charles W., (See Beecher, Smmuel N., assignor.) |
| 80, 082 | Miles, Frederick B., assignor to Bemont \& Dougherty, Philadclphia, Pa. Valve gear for steam hammer |
| 73, 913 | Miles, Mason, M., Aurora, M1. Vapor inhaler |
| 73, 453 | Miles, Purches, assignor to Theodme Mace, New York, N. Y. Sansage |
| 78,114 | Milholland, John, New Coneord, Ohio. Horso hay Milks, Giles, et al. (See Pease, C. C., assimuor.) |
| 79,077 | Millar, Carl, Sandoval, Ill. Smut machin |
|  | Millar, Charles C., and Robert M. Barthchnoss. (See Barthelmess \& Millar.) |
| 85, 467 | Millard, Joseph, Winslow, Ind. Cultivator |
| 74, 570 | Millard, S. A., Clayville, N. Y. Process of rolling |
| 80, 083 | Samo..... . Machine for rolling ho |
| 78,810 | Miller, Abraham S., Bluffton, Lnd. Machine for scutching flax. (Antedated June 5, 1868) |
| 78, 811 | Samc..... Machino for breaking flax. (Antedated June 5, 1868) |
| 76,227 | Miller, Alcxander, and C. Mason, Chicago, Ill. Wood parement Miller, August, and Fitch Raymond. (See Raymond \& Miller.) |
|  | Same..................................same. |
| 79, 770 | Miller, Benjamin F.. New York, N. Y. Paven |
|  | Miller, Charles, et al. (See Wack, Charles, assiguor.) |
| 79, 14, | Niller, Charles E., Indianapolis, Ind. Wash boiler |
| 80, 651 | Samo |
| 75,444 | Miller, Charles G., Springfield, Ohio. Harvester |
| 78, 309 | Millcr, Charles G., assignor to S. M. Spencer \& Company, Brattleboro', Vt. Bench drill |
| 81, 394 | Miller, Charles I., Buffalo, N. X. Trace bucklo |
| 81,395 | Same.....- Bridle bi |
| 12, 869 | Miller, Charles J., Philadelphia, Pa. |
| 76, 229 | Miller, David, Allegheny City, Pa. Paint can |
| 78, 310 | Miller, D. K., Reading, Pa. Pernutation |
| 75, 946 | Miller, D. L., Madison, N. J. Pulley for hoisting apparatus. (Intedated March 20,1868 ) |
|  | Miller, David L., and Charles Brown. (See Brown \& Miller.) |
| 79,491 | Miller, David S., West Alexandria, Ohio. Chnurn das |
|  | Miller, E., \& Company. (Sce Marcy, J. J., assignor.) Same..... (See Langston, Thomas, assimor.) |
|  | Same...... (See Langston, Thomas, assignor.) |
|  | Same...... (See Seymour, Fredcrick J., assignor.) |
| 75, 641 | Miller, Edmund B., Greenville, Tenin. Machine for stuffi |
|  | Miller, Edward. (See Pomeroy, Norman W., assignor:) Miller, E. L, et al (See Goodes, E A , assicnor, |
|  | Miller, E. L., et al. (See Goodes, E. A., assignor.) Same................................ |
|  | Same ................... . - same. |
| 76,095 | Miller, E. S., B |
| 75, 289 | Miller, Francis Bowyor, New South Wales. Process of treating gold bullion to tourheu and refine it |
| 77,637 | Miller, Frank, Tndianola, Ill. Bolt cutter |
| 78, 226 | Miller, F. C., Evans Center, N. Y. Portable oven. |
| 76, 934 | Miller, F. J., Brooklyn, N. X. Coustruction of ico pitchers. (Antedatod April 10, 1868). |
| 80,557 | Miller, Fred J., Brooklyn, N. Y. Spoaking trumpet |
|  | Miller, George, Providence, R. I. Manfacturing leather banding for machinery......................................................................... (Extension). |
| 77, 515 | Miller, G. L., Pontiac, Mich. Traco hook |
| 77, 638 | Miller, G. L., DeWitt, N. Y. Window-curtain |
| 81, 19\% | Same......Car brak |
|  | Miller, George L. (Sce Ustick, Stephon, assignor.) |
|  | Miller, G. W., West Moriden, Conn. 'tool for monding belts. |
| 76,648 | Miller, G. W., and J. D. Stephens, Scranton, Pa. Hnb fasteming |
| 75, 181 | Miller, Henry J., N ashua, N. H. Boot jack and blackin |
|  | Miller, H. J., et al. (Sea Sanderson \& S |
|  | Miller, Howard, and Edward Coogan. (See Coogau \& Miller.) |

## Date.

Sept. 1, 1868.
Oct. 20, 1868.
Ang. 11, 1868.

Jan. 7, 1868.
May 12, 1868.
Sopt. 8, 186.
Jan. 28, 1868.
Dec. 1, 186\%.
Mar. 10, 1368.
Sept. 29, 1868.
May 5, 1868.
Oct. 13, 1868.
July 21, 1868.
Jan. 28, 1868.
Jan. 21, 1863.
May 19, 1868.
June $23,1868$.
Dec. 29, 1868.
Fob. 18, 1868. July 21, 1868.

June 9, 1868.
June 9, 186.
Mar. 31, 1868.

July 7, 1868.
Juno 23, 1868.
Aug. 4, 1868. Mar. $10,1868$.

May 26, 1863.
Aug. 22, 1868.
Aug. 25, 1868.
June 28, 1868.
Mar. 31, 1868.
May $26,1868$.
Mar. 24, 1868.
Juиo 30, 1868.

Mar. 17, 1868.

Mar. 31, 1868.
Mar. 10, 1868
May 5, 1868.
May 26, 1868.
Apr. 21, 1868.
Aug. 4, 1866.
May 5, 1868.
May 5, 1868
May 5, 1868
Aug. 18, 1868
Aug. 4, 1868.
May 12, 1868
Apr. 14, 186.
Mar. 3, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

83,522
83,523
84, 367
84, 368
77, 070
80, 757
75, 947
81,928
82, 337
73, 625
81, 929
85, 323
78, 311
73, 361
73,362
73, 363
73, 364
78, 389
74, 929
84, 432
84, 433
77, 306
73, 742
73, 626
-75, 642

85,118
77, 516
77, 829
76, 228
81, 811
81, 812
83,524
84, 960
74,842
78,227

73, 454
7\%, 204
77, 902
77, 748
78, 115
81,664

80, 199
83, 079
78, 883
75, 445
75, 040
74, 239

3, 131
84, 131
80, 362

82, 431
82, 432
84, 205
76, 793
73, 627
78, 884

Name, residence, and invention or discovery.

Miller, Jacob, Washington, Pa. Machine for forming the hook or eyc on pot bails, \&c.
Same. .. . . Machine for bending oval handles for tin waro
Miller, Jacob, Canton, Ohio. Threshing and grain separating machino Same.... . Dropping platform for harvesters.
Miller, James, Allegheny City, Pa. Apparatus for distilling petroleum
Miller, J. D., Springfield, Ohio. Hames fastoner
Miller, James K., New York, N. Y. Post holo borer
Millor, John C., Bushnell, Ill. Brick machine
Miller, John C., Danville, Ky. Side-saddle-tree.
Miller, John H., Vernon, Ind. Animal trap.
Miller, John H., Oskaloosa, Iowa. Plane for cutting blind slais.
Miller, J. L., et al. (See Slaglo, Miller \& Hoy.)
Miller, Joln M., Cincinnati, Ohio. Carriage spring
Miller, John P., Somerset, Pa. Curtain fixtures
Miller, Joseph $\Lambda$., New York, N. Y. Ash sifter Same..... Apparatus for singeing cotton cloth.
Miller, Joseph A., Providonce, R. I. Steam generator Same.
. . same
Miller, Joseph B., and Rollin C. Welch. (See Welch \& Miller.)
Miller, Levi, Johnsville, Ohio. Gate
Miller, Lewis, $A$ kron, Olio. Harvester rake.
Same-.-. . Harrester
harvester guard fingers
Miller, L. C., Humphrey, N. Y. Spring brace for carriages, \&c.
Millor, L. H., Baltimore, Md. Perimatation lock
Miller, Nicholas B., Orion, Mich. Harrow.
Miller, Peter L., Mechanicsburg, Pa. Gato.
Miller, R. S., and R. M. Gano. (See Gano \& Miller.)
Miller, Samuel, et. al. (See Gates, Iloyd \& Miller.)
Miller, S. H. (See Kerr, John and Dayton C., assignors.)
Miller, Samnel J., and Luna Wright, Economy, Ind. Corn NJow
Miller, Samuel N., Dedham, Mass. Compound anchor. Miller, Sarah P. P., Beaver, Pa. Basket
Miller, Warner, assignor to the National Wood Fiber Company, Herkiner, N. $\bar{Y}$.
Machine for making paper pulp.
Miller, Warren P., New York, N. X. Attaching cross-cut saws to their handles Same.-...- Saw
same..... - same
Same...... Gauge for circular saws
Miller, William, Chieopee, Mass. Knife cleaner
Miller, William, assignor to self and John Boyle, Chicopee, Mass. Animal trap Miller, William, John J. Becker, and Abraham Simeox, assignors to selves and Jaeob Miller, Fort Wayne, Ind. Peg fioat. (Antedated May 15, 1868). Miller, William B. (See Dunn, Dangerfield, assignor.)
Miller, Willian Hartley, Philadelphia, Pa. Piston-rod packing .....................
Same.-.... Packing for engines, punps, \&c.
Same ... . . Manufacture of packing for steam-engines, \&c. . . . . . . . . . . . . . . . . .
Same.
Miller, W illiam J., Gettysburg, Pa. Shutter fastoning. Miller, W. J., Washington, D.C. Sash and shutter fastening Miller, W. K., and Clement Russell. (See Russell \& Miller.) Millerd, James C., River Point, R. I. Expanding mandrel, or boring tool Millett, J. S., and Erastus Woodward. (See Woodward \& Millett.) Millett, Needham C. (See Wingate, D. B., assignor.)
Milligan, George B., assignor to P. Poultney, Baltimore, Md. Horso shoe Milligan, James, and Jaeob C. Horton. (See Horton \& Milligan.) Milligan, John F., St. Louis, Mo. Baling press.
Millikan, John S., Thorntown, Ind. Truck for moving houses.
Milliken, J. E., Bridgeton, Maino. Bedstead fastening.
Milliken, William, Cimbridge, Mass. Combined book cover and stand
Millington, Norman, Shaftsbury, Vt. Maehine for graduating rules
Millington, Norman, and Demnis J. George, deceased, by L. J. Mattison, S. M. George and A. B. Gardner, executors, Shaftsbury, Vt. Machine for graduating carpenters' squares (Extension)
Millochan, Adolph, assignor through mesue assignments to the Metropolitan Rotary Engine Company, New York, N. Y Rotary steam engine.... (Reissue)
Millochau, A., assignor to self, Jules Marcelin, Louis A. Geyer and Edwin D. Barnes, New York, N. Y. Manufacturo of lampblack
Mills, Amzi C., Oaktown, Ind. Corn sheller
Mills, Benjamin T. (Sce Noble, George H., assionor.)
Mills, Benjamin Tr., and Seldon L. Crockett. (See Croekett \& Mills.)
Mills, C. W., et al. (See Chichester, Lewis S., assignor.)
Samo...... (See Taggart, Chichester \& Mills) .
(Reisstre.)
Mills, C. W., and Lewis S. Chichester, assignors to selves and Georgo II. Nichols, Brooklyn, N. Y. Grain separator. (Antedated Sept. 14, 1868)

## Same..... . Grain dryer. (Antedated Sept. 10, 1868)

Mills, Ezekiel, Baltimore, Mrl. Sheet metal roofing
Mills, James R., Macon City, Mo. Weather strip
Mills, Joln D., Dayton, Ohio. Paint compound
Mills, Mortimer Birdsill, De Witt, Iowa. Sewing horse

Date.

Oct. 27, 1868.
Oct. 27, 1868.
Nov. 24, 1868.
Nov. 24, 1868.
Apr. 21, 1868.
Ang. 4, 1868.
Mar. 24, 1868.
Sopt. 8, 1868.
Sept. 22, 1868.
Jan. 21, 1868.
Sept. 8, 1868.
Dec. 29, 1868.
Мау 26, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
May 26, 1868.
Feb. 25, 1868.
Nov. 24, 1.868.
Nov. 24, 1868.
Apr. 28, 1868.
Jan. 28, 1868.
Jan. 21, 1868.
Mar. 17, 1868.

Dec. 22, 1868.
Nov. 23, 1868.
May 5, 1868.
May 12, 1868. Mar. 31, 1868. Sept. 1, 1868. Sept. 1, 1868.
Oct. 27, 1868.
Dec. 15, 1868.
Feb. 25, 1868.
May 26, 1868.
Jan. 21, 1868.
Apr. 28, 1868.
May 12, 1868.
May 12, 1868.
May 19, 1868.
Sept. 1, 1868.

July 21, 1868.
Oct. 13, 1868.
June 16, 1868.
Mar. $10,1868$.
Mar. 3, 1868.
Feb. 11, 1868.

Aug. 6, $1,868$.
Sept. 22, 1868.
Nov. 17, 1868.
July 28, 1.868.

Sept. 22, 1868.
Sept. 22, 1868.
Nov. 17, 1868.
Apr. 14, 1868.
Jan. 21, 1868.
June 16, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

82, 338
78,81:
77, 071
81, 665
73, 365
77, 639
84, 206
80, 000
78, 752
73, 988
77, 830
85, 324
74, 708
82, 861
82, 260
78, 990
79, 492
80, 494
84, 434
75,949
75, 692
76, 340
77,072
75, 948
80,495

73, 366
74, 843
79, 588
82, 736
81, 396
74,709
76, 496
82, 339
73, 628

3, 056

82, 862
75, 182
80, 831
78, 31

84, 702
76, 794
79, 589
82, 541
75, 041
73, 629
76, 935
78, 313
75,950
74, 571
74, 113
77, 073
74, 114

Namo, residonco, and invontion or discovery.

Mills, P. H., Green's Landing, Mo. Row lock
Mills, Samuel, Clinton, In. Churn
Mills, Simeon, Marlison, Wis. Car coupling
Mills, Thomas and George, Philade, hia, Pa. Machine formaking eandy toys, \&e.
Mills, 'T. S., Kendallsvillo, Ind. Combined drill, roller, and cultivator
Mills, William R., Hartfoíd, Mieh. Mop wringer.
Millward, Frank, et al. (See Nason, Joseph, assignor.)
Millward, Frank, assignor to self, Doxter D. Hardy and Monry C. Dart, Cineimati, Ohio. Oscillating steam encino
Milner, Cyrus, Des Moines, Jowa. Washing machino
Milner, T., Houston, Texas. Circular-saw guide.
Milroy, J. W., Galreston, Ind. Corn and eotton ealtivator Samo...... Revolving-spado plow
Milroy, James W., assignor to self and S. B. Shaner, Galvoston, Ind. Corm and eotton plow.
Milroy, J. W., J. Vauglian, and J. Turley, Galveston, Ind. Soda fountain..... Milroy, James W., and John Cook, Galveston, Ind. Maehino for making diain tiles
Mindeleff, Demetry, Washington, D. C. Manufaeture of artificial stono.
Miner, Albert C., assignor to self and James Guild, Philadelphia, Pa. Railroadear heater
Minges, Simon, Roehestor, N. Y. Wear plato for boots and shoes.
Minifie, James, Baltimore, Ma. Lamp bumer.
Minnich, Simon B., Landisville, Pa. Windlass and horse-power.
Minniss, Thomas S., Meadvillo, Pa. Sad-iron haudle
Minor, Charles M., Bridqeport, and HenryS. Frost, Watertown, Conn., assignors to selves, Augustus N. Woolson, and Anthony G. Davis. Umbrella .
Minor, John A., Middletown, Conn. Feeding mechanism for sewing machines. Samo.....-Illusion toy
Minor, John $\mathrm{V}_{\text {., }}$ and Davil P. Ward, New Bedford, Mass. Carriago hub. .-. . . Minster, William, Washington, D. C. Carpet streteher
Mishler, Benjamin. (Seo Iske, Anthony, assignor.)
Samo . ......................... . . . same.
Mitehel, Willian H., Now York, N. Y. Machinery for eomposing typo. (Extension)
Mitchell \& Allen. (See Milton, Richard H., assignor.)
Mitchell, Allen \& Company. (See Fergison, E., assignor.)
Mitehell, George R., Novada, Col. Stamp mill.
Mitehell. Henry, Raeine, Wis. Wagon compling
Mitehell, Henry, Osborn. Ohio. Corn planter.
Mitchell, James, Philadelphia, Pa. Rotary blower
Mitehell, John B., assignor to self and Perez B. Burnham, Portland, Mo. Hose nozzlo
Mitchell, N. C., Caledonia. Ohio. Beehiro
Mitehell, N. N., Concord, N. C. Carriage polo
Mitchell, R. M., Fort Atkinson, Wis. Grain storer
Mitchell, Rufus S., Elizabeth, Ind. Flour scoop and sifter
Mitchell, Stevenson \& Company. (See Geyser, Jolm 13., assiono
Mitehell, Thomas A. (See Rand, Joseph A., assignor.)
Mitchell, Thomas S., Pittsburg, Pa. Cook stovo
(Design.)
(Designl) Same.... (See Same...-- .-....-........ sime
Same.....- (See Vance \& Smith, assignors.)
Mitchell, W. H., et al. (See Rowe, Miteheil \& Hamill.)
Mitchell, W. H. and J. F., Macomb, Ill. IBroadcast seed sower.
Mix, Edmon L., et al. (See Medvoy, Mugh I., assiguor
(Reissue.)
Mix, John, West Cheshire, Comn. Manufacturing gimlets
Moakley, Francis, and James Sutherland. (See Sntherland \& JLoakley.)
Mock, C. H., assignor to self and Israel Dixon, Quiney, Ill. Gridiron.
Moebs, George, Detroit, Mick. Cigar header
Same...... (See Reiniger, G. Albert, assignor)
(heissue.)
Same

- samo.
(Reissue.)
(Reissue.)
Moffitt, Jolin A., Boston, Mass. Water-proof paint. (Antodated Nov. 25, 1863)
Moffitt, J. R., Clielsea, Mass. Heel casing
Mohler, George, Xates City, 111. Sieve
Same...... Medical eompound.
Mohr, B. F., Miffinburg, Pa. Maehine for boring posts.
Moisan, Napoleon, et al. (See Michel, A., assignor.)
Molby, Horaee, Davisbirg, Mich. Corll harvester
Molineaux, Edward L., Now York, N. Y. Method of preparing laundry blaing. Same ...... Artiele of bluing
Mollenliauer, Edward, assignor to Theorore Riter, New York, N. Y. Appara-
tus for regulating tho position and movements of tho arms of violin players. Molleur, Moses Romual, Chicaso, Ill. Hay press
Monach, James, assignor to solf, Jeffers Hart and Robert Thorp, Philadelphia, Pa. Treating jute fiber-
Monach, James, assignor to self, John Hutehinson and Jeffery Hart, Philadel johia, Pa. Preparing juto yarn
Monee, J. H., Hopkinsville, Ohio. Mannor of working ehurns


## Dato

Sept. 22, 1868.
June 9, 1868. Apr. 21, 1868. Sept. 1, 1868. Jan. 14, 1868.
May 5, 1868.

Nov. 17, 1868.
July 14, 1868.
June 9, 1868. Fob. 4, 1868. May 12, 1868.

Dec. 29, 1868. Feb. 18, 1868.

Oet. 6, 1868. Sept. 15, 1868.

June 16, 1868.
June 30, 1868.
July 23, 1868.
Nov. 24, 1868.
Mar. 24, 1868.
Mar. 17, 1868.
Apr. 7, 1868.
Apr. 21, 1868.
Mar. 24, 1868.
July 28, 1868.

May 13, 1868.

Jan. 14, 1868.
Feb. 25, 1868.
July 7, 1868.
Uct. 6, 1865.
Aug. 25, 1868.
Felb. 18, 1868.
Apr. 7, 1868.
Sept. 22, 1868.
Jan. 21, 1868.

May $26,1868$.

Oct. 6, 1868
Mar. $3,1863$.
Aug. 11, 1868.
May $26,1868$.

Dec. 8, 1868
Apr. 14, 1868
July 7, 1868
Sept. 20, 1868
Mar. 3, 1868.
Jan. 21,1868.
A1r. 21, 1868.
May 26, 1868.
Mar. 2f, 1868
Fcb. 18. 1868
Feb. 4, 1868
A pr. 21, 1868
Feb. 4, 1868

## Alphabetical list of patentecs for the year 1868-Continued.

No.

79, 244
79, 289
83, 873
79, 590
85, 468
77, 749
78,001

77, 245
75, 951
75, 290
73,743

81, 525
78, 167
83, 196

81,526
85, 325
76,795
85, 262
81, 666
73, 991

81, 397
84, 996
77, 903
84,56\%
81,523
85, 019

83, 400
75, 183
81, 398
73, 367
81,524
84, 961
84, 568
77,517
79, 676
84, 207
81, 399
85, 020
7\%, 307
3, 078
76, 497
83, 080
81, 667
78, 813
74, 115
74, 579
75, 952
82, 737
75, 042
74,573
75,953
75, 446
84,503

Monce. J. I.. Hopkinsville, Ohio. Churn
Monce, S. G., Marathou, Ohio. Apparatus for motive power
Monerieff, A., England. Gun earriage. (Patented in England June 4, 1866)
Monouse, Elic, and Louis Duparquet, New York, N. X. Stove grato.

> Samo - - . . Cooking range

Monier, Hypolite, France. Gas burnor
Monnicr, Alfred, Philadelplia, Pa. Process of soparating cobalt and nickel from their ores.
Monod, A. E., et al. (See Grenier, Trancois, assimnor.)
Monroe, Bonjamin, assignor to self, William L. Chadwick and Nathan N. Cole, Bristol, R. I. Car coupling-
Monroe, James F. and Edwin P., Fitohburg, Mass. Apple parer
Monroe, Lang, assignor to solf and Charles G. Sargont, Lowell, Mass. Rack for carding engines.
Monroo, Myron I., Rochester, N. Y. Potato masher.
Montague, C. H., and Charlos Spofiord. (Sce Spofford \& Montague.)
Montague, E. M. (See Ames, Nathan, assignor.)
(Reissuc.)
Montgomery, George B., Winslow, Ind. Saw.
Montgomery, Jas., Croton, N. Y. Car axle and wheel. ( $\Lambda$ ntedated May 16, 1868).
Montgomery, James, Croton Landing, N. X. Beam and girder. (Antedated October 10, 1868)
Montgomory, James, and I. II. Chappell. (Sce Chappell and Montgomery.)
Montgomery, John A., Cranford, N.J. Grindiaç mill. (Antedatod Aug. 15, 1868)
Montomery, Joseph. Chicago, 1ll. Grain eleaner...
Montgomery, Richart, New York, N. Y. Metal beam.
Same..... Machine for corrugating metal
Montgomory, R. and M. J., Now York, N. Y. Bridge.
Montgomery, William. (Sce Mahmin, Stephon, assignor.)
Montier, L., New York, N. Y. Aitificial leather -
Montu, L., and L. Caldera. (See Caldera \& Montu.)
Monumenjal Automatic Gas Machinë Company. (See MoAvoy, Hugh I., assiguor)
(See McAvoy, Hugh L.
Monzert, Loonard, New York, N. Y. Car coupling-
(Reissue.)
Mood, Lynfred, assignor to Titus and Bostwiok, Itliaca, N. Y. Seeding machine. Moody, C. D., assignor to self and Horace Billings, St. Louis, Mo. Car brake or starter. (Antedated April 28, 1868)
Moody, James, Marwick, Mass. Wagon jack.
Moody, Josepli S., Saco, Maine. Lathe ehnck. (Antedated July 23, 1868)
Moody, Loring, Malden, Mass. Spading maoline.
Moody, Moses K. (See Brown, John M., assiguor.)
Same.

- same.

Moody, Rufus, Monmouth, Maino. Hold back.
Moon, Hiram, Red Crock, N. Y. Carriaro.
Moon, Hiram, and De Vitt C. Turner, Red Creok, N. Y. Surplus honey boxes in bee hives. (Antedated Aug. 21, 1868)
Mooney, Greorge, assignor to self, Job Arnold, and James Shaw, jr., Providence, R. I. Manufacture of argand gas burnors

Mooney, George, assignor to sclf, James Shaw, jr., and Job Arnold, Providence, R, I. Gas burner
Mooney, George, assignor to Mooney, Arnold and Shaw, Providence, R. I. Gas socket
Moor, Q. R. and P. and E.I. Patrick. Forest IIill, Ind. Coru planter......
Moore, Albert, and A. D. Howes. South Adams, Mass. Steam globe ralve.
Moore, A. D. (See Bond, Amos, assignor.)
Moore, Androw J., Samuel Bleistein and Samuel J. Shirk, Lebanon, Pa. Method of eutting boots
Moore, Charles, Stratford, Conn, Fruit basket.
Moore, Charles A.; Westorook, Conn. Knife and fork handle.
Same...-. Manufacture of knives and forks
Moore, Charles E., Elizabethport, N. J. Fluid meter.
Moore, C. E., et al. (See Nelson, William, assignor.)
Moore, Edward, Portland, Maine. Badge
(Design)
Moore, E. J., Westfield, N. Y. Churning apparatus
Same. --...-.-........................ . same
Moore, Ferdinand, and Goorge Hastic, Florence, Ind. Apparatus for handling steanboat stages.
Moore, Freoman, assignor to solf and J. H. Tressel, Carrollton, Ohio. Beehive.
Moore, F. D., Edray, West Va. Hand spinning maehine.
Moore, George R., Lyons, Iowa. Machime for eorrugating shect metal.
Same..... . Valve for water pipes.
Same...... Water meter.
Moore, Malsey, assignor to self and Aaron W. Knapp, Bangall, N. X. Air eondensing apparatus
Moore, H. A., E. Otis, and S. C. Frink, Intiamapolis, Ind. Box for strcet stop cocks.
Moore H. C., assignor to self and $\bar{P}$. Derby, Springfiold, Mass. Ice earriage Moore, H. K., et cel. (See Hargrave, Thomas C.. assismor.) ILoore, Jacob B., New York, N. Y. Window-shade fixture
Moore, James, and William Mathews. (See Matthews \& Moore.)
Moore, Jasper P., assignor through mesne assignments to A. B. Uline and G. G. Kidder, Boston, Mass. Seal bolt for railway cars.

## Date.

June 23, 1868.
June 23, 1868.
Nov. 10, 1868.
July 7, 1868.
Dec. 29, 1868.
May 12, 1868.
May 19, 1868.

June 23, 1868.
Mar. 24, 1868.
Mar. 10, 1868.
Jan. 23, 1868.

Aug. 25, 1868.
June 2, 1868.
Oct. 20, 1868.
Aug. 25, 1868
Dec. 29, 1868.
Apr. 14, 1868.
Dec. 22, 1868.
Sept. 1, 1868.
Feb. 4, 1868.

Ang. 25, 1868.
Nof. 24, 1868.
May 12, 1868.
Deo. 1, 1868.
Aug. 25, 1868.
Dec. 15, 1868.

Oct. 27,1868.
Mar. 3, 1868.
Aug. 25, 1868.
Jan. 14, 1868.
Aug. 25, 1868.
Dec. 15, 1868
Dec. 1, 1868.
May 5, 1868.

July 7, 1868.
ラov. 17, 1868.
Aug. 25, 1868.
Dec. 15, 1868.
Apr. 28, 1868.
June 30, 1868.
Apr. 7, 1868.
Oet. 13, 1868.
Sept. 1, 1868. June 9, 1868. Feb. 4, 1868.
Feb. 18, 1868.
Mar. 24, 1868.
Oct. 16, 1868.
Mar. 3, 1868.
Feb. 18, 1868.
Min: 24, 1868.
Mar. 10, 1868.

Dec. $1,1868$.

## Alphabetieal list of patentees for the year 1865-Continued.

No.

74,574 80, 084 76, 498

77, 074
77, 397
78, 814
3, 200
74, 240
85, 326
76, 230
74, 710
83, 721

80,652
78, 116
84, 703
73, 989

83,874
73, 368
78, 753
77, 398
73, 630
74,575
83, 525
78,885
82, 974
74, 711
3, 137

* 21,075

82, 733
80, 200
2, 861
76, 231
84, 839
80,653
83, 031
85, 119
75, 954
82, 975
84, 750

85, 235
75,562
83, 987
73, 369
3, 151
83, 782
77, 750
3. 219

73, 990
80, 281
74, 712
79, 291
79, 677
84, 297
75, 693
75, 694
-5, 695
80, 758
$80,7.58$
83,875
\%4, 401

Moore, John, Madison, Ind. Combined cane mill and steam-engine.
Moore, John A., Providenee, R. I. Roofing coment.
Moore, J. C., Mardison, Ind. Sleigh ranners and tho modo of attaehing them to the axles of velricles.
Moore, J. C., and Georgo B. Garlinghouse. (See Garlinghonso \& Moore.)
Moore, John H., Binghamton, N. Y. Method of moving buildings.
Moore, J. H., and Willian Johnston, assignors to Henry Hale \& Company, New Haven, Conn. Window holder for earriagres
Moore, John P., Morning Viow, Ky. Grinding mill
Moore, Joseph, San Eraneiseo, Cal. Frietion pavvl
$\qquad$
$\qquad$
$\qquad$ ore, Jose
. (Roissue) Same.

Car brake.
.samo
Joore, Joseph W....................................................... Paint brush.
Moore, Josephus, Bushnell, In. Corn planter
Moore, Joshaa B. and Erwin G., MeDonough, N. J. Apparatus for unloading stollo
Moore, J. S., ct al. (Sec Cox, Noedham, assignor.)
Moore, Levi, Baraboo, Wis. Clay mill
Moore, Marmaduke, et al. (Sec Perrin, Abram, assignor.)
Moore, Marquis D., Brooklyn, N. Y. Button.
Moore, Mary A., Lisbon, Ill. Catamenial saek. (Antedated Nov. 23, 1868)
Moore, Oel B., Walled Lake, Mich. Fruit nieker.
Moore, Osear C., administrat or of Samuel Yarion, deeeased. (See Yarion, Stmnel.)
Moore, O. K., and D. W. Perry. (Sce Perry \& Joore.)
Moore, Samuel C., Boston, Mass. Lamp
Same ...... (Sce Sagendorph, Lowis L., assignor.)
Moore, Stillman. (Sce Munger, George N., assignor.)
Moore, Thomas, Now York, N.' Y. Horso collar
Moore, Thomas B., and Garrett Do Bow, Bridesburg, Pa. Bed bottom
Moore, Thomas ML., Newton, N. J. Car coupling
Moore, T. W., New York, N. X. Culinary appantus
Moore, Thomas V., Riehmond, Ind. Bolt cutter
Same.
same
Moore, Willian, Kokomo, Ind. Water indicator for steam generators.
Samo-.... Low-water indieator.
Same........ (S'ce Custer, George, assignor.)
Moore, William H., Blooming Grove, Ind. Corn planter
Moore, W. N., Neenah, Wis. Stove ........................................... (Desicu).
Moorehead, James C., and William W. Eiliott, New Malrid, Mo. Feather renovator
Moorehead, James MI, Brooklyn, N. ․ Clamp for iron struetures
Mora, Antonio L., New Fork, N. Y. Bureat trank.
Moran, J. J., et al. (See Robbins, Monry R., assignor.)
Morandi, Franeis, Boston, Mass. Lantern.
(Reissue)
Same-..... Malden, Mass. Culinary apparatus.
Morehead, Varren, Parkersburg, West Va. Extension ladder
Morehouse, A., and A. R. Њeath, Danbury, Conn. Tnek creaser for sewing machines
Morehonse, William, Buffalo, N. Y. Nut-loeking devico Same....... Making horseslioes
Moret, Jules, and C. L. Taverdon. (Sec Taverdon \& Moret.)
Morey, A. F., Greenbush, Ill. Barrel truck.
Morey, Albert G., Chicago, Ill. Mattress. (Antedated Sept. 30, 1868)
Morey, L. E., Vandalia, Ill. Plow attachment, (doubletree)
Morford, W. II., et al. (S'ee Goodes, E. A., assignor.)
Samo. ............................... samo.
Same-................................ same.
Morgan, A. O., assignor to self and William B. Loller, Nashville, Ohio. Tire tightener
Morgan, Bevel S., Delhi, Iowa. Clothes pounder
Morgan, Charles, Waumandeo, Wis. Hames fastening
Morgan, David R., San Franeiseo, Cal. Eye merlieine.
Morgan, Dayton, Chillicotho, Olio. Bust of Frederiek Donglas........ (Design)
Morgan, Geiry, Nowport, N. H. Wind elevator of grain
Morgan, Henry, Springfield, Mass. Clothes-line holder.
Morgan, Mirick, deeeased, assignor, through his administratrix, to Adam R. Reese, Phillipslurg, N. J. Horse rako..................................(Roissue).
Morgan, M. S., assignor to self and Geo. C. Coffee, Clintonville, Ind. Stove drum. Morgan, William B., and I. H. Torrell, Antioch, Ind. Wagon brako.
Morgenstern, Wim., assignor to Ernst Von Jeinsen, Hartiord, Conn. Breechloading fire-arm
Morgenstern, William, assignor to Herman Funke, Hartfort, Conm. Breeehloarling fre-arm
Morgey, William, Wilmington, Del. Bending fifth wheels.
Morloy, F. A., Syracuse, N. Y. Potato digger.
Morrell, James A., assignor to self and Istae simmons, Chieago, nil. Vaginal syringe.
Samo...... Uterine supporter.
Samo......Abdominal supporter
Morrett, John W., and Hiran Watts, Shepherdstown, Pa. Roller wagon skein.
Morrill, L. H., West Cumberlant, Me. Horse rako
Morris, Daviu, Bartlett, Ohio. Implement for extracting nails.

Date.

Felb. 18, 1868. July 21, 1868.

April 7, 1868.
Apr. 21, 1868
Apr. 28, 1868.
June 9, 1868.
Nov. 17, 1868.
Feb. 11, 1868.
Dee. 29, 1868
Minl. 31, 1868
Feb. 18, 1868
Nov. 3, 1868
Aug. 4, 1868.
May 19, 1868.
Dec. 8, 1868.
Feb. 4, 1868.

Nov. 10, 1868.

Jan. 14, 1868.
Jume 9, 1868.
Apr. 28, 1868.
Jan. 21, 1868.
Fob. 18, 1868.
Oet. 27, 1868.
Juno 16, 1868.
Oct. 13, 1868.
Feb. 18, 1868. July $28,1868$.

Apr. 21, 1868.
Oct. 6, 1868. July 21, 1868.

Feb. 11, 1868.
Nit. 31, 1868.
vec. $8,186$.
Ang. 4, 1868.
Oct. $13,1868$.
Dee. 22, 1868.
Mar. 24, 1868.
Oet. 13, 1868.
Dee. 8,1868.

Dee. $22,1868$.
Mar. 17, 2868.
Nov. 10, 1868.
Jan. 14, 1868.
Aug. 4, 1868.
Nov. 3, 1868. May 12, 1868.

Déc. 1, 1868.
Feb. 4, 1868
July 21, 1868.
Feb. 18, 1863.
June 23, 1868.
Jaly 7, 1868.
Nov. 24, 1868.
Mar. 17, 1868.
Mar. 17, 1868.
Mar. 17, 1868.
Aug. 4, 1868.
Nov. 10, 1868
Felb. 11,1868.

## Alphabetical list of patentecs for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 80, 001 | Morris, David, Bartlett, Ohio. Charn motion.............................. | July $14,1868$. <br> Feb. 4, 1868. <br> Apr. 14, 1868. <br> Nov. 10, 1868. |
| 74, 116 | Morris, George M., and John McCreary, Cohoes, N. Y. Lubricator for loose pullcys |  |
| 76, 976 | Morris, LI, Clinton, |  |
| 83,988 | Morris, Issachar, Cliuton, Ill. Fire ki |  |
| 84, 435 | Morris, John H., and Thomas B. Harrison, Maquoketa, Iowa. Hand corn planter. |  |
| $\begin{aligned} & 83,520 \\ & 8,527 \\ & 73,637 \end{aligned}$ | (Antedated | $\begin{aligned} & \text { Nov. } 24,1868 . \\ & \text { Oct. } 27,1868 \\ & \text { Sept. } 8,1868 . \end{aligned}$ |
|  | Morrison, Charles F., Rifton Glen, N. Y. Waste saver for cardi Morrison, David, Nev York, N. Y. Valves for water closcts. . |  |
|  | Morrison, Duncan, Portland, Maine. Mode of converting reciprocal into rotar'y motion | Jan. $21,1868$.Mar. $3,1868$.June 16,1868Aug. . $28,1868$.May 19, 1868. |
| $\begin{aligned} & 75,043 \\ & 78,886 \\ & 81,527 \\ & 78,117 \end{aligned}$ |  |  |
|  |  |  |
|  | Morrison, Eli M., aud James |  |
|  | Morrison, Enoch R., Pittsburg, Pa. Machine for casing to |  |
| $\begin{aligned} & 75,447 \\ & 79,49 \\ & 83,401 \\ & 8,452 \end{aligned}$ | Morrison, | Mar. 10, 1868. June 30, 1868. Oct. 27, 1868. |
|  | Same...... Revolving h |  |
|  | Same......Elbow joint for s |  |
|  | Morrison, James B., St. Louis, Mo. Operating chair. (Patented in England |  |
| $\begin{aligned} & 80,558 \\ & 88,082 \\ & 74,402 \\ & 76,97 \\ & 76,97 \\ & 88,983 \\ & 76,232 \end{aligned}$ | rrison, | Sept. 29, 1868.Aug. 4, 1868.Oct. 13, 1868.Feb. $11,1868$.Apr. 14, 1868.Apr. 14, 1868.Nov. 3, 1868. |
|  | Morrow, G. M., Clarksvi |  |
|  | Morse, Cyrus B., Rhineb |  |
|  | Same..... Method of making rings for ri |  |
|  |  |  |
|  | Morse, Elmund L., St. Louis, Mo. Cotlon co |  |
|  | Morse, Edvard S., assignor to self a Shelf bracket. |  |
| $\begin{aligned} & 77,399 \\ & 77,999 \\ & 80,202 \\ & 81,193 \end{aligned}$ | Morse, F. B., New Haven, Conn | Mar. 31, 1868. Apr. 28, 1868. July 21, 1868. Aug. 18, 1868. |
|  |  |  |
|  | me....--stump joint |  |
| $\begin{array}{r} 77,076 \\ 77,077 \end{array}$ | Morse, H | Apr. 21, 1868 Apr. 21, 1868. |
|  | Morse, Ira, Danbury, Comm. Wrencl |  |
|  | Morse, Ira, West Frank |  |
| 640 | Morse, James F., Montgom | May 5,18 |
| 80, 989 | rse, J. F. (See Gitchell, John M., |  |
|  | Morse, John H., Peor |  |
|  | Morse, Marshall, and P. W. Sawyer, Gray, |  |
|  |  |  |
|  | Morse, Melvin |  |
| $\begin{aligned} & 80,203 \\ & 77,641 \\ & 7,250 \\ & 78,887 \end{aligned}$ | Morse, Orrin, assignor t | July $21,1868$. <br> May 5, 1868. <br> Jan. 14, 1868. June 16, 1868 . <br> Juno 10, 1868 |
|  | Morse, Sam |  |
|  | Morse, William A., Philadelphia, Pa. |  |
|  | Morse, William A., and John G. Powvell, Philadelphia, Pa |  |
|  | Morse, William H., et al. (See Lamb, Alford, assignor.) |  |
|  | Morsell, J. Ferguson, Stamford, Comn. |  |
| 73, 113 |  | Jan. $7,1868$. |
|  | Same. (See Hul |  |
|  | Morter, G. W., and Edward Berry, Hartr | Dec. 29, 1868. Mar. 10,1868 |
|  | Morton. James, Philadelphia, Pa. Corl | Jan. |
|  | ne......Cu | Mar. 17, 1868. |
|  | ton, Robert |  |
|  | Morton, Smith, Valpa |  |
|  | Morton, William F. New Haven, Conn. Carriage | Feb. 4, 1868. |
|  | Moseley, C. H., Winchester, Mass. Machine for desiccating leached tan and |  |
| 74,118 | Moseloy, Char | Apr. $21,1868$.Feb. $4,1868$. |
|  |  |  |
|  | Mosely |  |
| $\begin{aligned} & 78,534 \\ & 74,764 \end{aligned}$ | oses, Alfred II | Juıe 2, 1868. |
|  | Moses, Judah, Hartord, Coun. |  |
|  | oses. Lewis, assis (Andateil Feb 7 1868) | Feb. 25, 1868. <br> Sept. 1, 1868. <br> Apr. 14, 1868 . <br> Sept. 1, 1868 |
|  | ses, William, Bulfalo, N. Y |  |
|  |  |  |
| $\begin{aligned} & 76,799 \\ & 81,669 \end{aligned}$ | Mosher, David B, and Chartes C, Seneca |  |
|  | Mosiler, Or |  |
| $\begin{aligned} & 83,083 \\ & 75,955 \\ & 83,527 \end{aligned}$ | Mosher', | Oct. 13, 1868. <br> Mar. 24, 1868. |
|  | Mosley, John, Now Haven, Co |  |
|  | ) Norwich, Comn. Steam generator. (Antelated October 24, 1888.).. | Oct. 27, 1868. Aug. 4, 1868.June 16, 1868. |
| $\begin{aligned} & 80,559 \\ & 78,991 \end{aligned}$ | chm |  |
|  |  |  |

Alphabetical list of patentces for the year 1863-Continued.

No.

80, 363
73, 544
77, 751
83,120
78, 314
81,930
81, 813
77, 642
83, 197
73, 914
75, 292
77, 518
84, 293
84,209

76, 499
75, 956
82, 238
73, 371
79,247
77, 079
76, 233
73, 026
77, 308
78,535

80, 759
77, 080
74,403
78, 636
76, 293
73, 632
2,919
2,943
2,944
2,976
2,976
3, 249
3, 109
3, 040
3, 041
3, 296
80,204
78, 118
74, 119
78, 755
78,815
78,888
83, 989
2, 920
3, 138
3,274
82, 146
83, 5:28
74,404
74, 405
76, 500
3, 139
83, 299
82,627
73, 027
75,184
81, 931
83, 652
84, 704

77, 643
78, 469
$79,850^{\circ}$

Name, residence, and invention or discovery

Mosscr, William F., Allentown, Pa. Machine for dressing slate frames. Mott, Abil, assignor to self and Warren Keuyon, Scott, N. X. Hay clevator Mott, Benjamin, L., jr., Pawtucket, R. I. Conking stove
Mott, Mrs. J. H., Washington, D. C. Table-cloth protector
Mott, Mary E., Rouse's Point, N. Y. Corpse prescrver
Motte, Simon, assignor to Isaac Hyneman, France. Bellows pumping apparatus Motter, Gcorge, jr., Henry, Ill. Sliding gate
Mougcy, Peter, Marshallville, Ohio. Railway cattle guard
Samo...... Farm gate
Moul, C., Hanover, Pa. Harvester
Mould, Brooks K., and Chcenoy Rcod. (See Roed \& Mould)
(Extension.)
Moulton, Joel, Boston, Mass. Manufacture of clastic rolls

## same

Same............................ for the mufacture of elastic rolls and tubes
Same....... Method of detaching rubber articles from the molds in which they are vulcanized
Mount, John W. (Śee Dobson, William, assignor.)
Mowbray, George M., Titusville, Pa. Mranulacture of nitro-glycerine Mowers, P. A. Cleversburg, Pa. Horse hay fork
Moxcy, John G., assignor to self, Henry C. Carey, and Abraham Hart, Philadelphia, Pa. Process of de-branning wheat
Moxley, Robcrt, MLuscatine, lowa. Spinning machine
Moyer, John Mr, Pittsburg, Pa. Brick dryer. (Autedated December 23, 1867) Moycr, J. W., Cherry Valley, N. Y. Saw mill
Muchmore, William F., Astoria, N. Y. Glue cau
Mndge, Carson, New Orleans, La. Cotton-bale tic
Mudge, Charles, Ovid, Mrich. Builders' and Painters' scaffolid
Mudler, Charles, Cleveband, Ohio. Button. (Antedated May 22, 1868)
Muchho, Bernard II. (See Sprague, Welcome, assignor.)
Mueller, C. B. (See Bodc, Friedrich Max, assiguor.)
Mueller, Theodore, and William W. Winter. (See Winter \& Mueller.)
Mulford, Ichabod H., Orange, N. J. Shaft coupling for wagons
Mulford, N. E., Madison, N. J. Striking attachment to clocks
Mullally, William, Boston, Mass. Lamp
Same. ..... Apparatus for extinguishing fire
Mullec, William, assignor to Moseby, Nzekiel. Manufacture of hard rubber..
Mullen, John F., New York, N. Y. Top prop for carriages
Muller, Carl, New York, N. Y. Statuette.......................................................... Samo...... Clock cas
Same-...... Figure and baso (Desigu)
Same . 1 on
解
Clock case (Design)
vane - -

Muller, Carl, assignor to Nicholas Muller, New York, N. X. Figure.. (Design)
Muller, Carl, and John Deacon, New York, N. Y. Figure............ (Design)
Sane - ................................................... sime . ............. (Design)
Muller, Carl, assignor to Nicholas Muller, New York, N. Y. Figure. . (Design)
Muller, Charles, Albany, N. Y. Cigar machine
Maller, N. A., and Theodore Stock, Chicago, H1. Doubler for stills.
Maller,' Florent, Hartford, Conn. Brecch-loading firc-arm
Muller, Gustav, Newark, N. J. Doebcreincr self-lighting lamp. (Autedated June 4, 1868)
Mnller, Henry, North Cambridge, Mass. Machine for stuffing leather
Muller, Heary L. C., Bridgeport, Conn. Shoe-lacing device
Muller, Karl, assignor to Nicholas Muller, New York, N. Y. Clock case. . (Design)
Muller, L., and C. Hood, Hartford, Conn. Shatter worker
Muller, Nicholas, New York, N. I. Base or stand $\qquad$ (Dcsigu) Same...... . Clock case
(Design) Same.............same
(Desigu)
Müller, T. H., New York, N. X. Steaun generator Same ............................. same
Mullin, John, S., Port Moumouth. N. J. Steam gencrator
Mullin, Joseph H., Schellsburg, Pa. Horse hay fork
Mullins, William, Pittsburg, Pa. Mode of locking nuts
Mumford, Joseph M., assignor to self and Augusto F. Mason, South Reading, Mass. Trade mark.
.(Design)
Mumford, Josiah, Clarksburg, Ohio. Process of preserving potatoes
Mrundel, Auguste, et al. (See Pertuisct, Mundel \& De Flcron.)
Munger, Gcorge N., assiguor to self and Stillman Moore, Ncw Haven, Conn. Engravers' vise
Munger, L. F., Rochester, N. Y. Lathe
Munger, W. T., assignor to Thomas Konnciy, Brauford, Coun. Roversible knob latch
Manger, W. T., assignor to P. and F. Corbin, Branford, Coun. Roversible latch Same.......Knob latch.
Same ..... Reversible latch....................................................................
Munn, Samaul, et al. (See Green, Jacob, assignor)
(Reissue.) same
same
(Reissue.)
Munn, Wiliam A., Milwankee, Wis. Biank for bodics of sheot metal, tea, and coffeo pots.
Munns, Crawford. Now York, N. Y. Stump extractor
Munro, George, Philadelphia, Pa. Instrument for stretching boots and shoes.

Dato.

July 28, 1868.
Jan. 21, 1868.
May 12, 1868.
Oct. 13, 1868
May 26, 1863.
Sept. 8, 1868.
Sopt. 1, 1863
May 5, 1868
Oct. 20,1868
Jan. 28, 1868.
Mar. 10, 1868.
May 5,1868
Nov. 17, 1868.
Nov. 17, 1868.
Apr. 7, 1868
Mar. 24, 1868.
Sent. 15, 1868.
Jan. 14, 1868
June 25, 1868.
Apr. 21, 1868.
Mar. 31, 1868.
Jan. 7, 1868.
Apr. 28, 1868.
June 2, 1868.

Aug. 4, 1865
Apr. 21, 1868.
Fob. 11, 1868
June 2, 1868.
Mar. 31, 1868.
Jan. 21, 1868.
Freb. 4, 1868.
Mar. 3, 1868.
Mar. 3, 1868
Mar. 31, $1868^{\circ}$
Nov. 17, 1868
July 14, 1868
May 12, 1868.
May 12, 1868.
Dec. 15, 1868
July 21, 1868.
May 19, 1868
Feb. 4, 1868.
June 9, 1868.
Juno 9, 1868.
June 16, 1868.
Oct. 20, 1868
Nor. 10, 1868.
Fob. 4, 1868.
July $28,1868$.
Dcc. 1, 1868

Sept. 15, 1868.
Oct. 27, 1868.
Feb. 11, 1868.
Feb. 11, 1868.
Apr. 7, 1868.
July 28, 1868
Oct. 20, 1868.

Scpt. 29, 1868.
Jan. 7, 1868.
Mar. 3, 1868.
Sept: 8, 1868.
Nov. 3, 1868.
Dec. ${ }^{2} 1868$.

Mivy 5, 1868.
June 2, 1868.
July 14, 1868.

# Alphabetical list of patentees for the year 1868-Continned. 

No.

Name, residence, and invention or discovery

Munroo, Hezekiah, Fall River, Mass. Caster for furniture
Munroe, Hezekiah, assignor to Albert F. Munroe, Fall River, Mass. Caster for furniture
Munroe, Willian, Cambridge, Mass. Reed for organs, \&c
Munson, David, Indianapolis, Ind. Lightning rod

Munson, Edward W., and William P. Thomas, Watcrbury, Conn. Window spring
Munson, Gcorge A. (See Bovans, Samuel W., assignor.)
Munson, J. M., Bailey Hollow, Pa. Bed-clothes holder
Munson, Thaddeus, Canandaigua, N. Y. Portable roof for hay stacks, \&c.....
Murch, Charles G., Chicago, II. Coffee and tea steamer
Murch, Harvey, assignor throngh mesne assignments to Colby Brothers \& Co., Waterbury, Vt. Mophead.
(Division A, reissue)
Samo
.same.
(Division B, rcissue)
Samo.................. samo
Murdoch, J. E., jr., et al. (See Smith, Kolley \& Murdoch.)
Murdoch, Richard, Baltimore, Md. Suspending scale pans
Murdock, Charles, Ellenvillc, N. Y. Machinc for crozing and chamfering barrels. (Antedated May 18, 1868)
Murdock, Charles, Hartford, Conn. Stave machine
Same...... Cylindrical saw.
Murfey, J. H., and T. A. Lawrenco. (See Lawrence \& Murfey.)
Murpliy, Edgar W., et al. (See Kirkland, Wm. P., assignor.)
Murphy, Eliza A., and Ellen F. Price. (See Price \& Mruply.)
Murply, James E., and Timothy Lucey. (See Luccy \& Murphy.)
Murphy, John D., assiguor to Julius S. Bolrer \& Co., Baltimore, Md. Reversible ordnance.
Murnhy, Thomas J., Rochester, N. X. Automatic gate. (Antedated Nov. 18, 1868)

Murr, Lcwis, assignor to Joscph and Bernard Motz, Philadelphia, Pa Mode of printing and embossing cloth
Murray, A. B., Henderson, Pa. Snow gate
Murray, A. K., and A. B. Howland, Titusville, Pa. Argand lamp for burning petrolcurn.
Murray, C. E., Sugar Valley, Pa. Horse rake.
Same...... Horse hay tork.
Murray, Edgar, Now York, N. Y. Skate.
Murray, Gcorge. ir., Cambridgeport, Mass. Meat pounder and ice pick
Murray, II. E., Chester, N. Y. Clamp for vehicle seats.
Murray, J. B., and Sons. (See Combs, George W., assignor.)
Murray, Patrick, East Morrisania, N. Y. Horseshoe
Murray, Pcter, Philadelphia, Pa. Grate
Murray, Thomas W., New York, N. Y. Fudder-
Murrcll, John W., assignor to self, Samuel Pcrry, and Edward R. Jacobs, Seaford, Del. Attachment to spools for cutting thread
Murrill, James H., assignor to self, Lewis R. Keizer, and Jacob Seeger, Baltimore, Md. Machine for cutting bungs.
Musgrave, James, New - iumberland, West Va. Seed planter
Mycr, Henry B., Clevelaud, Ohio. Converting railroad car scats into beds or lounges.
(Extension).
Samo...... Philadelphia, Pa. Gas burner
Same...... Regulating gas burner
Same........ (See Thompson, Wm., assignor.)
Myers, Adam, Van Wert, Olio. Carriage jack.
Myers, Danicl F., New York, N. Y. Waiter machine
My yers, David, Chicago, Ill. Car brako
Myers, Frederick, New York, N. Y. Machine for bumdling kindling wood
Myers, Gcorge H., assignor to S. B. Fowley, Philadelphia, Pa. Fruit jar
Myers, George W., Hartleton, Pa. Knifo for removing the skin from animals.
Mycrs, Kenry M., Alleghany City, Pa. Manufacture of shovels. (Antedated June 5, 1868)
Same ...... Trade mark ..................................................................................
Myers, James, jr., assiguor to Barrons' Steel Manufacturing Company, Brooklyu, N. X. Mode of producing stecl.

Myers, James H., assignor to self and C. T. Rico, New York, N. X. Pattern for cutting out shirts.
Myers, Janes M. (See Jenkins, Wm. F., assignor.)
Myers, John, and Robert G. Eunson, Now York, N. Y. Machine for sawing thin boards, \&c
Myers, Johm, jr. (See Lourrentz, Miehael J., assignor.)
Myers, John it. (See Jackson, Allen S., assignor:)
Myers, Lewis Y., Roanoke, Ind. Elevator and conveyor
Myers, Samuel, Hogestown, Pa. Window frame
Mycrs, Samuol, and T. M. Herriott. (See Herriott \& Myers.)
Myers, William, and James F. Neall. (See Neall \& Myers.)
Myers, William II., assignor to Sylvester Matthias, Baltimore, Md. Tuyere.. Myrick, Freeman F., Dublin, N. II. Thread and yarn holder
Nadow, Alexander, Springich, Mass. Stean-engine piston .......................... Naeher, Facol, assignor to self, A. Renggly, aud J. Ulrich, La Crosse, Wis. Mreat cutter

June 30, 1863
Dec. $1,1868$.
Mar. 24, 1868.
July 28, 1868.
Jan. 21,1868.
June 30, 1868.
July 14, 1868.
Sept. 29, 1868.
May 12, 1868.
Apr. 28, 1868.
$\Delta$ pr. 7, 1808.
Dce. 29, 1868.
Mar. 17, 1868.
Oct. 20, 1868.
Apr. 21, 1868.
Dec. 8, 1868.
June 1,1868.
Nov. 10, 1868.
Nov. 10, 1868.
Feb. 18, 1868.
Dee. 15, 1868.
June 30, 1868.
Feb. 11, 1868. Dec. 22, 1868.
May 19, 1868.
June 19, 1868.
July $21,1868$.
Dec. 1, 1868.
Oct. 6, 1868.

May 13, 1868.
Nov. 24, 1868.
Dcc. 20, 1868.

June 2, 1868. Jan. 28, 1868. Jan. 21, 1868.

Fel. 11, 1868.

Alphabetical list of patentecs for the year 1868-Continued.
No.

Date.

Apr. 7, 1563
Aug. 4, 18,is
Oet. 6, 1863
Sept. 22, 1843
Apr. 14, 1803

Oet. 27,1868
Jan. 2, 1898
Mar. 3,1868
Sopt. 15, 1868

July 14, 1868.
May 12, 1863.
Mar. 24,1883

Nov. 3, 1853
Jan. 7, 1868
Sept. 29,1863
Feb. 4, 1868
Mar. 24, 1868
JIar. 10, 1868
Oct. 6,1868.
Apr. 28,1868
May 26, 1868
Jan. 23, 1868.
Oet. 23, 1868
Mar. 31, 1868
Apr. 21,1868
Jan. 7, 1869
Fob. 18, 1898
Dec. 10゙, 1563.
Juuo 』, 1868
Mar. 24, 1863
Sept. 29, 1868
Dee. 1, 1868
Miar. 3, 1868
Feb. 18, 1868.
July 7, 1868
Jan. 4, 1863
Mar. 17, 1868.
Mar. 17, 1868.
MIar. 24, 1868
Dee. 8, 1868
May 5, 1868
Mar. 24, 186.3.
Nov. 10, 1868.
July 28,1868
Teb. 18, 1868.

Mar. 17, 1868.
Mar. 3, 1868.
\ug. 4, 1868.
Маํ. 3, 1863.
Feb. 18, 1868.
Scpt. 15, 1868
Mar. 24,1868.
Oet. 27, 1868.

June 2, 1868.
Aug. 11, 1868.

No.

73, 633
74,930
81, 194
81, $6 \%$
82, 433
84, 571
79, 495
76, 235
74, 579
84, 369
73, 545
73, 916
73, 917
73, 315
78, 003
80, 653
81, 932
81, 933
73, 634
73, 744
79, 380
\%3, 918

76, 236
79,381
83, 653
74, 580

85, 237
73, 745
82, 240
77, 753
73, 023
82, 148
78, 680
78,757

81, 195
74,581
84, 753
73, 746
76,919

73, 784
73, 785
83, 530
81, 101

83, 531
2, 921
2, 922
2,923
2,924
2,925

Name, residence, and invention or discovery.

Neuhans, M. and Julius Nuellens. (See Nuellens \& Neuhaus.)
Neumann, Hoimann, New York, N. Y. Bucklo
Neumann, Marcus, New York, V. F. Lassoe, Brooklyn, and C. W. MacCord, New Xork, N. Y. Stean generator
Noumann, William, St. Louis, Mo. Aljustable ear step
IVeumeyer, Gustav Adolph, assignor to self and Angust Klein, Saze-Altenburg. Manufactare of gnmpowder and blasting poweler. (Antedated Aug. 25, 1868) Nevergoll, F., and 1). Brose, Pittsburg, Pa. Rolling mill.
Nevins, D. M. B. (See Barker, James H., assignor.)
Novison, James, Morgan, Ohio. Corn dropper..
Xevison, James, and 'L'umas, jr., Morgan, Ohio. Carriage wheel
Nevison, Thomas, jr., Morgan, Ohio. Hoe seed-dropper
Nevison, Thonas, jr., and James, Morgan, Ohio. Carriago wheel.
Nowark Patont Leathor Company. (See Van Gieson, A.H., assignor.)
Nowbrongh, J. B., Now York, Mi. Y. Compound of robber or gutta percha
Newbrough, J. B., and E. Fagan, New York, N. Y. Treating caoutchouc and other gums.

Sano.......Manufaeture of articles of rubber, gutta pereha, \&ce .........
Sarne....... Material produced by treating caoutchouc and other gums ..
Newbury, B., Coxsaukie, N. Y. Cuoking stove.
Newcombe, W. F., Cleveland, Ohio. Wheelbarrow
Neweomer, Joseph, Baltimore, Mcl. Composition for destroyinginsects in wheat
Nowell, Amos, assignor to self, Henry S. Brown, Frederick and Alfred Arnold, Red' Wing, Minn. Ore and bone crusher.
Newell, Amos, assignor to self, Henry S. Brown, George F. and Alfred Arnold, Red Wing, Minn. Mill for pulverizing bone, \&c.
Newell, Augustas W., Bradford, Pa. Steam generator
Same...... Spring bed bottom
Newell, Barnum B., Centerville, Mich. Capstan grubbing machine
Newell, Georgo E., Pawtacket, R. I. Dumping cart...
New England Steam Heating Company. (See Johnson, John, assignor.)
Same.
.same
New England Vuleanite Mile Company. (See Merrick, J. M., assiguor.)
Newhall, Abner W., Horse Hearls, N. Y. Machine for sharpcning and gumming saws.
Newhall, Cyrms, Hinsdale, N. I. Tool rest for engine lathes........................
Newhall, Henry A.. Irovidenee, R. I. Ventilating attachment for ash sifters.
Newhall, Philip A., Lynn, Mass. Slide-bloek last.
Newhall, Reuben A., and Blinn D. Joslin. (See Joslin \& Nowhall.)
New Haven Steam Heating Comp'y. (See Hubbard, CalvinL., assignor.) (Design.)
Newvill, William L., assignor to solf and Relway \& Burton, Cincinuati, Ohio Mode of attachiug stove legs
Newkirk, Abram G., Warren, Pa. Laup-ehimney cleaner
Newman, A. ML., Terre Haute, Ind. Saw-sharpening device
Nervman, Esau P., Albany, Ind. Churn.
Newman, Martin, Unadilla, N. Y. Velocipede.
Newnan, Martin, and Clark I. Hayes. (See Hayes \& Nowman.) (Reissue.)
Newman, Nolson, Springfield, Ml. Corn harvester
Newman, Thomas, New Orleans, La. Switch for city railroads. Samo...... Rope traees
New Orlcans Pnetmatic Propeling Conpany. (See Wailey, C. W., assignor.)

Nowton, Charles E., and Ephraim Elliott. (See Elliott \& Nowton.)
Newton, Daniel, Southington, Conn. Friction-brake for sowing machincs
Newton, Don Carlos, Batavia, III. Wagon pole support
Newton, Frederick W., South Orange, N. J. Lappet, or embroidery loom
Newton, Henry E., Manehester; N. H. Blacking brush
Newton, Jeromiah L., Boston, Mass. Composition for tho soles of boots and shoes
Newton, Job. (Sce Callaghan, John, assignor.)
Newton, Johin W. (Sce Sinith, E. A., assignor.)
Newton, John W., Geneva, Wis. Bog eutter and drag
Samo.......Potato dirger and vilue puller
Newton, O. G., Edinburg, Mo. Tuyere
Newton, William A. (Sce Holden, Stephen B., assignor, )
Nervton, William M. M, assignor to self and John E. Armendt, Baltimore, Md Brısh
New York Bolting and Packing Company. (See Gately, Dennis C., assignor.)
New York Rubbor Company. (Sec Alden, Henry A., assignor.) Same.............................................
New York Tap and Die Company. (See Bee, Benjamin F., assignor.)
Same. ........................................... same.
Noy, Baruh, and Henry Hofheimer, Alexandria, Va. Paper filo
Noy, Elemir J., assignor to the Lowell Manufacturing Company, Lowoll, Mass
Carpet pattern

Saune................ samc ......................................................... (Design)
Same...............same.............................................................. (Design)

Date.

Jan. 21,1868
Feb. 25,1868
Aug. 18, 1868
Sept. 1, 1868
Sept. 22, 1868
Dec. 1, 1868 June 30, 1868. Mar. 3i, 1868. Feb. 18, 1868.
Nov. 24, 1868
Jan. 21, 1868
Jan. 28, 1868
Jan. 28, 1868
May 26, 1868
May 19, 1868
Aug. 4, 1868.
Sept. 8, 1868.
Sept. 8, 1868
Jan. 21, 1868.
Jan. 28, 1868
June 30, 1868
Jau. 28, 1868.

Mar. 31, 1868.
Juno 3 j, 1868
Not. 3, 1868
Feb. 18, 1\&68.

Dec. 22, 1868
Jan. 23, 1868
Sept. 15, 1868.
May, 12, 1868.
Jan. 7, 1868.
Sept. 15, 1868
June 9, 1868
June 9, 1868.

Aug. 18, 1868.
Feb. 18, 1868.
Dce. \&, 1858.
Jan. 28, 1868.
Jain. 28, 1868.

Nov. 3, 1868.
Nov. 3, 1868
Oct. 27, 1868.

Aug. 18, 1868.

Oct. 27, 1868.
Feb.
Fob. 4, 1868
Feb. 4, 1868
Feb. 4, 1868.
Feb. 4, 1868.

Alphabetical list of patentees for the year 1863-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 2, 920 | Ney, Elemir J., assignor to the Lowell Manufacturing Company, Lowell, Mass. Carpet pattern $\qquad$ (Design) | Feb. 4, 1868. |
| 3, 119 | . same............. . . . . . . . . . . . . . . . . . . . . . . . (Design). | July 21, 1868. |
| $3,1: 0$ | Same............. same.............................................. (Design).. $^{\text {S }}$ | July 21, 1868. |
| 3,121 | (Design).. | July $21,1868$. |
| 3,122 | (Design) -- | Jnly 21, 1808. |
| 3,123 | me.............. .same ........................................................ (Design) | July 21, 1868. |
| 3, 279 |  | Dec. 8, 1863. |
| 3, 230 | Same............ same............................................. (Design) .- | Dec. 8, 1862. |
| 3, 231 | Same . . . . . . . . . . same............................................. (Design).. | Dec. 8, 1863. |
| 3,232 | Same.............samc.............................................. (Design) .- | Dec. 8,1863. |
| 3, 283 | Same - . . . . . . . . . samo . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) | Dec. 8, 1868. |
| 3,284 |  | Dce. 8, 1868. |
| 3, 285 | Same . . . . . . . . . . same...... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design).. | Dee. 8, 1868. |
| 3,286 | Same............ -same............................................. (Design).. | Dec. 8, 1868. |
| 3, 287 | Same ............ -same. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) | Dce. 8, 1863. |
| 3, 29 |  | Dec. 8,1863. |
| 3, 289 |  | Dec. 8,1868. |
| 3, 230 | Same........... Same ............................................ (Design). | Dec. 8, 186\%. |
| 84, 293 |  | Nov. 24, 1863. |
| โ8, 119 | Nichols, 13. T., Newark, N. J. Manufacture of cart saddles.... | May 12, 1863. |
| 82, 630 | Nichols, Freeman, Newport, Ky. Hub for wagon wheels | Scpit. 29, 1863. |
|  | Nichols, George II. (See Mills \& Chichester, assignors.) Same. |  |
|  | Same...... (See Chichester, Lewis S., assignor.) <br> Same ..... (See Taggart, Chichester \& Mills, assignors) ........ (Reissuo.) <br> Nichols, Henry P., trustee. (Sec Blunt, E., jr., assirnor.) |  |
| 79, 801 | Nichols, Johm, Garduer, Maine. Migh chair for children........................ | Apr. 14, 1868 |
| 53, 723 | Nichols, Johu, Paterson, N. J. Machine for burrin | Nov. 3, $1866^{\circ}$ |
| -3, 302 | Nichols, John A., Paterson, N. J. Valve for pump | Oet. 20, 18:8. |
| [8,316 | Nichols, Moses II., Hancock, N. Y. Shipping | May 20, 1868. |
| 76, 237 | Nichols, IV. A., West Liberty, Iowa. Ditchin | Mai. 31, 1868 |
| 31, 196 | Nichols, William E., Baldwin, Mo. Gate | Aug. 18, $180 \%$. |
| 74, 121 | Nichols, William H., East Hampton, Cunn. Self-sea | Felb. 4, 1868 |
| 32, 434 | smme...... Door bell | Sept. $22,1863$. |
| 78, 120 | Nichols, William R., Philadelphia, Pa. Ca | May 19, 1863. |
| 73, 747 | Nichols, W. T., Rutland, Vt. Hay raker | Jan. 28, 1863. |
| 73, 748 | Same......Hay stacker | Jan1. 23, 1866. |
| 74,408 | Same...... Portable railway | Felj. 11, 1803. |
| 25, 450 | Samo. ..... Hay raker and load | Mar. 10, 186. |
| \%5, 783 | Samo...... Exeavator or sho | Mar. 24, 1568. |
|  | Nicholson, Ambrose, Poland, N. Y. Self-f: | Mar. 12, 1868. |
| 50, 998 | Nicholson, E., Rockport, Olio. Road g. | Aug. 11, 1868. |
| 22, 341 | Nicholson, J. S., Anamosa, Iowa. Clothes press | Sept. 22, 1868. |
| -20,993 | Nicholson, William T., Providence, IR. I. Machine for eutting ras | Aug. 11, 1863. |
| 78, 681 | Nicholson, William T., assignor to the Nicholson File Company, Providence, R. I. Machine for cutting files. (Antedated June 5, 1868).. | Juno 9,1893 |
| 78,682 | Nickels, M. L., Dunlapsville, Ind. Grain drill...... | Juno 9, 1868. |
| 83, 403 | Nickerson, Charles N., assignor to self and William Hodgkins, 3d, Gloucester, Mass. Button | Oet. 27, 1868. |
| 75,568 | Niekerson, Hiram B., assignor to self and Stillman B. Allen, Boston, Mass. File |  |
| 80,656 | Nicolai, J., Boston, Mass. Folding chair......................................... | Aug. 4, 1868. |
|  | Nicolson, Samucl, deceased, by Georgo T. Bigelow, administrator, Boston, Mass. Wooden pavement ................................................ (Extension) | $\text { July 7, } 1808 .$ |
| 83,532 | Neibel, Abner, Tiffin, Ohio. Beehive .................................................... | Oct. 27, $180^{28}$. |
| 3,047 | Nieberg, C. L. L., assignor to Sargont \& Company, New Haven, Conn. Coffin handle |  |
| 83, 300 | Niedringhaus, F . G., St. Louis, Mo. Construetion of metallic spoons. | Oct. $20,1260$. |
| 83, 301 | Niedringhans, F. G. and W. F., St. Louis, Mo. Coal hoter | Oct. 20, 126\%. |
| 85, 023 | Niermami, Gerrit, Cincinnati, Ohio. Portable ward | Dee. 15, 1868. |
| 3, 005 |  | Airr. 21, 1893. |
| 75, 451 | Niles, Peter H., Boston, Mass. Lunch box. (Autedated March 6, 1868) | Mar. 10, 1863. |
| 76, 503 | Same -..... Hoso eoupliag ..................................................... | Apr. 7, 1868. |
| 84, 899 | Niles, P. I., and F. W. Marston, Boston, Mass. Fastening for corsets. (Antedated Dec. 2, 1868) | Dec. 15, 1803. |
| 80, 994 | Niles, S. R., Lavrsonvillo, Mich. Bean puller | Ang. 11, 186\%. |
|  | Nirdliuger, Albert H., and James Bramblo. (See Bramble \& Nirdhinger.) |  |
| 73, 827 | Nishwitz, Frederick, Brooklyn, N. Y. Harves Same . . . . . . . . . . . | Janl. 23,186 . |
|  | Nissley, Christian H., et al. (See Arudt, Theophilus, assignor.) |  |
| \% 7 , $45 \%$ | Nivert, Charles, Franco. Steam | Jan. ill, 1868 |
|  | Nixon \& Company. (See O'Bryan \& Kreps, assigmors).............................................. |  |
| 77, 645 | Nixon, Daniel M., Danville, M1. Hames ............................................ | M1ay 5, 1898. |
| 74, 582 | Nixon, George and William L., Sandyville, Ohio. Device to provent hogs from rooting. |  |
| 3, 021 |  | July 7, 1863. |
| 79,382 | Nixon, Joseplı, Altoona, | June 33, 1863. |

# Alphabetical list of patentees for the year 1868－Continued． 

No．


Date．

Sept．15， 180 E
Jan．7，1868
May 26，1868
Feb．11，186e
Apr．21，186を
Scpt．20， $186 \varepsilon$
Apr．21，186ع
Jan．21，186を
Oct．13，186を
Oet．13，186を
Feb．11，186e
Јан．28，186є
Aug．25，186を
Aug．25，186ع
Dce．22， $186 \varepsilon$
Apr．21，186ع
May 12， 1868
Nov．10，1868
Scpt．1， 1868
Apr．7， 1868
May 12， 1868
Juno 9， 1868
Jan．7， 1868
Dee．15， 1868
Aug．4， 1868
Mar．24， 1868
May 26， 1868
Oct．20，1868
June 16， 1868
Feb．11， 1868
Nov．24， 1868
Juno 2， 1868

Juno 23， 18 c8

May 5，1808
Apr．7， 1868
Apr．28， 1868
Mar．17， 1868.
Jan．14， 1868
June 2，1868
Jume 2， 1868
Fch．4， 1868
Jan．28， 1868
Sept．15， 1868

Jane 9， 1868

Nov．24， 1868.
Mar．3， 1868.
Nov．10， 1868.
Sept．29， 1868.
Nov．10，1868．
May 12， 1868.
Jan．21， 1868.
Dec． 15,1868
Jan．21， 1868.
Sept．15， 1868.

Alphabetical list of patentees for the year 1868-Continued.

Noyes, J. E., New Albany, Ind. Illmminating oil

82, 151
76, 65 )
76, £02
80, 302
74, 715
75, 188
80, 871
81, 814
76,506
75, 785
81, 284
75, 189
83, 533
73, 256
79, 143
85, 121
83, 724
83,534

74,765
81, 672
74, 412
81, 529

79, 771
79, 678
78, 121
78, 475
76, 507
84, 504
3, 077
78, 122
80, 085
79, 851
85, 238
83, 934
76, 508

73, 637
79, 852
80, 0.6
81, 197
81, 198
80, 497
82, 152
76, 509
80, 003
75, 570
84,371
73, 828
77, 755
82,544
76,651
81, 102
81, 934
73, 829
81, 935
73, 374
73, 749
82, 865

Noyes, Joseph P., Binglamton, N. Y. Toilet comb
Noyes, Josiah H., Center Abington, Mass. Cap for oil cans
Noyes, Person. (See Haseltinc, John, assignor.)
Noyes, Person, Lowcll, Mass. Lamp. (Antedated July 11, 1868)
Noycs, Samnel F., et al. (See Halscy, James E., assignor.)
Noyes, Walter B., Dorchester, N. H. Clothes dryer Same...... Saw jointcr. .
Noyes, W. B., and C. S. Baker, Manchester, N. H. Saw sct and gange
Noyes. Willian, jr., and Orison Twombly. (See Twombly \& Noyes.)
Nucllens, Julius, and M. Nouhans, England. Winc cooler. (Patcnted ín England May 29, 1868)
Nugent, Joseph F., Cannonsburs, Mich. Hay clovating apparatus
Null, Jonathan, Quincy, Pa. Wood boring machine
Nulsen. Authony, Eugen Haneisen and Albort Wagncr, assignors to A. Nulsen \& Company, Cincinnati, Ohio. Brick machinc.
Numsen, Pcter, Baltimore, Md. Fruit can
Nunanacher, John, and Henry Bechtold. (See Bechtoh \& Numanacher.)
Numan, Philip, Sandusky, Ohio. Apparatus for prescrving and freczing fish, meat, \&c.
Nute, James E., and George H. Hathorn, Lincolu, Mo. Hand loom
Nutting, George F., Randolph, Vt. Pump
Nutting, George P., Chicago, Ill. Water supply regulator.
Nutting, O.J.O Warwick, N. Y. Milk can
Nye, Charles II., Vineland, N. J. Bag fastener
Nyc, Chauncey, et al. (See Summers, Alfred F., assiguor.)
Nye, Lorenzo W. (See Thompson, John A., assignor.)
Nye, M., and A. J. Kniscley, Chicago, Inl. Bricī̀ machinc
Nye, S. R., et al. (See Barnard. Nye \& Mewett.)
Oakley, Oliver B., and Hiram Rosekrans, San Francisco, Cal. Door bell
Oaks, W. A. C., assignor to Harbster Brothers \& Co., Reading, Pa. Window shado fixture.
Oaks, W. A. C., assignor to W. M. Griscom, Reading, Pil. Reversible knob latch.
Obdyke, William. (Sce Austin, Win., assignoe.)
Oborn, William S., Marion, Ohio. Cider mill.
Obrcht, Henry, assignor to Samnel Keinhart and John C. Knapp, Mahanoy City, Pa. Mreat cuttcr
O'Brian, P., Philadelphia, Pa. IIop and scrubbing brush holder
O'Bricn, Richard, Dalton, Ohio. Railroad ear stove.
O'Bricn, Robert, Towlesvillo, N. Y. Harness
Obrietcr, John, assignor to self and Andrew Liebly, Lancaster, Pa. Sash holder
O'Bryan, Charles, and Henry Kripps, assignors to Nixon \& Co., Alliance, Ohio. Plow.
(Reissıe)
O'Bryan, Volncy, assignor to DeWitt C. and Amelia O'Bryan, St. Johns, Mich Fircman's clevator
O'Connell, Maurice, Boston, Mass. Apparatus for checking horses attached to velicles.
O'Connor, Patrick, and Morris Collins, Decatnr, Ill. Ditching machinc
Odenatt, Willian H., Philadelphia, Pa. Swing
Odenbaugh, Frank, Middlctown, Pa. Scaffold
Oefinger, Christian, and Sebastian Grmpp, assignors to sclves and Henry Stempleman, San Francisco, Cal. Kiln for drying malt.
Oehlcr, Paul. (See Klinkilardt \& Kibnz, assignors.)
Ocllig, L. A., Martinsbnrg, Pa. Dry-house for fruit, \&c
Ocrllein, George, Utica, Minn. Horsc-power
Oertly, B., and Xaver Fendrich, Washington, D. C. Composition for coating metal, \&c Sane...... Coal stove.
Ofeldt, F. W., and A. W. Almqvist, assignors to selves and Thomas Fitzsimmons, New York, N. Y. Apparatus for the manufacture of illuminating gas Offhans, Ernst, Newark, N. J. Propelling apparatus
Offineer, James, Ashland, Ohio. May knife
O'Friel, James, Blair County, Pa. Vitrified compound. (Antcdated March 28, 1868)

Ogburn, Benjamin W., Whittle's Mills, Va. Calculating balance Ogden, Elias, Lynchburg, Va. Harvester rake
Ogden, Ferris, Meadvillc, Pa. Rotary steam-enginc!
Ogden, H. L., Atkinson, Ill. Try sqnare
Ogdin, James, Philadelphia, Pa. Oil can.
O'Hara, C. J., New Orleans, La. Namo-plate for strcet lamps
O'Hara, Charlcs M., New York, N. Y. Propeller
O'Hearn, Richard. (Sce Necdham, H. R., assignor.)
Ohlcn, James, Columbus, Ohio. Attaching handles to saws.
okey, Joseph, assignor to self and Ferdinand Lchr, Indianapolis, Ind. Wash boiler.
Okcy, Joseph B., Indianapolis, Ind. Spring door holder
Olden, Lacius M., Pana, Ill. Sccding machino
Olds, A. Benjamin and Edwin, Nowark, N. J. Loom. (Antedated Jan. 4, 1868).
Same...... Portable folding fence. (Antedated Scpt. 26, 1868).

Date

Scpt. 15, 186s
A $1 \mathrm{r} .14,186 \mathrm{c}$.
Apr. 14, 1868.
July 28, 1868
Feb. 18, 1868.
Mar. 3, 1868
Ang. 11, 1868

Scpt. 1,1868
Apr. 7, 186:
Mar. 24, 1808.
Aus. 18, 1868
Mar. 3, 186z

Oct. 27, 186?
Jan. 14, 186\%.
Junc $23,1868$.
Dec. 22, 1868.
Nov. 3, 1868
Oct. $27,1868$.

Fcb. $25,1868$.
Gept. 1, 1803.
Feb. 11, 1868.
Aug. 25, 1858.
July 7, 1efo.
July 7, 1868
May 19, 186.
June $\quad, 1865^{\circ}$
Apr. 7,1868.
Dec. 1, 1868.
Aug. 11, 1868.
May 19, 1868
July 21, 1868.
July 14, 1868.
Dec. 22, 1868.
Nov. 10, 1868.
Apr. 7, 18 ci8.
Jan. 21, 1868.
July 14, 1 عti8.
July 21, 189e.
Ang. 18, 1868.
Aug. 18, 1 еб8
July 28, 186
Sept. 15, 18 ti .
Apr. 7, 1868.
July 14, 186
Mar. 17, 1868
Nov. 24, 1868
Jan. 28, 1868
May 12, 1868.
Sept. 29, 1868
APr. 14, 1868.
Aug. 18, 1868.
Sept. 8, 1868
Jan. 28, 1868
Sept. 8, 1868
Jan. 14, 1868.
Jan. 28, 1868
Oct. 6, 1868

## Alphabetical list of patentees for the year 1868-Continued.

No.

Name, residence, and invention or discovery.
Date.

Jan. 14, 1868
Nov. 24, 1868. Jan. 28, 1868.

Mar. 3, 1868.
June 30, 1868.
75, 193
79, 496
83,654
76,238

76, 652
76,939
82, 633
76, 510
80, 004
3, 209
82, 022
73, 031
73, 459
84,505
82, 473
85, 239
74,931
77,310
78, 604
82, 979
80,995
83, 535
80,658

84,572
80,303
r74,583
81, 673

76, 511
Olds, E. F., Brighton, and Warren Clark, Green Oak, Mich. Fence
Olds, E. F., and C. A. Jefferies. (See Jefferies \& Olds.)
84, 299
ondorf, Garret J., Mintlleficld, N. X. Mode of poling hops.
Olcudorf, Garret J., and Albert O. Parshall, Middlcficld, N. Y. Poling hops
Olhaber, Ulement, et al. (See Paris \& Davis, assignors.)
Olin, J. P., Westfield, Ohio. Corn markor, \&cc.
Oliphant, John, Spriug Hill Furnaco, Pa. Metallic hub.
Oliver, Charles P., and Theodore P'. Howell. (See Howell \& Oliver.)
Oliver, Frank L., Scarbolough, Maiuc. Wrench.
Nov. 3, 1868.
Oliver', Heury W.. jr., and William J. Lewis. (See Lewis \& Oliver.)
Sane. $\qquad$
jr., aud Wish, Pa. Band for baliug cott
cr, James, Soutli Beud, Ind, Mould board for plows
Same...... Casting mould boards
Oliver, Jolm S., assignor to Johu W. Cox and Alexander D. Slaw, New York, N. Y. Refining liquor

Oliver, Paul A., New York, N. Y. Machinery for the manufacture of gumpowder

Samo . . . . . Powder for blasting and other purposes.
Same...... Machine for the manufacture of gunpowder $\qquad$ . (Reissue)
Oliver, William F., assignor to the Boston Shoc-stud and Button Company, Lynn, Mass. Shoe laciag

Mar. 31, 1868.

Apr. 14, 1868
Apr. 21, 1863.
Scpt. 29, 1868
Apr. 7, 1868
July 14, 1868.
Nov. 24, 1868.
Sopt. 8, 1868
Olmstead, C. D., Williamsport, Pa. Saw-mill
Olmsted, L. H., Stamford, Conn. Lubricating bearings for machinery
Olmsted, L. H., Brooklyn, N. Y. Paper file.
Jan. 7, 1863
Jan. 21, 1808
Dec. 1,1868
Sept. 22, 1862.
Dec. 22, 1868.
Feb. 25, 1868.
Apr. 28, 1868.
June 2, 1868.
Oct. 13, 1868.
Ang. 11, 1868.
Oct. 27, 1868.
Ang. 4, 1868.

Dec. 1, 1868
July 28, 1868.
Feb. 18, 1863.
Sept. 1, 1863.

Apr. 7, 1868.
Mar. 17, 1868
May 12, 1868.

Oct. 27, 1868.

June 16, 1868.
Junc 23, 1868.
Ang. 18, 1868.
Aug. 4, 1868.
Oct. 6, 1868.
Feb. $2 \overline{5}, 1868$.
Apr. 14, 1868.
Sept. 22, 1868.
Apr. 14, 1868.

Nov. 10, 1868.

Mar. 31, 1868.
May 5, 1868.
Apr. 7, 1868.
Nov. 3, 1868.
Sept. 15, 1863.
May 26, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Osman, James, and John F. Potter, Linden Hall, Pa. Car coupling
Osmani, Cesare, Tolentino, Italy. Tanning hides and skins. (Patented in England, Jan. 23, 1868)
Osterhout, Joseph, Rock Island, Ill. Washing machine.
Ostrander, W. P., et al. (See Hermanco, C. W., assignor.)
76, 240 Otis, Charles R., Yonkers, N. Y. Hoisting apparatus. (Antodated Mareh 25, 1868).

Otis, Charles R. and Norton P., Yonkers, N. Y. Hoisting apparatus
Otis, George W., Lynn, Mass. Lightning rods
Otis, Joel A., and Thomas Barber, Watertown, N. X. Apparatus for treating milk.
Otis, J. L., Leeds, Mass. Grinding machino
Otis, Samuel A., Boston, Mass. Railway track seraper
Ott, Adolpl, assignor to Antonio Pelleticr, New York, N. X. Proeess of oxtracting the preeious metals from ores Same
same.
Ott, George. (Soe Martin, Alexander, assignor.)
Ott, Joseph J., Washington, D. C. Preparing paper for the manufacture of floor coverings, belting, window shades, and the liko.
Otterson, Thomas G., assignor, through mesne assignments, to S. B. Rowley. Pliiladelphia, Pa. Fruit jar
Ontcalt, Henry, Wilmington, Ohio. Mode of constructing metallie roofing. (Extension]
Outcalt, Jesse P., Lancaster, Ohio. Ballot hox
Outten, J. N., Caseyville, Ky. Bee hive.
Overkoltzer, Daniel, Polo, 111. Lag fastener
Overton, C. H. and D. B., Dover, N. J. Valvo gear for oseillating engines
Oviatt, S. E., Richfield, Ohio. Grain soparator
Samo.......Threshing machine.
Same.......Grain separator
Owen, Benjamin J. F., Memphis, Tonn. Machino for cleaning cotton
Owen, D. J., Springville, Pa. Wagon brako.
Owen, George B., Winsted, Conn. Cloek case front
(Design)
Same ......................................ame........................................ (Iesign).

Same...... Cloek ease .................................................................. (Design).
Same.......... - same - ...... ..................................................... (Design)
Owen, John, assignor to self, Henry L. Browu, and A. Barr Irwin, Dayton, Olio. Patent for stoves and hollow ware.
Owen, S. R., Stewartsville, Mo. Churn
Owens, G. H., Maysville, Ky. Hoo
Owens, John A., Little Falls, N. Y. Stareh tray
Owens, John A., assignor to self and Henry I. Petrio, Littlo Falls, N. X. Apparatus for the manufacture of starel.
Owens, Lane, Dyer and Company. (See Kirk, IV. A. L., assignor.)
Paar, John, New York, N. Y. Fire eseape
Paek, W. H., and Joseph S. Vanhorn. (See Vanhorn and Paek.)
Paekard, Joseph, et al. (See Burdick, Norman, assignor.)
78,758
79, 679
77, 084
78, 476
3, 022
75, 786
82, $86 \%$
82, 980
80, 206
82, 023
76, 654
81, 401
79, 383
79, 078
80, 087
85, 240
75, 452
79, 384
74, 584
2,932
2, 979
2,983
2, 981
2, 982
79,592

Packard, Manly, North Easton, Mass. Sole edge plane
Packard, O. L. (See Grunert and Bingham, assignors.)
Paekard, Ralph G., Brooklyn, N. Y. Globe valve
Paekard, Ralph G., and Michael Hastings, Brooklyn, N. Y. Lock-np safety valve Packer, G. W., 'Toulon, I11. Extension step ladder.
Paeker, George W., jr., Mystic River, Conn. Apparatus for building walls and extracting stamps
(Reissue).
Paddock, Osear, Watertown, N. Y. Horse hay fork Same
same. Samo....... Blind shatter fastening
Padrick, Oscar D., Shelbyvillc, Ind. Self-propelling velicle
Page, C. D., Rochester, N. Y. Lime-kiln
Same...... (See Me Namara, James, assignor.)
Page, Charles Grafton, Washington, D. C. Induction eoil apparatns and eircnit breakers
Page, Dudley L., Lowell, Mass. Confection
Page, Enos, Stroctsboro, Ohio. Sheep table, \&e.
Page, George F., et al. (See Cook, John F., assignor.)
Page, Ira, Adams, N. Y. Manufacturing butter from whey
Page, James T., lochester, N. Y. Scoon, shovel, \&e
Page, James T., assignor to solf and William H. Brown, Rochoster, N. X. Coal seuttlo.
Page, Samucl, McAlisterville, Pa. Horse lay fork
Page, T. C., Chieopee, Mass. Sewing machine. (Antedated Feb. 7 , 1868) Page, William H., assignor to Villiam $\Pi$. Pago \& Company, Norwieh, Conn.

Printer's border
(Design)
Samo ...... Alphabet of letters............................................................. (Design)
Same ..............samo -......................................................... (Design)

Page, William M. and E. B. Krausso, St. Louis, Mo. Process of preparing sulphate of barytes
Paige, W. H., assignor to self and I. O. Hanson, Springfield, Mass. Devico for connecting dissimilar hose couplings.

Date.

Nov. 17, 1868
Dee. 29, 1868
Sept. 1, 1868
Mar. 31, 1868
Nov. 3, 1868
July 21, 1848
Oct. 6, 1868
Oct. 27, 1868
June 2, 1868
Mar. 10, 1868
Mar. 10, 1868

Aug. 18, 1868
June 9, 1868
June 22, 1868
Fcb. 25, 1868
Scpt. 29, 1868
Jan. 7, 1868
Sept. 22, 1868
Dec. 8, 1868
Dee. 8, 1868
Apr. 28, 1863
Dec. 15, 1868
Dec. 15, 1868
Mar. 31, 1868
Mar. 31, 1868
May 12, 1868.
June 2, 1868
Nov. 3, 1868.
Nov. 24, 1868.
Dee. 15, 1868
Apr. 21, 1868.
May 26, 1868.
Jan. 14, 1868.
Mar. 31, 1868.
Jnno 9, 1868.
Jnly 7, 1863.
Apr. 21, 1863
June 2, 1868.
Jully 7, 1868.
Mar. 24, 1868.
Oct. $6,1868$.
Oet. 13, 1868
Jaly 21, 1868.
Sept. 8, 1868.
Apr. 14, 1868.
Aug. 25, 1868.
Juиo 30, 1863.
June 23, 1868.
July 21, 1868.
Dec. $22,1868$.
Mar. 10, 1868.
June 30, 1868.
Feb. 18, 1863.
Fob. 11, 1868.
Mar. 31, 1868.
Mar. 31, 1868.
Mar. 31, 1868.
Mar. 31, 1868-
Sopt. 15, 1868.
July 7, 1868.

No.

83,536
73, 392
83, 537
78, 229
84,372
74, 767
85, 241

74,585

84,754
73, 032
80,424
74, 413
79, 144
82, 024
73, 638

79, 250
77, 906
83, 303
77, 838
83, 726
73, 751
77, $20 \%$
78, 123
78, 933
81, 200
78, 816
82, 981
80,562
84, 300
80, 872
85, 471
74,933
82, 438
3, 2ヵ6
83,304
74,414
78, 230
3, 046
3, 152
74,934
77, 907
82, 025
2,920
80, 761
83, 995
84, 506
74,768
79, 772
77,908
83, 305
80,762
84, 373
77, 401
83, 084
85, 122
74, 935
80, 207
81, 815

Paige, W. H., assignor to self, John Sweeny, and James W. Russell, Springfield, Mass. Seat baek
Paine, Calvin H., assignor to self and George S. Thompson, Providence, R. I. Carliage jaek
Paine, Clinton J., assignor to self and Henry Creswell, Young America, Ill. Corn plow.
Paine, Elias A., Sutton, Mass. Sliuttle.
Paine, Enoch H., Louisville, Ky. Bacgage check.
Paine, George, Waslington, Ohio. Sheep holder and fleece folder combinod
Paine. Hiran E., assignor to Henry H. Paine, Troy, N. Y. Cartridge box. (Antedated Dec. 16,1868 )
Painter, William, assignor through mesne assignments to self and Charles Painter, Baltimore, Ma. Lamp burner . . ...................................... (Reissue)
Paley, John, and Thomas Rawsthorne, Great Britain. Mule for spinning. (Patented in England Nov. 23, 1864)
Palmer, Aaron, and William H. Scymour. (Sce Seymour \& Palmer.)
Palner, Aaron, Brockport, N. Y., and Stephen G. Williams, Janesville, Wis. Grain harvester.
Palmer, Abel B., and Jesse Tucker. (See Tueker \& Palmer.)
Palmer, Alonzo, assignor to self and N. II. Melcher, Hudson, Mich. Pump
Palmer, Charles E., Manehester, N. H. Steam trap
Palmer, Clarles E., Newburyport, Mass. Fastening for shirt collars
Palmer, Charles H., assignor to self, N. Palmer, and J. Heinrich, New York, N. Y. Manging window sash.

Palmer, Charles T., Norwich, Conn. Spice can. Same.......Spice box.
Palmer, Charles W., assignor to L. B. Frazier, trustee for C. W. Palmer, I. B. Frazier, H. E. Palmer, and C. Houghton, Lynn, Mass. Machine for finishing the edges of boot and shoe soles
Palmer, Edwiu A., Clayvillo, N. Y. Cheese-curd rake. (Antedated June 12, 1868)
Palmer, Frederick W., Albany, N. Y. Hand fork
Palmer, George. (See Havens, Jesse, assignor.)
Palmer, George, Littlestown, Pa. Railway-rail joint
Palmer, George N., Greene, N. Y. Stone-gathering machine Same...... Stone drag.
Palmer, George T., Brooklyn, N. Y. Filter. (Antedated Jan. 16, 1868) Same..... Mosquito-net frame. (Anterlated April 14, 1808).
Same...... Crib and bedstead. (Antedated May 5, 1868) Same....... Bottom for boilers. (Autedated June 6, 1868)
Palmer, George T., Brooklyn, N. Y., and P. P. Bush, New Haven, Conn. Machine for eutting soap into slabs.
Palmer, Harvey D. assignor to S. O. Kaempfer, David G. Williams, and William C. Wilson, Leonidas, Mieh. Horse hay fork.
Palmer, Hen'y, Evanston, Ill. Voltaic battery
Palmer, Heury H., Rockford, Ill. Spring seat for wagons Same...... Spling-bed bottom.
Palmer, Horace, and A. N. Case. Kingsville, Ohio. Doubletree
Palmer', Ira $\Lambda$. Monmouth, Ill. Cultivator
Palmer', Isaac E., Haekensaek, N. J. Mosquito eanopy Same...... Mechanieal movement. (Antedated Sept. 14, 1868) Same . . . . . Taekle block
(Reissue)
Palmer, Isaac H., Lodi, Wis. Harvester
Palmer, John, Mechaniesburg, Pa. Buggy-top roller.
Palmex, Joseph, Concord, N. H. Welding the ears of elliptie springs
Same..... Mode of manufacturing heads for elliptie springs.... (Reissue). Palmer, J. S., Portland, Me. Goblet
(Design) .
Palmer, Milton J. (See Sweetland, Alvah, assignor.)
Palmer, Nelsou, Albany, N. Y. Horse hay fork
Same. ................................... same
Palmer, Stewart B., Syracuse, N. Y. Low-water alarm for steam generators
Palmer, S. W., and J. F., assignors to the Metropolitan Washing Machine Company, Auburn N. Y. Gearing (Reissue)..
Palmer, S. W. and J. F., assignors to E. G. Storke, S. U. Palmer, and Clara M. Palmer, Auburn, N. X. Machine for grinding cutters of motring maehines. (Reissue)
Palmer, T. G., Shultzville, $\mathbf{N}$. X. Brake for horse power
Palmer, Timothy G.. et al. (See Waldron, John J., assignor.)
Palmer, W. H., jr., Middletown, Conn. Cord-eovering maehine
Palmer, Wilford L. (See Pitts, S. G., assignor.)
Palmer, William M., Middlebush, N.J. Water elevator Same................................................. same
Pancake, George, Harrisburg, Pa. Maehine for wiring blind slats.
Panehot, George, Hastings, Minn. Carriage step. .
Pannabceker, Jesse, Durlaeh, Pa. Mode of dressing millstones.
Pape, William Roehester, Great Brítain. Fire-arm.
Papin, P. M., St. Louis, Mo. Quartz stamp mill
Same...... Ladder
Paradis, Peter, Rochester, N. Y. Coal stove.
Paraf, Alfred, Boston, Mass. Process of separating coloring mattcr fom madder and otleer plants.
Paraf, Alfred, New York, N. X. Manufaeture of water-proof textile fabrie....

Date.

Oet. 27, 1868
Feb. 4, 1868
Oct. 27, 1868
May 26, 1868
Nov. 24, 1868
Feb. 25, 1868
Dec. 22, 1868
Feb. 4, 1868
Feb. 18, 1868

Jan. 6, 1868.
Dec. 8, 1868
Jап. 7, 1868
July 28, 1868.
Feb. 11, 1868
June 23, 1868
Sept. 8, 1868

Jan. 21, 1868
June 23, 1863.
May 12, 1868.
Oet. 20, 1868.
May 12, 1868.
Nov. 3, 1868
Jan. 28, 1808
Apr. 28, 1868.
May 19, 1868
Juue 16, 1868.
Aug. 18, 1868.
June 9, 1868.
Oct. 13,1868
Aug. 4, 1868
Nov. 24, 1868.
Aug. 11, 1868
Dee. 29, 1868.
Feb. 25, 1868
Sept. 22, 1868
Dee. 8,1868
Oct. 20,1868:
Feb. 11, 1868
May 26, 1868
July 21, 1868
Aug. 4, 1868
Feb. 25, 1868.
May 12, 1868
Sept. 8, 1868.
Apr. 21, 1868.

Ang. 4, 1868.
Nov. 10, 1868.
Dec. 1, 1868.
Feb. '25, 1868.
July 7, 1868
May 12, 1868.
Oct. 20, 1868
Aug. 4, 1868
Nov. 24, 1868.
Apr. 28, 1868.
Oct. 13, 1868
Dec. 22, 1868.
Feb. 25, 1868
July 21, 1868
Sept. 1, 1868.

## Alphubelical list of patentees for the year 1868-Continued.

| No. | Name, residonco, and invention or discovery, |
| :---: | :---: |
| 74, 769 | Pardee, Isaac, Vineland, N. J. Concreto brick machine. (Antedated Fel. 10, 1868) |
| 76, 288 | Pardee, Isaae, assignor to self and Ariol C. Cotton, Vineland, N. J. Seuffle hoe and garden trimmor |
| 80,873 | Pardee, Isaae, assignor to self and Orson Reed, Buena Vista, N. J. Stump maehine |
|  | Pardee, Moses B. (See Gray, H. H., assignor.) |
| 77, 402 | Pardee, Plincas, New Haven, Conn. Apparatus for discharging |
| 84, 573 | Pardee, William B., New Haven, Comm. Top prop for carriage |
| 78, 817 | Parham, Charlos, Philadelplia, Pa. Sewing machine |
| 78, 818 | Samo |
| 78,685 | Same |
| 78,686 | Samo..... Water reser voir attachment to cooking |
| 78, 687 | Samo...... Ovens of cooking stoves |
| 78, 890 | Samo..... Warming closet on cookin |
| 78,891 | Samo...... Earth and ash siftor in cooking <br> Same...... (See Boynton, N. A. assicnor.) |
| 78,688 | Paris. Daniel E., and Charles S. Davis, assignors to D. E. Paris and Cloment Ollaber, Troy, N. Y. Hot-water tank on cooking stoves. |
| 78,819 | Paris, Daniel E., assignor to Burdet, Paris \& Company, Troy, N. Y. Hot-water tank on eooking stoves |
| 76,098 | Park, Horaee, Columbus, Ohio. Ironingr table |
| 73, 375 | Park, James, jr., Pittsburg, Pa. Combining. eopper and cast iron |
| 78,477 | Samo..... Mauufaeturo of plates of eombined steel and iron |
| 2,976 | Park, James A., White House, N. J. Door and gato latch............ (Roissue) |
| 81,936 | Park, John, Joliet, Ill, Bedstead and quiltiner frame. |
| 77, 648 | Park, John H., Whito Honse, N. J. Bar liolder. (Antedated April 24, |
| 75, 697 | Park, R. W., assignor to C. W. Park, Philadelphia, Pa. Lamp buruer. |
| 80,996 | Park, Webster, Norwiel, Conn. Fluid meter. |
| 80, 208 | Parker, Androw, New York, N. Y. Bureau be |
|  | Parker, Charles, Meriden, Conn. Cast-iron vise. <br> (Extension) <br> Samo ...... (Sce Cummings, George N., assignor) $\qquad$ <br> Same...... (See Riehmond, Hiram, assignor.) |
| 77,649 | Parkor, Charles and Edmund, assignors to Charles Parker, Moriden, Conn. Coffee mill |
|  | Parker, Charles and C. A. Kinney. (See Kinney \& Parker.) Parker, E. (See Thomas, Ralph, assignor.) |
| 78,820 | Parkor, Edward M., Zion, Md. Horse hay fork |
| 77,519 | Parker, Edwin A., Horse Heads, N. Y. Coal sto |
| 83, 655 | Parker, Eliphalot H., Bueksport, Maine. Steam go |
| 76, 512 | Parker, E. N., Essex, Coun. Tatting shattle |
| 83, 306 | Parkor, Franeis, assignor to self and C. W. Ormsby, Petaluma, Cal. ALortising machino |
| 78,391 | Parker, G. L., Coventryville, N. Y. Boiler for making maple suga |
| 77, 085 | Parker, G. W. and W. FF., Kalamazoo, Mich. Fur muftor |
| 2,945 | Parker, Marrison, and Jonathan C. Sloeper, Boston, Mass. Trade mark. |
| 79, 251 | Parker, Hiram, assignor to H. W. Persing, Salem, Ill. Wagon box |
| 89, 364 | Parkor, Isaae J., Butfalo Grove, Inwa. Fence post driver. |
| 76, 804 | Parker, James L., Harrisonburg, Va. Hollow aurer. |
| 3, 180 | Parker, Jefferson, Louisvillo, Ky. Maehine for slanghtering hogs |
| 7\%, 650 | Parker, John E., Meriden, Conn. Roversiblo knob latch. |
| 77, 909 | Sam |
| 3, 140 | Samo..... . Drawer |
|  | Parker, Joseph. (See Bailey, Ezra, assignor.) |
|  | Parker, Lewis, jr., et al. (See Woolvorton, Simuel, assignor.) |
| 84, 507 | Parker, L. F., Davenport, Iowa. Harvester. |
| 81,937 | Parker, Quintin, Now York, N. Y. Steam goner |
| 73, 258 | Parker, Simuol J., Ithaea, N. Y. Briek maehine. <br> Same...... Sewing maehino. $\qquad$ (Diselaimer filed) <br> Samo.............. same <br> ......(Extension) |
| 75, 962 | Parker, Simon B., Springfield, Mass. Doviee for fastening shoo strings. |
| 77, 910 | Parker, Wilbur F., Meriden, Conn. Maehino for threading |
| 76,513 80,659 | Parker, William, Washington, Ohio. Straw earrier Parker, W. H., Memphis, Tenn. Smoke staek |
| 76, 241 | Parkerson, Franeis, Philadelphia, Pa. Wheeld |
| 83, 200 | Parkin, Joseph, and James H. Smith, Cloveland, Ohio. Maehino for molding sheet-metal window and door eaps. |
| 75, 963 | Parks, Benjamin M., St. Louis, Mo. Chorn dasher ..................................... |
| 82, 868 | Parks, B. M., assignor to self, A. C. Robinson, and William Seymour, St. Louis, Mo. Pruning hook |
| 75, 295 | Parks, David A., Fairview, II. Penstock for undergroand drains Parks, John A., et al. (S'ee Taylor, O. H., assignor.) |
| 73, 376 | Parks, Willian F., and Louis F. Lannay. (See Lannay \& Parks.) <br> Parlour, Joseph T., assignor to self and Willian Beard, Brooklyn, N. Y. Koel and bilge bloek |
| 84,963 | Parmele, D. J., assiguor to self and J. H. Currier, San Franeisco, Cal. Railwayear brake |
| 85, 12:3 | Parrish, William E. (See Taylor, O. H., assignor.) <br> Parrott, G. W. and B. F., and E. M. Timson, Lynn, Mass. Machine for folding and eutting material for shoe uppers, \&e. <br> Parrott, Samuel C. (See Bowen, George A., assignor.) |

Date.

Fob. 25, 1868.
Mar. 31, 1868
Aug. 11, 1868
Apr. 28, 1868
Dec. 1, 1868
Juno 9, 1868
June 9, 1868.
Nov. 20, 1868.
Juno 9, 1868
Juno 9, 1868
Juno 9, 1868
Juno 16, 1868
June 16, 1868

June 9, 1868
June 9, 1868
Mar. 31, 1868
Jan. 14, 1868
Jume 9, 1868
Juno 9, 1868
Sept. 8, 1868
May 5, 1868
Mar. 17, 1868
Ang. 11, 1868
July 21,1868
June 19, 1868.

May 5, 1868

Juno 9, 1868
May 5,1868
Nov. 3,1868
Apr. 7, 1868.
Oet. 20, 1868
May 26, 1868
Apr: 21,1868.
Mar. 3, 1868
Juno 23, 1868
July 28, 1868
Apr. 14, 1868
Nor. 3, 1868
May 5,1868
May 12,1868
July 28, 1868

Dec. 1,1868
Sept. 8, 1868
Jan. 14, 1868
Mar. 10, 1868
A pr. 9, 1868
Mar. 24, 1868
May 12, 1868.
Apr. 7, 1868
Aug. 4, 1868.
Mar. 31, 1868.
Oet. 20, 1868
Mar. 24, 1868.
Det. 6, 1868.
Mar. 10, 1868.

Jan. 14, 1868.
Dee. 15, 1868.

Dec. 22, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.
77. 834

79, 252
73, 639
77, 208
78, 689
77, 209
83, 201
83, 202
83, 203
83, 204
83, 205
81, 675
77, 835
78, 759
82, 155
82, 156
79, 253
80,832
3, 301
80, 209
82, 343
82, 743
3, 172
85, 47:
81, 676
81,938
79, 853
81, 201

83, 538
82, 868
83, 656
78, 994
79, 497
79, 854
82, 744
73, 033
81, 104
76, 099
74, 123
76, 514
77, 836
75, 571
77, 086
81, 530
82, 745
73, 640
83, 085
83, 086
82, 026
76, 515
74, 415
85, 328
81, 202
81, 285
82,982
73, 752
75, 453

82, 545
3, 167
3, 168
83, 788

Name, residence, and invention or diseovery.

Parrott, William P., (George Hughes, executor,) and John J. Bordman, Boston, Mass. Modo of removing netallic scale from glass and "moils"
Parrott, William P., assignor to N. F. Bryant, Boston, Mass. Railroad truek. . Parshall, Albert O., and Garret J. Olendorf. (See Olendorf \& Parshall.)
Parshall, Charles II., Detroit, Mich. Air whistle
Parson, John T., Washington, D. C. Roadway pavement. (Antedated April 18, 1868)
Parsons, A. B., assignor to self and Edward Redhead, Dunton, Ill. Tube well.
Parsons, George W., Marrisburg, Pa. Straw eutter
Parsons, Louis J., New Bedford, Mass. Mode of binding tho edges of reinholders.
Samo...... Adjustable mosquito bar frame.
Same...... Whip socket.
Same....... Thill guard.
Same...... Mode of fastening apron-hooks to the dasher falls of carriages.
Parsons, Lonis J., assignor to self, John R. aud O. E. Linton, New Bedford, Mass. Whip socket
Parsons, Luther M., Waukan, Wis. Cooking stove
Parsons, William T., Thomasville, Ga. Car brake
Partridge, George F., Adrian, Mieh. Corn planter
Passmore, E. G.., jr., Philadelphia, Pa. Harvester
Passy, Frederic, Franee. Andirons and fire-plaee
Pastorius, Franeis D., Philadelphia, Pa. Stove-pipe damper
Same....... Machine frame or honsing.
(Design)
Patch, J. V. D., Brownville, Neb. Eseapeinent
Patcher, John, jr., and W. W. Stevens. (See Stevens \& Patcher.)
Pate, Alvah and Edgar W., Mankin, Mich. Wagon
Pater: Aon, S. D., et al. (See Chamberlin, John V., assignor.)
Pathi, Adolphe, Aehille, Iranco. Cigar pipe.
Patric, C. E., Macedon, N. Y. Sifting apparatus for grain drills...... (Reissue).
Same...... Grain drill.
Patrick, E. L., ct al. (See Moor, Moor \& Patrick.)
Patrick, James D., San Francisco, Cal. Ball alley. (Antedated Aug. 25, 1863)
Patriek, Lewis, Shortsville, N. Y. Shaft journal. (Antedated Aug. 27, 1863).
Pattee, John W., assignor to self and Ephraim Elliott, Thornton, N. H. Paintcrs' hook
Pattee, Samuel L., Northbridge, Mass. Spindle step.
Pattee, Wyman, et al. (See Cummings, Pattee \& Shaw.)
Patten, Ben Adams, and Theodore A. Barry. (Sce Barry \& Patten.)
Patten, John W., North Greenbush, N. Y. Knife and fork holder. .
Patten, Julia W. D., New York, N. Y. Iee preserver
Patterson, Andrew, Birmingham, Pa. Harrow tecth
Patterson, Elias C., Rochester, N. X. Railroad ear jack.
Same -......Grain separator
Same...... Wire and picket fence
Patterson, E. G., Pit Hole City, Pa. Railway rail joint
Patterson, George, Augusta, Mich. Rail set
Patterson, George W. (See Duer, E. A., assignor.)
Patterson, J. B., Portage City, Ohio. Compound for preserving eggs
Patterson, James H., Glens Falls, aad Henry B. Northup, Sapdy Hill, N. X. Radiating drum stove.
Patterson, James Willard, assignor to Sarah Ellen Patterson, Cineinnati, Ohio. Culinary vessel
Patterson, James Willard, and Joseph Stacy Hill, Cineinaati, Ohio. Coftee pot
Patterson, N. A., Winehester, Temn. Vote register
Patterson, S. J., Bridgeport, Conn. Apparatus for leeching bark and other materials
Same. ..... Knife for removing the skin from animals.
Patterson, Thomas M., Tarr Farm, Pa. Tool extractor for wells
Pattison, John, Nevada, Cal. Quicksilver feeder for quartz mills
Pattison, JohnE., Thibodeaux, La. Apparatus for treating eane juiee with sulphurous acid.
Patton, Alcxander G., Troy, N. X. Cooking stove
Same...................................... .same ..
Patton, Charles W., Excter, Inl. Wheat drill
Patton, Garret R., Juda, Wisconsin. Fenco post.
Patton, Josiah M., Tipton, Io wa. Beehive
Patton, Nancy, Kansas, Ill. Composition for preserving eggs
Patton, Samucl, Chatsworth, M1. Corn harvester.
Same .....Belt tightencr
Pattoin, William, Springfield, Mass. Apparatus for dveing hair.
Patton, William P., assignor to self, Theo. Weaver and Isaae Lloyd, Harrisburg, Pa. Lailroad switch.
Patton, William P., assignor to James M. Foster, Harrisburg, Pa. Skate buekling tongs.
Paul, Charles II. (See Quinn, Patrick, assignor.)
Pauloy, Jason B., assignor to self and Franklin B. Ives, Tiskilwa, In. Feedpower machine
Paulus, Engene, Philadelphia, Pa. Top plate for a watch
(Design)
Same......................................

## Date.

May 12, 1868 June 23, 1868

Jan. 21, 1868
Apr. 28, 1868
June 9, 1868
Apr. 28, 1868
Oet. 20, 1868
Oct. 20, 1868
Oct. 20, 1868
Oet. 20, 1868
Oct. 20, 1868
Sept. 1, 1868
May 12, 1868
June 9, 1868
Sept. 15, 1868
Sept. 15, 1808
June 23, 1868
Aug. 11, 1868
Dec. 29, 1868
July 21, 1868
Sept. 22, 1868
Oet. 6, 1868
Oct. 27, 1868
Dec. 29, 1863
Sept. 1, 1868
Sopt. 8, 1868
July 14, 1868
Aug. 18, 1868.

Oet. 27, 1268
Oct. 6, 1868
Nov. 3, 1868
Juno 16, 1868
June 30, 1868.
July 14, 1868.
Oct. 6, 1868
Jan. 7, 1868.
Aug. 18, 1868.
Mar. 31, 1868.
Felb. 4, 1868.
Apr. 7, 1868.
May 12, 1868.
Mar. 17, 1868
Apr. 21, 1868
Aug. 25, 1868
Oct. 6, 1868
Jan. 21, 1868.
Oct. 13, 1868
Oct. 13, 1868.
Sept. 8, 1868
Apr. 7, 1868.
Fel. 11, 1868
Dec. 29, 1868.
Aug. 18, 1868
Aug. 18, 1868
Oct. 13, 1868
Jan. 28, 1868.
Mar. 10, 1868.
Sept. 29, 1868
Aug. 25, 1868.
Aug. 25, 1868.
Nov. 3, 1868

Alphabetical list of patentees for the year 1868-Continned.

No.

Payne, Charles, Brandon, Vt., and Bennet Vandeear, Waterford, N. Y. Cotton picker
Payne, Charles B., Bloomington, $\Pi 1$. Harness buckle
Samo...... Clinton, Ill., Gag swivel.
Payne, Edward, England. Composition for cattle food
Payne, F. C., Now York, N. Y. Folding bed.
Payne, Hemry T., and William Ayres, Sau Francisco, Cal. Finish for painted surfaces
Payne, Ira T., Cliester, Conn. Auger. (Antedated Feb. 28, 1868) Payne, N. S. (See Porter, Amos, assignor.)
Payne, R. W., et al. (See Rogers, Ephraim P., assignor.)
Payne, Thomas, Detroit, Mieh. Railroad-station Eindicator
Same...... Grand Rapids, Mieh. Meat chopper.
Payne, Willian H., Janosville, Wis. Hanes fastener
Payton, Walter, England. Water meter...
Same . . . . . Lathe for turning irregular curvel forms
Peabody, Cyrus, and Patrick H. Delanr, Detroit, Mich. Advertisine devico
Peaborly, Frederic J., Medford, Mass. Button
Peabody, Hemy O., assignor to the Providence Tool Conpany, Providence, I . $\overline{\mathrm{I}}$. breeeh-loading tire-arnı
Peabody, Joseph A., Philadelphia Pa. Mortising machine
Peabody, Rufus H., Chelsea. Mass. Botton-lole stitching machine
P'eabody, R. L. (S'ee Kline, Calvin, assignor.)
Peabody, Sarah A. T., et al. (See Remington, Wm. II., assignor.)
Puabody, S. G., Champaign, Ill. Cultivator
oring games.
Peace, John, Camden, N. J. Pipo cutter
Peacock, David L., Rock port, Ind. Shingle machine.
Poacock, Georgo H., Fairport, N. Y. Bag fastener
Peake, Willian I., New York, N. Y. Tr'ade mark $\qquad$


Pearce, John W. Suisun, Cal Car aud track for elevating on iucline plaues Pearce, Shadraek II, Boston, Mass. Case for unbrellas
Pearce, Stephen T., New York, N. Y. Machino for separatiug ores and other materials.
Same...... Machine for separating ores and other granular substances....................................
Pearee, Wesley, McLeau County, Ill. Sponge and dough raiser.
Pearl, Aldolph, New York. N. Y. Damping apparatus for copying presses
Pearl, Oliver, Lawrenco, Hass. Spinning throstle
Pearne, B. ML, and L. Coville, Oxford, N. Y. Axte box
Puars, John P., Birmingham, Pa. Manufacture of glass ware
Pearsall, A. II., et al. (See Hermance, C. W., assignor:)
Pearson, G. A., and R. V. Sallada. (See Sallada \& Pearson.)
Pearson. G. W., Billeriea, and D. Coburn, Lowell, Mass. Machine for cutting. and separating dyo woods.
Pearson, Henry G ., New York, N. Y. Mechanical toy
Pearson, William, Windsor Locks, Conn. Clamp nui.
Pearsons, Harrison C., Perryshurg, Mich. Sun dial.
Pease, C. C., assignor to selt, Giles Milks, and \&. B. Brininstool, Jamestown, N. Y. Instep streteher

Pease, Chester M., Monson, Mass. Roof-stawing.
Pease, Dexter E. (See Richards, George, assigior:)
Pease, F. S., Buffalo, N. Y. Iyulro-carwon vapor apparatus $\qquad$ (Reissue)
same....... Reciprocating stean-ongino.
Same ..... . Steam valvo
Pease, Henry, Broekport, N. Y. Coal eook-stove
Pease, Henry, assignor to self and $H$. W. Scymour, Brocknort, N. Y. Cooking stove.
Pease, Henry A., Hartford, Comi. Manufacture of soap,
Pease, Henry A., assignor to self aud Jeremy W. Bliss, Hartford, Com. Manufacture of soap.
Pease, H. F. (See Reany \& Corncll, assignors.)
Pease, H. I'. and W. I.. et al. (See Bailey, Henry, assignor.)
Pease, J. W., assignor to solf and Leonard and Isaac lVillets, Belmont, N. Y. Brick machine
Pease, Lewis P., McCordsville, Ind. Portable fence
Pease, O. S., Xenia, Oliio. Scal lock
Peaslee, Horaee W., Malden bridge, N. Y. Machino for washing paper stoeks. (Extension)
Peck, Ezra, Chieago, Ill. Plow
Peck, George 13. (See Chadwick, Johin H., assignor.)
Deck, John D., Tri:mılo, N. Y. Plow
Peck, Samuel, \& Company. (See Gardner, John, assignor.)
Peek, Thaddens, Stiatford Convi.........................
Peck Theodore $P$ Sayamal1 Ga
Pect, Valter assimor to Willim smoke stack
Rockford, Ill. WVindmill
Peckham, George F., Grafton, Ohio. Hair dyo and drossing contoond
Peckham, George li., Worcester, Mass. Wheel for animal eages
Peckham, Jethro and John, Middletown, I. I. Voutilator

Date.

Fel). 11, 1868.
May 19, 1868
Nuv. 3, 1868
1ec. 1, 1868.
Apr. 28, 1868.
Jan. 14, 1868.
Mar. 10, 1868.

Tuly 14, 1868.
Sont. 8, 1868.
Oct. 13, 1868.
Jan. 7, 1868
Jan. 28, 1868.
Dee. 8, 1868
Aug. 4, 1863.
Apr. 14, 1868.
Aug. 18, 1868.
Junc 9, 1868.

Dec. 1, 1868
A pr'. 21, 1868.
A119. $65,1868$.
Jan. 7, 1868
A pr: 21, 1368.
Nov. 3, 1368.
Sopt. 1, 1868.
Jan. 14, 1368.
Ang. 4, 1868.
Ang. 4, 1868.
July 7, 1868.
Oct. 13, 1868
Fob. 4, 1868
July 14, 1868.
Oct. 13, 1868.

Fob. 18, 1868.
Jan. 14, 1868 Aug. 11, 1868. May 26, 1868.

Jan. 21, 1868.
A pri. 7, 1868.
Mar. 10, 1868.
Sept. 22, 1868. Nov. 17, 1868. June 9, 1868

Nov. 3, 1868
Nov. 10, 1868.
Sept. 20, 1868.

Der. 15, 1868.
A 11: 21, 1868.
Aug. 18, 1868.
Aug. 18, 1868.
Sent. 29, 1868.
Sept. 15, 1868.
Mar. 10, 1868.

Aug. 25, 1868.
Sept. 15, 1868
Sent. 1, 1868
May 12,1868
Sept. 1, 1868
Oct. 6, 1868

No.

Namo, residence, and invention or discovery

Peckham, William H., New York, N. Y. Machine for bending rings Samo...... Finger ring.

See Adams \& Peckorer.)
Peddie, T. B. (See Wakcnshaw, Wm., assignor.)
Pedrick, Johm C., Washington, D. C. Combined high and low pressure steamengine. (Antedated Sept. 17, 1868).
Pedrick, Joseph B., assignor to self and Joseph F. Gent, Lowcll Mills, Ind. Reciprocating steam-engine
Peevy, Joseph, Orono, Maine. Rock drill
Peffer, Philip, Milroy, Pa. Shaft coupling
Peirce, I. Newton, and Catharine Maxwell. (See Maxwell \& Peirce.)
Peirce, James M., Mokema, Ill. Blind-slat fastening. (Antedated Apr. 30,1868).
Peirce, William If., Bangor, Maine. Egy beater-
Peirce, W. N., West Boylston, Mass. Wash boiler.
Peirson, C. C. and G. F., Philadelphit, Pa. Apparatus for condensation of vapor in lard boiling, \&c
Pelisse, Augustus, et ai. (See Griswold, Pclisse \& Hook.)
Pell, Henry V., Rome, N. Y. Harvester
Same .............................sanre........................................................
Polletier, Antonio, Washington, D. C. Barrel and cask for containing oils, \&c .
Same......Composition for manufacturing stone, and for other purposes. -
Same....... Cement for coating wood, \&c
Same......Cement for roofing, artificial stone, coating iron, wood, \&c .....
Same....... (See Smoot, W. G., assignor.)
Same...... (See Ott, Adolph, assiguor.)
Same ....................same.
Pellett, John J., Oconomowoc, Wis. Gate.
Pelton, Williain N., New London, Conn. Counecting link
Pember, Henry H., New York, N. Y. Hanging rudders.
Same.. Boiling kettle.
City, Pa. Manufacture of sulphate of alumina. Same..... Porous alum..
Ponce, W. II, and S. H. Cox. (See Cox \& Pencc.)
Pender, Joln. Let-off and take-up for looms.
Pendergast, T., St. Louis, Mo. Pole for horse cars.
Pendexter, Benjamin P., assignor to seli and George W. Horner, Minot, Maine. Machine for sharpening saws
Penuleton, John M., et al. (See Bishop, Pendleton \& Aiken.)
Penington, Philip, Union City, Ind. Churn ...........
Pennington L. D., and J. G. Woodfill. Vernon, Ind. Horse rake
Pemnock, O. H. and Ira G. W. (See Hammond, Everett C., assignor.)
Pemnoyer, George, New York, N. Y. Thill coapling
Pennoyer, Hobart D., Athens, N. Y. Auger handle
Pcmny, Joha M., and Jacob J. Wright. (See Wright \& Penny.)
Pentz, Levi, Canton, Ohio. Thill coupling.
Pepper, Danicl W., assignor to N. G. Taylor \& Co., Philadelphia, Pa. Fire-
man's stove. Lake Village, N. N. Cincular knitting machine....................................imer filed)

Pepper, T. W., Ncw York, N. Y. Sewing machine
Pepper, Percival, E. F., and IJ. S. True, Hammonton, N. J. Fruit basket
Percival, George Gilman, Philadelphia, Pa. Apothecaries' label
Percival, Thonas, Augusta, Me. Corn husker.
Perdue, O. B., et al. (See Nock, E. B., assignor.)
Perfater, G. S., Camp Point, Ill. Root cutter. .
Perlham, John, Rockton, Inl. Stove pipe shclf..
Perkins, Alfred T., and Nehemiab Waterman. (See Waterman \& Perkins.) Porkins, Belmont, and Andrew M. Leonard. (See Lconard \& Perkins.) Perkins, B. B., Chestertown, Md. Combined boiler and hot air register Perkins, B. F., Holyoke, Mass. Globe valve for stean-engines
Perkins, Charles B., assignor to self and Barnabas Burseley, Kenduskeag, Me. Horsc rake.
Perkins, Charles M., Providence, R.I. Forming horseshoe blaiks
Same...... Construction of toe calks for horseshoes
Perkins, P., Fond du Lac, Wis. Metallic shutter.
Perkins, F. B., and E. J. Smith. (See Smith \& Perkins.)
Perkins, it. J., Salem, Mass. Button
Perkins, George B., Utica, N. Y. Floor clamp.
Perkins, George F., New York, N. Y. Collar and neck-tie combined.
Perkins, George F., and S. F. Gibbs. Door fastener
Perkins, Howard, assignor to self and Benjamin S. Leonard, Mansfield, Mass. Portable adjustable elastic seat
Perkins, Jesse S., Lake Village, N. H. Iachine for making knitting-machine neetlle shanks.
Perkins, Johu B., and Ai Colburu, Holis, N. H. Seeldsowing machine
Perkins, John M., Plainfield, N. J. Compound fabric for covering walls, \&c Perkins, John M., assignor to I. M. Perkins, Plainfield, N. J. Aronatic lining for carpets, chests, drawers, wardrobes, \&c
for carpe

## Dato.

Apr. 28, 1868.
Sept. 29, 1868,

Sept. 29, 1868.
Sent. 8, 1868
Mar. 31, 1868 . Sopt. 8, 1868.

## May 19, 1868.

 Mar. 24, 1868. Oct. 20, 1868.July $14,1808$.
Jan. 21, 1868.
Jan. 21, 1868.
Jan. 21, 1868.
Feb. 18, 1888.
Apr. 14, 1868.
May $5,1868$.

Apr. 21, 1868.
Apr. 7, 1868. Mar. 24, 1868.
June 9, 1868.
May 19, 1868.
Oct. 6, 1868.
Feb. 4, 1868.
Dcc. $29,1868$.

June 16, 1808.
July 7, 1808
Mar. 31, 1868
June 9, 1808.
Mar. 17, 1868.
July 28, 1868.
Nov. 17, 1868.
May 5, 1888.
Dec. 3,1868.
Dec. 4, 1868.
Apr. 14, 1868.
Aug. 18, 1868.
Sept. 8, 1868
May 26, 1868.
Nov. 24, 1868
July 21, 1868.
Feb. 25, 1868
Oct. 6, 1868.
Apr. 7, 1808.
Mar. 10, 1868.
June 16, 1868.
Scpt. 15, 1868
Apr. 28, 1868
Aug. 25, 1868.
Mar. 3, 1868
Day 5, 1868
Sept. 29, 1868
July 28, 1868
June 2, 1868
Mar. 31, 1868
Apr. 7, 1868
Sept. 22, 1868

Alphabetical list of patentees for the year 1863-Continued.


79,593
73, 125
89, 871
75,048
75, 049
89,029
72, 254
73, 760

74,58s
81,523
84,964
85, 395
3, 025
77, 314
74, 417
82,548
84,755
84, 756
79,385
78, 231
78, 232

75,965
75,966 83, 303

77, 520
79,594

85, 124
74, 716
77, 756
84, 301

84,757
78,322

73, 380
81,941
81, 133
79, 386
78,825

76,519
74,937

73, 644
82, 242

78, 605
76, 343
78, 996

Namo, residcnee, and invention or discovery.

Perkins, Livingston \& Post. (See Durand, John, assignor.)
Perkins, M. R., and Jolin V. Bogert. (See Bogert \& Perkins.)
Perkins, Osker C., and Juhn R. Richards, assignors to selves and Joseph H. Forguson, Mit. Jof, Pa. Clothes-lino holder
Perkins, Willian, and Goorge Granger Tandy, England. Material for insulating telegraph conductors
Perl, M., Houston, Toxas. Modo of preserving meat
Perley, Cliarles, Now York, N. Y. Shoe.
Pernot, Hypolite, Now York, N. Y. Billiard eue trimmer
Perpente, Jolin, and Charles A. Flesehe. (See Fleselo \& Perponte) . (Design.)
Perrie, Willian B., Horso Head, Md. Martingalo

Perrin, Abram, assignor to self, Charlos L. Rowand, George S. Solden, and Marmaduke Moore, Cloveland, Ohio. Car coupling.
Perrin, J. D., and Joseph Sannders, Brooklyw, N. Y. Ictort for coneentrating sulphurie acid.
Perrino, G. W. (See Hoekert, S. L., assimnor.)
Perry, Albert D., and Alonzo T. Boon. (See Boon \& Perry.)
Perry, Benjamin P., Rielimond, Ind. Mead bloek for saw nills
Perry, Charles W., Providence, R. I. Well curbing.
Perry, D. W., assignor to solf and O. K. Moore; Wilkesbare, Pa. 'Iool for eutting moulding
Perry, Edward L., Ňow York. N. Y. Uose
Perry, Eli, Baldwingville, N. Y. Pump................................................ (Reissue)
Perry, Edward L., Now York, N. Y. Gas tabo.
Perry, E. L. (See Mauhoin, Charles, assignor.)
Perry, Goorgo, Georgetowu. Com. Modo of cultivating grape rines
Perry, Georgo W., Shouandoall City, Pa. Steam punping engine
Perry. G. W., and J. D. Billings, Wilmington, Dol. Seat for railway ears Same.... . . Door rotainer
Perry, Horatio O., Buffalo, N. Y. Feod water heater for boilers. (Antedated June 16, 1868)
Perry, James, Brooklyn, N. Y. Combined ovon and bath
Same....-Apparatus for apportiouing, expanding, and shaping dougl for the manufacture of braad.
Perry, Jcrome, and W. F. Higgins. (See Higgins \& Perry.)
Pery, John G., Kingston, R. I. Sausage fillor
.same.


Perry, John S., assignor to John S. Perry, trusteo and exeeutor, and Nathan B. Perry, Albany, N. Y. Base-burning stove.
Perry, John S., trustoo and oxecutor, and N. B. Porry. (See Spitzmiller, Am brose, assignor.)
Perry, John S., and James Easterly, Albany, N. Y. Magazino cook stove.
Perry, Oliver and Clark, Ortonville, Mieh. Gato..
Perry, Samuel, assignor to self and Johu L. Coulborn, Seaford, Del. Liftiug jack Perry, Samuel, et al. (See Murvell, John W., assignor.)
Perry, William G., Manchester, N. M. Machine for producing weavers' eut marks.
Pershing, Johil F. (See Ames, D. S., assignor.)
Pershing, H. W., Contralia, Ill. Wagon box
Same_....- (See Parker, Hiram, assignor:)
Pertuiset, E., Auguste Muudel, and Jean Etieno Armido do Fleron, Franco. Igniting explosivo projectiles
Peter, W. T., and R. A. Carson. (See Carson \& Poter.)
Peters, G. M., Laneaster, Ohio. Dropping platform for harvesters
Same...... Dropper for harvesters.
Peters, G. M. and A. L., Lancaster, Ohio. Droppor for harvesters
Peters, Theodore II., et al. (See Lazell, Elwin E., assignor.)
Peterson, J. B., Brooklyn, (E. D.,) N. X. Machine for mixing flour, \&e Peterson, Nelson, and Goorgo W. Jones, Antioch, Cal. Forging apparatus Peterson, Peter M., et al. (See Munt \& Wright, assignors.)

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\operatorname{San} \theta
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..samo.
Petrie, A. S., Hudson City, N. J. Wreneh
Petrie, Henry I. (See Owens, John A., assignor.)
Petseh, Julius, Prussia; and Stephon N. Buynitzki, Russia. Coffeo-making apparatus
Pettengill, D., and William W. Gordon. (See Gordon \& Pettongill.)
Pettibone, R. J., and 13onjamin Garvin. (See Garviu \& Pottibono.)
Pettierew, David, Westville, Olio. Garden plow
Pettijohn, William C., St. Lonis, Mo. Limo kiln..
Pettingell, William, administrator of J. F. Single. (See Singlo, J. F.)
Pettit, C. M., and N. L. Chappell. (See Chappoll \& Pettit.) Pfaffin, Matthew: (See Nairn, John, assignor.)
Pfau, Jacob, Cineinnati, Ohio. Manufaeturing fruit ean bodies Pfeifer, John. (See Fallows, Jamos, assi gnor.) Pfeil, John C., Arenzville, Ill. Rotary eattor for plows Pfleegor, L. H., Milton, Pa. Safety hook

Date.

July 7,1863.
May 19, 1868.
Oct. 6,1868.
Mar. 3, 1868
Mar. 3, 186z
Sojet. 8, 1868.

Juno 23, 1868.
Juno 9,1808.

Fób. 18, 1868.
Aug. 2J, 1868.
Dee. 15,1868
Dee. 29, 1868
July 7, 1868.
Apr. 28, 1868.
Feb. 11, 1868
Sept. 29, 1868
Dec. 8, 1868
Dec. 8, 1868
Jume 30, 1868.
May :0, 1868.
May 26, 1868
Mar. 24, 1862.
Man. 21, 1893.
Uct. 20, 1868

May 5, 1868
July 7, 1368.

Dec. 22, 1868
Feb. 18, 1868.
May 12, 1863.

Nov. 24, 1863.
Doc. 8,1868

May 26, 1868.
Jan. 21. 1863.
Sept. 8, 1865.
Nov. 17, 1868.
June 30, 1868.
Juno 2, 1863.

Арг. $7,1868$.

Feb. 25, 1868.

Jan. 21, 1868.
Scpt. 15, 1868.

June 2, 1868.
Apr. 7, 1868.
June 16, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

75,699
82, 372
7\%,521
76, 655
83, 309
84, 758
80, 998
73,994
83, 789
78, 997
83, 727
77, 757
79, 498
76, 245
79,387

73, 922
78, 126
79, 855
82, 344

83, 658
74, 124
84,576
76,808
83, 790
81, 105
80, 211
73, 034
78, 478
80, 498
$75,5 \% 2$
73, 923
80, 660
77, 403
74, 125

84,508
84,577
81, 679
81, 942
74, 418
73, 924
80, 833
2, 841

75, 050
$73,11 \%$
74, 126
73, 035
73, 036
74,717
75, 051
81, 404
79, 079
78, 893
75,573
83, 879
77, 315

Name, residenee, and invention or discovery.

Pfleghar, F. P.. Now Haven, Conn. Brace for bits
Pfrimmer, Jacob S., Lanesville, Ind. Wagon brake.
Pfimmer, William II., Lanesville, Ind. Measuring and registering grain
Phelan, William, Peoria, Ill. Coadenser Same.
Phelps, E. B., Now York, N. X. Gridiron
Phelps, George W., Conneant, Ohio. Bolt holder
Phelps, Harvey and Alvah, Albany, N. Y. Apparatus for ssparating soap bars.
Phelps, Wallace, and Abram Shoomaker. (See Shomaker \& Phelps.)
Pholps, William, jr., Salom, Mass. Blind fastencr
Phelps, W. E., Elmwood, IIl. Coru marker.
Same..... . Combined seeder and harrow
Phelps, W. H., Boston, Mass. Suspensory bandage
Phelps, William J., Springficld, Mass. Tioket punch
Plelps, William M.. and A. R. Ball. (See Ball \& Phelps.)
Pheteplace, David, Lewiston, Maine. Varnish for the surface of rolls used in textile machinery
Phifor; Edward, Trenton, N. J. Cultivator. (Antedated June 16, 1868)
Philadelphia Wood and Hollow Ware Manufactaring Company. (See Tingley, John, assignor.)
Pliilbrick, Warren C., Lynn, Mass. Composition for kindling firo
Philip, George W. (See Houghtaling, Ambrose L., assignor.)
Philippi, A., Elizabethport, N. J., Railway switch plate
Philips, David, Cordova, Ill. Wagon brake
same......same
Philips, Alfred, et al. (See Vander Weyde, P. H., assignor.)
Phillips, Charlos E., and John Hyslop, ir. (See Hyslop \& Phillips.)
Phillips, C. T., Jordan, N. Y. Smut mill
Phillips, Ezekiol, and Henry C., assignor to selves and Daniel B. Pond, Blaekstone, Mass. Picker-staff check for looms
Plillips, Goorge, Cadet, Mo, Xock drill.
Phillips, George B., assignor to Alexander G. Hues, Poughkeepsie, N. Y . Mor. tising machine.
Phillips, George H., Troy, N. Y. Resorvoir cooking stove
Phillips, Henry D., jr., and Ephraim R. Green, (Sce Green \& Plillips.)
Phillips, Henry F., and Henry W. Lsonard, Auburn, N. Y. Maehine for grinding the cutters of mowing machines
Phillips, John, jr., Georgctown, Mo. Washing maoline
Phillips, Joshua L., Washington County, Miss. Cottoa-bale tic
Phillips, Luke, and Franklin A. Deland. (See Delaud \& Phillips.)
Phillips, M. E., assignor to self, Paul and George Wotzel, Lena, Ill. Table and quilting frame
Phillips, Nathan M., New York, N. Y. Tag fastening. (Antedated July 18, 1863) Plillips, Philetus, Mateawan, N.J. Musical notation
Phillips, P., and L. L. Rineliart. (See Rinehart \& Phillips.)
Phillips, Thomas J., Washington, D. C. 'Tool for opening barrels
Phillips, W. A., Perry Center, N. Y. Compound for destroying inseets on plants
Phinney, Mugh M., Canbridgeport, Mass. Rogister.
Phreaner, Daniel, et al. (Sce Reakirt, John, assignor.)
Piekens, William, Chicaro, Ill. Bolt fooder and cooler
Pickering, Danisi N. (See Bardeu, Johu S., assignor.) Same
.same.
Pickering, James, Now Hope, Pa. Beneh vise
Pickering, Jonathan, England. Apparatus for raising weights
Pickernell, Albert, et al. (See Wright, Horace H. W., assignor.)
Pickersgill, Wm. C., Providence, R. I. Boiler feeder.
Piekett, Darius G., Stockton, N. Y. Grass-secd sower
Piekett, O. E., North Auburn, and R. S. Luce, Lowville Center, Pa. Fire and burglar alarm.
Pieket, Rufus S., New Haven, Cona. India-rubber soles
Picot, Leonce, Hoboken, N. J. Comb..
Piorce, Branford S., New Bcdford, Mass., and Mason R., Woodstoek, N. X. Machine for making drain pipes
(Roissuc)
Pierce, Bradford S., and Charles M., Now Bedford, Mass., Mold for eement or carthen tubes
(Extonsion)
Pierec, C. E., St. Charles, Ill. Fire heater
Pieree, Charles W., Albany, N. X. Frietion roller
Pieree, Crawford and Josoph R. (See Lothrop, Hear'y O., assignor.)
Pierce, Dennis, Waverly, Iowa. Pattern tor draughting sleigh bodies
Pieree, D. C., Clayton, N. Y. Anchor. (Antedata DDec. 28, 1867)

Same..... Connceting rod feorino....................... sparatus for
Pieree, Goorge H., and Martin T. Glimsetal, Mineral Point, Wis. Extension trestle or liorse
Pierce, George Willis, Boston, Mass. Umbrella
Pierce, John W., Millbury, Mass. Mowing machine
Pieree, Joseph J., Maquoketa, Iowa. Wagon brake.
Pieree, M., Winona, Minn. Clothes wringer.

Date.

Mar. 17, 1868
Sept. 22, 1868
May 5, 1868
Apr. 14, 1868
Oet. 20, 1868
Dec. 8, 1863
Aug. 11, 1868
Feb. 4, 1868
Nov. 3, 1868
June 16, 1868
Nov. 3, 1868
May 12, 1868
June 30, 1868

Mar. 31, 1868
Jane 30, 1868.

Jan. 28,1858
May 19, 1868.
July 14, 1868.
Supt. 22, 1868.

Nor. 3, 1863.
Feb. 4, 1868.
Dec. 1, 1838.
Apr. 14, 1868.
Nov. 3, 1868.

Aug. 18, 1868.
July 21, 1863.
Jai. 7, 1363.

Jume 2, 1868.
July 28, 1868.
Mar. 17, 1868.
Jan. 28, 1868.
Aug. 4, 1868.
Apr. 28, 1868.
Feb. 4, 1868,

Dec. I, 1868.
Doc. 1, 1868.
Sent. 1, 1868.
Sopt. 8, 1868,
Feb. 11, 1868.
Jan. 28, 1863.
Ang. 11, 1868.
Jan. 14, 1868.
July 29, 1868
Mar. 3,1868.
Jan. 7, 1868.
Feb. 4, 1868.
Tall. 7, 1868.
Jall. 7, 1868.
Feb. 18, 1868.
Mar. 3, 1868.
Aug. 25, 1868.
June 23, 1868.
Jume 16, 1868.
Mar. 17, 1868
Nov. 10,1868
Apr. $28,1868$.

## Alphabetical list of patentecs for the year 1868-Continued.

| No. | Name, residence. and invention or discovery. |
| :---: | :---: |
| 80, 00i | Pi |
| 80, 661 | Pieree, S. B., Homer, N. Y. Fence. (Antedated Ju |
| 73, 645 | Pieree, Samuel B. and Pembroke, Homer, N. X. Co |
| 83, 310 | Picrey, James T,, Meelhaniesburg, Ohio. Ironing ta Pierrez, Custavus. (See White, Gilbert, assimor.) |
|  | Pierrez, Custavus. (See White, Gilbert, assignor.) |
| 73, 995 | Pierson, Albert C., Rahway, N. J. Caleulating maehin |
| 74, 718 | Pierson, Isaac, Hartford, Conn. Window sash faston |
| 78, 127 | Pierson, J. S., Brooklyn, N. Y. Machino for cutting and stamping |
| 85, 125 | P'ietsch, Herman, New York, N. Y. Cooler for water, milk, and other liq |
| 3,201 | Pigeon, Narcisse, Mrooklym, N. Y. Manufacture of starch sugar.. ..(Reissu) |
| 78, 3:3 | Piguet, L. V., New York, N. Y. Watch |
| 80, 874 | Pike, Emery M., and William Smith. (See Smith \& Pike.) Pike, O. M, assimnor to self and S. S. Grares, North Lev |
|  |  |
| 85, 396 | Pike, Ozi M., assignor to self, Wendell T. Davis, and Austin DeWolf, Leverett, Mass. Machine for eutting ritreous substances. |
| 73, 381 | Pike, William G., Philadelphia, Pa |
| 81, 28 \% | Piland, Anderson H., and Andrew M. Turner, Indianapolis, In |
| 73, 037 | Pilkington, Joseplh, lirankford, Pa. Pieker motion |
| 73, 831 | Pillard, Oliver E., assignor to Frederic II. North, New Britain, Conn. Permutation lock. |
| 75, 967 | Same......Permutation lo |
| 79, |  |
| 82, 03.2 | Same..... Adjustable tumbler for permutation locks........................ |
| 78, $2 \times 2$ | Pillings, George T., assignor to self and John W. Massey, England. Shade fixture. |
| 84, 965 | Pinckard, F., New Orleans, La. Sanitary brace to keep the mouth closed during sleep |
| 75, 052 | Pine, Benjamin, assignor to Charles E. Hartshorn, New York, N. X. Extension ladder. |
| 73, 963 | Pine. George, assignor to self and E. I. Cook, 'Trenton, N. J. Naplin ring and salt cup eombined. |
| 2, 927 | Pine, Robert G., assignor to Emanuel Andrews, Williamsport, Pa. Machine for polishing buekiles <br> Pine, Wi'lian E., and George A. Mandeville. (See Mandeville \& Pine.) |
| 78,479 | Pinkerton, Jaeob. (See Caldwell, A. B., assignor.) Pinuell, Isaae A Boonerille Mo Nail extractor |
| 83, 539 | Pimuer, M., Buffalo, N. Y. Roofing compound. |
|  | Pinney, Russel W. and Forrest L. (See Adams |
|  | Pintard, H. A., and Jane Quantin, administrators of Alphouso Quantin, deeeased. (See Quantin. Alphonse) ...................................... (Reissue.) |
| 78,606 | Piper, Enoch, Camden, Me. Refrigerator |
| 76,209 | Piper, Truman. assignor to the Howe Manufacturing Company, Birmingham, Conn. Pin book. |
| 7\%, 912 | Pipe, 'Truman, and E. F. Bradley, assignors to the Howe Manufacturing Company, Birmingham, Conn. Machino for stieking pins. |
| 75, 788 | Pipo, J. A, and W. Walbarm, Hoboken, N. J. Shutter fasteni |
| 83, 540 | Piquet, H. E., France. Machine for shuffing and dealing |
| 74, 127 | Pirz, Anthony and Mannel, New York, N̦. Y. Station indi |
| 80,21: | Piteler, Leman B., Salina, N. Y. Shafti |
| 77, 758 | Piteher, Samuel, Barnstable, Mass. |
|  | Pitt, Jolm W. (See Hall, Willian, assignor.) |
| 85,126 | Pitt, William H., Philadelphia, Pa. Safety bat |
|  | Pitts, James, Clinton, Mass. Cotton picker cyl |
|  | Pitts, John A.. dceeased, by James Brayley and Mary Pitts, administrators, Bafelu N Y Horse power |
| 82, 24.3 | Pitts, S. G., assignor to self and Wilford L. Palmer, Leominster, Mass. Machine for forming buttons |
| 74, 844 | Place, George, New York, N. |
|  | Plaee, George and Charles. (See Hayes, Newman, assignor) ......... (Roissuo.) |
| 73, 460 | Plaisted, Caleb, Kenoekee, Mieh. Hay raker and loader |
| 73, 925 | Plaisted, Charles C., Hartford, Conn. |
| 70, 25.5 | Plant, Amzi P., and Amos Shepard, Plantsville, Comn. Maehine for forging nuts. |
| 2,973 | Plant, Paseal, assignor, throagh mesne assignments, to Hudson Taylor, trustee, Washington, D. C. Lamp ...... ......................... (Division A, reissuc). |
| 2,974 | Same |
|  | Plantz, W. A. (See Chapman, |
| 82, 244 | Plass, John 'I. and Reuben I., New York, N. Y. Apparatus for carbnretıng air. |
| 78, 607 | Platt, Anson H., Plitadelphia, Pa. Lamp |
|  | Platt, Anson H., and Eli Slater. (See Slater and Pl |
| 83, 541 | Platt, Comelius, New Haven, Comm. Chair seat |
| 78, 998 | Platt, David B., Madison, Ind. Combined liarrow, drill, planter, and roll |
| 80, 875 | Platt, Edwin A. and George, assignors to selves and Linus Wileox, East Hartford, Conn. Well tube. |
|  | Platt, James L. (See Kerr, Edwin R., assignor.) |
| 85, 127 | Platt, N. M., North Fairfield, Ohio |
| 82, 549 | Platt, William, Baltimore, Md. Sl |
| 77, 210 | Player, John, England. Manufacture of balls, klooms, and slabs of malleable |
| 79, 681 | iron <br> Same..... New York, N. X. Mannfacture of iron from titaniferous iron |

## Alphabetical list of patentees for the year 1868-Continued.

No.

82,160
75, 191
75, 969
83, 089
79, 682
79, 856
80, 876
81, 680
74, 589
82, 345
84, 134
74,590
77, 089
77, 316
84, 840
73, 832

83, 659
2,954
73, 038
78, 128
82, 748
83, 660
79, 499
75,574

3, 154
81,533
80, 662
73, 996
80, 663
74,243

75,575
83,542
78, 006
73, 382
81, 206
81,288
81, 534
73, 753
79, 683
74, 419
3, 233
77, 837
74,719
77, 317

78,324
81, 681
74,7\%0
85, 128
81, 405

Playle, F. I., Great Bend, Pa. Fumace for melting stecl, iron, \&c
Plum, Thomas W., England. Syphon fancet.
Plumb, S. H., Davenport, Towa. Automatic fceder and cut-off for cisterns Plumbly, F. K., Butholo, N. Y. Planing machine.
Plummer, Frank J., assignor to R. Ball \& Company, Woicoster, Mass. Circular saw mill..
Plummer, Hiram, assignor to self and William E. Doubleday \& Company,
 Plummer, Osgood, ant James Schonck, Worcester, Mass. Hechanism or operating harness in loons.
Plummer, Toswell, Brooklyn, N. X. Quartz mill
Plummer, S. A. (See Marable, T. E., assignor.)
Plympton, G. M., New Iork, N. Y. Carriage step
Poarce, C. II, Perry: Mo. Horse rako.
Poclú, S. A., St. James Parish, La. Apparatus for cvaporating cane juice
Pohl, Anthony, Detroit, Mich. Brick and mortar elevator

Pohle Clate, asmor to Oswald unger, Por He
Ponarles R. M., Richmond, Va. Envelope.

Poirel, Auguste, assignor to selif and Picrre Bernard, New York, N. Y. Boiler scraper-
hiam, and Thomas J. Rowley. (See Rowley \& Poland.)
Poland, Winam, C., assignor to self and George E. McLellan. Richmond, Va. Bratt hinge...
Polhamus, John, Mew York, N. X. Hanhe of a fork or spoon...........(Design)
Pollard, William IF, assignor to Downs \& Company's Manufacturing Company,
Seneca Falls, N. X. I amp valve.
Pollcy, Clark, Sinking Spring, Ohio. Mole trap............................................
Polloct John, and Theodore J. Diedrich, Philadelphia, Pa. Manufacture of

Pollock, Julius, Morrisania, N. Y. Purifying wood spirits.
Pollock, J. W., Cross Bridges, Tienn. Wagon-hub, axle. and box
Pomeroy, D. R. (Sce David, V. R., assicnor.)
Pomeroy, E. C., et al. (Sec Meyers, Nicholas, assignor.)
Pomeroy, Emerson C., and Edward L. Chamberlayne. (See Meyers, Nicholas, assignor.)
same.

Pomeroy, Noah, Hartford, Conn. Pomeroy, Norman W., assignon to Edward Miller, Meriden, Conn. Lubricator. (Reissue)
Pomeroy, William, Brooklyn, N. Y. Hernia pad. (Antedated Ang. 15, 1868)
Pond, Daniel B. (See Phillips, Ezckiel and Henry C., assignors.)
Pond, Henry E., Franklin, Mass. Carriage and curtain fastencr
Pond, Joseph F., Cleveland, Ohio. Washing machine
Pond, Levi W., assignor to self and the Eau Claire Lumber Company, Eau Claire, Wis. Device for shearing booms
Pond, Martin W., jr., and Alexander T. Ballantine, Titusville, Pa. Wedge buckle
Pond, Moses, \& Company. (See Highton, Wm., assiguor.)
Same -.... (Sec Aibee, James, assignor.)
Pond, O. M., Independence, Iowa. Combined seoding machine and cultivator Ponsard, A., France. Furnace for the manufacture of iron and steel
Ponton, John, assignor to self and Jacob F. Hayen, Buffalo, N. Y. Gas apparatus Pool, J. F., Momroe, Wis. Separator..

## Same...... Beehive -........ Same...... Grain separator.

Poole, H., Richmond, Ind. Culinary vessel
Poolo, Henry Ward, South Danvers, Mass. Enharmonic key-board for organs,
\&oole, J. Morton, assignor to solf, William T. Porter, and Thomas S. Poole, Wilmington, Del. Machine for turuing cylinders
Poole, O., Detroit, Mich. Culinary boiler
Poole, Robert, Baltimorc, Md. Machine for rubbing and mixing paint, chemicals, fertilizers, \&c
Poolcr, Charles T., Deansville, N. Y. Perpetual calendar
Pooley, Honry and Henry, jr., Thomas Roberts, and Louis Lic, England. Grain-weighing machine
Pope, Alexander, jr., Dorchester, Mass. Device for preventing horses from dragging weights.
Pope, F. W., et al. (See Blood \& Pope.
Pope, M. I., Susquehanna Depot, Pa. Horse hay fork
Pope, Samuel W. (Sce Wiard, Elward, assignor.)
Poppe, Johu, Grecn Point, N. Y. Pump
Poppenhusen, Hermann, and George Achelis. (See Achelis \& Poppenhusen.) Porter, Amos, assignor to self and N. S. Payne, Charlestown, Mass. Coal hod and screen
Porter, A. A., Griffin, Ga. Cottor E. Lusk, Alfred E.


Date.

Seprt. 15, 1868
Mar. 3, 1668
Mar. $24,1868$.
Oct. 13, 1808
July $\tau, 1 \varepsilon 68$.
July 14, 1808
Aug. 11, 1868 Sept. 1, 1868.

Feb. 18, 18c8. Sept. 22, 1868 Nov. 17, 1868 Feb. 18, 1868 Apr. 21, 1868 Apr. 28, 1868 Dec. 8, 1868

Jan. 28, 1868

Nov. 3, 1868
Mar. 17, 1808.
Jan. 7, 1868
May 19, 1868
Oct. 6, 1868
Nov. 3, 1868.
June 30, 1868
Mar. 17, 1868

Apr. 21, 1868
Oct. 6, 1868
Aug. 25, 1868.
Aug. 4, 1868
Feb. 4, 1868
Auģ. 4, 1868
Feb. 11, 1863

Mar. 17, 1868
Oct. 2\%, 1868
May 19, 1868
Jan. 14, 1868
Aug. 18, 1868
Aig. 18, 1868
Ang. 25, 1868
Jan. 28, 1868
July 7,186s
Feb. 11, 1868
Dec. 15,1808
May 12, 1868
Feb. 18, 1868
Apr. 28, 1868.
May 27, 1868
Sept. 1, 1868

Feb. 25, 1868
Dec. 22, 1808
Aug. 25, 1868

Alphabetical list of patentees for the year 1863-Continued.
No.

83, 406
75, 192
74, 420
80, 664
75, 193
79, 917
3, 120
74,244

75, 970
78,827
79, 971
75, 97:
75, 973
S5, 129
81, 682
Porter, D'Arcy, assighor to self and Thomas II. White, Cleveland, Ohio. Tension device for sewing machines.

Oct. 27, 1868.
Porter, D. H., Bridereport, Conn. Piroting teeth
Porter, E. N., and T. P. Roberts, Morrisville, Vt. Potato washer.
same....-. Swift or reel
Porter, Heny E., and Willian Gray. (Sce Gray \& Porter.)
Porter, Henry (.., Grand Rapids, Mich. Hay clevator
Porter, J. F., and A. Norton. Tidioute, I'a. Gang plow .....
..........................................

Porter, Robert, Philadelphia, Pa. Vent for sheot metal cans
(Rcissue)
Same ...... (Sce Hicker, Patrick, assignor:)
Porter. S. W. (Sce Cranstou, James F., assiguor.)
Porter, T. WV., Boston, Mass. Belt elasp
Sane.....-Shaft coupling
Porter, I' V., assignor to self and Charles L. Marston, Boston, Mass. Sleigh. Saue.-...- Express wagon
Porter, T. WV. and H. K., 2ssignors to selves and Charles L. Maיston, Boston Mass. Carriage

Mar. 3, 1868
Feb. 11, 1808.
Aug. 4, 1868.
Mar. 3, 1898.
Jnly 14, 1と68
Sept. 15, 1868.
Fel. 11, 1868.

Mar. $24,1868$.
June 9, 1868.
Mar. 24, 1868.
Mar. 24, 1868.
Mar. 24, 1Е6̀8.
Dec. 22, 1868.
Oct. 22, 1868.
Sept. 1, 1868.
Porter, William E. (Sce McCarty, Janes C., assignor:)
84, 902
79, 080
Porter, wima P, Phtsburg, Pa. Machme for rolning axles
Porter, William 'L', Wilminoton, Del. Derice for stopping and starting ealender rolls.
Porter, William T., et al. (Sice Poole, J. ILorton, assiguor.)
84, 759
Porterficld, D. A., New Paris. Ohio. Waslı boiler
74, 123
Portlock, Warren, Pleasant Groro, and John II. Smith, Toolesborough, Iowa.
Floor clamp..
Portlock, Warren, and J. K. Dodds, New London, Iowa. Railway car brake Portner, Louis, Chicago, Ill. Feflector
Post, Andrew J., Hudson City, N. J. Bridge
Same
Bridge
Post, Charles C., IVinesburg, Vt. Sap spile.
Post, Frederiel, Plano, Ill. Scraper
Same...... Water wheel
Sane..... . Pulverizing land roller
Post, Henry A. V., Cincinnati, Olio. Spring.
Post, Jolin Tr., Castile, N. Y. Skato. Same......Skate
Poth, Henry, Pittsburg, Pa. Whocl
Same..... . Wheel for velieles.
Pototsky, Aucustus, assignor to Fisk, Clark \& Flagg, New York, N. Y. Buckle for smspenders
Potter, Albert J., Omaha, Ncb. Farm gate
Potter, Alonzo, and James D. Bryson. (See Bryson \& Potter.)
Potter, A. I., Williamshurg, N. Y. Chronometer escapement.
Potter C., jr., Westerly, R. I. Printing press.
Same...... Feed gangu for printing presses
Potter, Collins, Pawlet, Vt., and Eleazer Jones, Middlo Granville, N. Y. Cofin Potter, E. M., Kalamazoo, Mich. Clevis.
Potter, E. O., Chicopee, Mass. Method of forming stockings
Potter, Elisha O., Pawtucket, R. I. Apparatus for foeding eloth to minting machmery.
Potter, Frederick A., assignor to Fales, Jenks \& Sons, North Providence, I. I. Tool hokler.
Potter, Isaae R., Dartmonth, Mass. Horseslioe
Same..... Thill coupling
Mar. 10, 1368.
Dee. 15, 186き.
June 23, 1868.
Dec. 8, 1868.
Feb. 4, 1868.
Nov. 3, 1868.
July 28,1 ع68.
Aug. $25,1868$.
Sept. 1, 1868.
Nov, Iя, 1868.
June 16, 1868.
Aug. 25, 1868.
Oct. : $0,1268$.
Ang. 25, 1863.
Feb. 4, 1808.
Feb. 11, 1868.
June 2, 1868.
Sept. 8, 1e(i8.
July 14, 1868.
Dec. 20, 1868.
Jan. 21, 1868
Jan. 7, 1868.
Jan. 7, 1868.
Apr. 7, 1868
Jan. 7, 1868.
Aug. 11, 1868.
Dec. 29, 1868.
May 5, 1868.
July 21, 1868
July 21, 1868
Feb. 4, 1868
Nor. 10, 1868.
July 14, 1868.
Jan. 14, 1868
Mar. 3, 1868
July 14, 1868.

Sopt. 22, 1868
Apr. 28, 1868.
May 12, 1868.
June 16, 1868.
Nov. 3, 1868.
Dec 1, 1868.
Feb. 4, 1868
May 26, 1868.
Sept. 22, 1868.
July 21, 1868
Sopt. 8, 1868.
Sept. 8, 1868.

No.

74, 130
ร7, 913

3, 141
85, 180
83, 343
79, 595
2,938
2,933
76,246

82, 872
82,347
75, 644
80, 009
77, 090
75, 458

80, 500
74, 720
76,247

83, 544
81, 000
73, 260
83, 090
81, 001
74,245
79,684

81, 683
77, 838
73, 647
81, 684
80, 088

75, 576
80,501
73, 648
82, ${ }^{7} 49$
75,789
75,790
77, 652
80,502
81, 002
83, 312
81, 685
81, 686

73, 118
82, 984
3, 142
74,591
3,079
78,007
73, 926
77, 404
79, $7 \% 4$
74, 131

Name, residenco, and invention or diseovery.

Powe, Moses, Belvidere, N. I. Carriago braco
Powell, James, Cineinnati, Ohio. Globe valve
Powell, John G., et al. (Sce Sehartan, Eilert O., assignor.)
Powell, Johni G., and William A. Morsc. (See Morse \& Powell.)
Powell, Morris B., and Charles W. Stutenroth, Naperville, Ill. Bottle. ( Design)
Powell, Palemon, Cineinnati, Ohio. Cartridge charger.
Powelson, Louis B., Pittsbrrg, Pa. Feed-water heater.
Power, Ficlder, St. Louis, Mo. Briek-kiln
Powers, A Dijah, et al. (See Walker, Sylvester G., assignor.)
Powers, Albert E., assignor to D. Powers \& Sons, Lansingburg, N. Y. Floor oil-eloth pattern (Design)
..................(Design)
Powers, Cytus, Greenwieh Village, Mass. Clamp for holding palm-lcaf warp.
Powers, D., \& Sons. (See Christie, Hugh, assignor)....................... (Design.)
Same...................................................................................... 1868 )
Powers, D. J., Madison, Wis. Harvester rake. (Antedated Sept.
Powers, I. K., Grand Iapids, Mich. Maehine for molding eandy
Powers, E. K., Grand Rapids, Mieh. Maehine for molding eandy ....
Powers, John, and J. B. Van Deusen, New York, N. Y. Fluid moter.
Powers, L. A., Meriden, Conn. Table fork
Prall, William E., Washington, D. C. Hot-water elevator
Praster, A.J., et al. (See Nelson, Wm., assignor.)
Pratt, Aaron W., Pultneyville, N. Y. Armlet porte-monnaie
Pratt, Charles. (See Seimel, Comrad, assignor.)
Same..... (See Bliss, Eliphalet W., assignor.)
Pratt, Charles C. (See King, Gamaliel, assignor)
Same.......................... . . same.... . . . . . . . . . . . . . . . . . . . . . . . . . . . (Reissue.)
Pratt, Daniel J., assignor throngh mesne asignments to self and Miehaol $P$. Cavort, Albany, N. Y. Parallel ruler.
Pratt, E. L., Boston, Mass. Pen.
Same...... Nut-eracker.
Pratt, Frank E., and Andrew F. Lapham. (See Lapham \& Pratt.)
Pratt, Frederick. (See Rogers, Junins, assignor:)
Pratt, George A., et al. (See Bacon, Thomas I., assignor.)
Pratt, James D., Cleveland, Ohio. Bed-lounge.
Pratt, John, Greenville, Ala. Meehanieal typographer.
Pratt, M. D., Copley, Ohio. Fence.......
Pratt, R. P., Hartford, Conn. Awning. (Antedated Oct. G, 1868)
Pratt, Seymour Clesson, Boston, Mass. Furniture easter
Pratt, Thomas, Valparaiso, Ind. Wrench. (Antedated Fe1. 5, 1863)
Pratt, William, Providenee. R. I. Tool-holder.
Pratt, William F., et al. (See Hunt \& Knight, assignors.)
Same.-. . . . . . . . . . . . . . . . . . . . . . . . same.
Pray, E. K., Holderness, N. H. Knitting machine
Pray, Lewis, Portland, Mc. Seat for vehieles.....
Pray, Onsville E., Portsmoath, N. H. Maehine for eutting dyewool
Prentice, Georgo W., Providenee, R. I. Eyelet. (Antedated Aug. 15, 1868)
Prentiee, James H., Ashtabula, Ohio. Lamp extinguisher
Same..... (Sce Richardson, John C., assignor.)
Same....... (See Stout \& Richardson, assignors.)
Prentiss, Mason, Cambridge, N. Y. Vise...................
Prentiss, Phineas, Chester, Mass. Washing maehine
Prentiss, Phineas, Chester, Mass. Washin
Preseott, Andrew J., Catawissa, Pa. Tool
Proseott, Edward. (See Sterrett, Charles, assignor.)
Prescott, Peter, assignor to Isaae and William J. Hall, and C. M. Preseott, Boonville, $\mathrm{N} . \mathrm{Y}$. Horse hay rake.
Prescott, Wiliom H., and Whiteomb Judson, Bangor, Me. Odometer.
Pressey, Samuel I. (Sce Leach, Wm. H., assimnor.)
Preston, A. J., Guilford, N. Y. Hay raker and loader
Preston, Hiram, Osfordville, Wis. Gauge for woather-boarding.
Samo...... Cultivator
Preston, H. M., Unionville, Comn. Journal box
Preston, James P., Monroe, Wis. Fanning mill
Preston, K. H. C., assignor to self, Stephen Cheney, and M. M. Snook, Manlius, N. Y. Harvoster rake

Preston, O. W., jr., and David Diek. (See Diek \& Preston.)
Same.
. same.
Same.
.same.
Prettyman, R. F., Aloxanlria, Va. Skate sharpener
Prevear, Edward, Leominster, Mass. Meridian time indicator
Priee, Charles E., and Joseph Haythorn. (See Maythorn \& Price.)
Priee, Ellen F., and Eliza A. Murphy, New Haven, Conn. Embossed design for

Priee, John, New York, N. Y. Shacke for
Priec, J. A. Seranton, Pa, Cook range........................................... (Design).
Priekett, William P., Philadelphia, Pa. Fnrmace for melting metal, glass, \&e...
Pridhan, George A., Newark, N. J. Spool stand.
Priest, David H., Watertown, Mass. Ready solder ............................................
Priest, D. H., and H. S. Waleott, Boston, Mass. Fastening liming to soles of


Date.

Tob. 4, 1868
May 12, 1868

July 28, 1868
Dec. 22, 1868.
Oet. 27, 1868
July 7, 1868

Feb. 18, 1868.
Feb. 18, 1868
Mar. 31, 1868.

Oet. 6, 1863.
Sept. 22, 1868.
Mar. 17, 1868.
July 14, 1868.
Apr. 21, 1868.
Mar. 10, 1868.

Tuly 28, 1868.
Fel. 18, 1868.
MLar. 31, 1868

Oct. 27, 1868
Aug. 11, 1868.
Jan. 14, 1868. Oct. 13, 1868. Ang. 11, 1868 Teb. 11, 1868. July 7, 1863.

Sept. 1, 186z.
May 12, 1868.
Тап1. 21, 1858
Sept. 1, 1868.
July 21, 1868.

Nar. 17, 1863
July 28, 1868. Jan. 21, 1863.

Oct. 6, 1868.
Mar. 21, 1868.
Ifar. 24, 1868
May 5,1868
July 28, 1868
Aug. 11, 1868
Det. 20, 1868.
Sept. 1, 1868
Sept. 1,1868.

Jan. 7, 1868
Oct. 13, 1868.

July 28, 1868
Feb. 18, 1868
Tume 30, 1868.
May 19,1868
Jan. 28, 1868
Apr. 28, 1868.
July 7, 1868
Fel. 4, 1868.

Alphabetical list of patentecs for the year 1868-Continued.


## Alphabetical list of patentees for the year 1868-Continued.

Race, John Elwin, and Aaron Smith, Chicago, Hl. Cloth measuring apparatus Racey, J. M., jr., New York, N. Y. Refrigerating chamber
Rackham, Joshtia S., Waterport, N. Y. Corn sholling maehine
Raddin, John, Lynn, Mass. Car whecl.

## Same

same
Rader, S. D., Williamsport, Pa. Brick kiln
Rae, Julio H., Syracuse, N. X. Lumber dryel
Samo..... . Electrical amalgamator
Raffington, Matthew G., and F'isher Spofford. (See Spofford \& Raffington.) Same.
ane

Raft, George, Drie, Pa. Device for fitting wrist pins
Raftery, John T., Eldara, III. Water elevator.
Rarsdalo, James M., McCoy's Station, Ind. Poad grader
Rahm, Frank, and Thomas J. Lewis. (Sen Wilson, Joln T., assignor.)
Raiber, Joseph. (See Pritchard, Iva, assignor.)
Rain, Samuel S., Lowville, N. Y. Animal trap. (Antedared June 27, 1863)
Rairigh, William K., Rural Valley, Pa. Clamp for sadtles, \&e.
Same . . . . . Implement.
Rais, Adrian, assignor to the Scovill Manufacturiug Company, Waterbury, Conn. Machine for spinning shect metal.
Rais, Adrian, and C. P. Goss. (See Goss \& Rais.)
Rakestraw, Albert, Peoria, Ill. Cherry stoner.
Rakestrow, Yarnall, Whitelionse, Ohin. Plow.
Ralyh, Ellery P., and James Hamnan, Gallipolis, Ohio. Straw cuttor
Ralph, William, Utica, N. Y. Curd mill.
Ralston, Andrew, West Middletown, Pa. Portable animal tether
Ramage, James, and Thomas Nelson, Seotland. Production of plates for printing. (Patented in Encland March 26, 1866)
Rambaut, G. V., Petersburg, Va. Medical eompound or bitters
Ramsey, Charles F., and Beamnan Butler. (.See Butler \& Ramsay.)
Ramsay, Jarues S., assignor to sclf and William G. Millman, Baltimore, Ma Loek label holder
Ramsburgh, John, jr., New Madrid, Mo. Medical eompound
Ramsburgh, John S., New Market, Md. Fertilizer
Ramsdell, Reuben, Rindge, N. I. Maehine for making wooden boxes.-. . . . .
Ramsdell, W. H., assignor to self and H. J. Sawyer, Lowell, Mass. Bobbin
Ramsey, C'harles C., Chieago, I11. Gas-pressure regulator
Ramsey, Jo, Milford, Texas. Harvester

Ramuz, Ulysse, Hmmbert, assiguor to Henry Hirsh and Seligman Oppeahciater, Switzerland. Solf-winding wateh.
Raneevau, John. Carthage, Ohio. Ice sleigh
Rand, A. C., Westfield, Mass. Process of covering whips
Same...... Whip holder
Rand, A. C., New York, N. Y. Gas bumer
Same.-.... Coal stove
Rand, Joseph A., assignor to Thomas A. Mitchell, Morrisville, Vt. Clothes pin (Antedated 1 ug. 27, 1868)
Rand, J. W., Charlestown, Mass. Pattern for cutting out shirts
Rand, N. A., Winslow, Ill. Cultivator
Randall, Bellvill L., Roxbury, Mass. Viso
Raudall, Benjamin, Adams, N. Y. Sulky harrow
Same.
Corn planter
Randall, Darius C., Niles City, Mieh. Limi ent or medical compound
Randall, David F., Chicopee, Mass. Metallic band for trimming ear seat Same...... Padlock
Randall, H. W. (See Buckingham, Isaac, assigaor.)
Randall, John H. and CLarles E., Boston, Mass. Steam-ongine goveruor
Randall, Joseph S. (See Chase and Devendorff, assignors.)
Randall, Oliver E., Lewiston, Me. Horse rake
Randall, Stephen, Centerville, R. I. Railway-car brake.
Randall, William, May, Mieh. Sash supporter.
Randleman, Benjamin D. Port Lonisa, Lowa. Clasp for joining belts
Randolph, Abram F. (See Stone, Jacob, assignor.)
Raney, James, assignor to self, Leander and Bostic Raney, New Castle, Pa. Elevating flour, feed, grain, \&
Rank, Amos, Salem, Ohio. Platform bridge for railroad ears
Same...... Harvester
Same............ same
Same.....-.-. -same
Same....... Harvester rake
Same...... Harvester
(Reissue)
Rank, Amos, and J. H. Cox, Salem, Ohio. Harrester
Rank, Gottfried, Greenleaf, Minn. Seed sower .
Ranke, D. Webster, Limestoneville, Pa. Gas generator. (Antedated Jwe 4, 1868) Rankin, Charles S., Cincinnati, Ohio. Fire-plaee grate
Rankin, Jolm, Tamnton, Mass. Harrow
Rankin, John S., Detroit, Mieh. Fall-leaf table
Rankin, Thomas L., New Riehmond, Ohio. Refrigerating house.
Rankin, Thomas L., New Richmond, Ohio, and Charles \$V. Grassmuck, Perı, Ill. Beer cooler
Ranuey, Isaae, Delaware, Ohio. Varnish

Date.

Dec. 15,1868 Ans. 4, 1868. Oet. 20, 1863 Feb. 25, 1868 Api. 14, 1868 Scpt. 15, 1868 June 9, 1868. Oct. 13, 1863

June 16, 1868 Dec. 29, 1868 Oet. 27, 1868.

July 7, 1808
Oct. 13, 1808
Nor. 10, 1898.
Nov. 10, 1868.
June 23, 1863.
Oet. 2), 1868
Det. 23, 1868
July 21, 1868.
Feb. 11, 1868
Mar. 17, 1863.
Fej. 25, 1868.

July 21,1868
Oct. 6,1868.
May 12, 1863
July 14, 1863.
July 7, 1863
Sept. 8, 1858.
Mav 5, 1868.
May $26,1868$.
Apr. 28, 1868.
Jan. 7, 1868.
May 19, 1868.
July 7, 1868.
June 23, 1868.
June 30, 1863.
Sept. 8, 1868.
May 26, 1863.
July $7,1868$.
Apri. 14, 1868.
Apr. 14, 1868.
Api. 14, 1868.
Dce. 22, 1868.
Jan. 28, 1868.
July 14, 1868.
Oct. 6,1868.
Fe7. 4, 1868.
Nor. 3, 1868
Aug. 18, 1868.
July 21, 1868.

May 5, 1868.
A pi: 28, 1868
May 5, 1868.
May 5, 1868.
June 30, 1868.
Aug. 18, 1868.
Oet. 6, 1868.
Oet. 13, 1868.
Nov. 24, 1868.
June 9,1868.
June 30, 1868.
Apr. 21, 1868.
May 5, 1868.
Oet. 20, 1868.
Dec. 29, 1868
Oct. 20, 1868.

# Alphabetical list of patentees for the year 1863-Continued. 

No.

Ransom. Franklin, Buffato, N. Y. Hydraulic engine
Samc...... Condeuscr
Ransom, Hiram W., Lawrenceburg, Ind. Fifth wheel for carriages
Ransom, Lommis E., Trenton, Mich. Brick machine.
Ransom, Lewis, assignor through ncsne assignments to sclf and Eugcuc Hyatt, Lansinghur, N. I. Clasp for trunks, dC
Rapp, Matthew D. (Sce IFanilton, Elward, assignor.)
Rasar', Peter, and D. J. Mayes, Illiopolis, Ill. Hanging for gatos
Sane...... Gate latch.
Iashcoe, Incinore, et al. (See Scboll, George, assignor.)
Rate, Edward $F^{\prime}$., Codar County, Inwa. Corn cultivator
Rathbonc, J. F. (Sec Hailes, Willian, assignor.)
liathbone, John F. \& Company. (Sce Hailes, William, assignor)
(Design.) same.
.samo
(Design.)
same..................................................................................(Dcsign.)

Rattcrbury, Thomas, Detroit, Mich. Self-acting bolt
Ran, Emaritel, New York, N. Y. Fustening for collars and neck tics
Raub, H. IR., Pymatuning, Pa. Gate
Rarn, Charles F., Milwaukec, Wis. Wagon skein.
Rawson, George W., assignor to self and Michael IIttingcr, Cambridgeport, Mass. Hydratulic aress.

## Same ...... Cut-off for steam engines

Rawson, Homer. (See Austin, Dinsmore, assignor.)
Samo.......................... same.
Rawson, Homer, assignor to self and O. H. Shaw, Jcricho, Vt. Ox yoko
Rawson, M. E., and H. P. Andrews. (See Andrews © Liawson.)
Rawsthorne, Thomas, and John Patey. (See Palcy \& Lawsthornc.)
Lay, Edwiu, et al. (See Rernolds, C. II., assignor.)
Ray, George W., Springfield, Mass. Manufactnre of paper collars, \&c. (Reissuc)
Ray, G. W., et al. (See Denison, C. H., assignor.)
Ray, N. M., Ellsworth, Mc. Shoo knife
Sanuc...... Boat-letaching apparatus.
Ray, Sammel, and MI. R. Shalters. (See shalters \& Pay.)
Ray, Wilinam C., Pleasant Run, and Gidion Leigh, Clinton Station, N. J. Fanning mill
Rayhill, William, Pana, Inl. Corn planter
Rayment, William L., and George WV. Thrall. (Sce Thrall \& Iaymont.)
Raymer, Nat., New Súerling, N. C. Fruit jar
Raymond. Fitch, and August Miller, Clevcland, Ohio. Compound for preserving citeese.
Samo.......Gate
Raymond, Frcterick A. S., aud Carl C. T. Thomas. (Sce Thomas \& Raymond.)
Raymond, Frederick O., and Benjanin B. Savary. (See Lyuch, Isaac İ. A. A., assignor)
Raymond, George, assignor to self and Oliver P. Conklin, Titchburg, Mass. De tachable nose for bowls, \&c.
Raymond, George, assiguor to self and Samucl E. Crocker, Fitehburg, Dass. Attaching handles to tools
Raymond, $J$ C., and F. I. Allyn, assignors to F. T. Allyn, lirooklyn, N. Low-water indicator
Raymond, Levi B., and Williaa Manley, Lockport, Iil. Coupling for sectional ressels
Raymond, Liberty, Green, Ohio. IVater clevator
Raymond, Louis, Fockland, Del. Niethod of making barrels.
Raynart, Josepll II., Lym, Mass. Machine for manufacturing parceling
Raynor, Johm B., Mazo Manio, Wis. Churn.
Sanuc.


Rea, John J., Cadiz, ohio. Elevator.
Kcr-hole ruard
(Rcissue)
Read, Christopher, Juscy Cits, N. J. Kcy-hole guard
Read, George P., Bosion, Mass. Chronometer escapoment
Read, Joseph, Philatıhia, Pa. Gntter in foot parements
Read, Josiah M., Boston, Mass. Boot crimper
Read, William, Vemon, Ind. Horse rakc.
Iead, William, jr., Boston, Mass. Cord retaincr for pictures ant mirrors. (Anterlated Oct. 10, 186i7)
Samo ..... . (See Bacon, Charlcs II., assignor.)
Read, William IT., and William S. Widger. (See Widger \& Read.)
Read. W. T. B., Chicago, Ill. Iee elevator
Reading, Joh, Samuel $\mathrm{A}^{2}$., Gcorgo E., and Froderick Francis, England. Belt clasp
Ready, William B., Sacramento, Cal. Gang plow $\qquad$ (Reissue)

Reakirt, Jolm, assignor to self, Daniel Phircancr, and Tryour Ieakirt, Philadelphia, Pa. Putting up alkalics.
Ream, B. F., Ada, Ohio. Shovel plow and cultivator.-............................. Reaney, Robert L., Jersey City, N. J., and John S. Corncll, Brookyyn, N. Xe,
assignors to John S. Comell and II. F. Pease. Valre gear for steam cngines assignors to John S. Cornell and II. F. Pease. Val Recht, Carl, Now York, N. X. Machine for threading sheet-metal pipe..

Same...... Shect-netal pipe.
Same...... Stove-pipe elbow

Date.

Apr. 28, 1868.
Oct. 13, 1868.
Fcb. 11, 1868.
Fob. 4, 1868.
Oct. 13, 1868
Jnly $28,1868$.
Ang. 18, 1 ع68.
Oct. 13, 1868.

Feb. 25, 1868
Oct. 20, 1868.
July 21, 1868.
May 5, 1868.
Aug. 11, 1868.
Oct. 6,1868.

Fcb. 18, 1868

Sept. 22, 1863.
Mar. 24, 1868.
Sept. $23,1843$.

May $19,1868$.
Jan. 21, 1868.
Not. 17, 1868.
Oct. 27, 1868
Nov. 10, 1863

May 12, 1868
Aug. 4, 1868.
June 2, 1868.
Mar. 17. 1868
Dce. 8, 1868
Jan. 21, 1863
Dec. 1, 1868
Fcb. 25, 1868
June 30, 1868
Oct. 20, 1868
Sept. 29, 1868
Apr. 7, 1863
Not. 3, 1868
July 7, 186s
Aug. 11, 1868
Fcb. 25, 1868.
Aug. 11, 1868.
Mar. 24, 1868.
Jrue 16, 1868
July 28, 1868
July 7. 1868
Feb. 18, 1868.
Mar. 10, 1868.
Jan. 28, 1868
Jan. 28, 18 ti8
Jan. 28, 1868
Apr. 14, 1868

Alphabetical list of patentees for the year 1868-Continued.

No.

82, 034
77, 841

82, 989
78, 482

76, 813
84, 966
80, 665
74, 847
80, 306
75, 297
84,509
82, 637
82, 638

76, 659
83, 548

84, 708
85, 478
80,010
81, 107
83, 729

3,302
77, 527
84,904

73, 384
79, 001
80, 221
83, 999
73, 039
73, 040
84, 067
82, 875
75, 195
78, 829
83, 207
85, 130
84, 760

79, 002
82, 990
82, 876
76, 100
84, 440
80, 011
$80,30 \%$
82, 991
3, $0 \geq 3$
75, 977
76, 34 \%

Name. residence, and invention or discovery.

Reck, William L., Darke Cornty, Ohio. Tile machine
Reckards, William, assignor to sclf and Leonard Gattman, New York, XV. Bedstead, chair, secretary, and wardrobe
Reckendorfer, Joseph. (See Bartholomew, W: N., assignor.)
Recker, P. N. and Joseph, Dayton, Ohio. Grain separator
Rector, George, Sodus, Mich. Harvester.
Redding, B. B., and Lucy A. Hansbrow, exeeutors of Thomas Hansbrow, deceasen. (See Hansbroit, Thomas.)
Redding, Jcrome, Charlcstown, and John B. Coe, Boston, Mass. Pastry jigger.
Redding, William F., Saratoga Springs, N. Y. Stove door handle.
Reddy, Edward J., Bayvillc, N. Y. Bundling machine.
Redficld, J. H., and M. W. Hilton. (See Hiltou \& Redfield.)
Redfield, J. H., and W. J. Cox, Saleni, Tnd. Marvester
Redfield, Richard and James, Salern, Ind. Smut mill
Redmayne, Charles, and John P. Courtney. (See Courtncy \& Redmayne.)
Redmond, Owen, Rochester, N. Y. Harvester rake
Same...... Machine for rounding barrel leads.
Redway, Albert J., Cincinnati, Ohio. Coal stove
Same.......Cooking stove.
Redway \& Burton. (See Newill, William L., assignor.)
Reed \& Barton. (See Brabrook, George, assignor.)
Same...... (See Lawrence, Nathan, assignor.)
Same...... (See Wright, Howell TV., assignor.)
Same............................ same.
Same....... (See Leach, Thomas, assignor.)
Same....... (See Kauffman, Eruest, assignor.)
Reed, Almet. (See Slayton, Phineas L., assignor.)
Reed, Beujamin, Alleghany City, Pa. Clothes wriuger
Reed, Byron, Kokomo, Ind. Photographie printing frame.
Reed, Cheeney, deceased, by Sarah W. Reed, executrix; and Brooks K. Moali, deceased, by Jane E. Mould, administratrix, Chicago, Ill. Ventilating railroad cars.
Reed, Clanthus A., et al. (Ser, Bowen, Reed \& Whclau.)
Reed, Cullen W., Chagrin, Ohio. Horse hay fork.
Reed, Daniel, Birminghan, Conn. Nail-plate feeder. (Intcdatel Dec. 24, 1868).
Reed, David R., Tekonsha, Mich. Apple corer and slicer.
Reed, George P., Boston, Mass. Watch ............
Reed, G. R., et al. (See Bell, Thomas S., assignor:.)
Reed, G. W., assignor to self, Reuben S. Middleton, and Henry Rothfelder, Brooklyn, N. Y. Watch
Reed, Herbert, et al. (See Mallary, G. H., assignor.)
Reed, H. C., and A.J. Sinith. (See Smith \& Reed.)
Reed, II. G., assignor to Reed \& Barton, Taruton, Mass. Spoon or fork handle. (Design)
Reed, Oliver H., Washington, D. C. Guide gange for printing presses
Reed, O. H. and Asa L. Carrier, Washington, D. C. Machine for washing printers' inle rollers
Reed, Orson. (Sec Pardee, Isaac, assignor.)
Reed, Samal, Whitestown, Pa. Animal trap
Reed, Samnel, Rising Sun, Mrd. Cultivator...
Reed, Samuel J., Cainden, Ohio. Sulky plow
Same...... Middletown, Ohio. Plow feuder
Reed, Thomas L. Providence, R.I. Lock coupling for gas fixtiores Same...... Gas socket
Reed,U. H., Jeremy Lake, and Luther Sisson, North Easton, Mass. Auti-fiction washer
Reeder, Simon B., Meacham, In. Corn planter
Reeder, William S., St. Loutis, Mo. Head block for saw mills
Reedy, Henry J., Cincinnati, Ohio. Hoisting machino
Rees, Charles B., and J. S. Houghtou. (Sec Houghton \& Rees.)
Reese, Abram, Pittsburg, Pa. Rolkng horse-shoe blanks
Same...... MeClure Township, Pa. Mode of manufacturing toe-ealk blanks
Reese, Adam R., Phillipsburg, N.J. Horse rake
Same...... (See Morgan, Mirick, assiguor).................................................
Same...... (See Lee, George W., assignor) ...........................(Reissue.)
Reese, Adam R., and George TV. Lee. (See Lee \& Reese) ................. (Rcissue.)
Reese, Christian C., Attica, Ind. Churn.
Reese, Francis, Elyton, Ala. Plow.
Reese, F., et al. (See Baierle, Hartmau \& Reese.)
Reese, Jacob, Pittsburg, Pa. Machine for working iron. (Antedated Oct. 2,1868)
Reese, Jacob, assignor to self and Robert C. Totten, Pittsburg, Pa. Ore crusher
Reesc, Leolf and Harry, assignors to sclves aud William MeHeury, Philadelphia, Pa. Printing press.
Reese, Thomas, St. Lotis, Mo. Steam-engino.
Reeves, Thaddeus S.. Chicago, Ill. Measuring faneet
Reeres, Thaddeus S., and Charles D. Smith, assignors to selves and William Schwartz, Chicago, Ill. Harvester rake
Reeves, Alexander D., Portland, Maine. Female supporter .......... (Reissue).
Reeves, Samuel J., Philatelphia, Pa. Railway-rail joint
Reeves, W. C., Boston, and Lonis L. Solonon, Charlestown, Mass. Button hole for paper articles of wearing apparel

## Date.

Sept. 8, 1868
May 12, 1868
Oct. 13, 1868
June 2,1868

Apr. 14, 1868
Dec. $15,18 \mathrm{~B}^{3}$
Aug. 4, 1868
Feb. 25,1868
July 28, 1868
Mar. 10, 1868
Dec. 1, 1808
Sept. 29, 1863
Sept. 29, 1868

Apr. 14, 1868.
Oct. 27, 1868

July 22, 1868
Dee. 8, 1868.
Dec. 29, 1868
July 14, 1868.
Ang. 18, 186る.

Nov. $3,1868$.
Dcc. 29, 1868.

May 5, 1868.
Dec. 15, 1868.
Jan. 14, 1868.
June 16, 1868.
July 21, 1863.
Nov. 10, 1868.
Jain. $7,1868$.
Jau. 7, 1868.
Nor. 17, 1868.
Oet. 6, 1868.
Mar. 3,1868.
June 9, 1868.
Oct. 20, 1863.
Dee. 22, 1863.
Dec. 8,1863.

June 16, 1868.
Oct. 13, 1868.
Oct. 6, $1 \varepsilon 68$.
Mar. 31, 1868.
Nov. 24, 1868.
July 14, 1868. July $28,1863$.

Oct. 13, 1868.
July 7, 1863.
Mar. 24, 1868.
Apr. 7, 1863.

Name, residencc, and invention or discovery.

Recres, W. C., Boston, and Louis L. Solomon, Charlcstown, Mass. (See Solomon, Martha B., assignor.)
Regester, Joshna, Baltimore, Ma. Stnp-eock
Reguin, C. F'., and Emilo Loiscau. (See Loiseau \& Reguin.)
Rehfuss, George, assignor to the Amcrican Button-lole, Cording, Braiding, and Embroidering-Machine Company, Philadelphia, Pa. Sewing machino.
Rchíuss, George, assignor to the American Button-lole Orerseaming and Sew-ing-Machine Company, Philadelphia, Pa. Braik-making machinc Same...... ITemmer for sewing machines
$\qquad$
Rehn, C', L., Philadelphia, Pa. Machine for soldering shcet-metal boxes.
Same...... Machine for making metal boxes
Rchn, Isaac, P'hiladelphia, I'a. Modc of printing photographie pictures Sane..... . Mode of printing photographic pictures $\qquad$ (Reissue)
Reiber, John, and John Schrader, assignors to selves and IV. M. Lewis, Bridgeport, Ill. King bolt for carriages.
Reiber, Ienben, Lebanon, Pa. Hinge
Reichard, Edward, Washington, Mo. Animal trap
Reichard, Jacob, Fayettéville, Pa. Cultivator.
Reichard, John J., Canton, Ill. Saw-set
Same ..... . . saw-set
Reiche, Julins, and Albert Gerdes. (siee Gerdes \& Reiche.)
Reiehert, Aelam, Cogan Station, Pa. Spring-wagon seat
Reichert, John J.. Delaware, Ohio. Corpse preserrer.
Reichert, Lonis P and Andrew Fuller. (See Fuller \& Reiehert.)
Reichmann, Christian, assignor to Rufus Spaulding Mcrrill, and Willian Carleton, Boston, Mass. Lamp
(Rcissue)
Reiehmann, Joseph, Dnbuque, Iowa. Valve for steam-cngines.
Reid, Clarles H., Danbury, Conn. Tool holder
Ieid, Hiram A., Beaver Dam, Wis. Sheep-shearinganachinc.
Same ....- Apparatus for shearing sheep.
Reid, Hugh, St. Louis, Mo. Valve motion for steam-engines Same...... Steam-engine valve gear.
Reid, J. S., Or:ange, Ind. Single harnuss.
Reid, William, North Britain. Method of supplying eattle with food and water on railrocel ears
Reik, William I., Brooklyn, N, X. Electro-marnetie log
Reiff, Jaenb G., Laneaster, Pa. Carriage spring
(Reissuc)
Reigel, David. (See Fosdick, Levi, assirnor.)
Reight, Charles A., assignor to selt, Ifenry B. Dill, and Georgo A. Swalm, Middletown, N. Y. Milk can
Reiher, Frank $A_{\text {. , assignor to Frank } 1 \text {. Reiher \& Company, Cincinnati, Ohio. }}^{\text {\& }}$ Window shutter.
Reilley, Jolm O., Baltimore, Ma. Duor fastener.
Reilley, John O., and Thomas Smith. (See Smith \& Reilly.)
Reilly, Frank W., assignor to self, George F. and Ebenozer T. Root, and Chauncey M. Cadey, Chicago, Ill. Lifting apparatus
Reilly, Joseph L., Chester, Pa. Furnace door latel
Reilly, Robert, Baltimore, Md. Hydrant. (Antedated Oct. 27, 1868) Reimann, Henry, and Charles Weber. (See Weber \& Reimann.)
Reiner, John F., Columbus City, Iowa. Joint for slaekles.. $\qquad$
Reinhardt, John, and Anton Hacupel. (See Hacupel \& Reinhardt.)
Reinhart, Christian, New Haven, Coun. Eseapenent for elocks.
Reinhart, J. J., and H. Monley. (See Henloy \& Reinhart.)
Reinhart, Sammel, and John C. Knapp. (See Obrecht, Henry, assignor.)
Remin, John, Fond-du-Lac, Wis. Eaves trongh
Reinger, G. Albert, assignor through mesno assignments to George Moobs, Detroit, Mich. Machine for making the bodies of eigars ... (Reissue)
Samo...... Machine for putting on the wrappers of cigars $\qquad$ . (Reissue) Same .-... Cigar machinc ...................................................... (Reissue) Feinstein, Samnel and Alexander. (See Canter, Wm., assignor.) Reisinger, George W., and W. O. Hickok. (See Hickok \& Reisinger.) Reisinger, James H., Vinton, Ohio. Auimal trap.
Reist, Abralim H., mad Johm S. Henry. (See Henry \& Reist.)
Reist, John, Philadelphia, Pa. Shoenaker's trimming knife
Reistle, Charles, Brooklyn, N. Y. Tumbler holder
Reith, Johu B., New York, N. Y. Sofa and bed
Ielyea, Georgo U., Watkins, N. Y. Machine for spreading plaster, lime, \&c.. Kembert, S. S., Memphis, Tenn. Breech-loading fire-arm Rembert, S. S., and H. Sehevenell. (See Schevenell \& Rembert.) Rementer, Albert, et al. (See Hollingsworth, James S., assignor.) Remington, Benjamin W., Providenco, R. I. Currycomb Remington, E., \& Sons. (See Rider, Joseph, assignor.) Same.
salle.
Remington, William U., assignor to self, Sarali A. T. Peabody, and Georgo D. Allen, Boston, Mass. Process of electroplating with niekel
Remsen, Georgo W., and Charles M. Miles. (See Miles \& Remsen.)
Reneky, Gustavns, and Samuel Kiess, Edgerton, Ohio. Spring bed bottom. Rencyly, A., et al. (See Nacher, Jacob, assignor.)
Renick, James H. (See Falconer \& Graliam, assignors.)
Rennie, A. H., Binghampton, NT. Y. Scissors.
Rennyson, Willian M., Pottsville, Pa. Lubricator

Sept. 15, 1868.

Jan. 7, 1868.
Jan. 23,1868.
July 21, 1868.
Oet. 20, 1868
Oct. 20, 1868
Apr. 14, 1868
May 26, 1868.
May 5,1868.
Jan. 7, 1868.
Oct. 13, 1868.
Aug. 18, 1868.
Nov. 3, 1868.
Nor. 3, 1868.
May 19, 1868.
Sept. 29, 1868.

Aug. 11, 1868.
Feb. 11, 1868.
Dec. 29, 1863.
Dug. 18, 1868.
Dec. 15, 1868
Oct. 13, 1863.
Dec. 8, 1868.
Jan. 28, 1868.
Mar. 17, 1868.
Apr. 7, 1868.
Dec. 를, 1868.

Anr. 21, 1868.
Nor. 17, 1868.
Dec. 22, 1868.

Apr. 21, 1868.
Mar. 3, 1863.
Nor. 10, 1868.
May 12, 1868.
Juno 16, 1868.

Sept. 1, 1868.

June 16, 1868.
June 16, 1868.
June 30, 1868.

May 5,1868.
Jan. 21, 1868.
Apr. 28, 1868.
Aug. 4, 1868.
Nov. 3, 1868.
Feb. 18, 1863.

Fob. 11, 1868.

Oct. 6,1868.
Nov. 17, 1868.

Jan. 28, 1863.
Nov. 17, 1868.

## Alphabetical list of patentees for thie year 1868-Continued.

No.

77, 093
81, 109

80,835
80, 091
77, 094
75, 646
75, 978
73, 385
79, 392

85,397
85, 398
3, 250
76, 522
77, 405
84, 762
84, 376
75,647
81,539
76, 661
75, 648
83, 549
78, 895
78, 010
82, 878
73, 463
75, 460
80, 222
81, 239
80, 425
79, 393

73,756

3, 103
84, 842
85, 181
82,639

76,523
74, 140
85, 399
84, 763
80,504
73, 650
84, 215
77, 760
*8,011
73, 041
76, 814
78, 761
73, 794
73, 386
80, 223
78, 393
73, 042
74, 848
84, 216
74,424
83, 409

84, 303
75, 054

Namc, residence, and invention or discovery.

Renshaw, Arthur Dallison, England. Apparatus for clipping the hair of animals
Ronwick, Edward Sabine, New York, N. Y. Grate for hot-air furnaces. (Design) Same..... (See Goddard, F., assignor.)
Renwiek, James H. (See Martin, Henry, assignor.)
Renz, Ferdinand, assignor to self and Joln A. Bayly, Poughkeepsie, N. Y Process of manufacturing sulphurie ether
Replogle, S. B., Martinsburg, Pa. Bechive. .
Requa, Charles W., Albany, N. Y. Still for distilling hydro-carbons
Requa, E. B., Jersey City, N. J. Balaneed valve.
Same... South Bergen, N. J. Lamp burner
Resley, Morace, Cumberland, Md. Car eoupling
Resor, William, Cincinnati, Ohio. Stove door
Resor, William, \& Company. (See Vedder \& Ritehie, assignors) ..... (Design.)
Samo - . . . . . . . . . . . . . . . . . (See Truesdalc, Charles, assignor:)
Restein, James, Pliladelphia, Pii. Fabric for the manufacture of paper eollars, cuffs, \&e

Corer for pots, kettles, \&c
Reaben, George, San Franciseo, Cal. Cover for pot $\qquad$ .....................
Rex, Stephen, Orefield, Pa. Harrester.
Rexford, Homer, Sandy Hill, N. Y. Canal-lock gate step
Rexford, Isaae, Malono, N. $\bar{Y}$. Seed planter.
Rexford, W. W., Lochsheldrake, N. Y. Extension pole and holdback for car riages
Reynerson, J. H., Pleasant Plains, Iowa. Cultivator
Reynerson, James H., Pleasant Plains, Iowa. Rotating fan
Reynolds, Andrew, Roek Springs, Md. Horse hay fork..
Reynolds, Andrew J., Sturgis, Mieh. Marine propulsion.
Reynolds, Andrew J., Chieago, Ill. Steam pump
Reynolds, B. H., Canterbury, and J. Baehelder, Norwich, Conn. Lubrieating deviee
Reynolds, C. H., assimnor through mesne assignments to Albert Bridges and Edwin Ray, New York, N. Y. Knife sharpener. (Antedated May 7, 1868). Reynolds, David M., Port Deposit, Md. Lubricator
Reynolds, E. D. and O. B., Nortli Bridgewater, Mass. Seed sower
Same .... . . Wheel hoe.
Reynolds, F. M., Mile Strip, N. Y. Hay loader
Reynolds, George H., New York, N. Y. Hoisting machine
Reynolds, G. H., et ali. (See Rider, Alex. K., assignor.)
Reynolds, Harvey A., Brooklyu, N. Y. Velocipede
Reynolds, Henry E., Ibristol, R. I. Sewing machine for button-holes ................. Reynolds, James. (See Evaus, Owen V., assignor.) Reynolds, Jessc. (See Steffe, Wm., assignor.)
Reynolds, John, San Franeisco, Cal. Preparation of dyes
Reynolds, John D., et al. (See Fry, Heary C., assignor') ....................(Dosign.)
Samo..-... (See Cutter, Thomas, assiguor) .-.............................. (Design.) Roynolds, John P., Salem, Mass. Army and navy emblem............ (Design) Reynolds, Joseph S., Wanconda, Ill. Filour cooler
Roynolds, Lester, Owatonna, Minn. Grain-weighing and registering maehine Reynolds, Lewis H., Goshen, N. X. Self-adjusting telegraphic relay Reynolds, Otis S. and G. W. (See Bunnell, Isaae S., assicnor.) Reynolds, William, et al. (See Utley, Kimball \& Reynolds.)
Reynolds, William W., assignor to the Howe Seale Company, Brandon, Vt Platform scales for weighing
Rheutan, AJram A., Worcestor, Mass. Envelope machine
Rheydt, Ferdinand, Chicago, In. Making screw nuts
Rhinehart, W. C., and Robert Gaston. Oskaloosa, Towa. Corn plow
Rhoades, Albert, and John Adams, Pontiae, Mich. Deep-well tabe.
Rhoades, Elias, sr., Clyde, Ohio. Horse hay fork.
Rhoades, J. W., Clyde, Olio. Oil box
Rhoades, S. H., Clyde, Ohio, and W. Carroll, Millsdale, Mich. Horse hay fork Rhoads, E. D. and J. P., Dayton, Ohio. Traee fastener Rhoads, Joathan M. (See Rntt, Henry W., assignor.)
Rhoads, Thomas, Ottawa, Ill. Apparatos for separating gold from ores....... . . Rlioads, Thomas, Tiskilwa, Ill. Propelling vehieles
Rhodes, Amos H., Fall River, Mass. Gib.
Rhodes, Eli T., and Robert Saylor. (See Saylor \& Rhodes.)
Rlıodes, Elias, jr., Clydo, Ohio. Horse hay fork
Rhodes, James C., Stillwater, Minn. Crutch.
Same..... . Damper
Rhodes, John H., Brooklyu, N. X. Fire plug
Rice \& Guy. (See Guy, John R., assignor.)
Rice, Archibald, and Lewis Leach, Fresno, Cal. Driving bridle
Rice, C. H., Port Henry, N. Y. Boot-crimping maehine
Riee, C. K., Marlboro, Mass. Coal sifter.
Riec, Charles L., Dunmore, Pa. Spring for vehieles
Rice, C. T. (See Myers, James H., assignor.)
Riee, Edwin T., New York, N. Y. Preventing mildew or injury to fibrous materials during their manufacturo.
Rice, Edwin T., et al. .(See Fuller, Jim B., assignor.)
Rice, Eli, assignor to self and N. H. Richardson, West Northfield, Mass. Do
viee for preventing hens from seratching
Rice, E.S., Paw Paw, Mich. Plow'wheel.

Date.

Apr. 21, 1868
Aug. 18, 1868.

Aug. 11, 1868
July 21, 1868
Apr. 21, 1868.
Mlar. 17, 1868
Mar. 24, 1868
Jan. 14, 1868.
June 30, 1868.

Dec. 29, 1868
Dee. 29, 1868
Nov. 17, 1868
Apr. 7, 1868
Apr. 28, 1868
Dee. 8, 1868.
Nov. 24, 1868
Mar. 17, 1868
Aug. 25, 1868.
Ар1. 14, 1868
Mar. 17, 1868
Oet. 27, 1868.
June 16, 1868.
IIay 19, 1868
Oct. 6,1868
Jan. 21, 1868.
Mar. 10, 1868
July 21, 1868
Aug. 18, 1868.
July 28, 1868
June 30, 1868.

Jan. 28, 1868.

July 14, 1868.
Dee. 8, 1868
Dee. 22, 1868.
Sept. 29, 1868.

Apr. 7, 1868.
Feb. 4,1868.
Dee. 29, 1858.
Dee. 8, 1868
July 28, 1868.
Jan. 21, 1868.
Nov. 17, 1868.
May 12, 1868.
May 19, 1868.
Jall. 7, 1868.
Apr. 14, 1868.
June 9, 1868.
Nor. 3, 1868.
Jan. 14, 1868.
July 21, 1868.
May 26, 1868.
Jan. 7, 1868.
Feb. 25, 1868.
Nov. 17, 1868.
Feb. 11, 1868.

Oct. 27, 1868.

Nor. $24,1868$.
Mar. 3, 186s.

Alphabelical list of patentees for the year 1868-Contimued.

No.
-ich, M. L., Sand Bank, N. Y. Bin for surar, \&e
Rich, Otis, N., assignor to self and Willian II. Howell, Genera, Ill. Grain separator.
76,815
83, 730
81, 290
78, 012
79, 005
S3, 410
83, 036
82,640

74, 722
77,842
78, 013
78, 608
81, 407
85, 131

84, $6 \frac{1}{4} 6$
3, 098
85, 027
81, 291
2,936
78, 130

73, 043
Rich, Thomas, Kiugston, N. Y. Churn
Inchard, Joseph, assigmor to sclf and G. W. Baker, Now York, N. Y. Apparatus for carbureting air. (Antedated Oct. 28,1868 )
Richards, C. B., Hartford, Conn. Brecch-loading fire-arm.
Richarts, Edmund J. (See Draper, Virgil, assignor.)
Richards. Gcorge, Boston, Mass. Throttlo valvo for locomutive engines
Richards, George, Richland, Centre, Wis. Wagon bolster.
Richards, George, assiguor to self and Dexter E. Pease, Richland Centro, Wis. Bit stock..
Richards, Gcorgo, and David Strickland, Richland Contre, Wis. Fanning mill.
Richards, H., and J. A. Traut, assignors to J. ג. Trant and J. W. Bliss, New Britain, Conn. Endless belt
Richards, Ira \& Company. (Sec Franklin, James D., assignor.)
Richards, Ira A., Brookficld, Mass. Butter dish
IRichards, Ira D., and Menry D. Snyder, Corbondalo, Pa. Fenco post Lichards, John, Cincinuati, Ohio. Bearing for spindles.

Same.-. . - Hanger for shafting
Sane .... - Mortising machine.
Richards, John, Philadclphia, Pa. Expansive gearing for feeding rolls
Richards, John, and V. Orton. (See Ortou \& Richards.)
Richards, Johu D., and A. E. Herrington. (See Merrington \& Richards.)
Richards, Johu R., and Osker S. Perlins. (See Perkins \& Jichards.)
Richards, Johm S., et al. (See Sangster, Richards \& Dobbins.) Same..... . (See Dobbins, Richards \& Sanestor.)
Richards, Johu W., Newark, N. J. Low-watcr indicator
Richards, MI, and J. Vandegrift, Princcton, In. Plow.
(Reissic)
Richards, S. C., St. Louis, Mo. Stecriner apparatus...
lichards, Thomas, assignor to Edward D. Manning, Milford, Mass. Machino for manufacturing fuso.
Richards, Thomas C., Now York, $\overline{\text { N. }}$. Attaching ornamental heads to nails and screws
(Reissue)
Richards, Warren, jr., assignor to self and Shiploy Smith, Cincinuati, Ohio. Gauge for cmbossing presses
Richards, William D., and William A. Garloch. (Sec Garloch \& Richards.)
Richards, William H., Aubnrndale, Mass. Device for securing stoppers to bottles, \&c
Richards, W. T., Bridgeport, Conn. Pnnching machino. Iichardson, Abijah. (See Whitmore, Wm. C., assignor.)
Iichardson, Charles, Aubnrn, N. Y. Machine for grindine reaper knives. Richardson, C. E., Cambridge Mass. Preserving and packing meat.
Iichardson, David C., Liswrence, Mass. Car ventilator.
Richardson, Edmond, and James II. Cole, assignors to James H. Colo, Adrian, Mich. Dovice for rolling roofing.
Richardson, Edward, and Newton Trowbridge. (See Trowbridge \& Richardson.) Richardson, E. J., Lowcll, Mass. Ticket holder. Richardson, Frederick, New Bedford, Mass. Boot hcel Iichardson, George, Lowell, Mass. Machine clock.

Samc...-- Reverso motion for winding on bobbins
Richardson, Gcorge W., Troy, and Henry Waternan, Iudson, N. X. Steam safety-valvo.
Richardson, Henry. (Sce Scott, Edwin M., assignor)
Same. --. . (Sce Casc, Honry J., assiguor.)
Richardson, Joel F. (See Britton, Hiram M., assignor.)

Date.

Jnly 28, 1868.
Scpt. 29, 1868.
Mar. 17, 1868.
Dec. 1, 1868.
Aug. 11, 1868.
Juио 9, 1868.
June 0, 1868.
Anč. 4, 1868.
June $23,1868$. Uct. 13, 1868.

Jan. 21, 1868.
May 5, 1868.

Jnne 16, 1868.
A Mr. ~2, 1868.
Ipr. 28, 1868.
Fcb. 4, 1868
Scpt. 15, 1868.
Oct. 8, 1868.
Ang. 4. 1868.
Ap1. 14, 1868.
Nov. 3, 1868.
Ang. 18, 1868.
MaT 19, 1868.
Juй 16, 1868
Oct. 27, 1868
Oct. 13, 1868
Sept. 29,1868
Feb. 18, 1868
May 12, 1868
May 19, 1868.
Junc 2, 1868
Ang: 25, 1868
Dec. :22, 1868.

Dec. 1, 1868
Aug. 2J, 1898
Dec. 15, 1863.
Aug. 18, 1868.
May $19,1868$.
May 19, 1868

Jan. 7, 1868
Oct. 13,1868
Feb. 25, 1868
Feb. 11, 1868.
Feb. 25, 1868.
May 19, 1868.
Tan. 7, 1868
Jay 5, 1868
Mar. 3, 1868.
Doc. 8, 1868
Oct. 20, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

74, 425
84, $37 \%$
85, 400
73, 044

77, 530
78, 326
76, 816
80, 308
73, 464
78, 830

76, 5:24
85, 401
85,401
76,248
73, 837
80, 667
81, 540
81, 110
3, 275
79, 501
74, 137
77, 761
82, 752
74, 426
73, 387
78,131
84, 647
84, 136
74,505
74, 138
77, 095
78,483

74,427
74, 428
73, 388
2,855
76, 249
73, 389
78, 234
81, 292

84,765
81, 006
74,850
85,330
78,132
3, 121
81, 408
74,851
73, 390
84, 510
76,525
79, 600

74, 762
77, 216

85, 402
75, 792
74, 002

Name, residence, and invention or diseovery.

Richardson, John, New York, N. Y. Machine for bundling kindling wood Pichardson, J. C., Ilion, N. I. Fork blank Same.............................. . samo
Richardson, John C., assicnor to self and James H. Prentice, Ncwark, N. J. Machino for pouncing hats.
Richardson, John C., and George W. Stout. (See Stont \& Richardson.)
Richardson, J. H., Chicaro, Ill. Screw-cutting machine
Richardson, L. T., Clayville, N. Y. Manufacture of hoes
Richardson, M. A., Sherman, N. Y. Horse-power
Same ...................................... . same.
Richardson, Nathan, Gloncester, Mass. Bait or meat cutter.
Richardson, Nathan, assignor to the Richardson Mill Company, Gloucester, Mass. Ice crushor.
Richardson, N. H. (See Rice, Eli, assignor.)
Richardson, Paris, jr., Warren county, Ill. Wagon wheel
Richardson, S. L., Webster City, Towa. Bechive.
Richardson, William, Baltimore, Md. Limb and basket holder.
Richardson, William, and Louis Ber MIuller, Baltimore, Md. Bending machine Richardson, William D., Springfield, Ill. Lead pipe connection.

Same...... Wooden pavement
Richers, Charics F., New York, N. Y. Harness rosette.
Same...... Spoon or fork handle.................................................... (Design)
Richey, James, Cincinnati, Ohio. Lnbricator. (Antedated June 10, 1868)
Richman, Charles H., et al. (See Ambruster, Charles S., assignor.)
Richman, E. I., Muscatine, Iowa. Woven fabric. (Antedated Aug. 5, 1867).
Richmond, Charles, assignor to Gaynor, Stiles \& Company, Memphis, Tcnn. Cotton planter.
Richmond, Hiram, assignor to Charles Parker, West Meriden, Conn. Mateh safe.
Pichmond, Isaac C., assignor to H. C. Hull, West Meriden, Conn. Snap hook..
Richmond, Peter, assignor to self and James Lamb, Aberdeen, Ind. Roofing scaffold
Richmond, Peter, Aberdeen, and Abner McFarland, Allcnsville, Ind. Boot crimper.
Richmond, Seelye, Annapolis, Md. Last-block elevator and instep stretcher.
Rickard, L., Danville, Ill. Ditching machine.
Rickard, W., Chicago, Ill. Pcarl barley machine
Rickerd, John C., Lewisville, Ind. Cultivator.
Riddel, Daniel, and Benjamin D. Vauderveer. (See Vanderveer \& Riddel.)
Ridcout, C. T., Boothbay Harbor, Maine. Rudder gear.
Rider, Alcxander K., assimnor to self, C. H. Delamaten, and G. H. Rojnolds, Nazareth, Pa. Valve for steam-engines.
Rider, B. P., and C. D. Wrightington. (See Wrightington \& Rider.)
Rider, Joseph, Newark, Ohio, assignor to self and E. liomington \& Sons. Strap ring for fire-arms.
Same .-.... Breech-loading fire-arms
Ridgaway, Samuel C., Baltimorc, Md. Harvester rake
Ridre, Joseph, Richmond, Ind. Coal oil lamp $\qquad$
Ridgely, P. R., Iron Mountain, Mo. Wagon wheel
(Reissue)
Ridgley, Heber R. Mansfield, Ohio. Harness pad
Ridgway, Charles Lowell, Boston, Mass. Water gauge for stean boilers.
Same...... Cork-screw
Same..... . (Sce Clapp, Seth E., assignor.)
Ridgway, John J. (See Clapp, Seth E., assignor.)
Ridgway, John J. (See Clapp, Seth E., assignor.)
Riegel, F. T., Philadelphia, Pa. Pressure indicator.
Rirg, William, England. Serew cap for oil cans. (Patented in England Feb 6, 1867)
Riggs, Charles G., Turin, and Homer C. Markham, West Turin, N. X. Milk cooler
Riggs, Charles H., Windsor Locks, Conn. Plancr chuck
Same. -.............-.-. . . . . . . . ................. . . same - $\qquad$
Risgs, Chavles H., Warwick, N. Y. Liquid meter. (Antedated Aug. 17, 1868)
Ricos, Homer, Oxford, Conn. Boot and shoe sole. (Antedated Feb. 12, 1868).
Rigrs, Lyman, Lansing, Mich. Convertible fork and hook
Riker, Daniel J., and J. Hall Dow. (See Dow \& Riker.)
Riker, E. J., Lewiston, Maine. Grappling hook
Rikert, Matthias, Oncida, N. Y. Rotary steam-engine
Riley, Clristian F assimnor to self and Jacob P. David, Philadclphia Pa Track-clearer for pailroads
Rilcy, Georgo P. (See Evans, Gcorge F., assignor.)
Riley, James, Detroit, Mich. Straw cutter
Riley, John D., deceased, by Jane Rilcy, administratrix, assiguor to Henry G. Dayton, Cincinnati, Ohio. Distilling apparatus
Riley, J. H. (See Quackenbush, J. H., assignor.)
Piley, William, assignor to H. Carpenter, Salen, Oregon. Shackle and supporter
Riler, W. W., Columbus, Ohio. Gate.
Rinelart, L. L., and P. Phillips, Evansburg, Ohio. Device to provent hogs from rooting.

Date.

Feb. 11, 1868.
Dec. 29, 1868.
Nov. 24, 1868.
Jan. 7, 1863.
May 5, 18ヶ8.
May 26, 1868
Apr: 14, 1868.
July 28, 1868.
Jan. 21, 1868
Junc 9, 1868.
Apr. 7,1868
Dec. 39, 1868.
Mar. 31, 1868. Jan. 28, 1868. Aug. 4, 1868 Aug. 25, 1868. Aug. 18, 1868. Dec. 1, 1868 Jume 30, 1868.

Feb. 4, 1868
May 12, 1868.
Oct. 6, 1868
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May 19, 1868.
Dec. 1,1868.
Nov. 17, $180^{\circ} 8$
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Feb. 4, 1868.
Apr. 21, 1868.
June 2,1868.

Feb. 11, 1868.
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Aug. 11, 1868.
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Dec. 1, 1868.
Apr. 7, 1868.
July 7, 18 隹.
May 12, 1868.
Apr. 28, 1863.

Dec. 29, 1 Е63.
Mar. 24, 1868.
Fel. 4,1868.

## Alphabetical list of patentees for the year 1868-Continned.

Rinehart, Martin, Lockport, Ml. Compound for treating piles
Rink, Pcter, and James Docherty, Wertsville, N. J. Adjustable barrel head
Riplcy, Danlel C., Pittsburg, Pa. Manufacture of glass. Same...... Birminghan, Pa. Manufacture of glass ware.
Ripley, Daniel C., assignor to Ripley \& Co., Pittsburg, Pa. Glass lamp. Same ...... Glass lamp......................................... (Division 2, r'cissuc) Same..........ssme.............................................. (Division 1, reissue)
Ripley, Ezra, Troy, N. X. Button fastener Samc...... Serew-handle attachment. Same....... Toy pistol.
Ripley, Ezra, assignor to self and W. C. Davis, Troy, N. Y: Tea-kettle
Ripley, E. H., North Chelmsford, Mass. Machine for planing mouldings
Ripley, John L., Fremont, Ohio. Hay knife
Ripley, M. H., and W. N. Temple, Minneapolis, Minn. Combined coru-sleller and apple-griuder.
Risch, Conrad F. L., Huntingburg, Ind. Heliometer
Same.................. ....................... same.
Risher, Daniel, ir., Dravosburg, Pa. Device for loading coal.
Risley, Seldon N., Brooklyn, N. T. Cigar case
Rist, J. W., assignor to self and Ira A. Hebbarl. Rochester, N. I. Kinitting machine

Rist, J. TV., assignor througle mesne assignments to self and Ira A. Hebbard, Rochester, N. Y. Register for knitting machines. (Antedated Sept. 24, 1868)
Ritchel, Charles F., Chicago, III. Can opener
Same...... Serial crank
Ritchel, Charles F., assignor to selt and Henrs S. Mayues, Chicago, In. Chalk and sand-paper holder for billiard tables
Ritchie, Charles O., and James H., North Marison, Inl. Press.
Ritchie, E. S., Brookline, Mass. Holtz electrical machine
Same...... Paint for liquid compasses, \&c.
Ritchie, Francis, and Nicholas S. Vedder. (See Tedder \& Ritchic)... (Design.)
Ritchie, William, and Alexander C. Martin. (See Martio \& Ritchic.)
Rittenhouse, Alval, Philadelphia, Pa. Clamp for holding leather.
Same.......Fcmalc syringe and ber pan-
Ritteuhouse. H. N., et al. (See Mreyer, Berck A., assignor.)
Rittenhouse, John P. (See Thompson, M. L., assignor.)
Ritter, Henry M., Covington, Jy. Machine for riveting hinges.
Ritter, Theodore. (See Mollenhaucr, Edward, assignor.)
Ritterhoff, F. W., and Nicholas H. Borgteldt. (See Borgfeldt \& Ritterlıff.)
Ritz, Adam G., assignor to self, John B. Carter, and William Lindley. Elizabethtown, Ind. Shingle machinc
Rivera, Geronimo, Cambritgeport, Ind. Pine-apple beer
Rivers, T. L., St. Lonis, Mo. Animal trap. (Antedated May 13, 1868 )
Fives, Jacques, France. Mcthod of casting metal
Rivot, Lonis Edouard, assignor to Jacques Gaillardon, France. Methol and means for treating ores of gold and silver

Same...... Apparatus for amalganating gold and silver ores ..........................................
Same......Treating ores with superhcated stean.
Same....... Process of treating gold and silver ores
Rix, Altred, San Francisco, Cal. Fastcning for buttons
Roach, Francis, assignor to self and Joseph Zane, Boston, Mass. Fancet
Roath, Lorenzo W., Lexington, Ohio. Bedstead
Robbins, A. H., Copenhagen, N. X. Horse rake
Robbins, C. G. (See Maxham, Norman, assignor.)
Tabobins, Edgar A., Wrentham, Mass. Trade mark $\qquad$ (Dcsign)
Robbins, Edward Y., Cincinuati, Ohio. Passenger railway car
(Dcsign).
Robbins, Elisha, Worcester, Mass. Check for picker staff.
Same.......Railway snow-plow
Same.......Railway.
Same ...... Scroll saw-mill
Robbins, Henry R., assignor to self and TV. H. Green, Baltimore, Ma. Tobacco pipe.
Robbins, Henry R., assignor to self, J. J. Moran, and G. Colton, Baltimore, Md. Steam-pipe coupling for railroad-car heaters
Robbins, Henry Seymour, Newton Falls, Ohio. Device for strawberry culture
Robbins, Hiram H., Lymu, Mass. Feather renovator
Robbins, Hiram H., et al. (See Lennox, Robbins \& Hayes.)
Robbins, Horace T., Boston, Mass. Locking device for umbrellas.
Robbins, Horace W. et al. (See Brafley, John, assignor:)
Robbins, J. A., and Tilliam Kcrr, jr. (See Kerr \& Robbins.)
Robbins, Jasper N., et al. (See Lyon, Slumard \& Robbins.)
Hobbins, Louis S., New York, N. Y. Preserving skius of animals
Same...... Process of oiling, prescrving, and streugthening leather
Same....... Process of cleaning wool, \&ce
Same....... A gricultural stcam boiler . .
Same....... Process for purifying butter
Pobbins, Richard B. (See Mason, Austin Z., assignor.)
Same...... (See Wallace, Luther R., assignor.)
Robbins. Richard B., and Austin Z. Mason. (See Mason \& Robbins.)

Date.

Not. 24, 1868. July 14, 1868. Mar. 17, 1868 Oct. 20, 1868
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July 14, 1868.
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Mar. 31, 1868.
Feb. 4, 1868
May 12, 1868.

Aug. 18, 1868.
Sept. $22,1868$.
Dec. 15,1868

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May 19, 1868
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Apr. 21, 1868
May 19, 1868
July 14, 1868
Aug. 18, 1868
Dce. 22,1868

Mar. 24, 1868
Mar. 24, 1868
Mar. 24, 1868
May 26, 1868
July 28, 1868
Name, residence, and invention or diseovery.

Robbins, William, Hinsdale, Ill., and Edward Swasey, Bucksport, Me. Amalgamator
Robbins, William O. (See Ferris, Samuel S., assignor.)
Robbins, William S., New Bedford, Mass. Bridle bit.
Robcrts, A. E., Des Moines, Iowa. Sehool seat and desk
Roberts, Allucrt W., Hartford, Conn. Sceuring eye-glasses to wearing apparel
Roberts, Benjamin H., Fall River, Mass. Carriage spring
Roberts, Charles, Lakc Village, N. H. Head-block for saw-mills
Roberts, Cyrus, and John A. Thorp, Three Rivers, Mieh. Horse-power and truek Roberts, C. H. L., and W. C. Dudley, Morrison, Ill. Collar fastener
Roberts, C. W., Austin, Ill. Repeating elock. (Antedated Nov. 21, 1868)
Roberts, Edward, Philadelphia, Pa. Apparatus for entting the teeth of wheels.
Roberts, Eleazer B., Rochestcr, N. Y. Cultivator
Roberts, E. L., Ncw York, N. Y. Ventilator.
Same......Apparatus for lieating and ventilating railroad ears
Roberts, E. S., Columbus, Ga. Cotton-bale tic
Roberts, Francis A., North Vassalboro, Maine. Potato digger
Roberts, Frank, et al. (See Loekhart, Roberts \& Knight.)
Roberts, Gcorge J., Dayton, Ohio. Cut-off for steam engines
Roberts, H., and W. Onions. (See Onions \& Roberts.)
Roberts, Henry A., Boston, Mass. Refrigerator
Roberts, Menry F., Pittsburg, Pa. Propeller
Roberts, Joseph, et al. (See Cook, John F., assignor.)
Roberts, Mark L., Mt. Union, Ohio. Knitting machine $\qquad$ . (Reissue)
Roberts, Marvin S., Racinc, Wis. Pcat crib
Same...... Pcat machine. (Antedated July 14, 1868).
Roberts, Osmore O. (See Stockbridge, Charles H., assignor.)
Roberts, P. P., and E. N. Porter. (See Porter \& Roberts.)
Sane .......................................... same.
Roberts, Richard N., assignor to self and Justus M. Alting, New Britain, Conn. Hitching-post cap
Roberts, Thomas, et al. (See Pooley, Roberts \& Lue.)
Roberts, Watson W. (See Kaulbeck, Charles, assignor.)
Roberts, William, assignor to self, Austin Roberts, and Wclcome Sprague, Farnham, N. Y. Corn sheller
Roberts, W. E., North Coventry, Pa. Portable fence
Robertson, Dunean, Detroit, Mich. Center-board for vessels. (Antelated Dec. 12, 1867)
Robertson, E. S., and A. B. Collins, Mount Liberty, Ohio. Lifting jack.
Robertson, James, Scotland. Exeavating machine.
Robertson, James, Gosport, Ind. Hay and cotton press.
Robertson, John, Brooklyn, N. Y. Manufacture of rubber tubes and machinery thercfor
Robertson, John, Quincy, Il. Valve-rod conneetion
Robertson, Johm B., New Orlcans, La. Stump cxtraetor,
Robertson, L. F., West Farms, N. Y. Compound for treating hides and skins.

Robertson, William D., San Franeisco, Cal. Track-laying machine for railroads
Robie, D. C., assignor to self and H. E. Bostwiek, Springfield, Mass. Lathe for turning buttons.
Robinett, James T., assignor to sclf and G. W. Goodwyn, Petersburg, Va. Journal box
Robinson \& Hearn. (See Rymes, Chistopher E., assignor.)
Robinson, Alfred, New York, N. X. Process and apparatus for the manufacturc of roofing fabrics
Robinson, Azariah, New Xork, N. Y. Firc cscapo.
Robinson, A. C. and William Seymour. (See Parks, B. M., assignor.)
Robinson, Benjamin, East Gloucester, Mass. Process of obtaining gelatine from fish heads
Robinson, Benjamin, Thomaston, Mainc. Carriage thill
Robinson, Charles, Boston, Mass. Chamber vessel
Robinson, Clark, Fox Lake, Wis. Miter box
Same....... Thill coupling.
Same...... Miter box .....
Robinson, D. C., et al. (See Flora, Orlando V., assignor.)
Same .......................................

Robinson, D. D., Niles, Mich. Hook for whiffletrees
Robinson, Daniel 'I., Boston, Mass. Implement for eutting tobaeeo and other substances.
Robinson, Edward T., Nashua, N. H. Valve gear
Robinson, Fayette S., Boston, Mass. Lamp burner
Robinson, George C., et al. (See Blakemore. Charles C., assignor.)
Robinson, George M., New Wilmington, Pa. Apparatus for operating horse hav forks
Robinson, George M., New Wilmington, Pa. Horse hay fork. Same...... Hay fork
Enbinson, Henry E., and James T. Watson. (See Watson \& Robinson.)
Robinson, James, assignor to self and William Robinson, Funkville, Pa. Lamp chimney
Robinson, I. C., Shepardsville, Mich, Shingle machine
Robinson, N. W., Moriah, N. Y. Hold-back hook.

- Date.

Apr. 21, 1868.
Dec. 8, 1868.
June 23, 1868.
June 30, 1868.
Nov. 24, 1868.
Jan. 21, 1868.
Dec. 8, 1868.
Oct. 6, 1868 .
Dee. $8,1868$. June 16, 1868
Mar. 17, 1868
June 30, 1868. Aug. 18, 1868. Mar. $10,1868$. Dec. 22, 1868.

Sept. 29, 1868.
Apr. 21, 1868.
Dee. 29, 1868.
Dec. 22, 1868.
Feb. 4, 1868.
July 28, 1868.

Tcb. 18, 1868.

June 16, 1868.
Mar. 31, 1868.
Feb. 4, 1868.
Apr. 28. 1868.
July 21, 1268 Scpt. 8, 1868

Mar. 17, 1868.
Apr. 7, 1868.
Jan. 7, 1868
Apr. 21,1868.
May 26, 1868
Sept. 22, 1868.
Mar. 10, 1868
June 9,1868

Mar. 3, 1868.
Apr. 7,1868

May 19, 1868
June 2, 1868.
Apr. 14, 1868
Apr. 28,1868.
July 28, 1868.
Scpt. 22, 1868.

Jan. 7, 1868
Feb. 11, 1868.
June 30, 1868.
Apr. 21, 1868.

Feb. 4, 1868.
May 12, 1868.
Aug. 25, 1868.

Apr. 21, 1868.
Aug, 18, 1868.
Feb. 4, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

85, 331 78,. 339 73, 6.51 75, 896 81, 710 7(1, 5:2 7!, 343
2, 955
2,956 2,957 โ2, 352 76, 946 76, 250

77, 764
74,144
78,236

77, 218
73, 652
81, 007
76, 813
80, 013
75, 881
81, 410
83,550
82, 753
7\%, 917
74,597
83, 411
74,430
73, 199
74, 598
73, 653
3,25\%
84,304
83, 212
81, 008

76, 103
79, 778
74, 431
74, 852
74, 599
79, 601
73, 048
80, 014
2, 983
3, 169
84, 711
75, 703
79, 397
78, 017
78, 018
74,004
81, 212
85, 332
75, 055
84, 908
84, 137
73, 049
83, 097
83, 412
73, 200
80, 669
81, 296
74,145

Name, residence, and invention or discovery.

## Robinson, Stillman W., and DeVolsou Wood. (Sce Wood \& Robinson.) Same. <br> same

Robinson, T. C., anl George P. Clark, Boston, Mass. Steam street car Robinson, William, Brooklyn, N. Y. Lamp burner.
Robinson, William A., Grand Rapids, Mieli. Hames fastener Sanc. ..... Mop head
Robinson, W. A., Auburu, N. Y. Steam graduator
Robinson, William B., Detroit, Mich. Balanced slide valre
Robinson, W. C., Saltzburg, Pa. Churn
 Same.
same
Design)
Same......................................same ................................ (Design).
Robrecht, Anthony J., Newark, N. J. Carpet bag
Robson, Robert, Buffalo, N. X. Brick kiln.
Roche, D. W., assignor to self and J. P. Roche, Rochester, N. Y. Shingle machine. (Antedated Feb. $2 \overline{5}, 1868$ )
Rock, Andrew J., Union Village, Va. Last and shoe holder
Rock, Edward A., Ludlow, Vt. Globe steam ralvo.
Rock, John IF., and Adam McMullen. (See McMullen \& Roek.)
Rockafellow, Samuel, Museatine, Iowa. Harvester
Rockwell, H. 'I. (See Hunter, W. R. S., assiguor.)
Rockrrell, L. Y. (See Baum, A. F., assignor.)
Roekwell', 'Thcodore 'T., Yorkville, N. Y. Blind slat fastening. (Antedated April 15, 1868)
Rockwood, S. J., Elsah, Ill. Candlestick or holder.
Rockwoot, Thomas J., St. Johnsbury, Vt. Machine for milling the knife-edge of scales.
Rodeheaver, William II., Miamisburg, Ohio. Hub for wagon wheels.
Same....... Machine for dressing felloes.
Rodenhauser, Leomhard, Pliladelphia, Pa. Car starter.
Rodes, Henry, Clarenco Center, N. Y. Plaster sower.
Rodgers, John F., South Bend, Ind. Gato...
Rodgers, William, Lymuville, Ind. Cultivator
Rodgers, Willian H., Brooklyn, N. Y. Gas-burner.
Rodier, Louis C., Springfield, Mass. Steam globe valro
Rodier, Peter, Detroit, Mich. Stop derice
Rodney, Leander, New York, N. Y. Cement roofing. (Antedated Jan. 31, 1868) Roe, İ. E., Elmira, N. X. P'late lifter.
 Roebuck, Samuel and John, New York, N. Y. Pulley and block.
Same.... Cuspadore.
(Design)
Roeden, Carl Wilhelm, San Francisco, Cal. Anchor
Rocmer, William, Newark, N. J. Traveling bag.
Roemheld, J., Chicago, Ill. Eyc-water.
Roeper, J. J., and Willian Flesh. (See Smith \& Brown, assignors)........................................
Rocsler, Henry, and Willian Crighton. (See Crighton \& Roesler.)
Roeth, Caspar W. (See Estes, Dana, assiguor.)
Roettger, Edward, and Pierce Du Rienx. (See Du Ricux \& Roettger.)
Roff, Almon, Southport, Comn. Woot-boring machine.
Samo ...... Adjustable spring
Rogers, A. E., and A. C. Gibbs. (See Rust, F. W., assignor.)
Rogers, Charles, Alleghany City, Pa. Pump.
Rogers, Ephraim P., assignor to self, R. W. Payne, and Hiram Pritchard, Corning, N. X. Governor
Rogers, Eran T., San Franciseo, Cal. Boot and slooe.
Rogers, F. O., Niles, Mich. Preserving eomposition roofs.
Rogers, Iehabod R., assignor to George E. Bartlett, Lynn, Mass. Mode of lasting boots and shocs.
Rogers, Isaac, West Chehalem, Oregon. Apple corer and slicer
Rogers, John, New York, N. Y. Group of figures..
(Design) Same

Group of statuary
(Design)
Rogers, John C., Alden, N. Y. Gate latch
Rogers, John W., Decatur, Ill. Tuyere.
Rogers, John W., and John II. Nale. (See Nale \& Rogers.)
Rogers, Junius, assignor to self and Frederick W. Pratt, Sterling, Ill. Lock nut
Rogers, Levi, Morehouse Parish, La. Mcdical compound. Same.

Rogers, Robert E., Philadelphia, Pa. Steam generator
Rogers, Robert W., Pittsburg, Pa. Bridge
Rogers, Silas O., jr., Stanfordville, N. Y. Car coupling
Rogers, Sullivan W., Harwich, Mass. Baking pan.
Rogers, William C., Newark, N.J. Reefing fore-and-aft sails
Rogers, William H., Harlem, Ill. Gate
Rogers, William H., New York, N. Y. Pocket safe for friction match cord Same....... Match composition
Rogers, W. L., North Cornwall, and W. E. Crane, New Britain, Conn. Railway switch.
Rogers, William W., Hampden Corner, Mo. Dumping cart and wagon
Rohrbacher, F., and F. Hormann, Philadelphia, Pa. Fruit jar.
Rohrer, Jeremiah E., Rohrersville, Md. Spout braeket

Date.

Dec. 29, 1868 June 2, 1868. Jan. 21, 1868. Mar. 24, 1868. Dec. 8, 1e68. Apr. 7, 1ع68. Feb. $25,1 \varepsilon 68$. Mar. 17, 1868. Mar. 17, 1868. Mill. 17, 1868. Sept. 22, 1868. Apr. 21, 1868.

Mar. 31, 1868. May 18, 1868. Feb. 4, 1868.

May 26, 1868.

Apr. 28, 1868.
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Mar. 31, 1868. July 7, 1868.

Feb. 11, 1868.
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Feb. 4, 1868.
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Mar. 3, 1868.
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Nov. 17, 1868.
Jan. 7, 1868.
Oct. 13, 1868.
Oct. 27, 1868.
Jan. 7, 1868.
Aug. 4, 1868.
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Feb. 4, 1868.
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Date

July 21, 1863

Sept. 1, 1868.
Mar. 17, 1868
Feb. 4, 1868
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May 5,1868.
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June 2,1868.

June 2, 1868.

July 14, 1868.
Apr. 14, 1868
Aug. 25, 1868
Mar. 10, 1868
Ang. 11, 1868.

Alphabetical list of patentees for the year 1868-Continued.
No.

81, 688
77. 844

84, 767
80, 508
76, 251
7ก, 532
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77,534
79, 393
ع0, 311
70, 830
72, 502
78, $7=0$
74, 601
79, 689
75, 200
85, 023
83, 795
79, 082
80, 015
75, 579
79, 399
73,548
85, 133

79, 690
77, 659
79,003
2, 909
78, 484
78, 833
84, 305
75, 982
74,148

78, 327
73, 656
75, 983
81, 821
76. 821

85,244
72, 249

75, 465
74, 602
81, 213
74,149
77, 920
76, 351

Ross, William, and James M. Adamson, Day's Store, Pa. Washing machine. (Antclated Aucust 28, 1863)
Ross, William J., Worcester, Mass. .Lamp burner
Samo ...... Door fastener.
$\qquad$

Rossman, William F., Hudson, N. Y. Kerosene lamp boiler.
Roth, Elias, New Oxford, Pa. Gate
Roth, FrankJ., Sehenectady, N. Y. Piston packing. (Antedated April i2, 1868) Same................................. (Antedated April „ə 1868) Same...... Stufling-box packing.................... (Antedated $\Lambda$ pril 22,1868 )
Roth, G. H., Boston, Mass. Hand coal-sifter
Same.... - Sad iron liolder
Roth, John G., New York, N. Y. Nutmeg grater.
Same......Clothes pin.
Roth. Lewis, Newark, N. J. Umbrella $\qquad$ (Antedated July 2,1868 )
(othfelder, Hemry, and I. S. Middleton. (See Reed, G. W., assignor.)
Rothischild, M., Harisburg, Pa. Plier for bending sheet metal
Rottanzi, A., San Francisco, Cal. Cup for efferveseing clrinks
Roulstone, E. A. G., Roxbury, Mass. Trunk corner
Romnds, William H., North Bridgewater, Mass. Machine for trimming welted seams
Rouse, Constant S., Dowamiac, Mich. Step ladder
Roush, Elisha, and W. F. Wickorsham. (See Wickersham \& Roush.)
Roush, Isaac, and John W. Truby, Otto, N. Y. Organ
Routt, A. P., Liberty Mills, Va. Cultivator
Roux, J. G., Crystal Springs, Miss. Extensiou wardrobe
Rowan, Robert, Parnassus, Pa. Scaffold and ladder
Rowand, Charles L., et al. (Sce Perrin, Abram, assiqnor.)
Rowe, A., W. H. Mitchell, and E. B. Hamill, Macomb, Ml. Seed sower
Rowe, Danicl H., Pana, Il. Attaching card clothing to cylinders of carding engines.
Rowe, E. (Sce Iaskins, T., Joseph, assignor.)
Rowe, George, and S. W. Nelson, Worcoster, Mass. Cutter-hear Rowe, Harrison, Marictta, Pa. Fagot for railroarl rails
Rowe, James H., Fort Wayne, Ind. Chumı. (Antedated June 6, 1868
Rowell, Albert H., and William Banister. (See Banister \& Rowell.)
Rowell, John S. and Ira, Beavor Dam, Wis. Cultivator
Samo...... Elevator for cultivator bars.
Same.......Secder and cultivator
Rowell, Warren, assignor to self and John Heck, Now York, N. X. Molding gear wheels
Rowland, Charles, Washington, D. C. Car seat
Rowland, Charles, assignor to self and Joseph G. Lowland, Quiney, Ill. Continuous leather peg strip
Rowland, Erasmus D. (See Chambers, John D., assignor.)
Rowland, James L., Milwankee, Wis. Manufacture of artificial stone
Rowland, T. F., Greenpoint, N. Y. Sub-aqueous tube.
Rowles, W. W. and A. J. Russell, Baltimore, Md. Invalid bedstead Rowley, Alexander S., Hudson, N. Y. Sewing machine. Rowley, B. L., New Britain, Coun. Flexible bit for bridles.
Rowley, Reuben, Rochester, N. Y. Training grape vines
Rowley, S. B., Philadelphia, Pa. Cap for preserve jars.

| Same | no | cissue.) |
| :---: | :---: | :---: |
| Same. | (Sec Gilbert, N. S., assiguor) | issue.) |
| Same. | (See Lewis, R. W., assignor) | (cissue.) |
| Same. | (See Myers, Goorge H., assign |  |

Same...... (See Lewis, R. W., assignor)
01.)

Rowley, Thomas J., and William Poland, Chillicotho, Ohio. Lubricating box
Rowlstone, W. D., Butternuts, N. Y. Sleigh brake
Rowse, Richard. (See Wetherbee, John W., assignor.)
Roy, Bozil S., assignor to self and Henry S. Morse, Lowell, Mass. Card grinder Roval, Jarvis, Rochelle, Ill. Drying and ventilating apparatus. Roye, Adolphe Lewis, and J. C. Drouhard. (Sce Drouhard \& Royé.)
Royer, Herman and Louis, San Francisco, Cal. Machino for treating hidos Royon, Edward, Piqua, Ohio. Serew-cutting machino.
Roys \& Wilcox Company. (See Meigs, Edmund H., assignor.)
Same
Roziere, Charles, and Leon $\bar{V}$. Hue. (See Hue \& Roziere.)
Rubbles, Casper, Lowrille, N. X. Planter and eultivator
Rubel, Moses, Chicago, M1. Cutlery
Rudolph, Daniel, Sugar Grove, Ohio. Beehive.
Rue, Nelson, Harrodsburg, Ky. Gato.
Rue, Samuel, jr., assignor to solf, Samuel McCambridge and Edward G. Martin, Chester County, Pa, Injector for steam generators
Samo...... Paoli, Pa.
.samo
Ruedy, John, et al. (See Zamboni, Isidoro, assimnor.)
Rneger, Sarah, Kansas City, Mo. Mammalial liniment
Ruggles, Henry J., Poultney, Vt. Mowing machine.
Same....... Slate trimming machine
Ruggles, Solomon W., assignor through mesne assignments to Samuel M. Long.
ley, E. J. Genet, Samuel B. Smith, and Andrew C. Getty, Fitchburg, Mass.
Stump extractor
15 P

## Dato.

Sept. 1, 1868.
May 12, 1868.
Dee. 8, 1868.
July 28, 1868
Mar. 31, 1868.
May 5, 1868.
May 5, 1868.
May 5, 1868
June 30, 1868
July 28,1868
Apr. 14, 1868
June 30, 1868.
July 7, 1868
Feb. 18, 1868.
July 7, 1868
Mar. 3, 1868.
Dec. 15, 1868.
Nov. 3, 1868.
June 23, 1868.
July 14, 1868.
Mar. 17, 1868.
June 30, 1868.
Jan. 21, 1868.
Dec. 22, 1868.
July 7, 1868.
May 5, 1363.
Juno 16, 1868.
Mar. 31, 1868.
June 2, 1868.
June 9, 1868.
Nov. 24, 1863.
Mar. 24, 1868.
Feb. 4, 1868.
May 26, 1868.
Jan. 21, 1868.
Mar. 24, 1868.
Scpt. 1, 1868.
Apr. 14, 1868.
Dce. 22, 1868.
Fob. 11, 1868.

Mar. 10, 1868
Feb. 18, 1868.
Aug. 18, 1868.
Fel. 4, 1868
May 12, 1868.
Apr. 7, 1868.

May 5, 1868
May 26, 1868
Mar. 3, 1868
Dec. 29, 1868.
Jan. 28, 1868.
Sept. 1, 1868.
Dec. 1, 1868.
Apr. 28, 1868.
Aug. 18, 1868.

Jaly 28, 1868.

No.

79, 781
75, 202
78, 136

83, 321

74,150
73, 932
79, 259
79, 009
77, 219
74, 005
74, 056
75, 456

73,841
79, 010
81, 214
85, 134

76, 529
75, 984
79, 146
75, 797
82, 994
83, 664
84, 768
3, 195
79, 782
84, 64 s
84,581
81, 215

74,853

80,770
73, 758
8ะ, 353
83, 665
77, 776
74, 603

81, 297
84, 001
73, 050
81,950
75,580
81, 412
3, 170
81, 824
77, 101
74, 007

83,552
84, 002
85,135
83, 883

Namc, residenco, and insention or discovery.

Rugcles, Stephen P., Boston, Mass. Rotary fluid clovator.
Ruhl, J., Defianee, Ohio. Harrow.
Ruhl, J., and E. S. Herrington, Defiance, Olio. Hay rake and loader Rumford Chemical Works. (See Horsford, E. N., assignor)
Rummer, E. D., and F. L. Kathan. (See Kathan \& Rummer.)
Rumpf, M. H., Franec. Railway car hrake. (Patented in France October 17, 1867)

Rumpff, Charles. (See Zinssmann, Emil, assignor.)
Same ....... (See Lambert, Jean, assignor.)
Rumrill, Ebenczer B., and Benjamin F. Holbrook. (See Holbrook \& Rumrill.) Rumsey \& Company. (See Egleston, Leouard, assionor) ............... (Design.) Rumsey, Henry D. Homer, N. Y. Adjustable head for barrels and firkins.
Rumsey, Jesse B., Port Huron, Mieh. Churn .

Rumscy, W. D., and William Cooper, Jr. (see Cool.
Rundlett, Samuel C., Portland, Me. Brace for bits.
Runstetler, Andrew, and Albert Windeck, Peoria, Il. Cotton plow and eultivator
Samc.......Cotton seraper and cutter.
Sanc...... Maehine for planting eotton secd and corn
Ranyon, Peter P., et al. (See Stelle, David D., assignor) $\qquad$ (Reissue.)
Same..... (Sce McDonald, Thomas E., assignor.)
Ruppel, George, Harlem, N. Y. Trunk loek
Rusehhanpt, Frederick M., New York, N. Y. Explosive powder. (Antedated June 4, 1868)
Rusehhaupt, Fredorick M., Now York, and Gustavus Burhenne, Williamsburg, N. Y. Preserving alc, porter, \&c

Rusco, Volncy E., Chicago, Ill. Gambrils and their support for slaughtering purposes.
Ruseo, Volney E., and Windsor Leland. (See Leland \& Rusco.)
Ruseo, Volney E., and Windsor Leland.
Rush, J. M., Marengo, Iowa. Grain eonveyor.
Russ, James J., Woreester, Mass. Wood-planing maehine.
Russell \& Erwin, Manufacturing Company. (See Brooks, Asa I., assiguor.)
Russell, Albert H., Adrian, Mieh. Stoek pump.
Russell, A. J., and W. W. Rowles. (See Rowles \& Russell.)
Russell, Clement, and W. K. Miller, Massillon, Ohio. Harvester.
Russell, E. P., Manlius, N. Y. Wrench.
Same...... Churn .....
Same..... Gas burner
Russell, E. P., assignor of one-half intcrest to Porter Tromain, Manlius, $\underset{\mathrm{N}}{\mathrm{Y}}$. Mode of lighting street cas burners
(Reissue)
Russcll, Emily S., Plymouth, Mass. Toy house
Russell, Ephraim, assignor to self and Beynard Yost, Waynesbirg, Pa. Car coupling
Russell, Hiram, and Myron S. Fullcr, Nashville, Mich. Spring bed bottom ......
Russell, Isaac S., New Market, Md., and H. R. Russell, Woodbury, N. J. Harvester.
Russcll, Jacob, and Winslow Sherman. (See Sherman \& Russell.)
Russell, James, Springfielf, Mass. Card-setting maehine
Russell, James, and George T. Coats. (See Coats \& Russell)........................... Russell, James W., and John Sweeny. (See Paige, W. H., assignor.)
Russell, J. W., Springfield, Mass. Lathe dog.
Russcll, John W., and David Joline, Tottenville, N. Y. Anchor.
Rnssell, N. W., Cedar Falls, Iowa. Mold for casting sleigh shoes.
Russell, Robert, et al. (See Lanagan, M. A., assignor.)
Russcll, R. J., Moundsville, West Va. Skate
Russell, S. I., Chicago, Ill. Sidewalk..
Russell, William, assignor to self and George Winship, Atlanta, Ga. Cotton and hay press
Russell, William D. (See Baxter, William, assignor.)
Russell, William M., and D. E. Holmes, Cineinnati, Olio. Railroad ear rentilator. Rust, F. W., assignor to self, A. E. Rogers, and A. C. Gibbs., Umatilla, Oregon. Maehine for scouring, blaeking, and finishing leather.
Rust, Gcorge E., Boston, Mass. Horseshoe cushion.
Rust, Henry A., and L. Hermann, Chicago, M1. Bridgo.
Rust, Joseph G., Xenia, Ohio. Derice for lasting boots and shoes
Rust, Solon, and E. M. Chapin. (See Clapin \& Rust.)
Ruth, Sarah, Philadelphia, Pa. Sum shade for horses
Ruthven, E. C., assignor to MaeKellar, Smith, \& Jordan, Philadelphia, Pa. Printing type.
Rutschman, Sigmund, Philadelphia, Pa. Meat-chopping machine
Rutt, Henry W., assimnor to self and Jonathan M. Rhoads, Reedsburg, Ohio. Fence for poultry yards.
Rutter, Benjamin, and Hixson Hunt, Now Lexington, Ohio. Treadle for propelling sewing machines
Rutter, J. H. J. (See Conway, TV. H., assignor.)
Ryan, John C., Chicago, In. Water-heating apparatus
Ryder, Benjamin L., Chambersburg, Pa. Potting and packing plants
Ryder, Jesse, Sing Sing, N. Y. Deviee for extraeting and transporting trees
Ryder, Nathan P., Boston, Mass. Hasp for trunk locks.

Date.

July 7, 1868.
Mar. 3, 1868.
May $19,1868$.

Oct. 20, 1868.

Fcb. 4, 1868
Jan. 28, 1868.
June 』3, 1868.
June 16, 1868
Apr. 28, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
Mar. 10, 1868.

Jan. 28, 1868.
June 16, 1868.
Aug. 18, 1868
Dec. 22, 1868.
Apr. 7, 1868.
Mar. 24, 1868.
Junc 23, 1868.
Mar. 24, 1868.
Oet. 13, 1868.
Nov. 3, 1 E68.
Dec. 8, 1868
Nov. 17, 1868.
July 7, 1868.
Dec. 1,1868
Dec. 1, 1868
Aug. 18, 1868
Feb. 25, 1868.

Aug. 4, 1868.
Jan. 28, 1 E68.
Sept. 22, 1868
Noт. 3., 1868
May 12, 1868
Feb. 18, 1868
Aug. 18, 1868.
Not. 10, 1868.
Jan. 7,1868
Sept. 8,1868.
Mar. 17, 1868
Aug. 25, 1868
Aug. 25, 1868.
Sept. 1, 1868.
Apr. 21, 1868.
Feb. 4, 1868 .
Oet. 27, 1868
Nov. 10, 1868
Dee. 22, 1868.
Nov. 10, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| ז8, 020 | Ryer, Edward C., Burlington, Vt. Wateh, eloek, and look key. (Autedated May 7, 1868) |
| 2, 842 | Ryerson, J. RL, and B. F. Allen. (See Allen \& Ryerson.) <br> Ryerson, William S., Philadelphia, Pa. Hoop skirt. |
| -9, 147 | Rymal, John J., Rochester, Minn. Antomatie swing. ........................... |
| T3, 102 | Rymees, Christoplier, assignor to Robinson \& Hearn, Somerville, Mass. Ma- |
| 2,978 | Ryner, Villiam, assignor to self and John C. Hopewell, Philadelphia, Pa. |
|  |  |
| ع3, 796 | Sabin, Hiblbarl, Philadelphia, Pa. Water heater.................. |
|  |  |
| 80, 567 | Saek, Georgo F., New York, N. Y. Moll for casting letters, \&e. |
| 83, 935 | Safiord, Larkin S., Hope, Maine. Stanchion for fastening eattle. |
| 77, 536 |  |
| 77, 537 | Saffray, Charles, New York, N. Y. Cement |
|  | Sage, A. A. (See Jones, Alvarado, assis |
| ${ }^{75}, 467$ | Sagendorpl, Lewis L., assighor to self and Samuel C. Moore, Boston, Mass. Lamp. |
|  | Sager, Damiel, New York, N. Y. Corn-lusking maehine..................... |
|  | Sailer, Villiam, Philadelplia, Pa. Clamp - .a. |
|  | Saladee, Cyrus W., Newark, Ohio, and John S. Hall, Pittsburg, Pa. |
|  | Same .... Grater and slicer |
|  | Salarlee, Fee \& Company. (See Gray, Joseph W., assigno |
| 77, 538 | Salgee, Oliver, New York, \. Y. Pump piston. (Antedated 4 pril 25.180 |
| \%9, 400 | Salisbury, A. J., assignor to self and Thomas R. Bard; San Buena Ventura, Cal. |
| 84, |  |
|  | alisuury, winam IH, Lawrence, lass. Proeess for the preparation of woolen |
| \%9, 691 | Sallada, 1. V.i and G. A. Pearson, Pliiladelphia, Pa. Carriage |
| 29, 148 | Sallec, Lucretia E., Peoria, Ill. Leather-work ornament |
| 84, 967 | Salmon, Peter, England. Manufacture and application of gas for various useful |
|  |  |
| 79, 602 | liage wheel <br> Salorgne, Thextore, assignor to Jaeob Woodbim, St. Louis, Mo. Wagon or car- |
| 81, 113 | Salsbury, Joln, Contral Falls, R. I. Loom... |
|  | Salter, James W. (See Wood, Georgo W., assignor.) |
|  |  |
|  | Same .........................s.sane..............................( (Design.) |
|  | Same |
|  | Same........................same .............................. (Design.) |
|  | Same.......................same.............................. (Design.) |
|  |  |
|  | Same......................same .................................(Desigini.) |
|  | Same.......................same................................(Design.) |
|  | Same....................- - same - .-........................... (Design.) |
|  | Same .................... same............................ (Design.) |
|  | (Design.) |
|  | Same.........................s.sme...............................(Design.) |
|  | Same-.....................-same.............................(1)esign.) |
|  | Same....................- same............................ (Design.) |
|  | Same ............ (See Hoskin. . Robert, assignor) .................. (Design.) |
|  | Same............. (See Meyer, Vietor, assignor) .................. (Design.) |
|  | Same....................... same ............................. (Design.) |
|  | ame........... (Sce Meyer, Charles T., assignor)............... (Design.) |
|  | Design.) |
|  | (Design.) |
|  |  | filv,

Sampson, Orestes, assignor to Sainpsou \& Fraekelton, Petersburg, Iil. Corn planter

Sampson, Thomas, assignor to George S. Harwood and George II. Quiney, Wanskuk, R.I. Feeding meclianism for earding engines.
Samuel, Riehard, Walden, N. Y. Portable fenee
Samuels, M., New York, N. X. Fountain lamp
Same.......Hoop-skirt clasp
Sanborn, Cyrus, Chichester, N. II. Safety pocket
Samborn, Gcorge H., Boston, Mass. Circular-saw table
Same......New York, N. X. Paper-eutting maeline
Same …...............................ame
Sanborn, J. A. (See Blake, J. D., assignor.)
Sanborn, Rufus S., Ripon, Wis. Water vessel for fire-proof safes.
Sanborn, Woorlbury, assignor to self and Bailey West, Chelsea, Mass. Truss Sanders, Abraham K., Brooklyn, N. Y. Base-burning stove Sanders, A. K., assignor to self and John II. Burtis, Brookiyn, N. X. Mi.
range

## Date.

Мау 19, 1868.
Jan. 14, 1868.
$J$ une $23,1868$.
Apr. 21, 1868.
June 9,1868.
Nor. 3, 1868.
Ang. 4, 1868.
Oct. 13, 1e6s.
May 5 , 1efis.
May 5, 1868.
Mar. 10, 1868.
June 16, 1868.
Aug. 18, 1868.
June $2,1868$.
June 2, 1868.

May 5, 1868.
June 30, 1868.
Dce. 1, 1868.
July 7, 1868.
June 23, 1868.

Dec. 15, 1868.
July 7, 1868.
Aug. 18, 1868.

Dec. 15, 1868.
May $20,1868$.
Mar. 24, 1863
May 26. 1868.
Dec. 15, 1868.
Dec. 29, 1868.
Feb. 4, 1868.
Apr. 21, 1268.
Nov. 24, 1868.
Nov. 24, 1868.
Apr. 21, 1868.
Dec. 8, 1 :68.
July 14,1863

## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or diseovery. |
| :---: | :---: |
| $\begin{aligned} & 81,689 \\ & 83,213 \\ & 83,214 \end{aligned}$ | Sanders, Alfred, Penn Yan, N. X. Car couplin |
|  | Sanders, B. D., Wcllsburg, Wost Va. N |
|  | Same |
|  | Sanders, C.T., and George Harsin. (See Harsin \& Sanders.) |
| 78; 330 | Sanders, Jolm, administrator of Richard Norris, deecased. ( See Norris, Richard.) Sanders, John J., jr., New York, N. Y. Mitering maehine ................. |
| 78, 330 | Sanders, John W. (See Shiclds, F. M. assignor.) |
| 79, 401 | Sauders, Thomas H. B., Philadelphia, Pa. Rocking swing |
|  | Sanders, C. C., and Thomas Booth. (See Booth \& Sanderson.) |
| $\begin{gathered} 76,949 \\ 78,396 \end{gathered}$ | Sanderson, D. B.,Lewiston, Maine. Peg eutter.................................... |
|  | Sanderson, E. W., and W. A. Shattuck, assignors to selves, Benjamin Whiting, and H.J. Miller, Hillsborough County, N. H. Hand sced sower |
|  | Sanderson, G., and L. J. Crow. (See Crow \& Sanderson.) Baton, Mass. Solder- |
| 77, 921 | Sanderson, Gcorge O., assignor to self and E. D. Goodrich, Boston, Mass. Soldering furnace |
| 78, 137 | Sanderson, George O., assignor to self and Fred. M. Baker, Boston, Mass. Cakc |
| 74,15178,138 | Sanderson, Hugh M., Noble, M1. Eyo medic |
|  | Sanderson, James, Fredericksburg, Ohio. Hoisting appa |
| $\begin{aligned} & 77,103 \\ & 80,509 \end{aligned}$ | Sanderson, John, Frederickshurg, Ohio. Bridge |
|  | Sanderson, Pobert, Cleveland, Ohio. Stcam cut-oft valvo .......................... |
| $78,834$ | Sanderson, William, New York, N. Y. Construetion of handles of table eutlery |
| 78,542 <br> 84, 649 <br> 85, 333 | Sandiford, Roger, Joliet, In. Plow clevis |
|  | Same...... Cultivator |
|  | Same......Land rolle |
|  | Sands, F. O., et al. See Crague, Fraueis and George G., assigno |
| 84,218 | Sands, Jacob, Waterloo, N. Y. Spinning ja |
|  | Sands, J. B. (See Corbin, S. W., assignor.) |
| 78, 485 | Sandt, J.S., St.Joseph, Mo. Apparatus for euring hops |
|  | Sanford \& Sisson, et al. (See Deitz, John M., assignor.) |
| 80,017 | Sanford, Aaron C., Plymouth, Connl. Renovating and dressing |
|  | Sanford, C.L. et al. ( See Anthony, Cornclins, assignor.) |
| $\begin{aligned} & 75,299 \\ & 77,922 \\ & 83,322 \end{aligned}$ | Sanford, Elias, Meriden, Conn. Yoke for horses |
|  | Same ..... Apparatus for handling iron in roling mins ..................... |
|  | Sanford, Gelston, Bergen Point, N.J. Machine for sharpening the cutters of mowing maehines. |
| 84, 070 | Sanford, Gclston, assignor to the Vallory \& Sanford Flax and Hemp Machine- |
|  | Dressing Company, Bergen Point, N.J. Machinc for separating the pulp from fibrous substanees |
| 82, 643 | Sanford, Leverett A., assignor to self and Albert Warner Wolcott, Conn. Clasp |
| $\begin{array}{r}82,644 \\ 79,012 \\ \hline\end{array}$ | Same..... Snap hook |
|  | Sanford, N. C., Meriden, Conn. Aug |
| 78, 331 | Sanford, William G., Union City, N X. Mail ear and mail-bag |
|  | Sanford, W.S., et al. (See Barns, Stephens, assignor.) |
| 84,84484,308 | Sangalli, Charles, New York, N. X. Hand supporter fo |
|  | Sangcr, Ethiel, Alton, Ill. Car-heating stov |
| $\begin{aligned} & 73,123 \\ & 75,468 \end{aligned}$ | Sangster, James, Buffalo, N. Y. Machine for handling or piling |
|  | Sangster, James, assignor to self and Danicl H. Burtis, Butfalo, N. I. Machine |
| $\begin{gathered} 75,469 \\ 73,201 \end{gathered}$ | Same |
|  | Sangster, James, Buffalo, N. Y., John S. Richards, Erie, Pa., and D. P. Dobbins, Buffalo, N. X. Briek machine |
|  | Sangstcr, James, et al. (See Doblins, Richards, \& Sangster.) |
| 82, 037 | Sangstcr, William, and John Bretz, Springfield, Tl . Brick monld |
|  | Sangster, William A., and I. G. (See Dubois, William V., assignor.) |
| 84, 584 | Sargeant, Thomas, Williamsburg, N. Y. Stair ro |
|  | Şergent \& Company. (See Sparks, Wm. E., assignor.) <br> (Sie Diser F. V., assignor) ....................(Design.) |
|  |  |
|  | Same ................... samc . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design.) |
|  | Same .................. .samo....................................... (Design.) |
|  | Same ...................same......................................... (Design.) |
|  | Same . ................. - same . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design.) |
|  | Same ...................same........................................ (Design.) |
|  | Same ................... same....................................... . . ) Design.) |
|  | Same .................. . same. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design.) |
|  | Same .................. same. ....................................... . (Design.) |
|  | Same .................. - same . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design.) |
|  | Same ...................same......................................... . (Design.) |
|  | Same . ................. same.......................................... . (Design.) |
|  | Same ................. same. .............................................. (Design.) |
|  |  |
|  |  |
|  | Same ....... (See Bradford, Purmort, assignor.) |
| $\begin{aligned} & 81,114 \\ & 84,968 \end{aligned}$ | Sargent, Amos, Brewcr, Maine. Stcering apparatus |
|  | Sargent, Charles G., Graniteville, Mass. Belt hook. |
|  | Same ...... (See Monroc, Ling, assignor.) |
| $\begin{gathered} 79,013 \\ 76,104 \end{gathered}$ | Sarcent, Elhanan W., Lowell, Mass. Mechaniea |
|  | Sargent, G. W., New York, N. Y. Nail |

Datc.

Sept. 1, 1868.
Oct. 20, 1863.
Oct. 20, 1868.

May 26,1868.
June 30, 1868.
Apr. 21, 1868.
May 26, 1868.

May 12, 1868.
May 19, 1868.
Fcb. 4, 1868.
May 19, 1868.
Apr. 21, 1868.
July 28, 1868.
June 9, 1868.
June $\quad 2,1868$
Dec. 1, 1868.
Dec. 29, 1868
Nov. 17, 1868.
June 2, 1868
July 14, 1868.
Mar. 10, 1868
May 12, 1868.
Oct. 20, 1868.

Nov. 17, 1868.
Sept. 29, 1868.
Sept. 29, 1868.
June 16, 1868.
May 26, 1868.
Dee. 8, 1868.
Not. 24, 1868.
Jan. 7, 1863
Mar. 10, 1868.
Mar. 10, 1868.
Jan. 7, 1868
Sept. 8, 1868.
Dec. 1,1868

Aug. 18, 1868.
Dec. 15, 1868.
June 16, 1868.
Mar. 31, 1868

Alphabetical list of patentecs. for the year 1863-Continued.

No.

79, 402

## 85, 245

85,245
85,246
85, 246
76, 530
84,585
76, 822
80, 6\%0
7\%, 104
81,543
74, 604
74, 009
74, 010
74, 011
74,012
3,079
77, 660
79, 149
77, 105
84, 379
81, 413
84, 380
83, 323
81,825
81, 826
76, \&23
74, 605
75, 799

## 83, 884

82,557
3, 050
2, 895
75,581
7ง, 863
79, 260

7,106
81, 827
82,354
78, 763
3,016
81, 690
77, 220
78, 397
76, 105
2,948
83,413

Sargent, Horace, Chelsea, Mass. Machine for cutting soap.
Sargent, James, Rochester, N. Y. Permutation lock
Same...... Bolt for safe doors
Sargent, J. B., New Haren, Conn. Sap spont
Same......Blind staplo.
Sargent, J. F., Tunbridge, Vt. Upsetting machiue.
Same...... North Tmbridge, Vt. Carriage top.
Sargent, Joseplı F., Boston, Mass. Nailing and pegreing machino
Sargent, J. Q. A., Manchester, N. H. Steam generator-
Sarony, Napolcon, New York, N. Y. Photographic rest
Sarven, James D., Columbia, Tenn. Carriage spring.
Same ...................................same ..............................................
Same...... Elastic bearing for body-supporting irons for carriages
Same ..............................
(Reissue)
Sarver, David, and Robert Coons, Greensburg, Pa. Corn harvester...
Sassaman, A. H., Lebanon, Pa. Car brake.
..............
Satterfield, J. M. (See Hopkins \& Anderison, assignors.)
Satterlee, D. R., New Haven, Conn. Machine for the manufacture of slate pencils
Satterlee, Miltou. Richland Center, Wis. Sleigh brake
Sattler, David, Mifilin, Ohio. Saw
Sattley, Marshall, Taylorsville, Ill. Kerolving coulter for plows
Saulson, Moritz, Troy, N. X. Dinner pail.
Sanuders, Albert II., Nashua, N. H. Reel
Same...... (See Flinn, Wm. H., assignor.)
Same...................... same.
Saunders, Benj., assignor to self and Albert H. Saunders, Nashua, N. H. Warp dresser
Saunders, Darid, assignor to Joseph Nason \& Compayy, Brooklyn, N. Threading tube.
Saunders, Frank, Aberdecn, Miss. Measuring fancet
Saunders, Frederic, New York, N. Y. Smoking pipe
Saunders, Joseph, and PauF Marcelin. (Sce Marcelin \& Saunders.)
Same....................................................same.
Saunders, Joseph, and J. D. Perrin. (See Perriu \& Saundors.)
Saurman, Mary A. H., Philadelphia, Pa. Bath-room rack
Sarage, Edwart, Chicago, Ill. Steam-cooking apparatus
Savare, Julius B., assignor to the Union Nut Company, Unionville, Conn. Ma-
chine for making nuits.
(Reissuc)
Sarage, J. J., TroF, N. T. Coal stove ......................................... (Reissue)
Sarage, L., Ashtabula, Ohio. Railroad freight car
Savace, W. G., Knoxville, Iowa. Steam engine
Savalle, D., France. Apparatus for distilling -
Savary, Beujamin B., and Frederick O. Raymond. (See Lynch, Isaac F. A. A.,
assignor) …..................................................................(Reissuc.)
Savery, Charles C., Philadelphia, Pa. Enameled water cooler
Same...... Water cooler aud refrigerator
Savery, Dennis, Wheeling, W. Va. Device for holding cut nails while being headed.
Savery, Thomas H. Wilmington, Dol. Expanding pulley
Savournin, W. H., Philadelplia, Pa. Box.................................... (Design).
Savor, Michael E., Corinth, N. Y. Counter and shank for boots and shoes. (An-
tedated Aug. 29, 1863)
Sawin, Aretus L. (See Lucas, James G., assignor.)
Sawin, George W., Nashua, N. H. Attaching wheels to axles
Sawyer, Alvah L., and Wilson Baldwin, Detroit, Mich. Spring bed bottom
Sawyer, A. M., Athol, Mass. Machine for splitting rattans
Sawyer, Charles H., Buxton, Maine. Stecring apparatus
Same....................................... same -
Sawyer, E. A., Portland, Me. Dish rack.
Sawyer, H. J., (See Ramsdell, W. H., assiguor.)
Sawyer, P. W., and Marshall Morse. (See Morse \& Sawyer.)
Same........................................... - same.
Sawyer, Sylvanus, Fitchburg, Mass. Rattan machine............................................
Same...... Machine for splitting rattan into strips ............. (Extension)
Same...... Machinery for cutting rattan, \&c. ........................(Extension)
Same...... Steam generator
Same....... Rattan machine
Same.......Calipor
Sax, John K., and George W. Kear, Kingston, Pa. Railroad car stove
Saxby, John, and John S Farmer, England. Switch and signal
Saxton, W. I. (See Brett, Thomas, assiguor.)
Sayler, Janes. (See Hoover, James. assignor.)
Sayles, Jeremiah L., Gloncester, R. I. Expauding drill
Saylor, Robert, and Eli T. Rhodes, Marshall, Mich. Anvil for forming horseshoe calks.
Sayward, Charles, Gioucester, Mass. Gudgeon for booms
Scanlon, William H., Memphis, Tenn. Portable service heater. (Antedated Dec. 9, 1868)
Scantlin, Thomas and Janes M., Evansville, Ind. Coal seuttle
Scarff, W. H. H., and S. L. Stockstill. (See Stockstill \& Scarff.)

Date.

Jume 30, 1868.
Dec. $22,1868$.
Dec. 22, 1868.
Apr. 7, 1868.
Dec. 1, 1868.
Apr. 14, 1868.
Aug. 4, 1868.
Арг. 21, 1868. Aug. 25, 1868. Feb. 18, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
Ang. 11, 1868.
May 5, 1868.
June 23, 1868.
A pr. 21, 1868.
Nov. 24, $1=68$.
Aug. 25, 1868.
Nov. 24, 1868.
Oct. 20, 1868.
Sept. 1, 1868.

Sept. 1, 1868.
Apr. 14, 1868.
Feb. 18, 1868.
Mar. 24, 1868.

Nov. 10, 1868.
Sept. 29, 1868
July 21, 1868.
Mar. 10, 1868.
Mar. 17, 1868.
July 14, 1868.
June 23, 1868.

Apr. 21, 1868
Sept. 1, 1868.
Sept. 22, 1868.
June 9, 1868
May 5, 1868.
Sept. 1, 1868
Apr. 28, 1868.
May 26, 1868
Feb. 18, 1868
Mar. 31, 1868
May 26, 1868.
Oct. 27, 1868

Dec. 11, 1868.
Dec. 23, 1868.
Dec. 28, 1868.
Mar. 3, 1868
May 26, 1868.
July 7, 1868.
July 14, 1868
Aug. 11, 1868.

Doc. 29, 1868.
Dec. 1, 1868.
July 14, 1868.
Dec. 22, 1868.
July 7, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

3, 013
76, 252
84,003
83, 324
75, 058

74, 606
84, 004
77, 767
2,947
77,671

74, 152
78, 835
73, 124
73, 051
84, 910
2, 950
82, 355
77, 539
73, 125
83, 215
75, 470
84, 005
81, 414

85, 404
81, 012
73, 052
83, 732
78, 543
81, 013
75, 704
77, 408
76, 824
76, 825

84, 770
85, 481
82, 754
82, 755
83, 797
81, 014
80, 671
80, 018
85, 030
85, 482
75, 582
82, 880
73, 549
80,6\%2
79, 150
77, 923
80, 568
75, 800
76, 823
80,510

Name, residence, and invention or discovery.

Scattergood, Henry Valentine, Albany, N. Y. Cotton gin
Schaefer, Lewis J., Philadelphia, Pa. Curtain fixture
Schaeffer, Carl, Elizabeth, N. J. Manufacture of artificial stone
Schaeffer, F.M., Blooming Grove, Kans. Sawing machine
Schaffer, George. (See Derozier, Louis, assignor.)
Schall, Michacl, New York, N. Y. Composition for forming casts and fancy articles
Schall, M., and G. W. Ilgenfritz. (See Ilgenfritz \& Schall.)
Schanck, Henry K., Chicago, I1. Composition for roofing. (Antedated Dec. 27, 1867)
Scharrath, Wilhelm, Prussia. Railroad car ventilator
Schartan, Eilcrt O., assignor to Frank S. Judd and John G. Powell, Philadelphia, Pa. Lamp wick. (Antedated April 28, 1868)
Schatz, John, New Haven, Coma. Reed organ case............................ (Design). Same...... Reed organ bellows
Schaum, Frederick, deceased, by Frederick G. Schaum, administrator, Baltimore, Md. Glass furnace
(Extension)
Schausten, August, Michigan City, Ind. Revolving cannon
Schayer, J. W., Boston, Mass. Machine for stuffing leather
Schcaf, Danicl F., Dayton, Ohio. Apparatus for generating gas
Scheffer, Theodore, and Henry Morrison, Patcrson, N. J. Traction engine.......
Scheiblein, J., and J. Heitzman, Philadelplia, Pa. Hand cultivator
Schell, Rowert. (See Wadsworth, Arthur, assignor.)
Schenck, Junius, New York, N. Y. Trade mark .
(Dosign)
Schermerhorn, George W., East Limington, Mc. Cork puil.
Schevenell, H., and S. S. Rembert, Memphis, Tenn. Instrument for treating piles
Schifferly, Conrad, Bourbon, Ind. Churn.
Schilling, D., Brooklyn, N. Y. Water closet
Schilling, William Baltimore, Md. Apparatus for distilling spirituous liguors.
Schimmel, Oscar, Saxony. Washing machinc
Schimonsky, S. W. Y., Cheyenne, Dakota Territory. Car brake
Schindler, C. W., and E. J. Gerdom. (See Gerdom \& Schindler.) Same. samc.
Sarne.................................................... . same.
Same...................................................... same.
Schinueller, Jacob, and Luke Fitzpatrick. (See Fitzpatrick \& Schinucller.)
Schlegcl, Mathias, St. Jacob, Ill. Hot-air stove
Schleicher, Gustav, Mt. Vernon, N. Y. Stringed musical instrument
Schlingman, Adolph, Alexandria, Ohio. Bel bottom
Schlingman, Adolph, Detcrick Glander, and James Campbell, West Alexandria, Ohio. Churn
Schlosser, Pcter G., assignor to sclf and A. P. Baer, Middletown, Md. Composition for depilating hides.
Schlotter, Hermann, Germany. Apparatus for raising water
Scllottmann, G., and H. Thal. (See Thal \& Schlottman.)
Schmeltz, E., assignor to self and Paul E. Fleury, New York, N. Y. Belt fastening
Schmidlin, William G., and J. W. Driscoll, Nerv York, N. Y. Reflector
Schmidt, Bruno, Hoboken. N. J. Restoring old leathcr
Same...... Preparation of manganates and permanganates
Schmidt, John, et al. (See Lumbard, Henry, assignor.)
Same............................... same.
Schmitt, Andrew, California, Mo. Salve for burns and scalds.
Schmitt, C. C., New York, N. Y. Spring rocking chair
Schmitt, Charles C., and Rudolph Wodrich, New York, N. Y. Folding easy-chair Samc. ...... Folding chair .
Schmitt, Charles C., and Sencea A. Swalm. (See Swalm \& Schmitt.)
Schmitt, Joseph Theodore, Brooklyn, N. Y. Picture frame..
Schmitt, Justin, New Albany, Ind. Shoe last. .
............
Schmitt, Paul. (See Quantin, Alphonse, assignor)
(Reissuc.)
Schmitt, Peter, and Pcter Jacob, Watcrloo, Ill. Grain drill shoo
Schmitz, Christiau, Philadclphia, Pa. Machine for stretching and softening
Same. ..... Mode of shaving and polishing skins
Schmitz, Wilhelm, Philadelphia, Pa. Explosive cartridge
Schnackenberg, A. D., Brooklyn, N. X. Vessel for mineral waters
Schneider, George C., Adrian, Mich. Beehive
Schncider, Lewis, et al. (See Bockstaller, George, assignor.)
Schncider, P. F., assignor to self, W. II. D. Callender, and B. C. English, Hartford, Conn. Cartridge box
Schuell, Johann, New Xork, N. X. Sash and window frame
Schofield, James, and Osgood Plummer. (See Plummer \& Schofield.)
Scholfield, A. H., and De Witt C. Sterry, Worcester, Mass. Pump
Scholfield, Socrates, Providence, R. I. Regulating and dispensing mechanism. (Antedated Marclı 20, 1868).
Scholl, John, assignor to Samuel S. Bateson, England. Gas-burncr attachment. Scholl, William, Marion Township, Pa. Horse hav fork
Schoonmaker, Peter, New Britain, Conn. Trace clip
Same...... Bit for bridles

Date.

June 30, 1868.
Mar. 31, 1868.
Nor. $10,1868$.
Oct. 20, 1858.

Mar. 3, 1868.

Feb. 18, 1868.
Nov. 10, 1868,
May $12,1868$.
Mai. 10, 1868.
May 5, 1868.
Apr. 23, 1868.
Feb. 4, 1868.
June 9, 1868.
Jan. 7, 1868.
Jan. 7, 1868.
Dec. 15, 1868.
Mar. 10, 1863.
Sept. 22, 1868.
May 5, 1868.
Jan. 7, 1868.
Oct. 20, 1868.
Mar. 10, 1868.
Nov. 10, 1863.
Aug. 25, 1868.

Dec. 29, 1868.
Aug. 11, 1868. Jan. 7, 1863.
Nov. 3, 18 है
June 2, 1868
Aug. 11, 1868.

Mar. 17, 1868.
Apr. 28, 1863.
Apr. 14, 1868.
Apr. 14, 1868.

Dec. $8,1868$.
Dec. 29,1868 .
Oct. 6, 1868 .
Oct. 6,1868.
Nov. 3, 1868.
Aug. 11, 1868.
Aug. 4, 1868.
July 14, 186 .
Dec. 15, 1868.
Dec. 29, 1868.
Mar. 17, 1868.
Oct. 6,1868.

Jan. 21, 1868.
Aug. 4, 1868.
June 23, 1868.
May $12,1868$.
Aug. 4, 1868.
Mar. 24, 1863.
Apr. 14, 1863.
July 23, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

## No.

75, 203
7i, 768
82, 645
73, 406

82,441
79, 014
74, 944
85, 137
75, 300
76, 8 ²
83, 098
82, 252
78, 398
76, 106
3, 017
83,885
79, 015
ع3, 099
75, 204
80, 511
73, 053
80, $8 \div 9$
73, 391
81, 691
2, 889
76, 352
85, 138
82, 996
80, 2:26
74, 013

74, 153
3, 159

75, 471
81, 299
83, 325
85, 217
74, 433
76, 663
78, 139
80, 420

76, 662
76, 253
80,569
78, 33:

ع2, 997
82, 033
73, 739
76, 827
76, 254
76,829

Namo, residence, and invention or discovery.

Schoonmaker, S. Franklin, New York, N. Y. Mode of preserving hops. dated Feb. 22, 1863)
Samo....
Transporting and storing grain and other products. (lated $\Delta$ pril 25,1868 ). joint Schoonover, James S., Corry, Pa. Railway joint
Schott, George, New York, N. Y. Mattress.
Schrader, Joln, and John Reiber. (See Reiber \& Schrader.) Schrader, William, and Frederick Bihn. (See Biln \& Schrader.)
Schreck, Valentin, Philadelphia, Pa. Wash stand and sick chair
Schreiber, John TV., New York, N. Y. Lamp bnrner
Schreiner', ERmund' F., St. Lonis, Mo. Umbrella. (Autedateil Feb. 17,1863 )
Schreiner', Henry, Philadelphia, Pa. Car replacer. (Antedated Nov. 3, 1868)
Schreyer, Gottlieb, Commbus, Ohio. Fimace..
Schreyer, Philipp, New York, N. Y. Gas heater
Schroeder, J. W., and John E. Marshall. (See Marshall © Schroecier.)
Schroy, Jeremiah, Fortville, Ind. Fruit picker. (Antedated Uct. 2, 1868)
Schnessler, John, and John Kemnedy, Latayette, Ind. Machine for threading bolts
Schntfert, Angustus, and George Coopcr, Wrandotte, Jich. Churn
Schultz, C., aud P. Warker, New York, A. I. Stop cock. (Antedated March 18, 1868)

Schultz, Frederick W., and John A. (See Brock \& Schnltz.)
Schultz, Judson, and Elias Brock.
Schnltz, Judson, and Elias Brock. (See Brock \& semmiz.)
Schulz, Otto A., Chicaco, Ill. Tonguo depresser ant atomizer
Schnlze, Louis, Louisrille, Ky. Beer cooler.
Schmmacher, H , et al. (See La vender \& Lowe, assignors).
(Teissue.)
Schmancher', Guitar, New York, N. Y. Combined knob latch and lock.
Schmmacher', John, and Henrs Upjohn, Ann Arbor, Mich. Machino for press-
ing and grooving seams in tin ware
Schmann, Carl, assignor to Edward II. Jackson, Saxony. lock-lrilling machine.
Schurger, Firank, and N. Allstattor, Hamilton, Ohio. Harvester rake
Schnssler, Hormann, San Francisco, Cal. Chain inclinometer.
Schwalbe, William H., Now York, N. Y. Sufa and bed.
Schwartz, William. (See Reeve \& Smith, assignors.)
Schweizer, Franzis, assignor to the Schweitzer Patent Bolt Conipay, New York, N. Y. Nachine for cutting threads on bolts or muts .................(Reissue)

Schweitzer, Peter, Robeson Towuship, Pa. Horse hay fork.
Schye, Loatrer, Chicago, Ill. Boot shank machine
Scotield, 1 bisha, Starkey, N. Y. Grape trellis
Scofield, Elward S., Rochester, N. Y. Carving fork and knife sharpener combiver
Scofield, Levi, Farmington, TVis. Shuttle for looms
Scorer, Robert, and Daniel'S. Colby. (See Colby \& Scorer) $\qquad$ (Design.)


Same. same (Design.) (Design.)
Scott, David $\Lambda$., and J. E. Burdge, Cincinneti, Ohio. Spring bed bottom
Scott, Edwin M., assignor throngh messue assigmments to Henry Richardson, Anburn, N. Y. Machine for grinding the cutters of mowing machines. (Reissuic)
Scott, George, Steubenvile, Ohio. Holder for razor straps
Scott, George, Louisville, Ky. Elevator.
Scott, Jerome, Charlestown, Pa. TVashing machiue.
Scott, John A., Lexington, Va. Photographic camera
Scott, J. P., aul S. H. La Rue, Lewisburg, Pa. School desk and seat
Scott, J. W., \& Company. (See Skinner, Russel, J., assignor.)
Scott, John WV. II., Rochester, N. Y. Spring mattress
Scott, Levi, Burgettstown, Pa. Chum.
Scott, Levi, and Paul Trinumer, Burgettstown, Pa. Car coupling
Scott, Melchi, and Richard Gaines. (See Gaines \& Scott.)
Scott, S. M., and A. F. Spaulding. (See Spanlding \& Scott) $\qquad$ (Reissue.)
Samo..........................................same
(Reissue.)
Scott, Uri, and E. G. Doreliester. (See Dorehester \& Scott.)
Scott, William MI. (See Mason, George R., assignor.)
Scotton, Stephen, Richnond, Ind. Tree box.
Scottron, Samuel T., Springlield, Mass. Mirror
Scoville, Glijah U. and Waslington L., Manlins, N. Y. İoisting apparatus
Scoville, Hiram 1I., Chicago, 1ll. Stone breakers.
Scoville Manufacturing Company. (See Rais, Adrian, assignor.)
Same...... (Sce Shipley, Alfred J., assignor.)
Scoville, S. S., aud Otis W. Stanford. (See Stanford \& Scoville.) Scranage, Matthew, Boston, Mass. Tumbler washer. Scranton, Irving W. West Liberty, Iowa. Merlical compound Scranton, T. S., Madison, Conn. Gauge for sewing machines

Same .... New Haven, Conn. Pipe stem
Scranton, W. T. (See Bean, Albert B., assiguor.)
Scribner', Jonathan, Franklin, N. H. Animal tether
Scribner, S. H., Chicago, Ill. Wristband for shirts .

Date.

Mar. 3, 1868.
May 12, 1868. Sept. 29, 1868. Jan. 21, 1868.

Sept. 22, 1868. June 16, 1863. Nol. 25, 1868. Dec. 22, 1868. Mar. 10, 1868. Apr. 14, 1868.

Oct. 13, 1868.
Sept. 15, 1868.
May 26,1868.
Mar. 31, 1868.
May 5, 1868.
Nov. 10, 1868.
June 16, 1868.
Oct. 13, 1868.
Mar. 3, 1868.
July 28, 1868.
Jan. 7, 1868.
Aug. 11, 1868
Jan. 14, 1:63.
Sept. 1, 18G8.

Mar. 3, 1868
Apr. 7, 1868
Dec. 22,186
Oct. 13, 1868
July 21, 1868
Fel. 4, 1863.

Feb. 4, 1868

Oct. 13, 1868.
Mar. 10, 1863
Ang. 18, 1863
Oct. 20, 1868
Doc. 22, 1868
Fel. 11, 1863.
Apr. 14, 1868.
May 19, 1863
July 28,1863

May $5,1868$.
Mar. 31, 1863
Ang. 4. 1868
May 26, 1863

Oct. 13, 1868
Sept. 8, 1863
Jan. 28, 1863.
Apr. 14, 1868.
Mar. 31, 1868
Apr. 14, 1868

## Alphabetical list of patentees for the year 1868-Continued.


Name, residence, and invention or diseovery.

73,126
78, 836
76, 830
84, 381
80, 019
75,583
77, 107
74, 434
76,531
77, 769

76, 831
3, 048
77, 540
77, 770
82,998
84, 382
82, 756

78,837
82, 442
74,154
82, 253
76, 832
81,300

79, 503
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79, 151

85, 031
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77, 663
85, 483
78, 764
79, 261
84, 219
74,607
74,608
84, 713

78, „39
84,911
73,467
74,155
73, 127
34, 006
3, 049
82, 646

76, $10 \%$
77, 845
83, 100
81, 692
83, 733
81, 216
75, 472
82, 162
3, 148
83, 326

83, 327
75, 301
83,414

Scripture, Eliphalet S., Brooklyn, N. Y. Dividers and calipers. Same...... Carriage top
Scudder, H. D., Amsterdam, N. Y. Paper box
Seaman, Charles B., Honcsdale, Pa. Inscet net
Seaman, Joseph, Chicago, Ill. Mangle and ironing machine.
Scaman, M., Middleport, N. Y. Railroad rail fastening
Searle, Thomas H., Providenee, R. I. Wrench
Searls, Auson, Now York, N. Y. Pivoted stump joint
Same...... Shaft eoupling
Same..... . Shaft coupling for earriages
Scars, Henry B. (See Golay, Samucl, assignor.)
Sears
Sears, M. C., and H. H. Forbes. (See Forbes \& Sears.)
Sears, Samucl W., New York, N. Y. Lawn mower.
Same
.same
(Reissue)
Seaver, Ebenezor, Boston, Mass. Clothes pin
$\qquad$
Scaver, Gcorge A., New York, N. X. Cotton-balo tie
Same...... . Swing.
Samc...... Revcrsible lateh
Seawell, C. H., assignor to George F. Lewis, St. Louis, Mo. Express signal. (Antedated Sept. 24, 1868)
Seawell, E. P., et cl. (See Smith \& Florence, assignors.)
Sebold, George, assignor to John F. Zisemann and Heinore Raschoe, Germany.
Maehine for placing friction matches in frames.
Seborn, F. A., D. R. Dunlap. and Joachim F. C. Geist, Zancsville, Ohio. Windowshade fixture
Sebring, Francis C., Hoboken, N. J. Apparatus for playing parlor base-ball. (Antedated Jan. 23, 1868) .
Sebring, Thompson C., assignor to Ira A. HebWard, Milford, Mieh. Harvester . .
Sedgwick, S. P., Wheaton, Ill. Medieino
Sedgwiek, Thomas S., Onargo, Ill. Fastener for buttons, studs, \&
See, Charles H., and Harris Keeney. (See Keeney \& Seo.)
See, Horaee, and J. Shields Wilson. (See Wilson \& See.)
See, Jannes, Mitehell, Ind. Meehanical movement.
See, John, Philadelphia, Pa. Composition for eovering roofs, pavements, walks, \&e
Seebald, Peter, New York, N. Y. Compound for destroying bedbugs and other vermin
Seeger, Jacob, et al. (See Murrill, James H., assignor.)
Seeley, Edward, Seranton, Pa. Wash-boiler
Seeley, H. H., Hudson, Mich. Fanning mill
Seeley, I. D., Hudson, Wis. Wash-boiler
Same
.-.same...
Seeley, Nathan. (See Hoyt, Wm. H., assignor.)
Seely, Austin, Alton, Ill. Valve-gear for stcam-engines
Seely, Charles A., New York, N. Y. Solidified eollodion
Same...... Manufaeture of gas from volatile liquids
Seelcy, Charles A., and Charles J. Eames, New York, N. Y. Proeess of preserving dead bodies.
Same....... Disinfeeting eompound
Seely, Edwin, Elkhart, Ind. Machino for sacking potatoes. (Antedated Nov. 23 , 1868)

Seely, E., and D. Elliot. (See Elliot \& Seely.)
Seely, John, North Java, N. Y. Horse rakc.
Seely, Samuel F., Whiteford, Mich. Cultivator and plow. (Antedatod Dee. 11, 1868).

Seely, Samucl J., assignor to J. M. Brown, New York, N. X. Iron roll. (Antedated Jan. 2, 1868)
Same. ..... Folding metal shutter.
Seem, J. K., Canton, Pia. Cloek calendar
Seibel, Jaeob, Manlius, 11 . Harvester .
Seiberling, John F., Akron, Ohio. Harvester'
Same..... (See Ball, Ephraim \& Milton, assignors.)
Seibert, George and John, Ashley, Hll. Cultivator.
Seibert, Nieholas, et al. (See Barnett, Purinton \& Seibert.)
Seibert, William, et al. (See Ginther; Jacob, assignor.)
Seidel, Charles, New York, N. Y. Vegetable coloring matter.
Seidel, Herman, Roxbury, Mass. Piano-forte action. (Antedated May 2, 1868).
Seimel, Conrad, Greempoint, N. Y. Soldering vessel.
Seimel, Comrad, assignor to Charles Pratt, Greenpoint, N. X. Sheet-metal ean.
Seitz, C. D. J., assignor to self and Charles Edmund Bailliere, England. Reeovering waste alkalies from paper stoek aud other fibers.
Seitz, Samnel, and L. D. Arnold, Dielmore, Ohio. Wagon.
Selbaeh, Emel, Columbus, Ohio. Stove drum.
Selby, James, Peoria, Ill. Corn planter.
Samo....-. ....- - ......... same.
(Reissue)
Selby, Nieholas, Flora, Ill. Horse rake.
Selden, George S., et al. (See Perrin, Abram, assignor.)
Selden, John C. (See Gifford, Franeis M., assignor.)
Selden, Naney M., Chatham, Conn. Pie tube.
Selden, William C., Brooklyn, N. Y. Steam and water packing.
Selden, William C., Brooklyn, and Charlton B. Kid, New York, N. Y. Fabie for covering steam boilers, \&uc.

Date.

Jan. 7, 1863.
Juno 9, 1863.
Apr. 14, 1865.
Nov. 24, 1868.
July 14, 1868.
Mai. 17, 1868
Apr. 21, 1858.
Feb. 11, 1808.
Apr. 7,1868
May 12,1868.

Apr. 14, 1868.
July 21, 1868
May 5, 1868
May 12, 1868
Oet. 13, 1868
Nov. 24, 1863.
Oct. 6, 1868.

Juno 9, 1868.
Sept. 22, 1868.
Feb. 4, 1868.
Sept. 15, 1868
Apr. 14, 1868.
Aug. 18, 1868.

June 30, 1868.
June 2, 1868.
June 23, 1868.
Dec. $15,1868$.
Sept. 29, 1868.
May 5, 1 ع68.
Dec. 29, 1868.
June 9, 1863. June 23, 1862 Nov. 17, 1868.

Feb, 18, 1868
Feb. 18, 1863.
Dec. $8,1868$.
May 26,1868.
Dec. 15,1868
Jan. 21, 1868
Feb. 4, 1868
Jan. 7, 1868
Nov. 10, 1868.
July 21, 1868.
Sept. 29, 1368.

Mar. 31, 1868.
May 12, 1868.
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Sept. 1,1868.
Nov. 3,1868.
Aug. 18, 1868
Mar. 10, 1 ®68
Sept. 15, 1868
Oct. 6, 18 GZ .
Oet. 20, 1868.

Oet. 20, 1868.
Mar. 10, 1868.
Oct. 27, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

| No. |
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| $\varepsilon 0,092$ |
| 81,415 |
| 79,504 |
| $7 \%, 409$ |
| 82,559 |
| 83,553 |
| 74,649 |
| 75,059 |
| 74,723 |
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|  |
| 75,584 |
| 2,964 |

79, 016
77, 108

75, 985
80, 673
78, 486
75, 986
74, 227

74,854

81, 015
81, 217
73, 392
75, 585
79, 505
78, 487
81, 21.8

75, 302
75, 303
2,907
80, 836
85,484
31, 828

74, 610
74,156
74,724
79, 783

75, 987
84, 512

75, 801
75,586
80, 711
76, 664
84, 586
82, 443
8u, 020
73, 261

| Name, residence, and invention or discovery. |  |
| :---: | :---: |
| Self-lighting Gas Burner Company. (See Locke, Riehard B., assignor.) Selfridge, TV. Reynolds, Greensburg, Ind. Ditehing maehine. |  |
|  |  |
| Selkirk, Alexander, assignor to John Gibson, jr., Albany, N.Y. Hand stamp... |  |
| Scllars, John Carrington, England. Metal founders' blaeking...................... |  |
| Sellers, George H., Phenixville, Pa. Wrought-iron roof truss. Same...... Mothod of making eye-bolts or links without welding............... |  |
|  |  |
| Sellers, William, Philadelphia, Pa. Lathe for turning iron Same...... Injector for feeding boilers. |  |
| Semon, J. S. (Sce Cook \& Dempster, assignors.) |  |
| Semple, Edward, Chieago, Ill. Trunk......................................... |  |
| Semple, E. IL., and William Wardswortl. (See Wardsworth \& Semple.) |  |
| Semple, Frank, et al. (Sec Cutter, Thomas, assignor.) <br> Sane..... (See Fry, Henry C., assignor.) ............................... (Design.) |  |
|  |  |
| Seneea Falls Churn Manufaeturing Company. (See Westeott, Henry P., assignor.) |  |

 Semor, Mathew, Frankfor't, Pa. Lubricating deviec
Senior, Mathew, assignor to Barton H. Jenks, Frankford, Pa. Lubrieating device. (Reissme).
Senmefi, Jacob, Philadelphia, P’. Weaver's heddle
(Extension)
Same...... Maehine for easting metallie ejes or mails of heddles for looms. (Extension)
Samo..... . Metallie heddle........................................................ (Extension).
Sergeant, William Fishley, St. Louis, Mo. Railroad-rail tie. (Antedated June 4, 1863)

Serrin, George W., Memphis, Tenn. Baling press
Serven, Andrew I. (See Kéndall \& Hathaway, assignors.)
Same.

> . -same.

Serviss, William, Sidnoy, Ohio. Deviee for soldering tin cans
Same................................................ . same.
Serviss, William, assignor to Jason MeVay and Jason S. Cares, Sidney, Ohio. Maehine for grooving sheet metal
Sessions, Francis E, assignor to self and Samuel A. Knox, Worcester, Mass. C'arbonizing and hardening iron and steel
Sessions, Lyman C., Neenal, Wis. Binding guide for sewing maehines
Setley, Abram. (See Michael, Wm. L., assignor.)
Severanee, O. S., and Frank H. Fuller. (See Fuller \& Severanee.)
Severson, I’. J., Ḱnowersville, N. Y. Bechive
Severy, Solomon, and Robert F. Leighton. (See Leighton \& Severy.)
Seward, B. I., and James D. Irvin. (See Irvin \& Survard.)
Sexaner, Louis, New York, N. Y. Water meter. .
Sexauer, Louis, and Franz Waguer. (See Wagner \& Sexauer.)
Sexton, C. Mr., Aurora, Ill. Rumningregear for wagons
Sexton, James B., assignor to self and John L. Andrew, Pella, Iowa. Cultirator. Sexton, S. B., Baltimore, MId. Base-burning stove.

Same.
-sanle.
Seyler, Carl, Clevelaud, Ohio. Vine trellis.
Seymour, Albert P., Hecla Works, and W. R. Goodrieh, assignors to the Leela
Works Company, Whitestown, N. Y. Sash pulley
Seymour, Elizabeth P. (See Wood, John S., assignor.)
Seymour, Frederiek J., Woleottville, Conn. Metal top lamp ehimnoy. Same...... Clamp for forming sheet metal cones.
Seymour, Frederick J., assignor to Tumer, Seymour \& Judds, Woleottville, Conn. Mode of attaching ornamental hearls to nails.
(h(issme).
Seymour, Frederiek J., assignor to self and E. Jiller \& Company, Wolcottrille, Conn. Maehine for burnishing and spimning metal.
Seymour, Frederiek J., assignor to E. Miller \& Company, Meriden, Conn. Tubo for oilers
Seymour, George W., Whitney's Point, N. Y. Carriage wheel
Seymour, Menry, \& Company. (See Weudt, Herman, assignor.)
Seymour, Hemy and Robert II...................... same.
Same...... (See Campbell, Daniel, assignor.)
Seymour, H. W. (See Pease, Henry, assignor.)
Seymour, J. H., Hagerstown, Md. Spittoon for ears
Seymour, James M., Newark, N. J. Socket wreneh
Same..... . Spaeing and boring machine
Seymour, James M., assignor to selt and Daniel Whetloek, Nowark, N. J. Mitering machine
Seymour, John A., et al. (Sce Exelby \& Marshall, assignors.)
Seymour, Josiah, Coventry, N. Y. Mold-hoard for plows.
Seymour, O. J., Anderson, Ind. Farm gate. (Antedated Sept. 18, 1868) Seymour, William, et al. (See Parks, B. M., assignor.)
Seymour, William H., Broekport, N. Y. Harvester
(Extension).
Seymour, Willian H., and Aaron Palmer, Brockport, N. Y. Harvester rake..
Scys, Menry II., Oil City, Pa. Surgical suppository
Shackford, Amaziah G., Malden, Mass. Lithowraphie printing press...............................................
Shaekford, Edwin, and Derk Amaud, Buston, Mass. Bureau bedstead
Shackleton, Joseph, Rahway, N.J. Steam-exhaust regulator
Shadduck, Seth, Elk Kiver Jownship, Iowa. Draught equalizer
Shaeffer, John W., Red Wing, Minn. Furnaee for roasting and smelting gold and other ores
Shafer, N. Mendal, New York, N. Y. Temporary binder. (AntedatedJan. 2, 1868)

Date.

July 21, 1868.
Aug. 95, 1868.
Jine 30, 1868.
Apr. 28, 1868.
Sept. 29, 1868.
Oct. 27, 1868.
Fel. 18, 1868.
Mar. 3, 1868.
Feb. 18, 1868.

Mar. 17, 1868
June $2,1868$.
July 17, 1868.
Aug. 20, 1868.
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June 16, 1868.
Apr. 21, 1868.

Mar. 24, 1868.
Ang. 4, 1868.
June 2, 1868.
Mar. 24, 1868.
Feb. 18, 1868.

Feb. 25, 1868.

Aug. 11, 1868.
Ang. 18, 1868. Jan. 14, 1868. Mar. 17, 1868. Juno 30, 1868. June ¿, 1863.

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Mar. 10, 1868. Mar. 10, 1868.

June 2, 1868.
Aug. 11, 1868.
Dec. 29, 1868. Sept. 1, 1868.

Teb. 18, 1868.
Feb. 4, 1868. Feb. 18, 1868.

July $7,1868$.
Mar. $24,1868$.
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Mar. 9, 1868.
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MLar. 17, 1868.
Ang. 4, 1868.
Apr. 14, 1868.
Dee. 1, 1868.
Sept. 22, 1868.
July $14,1868$.
Jan. 14, 1868

## Alphabetical list of patentees for the year 1868-Continued.

No.

82, 999
73, 128
83, 216

83, 000
79, 262
83, 886
75, 988

84, 007
81, 951

84, 7\%1
84, 772
73, 054
77, 410
81, 416
84, 071

83, 328
79, 604
75, 473

75,205
79, 693
80, 021
81, 544
79, 865
3, 122
75, 304
83, 554
79, 263
79, 264
81, 952
81, 953
78, 333
82, 356
75, 305

81, 417
83, 101
73, 760
77, 109

77, 110
75, 060
77, 111
77, 326
84, 220
84, 383
84, 221
84, 912
74, 611
74, 612
74, 613
74, 614
2,910


Shaffer, Benjamin F., Dayton, Ohio. Swing
Shaffor, B. I., assignor to self and William K. Young, Dayton, Ohio. Swiag
Shaffer, Edward P', and Jerome Stocking. (See Stocking \& Shaffer.)
Shatfer, Sammel. (See Laul, Petcr C., assignor.)
Shaffer, Thomas, and Georgo Walters. (See Walters \& Shaffer.)


Shaler, Gcorge C., Giboa, and Harry Barlow, Herbert, N. I. Horse rake Shalkenback, Joseph, Chicago, 171. Sad iron
Shaller, Frederick, Hudson, N. X. Gas-burner attachment
Shalters, M. R., and Samuel Ray, Alliance, Ohio. Double-shovel plow
Shaner, S. B. (Ser Milroy, James iV., assignor.)
Shank, Sanuel, and Jacob M. Walter. (See Walter \& Shank.)
Shanks, Andrew. (Sce Wenham, Francis Herbert, assignor.)
Shanner, J. A., Plainview, Ill. Mechanical movement
Shamon, David, and Villiam Spencer, Winslow, Ind. Grain separator
Shamon, George, et al. (See Flora, Orlando V., assiguor.)
Same
Shannon, John A., and W. A. Sharp. (See Sharp \& Shannon.)
Shannon, William, assignor to self and Joseph Graff, Alleghany City, Pa. Hinge Same
..same
Shares, Daniel WV., Hamden, Conu. Cultivator
(Extensiou)
Sharp, A. B. Paincourtville, La. Defecating cane juice
Sharp, David. (See Campbell, John A., assignor.)
Sharp, John H., Wortsville, N. J. Corn sheller
Sharp, William, and Smith Fisher. (See Howell, Levi T., assignor.)
Sharp, W. A., and John A. Shammon, Tana City, Iowa. Horse-collar fasteaing. Same....... Harness-tree pad.
Shartle, H. H., and B. Weirich. (See Weirich \& Shartle.)
Shattuck, W. A., and E. W. Sanderson. (See Sandersonı \& Shattuck.) Shattuck, W. G., Boston, Mass. Inkstand
Shaver, Austin D.. Belleville, N. Y. Riding attachment to harrows
Shaw, Albert M., Lebanon, N. H. Composition cement for pavements, \&c Shaw, 1. M., et cl. (See Cummings, Patteo \& Shaw.)
Shaw, Alexander D., and John W. Cox. (See Oliter, John S., assignor.)
Shaw, B. W., and George A. Simmons, Morristown, Vt. Churn.
Shaw, David W., Baltimore, Ma. Milk can
Shaw, Eugene F., Wyoming, Mich. Churn
Shaw, Henry, New Orleans, La. Mode of connceting tho draught lever to horsepower machines
Shaw, Henry, and William D. Leavitt, New Orleans, La. Grinding plate for grist mills
(Reissuo)
Shaw, Hcury F ., West Roxbury, Mass. Differential gear-power machine
Same.......Screw-cutting lathe
Shaw, Henry F., assignor to Jarucs $\Lambda$. Woodbury and Solomon S. Gray, West Roxbury, Maiss. Stcering apparatus

## Same...... Pulley block

Same...... Mechanism for operating the beds of planing machines
Shaw, II. M., and G. G. Tindall, lremont, Ohio. Windmill
Shaw, Jacob and W. A., Minkley, Ohio. Churu.
Shaw, James, Ballardrale, Mass. Loom
Shaw, James, jr., and Job Arnold. (See Mooney, George, assigaor.)
Shaw, James, jr., et al....................................smme.
Shaw, Jehyleman, Bridgeport, Conn. Pump
Shatr, John, Brooklyn, N. X. Lawn mower
Shaw, John C., Marayunk, Pa. Condensing earding machine
Shaw, N. Lawrenec, Wilson, N. Y. Feuce.
Shaw, O. H. (See Rawson, Homer, assignor.)
Shaw, Plilander, Boston, Mass. Air engine
Shaw, Samuel S., Newport, N. J. Oyster winder
(Extonsion)
Shaw, Thomas, Philadelphia, Pa. Lathe tool
Same..... Mode of surfacing shoet iron and metal plates.
Same....... Washer
Same......Gcncrating and applying carbonic oxide for treating metals.
Same.......Pile driver
Shaw, Thomas, assignor to self and Philip S. Justice, Philadelphia, Pa. Power hammer.
Same...... Pumping engine
Shaw, Warren, and Parley G. Green, Wales, Mass. Tentering cloth.................................. Shaw, William Anthony, New York, N. X. Manufacture of tin-lined lead pipe.

Same
Same
Sal
same.
Same
same
same
Shaw. William Anthony, assiguor to self, Gardner Willard, Louis and Joseph Colwell, New York, N. Y. $\Delta$ pparatus for separating shot .ouis and Joseph

Date.

Oct. 13, 1868
Jan. 7, 1868.
Oct. 20, 1868.

Oct. 13, 1863 June 33,1868 Nor. 10, 1868. MIar. 24, 1863.

Nov. 10, 1868. Sept. 8, 1868.

Dec. 8, 1868
Dec. 8,1868.
July 29, 1868.
Jan. $7,1868$.
Apr. 28, 1868.
Aug. 25, 1868.
Nov. 17, 1363.

Oct. 20,1868.
July 7, 1868.
Mar. 10, 1868.

Mar. 3, 1868.
July 7,1868
July 14, 1868.
Atug. 25, 1863.
July 14, 1868.
Sept. 15, 1863.
Mar. 10, 1868.
Oct. 27, 1868.
Jtune 23, 1868.
June 23, 1868.
Sept. 8, 1868.
Sept. 8, 1868.
May 26, 1868.
Sept. 22, 1868.
Mar. 10, 1863.

Aug. 25, 1868.
Oct. $13,1868$.
Ja?. 28, 1863.
Apr. 21, 1868.
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Apr. 21, 1868.
Mar. 3, 1868.
Apr. 21, 1868.
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Ňov. 17, 1868.
Nov. 24, 1868.
Nov. 17, 186 s .
Dec. 15, 1868.
June 19, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
Feh. 18, 1868.
Feb. 18, 1868.
Apr. 7, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.
Name, residence, and invention or diseovery.

Shaw, Winfield S. (See Smith, Joseph R., assignor.)
80, 093
75, 537
79, ®66
75, 240
77, 112
81, 301
83, 217
76, 255
74, $7 \pi$
26, 256
80, 312
75, 989
73, 20 ?
$80,0 \div 2$
73, 761
Shea, Patrick M., Chieopee, Mass. Attachment for lamp elimneys
Shea, Samucl, and E. W. Gillman, Long Island City, N. Y. Lamp).
Shea, Willian, and L. D. Harvey, Harver, Mieh. Furnace for melting metals. Sheaffer, Alfied B., Ephrata, Pa. Main bolt or goose-neck stay on earriages ... Shear, Jacob H., et al. (Ňee Burdick, Norman, assignor.)
Shoar, P. E., Saugerties, N. Y. Furnace door fastening
Shearman, Jaeob, Fayetteville, Pa. Machine for turning boot legs
Shears, Thomas J., Ypsilanti, Mieh. Carriage spring
Shebanek, Antony, Cleveland, Ohio. Harvester
Sheckler, D. J., et al. (See Frey, T'. E., assimnor.)
Shedloek, Alfred and Trilliam, Now York, I. Y. Mechanical donkey
Shedlock, William and Alfred, et al. (Sce Smith \& Shedloek.)
Sheelan, Thomas, Aurora, Ill. Process of steelifying iron..
Sheets, Isaac N., West Jefferson, Ohio. Bed bottom
Sheets, John, Colnmbia, Pa. Sand scoop
Shefferly, F.J., Detroit, Miel. Preserve jar.
Shefiield, George V., Worcester, Mass. Manufacturing serews
Sheldon, A., Greenwich Station, Ohio. Fence.
Sheldon, A. F., et al. (See Todd, Asahel, jr., assignor.)
Same............................... same.
Sheldon, F. L., and C. L. (See Foster, Wm. W., assiguor.)
Sheldon, John, Chicago, Ill. Derrick
Sheldon, Samuel D., assignor to the Whitman \& Mills Manufaeturing Company,
IV oreester, Mass. Siekle seetions and in method of serrating them.
Shellabarger, I., Decatur, Inl. Apparatus for dampening grain.
Same........................................... same
Shellaberger, John, Shanes Crossing, Ohio. Tile-cutting machine
Same ...... Tile machine
Shellenbaek, Peter, and John Angspurger, assignors to Peter Shellonback and James Ifudson, Middletown, Ohio. Rotary steam engine.
Sheller, Jacou, Wilmington, Del. Composition for filling the pores of wood for varuishing
Same...... Composition for stufting and filling wood.
Shelley, Benjanin N., Newark, N. J. Fastening for whip soekets
Shelley, Samuel T., and Henry C. Bull. (See Bull \& Shelley.)
Same ........................................................

Shelly, A. F., et al. (See Doering, Justus, assignor.)
Shelton, Clark R., New Haren, Conn. Whip tip.
Samo......Repairing whips
Shelton, G., et al. (See Lawler \& Gibson, assignors.)
Shepard, Albert B., Sand Bank, N. Y. Floating water power
Shepard, Amos, assignor to the Union Manutacturing Company, New Britain,
Conn. Venting metallic eores.
Shepard, Amos, and Amzi P. Plant. (Sce Plant \& Shepard.)
Shepard, Edwin R., Scranton, Pa. Rail for railways
Same.......Railroad rail.
Shepard, Ephraim, New York, N. Y. Fastening for eariago curtahis.
Shepard, Frederiek M., New York, N. Y. Rubber mat
Same...... Trater-proof shoe
Shepard, H. W. (See Wilder, John B., assignor.)
Same....... (Sce Huggins, George A., assignor.)
Shepard, James, Bristol, Com. Machine for wiring pans. (Antedated May 7, 1868)
Same...... Protecting plants, \&e ...
Shepard, John F., Hampton Falls, Mass. Apparatus for making eigars
Shepard, Morrill A., Bridgeport, Ill. Pan lifter
Same....... Fruit dryer
Same...... Boiler upon stove pipes
Shepard, M. V. B., and B. F. Kingman. (See Kingman \& Shepard.)
Shepard, Otis, Alton, Ill. Hammer.
Shepard, Ransom. (See Streeter, Luther, assignor.)
Shephard, A., and B. F. Watson. (See Watson \& Shephard.)
Shepherd, Henry F., Framingham, Mass. Veneer. (Antedated Oet. 31, 1868)
Shepherd, Heury L., Osborn, Ohio. Horse hay fork
Shepherd, Samuel, and A. MI. George, assignor:s to Samuel Shepherd and Joseph Greeley, Nasha, N. II. Machine for polishing paper
Same...... Burnisher for enamelled paper
Shepherd, Samuel, and A. M. George, assignors through mesne assignments to Samuel Shepherd and Joseph Greeley, Nasha, N. II. Machine for polishing enamelled paper.
(Reissue)
Shepler, Pius Lee, White Honse, Ohio. Sawing machine.
Shepler', Pius L., and Samuel L. Trwin, White Ionse, Ohio. Wash boiler ...
Sheppard, Edwin, Philadelphia, Pa. Automatie boiler feeder.
ash boiler ........
Sheppard, J. L., Charleston, S. C. Cotton bale tie
Shepperd, F. J., et all. (Sce Fornerook, Shepperd \& Gartom.)
Shepperman, Walter, Pittsburg, Pa. Clamp for trussing eylinders of staves
Sherburne, William, Charlestown, Mass. Journal box
Sherer, Samnel B., Aurora, Ill. Ankle brace
Sherman, Amory F., Roxbury, Mass. Sce-saw, or tilting apparatus.

Sherman, Charles R., and Francis Howlett. (See Howlett \& Shernuan.)

## Date,

June 23, 1868.
July 21, 1868
Mar. 17, 1868
July 14, 1 e68
May 26,1868
Apr. 21, 1868
Aug. 18, 18f8
Oct. $20,1=68$.
Mar. 31, 1868.
Fel. 25,1868
Apr. 7,1868
July 28, 1568
Mar. 24, 186z
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July 14, 1268
Jan. 2ช, 1е63.

May 5, 1868.
ITar. $24,1868$.
June 9, 1868. Aug. 11, 1868. June 9, 1863. July 20, 1863.

Apr. $28,1868$.
June 2, 1868
Sept. 15, 12:68.
Dee. 1,1868.

Feb. 11, 1368
Dee. 15, 1868
June 2, 1868.
Nov. 17, 1868.
Mar. 3, 1868
Oct. 6,1868
Oct. 27, 1868.
Sept. 29, 1868.
Dee. 1, 1868.

May 19, 1888
Sept. 1, 1868
May 12, 1868
Feb. 25, 1868
Apr. 7, 1868
Apr. $28,1868$.
Fel. 18, 1868
Nov. 10,1868
July 28, 1868.
Oct. 6,1868
Oct. '6, 1868.

Nov. 17, 1868.
Aug. 25, 1868.
Oct. 20, 1868.
Sept. 22, 1868
Mar. 17, 1868.
Feb. 18, 1868.
July 14, 1868.
Apr. 7, 1868
Apr. 14, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

74,726
80, 297
73, 129
74, 157
-4, 158
75, 061
81, 829
84, 913
85, 139
81, 830

85, 405
83, 329
76, 950

2, 865
2,866
75,588
3, 262
74,945
3, 057
85, 485
75, 207
84, 309
83, 734
84, 384
84, 222
75,589
73, 203
80, 674
84, 139
82,757
74, 616
81, 419
81,545
78, 334
3,246

85,249
77,771

78, 898
78, 140
73,130
74, 856
83, 556
73, 393
78, 141
84, 009
84, 7'73
81, 017
81, 219
77, 664
84, 310
82, 039
73, 262
85, 033
84, 774
75, 474
31, 546
79, 265
79, 868
81, 018
-73, 657
2,922

Sherman, Edwin F., Chicopee, Mass. Corn sheller
Sherman, Edwin F., assignor to self and A. W. Kellogg, Chicopec, Mass. Belt hook
Sherman, E. K. (See Loomis, O. E., assignor.)
Sherman, Franklin R., Dowagiae, Mich. Gate
Sherman, G. W. and C. L., Scymour, Conn. Flour seoop and sifter
Sherman, Jaeob A., New York, N. Y. Truss. (Antedated Jan. 24, 1868) Same.
Sherman, Jercmiah, Now Oxford, Pa. Animal trap
Sherman, J. L., and W. Ashley Jones. (See Jones \& Sherman.)
Sherman, S. M., Fort Dodge, Iowa. Window shutter..
Sherman, Samuel S. and Jeremiali G., McHenry, Ill. Harvester rake
Sherman, Winslow, New York, N. Y., and Jaeob Russell, Brooklyn, N. Y...... assignors to Jaeob Russell, Menry T. MeCoun, James L. Romer, and Thomas T. Buekley. Feeding nail plates

Sherwin, L. B., Hyde Park, Vt. Potato washer
Sherwood, Allen, Auburn, N. Y. Wash boiler.
Sherwood, Arthur Hamilton, Southport, Conn. Sewing machine. (Antedated $\Delta$ pril 16, 1868)
Sherwood, C. A., et al. (See Weaver, Jocl D., assignor.)
Sherwood, Calvin W., Chicago, 工ll. School desk and seat. (Division A, reissue).
Same......................................
Same....... Standard of a sehool desk (Division B, reissue).
(Design)
Sherwood, Charles K., et al. (See Cheekeni, Dominieo, assignor.)
Sherwood, Daniel, assignor to Woods, Sherwood \& Company, Lowell, Mass. Table easter
Sherwood, Henry M., Chieago, Iil. Frame of a sehool desk and seat. (Design).
Sherwood, Merrell B., Buffalo, N. Y. Process for curing and preserving meat.
Sherwood, N. B., Millville, N. Y. Cotton-seed planter.
Same......-Potato planter.-.
Sherwood, N. B., assignor to self and W. Willson, New York, N. Y. Pianoforte tuning key
Sherwood, Peter M., New York, N. Y. Bottle-filling apparatus.
Shiekle, Frederiek, assignor to Shickle, Harrison \& Company, St. Louis, Mo. Hydrant and gas-pipe stop
Shidler, A. W., South Bend, Ind. Cider press
Shields, F. M., assignor to self and James A. Jarnagin, Maeon, Miss. Envelope -
Shields, F. M., assignor to self and John W. Sanders, Macon, Miss. Yoke.
Shields, James S., Medora, Ind. Fruit box
Shields, Thomas, Hillsboro', Ohio. Beehivo
Shields, William, Philadelphia, Pa. Die for making square-headed bolts same
Shivock, William, and Eli White. (See White \& Shilvoek.)
Shimer, Jaeob T., Easton, Pa. Carriage wheel
Shimer, John, Bronson, Mich. Clamp for holding leather to eurrier's bench....
Shinn, John, assignor through mesne assignments to George Crompton, Woreester, Mass. Loom
(Reissue)
Shipley \& Smith. (See Richards, Warren, jr., assignor.)
Shipley, Alfred J., assignor to the Scoville Manufacturing Company, Waterbury, Conn. Feed motion
Shipley, Amos, and W. T. Merserean, Newark, N, J. Instrument for lighting gas, \&e
Shipley, A.B. (See Holtzscheiter, Leonard, assignor.)
Shipley, S. P., Olena, Ohio. Bechive.
Slipman, Henry A., and Robert Hoadley. (See Hoadley \& Shipman.)
Shipton, Thomas, Newark, N.J. Feed-water heater-
Shires, William, Cincinnati, Ohio. Garbage ean or vessel
Shirey, Heury, Fond-du-Lae, Wis. Dumping wagon.
Shirk, David B., Brunnerville, Pa. Railway eattle-guard
Shirk, Samuel S., et al. (See Moore, Bleistein \& Shirk.)
Shirley, Silas, Guilford, III. Sced drill and roller
Shirley, Silas, Santa Clara, Cal. Tire tightener
Shirley, Silas, Roekford, Ill. Wagon wheel.
Shirt, Joseph, and Charles Briggs, Great Britain. Steam-engine condenser
Shisler, Henry S., Manheim Township, Pa. Farm gate
Shiver, Elisha, Colnmbia, S. C. Sewing-maehine motor
Shlaudeman, H., Decatur, Ill. Beer eooler
Shmetzer, Louis, Chieago, In. Sleigh and baby carriage
Shock, Nieholas, Baltimore, Mi. Corn sheller and cleaner
Shoek, Thomas A., (U. S. N.,) Boston, Mass. Combined lubrieator and water eonductor
Shoekey, Daniel, Wayncsboro', Pa. Farm gate
Shoe, John, Pleasant Hill, Ohio. Bcehive.
Shoemaker, Abram, and Wallaee Phelps, Conesville, N. Y. Frame for hop vines Shoenberger, William Hamilton, Cincinnati, Ohio. Spike maehine
Sholes, C. Latham, Carlos Glidden, and Samuel W. Soule, Milwaukce, Wis. Type writing maehine
Same .............-same ............................
Shopbell, Elias, Ashland, Ohio. Lifting jack.
Same...... Pattern for eutting boots.
(Reissue)

Date.

Feb. 18, 1868. July 21, 1868.

Tan. 7, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
Mar. 3, 1868.
Scpt. 1, 1868.
Dee. 15, 1868.
Dee. 22, 1868.

Sept. 1, 1868.
Dfe. 20, 1868.
Oct. 20, 1868.
Apr. 21, 1868.
Feb. 11, 1868.
Feb. 11, 1868.
Mar. 17, 1868.
Nov. 17, 1868.

Feb. 25, 1863.
May 26, 1868.
Dee. 29, 1868.
Mar. 3, 1868.
Nov. 24, 1868.
Nov. 3, 1858.
Nov. 24, 1868.
Nov゙. 17, 1868.
Mar. 17, 1868
Jan. \%, 1868.
Aug. 4, 1868.
Nov. 17, 1868.
Oet. 6, $18 f 8$.
Feb. 18, 1868.
Allg. 25, 1868.
Aug. 25, 1868.
May 26, 1868.
Dee. 29, 1868.

Dec. 22, 1868.
May 12, 1868.
June 16, 1863.
May $19,1868$.
Jan. 7, 1868.
Feb. 25, 1868
Oet. 27, 1868
Jan. 14, 1868.
May 19, 1868
Nov. 10, 1863.
Dee. 8,1863.
Aug. 11, 1868
Aug. 18, 1868
May 5, 1868.
Nov. 24, 1868.
Sept. 8, 1868.
Jan. 14, 1868.
Dee. 15, 1808
Dee. E, 1868
Mar. 10, 1868
Aug. $2 \overline{2}, 1868$.
June 23,1868
July 14, 1868.
Aug. 11, 1868.
Jan. 21, 1868.
Apr. 28, 1868.

## Alphabetical list of patentecs for the year 1868－Continued．

No．

81， 019

78， 399
75， 475
75， 476
2， 949
83， 735
77，924
81， 547
80，772
84， 010

81， 831
3， 036
81， 420
75，208
75， 991
76， 257
74， 014
79， 152
79， 605
85， 183
79， 266
82，758
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82， 884
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81， 302
74， 946
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83， 330
73， 658
75， 209
81， 303
81， 421
74， 436
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73， 659
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73， 842
83， 666
80， 837
84， 514
78， 489
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75， 063
83， 557
85， 184

85， 406
73， 394
73， 468

76， 533
77， 113
Name，residence，and invention or discovery．

Shope，Lyndhurst T．，and George King．（Sce King \＆Shope．） Shorey，John，Lowell，Mass．Curtain tixture

Date．

Ang．11， 1868.
May 26， 1868.
Mar．10， 1868.
Mar．10， 1868.
May 26， 1863.
Nov．3， 1868 May 12， 1868. Ang． $2 ⿹ 勹 巳, 1868$.

Aug．4， 1868.
Nov． $10,1863$.

Sept．1， 1868.
July 14， 1868.
Aug．25， 1868.
Mar．3， 1868.
Mar．24， 1868.
Mar．31， 1868.
Feb．4， 1868.
June 23， 1868.
July 7， 1863.
Dee．22， 1868.
June 23， 1868.
Oct．6， 1868.
June 16， 1868.
Mar．24， 1868.
May 5，1868．
Mar．24， 1868.
Oct．6， 1868.
Nov．24， 1868.
Dee．29， 1868.
Dec．29， 1868 ．
Aug．18， 1868.
Fob．25， 1863.
May $10,1863$.
Scpt．15， 1868.
Oct，20， 1868.
Jan．21， 1868.
Mar．3， 1868.
Aug．18， 1868.
Aug．25， 1863.
Feb．11， 1868.
Mar．3， 1 ，68．
Jan．21， 1868.
Nov．17， 1868.
Jan．28， 1868.
Nov．3， 1868.
Aug．11， 1868.
Dee．1， 1363.
Juno 2， 1868.
Aug．4， 1868.
Mar．3， 1868.
Oct．27， 1868.
Dec．22， 1868.
Dee．20， 1868
Jan．14， 1868.
Јап．21， 1863.

Apr．7， 1868.
Apr．21， 1868.

## Date.

Sept. 15, 1868.
Dec. 8, 1868
Jan. 14, 1868.
Mar. 31, 1868.
Nov. 3. 1868.
Feb. 11, 1868.

Mar. 3, 1868.
Aug. 18, 1868.
Nov. 1\%, 1868.

Mar. 17, 1868.
Nov. 24, 1868.
Jan. 28, 1868.
Dec. 3, 1868.
Nov. 24, 1868.
June 9, 1868.
Apr. 7, 1868.
Apr. 28, 1868.
May 5, 1868.
Oct. 27, 1868.
Sept. 1, 1868.
Sept. 1, 1868.
Feb. 18, 1868.
Nov. 24, 1868.
Sept. 22, 1868.
July 28, 1868.

Dec. 22, 1868.
May 26, 1868.
Mar. 31, 1868.
Feb. 18, 1868.
Feb. 4, 1 ع68.
Aug. 18, 1868.
Fcb. 25, 1868.
June 23, 1868.
Mar. 17, 1868.
Dec. $15,1868$.
Aug. 25, 1868.
Feb. 18, 1868.
Aug. 11, 1868.
Sept. 15, 1868.
July 21, 1868.
Dec. 22, 1868.
Jan. 21, 1868.
May 19, 1868.
Aug. 11, 1868.
Dec. $29,1868$.
Aug. 4, 1868.
May 12, 1868.
June 23, 1868.
Aug. 18, 1868.
Sept. 22, 1868.
Feb. 18, 1868.
Jan. 7, 1868.
Jan. 14, 1868.
Mat 12, 1868.
Mar. 3, 1868.
Jan. 14, 1868.

Aug. 4, 1868.
Ма․ 3,1868.

## Alphabetieal list of patentees for the year 1868-Continned.

78, 840
Slaght, Hiram L., and Daniol H. Carpenter. (See Carpenter \& Slarht.) Slagle, G. W., J. L. Miller, and H. C. Hoy, Washinerton, D. C. Soap. Slammon, James, and William Lalor. (Nee Kelly, Jiehael, assignor.)
75,211
83, 415 77, 665

82, 359
80, 675
77, 926
74, 159
73, 396
73, 131

77, 328

85,251
74, 250

7\%, 114
80, 023
76, 535
73,205
84,587

73, 933
84, 224
80,427

75, 802
77, 544
79, 084
76, 833
84, 225
82, 759
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77, 666
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80, 775
73, 265
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81, 833
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78, 899
75, 994
79, 694
80, 229
73, 934
84, 775
84, 442
7\%, 927
78, 667
81, 423
80,225
80, 838
84, 652
79, 403 Slater, David S., Poynett, Wis. Cultivator
Slater, Eli, and Anson H. Platt, Philadelphia, Pa. Hot air finmace.
Slater, George, assignor to George Washington Belding, England. Sewing machine..
Slater, James W. (See Woorl, George W., assignor.)
Slatter, Henry, Covington, Ky. Carburetcr.
Slanghter, David, West Hompitield Township, Pa. Meat entter.
Slanghter, J. C., Crumpton, MId. Churn.
Slaughter, K. K., and J. O. Iundt, New York, N. Y. Machino for embossing window shades.
Slawson, J. B., New Jork, N. Y. Change rate for railroad ears.
Slayton, Phineas L., assignor to self and Almet Reed, New York, N. Y. Jachine for braiding whip lashes
Sleper, Jonathan C., and Harrison Parker. (See Parker \& Sleeper.) - (Design.) Slevin, Patrick, Johm, and Francis, New York, N. Y. Whistle Slicer, C. H. (See Dumbolton, Georce, assignor.)
Slicer, C. H., and M. M. Wclbs. (See Wrightson, Hugh S., assignor.)
Slingerland, John T., assinnor to Alden Type-setting and Distribntine Machine Company, New York, X. Y. Trpe-sctting and distributing machine...... Sloan, John, assignor to self, John II. Jones, and John Given, Philadchphia, I, , Means for stiffening articles of wearing apparel.

Name, residence, aud invention or discovery.
Date.

June 9, 1868.
Mar. 3, 1868. Oct. 27, 1868.

May $5,1868$.
Sept. 22, 1808.
\ау 12, 1868.
Feb. 4, 1898.
Jan. 14, 1 e68.
Jan. 7, 1868.
Apr. 28, 1868.

Dec. 22, 1868.
Feb. 11, 1868.
Apr. 21, 1868.
July 14, 1 ع68.
ipr. 7, 1868.
Jan. 7, 1268.
Dce. 1, 1868.

Nov. 17, 1 ع68.
July 28, 1868.

Mar. 24, 1868.
May 5, 1ミ68.
June 23, 1868. Apr. 14, 1868.

Nor. 17, 1868.
Oct. 6,1868.
Apr. 7, 1868
May 5,1868.
June 23, 1808
MIar. 31, 1868.
Aug. 11, 1868.
Jug. 4, 1868. Jan. 14, 1868.
June 9, 1868.
Sept. 1, 1868.
Scpt. 1, 1868.
Dec. 22, 1868.
May 5, 1868. May 19, 1868.
Jume 16, 1868.
Mar. 24, 1868.
July $7,1868$.
July 21, 1868
Jan. 23, 1868.
Dec. 8, 1868.
Nov. 24, 1868
May 12, 1868.
May 5, 1868.
Au's. 25, 1808.
July 21, 1868.
Aug. 11, 1868.
Dec. 1, 1868.
June $30,1868$.

## Alphabetical list of patentees for the year 1868-Continued.

No.

76,258
73,397
73, 469
78, 143
80,839
75, 653
73, 762
77, 115
75, 212
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77, 116
77, 117
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'78, 765
81, 305
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78, 144
77, 773
79, 508
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79,506
76, 834
79, 922

74, 160
81, 425
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3, 017
80, 231
75, 477
82, 165
82, 166
79, 018

2,985
2,986
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3, 0.59

74, 858
83, 667

76, 666
84, 914
81,115

> Name, residence, and invention or discovery.

> Smith, A. J., and H. C. Reed, Decorah, Iowa. Beehire
> Smith, A. M., and Willian F. Goodwin. (See Goodwin \& Smith.)
> Smith, Andrew V., San Francisco, Cal. Stone truck
> Smith, Andrew W., Dudleyville, Ala. Faming mill.
> Smith, Anselmo B., Plattsmonth, Neb. Carriage wheel
> Smith, Authony, Shcllsburg, Pa. Horse hay forik

Date.

Smith, Authony W., Birmingham, Pa. Gas meter
Smith, Antonio F., Ellsworth, Maine. Stove drum.
Smith, Anstin A., Seneca Falls, N. X. Lamp shade. (Antedated April 11, 1868)
Smith, Benjamin and $\Lambda$ dam. (See Arkcll, James, assignor.)
Smith, Benjamin M., New York, N. X. Button-hole for paper articles of apparel Smith, Bernard, assignor to American Burial Casc Company, Cincinnati, Ohio. Coffin
Smith, Bryan, Falkland, N. C. Cotton-seed planter.
Smith, Calvin D., Baldwinville, Mass. Journal of axles or shafts
Same......Tilting chair
Samc.............same
Smith, Charles A., New York, N. Y. Lifting jack.
Smith, Charles A., and George R. Chittenden. (See MacGregor, James, assignor)
Smith, Clas, Be assignor to sclf aud Onincy A. Fisk, Springfield, Tll. Spring seat. Smith, Charlcs D., and Thaddcus S. Reeve. (See Reeve \& Smith.) Smith, Uharles D. F., Geneva, Ill. Stove drum
Smith, Charles E., assignor to self, Johu S. aud Frank T. Jaques, Lowell, Mass. Spindles for shattles
Smith, Charles E., and Frank T. Jaques, Lowell, Mass. Shattle for looms
Smith, Charles F., Springfield, Mass. Inplement for cutting, perforating, and lighting cigars
Smith, Charles W., Hornellsville, N. Y. Cooking stove
Smith, Clark \& Company. (See Beckwith, Francis W., assignor.)
Smith, Daniel, Cedar Falls, Iowa. Plow
Smith, David, Newburyport, Mass. Brick machine.
Smith, David P., Salemi, N.J. Faucet
Smith, Edgar M., New York, N. Y. Lighting up picture gallerics
Smith, Edgar M., assignor to Mitchell, Vance \& Company, Now 「ork, N. Harvester
.(Reissuc)
Same...... Harvester rako
Smith, Edgar M., and Samucl B. H. Vance. (See Vance \& Smith.)
Smith, Edward A., assignor to sclf and John W. Newton, St. Albans, Vt. Seat for harvesters.
Smith, Edward A., St. Albans, Vt., and Haskell, G., Goshen, Conn. Harvester. (Antedated May 9, 1868)
Smith, Edward C., and David F. Wilcox, Greenville, N. Y. Dentistry
Smith, Edwin C., Brandon, Vt. Stove polish

## Smith, Ezekiel, West Middleton, N. Y. Potato digger

Smith, E. B., Marietta, Ohio. Animal trap.
Smith, E. J., and B. H. Checver, Washington, D. C. Paper file
Smith T J and TF B. Perkins, assignors to E J Smith, Chicaso, Ill and lifter
Smith, E. J., and ARolph Yorns. (See Yorns \& Smith.)
Smith, F., Alexandersville, Ohio. Carpet holder
Smith, F., and I. Carpenter, Lancaster, Pa. Plane.
Smith, Francis, Fighgate, Vt. Horse rake
Smith, Francis H., Baltimore, Md. Dryer.
Same..... . Brick machine
(Reissue).
Smith, Freterick H., Baltimore, Ma. Bridge
Smith, Frederick P., Petaluma, Cal. Gang plow Same
Smith, F. L. A. M., Brooklyn, N. Y. Oven rack for ship stoves. (Antedated Juno 4, 1868)
Smith, F. N., and James A. Bradley. (See Bradley \& Smith)....................................... Smith, Garrettson, and Henry Brown, assignors to William Flesh and J. J. Roeper, Philadelphia, Pa. Cook stove
. (Desigu) . Smith, Garrettson, and Henry Brown, assignors to Smith, Johnson \& Company, Pliladelphia, Pa. Cook stove.
(Design).
Smith, Garrettson, and Henry Brown, assignors to Abbott \& Noble, Philadclphia,
Pa. Plate of a cook stove. (Antedated May 5, 1868) (Design).
Same....... Illuminating ring for gas stoves. (Antedated May 5, 1868) . (Design)
Smith, George. (See Stouffer, Hiram C., assignor.)
Same..... ( (See Estes, Henry A., assignor.)
Smith, George and Godfrey, New York, N. Y. Boot and shoe
Smith, Gcorge, assignor to self and John C. De Laney, Providence, R. I. Devicc for unloading hay
Smith, George, and Christian Stotz. (See Stotz \& Smith.)
Smith, G. C., and R. Judson, Matteawan, N. Y. Thill coupling
Smith, George E., San Francisco, Cal. Automatic stop cock for gas-burners. Emith. George F., Plantsville, Conn. Carriage-axle coupling. Smith, George Hand, Rochester, N. Y. Process for making steel direct from the ore.....................................................(Extension). Samo...... Process of making steel dircet from the ore ........(Extension). Smith, George K., and Joseph Strasser, Alleghany City, Pa. Plow.

Mar. 31, 186き.
Jan. 14, 1868.
Jan. 21, 1868.
May 19, 1868.
Aug. 11, 1868.
IIar. 17, 1863.
Jan. 28, 1868.
Apr. 21, 1868.
Mar. 3, 1868.
July 14, 1868. June 2, 1868. Jan. 7, 1868. Apr. 21, 1868. Apr. 21, 1868. Aug. 25, 1868.

Oct. 6, 1868.
Oct. 6, 1868.
Oct. 20, 1868.
Oct. 27, 1868.
Apr. 7, 1868.
July 21, 1868.
July 28, 1868.
June 9, 1868.
Aug. 18, 1868. Aug. 4, 1868.

June 23, 186. June 30, 1868.

Mar. 10, 1868.
May 19, 1868.
May 12,1868 June 30, 1868. Feb. 11, 1868
June 30, 1868.
Apr. 14, 1868.
July 14, 1868
Feb. 4, 1868.
Aug. 25, 1868 Sept. 8, 1868 June 30, 1868. July 21, 1868. Mar. 10, 1868. Sept. 15, 1868
Sept. 15, 1868
June 16, 1868.

Mar. 31, 1868.
Mar. 31, 1868
May 20, 1868.
May 26, 1868

Feb. 25, 1868
Nov. 3, 1868
Apr. 14,1868
Dec. 15, 1868.
Ang. 18, 1868.
Jnne 30, 1863
Jume 30, 1868
Jan. 21, 1868.

## Alphabetical list of patentces for the year 1863-Continued.

No.

Smith, George P., and Harrison Flint. (Sce Flint \& Smith.)
Smith, Georgc I. Ki.. Jrooklyu, N. X. Wagon protector
Sinith, Hamilton E., New York, N. Y. Clothes ringer
Smith, Harrison. (Sec Campbell, Wesley B., assignor:)
Smith, Henry, and James Emery, Buffalo, N. Y. 'T'wine box.
Smith, Menry C., assignor to Jonathan C. Brown, Brooklyn, N. J. Lath machinc
(Reissuc)
Smith, Henry H., Wilmington, Del. Pocket for billet straps
Smith, Henry J., assignor to Joseph C. Wightman, Boston, Jass. Jode of hardening gas-burner tips made from soapstone, \&e $\qquad$ Smith, Hiram, Des Moines, Iowa. Cook fork
Smith, Horace, and D. B. Wesson, Springfield, Mass. Firc-arm....(Estension)
Same . ..... Cartridge
. (Extension) .
Smith, II. B., Essex, Conn. Fan
Smith, II. C., D. A. Kelly, aud J. E. Murdoch, jr., Clarksville, Ohio. Cloth rach Smith, H. D. (See Beccher, Henry MI., assignor.)
Smith, H. D., \& Company. (See Beccher, Meury M., assignor.)
Sinith, H. Julins, Boston, MLass. Electric fuse
Smith, H. K., Norwich, Comn. Lathe rest
Samc...... Friction clatch pulley
Smith, Isaac B., and Henry C. Burr, Springfield, Vt. Hames
Smith, Jacob J., Philadelphia, Pa. Bed bottom. (Antedated Oct. 1, 1868)
Smith, James, St. Louis, Mo. Stop box for cocks or valres of water and eras pipes Smith, Janes D., assignor to Arthur P. Emery, New York, N. X. Measuring faucet.
Smith, James H., and Joseph Parkiir. (Sce Parkin \& Smith.)
Surith, James L., assignor to Marvin, Washburn \& Company, Alton, Ill. Sirup filter.
(Reissuc)
Smith, James P. Cherry Iill, Pa. Excaratiner relicle
Smith, James P., assignor to self and Francis TV. Glen, Oshawa, Canada. Pulley Simith, James S., Brooklyn, N. Y. Cartridge holder. Smith, James W., and John I', Elder's Ridge, Pa. Car compling
Smith, Jasper N., and William O. Buckley, Washington, Hl. Machine for cutting open ditches
Smith, Joel, Leominster, Jass. Comb
Smith, John, and B. Weirich. (Sce Weirich \& Smith.)
Smitl;, John A., Lacon, Ill. Extension ladder
Same...... Gate
Smith, John B., Pittston, Pa. Automatic cut-off gas bumer
Smith, Johu B., Sunapec, N. H. Machine for making clothes pins.
Smith, J. B. (See Storle, Olo O., assignor.)
Smith, John B., assignor to self and James B. and U. Gr. Stevcns, Newton, Ill. Morse rako.
Smith, J. B., assignor to solf and George R. Chittcuden, Milwaukce, Wis. Coffee pot
Snuith. Jolu C., Troy, N. X. Rock drilling machine
Smith, John C., assignor to self and L. D. Hills, Chicopee, Mass. Loont for weaving palm leaf
Smith, John C., assignor to Wager, Fales \& Company, Troy, N. Y. Stove grate Sinith, J. E., and J. M., et al. (Sce Kinsey, Kissell \& Smith.)
Smith, Jolin E., Buffalo, N. Y. Ment cutter
Smith, J. M., and Gcorge O., Chicago, Ill. Paint for buildings, roofs, \&e
Smith, John H., and Warren Portlock. (See Portlock \& Smith.)
Smith, Joln H., and Charles II. Florence, assignors to selves, F. P. Seawell and H. G. IV. Whittenburg, Richview, Ill. Brick machine

Smith, J. Homer, Brewster Station, N. Y. Lamp
Smith, J. Hunt, Norwich, Conn., and Wiliam and Alfred Shodlock, New York, N. Y. Braid.

Smith, John Joseph Charles, Philadelphia, Pa. Clay mold for casting metals. . Smith, John P., Claverack, N. Y. Shaker for threshing machines
Snith, John P., Scotland. Tool for turning and planiug
Smith, J. P., Ifummelstown, Pa. Corn sheller.
Smith, John W. and James D., Washington, D. C. Letter box
Smith, Josepl, Sclodack Center, N. Y. Medical compound
Smith, J. R., Springfield, Mass. Bridge block
Smith, Joseph R., assignor to solf and Winfield S. Shaw, Bethel, Conn. Aut lock for axlo and skein boxes
Snith, Josiah M., Warren, N. J. Mortising chisel. (Antedated July 18, 1868)
Smith, Julins, and Isaac E:. Mall, Logan, Ohio. Cooking nteusil
Smith, Jnstin E., and Mark H. Dasenbrook, Warrenville, Ill. Weather strip
Smith, Justus. (See Bennett, E. S., assignor.)
Same
same
Smith, Kilburn, Lowell, Mass. Rogistor for time and prico. Smith, Lemucl A., Pckin, Il. Horseshoe
Smith, Lewis, and Samuel roster, jr., Des Moines, Iowa. Curtain fixture
Smith, L. F., Philadelphia, Pa. Low water and high steam indicator
Smith, L. J., Hamilton, Ohio, and D. S. Knight, New York, N. Y. Car brake and starter.
Smith, Matthew D., Independence, Iowa. Seeder and cnltivator
Smith, Moore, assignor to self and T. W. Wellington, Worcester, Mass. Horso ralse
Smith, Morris H.. et al. (See Halpey, James E., assignor.)

## Alphabetical list of patentecs for the year 1868-Continued.

No.

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79, 509
76, 259
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83, 102
77, 224
83, 332
84, 246
-3,308
16,538
79, 606
70.010

82, 041
3,171
3, 055
75, 803
80,514
75, 307

79, 020
81, 222
76,667

75, 905
81, 696
81, 697
82, 649
82, 885
76, 539
81,548
84, 141
73, 470
84,515
73,399
S0, 840
81004
79, 404
2,843
2, 844
3,014
3,060
79, 269
80, 366
82,360
83, 668
73, 763
84, 388
7\%, 668
78, 695
82, 446
84,390
77, 225
77, 774
83, 561
76, 540
75, 479
74, 860

Smith, M. M., Nashville, Tenn. Ladder or step for strect lamp lighters
Smith, M. R., Armonle N. Y. Sewing machiue
Smith, Norman, Martford, Conn. Guide for serows
Smith, O. C., and John A. Bassett. (See Bassett \& Smith.)
Smith, Orren M., assignor to S. W. Evans and A. Aguev, Philadelphia, Pa. Runner for umbrellas.
Smith, Oscar R., Elgin, Ill. Animal trap
Smith, Perry W., Abingdon, Ill. Buckle
Smith, Peter J., Philadelphia, Pa. Brick maehine
Smith, P. W., Chicopee Falls, MIass. Deviec for fastening shirt eollars
Canada. Maehino for the manufaeture of ....... boxes
Smith, Robert, Brooklyn, N. Y. Device for raising casks and barrels
Smith, Robort and William T., Carondelet, Mo. Amalgamator .
Smith, Robert A., Philadelphia, Pa. Railroad-traek clearer.
Smith, R. B. (See Hentry, T. C., assignor.)
Siwith, Robert D. O., Washington, D. C. Conneeting-rod adjustment
Same .-. . . . Bit stock
Smith, Rodncy L., Wolcottville, Conn. Mateh box............................. (Design)
Smith, Rolney L., and E. M. Judd. (see Judd \& Smith) $\qquad$ (Design.)
Smith, Rodney L., and E. M. E rad. See 1 amp sm
. (Design)
Smith, S. (See Kirtland, George, assignor:)
Smith, Samuel, Plainview. Minn. Mode of attaching traees to whiffetrees
Smith, Samuel B., et al. (See Ruggles, Solomon WV., assignor) .-..... (Reissue.)
Snith, Samuel R., assignor to P. P. Lane and Joseph T. Bodley, Cineinnati, Ohio. Head bloek for saw mills
Smith, Scott A., assignor to Cresson \& Sinith, Philadclphia, Pa. Flour bolt Smith, Scott A., and Gcorge W. Hubbard. (See Hubbard \& Smith.)

Same.

h, Sidney, Worcester, Mass. Hot air furnace.
Same...... Steam boiler furnace.
Smith, Simon B., assignor to self aud Joseph K. Chew, Salem, N. J. Bearing for fifth whecl to carriages. (Antedated March 31, 1868)
Smith, Solomon P. (See Allen, Leicester A., assignor.)
Smith, S. W., Addison, Vt. Flat-iron heater.
Smith, Theophilns S., and Edward L. Gilman. (See Gilman \& Smith.)
Smith, Thonas, California, Mo. Selfeacting wagon brake. (Antedater Aug. 29, 1868)

Same...... Compound tool for eutting and shearing bolts. (Antedated Aug. 21, 1868)
Same. . . - - Sawing and boring machine
Smith, Thomas, and John O. Reilley, Baltimore, Md. Railroad ear heating apparatus
Smith, Thomas C., New York, N. X. Lcmon squeezer
Smith, T. H., Clyde, N. Y. Seed planter.
Smith, Thomas H. (See Evans, John, assignor.)
Smith, Thomas J., Jackson, Mich. Apparatus for raising fenees
Smith, I. M., and William Franklin. (See Franklin \& Smith.)
Smith. T. S., Boston, Mass. Let-off for looms
Smith, T. S., assignor to Alfred B. Ely, Charlestown, Mass. Let-off meehanism for looms.
Smith, T. S., Boston, and A. B. Ely, Nowton, Mass., assignors to William N. Ely. Let-off mechanism for looms
Smith, Vinzcuz, Middlcbury, Ohio. Screw-cutting maehine
Smith, W. San Trancisco, Cal. Valve for water-elosets.
Smith, Willard H., New York, N. Y. Vapor burncr.
Smith, William, New York, N. Y. Weaving $\qquad$ (Division A, reissue)
Same.................................. samo ..................... (Division C, reissuc).
Same...... Corded elastie fabrie..................................(Division B, reissue) -
Smith, William, San Francisco, Cal. Water-closet reeeiver.
Smith, William, New Kork, T. Y. Book-binding
Snith, William, Whitchall, Bridesburg, Pa. Boot and shoo
Smith, William, Cincinnati, Ohio. Folding table
Smith, William, Allcghany City, Pa. Pipe-molding maehine
Smith, William. (See Aston, John, assignor.)
Smith, William, and Emery M. Pikc, McDonough, N. I. Carriage top
Smith, William, and George Howell. (Sea Hovell \& Smith.)
Smith, William Borthwiek, England. Frame for proteeting watel-works.
Smith, William C., Warrensburg, Mo. Sugar evaporator
Same
Smith, William C., Yantic, Conn. Chum
Smith, William C., assiguor to IIcury Sutcliff and John E. Tucker, Brooklyn, N. Y. Paper-ruling machinery

Smith, William H., and Rollin S. Eddy, assignors to selves, Scth Dean, and Henry Merrill, La Crosse, Wis. Machine for eutting key seats
Smith, William H., assignor to self and Israel Heeker, New York, N. Y. Tishing lines
Smith, Wilson, Tod Township Ohio. Hay rack
Smith, Wricht, St. Louis, Mo. Brick for building purposes
Smith, W. H., New York, N. Y. Lamp
Smith, TV. M., and Joseplh Steger, Now York, N. Y. Car brake
Smith, W. H., et al. (Sec Eddy, Rollin S., assignor.)

Date.

Sept. 8, 1868
Nov. 24, 1868
June 30, 1868.

Mar. 31, 1868.
Ang. 11, 1868
Oct. 13, 1808
Apr. 28, 1868
Oct. 20, 1868
Nov. 17, 1868.
Jan. 14, 1868.
Apr. \%, 1868
July 7, 1868
Junc 9, 1868.
Sept. 8, 1868.
Aug. 25, 1868
June 2, 1868.
Mar. 24, 1868.

July 28, 1868.
Mar. 10, 1868.

June 16, 1868.
Aug. 18, 1868.
Apr. 14, 1868.
Mar. 24, 1868.

Sept. 1, 1868.
Sept. 1, 1868.
Sept. 29, 1868.
Oct. 6, $1<86$.
Apr. 7, 1868.
Aug. 25, 1868.
Nor. 17, 1868.
Jan. 21, 1868.
Dee. 1, 1868.
Jan. 14, 1868.
Ang. 11, 1868.
Ang. 11, 1868.
Junc 30, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
Jume 30, 1868.
May 26, 1868.
June $23,1868$.
July 28, 1868.
Scpt. 22, 1868.
Nor. 3, 1868.
Jan. ®8, 1868.
Nor. 24, 1868.
May 5, 1868.
June 9, 1868.
Sept. 22, 1868.
Nor. 24, 1868.
Apr. 28, 1858.
May 12, 1868.
Oct. 27, 1868.
Apr. 7,1868
Mar. 10, 1363
Feb. 25, 1868.

## Alphabetical list of patentecs for the year 1868-Continued.

Smith, Youngs W., Bristol, N. Y. Hop-vine trellis
Smitten, Thomas W. F., Brooklyu, N. Y. Breast-pin fastener
Smoker, Gideon and Jonas, Smithville, Ohio. Combind hand truck and saek holder.
Smokey, Joh J., Natchez, Miss. Harness.
Smoot, W. G., assignor to self and Antonio Pelletier, Washington, D. C. Registering fare reccivers.
Smoot, William S. Washington, D. C. Wrench
Smoot, W. S., assignor to self and James D. Bacon, Washington, D. C. Neck-tie Smyth, D. M., assignor through mesne assigments to John T. Lary, Orange, N. J. Machine for sewing books.

Smyth, David M., assignor to Benjamin F. Smail, Orange, N. J. Lamp Smythe, George A. Reading, Pa. Caleulating scale beam
Snavely, Benjamin, et al. (See Stoll. Michael, assignor:)
Sineath, Courge R., and Charles II., Wilmington, Del. Tilting wagou Same...... Dnmping wagou
Snedecor, L., and D. S. Stevens. (Sce Stevens \& Snedecor.)
Suediker, James F., and William F. Bailey, Bristol, Pa. Apparatns for charging gas retorts
Sneider, C. E., Baltimore, Md. Breech-loading aruı
Snell, Daniel, assignor to self and J. H. Gano, Sprincfield, Ohio. Tumbling shaft for connecting power with machinery

$$
\text { Same . . . . . Wood-sawing machine. (Antedated May } 28 \text {, 1868) }
$$

Suell, Jasper, Pottsville, Pa. Railroad sill and chair
Suell, Oscar, Th illiamsburg, Ohio. Puup
Snell, Theorlore, and Willian Tucker, Philadelphia, Pa. Apparatus for cutting metallic bars ..
Suell, W. T. (Sce McCoy, Johu, assignor.)
Snider, William H. (See Hendersou, WW. H., assignor.)
Snorlgrass, Robert V. (See Wayman, Ednuud G., assignor.)
Snodgrass, William, Cold Spring, Wis. Water wheel
Snook, Lorenzo D., Barrington, N. I. Hop trellis Same.......Harvester
Snook, M. B., eit al. (See Preston K. H. C., assignor.) Same - . .......................... . same.
Snover, Theodore F., Oconto, Wis. Machine belt
Snow, B. B., and T. J. Dickerson, Auburn, N. Y. Jaehine for grinding the cutters of mowing machines
Snow, George 13., and Theodore G. Letvis, Buffalo, N. Y. Automatic dental plugging instrument
Snow, OU. D., Bennington, Vt. Water-wheol regulator
Snow, Harrisou S., and Edgar J. Itumkins, Macon, Mo. Cement for roofing, \&c Snow, Harvey, deceased, by Clara M. 13. Snow, executrix, Independence, Iowaz. Presser-bar for planiug machines.
(Extension).
Snow, Hiram F., and Janies II. Davis, Dover, N. H. Composition for navements Snow, Joseph C., and Louis Bomey. (See Tucker, John E., assignor.)
Snow, M. S., Forestrille, N. X. Beelice
Snow, W. B., Chicago, Ill. Sleeping-ear berth
Suyder, Albert, Jackson, Mieh. Fly trap
Snyder, Asa, and Alexanler Delaney, Richmond, Va. Box store................................ Snyder, Byron, Clinton, Wis. Farm, cate
Snyder, Cyrus, and Willian W. Jeffery. (See Jeffery \& Snyder.)
Snyder, Edward, Slatington, Pia. Machino for polishing slate, ©e
Snyder, Edward, assignor to self and Morgan Jones, STatington, Pa. Machino for rounding the corner's of slate frames
Snyder, H. A., Shullsburg, Wis. Fanning nill
Suyder, Henry D., Carboudale, Pa.. Coal stovo
Snyder, Henry D., and Lra D. Richards. (See Richards \& Snyder.)
Snyder, H. F. and G. S., and W. N. Jones, Williamsport, Pa. Casting hearings for machinery
Snyder, John, Hart's Mills, Ind. Grinding miil
Suyder, John A., Georgetown, Pa. Maehine for mortising feneo posts and sharpening fence rails.
Snyder, Joseph, Rock Liek, iv. Va. Cnltivator
Snyder, Lewis, and Jaeob Latta. (Sce Latta \& Snyder.)
Snyder, Simon, Cineinuati, Ohio. Tamuing
Snyder, Solomon, Harrisville, Pa. Thread tensiou meehanism for sewing machines.
Sofield, P. M., and J. Gilbert. (See Gilbert \& Sofield.)
Soles, James D., Lymn Township, Pa. Bread cutter.
Solomon, Louis L., and W. C. Reeres. (See Reeves \& Solomon.)
Solomon, Martha B., assignor to Louis L. Solomon and William C. Reeves, Charlestown, Mass. Children's eorset
Solter, John, Baltimore, Md. Tumbler washer
(Reissue)
Somers, I. M., New York, N. Y. Tumbler washer
Somers, Daniel M., and Walter S. Atwood, Brooklyn, N. Y. Attaching buttous to fabrics
Somerville, John, and Robert Elsdon, Maidstone, Great Britain. Maufacture of illuminatlng gas..
Somes, Daniel E., Washington, D. C. Apparatus for making ico and for cooling air and liquids

Date.

Aug. 25, 1868.
Nept. 1, 1e68.
Apr. 28, 1868.
Ficb. 1s, 1868.
Auc. 18, 1868.
Nov. 1i, 1868.
Dec. $1,1868$.
Feb. 25, 1868.
July 14, 1068.
Fel. 18, $1=68$.
Feb. 11, 1868.
Oct. 13, 1868.
Mar. 10, 1868.
Dee. $2: 1868$.
Sept. $22,1868$.
Oet. 2̃, 1868.
Apr. 21, 1563.
Dee. 8,1868 .
Oct. 6, 1868.

Jan. 14, 1868.
May 1: 1898.
June $2,1868$.

May 12, 1868.
Ang. 4, 1868.
June 23, 1868.
July 14, 1etis.
July as, 186.
Nor. 20, 1808.
Sept. 1, 1868.
Mar. 24, 1868.
Fen. 25, 1e63.
Matr. 10. 1868.
May $12,1868$.
Dec. 1, 1868.
July $\quad$, 1868.
Apr. 21, 1868.
Sept. 8, 1848.
Sept. 15, 1 ع68.

Dee. 29, 1868.
Feb. 4, 1868.
Jan. 28, 1868.
Feb. 11, $18 \cdot 6$.
Aug. 4, 1868.
Mar. 10, 1868.
Ang. 25, 1868.
Apr. 7, 1868.
Feb. 25, 1868.
Sept. 29, 1868.
Nov. 3, 1 İ68.
Apr. 14, 1868
Jan. 28, 1868.
Feb. 25, 1868.

Alphabetical list of patentees for the year 1868-Continued.

## No.

77, 226
77, 669
82, 651
82, 887
84, 654

77,545
73, 401
2, 884
76, 541
73, 402
80,095
80,676
76, 260
82, 448

73, 845
83, 333
77, 330
74, 162
79, 021

76, 261
76, 262
77, 776
81, 836
81, 025
76, 355

73, 661

82, 652
79, 695
79, 022
85, 185
81, 549
84, 227
75, 213
81, 026
75, 996
79, 271
80, 369
2,913

2,914
77, 929
77, 777
78,767
78, 242

76, 542
77, 331
73, 403
79,510
79, 636
3,234
84,312
82, 653
82, 654
78,615
76, 543
73, 662

Name, residence, and invention or discovery.

Somes, Daniel E., Washington, D. C. Apparatus for consuming smoke and gas and increasing draft in boiler furnaces
Same......Cooling air and liquids, and in making icc.
Same...... Apparatus for cooling and filtering liquids...........................
Same...... Canal boats and other vessels for the transportation of grain
Same.......Constrnction of rubber and other elastie springs
Sommer, Jacol, and Thomas Green. (See Greer: \& Sommer.)
Son, William II. (See Marehbank, Jolın, assignor.)
Sonnedecker, Joseph, Cincinnati, Ohio. Advertising framc. (Antedated April 28, 1868
Soper, Ephraim, New York, N. Y. Meehanical inovement.
Soper, Philo O., San Francisco, Cal. Hay knife
(Reissuo).
Sorber, Jaeob L., Chillieothe, Ohio. Mode of lubricating axles.
Sornborger, N. B., Northampton, Mass. Combincd catheter and syringe
Soule, Asa T., Savannah, N. Y. Hay rack
Soule, George H., Jersey City, N. J., Fastening for braeelets
Soule, Joel H., Georgetown, N. Y., Milk stirroc
Soule, J. W., Boston, Mass. Pegging machine
Soule, Samuel W., et al. (See Sholes, Glidden \& Soule.)
Same ................................... same.
Southack, Benjamin I., New York, N. Y. Reclining chair
Same...... Sofa beadstead.
Southard, A. M., and W. J. Hobson, Savannah, Mo. Stone-drilling machine
Southard, S. L., Roek Island, III. Bed-bottom.
Souther, John, Boston, Mass. Steam-fire extinguisher
Southmayd, Jefferson W., et al. (See Fithiau, Lemuel S., assignor.)
Same................................................... same
Southward, Eli F. (See Wing, Simon, assiguor.)
Southwiek, Albert H., Oskaloosa, Iowa. Wind-mill
Same...... Mahaska County, Iowa. Heel proteetor
Southwick, George TV., and John II. Gillett, Seott, N. Y. Shingle maehine. (Antedated May 4, 1868)
Southwick, Jacob, Brant, N. Y. Feneo
Sonthworth, H. W. Mittineague, Mass. Pad for horses' hoofs
Southworth, Levi B., Deep River, Conn. Carpet streteher
Sowers, P. H., et al. (See Buekius, George H., assignor.)
Same...........................................
Sowle, John, Boston, Mass. Hinge
Spafford, Nathan H. (See Burt, George E., assignor) $\qquad$ (Reissue.)
Same..................................
(Reissue.)
Spain, Edward, Philadelphia, Pa. Churn .......................................... Spalding, (Antedated June 18, 1868)
Spang, J. D., Dayton, Ohio. Gas stove.
Same...... Gas maehine
angle, John P., assignor to self and Chauncey Spear, Canandaigua, N. N . Snow shovel
Spangler, Albert, Philadelphia, Pa. Lateh
Sparks, J. C., assignor to self and A. G. Buzby, Philadelphia, Pa. Carriage wheel Sparks, William E., New Haven Conn. Snap hook
Sparks, William E., assignor to Sargent \& Company, New Haven, Conn. Door
button
Sparre, P. A., Sweden. Transmitting signals
Spathelf,John G., Sandusky, Ohio. Door loek
Spaulding, A. F., and S. M. Seott, assignors through mesne assignments to Metropolitan Washing Maehine Company, Middlefield, Conn. Meat-ehopping machine
(Reissue)
Same......Meat-ehopping maehine .............................................issue)
(Reissue)
Spaulding, Charles F. assiguor
Double seamer for tin work.
Spanlding, Edward, Brooklyn, N. X. Process for treatiug wood
Same. ..... Mosquito screen --
Spanding, George H., assignor to American Moulded Collar Company, Norwich,
Com. Machine for moulding eollars.
Spaulding, J. H. (See Riee, Rodue5, assignor.)
Speakman, Thomas S., Camden, N.J. Draw-bridge
Same......Pipe eoupling, for railroad ear heaters.
Spear, Chauney. (Sce Spangle, John P., assignor.)
Spear, Isaae C., New Wilnington, Pa. Horse hay-fork
Spear, James, Pliilarlelphia, Pa. Cooking stove and range
Same.......Base-burning stove .
Same....... Ornament of a stove $\qquad$
Same.......Railroad car stove
Spcar, John, Carbondale, In. Rain-water eut-off.
Samo...... Carbondale, Ill. Frnit dryer
Spear, Joln, and John A. Hall, Carbondale, Ill. Pruning shears and knife..... Spear, Vivian K., Lynn, Mass. Machine for polishing the heels of boots and shoes
Speeler, Henry, Trenton, N.J. Fire grate. (Antedater Dec. 21, 1867)
Speer, David R., and John K. Wood. (See Wood \& Speer.)

Date.

Apr. 28, 1868.
May 5, 1868.
Sept. 29, 1863.
Oct. 6, 1863.
Dec. 1, 1868.

May 5, 1868.
Jan. 14, 1868.
Feb. 25, 1868.
Apr. 7, 1868.
Jan. 14, 1868.
July 21, 1868.
Aug. 4, 1868.
Mar. 31, 1868.
Sept. 22, 1868.

Jan. 28, 1868.
Oet. 20, 1863.
A pri. 28, 1868.
Feb. 4, 1868.
June 16, 1868.

Mar. 31, 1868.
Mar. 31, 1868.
May 12, 1868.
Sepit. 1, 1868.
Aug. 111868.
Apr. 7, 1868.

Jan. 21, 1868.

Sept. 29, 1868.
July 7, 1868.
June 16, 1868.
Dee. 22, 186乏̇.
Ang. 25, 1868.
Nov. 17, 1868.
Mar. 3, 1858.
Aug. 11, 1868.
Mar. 24, 1868.
June 23, 1868.
July 28, 1868.

Apr. 7, 1868.
A pr. 7, 1868.
May 12, 1868.
May 12, 1868.
June 9, 1868.
May 26,1868.
Apr. 7, 1868.
Apr. 28, 1868.
Jan. 14, 1868.
June 30, 1868.
July 7, 1868.
Not. 10, 1868.
Nor. 24, 1868.
Sept. 29, 1868.
Sept. 29, 1868.
June 2, 1863.
Apr. 7, 1868.
Jan. 21, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Name, residence, and iuvention or diseovery.

Spenee, Gideon O., assignor to self, A. R. Williams, and J. S. Lathrop, Titusvillc, Pa. Lubricating oil
Same...... Process of treating petroleum for the manufacture of lubricating oils.
Spenec, Peter, England. Purifying illuminating gas
Spenee, Robert 'T. T. (See Hess, Charles, assignor.)
Speneer, A. C., assiguor to self, E. B. Joncs, and William H. Freneh, Bridgeport,
Conn. Combination of wood and paper for eabinet purposes
Speneer, Charles F., Rochester, N. Y. Lamp
Same....... Fruit jar
Same........ same
Speneer, Charles L., Providence, R. I. Hat hook
Speneer, Elihu, Ottawa, Canada. Station indicator
Spencer, Elilm, Elizabeth, N. J. Railroad-car heating apparatus
Spencer, Elihu, assignor to Robert $W$ estcott, Elizabeth N. J. Water meter
Speneer, J. E. (Sec Want, Edwin, assimnor.)
Spencer, L. W., New Zork, N. Y. Machine for cutting tobaceo
Spencer, N., and Jasper N. Davison. (Sec Davison \& Spencer.)
Spencer, Oded, Jaeksonburq, Ohio. Steam gcuerator
Spencer, Robert, New York, N. Y. Fire-proof componnd.
Spencer, S. M., \& Company. (Sce Miller, Charles G., assignor.)
Spencer, Thomas II., assignor to Charles L. Spencer, Providence, R.I. Construction of blacking boxes
Spencer, William, aud Davil Shannon. (See Shannon \& Spencer.)
Spencer, Williant W., Pittsburg, Pa. Self-lastening buekle
Spendclow, Henry, and Robert Hencage, Buffilo. N. Y. Grain dryer
Sperbeck, James H.. Warsaw, N. Y. Horse collar.
Spieer, Pratt A., and Giles Cramton. (Sec Cramton \& Spicer.)
Spickler, Lewis A., Clear Spring, Md. Slcigh
Spies, A. B., assicnor to Joln K. Journey, Sterling, Ill. Cultivator
Spiro, Herman, Knoxville, Tenn. Elevator.
Spitzmiller, Ambrose, assignor to John S. Perry, trustec and exceutor, and Na.
than B. Perry, Buffalo: N. Y. Oven in base-hurning stoves
Spofford, Chales, and C. II. Jontague, Buston, Mass. Machine for making paper collars
Spofford, Fisher A., and Matthew G. Raflington, Columbus, Ohio. Portablo pistol gallery
Same ..... Aidjustable ball holder for games
Same.......Toy gun
Spofford, Nclson, and Charles Corliss, assiguors to Charles Corliss, Haverhill,
Mass. Instrument for adding and registering numbers
Spoor, Stephcu, Phelps, N. Y. Lamp.
Spore, Morris F., Preble, N. Y. Mechanical novement
Spots, George W., Jaeksonville, Ill. Compound for destroying insects on trees, plants, \&c.
Sprague, Arnold, Poland, N. Y . Combined catch aud loek
Spraguc, A. and W. (Sec Atwood, Joln E., assignor.)
Spraque, E., Alleghauy City, Pa. Brick machine. (Antedated Dec. 11, 1868 ).
Sprague, E. L., assignor to self and Heury Eddy, Leicester, Mass. Making hand and other cards.
Sprague, John J. (Sce Laflin, Perley, assignor.)
Same ....................... same.

Sprague, Jonathan, Anu Arbor, aud Alva T. Hill, Pontiac, Mich. Sewing machines
Sprague, Thomas S. (See Wentworth, Wm. P., assiguor.)
Sprague, Wart, Sandy Creek, N. Y. Liquid measure...
Sprague, Wcleonc, et al. (Sce Roberts, William, assignor.)
Spraquc, Weleome, assignor to self and Bernard H. Inuelhc, Farnham, N. Y. Harvester. (Antedated June 30, 1868)
Sprague, William, Lynn, Mass. Water closet.
Spreckels, Claus, Sau Fraucisco, Cal. Manufacture of crushed sucar.
Spring, Solomon C., assignor to Welch, Spring \& Company, Bristol, Cont (1) esign).

> Same ....................... came.
(Design)
Springer, Charles, New Castle, Pa. Watch
Springer, Ezra, Davis, Ill. Railway-ear mover
Springer, Jacob, assignor to self, A. C. Flinn, and II. B. MeNeal, Lancastcr, Pa. Apparatus for rectifying spirits.
Springer, Joseph H., Philadelphia, Pa. High and low water alam for steam generators
Springer, Joseph H., assignor to self, John M. Hess, and Smith Bowen, Philadelphia, Pa. Steam-engine governor
Sproull, Charles W., Rome Ga. Pancl fence.
Sprout, Aricl B., Iughesville, Pa. Horsc hay fork
Spurgin, Joseph B., and Thomas A. Kirk, Kansas City, Mo. Mailway switch
Squier, George A., Syracuse, N, Y. Teeth for hay sproaders.
Squire, Charles I. (See Goodwin, Wm. F., assignor.)
Same........... (Sce Browne, A. W., assignor.)
Squire, Jolin J., New London, Conn. Fruit jar.
(Reissue)
Squyer, Oscar C., Peun Yan, N. Y. Pencil sharpener.
Staats, G. W., New Castle, Pa. Guide for scroll saws.

Date.

Apr. 14, 1868.
June 2, 1868
Oct. 27, 1868

Jnne 30, 1868.
Jan. 21, 1868
Jan. 28, 1868.
Ang. 18, 1868
Oct. 27, 1868
Oct. 27, 1868
Dec. 15, 1868
Маr. 17, 1868.
Mar. 24, 1868.
May 5, 1868
Nov. 17, 1868

May 12, 1868
Jume 2, 1868.
Sept. 15, 1868
Mar. 17, 1868
Sept. 1, 1868
Doc. 1, 1868
July 7, 1868
July 7, 1868
Dce. 15, 1868
Feb. 4, 1838
Feb. 4, 186
Sept. 29, 1868.
Jnnc 23, 1868
Jan. 21, 1868
Mar. 17, 1868.
Nor. 3, 1863
Nor. 24, 1868
Dec. 22,1868
Mar. 31, 1868

Dec. 1,1868
July 23, 1868.

July 14, 1868
May 19, 1868.
Mar. 17, 1868.
Sopt. 22, 1868.
Nov. 17, 1868.
Iay 12, 1868
Nov. 10, 1868.
May $5,1868$.
Felo. 11, 1868
July 21, 1868.
July 7, 1868
May 26,1868
Jan. 21, 1868.
Apr. 21, 1868.

Aug. 11, 1868
Feb. 18, 1868
Sopt. 15, 1868

## Alphabetieal list of patentees for the year 1868-Continued.

Name, residenee, and invention or diseovery.

Staek, William A., Hillsboro, Md. Animal trap
Staekhons, George, Mt. Washington, Pa. Bread, meat, and vegetable eutter . Staekhouse, John, West Pittsburg, Pa. Polishing maehine.
Staekpole, David D., et al. (See Ehrhardt, L. II. G., assignor.)
Staekpole, G., Now York, N. Y. Auxiliary power for sewing maehines......... Staekpole, Greenleaf, New York, N. Y. Toy pistol.

Same ..... . Lever power for sowing and knitting machines
Stackpole, G., assignor to self and J. N. Winslow, New York, N. X. Bit braee. (Reissue)
Stackpole, J. (See Carpenter, Wm. D., assiguor.)
Staey, Eli F., Gloueester, Mass. Fisherman's nipper
Stadler, Joseph, Detroit, and George M. Streng, Plymouth, Mieh. Churn. Stadler, Lueas, Bowen, Ill. Combined seeder and eultivator
Stafford, Arthur, Brooklyn, N. Y. Key tag.
(Design)
Stafford, C. W., Saybrook, Conn. Pavement
Stafford, H. P., and J. A. Laforgee, Dveatur, Ill. Deriee for regulating the sup. ply of water to steam gencrators
Stafford, H. P. and H. H., Deeatur, Ill. Water gange
Stahlbrodt, Edward, Roohester, N. Y. Lathe rest
Stair, Ednund, Marrisonville, Mo. Washing maehine
Stamp, William, Susquehama Depot, Pa. Steam-engine steans ehest
Stamper, Greenville Carter, Pella, Iowa. Animal and bird trap....
Same....... Wagor
Stanard, H. T., and A. O. Coleburn. (See Coleburn \& Stanard.) Standart, Stephon W., Bellevue, Ohio. Plow
Standing, William, Cairo, Ill. Grain dryer.
Standish, John A., et al. (See Mallary, G. H., assionor.)
Standish, L. F.. Sprincfield, Mass. Pen and pencil ease
Standish, Philander íl., Martinez, Cal. Method of mounting the eutters of rotary plows
Standish, Philander H., assignor to self and Olirer C. Coffin, Martinez, Cal. Steam plow and eultivator
Same . . . . . Gang plow
Standring, Thomas, Port Richmond, N. Beiting. (Antedated July 6,1868 )
Stanford, O. W., and J. Huston, jr. (See Iuston \& Stanford.)
Stanford, Otis W., and S. S. Seovillo, Lebanon, Ohio. Washing maehine
Stankowiteh, A., Philadelphia, Pa. Wash stand.
Stanley, Alfred R., Boston, Mass. Former for hoop slieits
Same.......Hoop skirt.
Stanley, A. R., and Henry W. Ensign, Shulisburg, Wis. Sulky plow
Stanley, Augustus, New Britain, Conn. Saw-horse
Stanley, Frank, Austin, Texas. Joining and fitting hoof-hooks
Stanley, Henry, St. Johnsburg, Vt. Smut maehine
Stanley, Henry, assignor to G. and W. Todd \& Co., St. Louis, Mo. Oil eup....
Stanley Rule and Level Company. (See Traut, Justus A., assignor.)
Stanley, Wilbur F., Cazenovia, N. Y. Manger....
Stansbury, Joseph A., Marion, Iowa. Hame-loek
Stansbury, T. M. and A. F., Canton, Tll. Tire bender
Stansbury, Upton, Plymouth, Ind. Beelive.
Stanton, J. M. and S. F. assiguors to Simon F. Stanton, Manehester, N. II. Head-bloek for saw mills.
Stanton, Samuel, Newburg, N. Y. Cut-off valive gear
Stanton, Sidney, Syracuse, N. Y. Machine for sawing stone
Staples, M. W., assignor to self and John H. Burtis, Catskill, N. Y. Wash boiler Stappers, Franeis. (N̂ee King, Henry, assignor.)
Star Mateh Corporation. (See Andrews \& Tueker, assignors.)
Starbird, G. B., and Thomas W. Weleh. (See Welch \& Starbird.)
Starek, John M., Milwaukee, Wis. Glazing and coloring tobaeeo pipes
Stark, I. Michael, Buffalo, N. Y. Beer faueet
Stark, John, Thomaston, Ga. Pruming hook
Stark, John and Miehael, Buffalo, N. Y. Machine for mashing and boiling wort for beer
Stark, J. F. (See Halbert, A. W., assignor.)
Stark, William, White Pigeon, Mieh. Potato digger
Starke, P. R., Riehmond, Va. Plow
Same
tarks, Isaae, deeeased, by Marinda Starks, alministratrix, Genoa, and Lyman Perrigo, Groton, N. Y. Deviee for holding pieees in spoke maehines. (Extension)
Starkweather, George A., Waymart, Pa. Tanning hides
Starr, Alfred, New York, N. Y. Solder for aluminium.
Same...................................... same
Starr, Alfred, assignor to William MI. Welling, New York, N. X. Composition for artifieial ivory. (Antedated Feb. 24, 1868)
Starr, Alfred, and William M. Welling, assignors to William II. Welling, New York, N. Y. Artifieial ivory. (Antedated June 2, 1868)
Starr, Eli T., Philadelphia, Pa. Articulator
Starr, George W., Washington, D. C. Envelope
Starr, James T., and Lueius M. Lull. (See Lall \& Starr.)
Starr, John, Grand Rapids, Mieh. Garden hand plow.
Starr, Nieholas, jr., Homer, N. Y. Horse hay fork

## Date.

Nor. 10, 1868
May 19, 1868.
May 5, 1868.
Sept. 29, 1868.
Oet. 13, 1868.
Nov. 17, 1868.
June 23, 1868.
June 2, 1868.
Aug. 11, 1868.
Oct. 20, 1868
Dee. 29, 1868.
Mar. 10, 1868.
May 19, 1868.
Oct. 6, 1868.
May 5,1868.
Mar. 17, 1868.
Nov. 19, 1868
June 23, 1868.
June 23, 1868.
Feb. 18, 1868.
July 7, 1868.
Aug. 4, 1868.
May 26, 1868.
Mar. 10, 1868.
Sept. 1, 1868.
Sept. 1, 1868.
Apr. 28, 1868.
Mar. 10, 1868
Mar. 31, 1868. Màr. 31, 1868. Sept. 1, 1868. May 12, 1868. Sept. 15, 1868. Ang. 25, 1868
Oct. 6,1868 .
Nor. 3, 1868
Apr. 7, 1868 .
Aug. 25, 1868.
Oet. 20, 1868.
May 5, 1868
July 14, 1868
July 7, 1868 .
Dee. 8, 1868.

May 5,1868 Feb. 18, 1868. July 7, 1868.

Jan. 7, 1868.
Aug. 11, 1868.
May 5, 1868
Dee. 29, 1868.

June 12, 1868.
Oet. 6, 1868.
Mar. 10, 1868.
May 19, 1868.
Mar. 3, 1868.
June 9, 1863.
May 19, 1863.
Dec. 22, 1863.
Aug. 11, 1868.
Apr. 21, 1868.

Alphabetical list of patentees for the year 1868-Continued.

Name, residenee, and invention or diseovery.
Dato.

Dee. 1, 1868.
Mar. 31, 1868

- fuly 21,1868. Jan. 23, 1863. Oct. 27, 1868. Sept. 1, 1868.

May $13,1868$.
May $13,1868$. May 13, 1868. June 2, 1868.

June 9, 1868.
June 9, 1868. July 7, 1868. Sopt. 1, 1868. Apr. 14, 1868. Feb. 4, 1863. Mar. 24, 1868.

June 2, 1868. June 2, 1868. Dec. 15, 1868. Jan. 21, 1868. Lug. 11, 1268. Jan. 7, 1868. Oet. 27, 1368. Nor. 3, 1868.

Jan. 28, 1868. May 26, 1868. Sept. 29, 1568.

Jan. 7, 1868.

MLar. 10, 1868. Anr. 14, 1863. Aug. ミ5, 1 е63. Aрr. 21, 1868. Mar. 17, 1868. May 12, 1868.

Dee. 17, 1863.

Aug. 4, 1868. Aug, 11, 1868. J an. 14, 1863. Jan. Zz, 1868. Feb. 25, 1868. May 19, $1=68$. Oet. 27, 1863. Dee. $20,1863$.

Mar. 10, 1863. Mar. 10, 1863.

Sept. 8, 1808.
Dec. $20,1868$.
Nov. 17, 1868.
Mar. 3, 1868.
July $28,1863$.
Aug. 25, 1868.
Min: 3, 1868.
May 19, 1863.
Mar. 31, 1868.
Fieb. 4, 1868
June 2, 1868.
Ang. 18, 1868.

Oct. 27, 1868.
Feb. 18, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

78, 336
81, 838
84,971
84, 972
82, 889
83, 103

79, 405
85, 343
81, 224
78,153
85,487

83, 740

77, 122
78, 549
78, 550
81,553
76, 204
81, 307
79, 701
3,048
80, 884
73, 404
2, 833
75, 807
76, 265
79. 273

79, 785
79, 702
73, 133

Name, residence, and invention or diseovery.

Stengel, Jost, and Jolin F. Gauweiler. (See Gauweiler \& Stengel.)
Stephens, Anson P., Brooklyn, N. Y. Composito pipe
Stephens, Benjamin, Wheeling, West Va. Composition for roofing. (Antedated April 3, 1868)
Stepliens, Benjamin C., Houston, Mo. Mill-stone dress
Stephens, Benjamin F., Brooklyn, N. Y. Box for pills, \&e
Stephens, Edward J., North Providenee, R. I. Machinery for printing yarn ...
Steplıens, Edward J., Pawtueket, R. I. Machine for printing yarn
Stephens, Samuel, et al. (See Symons, Harry \& Stephens.)
Stephens, William S. (See Tyler, Salmon E., assignor.)
Stephenson, Alfred W., Kensington, Vt. Balaneing polishing wheels
Sternberg, Adam, Nettle Lake, Ohio. Seeding machine
Sternbergh, J. H., Reading, Pa. Making nuts
Sterry, De Witt C., and A. H. Scholfield. (See Seholfield \& Sterry.)
Sterry, Francis A., Canton, Mass. Anti-frietion roll
Steschuet, B. William, Glandorf, Ohio. Dropper for harvesters
Stetson, Bradford. (See Leach, William H., assignor.) Samo....-................................ samc.
Stetson, John, West Harwich, Mass. Fishing apparatus.
Steuernagel, Jaeob, et al. (See Beeker, Ross \& Steuernagel.)
Same.
. same.
Stevens, A. G., Manchester, N. M. Door step.
Stevens, Alden S., Attiea, N. Y. Fruit picker.
Stevens, Benjamin D., Decorah, Iowa. Ax handle. (Antedated May 18, 1868).
Stevens, Charles H., and Wilson Garrison. (See Garrison \& Stevens.)
Stevens, Charles H., and Wilson Garrison, Syraeuse, N. Y. Breast-strap slido.
Stevens, Charles L., assignor to self and Albert A. Denton, Galesburg, $1 l$.
Steam water clovator
Stevens, Charles O., Auburn, Maine. Horseshoe
Stevens, Chase A., New York, N. Y. Treating ores, metals, and minerals
Stevens, Dudley F., Boston, Mass. Trade mark. ............................. (Design)
Stevens, D. S., and L. Snedeeor, Red Bank, N. J. Seeuring masts of vessels
Stevens, E. M., Boston, Mass. Wash boiler
Stevens, Edgar M., assignor to Williaw N. Ely, Stratford, Conn. Pegging maehine
(Reissue).
Stevens, Edgar M., assignor to self and W. N. Ely, Chelsea, Mass. Manufacture of enameled cloth.
Stevens, Edgar M., assignor to self and W. N. Ely, trustee, Chelsea, Mass. Rubber enameled cloth for boots and shoes
Stevens, Edward L., assignor to Isaac Barker, Houlton, Me. Sied.*.
Stevens, George B., Pluckemin, N. J. Sleigh brake
Stevens, G. R., Chicago, 111. Chmrn
Stevens, George W., Albany, N. Y. Safety padlock for railroad ears
Stevens, Henry B., and John Valentine. (See Valentine \& Stevens.)
Stevens, J. and E., \& Company. (See Frisbio, Russel, assignor.) Same
Stevens, James B. and U. G. (See Smith, John B., assignor.)
Stevens, John, and Duncan MeDougald Campbcll. (See Campbell \& Sterens.) Stevens, J. D., and G. W. Miller. (See MEiller \& Stevens.)
Stevens, Lafayette, assimnor through mesno assignments to A. Wyekoff, Elmira,
N. Y. Boring machinc.

Stevens, Levi, Washington, D. C. Manufacture of illuminating gas
Same...... Apparatus for manufacturing illuminating gas
Stevens, W. W., Portland, Mc. Teapot
Stevens, W. W., and John Patchen, ir., Fon. Stevens, W. X., Waterford, N. Y. Skatc
Stevenson, G., and G. W. Tull. (See Tull \& Stevenson.)
Stevenson, George H., Washington, Ohio. Ditching inaehino
Stevensor, James B., Bloomington, Ill. Return-drip for pumps.
Stevenson, S., Dansville, N. Y. Carpet stretcher
Stevenson, William, Alleghany City, Pa. Puddling furnace.
Stevenson, W. A., Atkens, Mo. Hand spinning machine. .
Stevenson, Williain H., Anburn, N. Y. Machine for grinding tho eutters of harvesting machines.
Same.
Harvester
Same. . . . . . . .same
Stevenson, William M., Sharon, Pa. Balance slide valve
Stever, Jeremiah, Bristol, Conn. Machine for scraping metals. ...(Extcusion) Stcward, A., Plano, Ill. Thread show-case

Same...... Ruffling attachment for sewing machines
Steward, D. M., Dayton, Ohio. Car eoupling
Steward, Thomas. (See Sinead, Jonathan, assignor.)
Stewart, A. R., Donglas Harbor, N. B. Machine for sharpening saws
Stewart, David, Corimua, Me. Clevis for plows.
Stewart, G. A., Des Moines, Iowa. Desk and seat
Stewart, George E., East Saginaw, Mich. Corn husker.
Stewart, George W., assignor to sclf and Warren Akin, Adairsvillo, Ga. Mar. vester
Stewart, Mugh, assignor to Georgo F. Wright and William Orr, jr., Clinton, Mass. Compass.
Stewart, II. A., Minneapolis, Minn. Portable fence

Date.

May 26, 1868.
Sept. 1, 1868.
Dee. 15, 1868,
Dee. 15, 1868.
Oet. 6, 1868.
Oct. 13, 1868.

June 30, 1868.
Dee. 29, 1868.
Aug. 18, 1868.
May 19, 1868.
Dee. 29, 1868.

Nov. 3, 1868.

Apr. 21, 1868.
June 2, 1868.
June 2, 1868.
Aug. 25, 1868.
Mar. 31, 1808.
Aug. 18, 1868.
July 7, 1868.
May 12, 1868.
Aug. 11, 1868.
Jan. 14, 1868.
Jan. 14, 1868.
Mar. 24, 1868.
Mar. 31, 1868.
Junc 23, 1868.
July 7, 1868.
July 7, 1868.
Jan. 7, 1868.

Sept. 22, 1868. Jan. 7, 1868. Apr. 14, 1868. June 16, 1868. June 30, 1868. Jail. 14, 1868.

May 12, 1868.
Nor. $10,1868$.
Nov. 3, 1868.
Jan. 21, 1868.
Aug. 4, 1868.
Feb. 18, 1868.
Feb. 18, 1868.
Mar. 3, 1868.
Aug. 18, 1868.
Oct. 20, 1868. Dce. 8, 1868. Junc 16, 1868.
July 28, 156s.
July 14, 1868.
Nov. 17, 1868.
Oct. 6, 1868.
Oct. 6, 1868.
July 7, 1868.
Dee. 22, 1868.
Apr. 21, 1868.
Feb. 4, 1868.

## Alphabetical list of patentees for the year 1868-Continued

No.

Stewart, James, St. Cloud, Minn. Fastening handles to axes, pieks, \&e
Stewart, James T., assignor to Samuel IR. Whitlow, Peoria, Ill. Medieal compound
Stewart, John. (See Van Stone, Samuel, assignor.)
Stewart, John, Jackson, Mieh. Potato digger.-
Stewart, John D., LaPorte, Ind. Balanee slide valve
Stewart, Plilo P., Troy, N. Y. Cooking stove...................................................
$\qquad$
$\qquad$
Stewart, Samnel B., Brush Valley, Pa. Coal stove
Stewart, T. B., Weathersfield, Comm, Railroad ear axle box...........(Reissue)
Stewart. William L., Rushville, Ind. Cultivator
Sthore, Charles, assignor to self and Leri Heigus, Montana, Iowa. Mould for casting sleigh shoes.
Stickney, Washington, and Nathan B. Chase, Loekport, N. Y. Composition for fuel
Stickney, W. C., and James 1 KeGee, Steubenville, N. Y. Veutilating sash adjuster
Same...... Device to open railway car ventilators
Stidger, H. A., Carrollton, Ohio. Beehive
Sticren. Edward, deceased, by Philippine S. Braekenridge, administratrix, Natrona, Pa. Process for treating the mother-water of salines....(Extension). Stiqale. E. M., Philadelphia, Pa. Case for preserving flowers, \&e
Stiles, David L., assiguor to Augusta P. Stiles, Rochester, N. Y. Fire pot for stores
Stiles, Darid L., assignor through mesne assignments to Augusta P. Stiles, Rochester, N. Y. Cooking stove
(Reissue)
Stiles, Ezra, New York, N. X. Car truek
Same...... Car brake
Same...... Thailroad ear wheel
Stiles, L. C., and R. P. Jackman, Elgin, II. Stovepipe shelf
Stiles, N. C., Meriden, Conn. Device for turning shafting.
Stiles, Norman C.. Middletown, Conn. Adjustable press
Stillman, O. M., Westerly, R. I. Gig for eloth
Same...... Combined steam generator and air lieater
Stillman, Richard B. Alnond, N. Y. Clothes dryer-
Stillson, Henry L., Plattsburg, N. Y. Combined clothes horse, ©e
Stilson, Lyman B., assignor to self and August Leich, Woodland, Minn. Har vester
Stilwwell, Edwiu R., Dayton, Ohio. Feed-water lieater for boilers
Same...... (See Bisbee, Thomas A., assignor.)
Same ..................... same
Stillwell, Thomas H., New York, N. Y. Ear trumpet. (Antedated May 18, 1868) Stimpson, James, leeeased, by Julia M. Colbum, administratrix, Baltimore, AIA. Vessel for holding liquids
(Extension)
Same......................... same
(Reissue)
Stimpson, J. Ienry, Bostou, Mass. Gas furnaee for heating soldering tools...
Stimson, Alfied A., Boston, Mass. Bung for easks
Stinc, William, Ehnore, Ohio. 'Tinner's forming maehine
Same.......Eave trough.
Stitt, Joln, St. Johns, Mieh. Log eart
St. John, Cornelius, Charlestown, Mass. Lamp burner
St. John, Garland B., Brooklyn, Mich. Cultivator
St. John, George B., assignor to self and Norman S. Cate, Boston, Mass. Watel key
St. Joln, M. W., Leonardsville, N. Y. Ball and soeket joint. (Anterlated June 18, 1×68)
St. John, O. S., Willoughby, Ohio. Car coupling
Same ..................................... Same
St. Joln, O. S. and T. C., Willonghby, Ohio. Machine for harvesting potatoes
St. John, R. If., Bellefontaine, Ohio. Theking device for sewing machines
St. John, William H., and Petor Cartwright, New York, N. Y. Composition for purifying illuminating gas
St. John, William O., and Edward Stoekton. (See Stoekton si St. John.)
 St. Lonis Lead and Oil Company. (See Waters, James S., assignor) ..................................... Stoek, John and Jaeob, New York, N. X. Barber's chair
Stock, Theodore, and E. A. Müller. (See Miiller \& Stock.)
Stoekbridge, Charles H., assignor to self and Osmore O. Roberts, Northampton, Mass. Bit holder
Stocking, Jerome, and Edward P. Shaffer, Roehester, N. X. Steam-engine slide valve.
Stoekstill, S. L., and W. I. I. Scarff, Medway, Ohio. Clover harvester
Stoekstill, S. L., and H. II. Dille, Medway, Oliio. Meat cutter
Stoekton, Edward, and William O. St. John, Folsom, Cal. Apparatus for produeing motive power
Stoekwell, Tra H., and Lizzic C. Goodwin, Worcester, Mass. Tatting, shuttle
Stoddard, Charles and Annos, Naples, N. Y. Cooking-store rentilator
Stoddard, William, Winona, Minn. Famning mill
Stoddard, William M., San Franeiseo, Cal. Binder for sewing machines
Stoddard, Worden E., Fort Edward, N. Y. Weatherboard gauge
Same...... Serubbing machine

## Date

Aug. 18, 1868.
Jan. 21, 1368.
Nov. 3, 1868.
Aug. 4, 1868.
Apr. 7, 1808.
Jaly 7, 1268. July 14, 1868. Sept. 22, 1868 Dec. 22, 1868. Dee. 29, 1868.

Aug. 25, 1868.
Jan. 21, 1868 Sept. 1, 1868
Dee. 20, 1868.
Felb. 18, 1868.
Dee. 9,1868
Not. 24, 1868.
Mar. 17, 1868
Dee. 29,1868.
Apr. 14, 1868.
Apr. 14, 1868.
Apr. 14, 1868.
A $11.14,1868$.
Sept. 8, 180's.
Nov. 24, 1868
Feb. 11, 1863.
Apr. 14, 1863.
June 16, 1868.
Sept. 15, 1868
Oct. 6, 1868
Aug. 18, 1868.

June 2, 1868.
Apr. 14, 1868.
Jume 9, 1868
Oct. 13, 1263.
June 30, 1868.
Jinn. 7, 1868.
June 2,1868.
Nov. 17, 1868.
Mar. 10, 1868.
Dee. $8,1868$.
Mar. 3, 1868.
June 30, 1868.
Dec. $8,1868$.
Dec. 29, 1868.
Apr. 21, 1868.
Oct. 20, 1868.
Apr. 7, 1868.

May 5, 1868.

Nov. 10, 1868.
Apr. 7, 1868.
Feb. 25, 1868.
June 23, 1868.
May 5, 1868.
Aug. 4, 1868.
Sopt. 15, 1868.
Sept. 8, 1868.
Noy. 3,1868.
Oet. 20, 1868.
Nov. 17, 1868.

## Alphabetieal list of patentecs for the year 1868-Continued.

No.

79, 274
75, 484
75, 485
73, 406
84, 314
80, 573
79, 409
82, 043
84,691
85, 186
75,215
79, 925
74, 259
78, 618
76, 816
80, 234
81, 118
81, $4 \geq 9$
83, 220
75, 706
82, 766
79, 8\%2

76, 669
「8, 243
74, 167
75,595
79, 410

77, 850
85, 408
79, 609
84, 016
74, 168
74, 169
3, 167
3, 232
83, 420
83, 545
3, 254
2,890
76, 266

77, 675
84, 017
84, 315
75,707
83, 743
73, 666
77, 332
73, 4\%
85, 490
80, 678
75, 486
84, 591
84, 915

Name, residence, and invention or discovery.
Date.

Stoddart, David, San Francisen, Cal. Reeiproeating steam engine Stohlmann, Frederiek A., Brooklyn, N. Y. Truss pad

Same...... Syringe
Stokely, B., et al. (See King, Jacob, assignor.)
Stokes, F. U., Cincinnati, Ohio. Check-rein holder
Stokes, John, assignor to Wesson Fire Arms Company, Springfield, Mass. Guu lock
Stokes, Joseph, and John Brough, Trenton, N.J. Water bosh for pudding furnaces
Stokes, Samuel S., Westboro, Ohio. Churn
Stoll, Michael, assignor to self, Benjamin Suavely, and Anthony Iske, Conestoga Township, Pa. Potato plow
Stoll, Miehael, and Henry Gross, assignors to Hemry Gross, Middletown, Pa. Manure
Stoll, P. J., Marshallsville, Ohio. Mitching-strap buekie
Stone, A. S., Plainview, Minn. Grain binder
Stone, A. S., and J. J. Butts. (See Butts \& Stone.)
Stone, Charles E., Amesbury, Mass., and Alfred Herbert, Salisbury, Mass. Tool for fitting bands on houbs.
Stone, Chester, Ravenna, Ohio. Fruit frame.
Stone, Daniel J., Warwiek, R. I. Mop wringer
Stone, Draper, Rochester, N. X. Fruit jar
Stone, E. S., et dl. (See Vandergrift, French \& Stone.)
Stone, Hiram, Cleveland, Ohio. Fruit jar
Stone, Jacob, assignor to self and Abram F. Randolph, Belvidere, N. J. Grate of railroad car stoves
Stone, James II., Washington, D. C. Fan for sewing machiles
Stone, Jamos S., and G. V. Chamberlin, Fitchburg, Mass. Bird trap
Stone,
, Same. 1. ,
Same...... Shect-metal ean. (Antedated Sept. 20, 1868)
Stone, John S. (See Ames, Horace B., assignor.)
Stone, Joseph M., assignor to self, George L. Davis, and John A. Wiley, North Audover, Mass. Card eylinder
orth, John, assignor.) ne, Joseph M., et al. (See Ashworth, J
Stone, N. F., Chicago, Mil. Can opener. (Antedated April 1, 1868)
Stone, Orin', Ionia, Mich. Cultivator
Stone, Paschal, assignor to Joseph Veazie and Augustus T. Dole, Charlestown, Mass. Box opener
Stone, S. D., Warwiek, R.I. Cattle stall
Stone, Thomas, assignor to self and Virgil H. Lyon, Plainfeld, Ind. Car, wagon, and other vehicles
Stone, W. F., and R. S. Laird. (See Laird \& Stone.)
Stone, William M. (See Barden, John S., assignor.)
Stone, Zaphna, Kinsmans, Ohio. Aërial navigator
Stonebanks, Joseph, College Point, N. Y. Aftaching wheels to sleighs
Stonecipher, Nathan, Cambridge City, Ind. 'Track clearer for harvester
Stoner, Alferd F., West Unity, Ohio. Cultivator
Stoner, John B., assignor to self, L. Meudelson, and T. Crommelin, New York, N. Y. Life-preserving apparatus

Same...... Ballasting vessels Same..........-same ..................... $\qquad$ (Reissue) (Reissuc) Stoner, John B., L. Mendelson, and Theodore Crommelin, New York, N. Y. Ballasting ressels
Stoops, L. M., Grandview, Ind. Beehive
Storer, David W., Bangor, Maine. Trade mark...........................................................
Storer, Jacob J., and James D. TVhelpley. (S'ee Whelpley \& Storer.)
Storer, John, New York, N. Y. Lubrieator for steam engines....... (Reissue).
Storey, George, Wheeling, West Va. Mole of treating malt and other liquors. (Antodated Mareh 20, 1868)
Storke, E. G., et al. (See Palmer, S. W. and J. F., assignors.)
Storle, Ole O., assignor to self and Isaac N. Mason, North Cape, Wis. Harvester rake
Storle, Ole O., assignor to solf and J. Smith, Norway, Wis. Horse hay fork. Storle, Ole O., and Lorens Swenson, Norway, Wis. Horse rake
Storm, William Mont., New York, N. Y. Clothes Wringer. (Antedated Mareh 10, 1868)
Storm, William Mont., New York, N. Y., and Genrge H. Ennis, Hudson County, N.J. Machine for fulling and felting hat borlies

Storrs, H. C., New York, N. X. Loeking knob latch
Same......File handle
Storrs, John W., Birmingham, Conn. Stereoseope
Story, Joseph M., and Isaae A. Hedges. (See Hedges \& Siory.)
Stotz, Christian, and George Smith, Perth Amboy, N. J. Clay-pipe machino.
Stouffer, George TV., Lewistown, Pa. Spoke tenon
Stouffer, Hiram C. and Abraham, Beaver Townshin, Ohio. Horse hay fork................................
Stouffer, Hiram C., assignor to self and George Smith, Beaver Township, Ohio. Hay carrier.
Stout, George TV., and John C. Richardson, assignors through mesne assignments to George W. Stout, James H. Prentice, James Davis, jr., and Sainuel K. Hawley, Newark, N. J. Hat-ironing machine

June 23,1868
Mat. 10, 1863
Mar. 10, 1868
Jan. 14, 1868
Nov. 24, 1868
Aug. 4, 1868
June 30, 1868
Sept. \&, 1868
Dec. 8,1868
Dce. 22, 1868
Mar. 3, 1868
July 14, 1863
Fel. 11, 1863
June 2, 1863
Apr. 14, 1868
July 21, 18.58
Aug. 18, 1868
Aug. 25, 1863
Oct. 20, 1868.
Mar. 17, 1868.
Oct. 6, 1868.

July 14, 1868.
Apr. 14, 1868
May 26, 1868.
Feb. 4, 1868.
Mar. 17, 1868.
June 30, 1868.

May 12, 1868
Dee. 29, 1868
July 7, 1868
Nov. $10,1868$.
Feb. 4, 1868.
Feb. 4, 1868.
Oct. 20, 1868.
Dec. 15, 1868
Oct. 27, 1868
Oct. 27, 1868
Nov. 17, 1868
Mar. 3, 1868
Mar. 31, 1868.

May $5,1868$.
Nov. 10, 1868
Nov. 24, 1868
Mar. 17, 1868.
Nov. 3,1868.
Jan. 21, 1868.
Apr. 28, 1868
Jan. 21, 1868.
Dec. 20,1868 .
Ang. 4, 1868 .
Mar. 10, 1868.
Dec. 1,1868.

Dec. $15,1868$.

## Alphabetical list of patentecs for the year 1868-Continued.

No.

78,154
74, $4+4$
73, 667
78, 025
76, 817
83, 631
84, $84 \%$
74, 86:
75, 708
85, 403
75, 407
3. 069

S4. 316
85, 144
79, 873
84, 230
$74, .951$
81, 023
81, 0:0
81, 030
84, 916
76, 11:3
76, 206
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76, i14
76, 115
82,174
81, 031
74. 74

73, 938
$\varepsilon 2,1: 5$
76,546
73, 473
84. 51:

80, 783
81, 839
85, 0:38
2,968
79,0 0 6
84, 147
76, 670
73,848
73, 8.49
84, 018
74, 445
76, 0.54
3, 213
74, 170
75, 071
73, 266
84,317
82,562
79,51:

Stout, Stephen, Tremont, Ill. Trace holder
Stover, Aurlrew J., Sandyville, Iowa. Stove flue supporter
Stover, Benjamin F., Lidoga, Ind. Washing machine
Stover, Benjamin F. aud Abram İ., Ladoga, Ind. Churn-dashor liead
Stover, D. C., Dayton, Ohio. Attachment for cultivator shovels
Storer, Hemry D., New York, N. X. Mortising and tenoning machine
Same...... Planing machine
Stom, E., aud A. D. Smith. (See Smitl \& Stow.)
Stow, Heury JI., San Francisco, Cal. Street parement
Same...... Well drill
Same...... Railroad ticket and punch for cutting conpons therefon
Stow, O. W., Ilantsville, Comn. Machine for forminer tubular beads on sheet utuetal outters
Same..... . Machine for bending sheet metal
(Reissue)
Stowe, Auson C., San José, Cal. Carriage spring
Same.
same
(Rusul
Stowe, George, Braceville, Ohio. Hoisting grato
Stowell, Barna T., Quincy, Ill. Excavator
Stowell, Willian J., Baltimore, Md. IRailway switch
Same...... . . . . . . . . . . . . . . . . . . . . . . same
Same........................
Strange, E., E. W., aud E. C., Tamton, Mass. Sirw minden
Strange, J. W., Bangor, Maine. Thread and twino cuttor
Strasser, Albert, Montgomery, Alib. Artificial leg

Strasser, Joseph, and George K. Smith, (Sce Smith \& Strasser.)
Stratton, James, Philarelphia, Pa. Carburettins air
Stratton, James, assiguor to self, William Wallace, aud Robert N. Wetherill, Philadelphia, Pa. Hydro-carbon burner.
Stratton, Josepli D., and Thomas Wilson, assignors to Joseph D. Stratton, Mackinaw ill. Cheese press.
Stratton, O. G., Greenfich, Mass. Bitstock
Straub, d. W., Philadelphia, Pa. Portable grinding mill
Strans, Louis, Louisville, KT. Apparatns for cleaning privies
Strant, Hooper B., Greenleaf, Minn. Washboard
Straw, Levi H., et al. (See Bean, Frank, assionor.)
Strawn, Janes, Plymouth, Mich. 'Carriage bolt
Streat, George, New York, N. Y. Oiled fabric
Street, Willim Tell, Frankford, Pa. Liti-line for sea bathing
Streeter, James S., assignor to self and City Macline Company, Provideuce, Ti I. Ely frame flyer

Streeter, 'Luther, assignor to self and Ransom Shopark, Chicopec, Mass. Gardeu hoe
Streeter, L. R., Chelsea, Mass. Plate for artificial teeth
Streeter, L. R., assignor to Alfued B. Ely, trustee, Nowton, Mass. Plate for artificial teeth
(Reissne). Streeter, Martin, assignor to self and Artell Austin, New Haren, Conn. Shut ter operator
Streit, Charles, Indianapolis, Ind. Extension lonngo
Stremme, Conrad C., Anstin, Texas. Bung.
Streng, George MI., and Joseph Stadler. (Sce Stadler \& Streng.)
Strevell, William, Jersey City, N. J., and G. B. Kerper and S. B. Wells, New York, N. X. Leather belting
Stricker, George, Catawissa, Pa. Vehiclo
Strickland, Davik, and George Richards. (See Richards \& Strickland.)
Stricklaud, R., Albany, N. Y. Tea and coffee pot
Strickler, Henry, Carlisle, Pa. Hoisting drum
Strickler, Henry, (barlisle Borough, Pa. May hoisting drum and grain fork
Strock, Daniel, Chambersburg, Pa. Inorse rake.
(Reissue)
Strorle, Thomas F ., Mortonville, Pa. Calculating mul registering machino
Strong, George M., Boston, Mass. Sleigh bell
Strong, Olirer, Green Center, Ind. Hand loom
Stroug, William N., et al. (Sce Wilsm, Sylvanus C., assiguor.)
Strothman, Edward and John, Milwankie, Wis. Straw cutter
Stroud, J. C., Lockhart, I'exas. Cultivator
Strongh, George H., Watertown, N. Y, Morse hay fork
Strouse, I., \& Company. (See Cargill, W. B., assignor.)
Stronse, Simon, and Adam Good. (See Good \& Stronso.)
Same.
Stront, Cyrus W., and Amos Wilder. (Sce Wilder \& Stront.)
Strow, Frederick, and Robert Taylor. (Nec Taylor and Strow.)
Strmbe, Andrew, Frederiek, Ma. Power hammer
Struse, H. D., Brooklyn, N. Y. Clothes dryer
Stuart, A. P., and P. A. Downer. (Sce Downer \& Stuart.)
Stuart, David, and Lewis Bridge, assionors to Stuart, Petorson \& Company
Philadelphia, Pa. Base-huming stovo
Same..... . Base-burning fireplace stove
Same...... Cooking stovo
Stuart, David, and A. Wemyss, assignors to Stuart, Peterson \& Company, Pliiladelphia, Pa. Store plate.

Date.

May 19, 1868
Feb. 11, 1868.
Jan. 21, 1863.
May 19, 1868
Apr. 14, 1868.
Noy. 3, 1863.
Dec. 8, 1863.
Feb. 25, 1862.
Mar. 17, 1868.
Dec. 29, 1863
Mar. 10, 1868
Ang. 4, 1863.
Nov. 24, 1868
Dec. 22, 1868
July 14, 1868.
Nov. 17, 1868
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ithe. 11, 1868.
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Ang. 11, 1868.
Dee. $15,1868$.
Mar. 31, 1868.
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Mar. 31, 186.
Mar. 31, 1863.
Sept. 15, 1863.
Ай. 11, 1868. Feb. 25, 1868
Jan. 28, 1868.
Sept. 15, 1868.
Apr. 7, 1863
Jan. 21, 1863.
Dec. 1, 1863.
Aug. 4, 1863.
Sept. 1, 1868.
Dec. 15, 1848.
June 9, 1863.
June 23, 1868.
Nov. 17, 1868
Apr. 14, 1868.

Jan. 28, 1868
Jau. 23, 1868.
Nov. 10, 1868
Fob. 11. 1868
Apr. 21, 1868
Nor. 24, 1863
Feb. 4, 1868
Mar. 3, 1868
Jan. 14, 1868
Nov. 24, 1863
Sept. 20, 1868
June 30, 1868.

Mar. 24, 1863
Sept. 29, 1868.

May 5, 1868
June 23,1868
Nov. 3, 1868.
July 21, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Name, residence, and invention or discovery

Stuart, F. D., and George F. Lewis. (Sce Lewis \& Stuart.) Stuart, Henri L. (See Boynton, Joln F., assignor.)

> Samc...... . . (Sce Wílliams, Cyıus M., assignor.)

Stuart, L. C., New York, N. Y. Electro-magnetic engine.
Stuart, Peterson \& Company. (Sec Stuart \& Wemyss, assignors.)
Stuart, Robert, et al. (S'ce MeDougall, Hugh, assignor.)
Stubbs, Enool E., West Elkton, Ohio. Combination padloek
Same...... Bolt fastening
Stuek, Levi, Bryan, Ohio. Method of obtaining dental models
Strieky, Stephen. New Albany. Ind. Feed-water heater
Studer, George, Richmond, Ind. Apparatus for pressing cigars
Studley, Alvan, Natiek, Mass. Curtain fixture
Stuhltracer, Philip J., Philadclphia, Pa. Compound safe-door hinge
Stump, Andrew, assignor to seif and Charles Colby, Bodega, Cal. Churn. (Antedated June 6, 1868)
Sturcken, Otto Edward Henry, San Traneisco, Cal. Window frame
Sturdevant, D. B., and B. H. Harmon, Clifton Springs, N. Y. Modc of removing tin from sheet metal

## Same..... . (Sce Harmon \& Sturdevant.)

Sturdy, George J., and S. W. Young, Providence, R. I. Japanning metals
Sturdy, J. E., Augusta, Maine. Taek holder and carpet strctcher
Sturgeon, Eli, Columbiana, Ohio. Safety bridge for railroad cars
Sturgcon, Jolin M., New York, N. Y. Postage stamp.
Sturceon, Sheldon. (Sce MeBeth, James E., assignor.
Sturgis, D., assignor to self and M. Thatehcr, Byron, Miel. Straw outter. (Antedated June 27, 1868)
Stuated June 27, 1868) ......................................................
Styer, Joseph T., assignor to self and Eber Bradley, Richwood, Ohio. Sheepshearing table
Suhr, Frederick T., Titusville, Pa. Apparatus for burning hydro-earbons. (Antedated April 7, 1868)
Sullenberger, Asher W., Laurel, Ind. Car coupling
Sullenberger, W. H., assignor to self and J. C. Martin, Harrisburg, Pa. Sasli stop and look
Sullivan, Edward, Pittsburg, Pa. Rcamer. (Antedated Junc 6, 1868)
Sullivan, Engene, assignor to the American Horse Collar Company, New York, N. Y. Fabrie for covering horse collars

Sullivan, George M., et al. (Sce MeCreary, Thomas, assignor.)
Snlivan Michael H Providence, R. I. Cribbing preventer..
Sullivan, T. J., Albany, N. Y. Permutation lock.
Sully, Alfied, United States Army. Army wagon
Sulfer, Frederick, St. Paul, Minn. Steam boiler furnaee
Sulzbacher, Mirum, New York, N. Y. Bureau bedstead
Sulzman, Charles, Waterford, N. Y. Door bolt and lock
Sum, Philip, New York, N. Y. Show-ease nolding
(Desicn)
Summerill, James B., Peun's Grove, Pa. Hay clevator
Simmers, Alfred F., assignor to self, Chaumeey Nye, and Thomas A. Slack, Peoria, Ill. Post-hole borer
Summers, J. W., Sandy Hill, N. Y. Horse hay fork
Sumner, Eli J., and Richard P. Johnson. (See Johnson \& Sumner.)
Sunderland, I. A., Chagrin Falls, Ohio. Milk can
Sutcliff, Henry, and John E. Tueker. (See Smith, William C., assiguor.)
Sutherland, Brush, Chicago, Ill. Water wheel
Sutherland, James, Morris, Ill. Wagon for loading logs, stone and hay
Sutherland, James, Brooklyn, N. Y. Liquid meter
Sutherland, James, and Francis Moakley, East Mampton, Mass. Steam pump engine. (Antedated Feb. 18, 1868)
Sutherland, James A., Elmwood, Ill. Machine for curbing wells.
Same... . . . Horse collar
Sutherland, William I., Seven Mile, Ohio. Sash stop
Sutherlen, B. W., Freesoil, Minn. Sulky plow
Sutphen, George E., Louisiana, Mo. Horse rake.
Sutliff, James, East Boston, Mass. Steam generator
Same
same
Sutliff, W. W., Town Linc, Pa. Carriage spring
Sutter, E. V. (Sce Wehrly, Samuel, assignor:)
Sutton, Charles D., Tarrytown, N. Y. Spring for vehicles
Sutton, George J., (See TVait, J. L., assignol.)
Sutton, James W., Detroit, Mich. Water heater for steam generators.
Sutton, Sedgwiek A., assignor to self, W. Uhl and Cysander Flagg, Dixon, Il. Filc-cutting machine
Sutton, William, Washington, Ga. Saw ootton gin
Swafford, Levi W., Edward Butler, and John R. Hess, Museatine, Iowa. Blindslat operator
Swain, Charles H., and Jerome B. Garduer. (Sce Gardner \& Swain.)
Swain, C. F., and A. R. Ergleston. (See Ergleston \& Swain.)
Swain, Delos, and Daniel Fuller. (See Fuller \& Swain.)
Swain, Enoch, Lewistown, Pa. Wheel tightener
Swain, James H., San Franciseo, Cal. Boot and shoe last
Swallow, G. C., and R. Cutler. (Sce Cutler \& Swallow.)
Swalm, George A., et al. (See Reight, Charles A., assignor.)

Date.

June 2, 1868

Mar. 3, 1868
Mar. 10, 1868
Sept. 29, 1868
July 28, 1868
Dec. 29, 1868
Mar. 3, 1868
Sept. 29, 1868
June 23, 1868
Mar. 31, 1868
Mar. 24, 1868
July 21, 1868
Dee. 8,1868
Sept. 8, 1868
June 23, 1868

June 30, 1868

Nov. 3, 1868
Apr. 21, 1868 Mar. 10, 1868

Dee. 29, 1868
June 23,1868
Jume 16, 1868.
May 19, 1868
Aug. 25, 1868
Sept. 22, 1868.
June 30, 1868
Feb. 18, 1868
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Mar. 31. 1868.
Mar. 24, 1868.
Aug. 25, 1868
Mar. 24, 1868.
Dee. 15, 1868.
Sept. 1, 1868
Feb. 11, 1868
June 2, 1868
Mar. 24, 1868
Apr. 14, 1868
Sept. 22, 1868
Feb. 11, 1868.
Apr. 14, 1868
Dec. 8, 1868
Apr. 28, 1868
Aug. 18, 1868.
Mar. 24, 1868
Aug. 25, 1868
Sept. 1, 1868
Aug, 4, 1868.
Nov. 24, 1868.
Oct. 27, 1863

Jan. 21, 1868
May 12, 1868

## Alphabetical list of patentees for the year 1863-Continued.

No.

82, 176

76, 955
76, 956
78, 620
80,027
3, 160
78, 620
78, 156
80, 680
79, 411
2,966
73. 134

76, 268
85, 187
79,277
79,786
3, 149
3, 181
79, 158
83, 105
73, 474
75, 073
85,145

79, 412
82, 564

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76, 000
77,125
79, 159
83, 566 81, 556

82, 362
77, 676

79,515
79,516
81, $55 \%$

77, 126
77, 932
76,673
74,952
75, 314

Name, residence, and invention or diseovery.

Swalm, Sencea A., ant Charles C. Schmitt, New York, N. Y. Fire escape Swan, Caleb, uxecutor of Daniel Hayward, deceased. (Sce Hayward, Daniel.) (Extension.)
Swan, James, Seymour, Conn. Maehino for making auger bits
Same..... Auger handle
Samo. . . . . Manufacture of augers and bits
Same...... Manufacture of anger lits.
Sivan: John. Baltimore, Md. Sleeping ear
(Reissue).
Swan, Samuel, New York, N. Y. Bench hook for earpenter's benches
Swan, Willian, assignor to self and Louis Duhain, jr., Now York, N. Y. Mode of ornamenting fabries.
Swart, James, Hoftman's Ferry, N. $\bar{Y}$. Corn and potato eoverer
Swarthout, Coc, Jolict, Ill. Salve
Swartwout, Thomas. (See Enos, John M., assignor.)
Swartz, Daniel M., and Jonathan Kieamer, assignors to C. Aultman, Canton,
Ohio. Harvester rake.
Swasey, Elward, and Willian Robbins. (Sce Robbins \& Swasey.)
Swasey, Samuel II., Morristown, Vt. Barrel cluurn
Swayne, Wager, Uniterl States Ármy. Piston
Sweeney, Charles, East Bloomfichd, Mass. Churn
Sweeney, John, and James W. Russell. (Sec Paige, W. H., assignor.)
Sweeney, Michael, Wheeling, West Va. Lamp chimney
Sweeney, Michacl, assignor to Sweeney, Bell \& Company, Whocling, Wost Va. Glass pressing machino

Sweeney, Michael, James E. Jathews, and Thomas Hartley, Wheeling, West
Va. Glass mold
(Reissue).
Sweeney, Peter, and John Braiburn, New York, N. Y. Platform for rock drills
Swe oner, Samuel L., Mor'ison, M1. Corn planter.
Sweet, Eli, assignor throngh two assigmments to T. W. Vincent, Eber Sweet,
and Benj. J. Jones, Whitney's Point, N. Y. Tongue for hay-loading machines
Swect, George W., Troy, N. Y. Ash pan for cooking stoves
Sweet, John E., Syracuse, and J. Boyd Elliott, New York, N. Y., assignors to
Orlando B. Potter and Solomon J. Gordon. Machine for making ent nails .
Sweet, Nathaniel. (Sce Enos, Levi S., assignor.)
Sweet, Oliver C., Albany, N. Y. Machine for drying tubular fabries. (Ante dated June 19, 1868)
Same...... Machine for drying and stretching fabries. (Antedated Sept. 24, 1868)
Sweetland, Albert C., ct al. (See Draper, Sweetland \& Draper.)
Swectland, Alvah, assignor to self and Milton J. Palmer, Syracuso, N. Y. Hame fastener.
Swectland, Anthony B., assignor to self and James Daley, Fitchburg, Mass. Refrigerator
Sweetland, Jerome B., Pontiae, Mieh. Corn harvester
Same...... Marvester rake
Same-. - . . Horse hay fork
Same...... Hook
Same...... Wash boiler
Sweetland, J. B., and Silas T. Fenn, Pontiae, Mich. Wash boiler
Sweetland, Jeromo B., et al. (Sec Hieks \& Doty, assirnors.)
Swenson, Lorens, and Ole O. Storle. (Sce Storle \& Swenson.)
Swesey, Samuel, Malta, Ohio. Quartz mill.
Swett, G. L., Leominster, Mass. Shelf rest
Swett, James H., Pittsburg, Pa. Hinging of the griping jaw of spike machine.
Same.... . . Birminghanı, Pa. Railway joint
(Extension)
Samo. . . . . Machino for making rivets.
Swett, Leonard S., and James Graham, Vassar, Mich. Gate for turlono waterwheels
Swickard, Noalı, Galra, Ill. Wagon and ear unloarler
Swift, Moses C., and Franeis W. Tilton. (Sce Tilton \& Swift.)
Swindell, James II., Camdon, N. J. Indexing books ant ledgers
Swindell, William, Alleghany City, Pa. Puddling and boiling furnaco
Swineford, A. P., et al. (See Gram, Ernst W., assighor.)
Swingle, George J., Knoxvillo, Ill. Fly trap.
Swinnerton, W. R., Peoria, Ill. Mcehanieal movement
Switzer, John, Lymm, Mass. Modo of securing the ends of felloes and spokes in carriage wheels
Switzer, John J., assignor to self and Edwin H. Fittz, Roxbury, Mass. Stop motion for looms.
Sylla, Philo, assignor to self, W. F. and Edwin H. Sylla, Elgin, Ill. Hat racks for seats.
Symes, Robort, St. Louis, Mo. Device for ventilating mill stones
Symonds, Dexter, Marlow, N. H. Process for tanning
Symons, Richard D., John 'T. Harry, and Samuel Stopliens, Grass Valley, Cal
Ore separator and concentrator
Taber, C. R. and J. O., Salem, Ohio. Dropping platform for harvesters
Same. . . . . Harvester
Taft, B. F., assignor to self and Daniel Neodham, Grotou Junction, Mass. Hay and eotton press

Dato.

Sept. 15, 1868.

Apr. 21, 1868
Apr. 21, 1868 June 9, 1868 July 14, 1868. Oct. 13, 1868. June 2, 1868

May 19, 1868
Aug. 4, 1868
June 30, 1868.

June 23, 1868
Jan. 7, 1863.
Mar. 31, 1868
Dee. 22, 1868
June 23, 1868.
July 7, 1868
Oct. 6, 1868.
Nov. 3, 1868
Jume 23, 1868
Oct. 13, 1868.
Jan. 21, 1868
Mar. 3, 1868
Dec. 22, 1808.

Juno 30, 1868
Sept. 29, 1868

Mar. 3, 1868
July 7, 1868
Fieb. 11, 1868.
Mar. 24, 1868.
Apr. 21, 1868.
Juno 23, 18.68.
Oct. 27, 1868.
Aug. Д5, 1868.

Sept. 22, 1868.
Мау 5, 1868.
Fel. 26, 1868
Juno 30, 1868.
Jınie 30, 1868.
Aug. 25, 1868.
Oet. $13,1868$.
Арт. 21, 1868.
May 12, 1868.
Apr. 14, 1868
Fob. 25, 1868.
Mar. 10, 1868.
Aug. 11, 1868
Feb. 95, 1868
June 30, 1868
Apr. 14, 1868.
Oct. :30, 1868
Mar. 31, 1868
June 30, 1868.
Aug. 4, 1868

## Alphabetical list of patentees for the year 1888-Continued.

## No.

80, 237
2,870
7\%, $67 \%$
79, 278
3,206

83, 888
74,254
75,596
76, 270

75,075
76, 849
82,767

2,933
82, 363
81, 705
75, 811
-76,674
84, 778
82, 565
83, 006
82, 177
\%8, 850
81,553
80, 429
73, 669
74, 863
82, 178

81, 032
83, 673
75, 597
21
9, 610
9, 611.
82, 450
83, 222
83, 223
33, 224
81, 432
81, 033
3, 157
84,393
73, 671)
83, 422
75, 490
83,659
79, 025
66, 547
80, 238
2, 885
81, 559
3, 234
80,372
81,034
81, 706
77, 127
74, 775
4.3 135
3., 18

84, 148
81,433
80, 430
76,548
75,070

Name, residenee, and invention or diseovery.

Taft, Daniel F., New Bedford, Mass. Corn planter
Taft, Georce C., Worcester, Mass. Wreneh. (Antedated July 11, 1868)
Taft, James M., North Providence, R. I. Teade-mark label.
(Design)
lagart, Hugh, Jacksontown, Ohio. Cattle guard for railroads $\qquad$
ragint, B. B., and C. W. Brown, Watertom, N. X. Hat, bonnet, de Taggart, Franeis, Lewis S. Chichester, and Clark W. Mills, assignors throngh mesne assigments to. Lewis S. Chichester, George II. Nichols, and Clark W. Mills, Brooklyn, N. Y. Grain elevator
(Reissme). Tareart, Johur, Boston, Mass. Maehine for e

Extension)
Saue..... Machine for splitting leather
Taggart, John, assignor to self and Daniel C. Molden, Roxbury, Mass. Water meter
Taggart, John, assignor through mesuo assigmments to self, Isaae Ames, anil Sarah P. Taggart, Roxbury, Mass. Brick maehine
Taggart, John, assignor to self and Jerome A. Bacon, Roxbury, Mass. Maehine for making paper pulp
Tagliabue, Guiseppe. (See Boyle, Robert Kirk, assignor.)
Talbot, E. C., Molden, Mass. Fishiug tackle
Tallott, S. J., assignor to self, James II. Hall, and James II. Gray, Milford, N. If Plate lifter.
Talcott, George W., assiguor to self and Isaac D. Voak, Buffalo, N. Y. Conbined floating fire-engine and wrecking-pump
Talcott, John B. (See Haslam, Septimus, jr., assignor.)
Tallman, Abel C., Philadelphia, P’a. Skate ramer
Design)
Tallman, James, Clayton, Ill. Bechive
Tallman, Newton, West New Brighton, N. Y. Oiler for machinery
Talpey, Joseph A., assiguor to self and Mellen Bray, Somerville, Mass. Rotary pump
Tambling, William H., Mazo Manie, Wis. Bed bottom.
Tamblyn, James, Virginia City, Nev. Antomatic stop for ears
Tamin, Jean Maric Onesime. (See Mallet, J. I. A., assignor.)
Tamkin, George, Ncwburg, N. Y. Stove-pipe damper
Landy, George Granger, and William Perkins. (See Perkins \& Tandy.)
Taney, Joseph, and John H. Brown, Bangor. Maine. Railway-ear bumper
Camer, George, Frcetown, N. Y. Fruit gatherer.
Tamer, J. M., Albert Lea, Minu. Water wheel
Tanner, Lovel F., Milan, Ind. Farm gate
Tansey, Verlin G., assignor to self and James W. Simpson, Indianapolis, Ind. Fire kindler
Tapley, J. F., Springfield, Mass. Ruling machine
Tapley, J. F., \& Company. (See Trest, Charles F., assignor.)
Taplin, Alvin, Somerville, Mass. Lamp
Lappey, William H., William C. Lumsden and Alexander Steel, Petersburg, Va. Cotton press
Tarbell, Edmund. (See Hartford, D. Frank, assignor.)
Tarbox, Eugene L., Nashrille, Teun. Stencil plate
Tarbox, Horaee, Warwiek, R. I. Automatie car coupling.
Tarpley, Meary, Wesley, Ky. Horse power.
Tarr, John Blake, Fair Haven, Mass. Maunfacture of spherical shot and shell
Same.......Machine for polishing spherieal shot and shell
Same...... Cast-iron car wheel -..................................................
Same...... Chicago, III. Cap pentrs plane. (A steel ingots
Same .... Cair Haven, Has.
Same....... Steam-engine
Tarrant, Esan, Muskegon, Mieh. Machine for turning logs in saw mill
Tartiere, Lucien A., and Jules Fongerat. (See Fougerat \& Tartiere.)
Tassius, Louis, Norwalk, Ohio. Artificial leg...
Tate, Isaac C., New London, Comi. Brace for bits
Tate, William E., Cambridgeport, Mass. Water wheel
Tate, Willum. New Haven, Conn. Arjustable spirit level
Tattershall, Richard, Beloit, Wis. Spring bed bottom . Car brake.
Tattershall, Richard, and John A. Burchard (Seo Bu
Taverdon, C. L., and Jules Moret, France. Pump
Taylor, Abner, New Hartford, Conn. Farm gate
Taylor, Albert L., Springfield,' Vt. Clothes pin
Same...... Cutlery
Taylor, Ambrose, Osawatomio, Kansas. Last
Taylor, A. E., New Britain, Conn. Letter tile
Same...... Bell attachment.
(koisstre)

Taylor, Barnett, Forestville, Minn. Grain register
Samo...... Hand cultivator............................
Taylor, Benjamin C., Dayton, Ohio. Horse hay rake
Taylor, Charles $\Delta$., Chicago, Ill. Trunk .
Taylor, Daniel W., Bell County, Texas. Medieal eompound
Taylor, Edward W., Morristown, Pa. Hydro-carbon burner
Taylor, Edwin, Tecumseh, Mich. Steam generator
Taylor, Edwin P., New Bedford, Mass. Button boot
Taylor, Enoch, Menphis, Tenn. Baling press
Taylor, Esau D., Hornellsville, N. Y. Base for ball players.

Date

Oet. 20, 1868. July ¿1, 1868. Jィュ. D2, 1868. May 5,1868.
Junc 23, 1868.

İot. 24, 1868.
July 3, 1868.
Nov. 10, 1868.
Fel. 11, 1868.
Mar. 17, 1868.
Mar. 31, 1868.
Mar. 3, 1868.
Apr. 14, 1868.
Oct. 6,1868.
Feb. 11, 1868. Sept. 22, 1868. Sept. 1, 1868.

Mar. 24, 1868,
Apl. 14, 1868.
Dee. 8, 1868.
Sept. 29, 1868.
Oct. 13, 1868
Sept. 15, 1868.
Jan. 28, 1868
Aug. 25, 1868.
July 28, 1868.
Jan. 21, 1868.
Feb. 25, 1868.
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Aug. 11, 1868.
Nov. 3, 1868
Mar. 17, 1868.
Mar. 31. 1868.
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July 7,1868 .
Sept. 22, 1868
Oct. 20, 1868.
Oct. 20, 1868
Oct. 20, 1868
Aug. 25, 1868.
Aug. 11, 1868
May 19, 1868.
Nov. 24, 1868.
Jan. 21, 1868
Oct. 27, 1868
Mar. 10, 1868.
Sept. 29, 1868.
June 16, 1868
April 7, 1868
July 21, 1868.
Fel. 25,1868
Aug. 25, 1868.
Dee. 15, 1868
July 28, 1868.
Aug. 11, 1868.
Sept. 1, 1868
Apr. 14, 1868.
Feb. 25, 1868.
Jan. 7, 1868.
Nor. 1\%, 1868
Aus. 25, 1868.
July $28,1868$.
Apri. 7, 1868.
Mar. 3,1868.

| No. |
| :---: |
| 79,612 |
| 76,549 |
| 75,217 |
| 75,913 |
| 77,933 |
|  |
| 89,566 |
| 79,413 |

Taylor, E. P., St. Lonis, Mo. Apparatus for hardening stone
'Taylor', George Cr., Cluarlestown, Mass. Mateh stand.
Tajlor, Gcorge II., New York, N. Y. Apparatus for exereise Same.
.same
Taylor, George H., Now York, N. Oseillating rubling machino for medical uses.
Taylor, George I., et al. (See Woolverton, Samuel, assignor.)
Tajlor, Gilbert F. New York, N. Y. Guard for calpet-sweeping maeline
Tajlor, Heury, JIidletown, Wis. Hop pross.
Tayior, II. A. (See Irving B., assignor.)

> Same . . . . . . . . . . . . . . same. Same . . . . . . . Same.

Taylor. Henry R., IVestport, Comn. Gear-entting tool
ifar. 3. 1868.
May 12. 1rG?.
Jinc 23,18 uz.

June ?, 1868.
Mar. 3 1ebe.
(1)t. 13, 106*.

May 19, 18ט8.

Ninv. 10, 1868. For. $24,1808$.

Junc 23, 1=68.
Dec. 1, 18G8.
Jug. 4, 1868.
Sept. 8,1868.
Nor. $10,1868$.
Dec. 1,1868.
Oct. 20, 1863.
Feb. 18, 1868.
June 30, 1868.
Ang. 4, 1268 Sept. 1, 1863
()ct. 6, 1868.

Dee. 8, 1868.
Jnly 14, 1868.
JuIy 23, 1868.
Tail. 21, 1868.
Mar. 31, 1868.
Feb. 11, 1868.
Ang. 18, 1868.
July 14, 1868.
A1)r. 7, 1868.
July $14,1868$.
June 9, 1868.
Apr. 7, 1868.
July $7,1868$.
Aug. 11, 1868.

Nov. 10, 1868.
Oct. 6, 1868.
Apr. 14, 1868.
July 21, 1868. June え3, 1868. June 23, 1868.

Dec. 29, 1868
Jume $23,1868$.
Nor. 24, 1868
Dce. 1, 1868
Mar. 31, 1868
June 16, 1868.

## ATphabetical list of patentees for the year 1868-Continued.

Thal, II., and Gr. Schlottmann, Now Haven, Comn. Coffeo pot
Thatcher, Johu M., Bergen, N. J. Fire-place heater.
Thatcher, M. (Sce Sturgis, D., assignor.)
Thatcher, M. P., Pontiac, Mich. Padlook
Thayer, Augustus, Albany, N. Y. Combined sereen and shovel.
Same..... Implement for sharpening cutlery
Same. ..... Implement
 Thayer, A. I
maver, D. H., Ladlowville, N. X. Harvester.
Thayer, Fredorie William, Boston, Mass. Hydro-earbon burner
Thayer, H. S., Boston, Mass. Submarine exploring
Thayer, J. C., Dunton, Ill. Milk cooler.
Thayer, R., and L. Bailey. (See Bailey \& Thayer)
(Reissmo.)
'Thaver, Sewel G., administrator of Daniel N. Beard, deceased. (See Beard, Daniel N.)
Theberath, Charles M. and Jacob H., Newark, N. J. Harness trimming . . (De. sign)
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84, 394
80, 315
73, 672
74, 630
75, 079
76, 553
73, 407
79, 029
80, 030
76, 002
77, 128
85, 147
74, 450
75, 812
83, 674
76, 273
10, 2 ²
75, 220
84,718
81,434
83,109

Thieme, Charles $I$. F., North Vernon, Ind. Priming for needle guns
Thiessen, C. V.. Effinglam, Ill. Corn planter
Thilmany, Waldemar, Cleveland, Ohio. Steam-engine balance slide valve
Thode, Marx, Mattoon, Ill. Subterranean walls
Thoma, Alois, New York, N. Y. Furnace for melting and refining steel
$\bar{X}$. Furnace for decarbonizine pomberg, and A. W. Wilder, New york, N .
Thomas, Abner, Ulysses, N. Y. Pauking eggs, \&e
Thomas, Allen C.. Camp Charlotte, Ohio. Animal trap
Thomas, Carl C. T., and Fredcrick A. C. Raymond, Beverly, Mass. Ladder.
Thomas, David, Hingham, Mass. Friction nipper
Thomas, Edwin, Philadelphia, Pa. Neck-tie
Thomas, Edwin, Philadelphia, Pa. Ventilating boots and shoes
Thomas, Enoch, Craigsville, Va. Oil, tobacco, and other presses.
Thomas, E. A., Philadelphia, Pa. Seann joint for cans, \&c
Thomas, James H., Lacon, Ill. Rook drill
Thomas, James H., Lyun, Mass. Weather strip
Thomas, J. H., et al. (See Gardincr, C. O., assignor.)
Thomas, J. H., and P. P. Mast, Springfield, Ohio. Seed planter. (Division A, reissue)
. same.
(Division B , rcissue).
Thomas, John F., Adamstown, Md. Machine for distributing guano, \&o
Thomas, John J., Union Springs, N. Y. Harrow.
Thomas, John L., Newburg, Ohio. Belt conpling
Same...... Alliance, Ohio. Steam generator Thomas, Laneaster, Philadelphia, Pa. Bottle mold
Thomas, Leopold, assignor to Andrew Kloman, Alleghany City, Pa. Spike machine.
Same...... Pointing spikes
Thomas, Milam, and James R. Madison. (See Madison \& Thomas.)
Thomas, Morgan H., Dansville, N. Y. Churn dashe1
Thomas, Nolson C., and Jacob H. Coo, Brighton, Mieh. Hay clevator
Thomas, Ralph, assignor to self and E. Parker. Waterbury, Conn. Sash fasteuer
Thomas, Roberts, Sterenson \& Company. (See Flansburgh, John D., assignor.)
Same...... (See Rose \& Calely, assignors.)
Thomias, S, I. Dawson, Ga. Wator wheel
y apparatns
Thomas, Volney M., Brandon, Vt. Crimary acp for boi.................
Thomas, William G., Centralia, Pa. Gal. Water heater for baths, tubs, \&c
Thomas, W. H., Galveston, Ind. Hemmer for sewing machines
Thomas, William L., Middlebury, Ohio. Bedstead
Thomas, William P., and Edward W. Munson. (See Munson \& Thomas.) Thomas, W. R., Catasanqua, Pa. Annealing furnaeo

Same.......Car wheel.
Same ......Steam pump .............................................................. Stame Thomplkins, Lyman P. (See Curtiss, Samuel T., assignor.)
Thompson, Albert, Ridgway, Pa. Shingle machine
Thompson, A. B., Owego, N. Y. Railroad car coupling
Thompson, Bjarne, Chicago, Ill. Sleigh
Same......Rnmer for wheeled vehicles.
Thompson, Bjarne O., Chioago, Ill. Railway ear brake
Thompson, D. J., Brooklyn, N. Y. Elevator for bnildings
Thompson, De Witt C., Ischna, N. Y. Beef steak eutter and mangler
Thompson, George, Nashua, N. H. Belt saw
Thompson, Goorge M., Boston, Mass. Device for stretehing telegraph wires....Nor. 17, 1868

Nov. 10, 1868. Dee. 22, 1868.

Jan. 7, 1868
A pr. 28, 1868
June 9, 1868.
June 16, 1868.
July 28, 1868.
May 26, 1868.
Mar. 24, 1868.
Apr. 7, 1868
July 28, 1868.
July 7, 1868.

Nov. 17, 1868.
Aıg. 18, 1868.
Ang. 11, 1868
Oot. 27, 1868
Mar. 17, 1868.
June 16, 1868.
Dec. 29, 1868.
Mar. 3, 1868.
Feb. 11, 1868.
Feb. 11, 1868.
June 30, 1868.
Aug. 4, 1868.
May 19, 1868.
July 28, 1868.
July 14, 1868.
Oct. 13, 1868.
July 21, 1838.
Mar. 31, 1868.
July 14, 1808.

Oct. 20, 1868
Nov. 24, 1868
Feb. 11, 1868. Scpt. 22, 1868. Feb. 11, 1868. Oct. 13, 1868. June 23, 1868.

Sept. 22, 1868.
Dec. 22, 1868.
Oct. 6, 1868.
Oct. 13, 1868.
June $9,1868$.
Not. 24, 18 กi8.
Date艮

July 28, 1868.
Jan. 21, 1868.
Feb. 18, 1868.
Mar. 3,1868.
Apr. 7, 1868.
Jan. 14, 1868.
June 16, 1868,
July 14, 1868.
Mar. 24, 1868.
Apr. 21,-1868.
Dcc. 22, 1868.

Feb. 11, 1868.
Mar. 24, 1868.
Nor. 3, 1868. Mar. 31, 1868.
Mar. 3, 1868.
Dec. 8, 1868
Aug. 25, 1868.
Oct. 13, 1868.

## Alphabetical list of patentecs for the year 1863-Continued.

| No. | Name, residence, and invention or discorers. | Date. |
| :---: | :---: | :---: |
|  | Thompson, George S. (See Paine, Calvin H., assignor.) |  |
| 78,552 | Thompson, George W., New York, N. X. Wagon for advertising. (Antedated May 25,1868$)$ | June 2, 1868. |
| 82, 364 | Same..... Brooklyn, N. Y. Sweat for hats.. | Sept. 22, 1868. |
| 85, 138 | Sane....... Medieated paper for the water eloset................................... | Dee. 22, 1868. |
| 2, 871 | Thompson, Henry Gr., assignor to the Hartford Carpet Company, New York, N. <br> Y. Carpet pattern. <br> (Design) | Ja1. 28, 1868. |
| 2,872 | Same........-........ same........................................... (Design) .- | Jan. 28, 1868. |
| 2,873 | Same.................. same. .-... ......... . . . . . . . . . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2,874 | Sanı. .-. . . . . . . . . . . . - same....... . . . . . . . . . . . . . . . . - . . . . . . . . . (Dosign) . | Jan. 28, 1868. |
| 2,875 | Same.................. - same................... ...... . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2,876 |  | Jan. 28, 1868. |
| 2,877 |  | Jan. 28, 1868. |
| 2,878 | Same . . . . . . . . . . . . . . . samı . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) . . | Jan. 28, 1868. |
| 2,879 | Same...... ............ . same. .-. .-. . . . . . . . . . . . . . . . . . . . . . . . . . . (Design). . | Jan. 28, 1868. |
| 2,880 | Same............. . . . . . same. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Disign) . - | Jan. 28, 1868. |
| 2, 881 | Same................. - samo.................... . . . . . . . . . . . . . . . . . . (Design) . | Jan. 28, 1868. |
| 2. 882 | Same .-. . . . . . . . . . . . . same. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2, 883 |  | Jan. 28, 1868. |
| 2,884 | Same ............ ..... - samө............... . . . . . . . . . . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2.885 | Same................. - same... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2,886 | Same.................. . same...... . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) .- | Jan. 28, 1868. |
| 2,88\% | Same................. . same............................................ . . (Design) .- | Jan. 28, 1868. |
| 2,888 | Same. . . . . . . . .-. .-. . . same....-. . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Desigrı) . - | Jan. 28, 1868. |
| 2,889 | Same. . . . . . . . . . . . . . . same............. . . . . . . . . . . . . . . . . . . . . . . . . (Design) . | Jan. 28, 1868. |
| 2, 830 | Same....-. .-........ . same.......... . . . . . . . . . . . . . . . . . . . . . . . . . (Design) . - | Jan. 28. 1868. |
| 2,891 | Same.................. . same...-. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Dosign) .- | Jan. 28, 1868. |
| 2,892 |  | Jan. 28, 1868. |
| 2,893 |  | Jan. 28, 1868. |
| 2,894 |  | Jan. 28, 1868. |
| 2,895 | Same.................. . same........... .-. . . . . . . . . . . . . . . . . . . . . . (Design) . | Jan. 28, 1868. |
| 2,896 |  | Jan. $28,1868$. |
| 2,897 | Samo.................. - same..-. . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) . | Jan. 28, 1868 |
| 2,898 |  | Jan. 28, 1868. |
| 2,899 |  | Jan. 28, 1868 |
| 2,900 |  | Jan. 28, 1868 |
| 2,901 |  | Jan. ¿8, 1868. |
| 2,902 |  | Jan. 28, 1868. |
| 2,903 |  | Jan. 28, 1868. |
| 3, 172 |  | Aug. 25, 1868. |
| 3,173 | Same...-.............. samo.-.......................................... (Design) .- | Aug. 25, 1868. |
| 3, 174 |  | Aug. 25, 1868. |
| 3, 175 |  | Aug. 25, 1868. |
| 3,176 |  | Allg. $25,1868$. |
| 3, 177 |  | Aug. 25, 1868. |
| 3, 178 | Same...-. .-. . . . . . - - same.... . . . . . . . . . . . . . . . . . . . . . . . . . . . . (Design) . | Alig. 25, 1868. |
| 3, 179 | Same................. same. .........-................................ (Design) . - | Aug. 25, 1868. |
| 3, 180 |  | Aug. 25, 1868. |
| 3, 181 |  | Alig. 25, 1868. |
| 3, 182 |  | Aug. 25, 1868. |
| 3, 183 | Same......-.-........ same...-...................... . . . . . . . . . . . . . (Design) .- | Aug. 25, 1868. |
| 75, 221 | Thompson, Miram, Woreester, Mass. Machine for headi | Mar. 3, 1868. |
| 82,257 | Thompson, Hiram, assignor to R. Ball \& Company, Woreester, Mass. Sew. ing machiue | Sept. 15, 1868. |
| 76,958 | Thompson, Hiram C., Bristol, Conn. Dio for making elock collets ......-.-.-. - - | A pr. 21, 1868. |
| 81,459 | Thompson, Howard M., and Charles W. Burbank, assignors to selves and George H. Knowlton, Alfred, Maine. Tailor's press board. | Sept. 8, 1868. |
| 73,673 | Thompson, Ira F., Providence, R. I. Knife eleaner................................... | Jan. 21, 1868. |
| 76, 003 | Thompson, I. M., Edinburg, Ind. Water wheel | Mar. 24, 1868. |
| 78, 553 | Thompson, James K., assignor to self and William B. Howard, Chieago, dll. Turn tablo. | Jume 2, 1868. |
| 81,960 | Samo..... . Bridge | Sept. 8, 1868. |
| 84, 452 | Thompson, James S., Lynden, Vt. Apparatus for boiling sap and other liquids. | Feb. 11, 1868. |
| 79, 030 | Thompson, John A., Auburn, N. Y. Machine for grinding mowing machine knives. | June 16, 1868. |
| 79,031 | Thompson, John A., Bueyrus, Ohio. Machine for cleaning the intestines of slaughtered animals | June 16, 1868. |
| 82,365 | Thompson, John A., Auburn, N. Y. Refrigerator and silleboard. | Sopt. 22, 1868. |
| 75, 709 | Thompson, John A., assignor to self and Lorenzo W. Nye, Auburn, N. Y. Machine for grinding knives of harvesters. | Mar. 17, 1868. |
| 84, 719 | Thompson, John F., Groensboro, Pa Hydraulic apparatus ....................... | Dee. 8, 1868. |
| 83, 110 | Thompson, J. J., Richwood, Ohio. Hay rake and loader | Oct. 13, 1868. |
| 83, 111 | Thompson, J. J., and V. F. Collier, Richwood, Ohio. Cultiva | Oct. 13, 1868. |
| 73, 939 | Thompson, John M., Saltilloville, Ind. Medical eompound | Jan. 28, 1868. <br> Sept 15, 1868 |
| 82, 179 | Thompson, Johı W. and Francis M., Greenfield, Mass. Bitstoek | Sept. 15, 1868. <br> May 19, 1868. |
| 78,028 76,004 | Thompson, Joseph M., Rome, N. Y. Salt and sugar evaporator. . . . . . . . . . . . . . . | May 19, 1868. |
| 74,451 | Thompson, J. S., Sycamore, Ill. Animal trap........ | Feb. 11, 1868. |
| 81, 842 | Thompson, J. W., Bureau Junction, Ill. Churn....................................... | Sept. 1, 1868. |
| 80, 886 | Thompson, M. L., assignor to self and John P. Rittenhouse, Flemington, N. J. <br> Head for barrela | Aug. 11, 1868. |

## Alphabetical list of patentees for the year 1868-Continued.

No.

80, 031
83, 749
84, 655
73, 475
79, 087
76, 005
75, 315
77, 678
77, 599
76, 357
81, 435
76,119
79, 877
84, 319
84, 021
73, 137
73, 267
S2, 045

83, 890
74, 171
82, 180
78,773
75, 316
76,554

78,244
79, 163
83, 675
\%5, 813
79, 088
77, 934

74, 631
85, 346
82, 258
77, 780
76, 555
777,550
83, 339
84, 232
79, 878
81, 037
78,337
78, 402

74, 632
74, 633
84, 848
81, 961
73, 408
73,338
79, 032
84, 974
73, 138
Nanıe, residence, and invention or discovery

Date.

July 14, 1868
Nov. 3, 1868
Dec. 1, 1868
Jan. 21, 1868
June 23, 1868
Mar. 24, 1868.
Mar. 10, 1868.
May 5, 1868.
Mar. 17, 1868.
Apr. 7, 1868.
Aug. 25, 1868.
Mar. 31, 1868
July 14, 1868
Nov. 24, 1868 Nov. 10, 1868.

Jan. 7, 1868.
Jan. 14, 1868.
Sept. 8,1868.

Nov. 10, 1868.
Feb. 4, 1868.
Sept. 15, 1868.
June 9, 1ع68.
Feb. 25, 1868.
Mar. 10, 1868.
Apr. 7, 1868.
Sopt. 18, 1868.
May 26, 1868.
June 23, 1868.
Nov. 3, 1868.
Mar. 24, 1868.
June 23, 1868.

May 12, 1868.
Feb. 18, 1868.
Dec. 29, 1868.
Sept. 15, 1868
May 12, 1868
Apr. 7, 1868.
May 5, 1868.
Oct. 20, 1868.
Nov. 17, 1868.

July 14, 1868.
Aug. 11, 1868.
May 26, 1868.
May 26, 1868.

Feb. 18, 1868
Feb. 18, 1868
Dec. 8, 1868
Sept. 8, 1868
Jan. 14, 1868.
Мау 26, 1868
June 16, 1868
Dec. 15, 1868
Jan. 7, 1868
Jan. 14, 1868.

All hubetical list of patentees for the year 1868-Continued.

No.

| Name, residence, and invention or discovery. |
| :---: |
| Tift, George H., Morrisville, Vt. Vegetable washer. |
| Tilden, Henry A. New Le Patato washer ........ |
| Tilden, Howard, Boston, Mass. Lamp........... |
| Same..ili- (See Prouty, Henry W., assignor.) |
| Tillson, Isaiah Sontl ${ }^{\text {a }}$, |
| 1son, |

Tilman, Noah H., aul D. G. Good, Arcanum, Ohio. Table fan and caster stand.
Tilton, Calvin R., and Preston Ware. (See Ware \& Tilton.)
Tilton, Francis W., and Moses C. Swift, New Bedford, Mass. Clothes-line sup.
porter (Antedated Aus. 12, 1868) porter (Antedated Aug. 12, 1868)
Tilton, Frederick W, Aroline, Hl. Seed-planting machine. (Antedated March Same.....Bristol Station, Xil. Seed sower. (Antedated March 7, 1868) TYitton, Jereniah C., Sanbornton Bridye, N.H. Compositiou for dressing hair. Tilton, Johu S., Philadelphia, Pa. Sleove for brushes
Tilton, Leonard, Brooklyn, E. D., N. Y. Maehine for bundling kindling wood.
Same..... W ood-splitt ting machine
Timby, Theodore R., Saratoga, N. Y. Paper eutter
Timmons, William W., assignor to Almeth White, Kahway, N.J. Soda water bottle
Timson, E. H., et al. (See Parrott \& Timson.)
Tineh, Ed warl T., assignor to self and George R. Harris. Salem, Ind. Washing maehine
Tindall, G. G., and H. M. Shaw. (See Sliav and Tindali.)
Tindall, Hemry, Chicago, MII. Process of roasting and ehloridizing ores Same ..... Turnace for roasting and chloridizing ores.
Tingley, Albert H., Providence, R. I. Maeline for sawing stone and marble.
(Extension) (Extension)
Tingly, John, Philadelphia, Pa. Iee-eream freezer
Tingley, John, assiguor to Philadelphia Wood and Hollow Ware Manufacturing
Company, Philadelphia, Pa. Churn .......................
Company, Philadelphia, Pa. Churn
Tingley, John, assignor to self and Samuel L. Davis, Philadelphia, Pa. Tight-
ening ening band for ressels
Tingley, Lucas D., and Heary Felthoff. (See Felthoft \& Tingley.)
73, 675

$\begin{array}{r}73,554 \\ -7.1635 \\ \hline\end{array}$
Tr 33
81, $2: 7$
76, 851
79, 898
80, 03:
74, 864
80,033
8180,033
83,568
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78, 844
83, 112
84,656
74, 017
74, 018
74, 636
74, 955
81,814
78, 554
80,784
77, 120
83, 891
81, 436
80, 242

75,317
76, 31४
77, 130
77, 131
78,158
80, 843
84, 917
Tipton, John, Malaga, Ohio. Hoof expander
Tipton, John, and J.Carl, assignors to John Tipton, Malaga, Ohio. Boot crimp Tisdale, Josiah, Sonth Derlham, Mass. Peat maehine.
Titcomb, R. S., Gloversville, N.' Y. Folding bedstead or crib
Titeomb, Smith, Amesbury, Mass. Carriage.
Tittle, Danicl J., assignor to Abbic M. Tittle, Aibany, N. Y. Machine for raking Same...... Horse power.
Titus \& Bostwiek. (See Mood, Lynfred, assignor.)
Titus, Charles, Union, Me. Dressing barrels
Titus, C.M. (See Berystresser, E. L., assignor) (Teissue.)
Titus, Hiram A... Gloversville, N. Y. Bread an
Toau, John S. King s Ferry, N. Y. Horseshoc
Tobey, Elisha H., assignor to self and A. R. Hale, Bridgeport, Conn. Doviee for raising and lowering windows
sh lock
Same...... Sash lock
Tobcy, IV. R. (See Barealo, Myrou J., assignor.)
Toby, William R., Nunda, and Myron J. Barealo, Mt. Morris, N. Y. Revolving
assignor to self, A.F. Slieldo, Johins. Tod, I.S. Ledidard, and
L. S. Cuyler, Pultneyville, N. Y. Construetion of fence..... Same. .same
Todd, A. W, Chieago, III. Frame for supporting and moriing eloth to be creased
Todd, A. and W. \& Company. (See Stanley, Henry, assignor.)
Toold, Paul P. (Sce Galbraith, Edward A., assignor.)
Tollner, Charles Grove, Ohio. Churn.
Tollner, Charles, Pulaski, N. Y. Smoking pipe
Tomlinson, N. L. New York, N. Y. Machine for making tree iails
Tompkins Tompkins, A.J. (See Kennedy, George, assignor.)
Tompkins, Charles R, , and Johin Vright, Roehester, N. Yt Saw-mill.
Tompkins, Clark, (See Vivard, Beajamin, assignor.)
Thompson, Thomsas, j1., New York, N. Y. Fite eseork, N. X. Mitering machine

Tomer, A. C., et al. (See Buekius, George H., assignor.)

Toof, Edwin J., Fort Madison To., assignor. )
Same...... Wiek regulator.................
Same.....Try square. (Antedated April 111, 1868)
Same......Paper stamp and inkstand combined.
Same.......Peneil holder.
Lamp burner
Same....... Fort Madison, Iowa. Horse rake

Date.
May 12, 1868
May 5, 1868. Oet. 27, 1868. Jan. 14, 18c
Sept. 15, 1863.
Jan. 7, 186 ?
Apr. 28, 1868 .
Aug. 18, 1868.
Mar. 17, 1868.
Mar. 17, 1868
Sept. 29, 1868
Feld. 11, 1868
Feb). 18,1868
July 21, 1888.
Jan. 21, 1868.
Fcl. 11, 1868.
Apr. 14, 1868.
Oct. 13, 1868.
July 16, 1868.
Feb. 11, 1868.
Feb. 25, 1868.
Sept. 1, 1868.
Jan. 21, 1868.
Jan. 21, 1868.
Feb. 18, 1868 .
Apr. 28, 1868.
Aug. 18, 1868 .
Apr. 14, 1868.
June $23,1868$.
July $14,1868$.
Feb. 25, 1868
July 14, 1868
Oct. 27, 1868.
Junc 0, 1868 .
Oet. 13, 1868 .
Dec. 1,1868
Feb. 4, 1568 .
F'eb. 4, 1868 .
Feb. 18, 1868.
Feb. 25,1868.
Sept. 1, 1868.
June 2, 1868.
Ang, 4, 1868.
Apr. 21, 1868.
Nov. 10, 1868.
Aug. 25, 1868.
July $21,1868$.

Mar. 10, 1868.
Mar. 10, 1868.
Apr. 21, 1868.
Apr. 21, 1868
May 19, 1868
Ang. 11, 1868
Dcc. 15,1868

Alphabetical list of patentees for the year 1868-Continued.


## Alphabetical list of patentees for the year 1868-Continued.

No.

77, 418
75, 319
83, 008
73, 410
78, 555

80, 683
81, 561
76, 558
78, 403
74, 455
84, 396
82, 894
79, 414
80, 035
80, 036

3, 037
3, 038
3, 039
81, 229
84, 657
77,682
3, 081
83, 009
85, 257

84, 721
85, 411
85, 493
80, 243
80, 684

84, 658
83, 225
83, 113
77, 336
82, 662
78, 621
85, 258
75, 222
8:3, 424
81, 038
84, 321
77, 781
82, 567

76, 274
74, 172
77, 935
3, 257

83, 342
73, 676
75, 814
81, 845

Trowbridge, Newton, and Edward Richardson, Tully, N. Y. Roofing centent
Trowbridge, William, New Orleans, La. Cotton-bale tic...
Trowbridge, W. O., assignor to Mason \& Hamlin Organ Company, Newton Corner, Mass. School desk and musical instrument.
Troxell, John P., Hancock, Md. Sausage stuffer
Troxell, John P., assignor to self and Samuel H. Davis, Hancock, Ma. Sausage stuffer.
Truby, Joln W., and Isaac Ronsh. (See Roush \& Truby.)
True, George S., Leavenworth, Kansas. Label holder.-
True, N. S., and E. F. Percival. (Sce Percival \& True.)
Truesdale, Charles, assignor to self and William Resor \& Company, Cincinnati, Ohio. Cupola and blast furnace..
Truesdell, L. E., Chicago, IIl. Bridge
Same ...... Lock-bar for bridges
Truex, J. H., and O. Forsyth. (See Forsyth \& Truex,)
Trullinger, John C., Oswego, Oregon. Water wheel
Trumbore, Samuel, Easton, Pa. Governor for stean-engines
Trumbull, George, and Richard Walker. (See Walker \& Trumbull.)
Trump, S. N., Baltimore, Md. Tea tray-
Truslow, Edward, New York, N. Y. Bag tic
Truxell, A. J., Salem, Va. Lard press and sausage stuffer
Truxell, A. J., and J. W. Neal. (See Neal \& Truxell.)
Tyron, J. R., La Crosse, Wis. Compound for welding
Tuck, Joscph Henry, Brooklyn, N. Y. Packing for stuffing boxes, \&c. (Extension).
Tucker, Charles L., Chicago, Ill. Manufacture and preservation of lard. (Division A, reissue)
Same...... Manufacturo of lard.....................................................................
Same.......Process of putting up lard for storage and transportation. (Division C, rcissue)
Same...... Cementing and strengthening boxes for packing lard and other substances
Same ...... Box for lard, butter, and sinilar substances
Tucker, G. V. ., Elba Township, Ill. Gate
Tucker, Hiram, assignor through mesne assignments to the Tucker Manufacturing Company, Boston, Mass. Spring-bed bottom ...., ..............(Reissue) Tucker, Jesse, and Abel J3. Palmer, Adrian, Mich. Water wheel
Tucker, John E., assignor to self, Lewis Bonncy, and Joscph C. Snow, Boston, Mass. Faucct.
Tucker, John E., and Henry Sutcliff. (See Smith, W. C., assignor.)
Tucker, Stephen D., New Xork, N. Y. Machine for grinding circular saws
Same...... Machine for coating the surface of electrotype molds with plumbago..
Same...... Printing press.
Tucker', Stephen D., and R. M. Hoe. (Sce Hoe \& Tucker.)
Tucker, Sydney D., Troy, N. Y. Cloth plaiting attachment for sewing machines
Tucker, Washington H., Sunman, Ind. Wagon brake
Tucker, William, and Thcodore Snell. (See Snell \& 'Iucker.)
Tucker, William, and Emery Andrcws. (See Andrews \& Tucker.)
Tucker, William B., Columbus, Ohio. Churn
Tudor, Frederic, Boston, Mass. Screw bolt.
Tufts, Augustus, Malden, Mass. Diaphragm bellows for dry gas meter. (Antedated Oct. 3, 1868)
Tufts, Joshua, Athens, Olio. Steam pumping engiue
Tull, J. W., and G. Stevenson, Zionsvillc, Ind. Boot and shoe heel
Tuller, Homer, Ash Grove, M1. Beehivo
Tumbridge, John, Newark, N. J. Method of extracting gold and silver from their ores.
Tunison, Jolm C., Decatur, Ill. Stationary spittoon for cars.
Tunstall, J. B., Boydton, Va. Hydraulic press.
Tunstill, William, Paterson, N. J. Braiding machine.
Tupper, L. B. (See Vandercar, John, assignor.)
Tupper, Newell, Grand 13lanc, Mich. Adjustable flood gate
Turchin, John B. (See Mariner, Gcorge A., assignor.)
Turel, Jules, Kendallville, Ind. Modo of lettering marble
Turley, J., et al. (See Milroy, Vaughu \& 'Turley.)
Turley, Marshall, Council Bluffs, Iowa. Stcam generator
Turnvoll, John M. (See Dryden, W. A., assignor.)
Turner, Andrew H., and Anderson M. Piland. (See Piland \& Turner.)
Turner, Chester, Grand Rapids, Mich. Water meter or motor
Turner, Chester B., Grand Rapids, Mich. Rotary steam-engine
Turner, Dewitt C., and Hiram Moon. (See Moon \& Turner.)
Turner, D. H., Now York, N. Y. Apparatus for cooling and purifying bonc black
Turner, Edwin H., Quincy, Ill. Trade mark.
(Desigu)
Turner, Elisha. (See Adt, F., assignor.)
Same...... (See Hotchkiss, Leander, assignor.)
Turner, Enoch 13., Providence, R. I. Horseshoe machine.
Turner, Enoclı B., and John Groves. (See Groves \& Turner.)
Turner, Henry, Ncw Xork, N. Y. Feeding apparatus for flocking machines.
Turner, Henry, assignor to self and Mellen Bray, Boston, Mass. Spring chain.
Turner, John, Norwich, Conn. Machine for covering cord. (Antcdated Aug. 25,1868 )

Date.

Apr. 28, 1868. Mar. 10, 1868.

Oct. 13, 1868.
Jan. 14, 1868.
Juno 2, 1868.
Aug. 4, 1868.

Aug. 25, 1868.
Apr. 7, 1868.
May $26,1868$.
Feb. 11, 1868.
Nov. 24, 1868.
Oct. 6, 1868.
June 30, 1868.
July 14, 1868.
July 14, 1868.
Aug. 24, 1868.
July 14, 1868.
July 14, 1868.
July $14,1868$.
Aug. 18, 1868.
Dec. 1, 1868.
May 5, 1868.
Aug. 11, 1868.
Oct. $13,1868$.
Dec. 22, 186\&.
Dec. 8,1868.
Dec. 29, 1868.
Dec. 29, 1868.
July 21, 1868.
Aug. 4,1468.
Dec. 1, 1868.
Oct. 20,1868.
Oct. 13, 1868.
Apr. 28, 1808.
Scpt. 29, 1868.
June 2, 1868.
Dec. 22, 1868.
Mar. 3, 1868.
Oct. 27, 1868.
Aug. 11, 1868.
Nov. 24, 1868.
May $12,1868$.
Scpt. 29, 1868.
Mar. 31, 1868.
Feb. 4, 1868.
May 12, 1868.
Nov. 17, 1868.

Oct. 20, 1868.
Jan. 21, 18f,
Mar. 24, 1868.

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, rosidence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
|  | Turner, Jonathan S., Now Haven, Conn. Alarm clock............. (Extension) .. | Sept. 8, 1868 |
|  | Turner, Malcolm C. (See Lapham \& Pratt, assignors.) |  |
| 80,098 | Turner, Peter B., Quiney, Mass. Bracket for shingle roofs. ..................... | June 30, 1868 |
|  | Turner, Reuben C., Mendon, Mich. Machine for cutting leather filling and other purposes | July 21, 1868. |
|  | Turner, Seymour \& Judds. (See Seymour, Trederick J., assignor) ... (Reissue.) Same...... (See Judd \& Smith, assignors) ............................. (Design) |  |
|  | Turner, Sidney S. Westboro, Mass. Sewing machine............(Extension) | Aug. 17, 1868. |
| 80,78 | Turner, William F., Philadelphia, Pa. Umbrel |  |
| 75, 604 | Turpie, David, assignor to the Boston \& Sandwich Glass Company, Sandwich, Mass. Glass mold. | Mar. 17, 1868. |
| 85, 190 | Turrell, George B., New York, N. Y. Cooler for beer and other liquids.... | Dec. 22, 1868. |
| 76, 275 | Tute, Rensalaer, et al. (See Locke, Charles S., assignor.) |  |
|  | Tuttle, S. D., Eaton, Ohio. Subsoil plow.- | Mar. 31, 1868. |
|  | Tuttle, S. D., et al. (See Abbott, Tiattle \& Holt.) |  |
| $\begin{aligned} & 74,173 \\ & 83,803 \end{aligned}$ | Tuttle, S. E., Genoa, Nev. Apparatus for raising heavy weight | Feb. 4, 1868. |
|  | Tuttle, William, Boston, Mass. Street railway switch .... |  |
|  | Tweed, Henry A., and J. Ashton Greene. (See Blake, G. W., assignor). (Roissue.) Same |  |
| 73, 677 | Twigg, George, Birmingham, England. Corkscrew................................ | Jan. 21, 1868. |
| 74, 019 | Twining, Alexander C., Now Haven, Conn. Caster. (Antedated Jan | Feb. 4, 1868. |
| 75, 080 | Same...... Socket for caster | Mar. 3, 1868. |
| 76, 559 | Same.....-Railway signal and ala | Apr. 7, 1868. |
| 76,006 | Twining, William E., Morrison, Ill. Car coupling. | Mar. 24, 1868. |
|  | Twitehell, C. S., and H. S. Golightly. (See Golightly \& Twitche |  |
| 79,789 | Twombly, Orison, Holderness, N. H., and William Noyes, jr., Newburyport, Mass. Knitting machine | July 7, 1868. |
| 84, 918 | Tyler, Charles N., New York, N. Y. Wash boilor. | Dec. 15, 1868. |
| 83, 892 | Tyler, Charles N. and Augusta C., Buffalo, N. Y. |  |
| 77,337 | Tyler, E. D., Gibson, Pa. Fellø dowel pin....................................... | Apr. 28, 1868. <br> June 30, 1868. |
| $3,015$ | Tyler, John, West Lebanon, N. Y. Water wheel....... .............. (Reissue) | June 30, 1868. |
|  | Tyler, N. P . (See Lawrenee, C. $\mathrm{H} . .$. assignor.) |  |
| 83, 804 | Tyler, P. Shelton, Boston, Mass. Paper boat | Nov. 3, 1868. |
|  | Tyler, P. Shelton, and Francis E. Boyd. (See Boyd \& Tyler.) <br> Samo. |  |
| 83, 805 | Tyler, R. W., Wayne, Mich. Saw-set............................................ | Nov. 3,1868. |
| 79, 705 | Tyler, Salmon E., assignor to self and William S. Stephens, Beloit, Wis. Springbed bottom. | July 7, 1868. |
|  | Tyler, S. E., and W. M. Jones. (See Jones \& Tyler) ................... (Reissue.) <br> Same. <br> same. <br> (Reissue.) |  |
| 82, | Tyler, Thomạ G., Now Y 0 , | Sept. 29, 1868. |
| 80, 685 | Tyler, T. W., Corry, Pa. Churn das | Aug. 4, 1868. |
| 74, 866 | Tyng, Levi B., Lowell. Mass. Skate. | Feb. 25, 1868. |
| 79, 089 | Tyrrell, Robert, Sumner, Ill. Tire-bending m | June 23, 1868. |
| 78, 030 | Tyson, Charles S., Old Point Comfort, Va. Gun carr | May 19, 1868. |
| 75, 711 | Tyson, James P., Philadelphia, Pa. Carriage | Mar. 17, 1868. |
| 78, 699 | Tyzick, James, St. John, N. B. Nail extraetor | June 9, 1868. |
| 82, 568 | Tyziek, James, and Henry W. Eskildson, New York, N. Y. Nail extractor | Sept. 29, 1868. |
| 80, 244 | Ucker, Thomas, and A. Hutehins, Amanda, Ohio. Corn and cob mill | July 21, 1868. |
|  | Udall, J. E., and J. B. Lewis. (See Lowis \& Udall.) |  |
|  | Uecke, William, and Hermann Koeller. (See Koeller \& Uecke.) |  |
| 81,708 | Uhl, John, Brooklyı, N. X. Saw-set ............................... | Sept. 1, 1868. |
|  | Uhl, W., et al. (See Satton, Sodgwiek A., assignor.) |  |
| $\begin{array}{r} 3,297 \\ 83,570 \end{array}$ | Uhlinger, W. P., Philadelphia, Pa. School desk - ...................... (Design).. | Dec. 22, 1868. |
|  | Uitting, Leonhardt, assignor to self, G. Massa, Ch. Amulung, and H. Zimmerman, Philadelphia, Pa. Hasp for trunk loeks | Oct. 27, 1868. |
|  | Uline, Andrew B., and Gardenir G. Kidder. (See Moore, Jasper P., assignor.) |  |
| 74, 867 | Uliman, Sigmund, New York, N. Y. Envelope . | Feb. 25, 1868. |
| 81,962 | Same.. | . 18, 1868. |
| 81, 963 | Sam | Sept. 18, 1868. |
| 75, 657 | Ullmann, Charles T., New York, and Marcus Boekman, Brooklyn, engine | Mar. 17, 1868. |
|  | Ulrich, J., et al. (See Nacher, Jacob, assignor.) <br> Ulrieh, William, and Julius Bein. (See Bein \& Ulrieh.) |  |
| 80,433 | Umbaeh, John, Kankakee, Ill. Constrıcting baek pads to larness | July 28, 1868. |
| 77, 551 | Umpleby, Joseph F., Albany, N. Y. Necdle boo | May 5, 1868. |
| 84, 519 | Underhill, Edward F., New York, N. Y. Device for attaching vines to trellises. | Dee. 1, 1868. |
| 82, 433 | Underkuther, Nathaniel S., Norristonville, Pa. Sausage stuffer and lard press. | Sept. 22, 1868. |
| 85,4123,094 | Underwood, F. J., assignor to B. D. Buford, Rock Lsland, Ill. Cultivator | Dec. 29, 1868. |
|  | Underwood, Goorge L., Boston, Mass. Card basket ...... . . . . . . . . . . (Design.) | July 21, 1868. |
| 3, 125 | Same......Picture frame............................................ (Design.) | July 21, 1668. |
| 3,126 | Same......... .same ................................................ (Design.) | July 21, 1868. |
| 3,127 <br> 3,128 | Same..........same ................................................. . (Designi.) | July $21,1868$. |
|  |  | July 21, 1868 July 21, 1868. |
| 3,129 |  | July 21, 1868. |
| 78,700 88, 770 | Underwood, James C., surry C. H., Va. Hachine for picking and cleaning peanuts |  |
|  | Underwood, John, Musca | June 9, 1868. |
|  | Underwood, Lester, Ottawa, | Oct. 6, 1868. |

Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residenee, and invention or discovery. |
| :---: | :---: |
|  | Unger, Gustav, and Jacob Silbermann. (See Silbermann \& Unger.) <br> Same <br> .same. |
|  | Ungex, Oswald. (See Pohl, Riehard, assignor.) |
|  | Union Comb Company. (See Brown, Georgo F. H., assignor.) |
|  | Union Hardware Company. (see Migcon, A. F., assignor.) |
|  | Uniou Manufacturing Company. (See Shepard, Amos |
|  | Union Metallie Cartridge Company. (See Edwards, Amory, assighor) ... (Design.) |
|  | Union Nut Company. (See Savage, Julius B., assignor)................ (Reissue.) |
|  | Union Steam Valve Company. (See Barden, John S., assignom.) <br> United States Pin Company. (See Fowler 'Thaddeus assirnor |
|  | Universal Pump and Manufaeturing Company. (See Frycr, Robert M., assignor.) |
| 73, 85\% | Unvezagt, Clemens, Terro Haute, Ind. Hand loon ... |
| 82, 454 | Upham, George William, Amherst, N. H. Cement. |
|  | Upham, James P., et al. (See Fuller, Jim B., assignor.) |
| 82,046 | Upshur, Thomas H. Wr., Norfolk, Va. Medical eompoun |
|  | Upton, George B., et al. (See Ehrhardt, L. H. Gr., assignor.) |
| 77, 419 | Upton, Janes S., Battlo Creek, Mich. Grain separator... |
| 82, 455 | Same.... - Shatt coupling ........................................ |
| 79,034 | Uren, Richard, and John Walker, assignors to selves and John Uren, Houghton, <br> Mich. Stamp mill |
| 73, 209 | Urie, James, Evansville, Ind. Plow |
| 85, 148 | Urie, Thomas, Springfield, Iowa. Wagon |
| 77,683 | Ustick, Stephen, assignor to George L. Miller, Philadelphia, Pa. Pea sheller. |
| 80, 245 | Ustick, William W., La Crosso, Wis. Apparatus for cutting and mitering printers' rules. |
| 82, 895 | Utley, Albert M., H. N. Kimball, and William Reymolds, Watertown, N. X. Boxing, bandaging, and preparing checso |
| 78, 339 | Utley, Gabriel, Chapel IIill, N. C. Plow.......... |
| 77, 852 | Utlcy, Grey, Charlotte, N. C. Hay and cot |
| 81,571 | Vail, Alexander, Henry, Ill. Plow |
|  | Vail, Alexander H., and 'Thomas Hull. (Sec Hull \& Vail.) |
|  | Vail, E. Wright, et al. (See Allaire, Seamen, assignor.) |
| 83, 744 | Vaill, E. W., Worcestcr, Mass. Folding chair . Same... .- (Sce Mc Aleer, George, assignor.) |
| 79,615 | Vate, Joseph, Beloit, Wis. Bake oren. |
| 84, 919 | Valentinc, Jolm, and Heury B. Sterens, Puffalo, N. Y |
| 76, 276 | Valentine, W. F., Butfalo, N. Y. Roofing eonpound . |
| 79, 616 | Same...... . . ${ }^{\text {Sming and purifying spiritous liquors }}$ |
| 80,786 | Valetton, Louis D., assignor to Eensel, Reichert, Wolif d Company, Philadelphia, <br> Pa. Loom for wcaving fringo. |
| -6,560 | Valliquette, Jolm B.. Chicago, Цll Bridge.................... |
|  | Valois, Lonis, and Albert Lazcomaycr. (See Kazemmayer \& Valois.) |
| $\begin{aligned} & 81,563 \\ & 85.149 \end{aligned}$ | Van Alstine, C. C. E., Now Maven, Conn. Casting ehains.. |
| 85,149 85,347 | Van Amringe, G. L., New Xork, N. Y. 'Iube for steam gencra Van Anden, William, Joughkeepsio, N. X. Railway rail chair. |
| 80, 037 | Van Ansdall, Baker, Kcokuk, Lowa. Boot solc. (Antedated July 6, 1868) |
| 84, 920 | Van Benthuyseu, Henry B., Emporium, Pa. Base-burning stove Van Buren, Alexander L., et al. (See Mallary, G. H., assignor.) |
| 74,733 | Van Camp, A., Washington, D. C. Preserving |
| 74, 174 | Vance, R. L., St. Louis, Mo. Vinogar still . |
| 76, 277 | Vance, Samucl IB. H., assignor to Mitchell, Vanco \& Co., New Xork, N. Y. Coek for gas burners |
| 79, 5®1 | Vance, Namuel B. H., and Edgar M. Smith, assignors to Mitchell, Vance \& Co., New York, N. Y. Composition clock case |
| 84, 322 | Vanee, William II., New Corydon, Ind. Compound for treating ring-bone, sparin, \&e., in horses |
|  | Vandecar, Bennet, and Charles Payno. (See Payne \& Vandeear.) <br> Vandegrift, J., and M. Richards. (See Riehards \& Vandegrift) |
| 73,140 | Vandegrift, J. N. and S. 'T., S. D. French, and E. S. Stone, Wabash, Ind. Car coupling |
| 84,659 | Vandemark, A. B., Phelps, N. X. Combination |
| 84, 660 | Vanderbilt, W. W., New York, N. Y. Operating eapstans........................ |
| 74,637 | Dan orear, John, assignor to Thaddous B. Beecher, Brooklyn, N. Y. Bootblacking apparatus. |
| 80,844 | Vandercar, Jolin, assignor to L. B. Tupper, Brooklyn, N. Y. Fire grato <br> Vandcreook, Alfred E. and Oscar, et al. (See Portur, Benjamin, assignor.) <br> Vandercook, Charles H., and Charlos S. Chatfee. (See Chaffee \& Vandercook) <br> (Dcsign.) |
| 82, 896 | Vanderpool, Medders, Polk County, Oregon. Grain liarvester |
| 81, 119 | Vanderslice, Isaac, Philadelphia, Ц'a. Milk can. |
| 73, 478 | Vandersliee, William K., jr., San Francisco, Cal. Cig |
| 81, 230 | Vandervcer, Benjamin D., and Daniel Riddel, Freehold, N. J. Potato digger... |
| 81, 231 | Vander Weide, Michel, assignor to C'assius M. Clay, Lussia. Submarine lantern. |
| 74,175 | Vander Wcyde, P. H., Philadelphia, Pa. Mode of preparing aratod liquids. <br> (Antedated Jan. 27, 1868) |
| 81, 232 | Vander Wcyde, P. H., assignor to Alfred Phillips and John MacDougall, Now York, N. Y. Apparatus for the inanufaeture of illuminating gas |
| 83,676 | Vande Sando, Peter, assignor to self and Stephen Coleman, Rochestor N. Y. Machine for eutting meat and other articles |
|  | Van Deusen, $\delta$. B., and Johu Powers. (Sce Powers \& Van Dousen.) |
| $\begin{aligned} & 84,534 \\ & 84,595 \end{aligned}$ | Van Doren, Francis, Adrian, Mich. Corn plante Samc....... Shïngle stool. . |

Date.

Јац. 28, 1868.
Sept. 2i, 1868.
Sept. 8, 1868.
Apr. 28, 1868
Sept. 22, 1818.
June 16, 1868
Jan. 7, 1868
Dec. 22, 1868
May 5,1868.
July 21, 1863
Oet. 6,1868
May 26, 1868.
May 12, 1868
Aug. 25, 1868.

Nov. 3, 186?
July 7,1868
Dec. 15, 1868
Mar. 31, 1868
July 7, 1868
Aug. 4, 1863
Apr. 7, 1068.
Aug. 25, 1868
Dec. 22, 1868
Dec. 29, 1868
July 14, 1863
Dec. 15, 1868
Feb. 18, 1868.
Fob. 4, 1868
Mar. 31, 1868
Junc 30, 1868
Nov. 24, 1868

Jan. 7,1868.
Dee. 1,1868
Dcc. 1, 1868.

Feb. 18, 1868. Aug. 11, 1868.

Oct. 6, 1863
Ang. 18, 1868
Jan. 21, 1868
Aug. 18, 1868
Aug. 18, 1868
Feb. 4, 1868.
Aug. -., 1868
Nov. 3, 1868
Dee. 1, 1868
Dee. 1, 1868

## Alphabetical list of patentees for the year 1868-Continued.

No.

2,871
82, 183
85, 413
80, 246
78, 701
75, 320
84, 023
82, 771
83, 806
78,340
83, 343
79, 530
81, 120
83, 807
78, 622
80, 247
83, 808
76, 561
82, 047
2,873
81, 846
78, 341
81, 964
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18, 343
83, 745
76, 562
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78, 702
75, 223
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74, 956
81, 711

78,344
75,491
84, 024
75, 492
75, 815
26,358
r6,960
78, 495
78, 845
81,847
83,571
-17, 684
76,278
74, 638
79, 926

76,359
78, 031
79,522
80, 038
84, 661
74, 260

Name, residence, and invention or discovery.
Date.

Feb. 18, 1868 Sept. 15, 1868

Dec. 29, 1868 July 21, 1868

June 9, 1868
Mar. 10, 1868
Nov. 10, 1868
Oct. 6, 1868
Nov. 3, 1868.
May 26,1868.
Oct. 20,1868.
June 30, 1868
Aug. 18, 1868
Nov. 3, 1868
June 2,1868
July 21, 1868
Nov. 3, 1868
Apr. 7, 1868
Sept. 8, 1868
Feb. 18, 1868
Sept. 1, 1868
May 26,1868
Sept. 8,1868
Nov. 24, 1868
May 26,1868.
Apr. 21, 1868.
Apr. 21, 1868.
Mar. 17, 1868
Sept. 29, 1868.
May 26, 1868.
Nov. 3, 1868.
Apr. 7, 1868.
June 9, 1863.
Oct. 28, 1868.
June 9, 1868.
Mar. 3, 1868.

Apr. 14, 1868.
Feb. 25, 1868
Sept. 1, 1868.
May 26,1868.
Mar. 10, 1868.
Nov. 10, 1868.
Mar. 10, 1868.
Mar. 24, 1868.
Apr. 7, 1868.
Apr. 21, 1868.
June 2, 1868.
June 9, 1868.
Sept. 1, 1868.
Oct. 27, 1868.
May 5, 1868.
Mar. 31, 1868.
F,eb. 18, 1868.

July 14, 1868.

Apr. 7, 1868.
May 19,1863 .
Junc 30, 1868.
July 14, 1868.
Dec. 1, 1868.
Feb. 11, 1868.

Veazic, Frederick, Vorccster, Hass, Blind fastcner ........................
Veazie, Joseph, and Augustus L. Dole. (See Stonc, Paschal, assignor.)
Veazie, Jowzph A., Boston, Mass Removing ink and colors from printed paper. Same....... (See Browa, Nathaniel H., assignor.)

## Alphabetical list of patentees for the year 1868-Continued.

No.

76, 120 75,224 81, 039 82, 897 2,958

Name, residence, and invention or discovery.

Veber, William, jr., Shingle Creek, N. Y. Milk shelf
Veber, W. F., Perrysburg, Ohio. Gate post
Vedder, Nicholas S., Troy, N. Y. Cooking stove Same.
Vedder, Nicholas S., assignor to George Williamson and Company, Troy, $\bar{N} . \bar{X}$. Plato of a hop stove. Vedder, Nicholas S., assignor to Edward J. Hicks and Gurdon G. Wolfe, 'Iroy, N. Y. Plate of a stove. (De

Vedder, Nicholas S., and Franeis Ritchie, assignors to William Resor and Company, Troy, N. Y. Cook stove
(Design)
Verhoeven, ALichael, Rochester, N. Y. Limo kiln
Vernier, IVillian F., Philadelphia, Pa. Carriage spring
Vornol, R. C., New York, N. Y. Walking vohielo
Vorplanck, Philip, jr., Binghamton, N. Y. Dash board and rein holder
Verry, George, assignor to self and O. B. Graves, Norwich, Conn. Valve and steam passage
Verstraet, Louis, Franco. Hydrocarbon burner
Vester, Franz, Ncwark, N. J. Drill.
Same..... . Burial case
Vetterlin, Frederiek, Switzerland. Magaziue firo-arm
Vickers, John H., assignor to Norwieh Lock Company, Norwich, Conn. Combined knob latch and lock. (Antedated April 22, 1868)
Vickers, J. H., and A. F. Smith. (See Smith and Viekers.)
Viekers, Thomas Edward, England. Machine for rolling tires.
Vicle, P. B., Rochester, N. Y. Fruit basket.
Viets, H. MI., Carlisle, Ohio Making cheese hoops
same..... - Milk can
Vigeant, Jaeob, Marlboro, Mass. Shoemaker's hammer
Vignal, Carl, Now York, N. Y. Vegetablo mashing and cutting machine Vincent, T. W., et al. (See Sweet, Eli, assignor.)
Vine, Williain, and William II. Jubb, Norwalk, Conn. Dyer's vat
Vincy, James, Manchester, N. I. Paper-making machine.
Viol, ddolphe Pierro, and Cesaire Pierre Duflot, jr., Franee. Bleaehing and lyeing feathers.
Virdin, William W., Baltimore, Ma. Tide motor
Vittum, Francis J., assignor to W. N. Ely, Newburyport, Mass. Leather-splitting inachine.

Same ..... . Mand-pegging machino
Voak, Isaac D. (See Talcott, Georgo W., assic.....)
Vocgtle, Jacob, Indianapolis, Ind. Stove drum
 yarn, \&e..
Vogel, Charles, New York, N. Y. Trip hammer
Vogel, H., assignor to Wilson \& Hood, Berlin, Prussia. Photometer
Vogel, Kasimer, assignor to Eben W. Lothrop, Chelsea, Mass. Sewing machime for button holes.
Vogel, W., assignor to Ezra Durand, Norwieh, Conn. Musieal instrument
Vocler, Charles, and John A. Mahn. (See Hahn \& Vogler.)
Voiles, J. E., assignor to self and John W. Hutchings, Madison, Ind. Horse rake
Volkinar, Charles, Baltimoro, Mi. Painters' canvas
Von Jeinsen, Erıest, New York, N. X. Breceli-loading fire-arm
Same...... (See Morgensterı, William, assignor.)
Von Wessely, Joseph R. (See Kuehn, Carl, assignor.)
Samo...... (See Asthower, Fritz, assiguor.)
Same .-... (Sce Fassler, August, assignor.)
Vorse, A. S., and D. H. Young. (Sec Harger, David, assignor.)
Vosburgh, William C., Brooklyn, N. Y. Drop light for ehandeliers
Vose, Ambrose S., Raudolpli, Vt. Calendar $\qquad$
$\qquad$
Vose, Joshua E. (Sce De Bretton, Geert, assignor.)
Vossnack \& Steins. (See Kaiser, Gottlob, assignor.)
Vowles, George, Now Hudson, Mieh. Potato digger
Vrooman, H. S., Bostord, Mieh. Cultivator
Vrooman, H.S., Boston, Mass. Support for passengers in cars
Vuillemin, Jules D. Huguenin. (Sce Roskopf, George Fredoric, assignor.)
Vargason, N. A., Brooklyn, N. Y. Lamp-ehimney cleaner
Same......-Skirt supporter.
Wack, Charles, assignor to self, Charles Miller, and A. Stoinbach, Evansville, Ind. Back-band hook
Wackman, Smith D., Auburn, N. M. Machine for grinding tho cuttors of mow ing machincs.
Samo...... Axles for vebicles
Wardell, W. H. and L., Churchville, Va. Churn
Wade, Levi C., and Frecman K. Sibley. (See Sibley and Wade.)
Wadhams, Edward, assignor to self and A. Wadhams, Yorkville,
lic tars for straps. (Antedated December 28, 1867)
Wadleigh, Joseph, Cliebanse, Ill. Tongue for harvestor
Wadsworth, Arthur, assignor to solf and Robert Schell, Newark, N. J. Watch.
Wadsworth, James W., Durham, Conn. Rein holder
Wadswortll, W. B., Cleveland, Ohio. Water elevator......(Division A, reissuo).

Date.

Mar. 31, 1868
Mar. 3,1868
Ang. 11, 1868
Oet. 6, 1868
Mar. 17, 1868.
Mar. 31, 1868
Mar. 31, 1868
Mar. 31, 1868
Apr. 7, 1868
Nov. 24, 1868
Feb. 4, 1868
Mar. 24, 1868
June 2, 1868
Nov. 17, 1868
Mar. 24, 1868
Aug. 25, 1868
Dec. 20, 1868.
May 5,1868.
June 30, 1868.
Fob. 11, 1868.
Juno ®3, 1868
Dec. 15, 1868
Jan. 7, 1868
Mar. 17, 1868.
Mar. 3, 1868.
Nov. 17, 1868.
Sept. 1, 1868.
Juno 2, 1868.
Fob. 18, 1868
Nov. 10, $1=68$.
Apr. 7, 1868.
Nov. 10, 1868.
Feb. 25, 1868.
Mar. 10, 1868.
July 28, 1868.
Nov. 10, 1868.

Nov. 10, 1868.
Јan. 7, 1868.
Dee. 15, 1868.

Apr. 7, 1868.
Mar. 17, 1868.

May 26, 1863.
Nov. 10, 1868.
Ajr. 28, 1868.
Sept. 1, 1898.
Oct. 6,1868.
July 28, 1868.
June 2, 1868
June 23, 1868.
Juио 16, 1868.

May 19, 1868.
Dec. 22, 1868
Feb. 11, 1868.
July $\approx 8,1868$
July 28, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

3, 057
82,366
74, 639

82, 898
81, 438

78, 624
75,225
80, 787
81,712
82, 899
75, 494
76, 121
77, 420
74,95\%
80, 576
80, ฉ48
80, 249
80, 250
74, 640
81, 713
82, 184
84, 030
84, 447
83, 344
79, 706

80, 251
78, 160
78, 033
81, 439
80, 845
82, 456
75, 082
84, 237
74, 261
84, 238
3, 054
79, 790
78, 404
3, 123
75, 083
75, 321
79.417

77, 421

80,887

76, 852
77, 782
80, 099
74,458
78, 625
80, 521
80, 522
76, 853
79, 523
77, 339
77,783
75, 495
77, 134
77, 135
76, 565
81, 848
84, 031
79, 418

Wadsworth, W. B., Cleveland, Ohio. Water elevator.
....(Division B, reissue) . Wagener, Jeptlia A., New York, N. Y. Sewing machine Wagenhorst, James J., assignor to self, C. H. Zink, and W. M. Weand, Philadelphia, Pa. Till alarm and lock
Wager, Fales \& Co. (See Simith, John C., assignor.)
Waggoner, J. C., St. Louis, Mo. Smut mill
Wagner, Adolph, assignor to Samuel Beinstein, New York, N. Y. Loom for circular weaving
Wagner, Albert, et al. (Sec Nulsen, Haueisen \& Wagner.)
Wagner, Awsbent H., Stamnton, Va. Grinding mill.
Wagner, Franz, and Louis Sexauer, New York, N. Y. Water meter
Wagner, Friedrich, Danville, Pa. Cock for racking off beer
Wagner, F. F., Harrisburg, Pa. Car seat
Same...... Railway car seat.
Wagner, John, Washington, D. C. Attaching horseshoes
Wagner, John, Cumberland, Md. Dinner kettle
Wagner, Oscar A., Davenport, Iowa. Artificial slate surface.
 planter
Wagstaff, W., Milluury, Ohio. Tea kettle, coffee pot, \&c
Wahl, Christian, Chicago, Ill. Apparatus for drying glue
Same...... Machine for drying glue
Same.....................samo..
Wahlgren, Clarles E., Knoxville, 111. Washing machine.
Wailey, C. W., assignor to Now Orleans Pneumatic Propelling Company, New
Orlcans, La. Paper reservoir for compressed air

Wain, Hugh, Raverna, Ohio. Gas machine
Wainwright, Theophilus A., assignor to self and Albert Farmer, Wilson, N. N. Cotton plow.
Wainwright, William H., and William H. Evans. (See Evans \& Wainwright.)
Wait, H. M., Woodstock, Ill. Band puller.
-chimney cleaner
Wait, John Jackson, Oreana, Nev. Lamp. Sutton, East Cambridge, Mass. ComWait, J. L., assi posing stick
Wait, P.H., Sandy Hill, N. $\bar{X}$. Curb for water wheels
Waito, E. W., New Haren, Conn. Carriage prop joint
Same...... Joint for carriage top props.
Waite, Increase S., Hubbardston, Mass. Machine for finishing caxd handles
Waite, R., Blue Earth City, Minn. Wind wheel
Waite, R. H., Newark, N. J. Hand card
Waite, Thomas, Plymouth, Ohio. Cultivator
Waitt, George W., Philadelphia, Pa. Trade mark
(Dcsign)
Same...... Manufacture of desiccated cocoznut.
Wakefield, Charles A., Pittsfield, Mass. Sced planter $\qquad$ (Extension) Wakeman, Zalmon B., Rockford, Ill. Railroad rail Same...... Railway rail and splice (Reissuc)
 Walbaum, W., and J. A. Pipo. (Sec Pipo \& Wallaum.)
Walbridge, H. B., Toledo, Ohio. Bed bottom
Walcott, George B., Jackson, Mich. Machine for making lorseshoc nails
Walcott, H. S., assignor to Boston Shoe-stud and Button Company, Boston, Mass. Boot and shoe stud.
Walcott, H. S., and D. H. Priest. (See Priest \& Walcott.)
Waldie, James, assignor to self and George Kennedy, Ipswich, Mass. Knitting machine
Waldo, Campbell G., et al. (See Hayes, Waldo \& Main.)
Waldron, C. F., New York, N. Y. Lamp for vehicles
Waldron, John J., assignor to self, Timothy G. Palmer, and Menry Brown, East Durham, N. Y. King bolt for wagons
Wale, Altred J., Philatelphia, Pa. Knitting machine.
Wales, Nathaniel, Boston, Mass. Decoy bird.
Walker, A., et al. (See Wilson, Walker \& Foster.)
Walker, Alvah, Oswego, N. Y. Water elevator
Walker, Andrew, Claremont, N. H. Gang plow
Same ..... . Seed sower and harrow.
Walker, Andrew Barclay, Warrington, England. Apparatus for browing, malting, \&c.
Walker, $A$. I., Oswego, N. V. Water heater for steam boilers.
Walker, Charles, Chester, Vt. Bed bottom
Walker, David, Newark, N. J. Blotter..............................................................
Walker, Eaton, Dundee, Il. Device for connecting rotary into reciprocating motion
Walker, Edward L., Benford's Store, Pa. Horsc hay fork
Walker, Emory P., Belchertown, Mass. Butter worker.
Walker, Felix, Memphis, Tenn. Coal stove.
Same...... Sash fastening.
Walker, Felix, New Orleans, La. Sash stop and holder
Walker, Francis H., Boston, Mass. Button-hole cutter

Date.

July $28,1868$.
Sept. 22, 1868.
Feb. 18, 1868.
Oct. $6,1868$.
Aug. 25, 1868.
June 2, 1868.
Mar. 3, 1868
Aug. 4, 1868
Sept. 1, 1868.
Oct. 6, 1868
Mar. 10, 1868.
Mar. 31, 1868
Apr. 28, 1868.
Feb. 25, 1868
Aug. 4, 1868.
July 21, 1868
July 21, 1868
July 21, 1868.
Fel. 18, 1868
Sept. 1, 1868
Sept. 15, 1868.
Nov. 10, 1868
Nor. 24, 1868
Oct. 20, 1868 .
July 7, 1868.
July $21,1868$.
May 19, 1868.
May 19, 1868.
Aus. 25, 1868.
Aug. 11, 1868.
Sept. 22, 1868
Mar. 3, 1868.
Nov. 17, 1868
Feb. 11, 1868
Nov. 17, 1868.
May 26, 1868.
July 7, 1868.
July $23,1868$.
May 26, 1868.
Scpt. 15, 1863.
Mar. 3, 1868.
Mar. 10, 1868.
june $30,1863$.
Apr. 28, 1868.

Aug. 11, 1868.
Apr. 14, 1868.
May 12, 1868.
July 21, 1868.
Feb. 11, 1868.
Jnue 2,1868.
July $28,1868$.
July 28, 1868.
Apr. 14, 1868.
Jıne 30, 186s.
Apr. 28, 1868.
May 12, 1868.
Mar. 10, 1868.
Apr. 21, 1868.
Apr. 21, 1868.
Apr. 7, 1868.
Selpt. 1, 1868.
Not. 10, 1868.
June 30, 1868.

Name, residence, and invention or discovery.

Walker, George, Middletown, N. Y. Saw
Wallzer, Georgo S., Enc, Pa. Step and extension ladder
Same..... . Stove-pipo drum
Walker, Isaac H., Nowton, Ill. Combined plow and planter
Walker, James F., Murrayville, Ill. Corn planter
Walker, James T., Albany, N. Y. Dish-cloth holder
Samo..... . Collar machino.
Same-.... (Sce Zepf, Jacob, assignor.)
Walker, John, and Richard Uren. (Sce Uren \& Walkor.)
Walker, John G., et al. (See Allen, Alexander, assignor.)
Walker, Joseph II., Grand Iapids, Mich. Horse hay fork

## Samo.

Walker, Londus 13., Chicago, Il. Saw mill
Walker, Richard, and Goorge 'Lrnmbull, Batavia, N. X. Draft equalizer.
Walker, Robert L., Globo Village, Mass. Steam boiler furnaco
Walker, Russ B., Claromont, N. H. Waxine floors
Walker, Sylvester G., as̆signor to self, Willian C. Allen, and Abijah Powers,
Corydon, N. H. Adjustablo ox yoko.
Walker, Thomas, assignor to Edward J. Hicks, and Gurdon G. Wolfe, Troy, N.
Y. Store door
(Design)
Walker, Thomas and Thomas F., Birmingham, England. Apparatus for taking soundings. (Patented in England Dec. 20, 1866)
Walker, William H., Fond-du-Lac, Wis. Shinglo machine
Walker, William N., and Charles S. Lord. (See Lord \& Walker) ... (Desiru.)
Walker, Willis C., St. Louis, MLo. Trado mark.
(Design
Walker, W. J., Brooklyn, N. Y. Acid powder as a substitute for yeast
Wall, William, et al. (See Enright, John, assignor.)
Wallace, Daniel F., Ripley, Ohio. Hemp break.
Samo..... . Quilting-frame.
Wallace, Lorenzo, Leaven worth, Kansas. Harvester
Wallaco, Luther R., assignor to self, Richard B. Robbins, and NV. B. Fassett,
Adrian, Mich. Seeder, drill, and roller.
Wallace, N. B., Foud-du-Lac, Wis. Watch
Wallaco, William, Ausonia, Conn. Machine for forming lamp tubes
(Rcissue)
Wallaco. William, et al. (See Stratton, James, assignor.)
Wallen, H. D.. jr., Fort Columbus, N. Y. Caloric engino
Walling, W. P., Swarz Crock, Mich. Water elerator
Wallis, John N. and Theodoro, Fleming, N. Y. Harrow
Wallis, S. G., Waterford, Pa. Balm
Walls, John. (See Cline, James, assignor.)
Wallworth, Thomas, Great Britain. Computing apparatus. (Antedated Feb. $14,1863)$
Walpert, F., Baltimoro, Ma. Machine for removing burrs from hair
Walpole, W'. R., et al. (See Allon, Alexanler, assignor.)
Walrath, Peter aud Jesse, Chittenango, N. X. Brick machino
Walsh, Arthur, and James P. Sibley. (See Sibley \& Walsh.)
Walsh, Thomas and Augustin, New York, N. Y. Bucket for dredging machines Walter, A. W., Canton, Ohio. Door hiugo
Walter, Charles E. (See Loomis, Sammel L., assignor.)
Walter, J. F., jr., Now York, N. X. Metallic lathiner.
Walter, JacobM., and Samuel Shank, Springfield, Ohio. Post-hole borer
Walter, James C. (Sce Moses, Lewis, assignor.)
Walters, David C., Warsaw, Ind. Attachment for hoppers of grinding mills.
Walters, George, and Thomas Shaffer, Phonixville, Pa. Fagot for beam
Same...... Method of constructing columns, $\mathcal{E C}$. .
Samo. .......................... samo....
Same....... Method of constrncting wrought iron eolumins
Walter, Jolin W., Riceville, Iowa. Machino for boring hubs.
Walters, J. W., Tiffin, Ohio. Clothes sprinklex
Walters, W. B., Lock Haven, Pa. Composition for cleaning and renovating hrick walls.
Walther, Bartholomew and Peter, New Xork, N. Y. Hitching post
Walton, Collins W. (See Wright, Wm. P., assignor.)
Walton, Elisha W., assignor to Josepli II. Atkiuson, Drytown, Cal. Tamping and blasting machino for splitting wood
Same....... Drill sharpener
Walton, Elisha W., assignor to self and W. H. Derrick, Stockton, Cal. Horso hoe.
Walton, James, Sunfish, Ohio. Cibler and wine mill
Waiton, Jonathan, Brooklyn, N. Y. Bail oar for pails. (Antedated April 30, 1868)

Walton, Joseph, Delovan, Wis. Wagou brako
Walton, R. K., Clarington, Ohio. Spike.
Walton, William, East Palestine, Ohio. Cultivator
Walworth, C. A., Utica, N. Y. Dovice for teaching commercial transactions
Walz, Frank J., and Cliarlos Steck, Hudson. N. J. Beer faucet
Wampach, Jolm, Shakopee, Minn. Tire cooler
Wandell, Wilber S., Battle Creek, Mich. Gate
Wanklin, Henry, United States revenuo steamer Wilderness. Salinometer pot. Want, Edwin, assignor to self and J. E. Spencer, New Haven, Conn. Eyo glass.

Datc.

Jan. 7, 1868.
Feb. 4, 1868
Sopt. 1, 1868.
Aug. 4, 1868
Nov. 3, 18tiz
July 21, 1868.
NoF. 3, 1868.

Jan. 7, 1868.
Apr. 21, 1868.
Apr. 14, 1868
Dec. 15, 1868.
Mar. 24, 1808
May 12, 1868.
Aug. 4, 1868.
Mar. 31, 1868.
Apr. 7, 1868.
Apr. 7, 1863.
Feb. 11, 1868.
May 5, 1868.
May 5, 1868.
Aug. 25, 1868.
Mar: 17, 1868.
June 9, 1868.
Mar. 3, 1863.
Juno 16, 1863.
Oct. 13, 1868.
July 7, 1863.
Jan. 7, 1868.
July 21, 1868.

Fclo. 18, 1868.
Mar. 31, 1868.
Oct. 13, 1868.
Jan. 21, 1868.
Oct. 27, 1863.
Jan. 23, 1868.
Sept. 15, 1868.
Jan. 7, 1868.
Mar. 17, 1868.
Sept. 29, 1868.
Sept. 29, 1868.
Oet. 20, 1868.
Oct. 27, 1868.
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Aug. 18, 1868.
May 5, 1868.

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May, 12,1868.
Feb. 18, 1868.
Oct. 6, 1863
June 2, 1868.
Fob. 18, 1868.
Mar. 3, 1868.
Aug. 4, 1868
Mitr. 17, 1868
Fel. 25, 1868.
Sept. 1, $1866^{\circ}$

No.

85, 495
:74, 178
84, 323
80,252
84, 324
76,854

73, 479

85, 191
84, 780
79,791
82,901
83, 893
85, 259
75, 496
77, 687
75, 497
82, 902
82, 457
84, 662
82, 903
84, 236

73, 062
75, 086
77,554

83, 011
75, 818
84, 923
82, 904
84, 325

83, 227
83, 228
83, 229

76,008
76, 009
76,567
76, 855
81, 234
80,577
82,186
78, 496
73, 411
76, 362
77,854
78,161
80,523
74, 179
79, 419
76, 856
82,905
75, 608
77, 138
81, 850

Name, residence, and invention or discovery.

Want, Henry, and John Luudgren, New Haven, Conn. Manufacture of spectacle bows.

## Warburton, Anson L., and Henry Bendir, Fort Wayne, Ind. Metallic end for

 spring bars for earriages.Warburion, W. F., Philadelphia, Pa. Hat ventilator
Ward, A. F., assignor to W. S. Batchelder \& Company, Marictta, Ohio. Combined plumb, square, and level
Ward, A. F., and J. H. Bean, assignors to selves, J. W. L. and L. S. Brown, and Samuel Bean, Marietta, Ohio. Cane and willow stripper
Ward, Benjamin, assignor to Clark Tomplkins, Troy, N. Y. Knitting machine..
Ward, Daniel, and John Freeland. (See Freeland \& Ward.)
Ward, David P., and John W. Minor. (See Minor \& Ward.)
Ward, D. T., Cardington, Ohio. Churn..
Ward, Isaae B. (See Williams, Charles, assignor.)
Ward, Jolin, jr, et al. (See MeKillop, John, assignor.)
Ward, Joseph E., assignor to Andrew Dwight Campbell, Great Britain. Mold for forming hats
Ward, Moses N., assignor to self, Benjamin S. Grant, and Thomas Hersey, Bangor, Me. Timber grapple
Ward, R., Edinburg, Ind. Smut mill
Ward, (Mrs.) R. A. N. A., Philadelphia, Pa. Brace and skirt supporter combined
Ward, S. W.H., New York, N. Y. Coating and water-proofing collars, cuffs, and other articles of wearing apparel. Same.......Carriage wheel
Ward, Thomas, Columbus, Ohio. Vapor burner
Ward, Walter, Mt. Holly, N. J. Shaft attachment to wagons
Ward, William, Clevelaud, Ohio. Oil for paint, \&c
Same...... Metallic roofing
Ward, William M., and P. Bennage, Eureka, Il. Bedstead
Ward, William T., Indianapolis, Ind. Wagon brake
Ward, Winthron, Mystic Bridge, Conn. Window strip attachment
Wardsworth, William, and E. H. Semple, St. Louis, Mo. Machine for picking wool
W ardwell, E. S., and J. D. Leach. (See Leach \& Wardwell.)
Ware, Preston, and Calvin R. Tilton, Newton, Mass. Mode of closing up boot legs.
Ware, W. Powell, assignor to self and James J. DeBarry, New York, N.X. Sign for' street lamps
Wareham, Charles E., Port Washington, Wis. Rotary scrubbing machine. (Antedated April 23, 1868)
Warfield, E. A., and J. O. Adams. (Seß.Aldrich, Robert H., assignor.) .. (Reissue.)
Waring, Arthur L., Coshocton, Ohio. Animal trap.
Waring, J. B., New York, N. Y. Car starting and stopping apparatus
Waring, J. B., assignor through mesne assignments to W. E. Dickson, Brooklyn, N. V. Wash boiler

Waring, John T., Yonkers, N. Y. Felted fabrie. (Antedated Sept. 28,1868 )....... Same....... Felted tufted fabric.
Warker, T., and C. Shultz. (See Shultz \& Warker.)
Same...............................same
(Design.)
Warne, Mahlon, Philadelphia, Pa. Head rest
Same. ..... Policeman's mace. .
Same...... Sabot
Warner, Albert. (See Sanford, Leverett A., assignor.)
Same .......................... . same.
Warner, Alexander, Williamsburg, N. Y. Fruit jar and preserving vessel. (Antedated March 18, 1868)
Same...... Means for elosing preserving vessels. (Antedated March 18, 1868)

Warner, Charles H., New Haven, Conn. Clock alarm
Warner, Charles H., Pittsficld, Mass. Window blind
Warner, C. W., New Haven, Vt. Horse hay rake
Warner, Daniel, assignor to self, James T. Bowman, Richard C. Dougherty, and Daniel J. Huckins, Boston, Mass. Lamp-wick trimmer
Warner, Eli G., Union Township, Ohio. Rail fence -
Warner', George, Cleveland, Ohio. Cap for marine stove-pipes.
Warner, Henry, Newark, N. J. Maehine for sizing hat bodies
Warner, Jackson, et al. (See Lavender \& Lowe, assignors.).
(Reissue.)
Warner, L. A., Freeport, I11. Corn popper and coffee roaster
Warner, L. S., Chicago, III. Concreto block press.
Warner, W. Y., Wilmington, Del. Snow plow
Warnoek, Robert, and Charles Abbey, ad, Ridgeville, Ohio. Grain rake
Warren, C. M. H., Brooklyn, N. Y. Pen holder
Warren, C. T., Linden, N.J. Mosquito-bar for windows
Warren, E., and T. Brangwin, Ceresco, Mich. Dray. (Antedated April 8, 1868)
Warren, E. K., Rochester, N. Y. Tank for fermenting ale, beer \&
Warren, Garduer, Roxbury, Mass. Extraeting tannin from bark. (Antedated Mareh 6, 1868)
Warren, Gardner, assignor to self and Hezekial H. Bryant, Roxbury, Mass. Process of treating woolen and silk goods.
Warren, Gardner, assignor to William M. Byrnes, Boston, Mass. Sliding sash...

Date.

Dec. $99,1868$.
Feb. 4,1868
Nov. 24, 1868.
July $21,1868$.
Nov. 24, 1868
Apr. 14, 1868.

Jan. 21, 1868.

Dec. 22, 1868.
Dec. 8,1868.
July 7, 1868.
Oct. 6,1868
Nov. 10, 1868
Sept. 22, 1868
Mar. 10,1868
May 5, 1868
Mar. 10, 1868
Oct. 6, 1868
Sept. 22, 1868
Dee. 1, 1868
Oct. 6,1868
Nov. 17, 1868.

Jan. 7, 1868
Mar. 3, 1868.
May 5, 1868.
Oet. 13,1868
Mar. 24, 1868.
Dec. $15,1868$.
Oct. 6,1868.
Nov. 24, 1868.

Oet. 20, 1868
Oet. 20, 1868
Oct. 20, 1368.

Mar. 24, 1868.
Mar. 24, 1868.
Apr. 7, 1868
Apr. 14, 1868
Aug. 18, 1868.
Aug. 4, 1868.
Scpt. 15, 1868.
June 2, 1868.
Jan. 14, 1868.
Apr. 7,1868.
May 12, 1868.
May 19, 1868.
July $28,1868$.
Feb. 4, 1868.
June 30, 1868.
Apr. 14, 1868.
Oet. 6, 1863.
Mar. 17, 1868.
A pr. 21, 1868.
Sept. 1,1868.

## Alphabeticat list of patentees for the year 1868-Continued.

## No.

84, 72
74, 643

Warren, John L., Detriit, Mich. Saw
Warren, Joseph, Lodi, Ohio. Corn sheller. Same. -same...
Warren, Thomas P., assignor to D. W. Warren, Norfolk, Va. Clevis iron
Warren, William H., W oreester, Mass. Crank planer.
Same...... Plancr's chuck
Warren, Willian M. and Charles A., assignors to the Warren Manufacturing Company, Watertown, Comn. Sash fastener.
Warrincr, ik., and J. H. Baker, Saratoga Springs, N. Y. Corn husker, straw and stalk cutter
Warth, Albin, Stapleton, N. X. Scwing machine Same................................... same. Same....... Pen-holder. (Antedated April 19, 1868)
Warth, Albin, assignor to self and Eberhard Faber, Stapleton, N. Y. Shuttle for sewing machines.
Warwiek, Joseph, Springboro, Ohio. Sulky plow
Wash, James, Mt. Sterling, Ill. Beehive
Washbourne, F., New York, N. Y. Screw.
Washburn, B. D., Boston, Mass. Shutter fastener
Washburn, Benianiu D. (See Baker, Hardy N., assignor)
.............. (Design.)
. Lock bolt. (Antedated June 27,1868 )
Washburn, George I., Worcester, Mass. Feed-water heater
Washburn, John R., West Stafford, Conn. Lathe chuck.
Wassell, Edwin, Pittshurg, Pa. Hachine for making horseshoes
Waterbury Brass Company. (See Wooster, Horace B., assignor.)
Waterbury Clock Company. (See Terry, S. B., assignor:)
Waterbury, Enos, Stamford, Conn. Scwing machine
Waterhouse, Miles, Passaic, N. J. Flock duster. Same......Apparatus for dyeing.
Waterhouse, W. F., Weyauwega, Wis. Hop drier
Waterman, Henry, Hudson, N. Y. Safety valve
(Extension).
Waterman, Henry, and George W. Richardson. (See Richardson \& Waterman.)
Waterman, Johı B., Summit, Mich. Hames and strap fastener
Waterman, Joseph S., Roxbury, Mass. Corpse-preserving ease .
Waterman, L. B., Chicago, III. Clothes dryer.
Waterman, L. B., assignor to John Carlon \& Company, Indianapolis, Ind. Inking apparatus for color printing
Waterman, Nelemial, and Alfred T. Perkins, Toledo, Ohio. Paper eap
Waters, Charles H., assignor to the Clinton Wire-eloth Company, Groton, Mass. Machine for painting wire eloth.
Same ...... Groton, Mass. Machine for printing figures on wire eloth
Waters, Elisha, Troy, さ. Y. Vessel for holding petroleum and other liquids Waters, Elisha, and George A., Troy, N. Y, Boat
Waters, Gardner, Cincinnati, Ohio. Lubricator (Antedated Mareh 31, 1868) Same................................same......
Same...... (See Hadley, George D., assignor.)
Waters, Hervey, Boston, Mass. Blank for hoe...
Waters, H. N., assignor to self and Newton Case, Hartford, Conn. Feed-water heater of stearn generators
Waters, James S., assignor to St. Louis Lead \& Oil Company, St. Lonis, Mo. Trade mark. .
(Design)
Waters, Zero, Bloomington, ml. Hat holder
Watkins, Francis, sengland. Nut machine. (Antedated Nov. 28,1868 ) Same...... Bolt-naking machine
Watkins, G. A., Proctorsville, Vt. Device for weaving chair seats. Same.. ..........same...... $\qquad$ (Antedated April 6, 1868)
Watkins, James T., Santa Clara, Cal. Gang plow
Watkins, John E., Smithficld, Ky: Railroad rail clamp or chair
Watkins, J. R., Maine Prairie, Minn. Clothes' dricr
Watkins, M. S., Mansfield, Texas. Hat
Watrous, Edwin, Mystic River, Conn. Coffec mill.
Watrous, John N., West Meriden, Conn. Sash supporter
Watrous, W. H., Hartford, Conn. Electro-plating frame.
Watson, B. F., and A. Shephard, Bridgeport, Ohio. Curtain clasp.
Watson, B. J., Troy, Wis. Heat-radiating attachment to stove.
Watson, Charles S., Philadelphia, Pa. Low-water indicator
Watson, James T., and Henry E. Robinson, Richmond, Ind. Straw cutter.
Watson, Jeremiah MI., assignor to self and William B. Wiekes, Sharon, Mass. Plant protector.
Watson, John. (See Cheeseman, Andrew M., assignor.)
Watson, Thomas, Brooklyn, N. Y. Device for operating sluntters
Watson, W. C., Paterson, N. J. Portable book clamp.
Watson, W. G., Paterson, N. J. Silk eleaner
Watson, William H., New York, N. Y. Machine for shecting and pressing tobaceo.
Watson, William J., Benton Center, N. Y. Wood-turning latho
Watson, William P., and Andrew Smith. (See Smith \& Watson.) Watson, W. P., et al. (See Sinith, Andrew, assignor.)
Watson, William W., and Janaes La F. King. (See King, Watson, assignor.) (Rcissue.)

Dec. $8,1868$.
Feb. 18, 1868.
A pr. 28, 1868
May 12, 1868 Tune 9, 1868
Jan. 14, 1868
Mar. 10, 1868.
Dec. 1, 1868
June 23, 1868.
Jan. 7, 1868
Jan. 7, 1868
Apr. 28, 1868.
Dec. 15, 1868
Jān. 7, 1863.
Apr. 21, 1868.
Dec. 1, 1868.
Nov. 10, 1868
July $14,1868$.
Fel. 25, 1868
Sept. 29, 1868
Dec. $29,1868$.

June 16, 1868
Jan. 7, 1868
June 2, 1868
Aug. 4, 1868
Nov. 13, 1868
Sept. 22, 1868
Apr. 7, 1868.
July 28, 1868.
Mar. 10, 1868
June 30, 1868
Dec. 1, 1868.
Dec. 1, 1868
Aug. 25, 1868
June 30, 1868.
June 23, 1868. Sept. 22,1868

Feb. $20,1868$.
Feb. 18, 1868.
May $12,1868$.
July 28, 1868
Dec. 8, 1868
Dec. 8, 1868
Mar. 10, 1868.
Apr. 7, 1868
Apr. 28, 1868
Tuly 14, 1868
Jan. 21, 1868
June 30, 1868
Sept. 1, 1868
July 28,1868.
June 30, 1868.
June 2, 1868
Nov. 24, 1868
Mar. 3, 1868
July 7, 1868
July 28, 1868
June 30, 1863
July 7, 1868
Mar. 10, 1868
Feb. 18, 1868.
Feb. 25, 1868
Apr. 7, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

81, 851
3, 071
77, 140
73,680
74, 869
75, 609
75, 610
3, 165
83, 426
76, 010
81, 716
80,253
73, จัว
81, 311
80, 435
73. 480

78, 162
84, 449
74, 736

79, 709
77, 875
80, 789
85, 260
82, 665
79, 038
80, 888
77, 423
78, 903
81, 312
84,450
81, 442
75, 322
76, 857
73, 853
74, 459
82, 259
84, 451
85, 496
76, 858

82, 458
83, 230
78, 498
76, 961
76, 364
76, 678
76, 679
77, 786
85, 041
78,034
78,035
77, 141
2, 859
73, 413
76, 011
74, 645
79, 090
78, 163
82, 773
77, 936
79, 526
85, 042
74, 961
78, 499
82, 774

Name, residence, and invention or discovery.

Watt, Alexander, England. Bleaching soap
Watt, Gcorge, Richmond, Va. Plow
(Reissue)
Watters, C.D. P., New York, N. Y, Egg cup
(Reissue).
Wattis, Edward, jr., Philadelphia, Pa. Fastening metallic collars to bottles
Wattis, Edward, sr., Philadelphia, Pa. Pepper-easter bottle
Wattles, Joseph W., Canton, Mass. Clearer for ring-spinning machines.
Same...... Ring and traveller spinning machine
Same...... Ring for ring and traveler spinning machine ........... (Reissue) Same.......Ring for spinning machines
Watts, Hiran, and John W. Morrett. (See Morrett \& Watts,)
Watts, Joseph, Birmingham, Great Britain. Heating furnace
Watts, Joseph, Brazil, Ind. Churn
Wangaman, Eli, Blairsville, Pa. Combined eider mill and press.
Way, Francis K., Springfield Ohio. Machine for twisting wax-ends
Way, Johh, Waterbury, Conn. Straph-holding device.
Way, John A., assignor to the Darrow Manufacturing Company, Bristol, Conn. Washer
Way, Seth, La Porte, Ind. Gang plow Samo....... Sled
Same...... Cultivator
Wayman, Edmund G., assignor to Robert V. Snodgrass, Louisville, Ky. Preparing hemp and flax fibre for the manufacture of dusters, \&c.
Weakley, T. B. (See Zinn, John Hartzell, assignor.)
Weand, W. R., et al. (See Wagenhorst, James J., assignor.)
Weare, Joseph, Fitchburg, Mass. Surface file handle.
Weatherill, Henry, and Joseph Cookshoot. (Sce Coekshoot \& Weatherill.)
Weathers, James, Greensburg, Ind. Mode of attaching hubs to axles
Wearer, Daniel, Guilderland, N. Y. Sewing machino
Weaver, George, and II. Nelson Allen, assignors to selves and E. R. Cheney, Boston, Mass. Barrel head and top
Weaver, George L., Hartford, Connectieut. Journal box
Wcaver, Jacob, jr., Elizabethville, Pa. Corn planter and seed drill
Weaver Joel D., assignor to self, C. A. Sherwood, and L. S. Bunnell, Troy, N. I. Spirit meter.
Weaver, Rebecea, Washington, D. C. Trunk

> Same .......Fastening for buttons.

Weaver, Theophilus, Harrisburg, Pa. Clothes hook and line-holder eombined Same...... Safety-horse hiteh. (Antedated Sept. 22, 1868)
Same....... (See Patton, Wm. P., assignor.)
Wearer, W. B. Reading Center, N. X. Saw set
Webb, C. H. New York, N. X. Adding maehine
Webb, Charles R., Philadelphia, Pa. Boom gear
Webb, George, Lewiston, Maine. Bridle bit
Webb, Josiah, Spartansburg, Pa. Washing maeline
Same......Clothes wringer
Webb, Milo, Chenango Forks, N. Y. Mechanical movement
Webb, Thomas S., et al. (See Martin, Barrett \& Webb.)
Webb, Timothy U., Springfield, Ill. Gang plow
( Antedated Dec. 22, 1868)
Webber, Eugene, Portage, Mieh. Horse collar
Webber, G. A., et al. (See Vanghn, Chadwell, Childress \& Webber.)
Webber, John, and Edward McGivern. (See Kinney, Israel, assignor.)
Weber, Anthony, and Earnest Kaufmann. (See Kaufmann \& Weber.)
Weber, Charles, and Henry Reimann, West Meriden, Conn. Lamp
Weber, George R., Springtield, Ill. Washing machine
Webster, Alexander, Seneea Falls, N. Y. Apparatus for distilling
Webster, Charles, New Haven, Vt. Feed-water heater for boilers
Webster, D. P., New York, N. Y. Furnace for smelting lead ores
Same...... Bottle for holding hydro-luorie aeid.
Same...... Smelting lead ores
Webster, E. Z., Louisville, Ky. Stove for railroad cars
Same...... Norwich, Comn. Hat eonformator
Webster, Harvey, Cambridge, Vt. Whifletree... Same...... Thill coupling.
Webster, J. B., Stockton, Cal. Seed sower and harrow attachment to gang plows Webster, John G., et al. (See Hilton, Webster \& Wheeler.)
Webster, John T., assignor to Edward Harvey, New York, N. Y. Floor oileloth pattern.
(Design).
Webster, Joseph R., Boston, Mass. Mode of straining wood saws.
Webster, Nelson, Plainfield, N. J. Weeding tool
Webster, R. A., Sandisfield, Mass. Imer sole
Webster, R. A., assignor to self and John and R.J. Dowd, Sandisfield, Mass. Inner sole for boots and shoes
Webster, William, Morrisania, N. Y. Wearing pile fabries
Same.......Loom for weaving pile fabries. (Antedated Aug. 24, 1868)
Wedekind, Gustav, Philadelphia, Pa. Lamp shado
Same...........................................same.
Wedekind, Gustav A., and Helmuth Dueberg, New York, N. Y. Burning kilı Wced, Alfred, Boston, Mass. Boring faucets

Same...... Self-boring stop-eock.
Weed, Andrew J., Hardwick, Vt. Sugar pan derrick.

## Date.

Sept. 1, 1868
Aug. 4, 1868.
Apr. 21, 1868.
Jan. 21, 1868.
Feb. 25, 1868.
Mar. 17, 1868.
Mar. 17, 1808.
Oet. 20, 1868.
Oct. 27, 1368.
Mar. 24, 1868
Sept. 1, 1868.
July 21, 1868.
Jan. 14, 1868.
Aug. 18, 1868.
July 28, 1868.
Jan. 21, 1868.
May 19, 1868.
Nov. 24, 1868.
Feb. $18,1868$.

July 7, 1868.
May 12, 1868.
Aug. 4, 1868.
Dee. 22, 1868.
Sept. 29, 1868.
June 16, 1868.
Aug. 11, 1868.
Apr. 28, 1868.
June 16, 1868.
Aug. 18, 1868.
Nov. 24, 1868.
Aug. 25, 1868
Mar. 10, 1868.
Apr. 14, 1868.
Jan. 28, 1868.
Feb. 11, 1868.
Sept. 15, 1868.
Nov. 24, 1868.
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Apr. 14, 1868.

Sept. 22, 1868.
Oet. 20, 1868.
June 2, 1868. Apr. 21, 1868. Apr. 7, 1868.
Apr. 14, 1868.
Apr. 14, 1868
May 12, 1868
Dee. 15, 1868.
May $19,1868$.
Мау 19, 1868.
Apr. 21, 1868.

Jan. 14, 1868
Jan. 14, 1868
Mar. 24, 1868.
Feb. 18, 1868.
June 23, 1868
May 19, 1868.
Oet. 6, 1868
May 12, 1868
June 30, 1868
Dee. 15, 1868.
Feb. 25, 1868
June 2, 1868
Oet. 6, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

Name, residence, and invention or discovery.
Date.

Apr. 14, 1868.
Feb. 11, 1868
Apr. 28, 1808.

Sept. $2 \Omega, 1868$.
June 16, 1868.
Jıne 30, 1868
Sept. 1, 1\&68.

June 16, 1868
May 12, 1868
July 7, 1868.
June 9, 1868.
May $5,1868$.
June 2, 1568.
May 26, 1868.
Aug. 2J, 1868.
Jan. 21, 1868.
Mar. 31, 1868.
Aug. 4, 1868.
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Apr. 21, 1868.
Aug. 25, 1868.
May 19, 1868 .
Mar. 3, 1668
Dee. 22, 1868
Not. 2t, 1868.
Nov. 24, 1863.
Feb. 18, 1868.
Mar. 17, 1868.
May 12, 1868.
Lan. 14, 1868.
Feb. 4, 1868.
Feb. 11, 1863.
$J$ une 16, 1868.
July $28,1868$.
June 16, 1868.

Oct. 6, 1868.
Fol. 25, 1868.
Nov. 10, 1868.
May 12, 1868.
May 12, 1868.

Apr. 21, 1868.
Aug. 18, 1868
Aug. 18, 1868
Doe. 22,1868.

Jan. 7, 1868
June 16, 1868.
July 7, 1868
Jail. 7, 1868
Mar. 24, 1868
Oet. 20, 1868.
Mar. 24, 1868.
Not. 10, 1869.
Dec. 15, 1868.
Feb. 4, 1868.
Feb. 4, 1868.
4, 1868.

Alphabetical list of patentees for the year 1868-Continued.

## No.

77, 425
2, 942
74,779
79, 617
77,556
79, 618
82, 666
84, 240
76, 123
78, 563
74,460
82, 907
85, 151
77, 143
80,102
74, 263
2,931
80, 846
78, 704
84, 326
76, 014
80, 254
80,255
81, 564
81, 853
84,783
73, 481
78, 405
76, 860
75, 226
3,258
74, 737
82, 908
76,570
'76, 124
78, 776
75, 611
84, 035
82, 909
78, 847

84,976
74, 962
84, 977
82,369
83, 809

79, 927
77,939
74, 647
81, 315

74, 780
77, 144
84, 784
82,048

Name, residonee, and invention or discovery.

Wells, George M., assignor to Moses D. Wells, Chieago, Ill. Last holder or jaek. Wells, Henry A., deceased, by Eliza Wolls, administratrix, Brooklyn, N. Y. Machinery for making hat bodies.
Wells, Isaae M., Jeffersonville, Ohio. Burglar alarm
Wells, Lemuel T., St. Louis, Mo. Printing press.
Wells, Marcus M., Hartwiek, N. X. Grain rake..
Wells, Martin, New York, N. X. Pointod bracket for lightning rods.
Wells, S. B., et al. (See Strevell, Kerper \& Wells.)
Wells, S. C., Le Roy, N. Y. Pantaloons stretehing deviec.
Wells, William, Ashtabula, Ohio. Spring butt
Wells, William C., Newark, N. J. Drill gauge.
Wells, William C., Philadelphia, Pa. Iee ereeper.
Welsch, Jonathan C., Edgerton, Ohio. Knitting machino
Welsh, Christoplser C., Pleasant Valley, Pa. Machine for converting rotary into reciprocating motion.
Welsh, George W., and George Wylie, Arlington, Wis. Wagon brake.
Welte, Charles, Frankford, Pa. Meat eutter
Welty, Isaac, Olney, Ill. Sulky enldivator...
Wemmer, N. J. and J. P., Philadelphia, Pa. Branding instrument
Wemple, Jacob V. A., Quincy, Mich. Harvester.
(Reissue)
Wemyss, A., and David Stuart. (See Stuart and Wemyss.)
Wendell, Charles, Albany, N. Y. Slate frame
Wendell, Isaac P., Philadelphia, Pa. Lmbricating journals of car shafts. (Antedated May 23, 1868).
Wendell, Isaae P., assignor to Ebert J. Wendell, Philadelphia, Pa. Journal bearing for railroad ears. (Antedated May 25, 1868.)
Wendell, W. C., Albany, N. Y. Slate frame
Wendt, Hermann, assignor to Henry and Robert H. Soymour, Elizaboth, N.J. Shears.
 Sheep shears.
Wenger, Edouard, assignor to self and Josepli Martischang, Richmond, Ind. Composition for pavements
Wenham, Francis Herbert, assignor to Andrew Shanks, England. Hot air engine
Wensley, James, New Brunswiek, N. J. Guiding attachment for sewing ma ehines
Wentworth, Hiram, and V. B. Clark, Ripon, Wis. Lantern
Wentworth, William P., assignor to self and Thomas S. Sprague, Detroit, Mieh. Stake holder for cars. (Antedated May 16, 1868)
Wentz, J., Girard, Ala. Cotton, or hay press.
Wenzell, Plilipp, assignor to H. C. Lauterbaek, Mentz, Germany. Window sash supporter

Weñıul, Josef,', Steyer, Austria. Bre日ch-loading fire-arms
Werner, Daniel, St. Louis, Mo. Breech-loading pistol.
Werner, Julins, New York, N. X. Sofa bedstead.
Werner, Werner. (See Zippe, G., assignor.)
Wertman, Daniel K., Centralia, Pa. Breast pad.
Wertz, William, Pana, Ill. Car axle eap
Wesgate, Joseph Davis, San Francisco, Cal. Sad-iron holder
Wesley, George W., Troy, Pa. Water wheel
Wesselhoeft, Minna, Baltinore, Md. Extraet of barley malt
Wesson, D. B., assignor to Wesson Fire-arms Company, Springfield, Mass. Breech-loading fire-arm
 Same.
.same.
(Extension).
Wesson, Edward M. (See Fiske, Milton A., assignor.)
Wesson Fire-arms Company. (See Stokes, John, assignor.)
Wesson, Frank, Worcester, Mass. Revolving fire-arm
Wesson, Martin, Springfield, Mass. Shoe
Wesson, Phineas D., Providence, R. I. Steam heater.
Wesson, Samuel, Woreester, Mass. Corn husker..
West, Andrer, Burlington, Iowa. Bed bottom.
West, Andrew B., and Sylvester Bissoll. (See Johnson, Alonzo, assignor.)
West, Bailey. (See Sanborn, Woodbury, assignor.)
West, Charles F., assignor to J. F. Tapley \& Company, Boston, Mass. Paperruling machine. .
West, E. B., St. Anthony, Minn. Churn dasher.
West Haven Buckle Company. (See Hartshorn, Sheldon S., assignor.)
West, Isaac H., and Tertins L. Camp, Evans, N. Y. Culinary boiler.-
West, J. Burns, assignor to Samuel Finley, Geneseo, N. Y. Lathe for turning balls.
West, R. (See Hackett, Ephraim, assignor.)
Westbrook, Abram, and Stephen O. Doan, Leona, Pa. Detaching eheck reins. Westcott, Amos, Syraeuse, N. Y. Churn

Westeott, Amos, and Lewis T. Hawley. (See Hawley and Westcott.)
Westcott, Henry P., assignor to Seneca Falls Churn Manufacturing Company, Seneca Falls, N. X. Butter pail

Date.

Apr. 28, 1868.
May 19, 1868
Feb. 25, 1868.
July 7, 1868.
May 5, 1868.
July 7, 1868
Sopt. 29, 1868
Nov. 17, 1868.
Mar. 31, 1868
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Dec. 15, 1868.
Feb. 25, 1868.
Dec. 15, 1868.
Sept. 22, 1868.
Nov. 3, 1868.

July 14, 1868
May 12, 1868.
Feb. 18, 1868.
Aug. 18, 1868.
Feb. 25, 1868.
Apr. 21, 1868
Dec. 8, 1868

Sept. 8, 1868.

## Alphabetical list of patentees for the year 1868-Continued

Name, residence, and invention or discovery.

Westcott, J. D., Waterford, Pa. Pump piston
Westcott, Robert. (See Speucer, Elihu, assignor.)
Wcstfall, Wesley. Chelsea, Mich. F'ield roller
Westhcad, Marcus Brown, England. Riblon roll clip
Same...... Tape box
Westinghonse. George, jr., Schenectady, N. Y. Railway fiog
Westlake, William, Brooklyn, N. I. Lantern globe

> Same...... Lanteru
> Same...... Manfactrro of spouts for tea pots Same...... Chicago. Ill. Straincr
Westland, Charles S., and John B. Allen, Providence, R. I. Kitchen implement
Weston, C. H., Lowell, Mass. Bench hook, (for carjenters' benches)
Weston, C. I., Cnmmington, Mass. Dressing hides and furs
Weston, Darid M., Boston. Mass. Centrifugal machiur for draining sugar and (Reissue).

## other substances <br> Same..... Machine for scparating paints and other solid substances

Same......Self-oiling hub for pulleys, \&c same. ..... Belt sturd
Weston, D. M., Boston, Mass. Self-balaucing centrifugal machine.
Weston, D. Mr, assignor to Green, Lweed \& Company, Boston, Mass. Belt punch
Weston, Erastus D., Taunton, Mass. Cooking stove
Same......................................... - ame
Weston, Henry, and Gcorge C. Langtry, Dayton, Ner. Concentrator for dressing ores
Weston, J. W., New York, N. X. Fruit carrier. (Antedated October 17, 1868.)
Weston, T. A., Buffalo, N. X. Ratchet head and lever Same.
Same.......Ratchet
Same...... Ratchet brace, or lover
Same.......Ratchet brace lever
Weston, Thomas Aldridge, England. Coupling and brake
Westover, Gcorge C., Paducal, Ky. Combincd churn and ice-crean freezer
Westover, John, Taylor, Ill. Elevator
Wctherbee, Albert. Waltham, Mass. Composition tip for billiard cues
Wetherbec, John W., assignor to self and Richard Rowse, Charlestown, Mass.
Reclining chair
Wetherell, Joseph L., Attleboro, Mass. Pad for horses hoofs
Wetherill, Robert N., et al. (See Stratton, James, assignor.)
Wetherill, Samuel, Philadelphia, Pa. Process of manufacturing white oxide of zinc
Same...... Apparatus for the manufacture of white oxide of zinc
Wetmore, H. P., Elizabeth, N. J., and J. G. Hitchcock, Ncw Jork, N. X. Clotlr diawers.
Wetzel, Anton, Cincinnati, Ohio. Permutation lock.
Wetzel, Paul and Georgc. (See Phillips, M. E., assignor.)
Wetzell, Ludwig, Washington, D. C. Hames tug buckle.
Wharff, Joseph, Bangor, Maine. Machine for boring hubs for wagon wheels
Wharry, John I., Moundsville, West Va. Ventilator and window shade Same...... . window metting.
Wharton, Gcorge, Jcrsevville, Ill. Gang plow
Wharton, J. C., Nashville, Tenn. Tumbler stand
Same......Jct attachment for soda fountains
Wharton, William, jr., Philadelphia, Pa. Railway fros
Same....... Railway switch
Same .............. same
Wheat, James E., Rochester, N. X. Letter game
Wheat, S., Middletown, and D. B. Wheat, Now York, N. Y., assignors to Francis M. and Ellen A. Wheat. Refrigerator
Wheatley, R. B., Grandriew, Ind. Tirc-setting machine
Wheaton, L. F., Madison, Conn. Dust pan
Wheaton, Miles B., New York, N. Y. Clothes dryer
Wheeler, Benjamin Fr., Calais, Vt. Wagon brake
Same......Slcigh brakc.
Wheeler, Charles L. (See Hascltine, John, assignor.)
Whecler, Cyrenus, jr., Auburn, N. X. Pitman counection for harvesters

Same......................amo
Samc.........Harvester rakc


Same......Grain and grass harrester ....................(Extension of No. 877).
Samo.................... samo................................(Extension of No. 879)

Same.....................same............................. (Extension of No. 881)
Same...... (See Merrell, Wm. G., assignor.)
Same...... (Ser, ANington, Charles C., assignor.)

Date.

Aug. 28, 1868.
Nov. 17, 1868 Jnly 28, 1868 Aug. 11, 1868 Apr. 7, 1868 Feb. 4, 1868
Apr. 7, 1868
Apr. 7, 1868
Ang. 4, 1868 Sept. 15, 1868 Feb. 4, 1868
Mar. 24, 1868.
Jan. 14, 1868
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Mar. 10, 1868
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Sept. 1, 1868
May 5, 1863
Oct. 6, 1868
Oct. 20, 1868
Nov. 3, 1868
Mar. 3,1868
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Mar. 3. 1868
Mar. 3, 1868
Mar. 3, 1868.
Mar. 3, 1868.
Jan. 28, 1868.
July 21, 1868
Nov. 10, 1868.
Oct. 13, 1868
July 28, 1868.

Jan. 7, 1863
Jan. 7, 1と68.
Nor. 17, 1868
Feb. 25, 1868.
Jan. 7,1863.
May 26,1868
Jan. 7, 1868.
Mar. 17, 1868.
July 14, 1868.
Sept. 29, 1868.
Oct. 20, 1868.
Feb. 11, 1868.
May 19, 1868.
June 2, 1868.
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Mar. 17, 1868
May 26, 1868
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July 14, 1868
Nov. 17, 1868.
Dec. 15, 1868
Dec. 9,1868
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Dec. 9, 1368
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Dec. 9,1868

Wheeler, Elonzo S., Westport, Conn. Nivet reritz....

## Alphabetical list of patentees for the year 1868-Continued.

No.

76, 016
73, 214
73, 415
73, 215

80,792
76, 125
77, 557
80, 257
73,855
77, 340
84, 074
84,597
82, 775
80, 847
76, 680
79, 168
79, 169
75, 714
84,598

77, 147
80, 040
83, 427
76, 280
81, 965
74,738
78,705
84,599
73, 556
, 2, 923
78, 247
81, 041
75, 324
75, 094
3, 109
81, 854
2, 994
2, 995
76, 863
80, 041
85, 193

74, 648
76, 017
82,573
74, 183
80, 376
81, 445
76, 864
79, 041
77, 940
84, 327
73, 856
79, 711
77, 689
78, 628
73,557
79, 882

73, 416
73, 065
80, 688
-5, 501

Name, residence, and invention or discovery.

Wheeler, Elonzo S., assignor to self and J. E. Wheeler, Westport, Conn. Button Wheeler, Emery I., and Wm. H. Vaughan, Cannelton, Ind. Machine for saw. ing lath.
Wheeler, George, Chicago, Ill. Lanteru
Wheeler, George W., and George V. Allen, Harttord, Vt. Water wheel
Wheeler, Henry A., et al. (Sbe Deming, F., assignor.)
Wheeler, Hiram E., et al. (See Hilton, Webster \& Wheeler.)
Wheeler, H. F., Boston, Mass. Nut squaring chnck
Wheeler, James W., et al. (See Cawl, Corning \& Wheeler.)
Whecler', Joel M., Oxford, Conn. Stoam jet head for cleaning boiler flues
Wheeler, John, et al. (See Chandler, Wm. H., assignor.)
Whecler. Johu A., Freeborn, Minn. Wind mill.
Wheeler, John B., Neville, Ohio. Envelope.
Wherler, J. H., Addison, Vt. Match box.
Whecler, J. T., St. Charles, Ml. Washing machine
Wheeler, John W., assignor to H. F. Wheeler, Cleveland, Ohio. Machine for spreading paint or mastic
Wheeler, Leroy B., Madison, Wis. Washing machine.
Wheeler, N. W., Ripon, Wis. Combined harrow and eultivator
Whecler, Orren L., Iewiston, Maino. Measuring fancet
Wheeler, Seth, Albany, N. Y. Pulley and gearing for machinery
Same....-. Shaft coupling.
Wheeler, William O., Deposit, N. Y. Street lamp.
Wheelock, Finlay \& Company. (Sec Ford \& Logan, assignors.)
Wheelock, Jerome, Worcester, Mass. Piston
Wheclock, Luke, assignor to Winchester Repeating Arms Company, New Haven, Conn. Magazine fire-arm.
Whelan, Charles A., et al. (See Bowen, Reed \& Whelan.)
Whelan, Martin, New Haven, Conn. Carriage hub
Wholden, Andrew, South Dennis, Mass. Lantern.
Whelpley, James D., Boston, Mass. Rotary steam-engine
Whelpley, James D., and Jacob J. Storer, Boston, Mass. Steam boiler furnace.
Whetlock, Daniel. (See Seymour, James M., assignor.)
Whipple, Heman, and Elon Denio, Baldwinsville, N. Y. Making forks
Whipple, James 'I., Chicago, Ill. Pump for deep wells
Whipple, John L., Detroit, Mich. Spring seat.
Whipple, Milton D., Cambridge, Mass. Felting hats
Whipple, S. J., assignor to self and Joseph H. Atkinson, Orville, Cal. Churn.
Whisler, David, Union Township, Ohio. Ditching machine $\qquad$ (Reissue)
Whisler, H., and J. S. Berry, New Market, Ohio. Still
Whissemore, John H., Mansfield, Ohio. Harness tree
Whitaker, Bonjamin $\bar{F} .$, Whitestown, Ind. Gate and door spring
Whitaker, James, and A. M. Damon. (See Damon \& Whitaker.)
Whitaker, Samuel H., Cincinnati, Ohio. Globe valve..
Whitall, Henry, Woodbury, N.J. Machine for grinding the cutters of mowing machines.
(Reissue).
Whitcomb, Alonzo, Worcester, Mass. Planing machine
Whitcomb, George, Port Chester, N. Y. Horse rake..... (Division A, reissue). Same.......................................................................... White, Aaron B., Mendon, Mich. Bolt trimmer .
White, Albert M., Thompsonville, Conn. Railway ear seat
White, Albert M., assignor to the Amcrican Brush Company, Thompsonville, Conn. Brush-making macline.
White, Almeth. (See Timmons, Wm. W., assignor.)
White, A. J., Ballston Spa, N. Y. Oil-burning apparatus
White, A. M., Thompsonville, and E. G. Burnham, Bridgeport, Conn. Faucet for soda water fountains.
White, A. S., Malone, N. Y. Harrow and cultivator
White, B. L. (See Hardy, Cyrus H., assignor.)
White, Charles, Bladensburg, Md. Plow
White, Cyrus B., Port Richmond, N. Y. Gib and self-oiler.
White, C. N., assignor to self, W. S. Harris, and T. P. Roland, Batesville, Miss. Churns.
White, Daniel and George H., Chicago, Ill. Street letier-box.
White, D. A., Chagrin Falls, Ohio. Stovepipe damper.
White, Daniel M., Malden, Mass. Portable music stand
White; Darius, Portland, Maine. Paint brash
White, Eli, and William Shilvock, New York, N. Y. Bung.
White, E. I., Locke, N. Y. Horse hay fork.
White, George H., Huntington, N. Y. Device for preventing and curing crib biting in horses.
White, George M., and Charles S. Mecker, New Haven, Conn. Curtain fixturo.
White, Gilbert, assignor to self and Gustavus Pierrez, Harlem, N. Y. Handhole joint for boilers.
White, H. K., Comnoaut Township, Pa. Washing compound
Same......................................................................
White, Henry K., and Levi K. Desk and seat
White, J. B. (See Cochrane, E. C., assignor.)
White, Jacob D., Kilbourne, Ohio. Sheop rack
White, James, Harrison, Ohio. Car coupling.
White, James, and Thomas Lingle, South Amboy, N. J. Car brake.

## Date.

Mar. 24, 1868
Jan. 7, 1868
Jan. 14, 1808.
Jan. 7, 1868

Aug. 4, 1868
Mar. 31, 1868.
May 5, 1868.
July 21, 1868.
Jan. 28, 1868
Apr. 28, 1868.
Nov. 17, 1868
Dec. 1, 1868.
Oct. 6, 1868
Aug. 11, 1868.
Apr. 14, 1808. June 23, 1868.
June 23, 1868.
Mar. 17, 1868.
Doc. 1, 1868.
Apr. 21, 1868
July 14, 1868.
Oct. 27, 1898.
Mar. 31, 1868.
Sept. 8, 1868.
Feb. 18, 1868.
June 9, 1868.
Dec. 1, 1868.
Jan. 21, 1868
May 5, 1868.
May 26, 1868.
Aug. 11, 1868.
Mar. 10, 1868.
Mar. 3, 1868.
Sept. 1, 1868.
Scpt. 1, 1868. June 16, 1868.
June 16, 1868.
Apr. 14, 1868.
July 7, 1868.
Dec. 22, 1868.
Feb. 18, 1868.
Mar. 24, 1868.
Sept. 29, 1868.
Feb. 4, 1868.
July $28,1868$.
Aug. 25, 186.
Apr. 14, 1868. June 16, 1868. May 12, 1868.
Nov. 24, 1868.
Jan. 28, 1868.
July 7, 1868.
May 5, 1868.
June 2, 1868
Jan. 21, 1868
July 14, 1868
Sept. 18, 1868
Jan. 14, 1868.
Jan. 7, 1868.
Ang. 4, 1868
Mar. 10, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

73, 682
84, 66
84, 665
84, 849
81, 042
73,216
2, 992
82, 188
82, 776
77, 690
75, 228
82, 911
75, 819

75, 502
77, 148
77, 149

78, 777
74, 963
77,941
78, 036
80, 377
81, 043
76, 018
75, 095
77, 426
85,194

75, 239
3, 058
78, 501
74, 464
77, 691
79, 170
80, 258

Name, residence, and invention or discovery.

White, James H., San Francisco, Cal. Hydrocarbon burner
White, Jarvis B., Detroit, Mich. Combination lock.
Same...... Carriage jack.
Same.......Clothes dryer.
White, Jolm H., Lima, Peru. Rice pounding machine
White, Joseph, and Wilson Jewell. (See Cassiday, Charles H., assignor.)
White, Joseph P., Savannah, Ga. Marker for sewing machines.
White, Leroy S., Watcrbury, Conn. Spoon and fork handle
White, Margeannah, Providence, R. I. Shoe lacing
White, O. A., and Martin Helikcr. (See Heliker \& White.)
White, Otis C., Hopkinton, Mass., and Austin I. Ashmead, Hartford, Comn. Dentists' chair
White, Peter, St. Louis, Mo. Check valve. (Antedated April 22, 1868)
White, Philo B., and Henry M. C., Doragiac, Mich. Pump.
White, P. B., and Hugh Dool. (See Dool \& White.)
White, Rudolph, Newport, Pa. Clothes-line adjuster
White, Stillman, assignor to self and Clristopher Dexter, Providence, I. I. Pump.
White, Stillman, and L. W. Cushing. (See Cushing \& Whitc.)
White. T. B., New Brighton, Pa. Bridge
White, Thayer D., Cincinnati, Ohio. Dovetail machine
Same...... Machine for making dovetail mortises
White, Thomas II. (See Porter, D'Arey, assignor.)
White, Thomas H., and Warren Johnson. (See MeNeil, Wm. S., assignor.)
White, Warren W., and Martin King, Lowville, N. Y. Refrigcrating milk can
White, Wells H., Troy, Ohio. Concrete pavement
White, William H., Lynn, Mass. Tnbe well.
White, William H., Ncw York, N. Y. Hat.
Whitchead, Job, Ames Station, Iowa. Carriage
Whitehead, William H., Chicago, II. Combustion chamber in coal stoves
Whitehill, James. (See Canpbell, Abner, assignor.)
Whiteliill, James, Frederick, Md. Hot air turuace
Whitehonse, Ralph C., Boothbay, Me. Frying pan.
Same.......Clevis
Same....... Stove oven.
Whiteley, Andrew. (See Gago, Wm., assignor) $\qquad$
Same ...........................same..........
(Reissue.) Whitelcy, A., assignor to William N.Whitcley, fr., Springfield, ohio. Harvestcr
Whitcley, Edward, Boston, Mass. Culinary boiler
(Reissue)
Whiteley, William, Springfield, Ohio. Plow
(heissue)
Whitcley, William N., Springfield, Ohio. Harvester rake
Same....... Harvester.
Same...... Harvester rake
Same....... Harvester
Same....... Harvester cutter
Same...... Harvester rake
Same....... Harvester
Same...... Harvester reel and rako
Same....... Harvester
Same.......... same.
Whiteley, W. N., Jerome Fassicr, and O. S. Kcley, Springfield, Ohio. Cider mill Whiteley, William N., and Jerome Fasslcr, Springfield, Ohio. Harvester rake. Same.......Harvester
(Disclaimer)
Whiteley, William N., and Thomas Harding, Springfield, Ohio. Harrester driving wheel
Whiterow, William H., assignor to self and to William Detrick, New Albany, Ind. Corn sleller
Whitin, John C. (See Aldrich, John H., assignor.)
Whiting, Benjamin, et al. (See Sanderson \& Shattuck, assignois.)
Whiting, Jolin L., Bostou, Mass. Brush
Same .............................. same
(Reissue)
Whiting, Bichard, and Albert Hamilton, New York, N. Y. Grate for stores, ranges, and heaters
Whiting, William E., Providcnce, R. I. Gauge for angers
Whitlock, Abel, Danbury, Conn. Lamp
Whitlock, John, Birmingham, Conn. Shackle jack
Whitlock, William H., Rising Sun, Ind. Turning tool
Whitlow, Samuel R., Rosefield, III. Congh mixture Same...... (See Stewart, James T., assignor.)
Whitman \& Miles Manufacturing Company. (See Sheldon, Samuel D., assignor.) Whitman, Ephraim, Fitchburg, Mass. Flower pot
Whitman, F. H., Harrison, Maine. Stove for railroad cars
Whitman, Lorenzo F., et al. (See Damron, Massey \& Whitman.)
Whitman, L. M., assignor to self and A. B. Enderton, Sterling, Ill. Invalid chair. coated articles. (Antedated June 27, 1868)
Whitmore, Caleb, North Vernon, Ind. Rock drill
Whitmore, E. B., Rochester, N. Y. Fruit jar
Whitmore, J. M., and J. N. Arvin. (See Arvin \& Whitmoro.)
Whitmore, William C., assignor to Abijah Richardson, Macon City, Mo. Horseshoe.

## Date.

Jan. 21, 1868.
Dec. 1, 1868.
Dec. 1, 1868
Dec. 8, 1868
Ang. 11, 1868.
Jan. 7, 1868
Mar. 31, 1868.
Sept. 15, 1868.

Oct. 6, 1868
May 5, 1868.
Mar. 3, 1868
Oct. 6, 1868 .
Mar. 24, 1868.
Mar. 10, 1868.
Apr. 21, 1868.
Apr. 21, 1868.

June 9, 1868.
Feb. 25, 1868.
May 12, 1868
May $19,1868$.
July 28,1868
Ang. 11, 1868.
Mar. 24, 1868.
Mar. 3, 1868.
A pr. 28, 1868.
Dec. 22, 1868.

Mar. 3, 1868.
July 28,1868
June 2, 1868
Feb. 11, 1868.
May 5, 1868.
Jiule $23,1868$.
July 21, 1868.
Aug. 11, 1868.
Ang. 11, 1868.
Aug. 11, 1868.
Scpt. 8, 1868.
Nov. 24, 1868.
Dec. 15, 1868.
Jan. 14, 1868.
Feb. 11, 1868.
June 1, 1868.
Jnne 23,1808 .
Aug. 18, 1868.

Sept. 8, 1868.
Dec. $15,1868$.
Ang. 4, 1868.
Fel. 11, 1868.
Sept. 8,1868.
June 9, 1868
Oct. 27, 1868
Aug. 25, 1868.

Sept. 8, 1868
July 28,1868

Nov. 3, 1868
July 7,1868
Aug. 11, 1868.
Jan. 14, 1868
Nov. 24, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

76, 865
81, 048
83, 347
83, 574
74, 649
77, 427
85, 497
77, 692
79, 283
84, 453
76,368
3, 066
3, 067
3, 068
3, 110

75, 503
74, 782
76, 281
74, 870
83, 348
74, 184
78, 166
83, 810
83, 349
80, 259
79, 883
84, 328
74, 650
81, 122

75, 096
74, 023
77, 558
76, 019
83, 811
84, 037
82, 053
84, 668
3, 040
75, 097

85, 152
78, 849
76, 282
8.667

75, 230
78, 629
78, 630
80, 320
77, 150
81, 235

77, 942
82, 668
79,284
83, 013
83, 428
73, 217
77, 856
73, 558
81, 049
81, 566
82, 460
74,964

84,038

Name, residenee, and invention or discovery.

Whitner, Benjamin F., Madison, Fla. Combined planter and manure distributor Whitney, Aaron Warren, Woodstoek, Vt. Tinsmith's stake Whitney, A. W. and P. A., Woodstoek, Vt. Maehine for bending sheet metal Whitney, Bennot, Now Brunswiek, N. J: Grist mill.
Whitney, Edward P., Stamford, Conn. Carriage curtain fisture
Same. ..... Instrnment for drawing nails
Whitney, Eli, New Haven, Conn. Reversible latel
Whitney, E. R., Plattsburg, N. Y. Dumping sled
Same.......Car eoupling
Same.......Cover for hay and grain eoeks
Whitney, E. R., assiguor to self and Joseph Fraser, Plattsburg. Car coupling
Whitney, Henry, Fast Cambridge, Mass. Perfume bottle.............. (Desigu)
 same...... Toilet bottie Same....... Lamp foot.
(Desion)
Whitney, Joel, assignor to James A. Woodbury, Winchester, Mass. Planing machine
Whitney, J., and D. Harrigan. (See Harrigan \& Whitney.)
Whitney, Jonathan, Port Winnebago, Wis. Hop dryer
Whitney, Levi H., Vallejo, Cal. Fire lighter. Same ...... Washington, D. C. Washing machine
Whitney, P. A., Woodstoek, Vt. Drill and comiter-sink. Same.......Counter-sink. (Antedated Oetober 16, 1868)
Whitney, S. B., Coxsackie, N. Y. Sustaining device for draft poles for carriages Whitney, Thomas, J., Whitpain Township, Pa. Car brake. (Antedated May 9, 1868.
Whitney William F., Milton, N. X. Carriage spring
Whiton, D. E., West Stafford, Conn. Lathe ehuck
Whitson, G. W., Ashville, N. C. Self-loading cart
Whittaker, Charles, Milwaukie, Wis. Apparatus for moving heavy bodies Same

Rein-holder
Whittenore, A. S., Chieaso, In. Grain thresher
Whittemore, Charles H., Lewiston, Maine. Medieal compound
Whittemore, David. (See Lambert, Richard C., assignor.) Same
same.
Whittemore, Harry D., New York, N. Y. Briek kiln
Whittemore, Henry. (See Flurscheim, Miehael, assignor.)
Whittemore, John R., Chicopee Falls, Mass. Horse rake
Whitten, Nathan, Etna, Me. Car conpling
Whittenburg, H. G. W., et al. (See Smith \& Florence, assignors.
Whittenhall, D. S., St. Louis, Mo. Portable building
Whithier, Charles, assignor to self and Benjamin F. Campbell, Boston, Mass. Steam gencrator. Same ..........Steam radiator
Whittier, Reuben S., Dorchester, Mass. Window sereen
Whitton, F., South Carrollton, Ky. Chum
Whitworth, John, assignor to self and William H. Hawkins, Cleveland, Ohio Cutter for wood moldings
Whorf, Charles F., assignor to self and Charles M. Elleard, St. Louis, Mo. Hot air furnace
Wiaut, Moses, and George Gorr. (See Boyer, John G., assignor.)
Wiard, Edward, assignor to self and Samuel W. Pope, Louisville, Ky. Plow. .
Wiard, John, Now Britain, Conn. Cattle tie
Wible, Thomas H., Quincy, Ill. Corn planter
Wickersham, John B., Philadelphia, Pa. Lubricator
Wiekersham, William, Boston, Mass. Marble-eutting machine Same...... Eleetro-magnetic engine Same....... Railway rail chair Same.......Railway chair
W̌ickersham, W. F., and Elisha Roush, Springfield, Ill. Car eoupling
Wickes, William B. (See Watson, Jcremiah M., assignor.)
Wickham, Horace J., assignor to self and Milton Keeney, Manehester, Conn. Jack for knitting needles.
Wickham, Thomas B., Granville, Ohio. Portable fenee Same...... Farm cate
Wicks, Frank, Uppor Sandusky, Ohio. Horso rake
Widgeon, John R., and Fred. E. Frey, Bucyrus, Ohio. Automatie boiler feeder (Antedated Septomber 26. 1868)
Widger, William S., and William M. Reai, Fairfield, Iowa. Apparatus for tolling grain.
Widhan, Joseph, Panola, Ill. Cultivator
Widmer, Godfrey, New York, N. Y. Adjastable eouch
Wieand, Moses, and Gcorge Gorr, Emaus, Pa. Stone and stump extractor
Wicgand, S. Lloyd, Philadelphia, Pa. Screw-eutting machine. (Antedated J̈ly 29, 1868)
Wiegand, S. Lloyd, assignor to Walter J. Budd, Philadelphia, Pa. Steam generator. (Antedated August 18, 1868) Same...... Steam generator. (Antedated Septomber 4, 1868)
Wiccel, Lawrenee, Joseph Lchnbeuter and Charles Fegers, Cineinnati, Ohio. Preparing school slates.
Wicland, C. F., Darmstadt, Ill. Ice spur
Wiesler, Gerhart, Chieago, Ill. Tumbler-brush
Wiesmann, Wilhelm, Prussia. Preserving meat

Date

Apr. 14, 1868.
Aug. 11, 1868.
Oet. 20, 1868.
Oet. 27, 1868.
Feb. 18, 1868.
Apr. 28, 1868.
Dee. 29, 1868
May 5, 1868.
June 23, 1868.
Nor. 24, 1868.
Apr. 7,1868
June 2, 1868.
June 2, 1868.
June 2, 1868.
Sept. 1, 1868.
Mar. 10, 1868.
Feb. 25, 1868.
Mar. 31, 1868.
Feb. 25, 1868
Oct. 20, 1868
Feb. 4, 1868.
May 19, 1868.
Nov. 3, 1868.
Oet. 20, 1868.
July $21,1868$.
July 14, 1868.
Nov. 24, 1868.
Feb. 18, 1848.
Aug. 18, 1868.

Mar. 3,1868.
Fcb. 4, 1863.
May 5, 1868.
Mar. 24, 1868.
Not. 3, 1868.
Nov. 10, 1868.
Sept. 8, 1868
Dee. 1, 1868.
July 14, 1868.
Mar. 3, 1868.
Dee. $22,1868$.
June 9, 1868.
Mar. 31, 1868.
Sept. 29, 1868.
Max: 3, 1868.
June 2. 1868.
June 2,1863.
July 28, 1868.
Apr. 21, 1868.

Aug. 18, 1868.
May 12, 1868.
Sept. 29, 1868.
June 23, 1868.
Oet. 13, 1868 .
Oet. 27, 1868.
Jan. 7, 1868.
May 12, 1868.
Jan. 21, 18 i .
Aug. 11, 1868.
Ang. 25,1868.
Sept. 22, 1868.
Feb. 25, 1863.
Nov. 24, 1868.
Sept. 1, 1868.
Nov. 10, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

No.

Wigal, Jances P., Henderson, Ky. Animal trap
Wiggin, C. Albert, North Sanlwich, N. H. Apple parer
Wiggin, Jay J., Syracuse, N. Y. Preparation of roofing fabrics.
Samo...... Roofing composition for houses, barus, de
Wiggin, John E., Stoneham, Mass. Automatie puneling machine. (Antedatca Sept. 26, 1868)
Wiggins, Gcorge, assiguor to self, Charles Herrington, and Hiran Maxficld, Ortonville, Mich. Shccp-shearing table.
Wiggins, John H. (Sce Heyl, Jolm A., assignor.)
Same . . . . . . . . . . . . . . . . . . . . . .

Wight, David, Now London, Conn. Top game board
Wight, D. R., Sturbridge, Mass. Awl handle.
Wightman, Carmi, Batavia, Ill. Wool box
Wightman, Joseph C. (See Smith, Henry J., assignor.)
Wilber, Daniel, Collins Center, N. I. Combined seed sower and field roller
Wilber, James G., Kilburn City, Wis. Hop pole
Wilbur, John R., Chicopee, Mass. Cor'u shcllcr
Wileke, Julius, Newarľ, N. J. Pump
Wilcox, A. W., New Haven, Conn. Dellows for reed musical instruments.
Wileox, B. B., assigmor to J. W. Nash, New Haven, Conn. Trade inark. (Desigu).
Wileox, B. H., Petroleum Center, Pa. Horse-power.
Wileox, D. (See Going, F. R., assignor.)
Wileox, D. C., assignor to the Meriden Britannia Company, Meriden, Conn. Manufactore of double-wall iee pitehers
Wilcox, David F., Greenville, N. Y. Hop pole
Wilcox, David F., and Edward C. Smith. (See Smith \& Wileox.)
Wileox, Elijah W., and Albro S. Dow. (See Dow \& Wileox.)
Wileox, Gcorge, and Henry P. Beardsley. (See Beardsley \& Wileox.)
Wileox, George D., Providenee, R. I. Mueilage brush
Wilcox, Horace C., assignor to the Meriden Britannia Company, West Meriden, Conn. Pitcher
(Dosign)
Wileox, John, Springfield, Mass. Machine for filling paint eans
Wilcox, J. W., New York, N. Y. Box
Wilcox, Linus. (See Platt, Edwin A. and George, assignors.)
Wileox, M. S., Union Mills, Ind. Made of setting whecls on axles
Wilcox, Samuel W., Mendon, Mass. Paper cutter aud ruler.
Wileox, William J., New York, N. Y. Machine for stirring lard.
$\qquad$ Wileox, William S., Wellington, Ohio. Trap net.
Wileox, William W., Middetown, Conn. Trellis for strawberry and other plants
............
. . (Reissue). Wild, Albert. (See Wirsching, Alois, assignor.)
Wild, Matthew, and G. W. Hawksley. (See Hawlisley \& Wild.)
Wilde, John, Daniel, and John H., Washington, Iowa. Cornstalk eutter, preparatory to plowing.
Wilde, Robert, Philadelphia, Pa. Stcam generator
Wilder, Amos, and Cyrus W. Strout, Boston, Mass. Clock front......(Design). Wilder, A. W., et al. (Sce Thoma, Alois, assignor.)
Wilder, Eli F., Lowell, Mass. Implement.
Wilder, Elihu, Chieopeo Falls, Mass. Stop-motion and indicator for knitting machines
Wilder, Elihu, and John Crandell, Chicopce, Mass. Hemmer for scwing maehincs
Wilder, Ezra, South Hingham, Mass. Carriage harness
Wilder, Gcorge C., Lawrence. Kansas. Puneh
Wilrer, Henry C., Ashby, Mass. Bail-making machine. (Antedated Aug. 13, 1868)

Wilder, John 33., assignor to self, H. W. Shepard, and George A. Huggins, Manns-

Wilder, J. H., Farmington, Ohio. Horso hay fork
Wilder, Silvanus C., Sardinia, Ohio. Secd planter
Wilder, William S., New York, N. Y. Paper-ruling machine
Wiley, Edwin, Brooklyn, N. Y. Manufacturo of pens
Wiley, Hiram S., Madison, Ind. Machine for jointing staves
Wiley, John A., et al. (See Stone, Joseph M., assignor.)
Samo..... (See Ashworth, John, assiguor.)
Same ........................ same.
Wiley, M. H., Boston, Mass. Potato-digging machinc
Wiley, William H., Fredonia, N. Y. Method of supporting ehills in casting Same. . . . . Horse-power
Wilford, Johw B., and L. H. Allen. (See Allen \& Wilford.)
Wilhelms, August, Russia. Chimney
Wilkin, Cornelias, Dundas, Ill. Plow
Wilkins, A. G., Cooperstown, Pa. Washing machine.
Wilkins, A. P., and J. S. Allen, (See Allen \& Wilkins.)
Wilkins, Paterson V. (See Hawenstine, David J., assignor.)
Wilkinson, George, Providence, R. I. Fork or spoou handle
Wilkinson, George, assignor to Gorham Manufacturinc Company, Providenee, R.I Fork or spoon handle called "Tonic"
(Design)
Same.. .Fork or spoon handle ealled "Dorie",
Same....... Fork or spoon handle called "Rush" (Design)
(Design)
(Design)

Date.

Jan. 14,1868.
Aug. 4, 1868.
Oct. 27, 1868
Oet. 27, 1868.
Oct. 13, 1868.
May 5, 1868.

Apr. 7, 1868.
Mar. 24, 1868.
May 26, 1868.
Fel. 18, 1868
July 21, 1868.
Feb. 25, 1868.
May 5,1868.
Apr. 28, 1868.
Nov. 24, 1868.
Oct. 6, 1868

Nov. 3, 1868.
May 19, 1868.

Apr. 28, 1868.
Mar. 3, 1868.
Jan. 14, 1868.
Nov. 3, 1868.
Mar. 31, 1868.
Oct. 13, 1868.
Nov. 17, 1868.
Oct. 27, 1868.
Mar. 10, 1868.

Fcb. 18, 1868.
Jume 23, 1868.
Feb. 25, 1868.
May 26, 1868.
Oct. 13, 1868.
Nov. 24, 1868.
Jan. 7, 1868.
Nov. 10, 1868.
Aug. 25, 1868.
Jnly 14, 1868.
Apr. 7, 1868.
Mar. 17, 1868.
June 30, 1868.
Jan. 14, 1868.
Apr. 21, 1868.

Mar. 31, 1868.
July 28, 1868.
July 28, 1868.
Dec. 1, 1868
Apr. 14, 1868
Aug. 11, 1868

Dee. 1, 1868.
Apr. 7, 1868
Apr. 7, 1868.
Apr. 7, 1868.
Apr. 7, 1868.

Alphabetical list of patentees for the year 1868-Continued.

No.

2, 998
2, 999
3, 110
3, 111
3, 112
78, 167
78, 631
75, 820
83, 577
78, 850
83, 679
84, 978
80, 690
73, 420

79, 173
79, 884
78, 502
81, 855
85, 498
78, 168
82, 461
82, 462
82, 463
82, 464
78, 907
80, 262
80, 105

81, 316
76, 283

75,504
76, 021
80, 260
80, 261
80, 526
81, 317
75, 715
82, 574
79, 528
75, 098
74, 467
83, 748

76,022
78,249
81, 856
78, 851
81, 719
80, 322
3,183

84, 241
80,042
80, 691
80,692
81, 720
74, 653
83, 748

75, 099
74, 468
76, 023

Name, residence, and invention or discovery.
Wilkinson, George, assignor to Gorham Manufacturing Company, Providence, R.I. Fork or spoon handle ealled "Mask"

|  | Fork or spoon handle ealled "Pompeian" | ign) |
| :---: | :---: | :---: |
| Sam | .Fork or spoon handle ealled "Rosette" |  |
| Sam | Fork or spoon handle ealled "Pridal" |  |
|  | Knife or fork handle ealled "Ivy" | (r).. |
|  |  | n) |

Wilkinson, James, Knife or fork handle ealled "Elizabethian"............. (Design).
Wilkinson, Jesse, assignor to Horaee Ballard Wilkinson, Urbana, Ill. Herding and sceuring eattlo
Wilkinson, John D., Plattsburg, N. Y. Bed bottom
Wilkinson, John D,, and E. O. Boyle, Plattsburg, N. Y. Combined tool
Wilkinson, Lewis, Boston, Mass. Ball easter
Wilks, Stephen, Chieago, Ill. Cooking range. (Antedated Oct. 17, 1868)
Same...... Water back for stores and ranges. (Antedated Dee. 9, 1868) ...
Will, Hironimus, Columbus City, Iowa. Thill eoupling
Will, John, Bryan, Ohio. Worm fenee and pen.
Willard, Cyrenius M. (See Luee \& Green, assignors.)
Willard, Gardner, ot al. (See Shaw, W. Anthony, assignor)
(Reissue.)
Willard, Henderson, Grand Rapids, Mieh. Horse hay fork.
willard, Henry, Ripon, Wis. Portable fenee
Willard, Hosea, Vergennes, Vt. Butter worker
Willard, John, Norwieh, Conn. Box opener
Willard, R. S., Franklin, Vt. Maehine for making wire hooks.
Willard, Z. A., Boston, Mass., and William J. Adams, Franlilin, Mass. Treating metals and minerals
Willbur, J. M., Cleveland, Ohio. Rotary embossing press
Same.......Ink pad for hand stamps.
Same...... Machine for forming stereotype plates. (Antedated Sept. 16, 1868) Same...... Stereotyper's putty. (Antedated Sept. 17, 1868)
Willeox, George, Neonah, Wis. Grain ehaffing mill
Willeox, H. B., Philadelphia, Pa. Carriage-thill eoupling
Willeox, James M., Glen Mills, Pa. Manufaeture of paper for eollars.
Willets, Charles H., and Spencer H. Brown. (See Brown \& Willets.) Same
same
(Design.)
Willets, Leonard and Isaac. (See Pease, J. W., assignor.)
Willett, George, Richburg, N. Y. Turning logs in saw-mills
Willey, George F., Laconia, N. H. Plow earriage....
Williams, A. R., et al. (See Spenee, Gideon O., assignor.) Same............................. same.
Williams, C., New York, N. Y. Pavement Same............................................................... Same................................same Same....................................... Same....... Crane
Williams, Charles, Manehester, $\mathrm{N} . \mathrm{H}$. Coal stove Same.......Cooking stove
Williams, Charles, Jaekson, Miss. Attaehing handles to moldboards of plows
Williams, Charles, assignor to self and Isaae B. Ward, Vineland, N. J. Construetion of walls of buildings.
Williams, C. B., Bourbon, Ind. Charn
Williams, C. H., and S. A. Holt. (See Holt \& Williams.)
Williams, Cyrus M., assignor to Henri L. Stuart, Now York, N. Y. Charging gases with vapors of hydrocarbon liquids
Williams, David G., et al. (See Palmer, Harvey D., assignor.)
Williams, Edwin, Rowlesburg, W. Va. Wood-turning lathe.
Williams, E. P., assignor to self, W. L. Hopson, and A. R. Homesly, Yorkville, S. C. Ventilating portable churns

Williams, E.R., Roehester, N. Y. Fruit jar
Williams, Franeis H., Syraeuse, N. Y. Construetion of safes Same...... Steneh trap.
IWilliams, George H. C., Chieago, Ill. Ottoman louge $\qquad$
Williams, Giles B., assignor to Elisha M. Allen, New York, N. Y. Apparatus for stirring, mixing, heating, cooling, and evaporating lard and other substances
(Reissue) .

## Same...... Desiceated coeoanut

Williams, H. G., Providenee, R. I. Die and plunger
Williams, Hugh T., and Robert T. Tompkins. (See Tompkins \& Williams.)
Williams, Isaac, Westfield, Ind. Weatherboard gauge and rest. Same...... Gauge for weatherboarding
Same....... Adjustable measuring rule
Williams, Isaiah M., assignor to self and Calvin M. Baidwin, Blanehester; Ohio. Ditching machine.
Williams, Isaiah M., assignor to self aud Harvey Smith, Blanchester, ohio. Self. loading hay eart.
Williams, James, and Honry Bundel. (See Bundel \& Williams.)
Williams, J. A. Elizabeth, Ill. Axle for vehieles.
Williams, J. A., and W. W., Mattoon, Ill. Self-aeting wagon brake
Williams, Jesse, John Forgie, and James Edwards, New York, N. Y. Eurnace grate bar

## Date.

Apr. 7, 1868.
Apr. 7, 1868.
Apr. 7, 1868.
July $14,1868$.
July 14, 1868.
July 14, 1868.
May 19, 1868.
June 2, 1868.
Mar. 24, 1868.
Oet. 27, 1868.
June 9, 1868.
Nov. 3, 1868.
Dee. $15,1868$.
Ang. 4, 1868.
Jan. 14, 1868.

June 23, 1868.
July 14, 1868.
June 2, 1868.
Sept. 1, 1868.
Dee. 29, 1868.
May 19, 1868.
Sept. 22, 1868
Sept. 22, 1868
Sept. 22, 1868.
Sept. 22, 1868
June 16, 1868.
July 21, 1868
July 21, 1868.

May $18,1868$.
Mar. 31, 1863.
Mar. 10, 1868.
Mar. 24, 1868
July 21, 1868
July 21, 1868.
July 28, 1868.
Aug. 18, 1868.
Mar. 17, 1868.
Sept. 29, 1868.
June 30, 1868.
Mar. 3, 1868.
Feb. 11, 1868.

Nov. 3, 1868.
Mar. 24, 1868.
May 26, 1868.
Sept. 1, 1868.
June 9, 1868.
Sept. 1, 1868
July 28, 1868.

Nov. $10,1868$.
Nov. 17, 1868.
July 14, 1868.
Aug. 4, 1868.
Aug. 4, 1868.
Sept. 1, 1868.
Feb. 18, 1868.
Nov. $3,1868$.
Mar. 3, 1863.
Feb. 11, 1868.
Mar. 24, 1868.

Alphabetical list of patentecs for the year 1868-Continued.

No.

73, 857
77.789

79, 712
7\%, 790
81, 967 84, 455

81, 448
80,581 75, 100 81, 051 73, 683

74, 469
76, 866
81, 123
84, 456
74, 966
78, 346
74, 470
74, 471

85,415
83, 894
84, 979
79, 985
77, 943
80, 889
83, 750
79, 290
79, 795
72, 373
75, 101
76, 284
76, 867
76, 868
79, 042
75, 505
81,721

82, 465
78, 788
82, 912
80, 323
82, 466
85, 046
84, 040
85, 047

81, 968
82, 261
82, 669
80, 436
82, 467
82, 670
82, 189
73, 150

Name, residence, and invention or discovery.

Williams, John C., Newton, N. J. Coffin
Williams, John D. (See Nolf, John H., assignor.)
Williams, J. E., and M. Lemon, Binghanton, N. Y. Churn dasher
Williams, Tohn H., assignor to self, Thomas N. Dickinson, and William E.
Bcames, Esscx, Conn. MLannfacture of floor cloth.
Williams, John I., Etua, Pa. Boiling and puddling furnace
Williams, John S.. Chicago, Ill. Donble-ratchet levor nower
Williams, Joseph S., Cinnaminson, N. J. Manufacture of alcoholic spirits from tomatoes.
Williams, Miles D., Lawton, Mich. Grain separator.
Williams, M. T., assiguor to self and John Lnnd, Milwaukce, Wis. Scaffolding Williams, N. Bangs, Providence, R. I. Oil cup

Williams, Panl, Winona, Miss. Cotton press
Williams, Sanuel, et al. (See Carmell, Williams \& Ellis.)
Williams, Stophen G., and Aaron Palmer. (Sce Palmer \& Wiliams.)
Williams, Thomas, and John J. Yates, New York, N. Y. Stean heater for brewers and others. (Antedated Jan. 31, 1868)
Williams, W. L., New York, N. Y. Foot scraper

> Samc..... Machine for splitting kiudling wood

Williams, William M., St. Louis, Mo. Coffee pot.
Williamson, Darid, assignor to James Willianson, New Kork, N. Y. Corkpull
Williamson, Gcorge, \& Co. (See Vedder, Nicholas S., assignor.).... (Desigu.)
Williamson, John R., Bethlehem, N. J. Fruit can.
Williamson, M. V. B., Jamesport, N. Y. Draft equalizer for donbletrecs Same....... Doubletree
Williamson, Truman P., and Don Carlos Matteson. (See Matteson \& Williamson)
(Reissue.)
Same............... same.
Williamson, William C., Philadelphia, Pa. Hoisting Machine
Willie, Hermaun, and Gottlieb Hemning. (See Henning \& Willic.)
Willig, Frederick, Joliet, Ill. Tenter-bar for clotly
Willis, James, Mifflin, Wis. Sled brake
Willis, N. J., assignor to the Boston Spring Bed Compary, Boston, Mass. Spring ber-bottom
Willits, Willian J., Dctroit, Mich. Platform ear stake holder. (Antedated April 28, 1868
Willmarth, William C., assignor to B. W. Lacy and S. C. Eaton. Philadelphia, Pa. Sewing machine
Willmarth, William C., and C. N. Farr, assignors to B. W. Laey, Philadelpha, Pa. Sewing machine
(Reissue.)
$\qquad$ illoughby, Charles Benjamin, Uhrieksville, Ohio. Carburettor.
Willonghby, H. B., Ottawa, Ill. Mop wringer
Willoughby, J. D., Shippensburg, Pa. Weighing scale. (Antedated Dee. $23,186 \%$. Same...... Cider mill. (Antedated Feb. 20, 1868)
Wills, Daniel, Camden, N. J. Gill net
Willson, Albert C., Grecupoint, N. Y. Ferry bridge.
Willson, Franklin M., assignor to self and Isaac G. Dundore, Whitney's Point, N. Y. Horse hay fork

Willson, F. R., Columbns, Ohio. Harrow
Willson, Gile J. Reading, Pa. Watch case
Willson, H. F., assignor to Jacob J. Kamm, Fort Waync, Ind. Paint eompound Willson, Thomas H. and Hiram, et al. (S'ee Green, Jacob, assignor). . (Reissuc.)
 Willson, Wm. H., New York, N, Y. Hand brushing and polishiug apparatus. Willson, W. H. (Sce Sherwood, N. B., assignor.)
Wilmans, Charles I., and W. J. Wolf, Olney, Ill. Dongh kncader
Wilmarth, John C., and Avery Fobes, St. Louis, Mo. Knife riug.
Wilmington, William, Toledo, Ohio. Car wheel
Same...... . Car wheel
Same. ..... Chill for casting car wheels.
Wilmot, S. R., Bridgeport, Coun. Apparatns for sizing glass cylinders Same..... Lamp chinncy
Wilms, H., and E. E. Worden. (See Worden \& Wilms.)
Wilson and Hood. (See Vogel, H. assignor.)
Wilson, Arthur Gates, New York, N.
Wilson, Charies, Clinton, Pa. Cider mill. (Antodated Scpt. 4, 1868)
Same...... Measuring heights and distances.
Wilson, Charles A., Cincinnati, Ohio, Thermostat Same...... Oil globe for steam chests.
Wilson, Charles A., and William R. Dunlap, Cincinnati, Ohio. Pump
Wilson, Charles E., Palmyra, Me. Attachment for plows.
Wilson, Courtland B., and Abner S. Houghton, 'I'renton, N. J. Watcr wheel.. Wilson, C. P., et al. (See Boyd, Jesse C., assignor.) Wilson, D. A., et al. (See Maranville, Galusha, assiguor.)
Wilson, David H., and Edward S. Lowry. (See Glandilg, James, assignor.)
Wilson, Eskridge J., Fair Play, Cal. Machine for crushing rocks. (Antedated Dee. 12, 1868.).

De. 22, 1868
Dec. 15, 1868.
Jan. 7,1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

82, 190
82,575
76, 869
75, 325
75, 326
75, 327
75, 328
75, 329
75, 330
75, 331
75, 332
75,333
75, 334
75, 335
84, 329
75, 336

75, 337
75, 338
75, 339
80, 324
79, 527
82, 468

73, 421
84, 926
73, 858
74, 871
3, 166
79, 091
73,274
85, 048
75, 102
84, 152
73, 422
79, 286
75, 340
80, 043
81, 449

77, 152
81, 052
78, 347
2, 304
82, 370
76, 870
74, 967
83, 430
82, 263
77, 696
84, 330

3, 187
84, 666

76,128
80, 693
83, 578

Name, residenee, and invention or discovery.
Date.

Sept. 15, 1868. Sept. 29, 1868.

Apr. 14. 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10 186s.
Mar. 10 L868.
Nov. 24. 1868.

Mar. 10, 1863.
Mar. 10, 1868.
Mar. 10, 1868.
Mar. 10, 1868.
July 28, 1868.
Jume 30, 1868.

Sept. 22, 1868.
Jan. 14, 1868
Dee. 15, 1868
Jan. 28, 1868
Feb. 25, 1868
Oet. 20, 1868
June 23, 1868.
Jan. 14, 1868
Dec. 15, 1868
Mar. 3, 1868
Nor. 3, 1868
Jan. 14, 1869
June 23,1868

Mar. 10, 1868
July 14, 1868
Aug. 25, 1868

Apr. 21,1868
Aug. 11, 1868.
May 26, 1868.
Jan. 28, 1868
Sept. 22, 1868
Apr. 14, 1868
Feb. 25, 1808.
Oct. 27, 1868.
Sept. 15, 1868.
May 5, 1868.
Nov. 24, 1868.
Nov. 10, 1868.
Dee: 1,1868.

Mar. 31, 1868.
Aug. 4, 1868.
Oct. 27, 1808.

Alphabetical list of patentees for the year 1868-Continued.

Name, residence, and invention or discovery.

84331
89, 425
80,044
3,020
78, 498
77, 695
79, 713
73, 218
84, 242
82506
78, 63:
74,969
85, 348
84, 667
79,092
3, 184

83, 431

Winecoff, Jesse, Berlin, Pa. Hand plow
Winegar, Ashbel B., San Francisco, Cal. Machine for kiln drying
Winegard, Peter, Coldwater, Mich. Device for sharpening horseshoe calks Winemiller, Joseph V. (Sce Althouse, Jacob, assignor.)
Wing, Samnel, assignor through mesne assignments to Charles S. and Charles F. Hall, Brooklyn, N. Y. Refitting stop valves
(Reissue)
Wing, Simon, Boston, Mass. Photographic camera
-•••••
Wing, Simon, assignor to sclf and Eli F. Sonthward, Boston, Mass. Modo of hanging signs or banners.
Wingate, D. B., assignor to Needlam C. Millett, Natick, Mass. Apparatus for printing upon glass
Wingate, Stansberry J., Decatur, Ill. Ber botton
Winkler, Johann, Hudson City, N. J. Froth arrester for beer rlasses, \&
Winkley, W. I., Des Moines, Iowa. Composition for fire kiudling.
Winn, Charlcs $A .$, Lock Haren, Pa. Brick machine
Winship, George. (See Russell, William, assignor.)
Winslow, A. P., Cleveland, Ohio. Railroad car stove
Samc...... Stove for railroad cars
Winslow, J. L., Portland, Maine. Lubricating axles
Winslow, J. N. (Sce Stackpole, G., assignor.)
Winslow, K. J., England. Apparatus for converting motion
Winslow, Willian Henry and Ewiner, Boston, Mass. Trado mark.... (Design)
Winsor, Joseph S., Providence, II.' I. Machine for making weavers' har ness.
. (Extension)
Winsur, William S., and J. E. Emerson. (See Emerson \& Winsor.)

Winston, J. B., and iv. H. Trainhan. (See Bragg, W. N., assignor.)
Winter, George, Buffalo, N. Y. Beer cooler
lounge Same...... Recumbent chair
Winter, Willian W., and Thco. Muelicr, Philadelplia, Pa. Umbella
Winterbottom, W. S., Philadelphia, Pa. Combined square and mitcr
Winterburn, C., and William Kent, Cincinnati, Olio. Electrical bath
Wintergerst, Christoph, Mobile, Ala. Vapor burner.
Wintcringer, George W., Fredericktown, Ohio. Gate
Winters, A., Waslington, Pa. Hand rake
Winton, W. B., Marion, Iowa. Hand plow
Wirsching, Alois, assignor to self and Albert Wild, Brooklyn, $\dot{N}$. $\dot{Y}$. Watch maker's drill
Wirt, J. H., Delphi, Ind. Concrete brick press
1868
May 26, 1868
May 5, 1868
July 7,1868
Jall. 7, 1868
Not. 17, 1868
Sept. :29, 1868
June 2, 1868
Feb. 25, 1868
Dec. 29, 1868
Dec. 1, 1868
June 23, 1868
Aug. 25, 1868
Dec. 31, 1868

Oct. 27, 1868
Мау 5, 1868.
June 23, 1868
Mill. 31, 1868
Junc 23, 1868.
July 14, 1868
Sept. 15, 1868.
Аиr. 21, 1868. Dec. 22, 1868. Sept. 1, 1868.

A11』. 25, 1868.
Apr. 21, 1868
Dec. 1, 1868
Mar. 24, 1868.
Aur. 25, 1868.
Jan. 14, 1868.
Ang. 18, 1868.
June 2, 1868
Dec. $22,1868$.
Oet. 13, 1868.
Jan. 28, 1868.
May 26, 1868.
Anr. 21, 1868.
Nov. 24, 1868.
Mar: 3, 1868.
Mar. 24, 1868.
Dec. 8, 1868 .
Aug. 4, 1868.
Dec. 29, 1868.
Jan. 21, 1868.
Dec. 29, 1868.
Juno 9, 1868
Sopt. 22, 1868
Oet. 6,1868
Nov. 3, 1868

Oct. 27, 1868
May 5, 1868
Allg. 18, 1868
Oct. 27, 1868
Mar. 3, 1868
Feb. 18, 1868
Apr. 21, 1868.

## Alphabetical list of patentees for the year 1868-Continued.

## No.

76, 964
78, 779
75, 506
76,292

74, 739
77, 791
85, 156
83, 350
78, 504
76, 871
80, 890
84, 153
74, 024
76, 130
79, 714
76, 131
78, 853
76, 965
76, 682
84, 523
76, 285
76, 683
74, 741
79, 043
78, 409
74, 472
81, 237
3, 157
78, 561
82, 469
74, 473
81, 451
73, 066
83, 895

73,684
84,524
80, 695
78, 348
84, 332
78, 706
76,574
85, 501
79, 044
82, 507
78, 633
84, 458
76, 369
2,938
79,930

79, 093
74, 792
2,930

80, 325
77, 229
77, 699
7\%', 2:0

Name, residence, and invention or discovery.

Wolf, Joseph, Young Ameriea, Ml. Corn plow
Wolf, Moritz, Philadelphia, Pa. Jaequard for looms
Wolf, Robert, Burlington, Iowa. Dovetail maehine
Wolf, W. J., and Charles I. Wilmans. (See Wilmans \& Wolf.)
Wolfe, Gurdon G., Troy, N. Y. Cooking-stove tank
Wolfe, Gurdon G.,and EdwardJ. Hicks. (SeeWalker,Thomas, assignor. (Design.)
Same...... (See Colby \& Scorer, assignors) ............................. (Design.)

Same............ee Vedder, Nicholas S., assignor) ............................................................
Same........................ . .same . ......................................... . . (Design.)
Wolfe, L. W., Jaeksonville, IIl. Mortising maehine
Same...... Seat for vehicles.
Wolfer, John A., Rondout, N. Y. Automatie ice ehute
Wolff, Jacob, aud Charles B. Maedel. (See Maedel \& Wolff.)
Wolfinger, Francis R., and Joseph Barrett, Chieago, Ill. Extension tablo
Wolfrom, Jonathan, Xork, Pa. Horse hay fork
Wolfsbruck, Zadig, New York, N. X. Wristband for wearing apparel
Woliston, Philip NN., assignor to self and Ferrell, Ludlow \& Rodgers, Springfield, Ohio. Briek maehine.
Wolters, Herman J., Chester, Mass. Burglar alarm
Wonsey, Philander, Ogden, N. Y. Combined plow and harrow
Wood, Aurin, Woreester, Mass. Engine-lathe for turning shafting
Same...... Maehine for threading bolts
Wood, DeVolson, and Stillman W. Robinson, Ann Harbor, Mich. Steam-engine valve-gear.
Same......-Steam engine. (Antedated March 31, 1868)
Wood, Edwin A., Utiea, N. Y. Electro-magnetie valve-gear
Wood, Enos D., Utiea, N. Y. Rotary valve.
Wood, Frederiek A., Jersey City, N. J. Bit braee. (Antedated Nov. 19, 1868)
Wood, George K., Morristown, N. J. Refrigcrating ear.
Wood, George W., Philadelphia, Pa. Hair erimper
Wood, George W., assignor to self and James W. Slater, Richmond, Ind. Color printing press
Same...... Inking apparatus for color printing
Wood, Henrietta T., San Francisco, Cal. Ointment.
Wood, Horaee, Leverett, Mass. Staging frame
Wood, Ira, Woodstock, Vt. Composition for tanning
Same........................................
Wood, Isaae N., Fall River, Mass. Hoe -......
Wood, James, Utica, N. Y. Whiffetree hook.
Wood, James M., Lowville, N. Y. Roofing shoe
Wood, John, Franklin, Pa. Pump piston.
Wood, John B., Cranston, R. I. Means of attaching handles to dippers
Wood, John B., Jersey City, N. J., and John T. Chapman, Brooklyn, N. Y. Mode of filling marshes
Wood, John G., and William Glasgow, jr. (See Glasgow \& Wood.)
Wood, John Henry, Trenton, N. J. Wagon for unloading coal
Wood, John K., Alleghany City, and David R. Speer, Pittsburg, Pa. Churn
Wood, John S., Lansing, Mich. Car brake and starter
Wood, John S., assignor to self and Elizabeth P. Seymour, Hartford, Conn. Briek machine
Wood, Joseph S., Philadelphia, Pa. Apparatus for earburetting air
Wood, Melvin, Babe's Corners, Mich. Churn.
Wood, Sherwood \& Company. (See Sherwood, Daniel, assignor.)
Wood, Solomon H., East Berlin, Conn. Die for making pliers...
Wood, Sylvester A., Manitowoc, Wis. Veiocipede.
Wood, S. V., Cornwall, N. Y. Pucumatic grain elevator
Wood, Thomas E., Knoxville, Pa. Elastie roofing composition.
Wood, Valentine, Riehmond, Ind. Flood fence
Wood, William C., Washington, D. C. Construetion of ice-pitchers
Wood, W.G., et al. (See Allen, Alexander, assignor.)
Wood, William S., Hatborough, Pa. Harness.
Woodard, A. B., assignor to self and Thomas Ellis, Alred Center, N. canizing flask.....................................................................issue)
Woodard, A. B., Alfied Center, and Samuel A., Horncllsville, N. Y., assignors to selves and Orson Mosher. Hames fastener.
Woodburn, Jacob. (See Salorgne, Theodore, assignor.)
Woodbury, C. A., Woodstock, Vt. Thread cutter.
Woodbary, D. K., and E. F. Lacey. (See Lacey \& Woodbury.)
Woodbury, G. T., and T. Burch, Newark, N. J. Finishing skins and leather
Woodbury, Henry E., Washington, D. C. Paper file
Woodbury, James A. (See Whitney, Jocl, assignor.)
Reissue
Woodbury, James See Shaw, Henry F., assignor.)
Same..................... -same.
Woodbury, James A., and Solomon S. Gray. (See Shaw, Henry F., assiguor.)

Woodbury, Nelson, assionor to William Woodbury, Chelsca, Mass. Pendant for sheets of fore-and-aft sails
Woodbury, Urban A., Morrisville, Vt. Looking-glass
Woodbury, Walter B., England. Mode of producing desigus on paper

Date.

Apr. 21, 1868.
June 9, 1868.
Mar. 10, 1868.
Mar. 31, 1868.

Fob. 18, 1868.
May 12, 1868.
Dee. 22, 1868.
Oct." 20, 1868.
June 2, 1868 Apr. 14, 1868.

Aug. 11, 1868.
Nov. 17, 1868.
Feb. 4, 1868.
Mar. 31, 1868.
July 7, 1868.
Mar. 31, 1868.
June 9, 1868.
Apr. 21, 1868.
Apr. 14, 1868.
Dee. 1, 1868.
Mar. 31, 1868.
Apr. 14, 1868.
Feb. 18, 1868.
June 16, 1868.
May 26, 1868.
Feb. 11, 1863.
Aug. 18, 1868.
Oct. 6, 1868.
June 2, 1868.
Sept. 22, 1868.
Feb. 11, 1868.
Aug. 25, 1868.
Jan. 7, 1868.
Nov. 10, 1868.
Jan. 21, 1868.
Dee. 1, 1808.
Aug. 4, 1868.
May 26, 1868.
Nov. 24, 1868.
June 9, 1868.
Apr. 7, 1868.
Dee. 29, 1868.
June 16, 1868.
Sept. 29, 1868.
June 2, 1868.
Nov. 24, 1868.
Apr. 7, 1868.
May 19, 1868.
July 14, 1868.
June 23, 1868.
May 12, 1868.
May 12, 1868.

July 28, 1868.
A pr. 28, 1868.
May $5,1868$.
Apr. 28, 1868.

Alphabetical list of patentees for the year 1863-Continued.

No.

77, 231
77, 232
81, 053

79, 426
74, 185
80, 848
73, 219

75, 614
74, 186
77, 700
80, 696
82, 054
$8: 2,264$
76, 287
76, 872
76,026
76, 290
82, 371
77, 154

79, 885
81, 568
82, 7,9
80, 793
73. 275

7T, 341
84, 601
2,993
79, 796
82, 671
83, 351
81, 238
84, 041
82, 191
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83, 232
73, 482
84, 243
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81, 239
77, 155
78, 038
79, 619

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75, 716
76, 370
85,502
82, 780
83, 896
76, 286
82, 672
77, 559
77, 233
74, 872
81,858
75, 717
79,886

Name, residence, and invention or discovery.

Woodbury, Walter R., England. Production of ornamental surfaces for jewelry, \&e Samc....... Mode of producing surfaces for printing from photographs..... Woodeock, George O., Claremont, N. H. Coal store
Woodcock, William, and Franklin P. McCullon. (See McCullon \& Woodcock.) Woodfill, J. G., and L. D. Pemington. (See Pennington \& Woodfill.)
Woodford, Henry M., Kensington, Conn. Match sato
Woodham, Alfred, New York, N. Y. Skate fastening
Woodhull, Samuel, Linden, Mich. A pparatus for setting arle........................... Woodman, Charles E. (See Hillbright, F. L., assignor.)
Woodman, Horace, Saco, Maine. Shingle maehine
Same......Biddeford, Maine. Cleaning top cards of earding machines.
Woodmansee, L. D., Dayton, Ohio. Driving lines
Woodrow, D. T. (See Frailey, Wm. C., assignor.)
Woodruff, Charles F., Newbern, Tcmn. Water elevator
Same...... Spur wheel
Same.......Excavator
Same....... Spur wheel
Same...... Water elevator
Woodruff, Chauncey D., Toledo, Ohio. Suspending eave troughs. (Extension) Woodruff, E. W., and George C. Green, Washington, D. C. Paper file. Same
Woodruff, James E., Buffalo, N. X . Letter box
Same ...... Fare-box for passenger cars.
Woodruft, Sanuel, and H B. Beach, Hartford, Coun. Pump
Woodruff, William W., Morrisville, Vt. Fermentation bung
Woods, David C., and Seth Gill. (See Gill \& Woods.)
Woods, George E., and Hazen J. Batehclder. (See Batchelder \& Woods.)
Woods, George L., Newburyport, Mass. Windlass
Woods, S. A. (See Harrington, David, assignor.)
Woods, Thomas C., Marion County, Ky. Car brake
Woods, Walter D., assignor to self and Ebenezer F. Troods, Bemington, N. II. Cutlery
Woods, Willian M., Philadelphia, Pa. Curtain fixture
Woodside, Beujamin F., MeDouald, Tenn. Friction match
Woodside, William J., Zanesville, Ohio. Animal trap
Woodward, Alonzo S!, Pepperell, Mass. Wagon hub.
Woodward, Davis B., assignor to Horaee R. Hawkins, Akron, ohio. Horse rako. (Reissue)
Woodward, Elias, Brooklyn, $\mathrm{N} . \mathrm{X}$. Fastening for neck-ties
Woodward, Erastus, and J.S. Millett, Charlestown, Mass. Starting apparatus for railroad cars
Woodward, George M., New York, N. Y. Steam heater
Woodward, H., England. Apparatus for carburetting.
Woodward, Henry M., St. Louis, Mo. Treating cast iron for the mannfacture of car wheels
Woodward, J. A. and S. S., and T. Masou, Sandwich, Ill. Cnltivator
Woodworth, D. B., assignor to the Cincimati Britannia Company, Cincinnati, Ohio. Construction of tea and coffee pots.
Woodworth, George D., Chicago, Ill. Stove grate.
Woodworth, James R., Nunda, N. Y. Devico for puling hop poles.
Woodworth, Justin P., Brooklyn, N. Y. Electroplating
Woodworth, Linus, Troy, Pa. Horse hay fork.
Woodworth, O. H., Columbia City, Ind. Winding stop for woight cloeks. (Antedated May 7, 1868)
non, Ind. Rotary steam-enginc
Wool, James, assignor to self and F. Hunnewell, Boston, Mass. Diop hammer Woolcver, Adam, and Alexander Lisk. (See Lisk \& Woolover.)
Woolley, Lucins Leander, Medford, Mass. Door lock.
Woolley, Milton, Brooklyn, N. Y. Cooking stove.
Woolson, Augustus N. (See Davis, Anthony G., assignor.) Same ...... (See Minu \& Frost, assiguors.)
Woolson, Charles J., Cleveland, Ohio. Door of a cook stove...........(Design)
Woolverton, Samucl, assignor to self, George L. Taylor, and Lewis Parker, jr. Trenton, N. J. Dental foreeps.
Woolworth, Robert, New Havcı, Com. Clock

Wooster, Emma C., New York, N. Y. Rutilel trimming
Machine for scouring steel to Waterbury Brass Company, Waterbinry, Comi.
Machiwe for scouring steel metal. (Antedated April 6, 1868).
Wootan, W. S., Richoond, Inl. School desk
Same......Draught valve in racking for joints
Woreester Leonard and Josenh S.
Woreester, Leonard, and Joseph S. Brown, Low
Worden, E. E., and H. Wilms, Brandon, Vt. Spring-bci Dott....
Worden, John, Normal, Ill. Lubricator for axles
Worden, Wilbur R., Ncu Haveu, Conn. Sprinkler
Workman, Morgan, Washington Township, Ohio. Feed rack
Workman, Thomas C., and Flavius J. Van Vorhis. (See Van Vorhis \& Work-

Date.

A pr, 28, 1868.
Apr. 28, 1868.
Aug. 11, 1808.
June 30, 1868.
Fcb. 4, 1868.
Aug. 11, 1863.
Jan. 7, 1868.
July 29, 1868.
Mar. 17, 1868.
Feb. 4, 1868.
May 5, 1868.
Aug. 4, 1868.
Sept. 8, 1868.
Sept. 15, 1868.
Fch. 18, 1863.
Mar. 31, 1868.
A pr. 14, 1868.
Mar. 24, 1863.
Mar. 31, 1868.
Sept. 22, 1868.
Apr. 21, 1868.
July 14, 1868.
Aug. 25, 1868.
Oet. 6, 1868.
Aug. 4, 1868.
Jan. 14, 1868.
Apr. 28, 1868.
Dec. 1, 1868.
Jnue 16, 1863.
July 7, 1863.
Sept. 29, 1868.
Oct. 20, 1868.
Ang. 18, 1868.
Nov. 10, 1868.
Sept. 15, 1868.
Apr. 14, 1868.
Oct. 20, 1868
Jan. 21, 1868.
Nov. 17, 1868
May 19, 1868.
May 19, 1868.
Aug. 18, 1868.
Ap1. 21, 1868.
May 19, 1868.
July 7, 1863.
June 23, 1868.
Mar. 17, 1868.
Apr. 7, 1868.
Dec. 29, 1868.
Oct. 6, 1868.
Not. 10, 1868.
Mar. 31, 1868.
Sopt. 29, 1863.
May $5,1868$.
A pir. 28, 1868.
Felo. 25, 1868.
Sept. 1, 1868.
Mar. 17, 1868.
July 14, 1868.

# Alphabetical list of patentees for the year 1868-Continued. 

No.

76,873
74,873
73, 560
74,655

75, 103
7\%, 560
76, 575
73, 685
:6, 371
80, 045
78,780
3, 185
81, 859

79, 28:
73,483
2,921

75,615
79, 427
7\%, 793
78,562
78, 171
79, 428
82, 055
83,581
81, 054

74, 187
77,561
80, 378
75,616
84, 723
78, 505
84, 042
76, 027
76,685
78, 634
73, 561
85, 157
8) 056

79, 045
74, 783
73, 859
73, 860
73,861
73, 862
74, 188
78, 978
84, 075
79, 670
78, 635
81, 055
82, 781
84, 459

Name, residence, and invention or discovery.

Worstenholm, George, Newark, N. J. Bolt and rivet machine
Worster, George W., Bangor, Maine. Culinary steamer....
Worth, H. B., assignor to self, William H. Chapin, and A. L. Crcamer, Chicago,
Ill. Ventilator
Wren, George A., and Ralph R. Lee. (See Lee \& Wren.)
Wrerm, R. C., Waverly, Mo. Hemp harvester.
Wright, Abram and George F., Clinton, Mass. Toy safe with puzzle lock ........
Wright, Alram Wallace, Bruker Hill. Ill. Spring bed-bottom
Wright, Alexander, Alleghany City, Pa. Plow
Wright, Benjamin P., San Francisco, Cal. Potato digger
Wright, Charles, Newark, N.J. Friction clutch pulley. (Antedated July 10, 1868).

Wright, David, Boston, Mass. Composition for gilding moldings, \&c...........
Wright, David W., New York, N. X. Pocket sum dial..................(Design).
Wrimht, Edward S., assignor to Samuel Leggett, New York, N. Y. Cutter head Wright, E. W., and Norman Rose. (See Rose \& Wright.)
Wright, George F., and William Orr, jr. (See Stewart, Hugh, assignor.) Same......Clinton, Mass. Tag. (Antedated June 5, 1868)
Wright, Henry, assignor to James IR. Clark, Saco, Maine. Boot crimp.
Wright, Homer, assignor to self, Henry H. and Benjamin F. Collins;'Pittsburg,
Pa. Construction of jug tops.
(Reissue).
Wright, Humer, et al. (See Davis, E(lward M., assignor.)
Wright, Horace H. W., assignor to self, James Morse, Richard S. Jenness, and Albert Pickernell, South Boston, Mass. Hammer.
Wright, Howell W., Taunton, Mass. Electroplating and plated ware..............
Wright, Howell W., assignor to Reed \& Barton, Taunton, Mass. Alloy for the manufacture of spoons and forks.

## Same...... Manufacture of table ware

Wright, Jacob J., and John H. Penny, Harrison, Ohio. Corn planter
Wright, John, and Charles R. Tompkins. (See Tompkins \& Wright.)
Wright, John A., Keene, N. H. Combined mop and wringer Sane ..... Mop
Wright, Joseph, Philadelphia, Pa. Stop for umbrella runners
Wright, Lewis R., Troy, N. Y. Cultivator and plow eombined
Wright, Luna, and Samnel J. Miller. (See Miller \& Wright.)
Wright, Lysander, Newark, N. J. Sawing machine ...........
Wright, N. A., and W. A. Terry. (See Clark, S. W., assignor.)
Wright, Nathaniel F., and Augustus R. Hobbs. (See Hobbs \& Wright.)
Wright, Rufus, Brooklyn, N. Y. Cherry stoner
Saune.................................. same
Wright, Rufas, assignor to self and J. B. Chadwick, New York, N. Y. Crayon holder.
Wright, R. B., Vermillion, Ill. Seed planter.
Wright, Warren, St. Louis, Mo. Hominy and smut mill.
Wright, Wendell, Bloomfield, N. J. Clasp for fastening garme....ts
Same. ..... Suspender fastening
Wright, Willian, New York, N. Y. Cut-off valve gear
Wright, William P., assignor to self and Collins W. Waiton, Philadelphia, Pa. Process for treating muslin for sweat linings, \&c., for hats.
Wrightington, C. D., and B. P. Rider, Chelsea, Mass. Brick machine.
Wrighston, Hugh S., assignor to M. M. Welby, and C. H. Slicer, Baltimore, Mi. Wrench
Wrinkle, James, Lee, Mass. Machine for mixing coloring matter with paper pulp
Wroe, John A., Hagerstown, Mi. Exercising chair
Wulsten, Charles, Lafayette, Ind. Printers' ink
Wunderlich, J. N., Philadelphia, Pa. Traveler's trunk
Wurtz, Henry, New York, N. X. Manufacture of refined grahamite.
Same...... Preparation of grahamite.
Same...... Preparation from grahamite called "Trisine;
Same.......Material prepared from grahamite called "Viscosine",
Same....... Mode of componnding printers' ink from grahamite
Wyatt, Henry M., Somerville, Mass. Lamp burner.
W yatt, Lorenzo D., assignor to self, Samuel Farley, and Edward McManama, Castleton, Ind. Corn planter
Wyche, W. E., and Young P. Dickson, Brookville, N. C. Hopper shoe for grist mills
Wyckoff, Arcalous, Elmira, N. X. Pavement.
Wyekoff A (See Stevens Lafayette assignor)

Wyckoff, J. H. and W. K., Ripon, Wis. Photographic camera.
Wykoff, John, Grant City, Mo. Compornd doubletree
W yley, Andrew, Birmingham, England. Breech-loading fire-arm. (Patented in England Mareh 25,1867 )
Wylie, George, and George W. Welsh. (See Welslı \& Wiley.)
Wylie, John, and W. J. Benedict. (See Benedict \& Wylie.)
Wyman, Dana. (See Beardsley, Theodore, assignor.)
Wyman, F. S., Chicago, Ill. Can opener
Wynn, James M., Scipio, Ind. Wagon coupling
Wyon, Joseph Shepherd, and Alfred Benjamin Wyon. (Sec Hill, Charles J., assignor.)

Date.

Apr. 14, 1868.
Feb. 25, 1868.
Jan. 21, 1868,
Feb. 18, 1868.
Mar. 3, 1808.
May 5, 1868.
Apr. 7, 1868.
Jan. 21, 1868.
Apr. 7, 1808.
July 14, 1868.
June 9, 1868.
Aug. 25, 1808.
Sept. 1, 1868.

June 23, 1868.
Jan. 21, 1868.
Apr. 21, 1868.

Mar. 17, 1868.
June 30, 1868.
May 12, 1868.
$J$ une 2,18G8.
May 19, 1868.
June 30, 1868
Sept. 8, 1868
Oct. 27, 1868.
Aug. 11, 1 ع68.
Dec. 31, 1868

Feb. 4, 1868
May 5, 1868.
July $28,1868$.
Mar. 17, 1868
Dec. \&, 1868
Jane 2,1868.
Nov. 10, 1868.
Mar. 24, 1868
Apr. 14, 1868
June 2,1863
Jan. 21, 1868.
Dec. 22, 1868
Sept. 8, 1868.
June 16, 1868.
Feb. 25, 1868.
Jan. 28, 1868.
Jan. 28, 1868.
Jan. 28, 1868.
Jan. 28, 1868.
Fel. 4, 1868.
June 16, 1868.
Nov゙. 17, 1868.
July 7, 1868.
June 2,1868.
Aug. 11, 1868.
Oct. 6,1868.
Nov. 24, 1868.

July 28, 1868.
Aug. 18, 1868.

Alphabetical list of patentees for the year 1868-Continued.


## Alphabetical list of patentees for the year 1868-Continued.

| No. | Name, residence, and invention or discovery. | Date. |
| :---: | :---: | :---: |
| 85, 195 | Young, Wesley, Bloomington, 71 | e. $22,1868$. |
| 77, 857 | Young, William, Easton, Pa. Deviee for elearing | May 12, 1868. |
|  | Young, William, and Jacob Van Norman. (See Van Norman \& Young.) |  |
| 80,379 | Young, William, jr., assignor to self and Charles Lowell, Franklin, Mass. Door |  |
| 74, 474 | Young, William B., Chicago, 711. Plow | July 28, 1868. |
| 79, 622 | Young, W. H. and L., Boston, Mass. | July 7, 1868. |
| 79, 798 | Same...... Caster | July 7, 1868. |
| 83, 680 | Same ...... Curtai | Nov. 3, 1868. |
|  | Young, William K. (See Shaffer, B. F., assignor.) |  |
| 80, 794 | Youngblood, William, New York, N. Y. Horse coll | May 5, 1868 |
|  | Youngs, Elijah, Tuscarora, N. Y. Mop and elothes | Aug. 4, 1868. |
|  | Youngs, William F. (See Metzler, Henry F., assignor.) |  |
| 77, 430 | Zaeharias, J. F., Leesburg, Va, Machine for attaching labels tonewspapers, \&e. (Antedated April 11, 1868) | Apr. 28, 1868. <br> May 26, 1868. <br> Nov. 24, 1868. <br> Feb. 11, 1868. |
| 78,349 |  |  |
| 84, 401 | Zahn, Henry, Toledo, Ohio. Railway rail |  |
| 74, 264 | Zaiser, Charles, Newark, N. J. Animal trap |  |
| 75, 233 | Zamboni, Isidoro, assignor to self, Peter Zoppi, and John Ruedy, St. Louis, Mo. Bottlo stopper. | Mar. $3,1868$. |
|  | Zane, Joseph. (See Roaeh, Franeis, assignor.) |  |
| 73, 686 | Zeigenfuss, George S., Doylestown, Pa. Wagon elip. (Antedated Jan. 16, 1868). | Jan. 21, 1868. |
| 76,687 | Zeigler, George W., Maumee, Ohio. Land tiller | Apr. 14, 1868. |
|  | Zeigler, George W., and William D. Burgess. (See Burgess \& Zeigler.) |  |
| 79,046 | Zell, Franeis, Louisville, Ky. Sash fastener | June 16, 1868. |
| 79, 047 | Same.....-Shutter fastening | June 16, 1868. |
| 76, 874 | Zell, George M., Waynesville, Ohio. Ha | Apr. 14, 1868. |
| 84,043 | Zepf, Jaeob, assignor to James T. Walker, Troy, N. X. Machine for making horseshoes. | Nov. 10, 1868. |
| 3,226 | Zeuner, Charles, assignor to M. Greenwood \& Company, Cincinnati, Ohio. Shovel and tongs stand ........................................................ (Design) . |  |
| 75, 822 | Zibell, Frederiek, St. Louis, Mo. Turning | Mar. 24, 1868. |
| 77, 794 | Zider, Reuben, El Paso, Ill. Railway chair | May 12, 1868. |
| 83, 751 | Ziegler, John, Dayton, Ohio. Casting hollo | Nov. 3,1868. |
| 83, 752 | Zilar, Reuben S., Cincinnati, Ohio. Iee elevato | Nov. 3, 1868. |
|  | Zimmer, George, \& Company. (See Green, F. D., as |  |
| 78,172 | Zimmer, John, Pittsburg, Pa. Furnace for boiling and puddling iron and other metals. | May 19,1868. |
| 81, 056 | Zimmerman, Charles E., Cincinnati, Oh | Aug. 11, 1868. |
|  | Zimmerman, F. (See Beurer, Gottlieb, assignor.) |  |
|  | Zimmerman, H., et al. (See Uitting, Leonhardt, assignor.) |  |
| 78, 714 | Zimmerman, J. C., Eberly's Mills, Pa. Corn shelle | June 9, 1868. |
| 79, 717 | Zimmerman, Peter, Delaware Water Gap, Pa. Deviee for hanging mill | July 7, 1868. |
| 82, 372 | Zimmerman, Valentine, Morris, Ill. Beehive | Sept. 22, 1868. |
| 76,029 | Zimmerman, William, Colfax, Iowa. Horse hay | Mar. 24, 1868. |
| 83, 897 | Zimmerman, William, Quiney, Ill. Hammer | Nov. 10, 1868. |
|  | Zink, C. H., et al. (See Wagenhorst, James J., assignor.) |  |
| 84, 155 | Zinn, Benjamin F., Mt. Rock, Pa. Open or middle ring | Nov. 17, 1868. |
| 76, 577 | Zinn, Bernhard, H., New York, N. Y. Extension cha | Apr. 7, 1868. |
| 79, 288 | Zinn, John Hartzell, assignor to self and T. B. Weakley, Harrisburg, Pa. Line holder |  |
| 76,030 | Zinsser, August, New York, N. Y. Ta | Mar. 24, 186 |
| 76,031 | Zinssmann, Emil, assignor to self and Charles Rumpff, New York, N. Y. Compound of aniline colors | Mar. $24,1868$. |
| 83, 433 | Zippe, G., assignor to self and Werner Werner, New York, N. X. Process and eomposition for tanning leather | Oet. 27, 1868. |
|  | Zisemann, John F., et al. (See Sebold, George, assignor.) |  |
|  | Zoiner, P. W., and C. Harris. (See Harris \& Zoiner) ................... (Design.) |  |
| 77, 702 | Zopff, Heinrieh, Milwaukie, Wis. Culinary apparatu | May 5, 186 |
|  | Zoppi, Peter, et al. (See Zamboni, Isidoro, assignor |  |
| 79, 718 | Zumsten, F. S., Evansville, Ind. Hea | July 7, 1868. |

## ALPHABETICAL LIST OF INVENTIONS.



## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Alarm, Till | A. D. Hoffman | 83, 498 |
| Alarm, Time | L. Baum | 73, 154 |
| Alcoholic spirits from tomatoes | J. S. Williams | 84,455 |
| Ale, becr, \&c., Preserving | R. Jickemeyer | 82, 394 |
| Ale, porter, \&c., Brewing | F. M. Ruschhaupt | 81, 214 |
| Ale, porter, \&c., Composition for the ma | T. Hawks. | 78, 874 |
| Alkali, Metal cans and cases for putting | J. McCoy | 77, 899 |
| Alkalies, Putting up. | J. Reakirt | 79,599 |
| Alloy for metallic roofing | L. S. Enos | 77, 874 |
| Alloy for the manufacture of spoons and | H. W. Wright | 77, 793 |
| Alunina, Sulphate of | H. Pemberton. | 78, 005 |
| Alum, Porous. | H. Pemberton | 82, 747 |
| Amalgamating gold and silver | W. M. Fuller | 81, 767 |
| Amalgamator.. | A. L. Fleury | 73,241 |
| Amalgamator | R. and W. F. Smith | 76,538 |
| Amalgamator. | W. Robbins. | 77, 097 |
| Amalgamator. | S. Fountain | 77, 183 |
| Amalgamator. | A. Horn | 80, 739 |
| Amalgamator | G. A. Mariner and J. Kune | 82, 730 |
| Amalgamator, Electrical | J. H. Rae | 83, 091 |
| Amalgamator, Shoe for | J. H. Bullock | 77, 868 |
| Anchor. | D. C. Pieree | 73, 035 |
| Anchor | D. C. Pieree | 73, 036 |
| Anchor. | J. M. Russell and D. Jol | 73, 758 |
| Anchor | F. Wittram. | 78,852 |
| Anchor | J. A. Habberley | 82, 940 |
| Auchor | C. W. Roeden | 84, 304 |
| Anchor | E. P. MeCarthy and J. J | 44, 565 |
| Anchor. | F. Howes ........ | 85, 228 |
| Andirou and fire-place | F. Passy. | 79, 253 |
| Aniline colors, Compound of .. | E. Zinssmann | 76, 031 |
| Animals, Catehing and holding domest | H. V. Van Etten | 85, 413 |
| Animals, Cleaning the intestines of slat | J. A. Thompson | 79, 031 |
| Animals in slaughtering, Handling | A. Graves .- | 74, 681 |
| Animals, Relieving choked. | G. Clump | 76, 993 |
| Animal substances, Preserving | O. Lugo | 81, 185 |
| Animals, Suspending slaughtered | W. Leland and V. E. Rusco | 85, 109 |
| Animal tether | M. and S. C. Leonard. | 74,553 |
| Animal tether, Portable | A. Ralston | 74, 475 |
| Ankle brace. | S. B. Shearer | 76,353 |
| Ankle or knce guard | H. A. Hall | 77, 728 |
| Annealing pot and sa | J. Hibell | 79, 759 |
| Annuneiator | J. S. Birch | 84, 474 |
| Anvil for forming hor | F. Saylor and E. T. Rhodes | 84,583 |
| Apiary ..... | W. Faulkner. | 74, 065 |
| Apple corer | M. M. Hatch | 80, 172 |
| Apple corer and cutter | A. Frost | 80, 938 |
| Apple corer and quarterer | J. M. Hassam | 83, 494 |
| Apple corer and slieer | D. R. Reed | 80, 010 |
| Apple corer and slicer | I. Rogers | 80, 014 |
| Apple grinder and corn | M. H. Ripley and W. N. Tem | 82, 250 |
| Apple parer.. | J. F. and E. P. Munroe. | 75, 951 |
| Apple parer. | C. A. Wiggin ...... | 80, 580 |
| Apple parer, eorer, and | A. Clark | 78. 721 |
| Apple quarterer | C. E. Billings | 84, 791 |
| Apple slicer. | H. and J. S. B. Norton | 73, 373 |
| Arches, tunnels, \&e., Con | G. T. Lape | 81, 797 |
| Arm, Breeeh-loading | C. E. Sneider | 85, 252 |
| Armor plating for vessel | G. J. Gunther | 84, 418 |
| Arno rest and paper cutter, Combined | C. B. Dickinson. | 78, 192 |
| Arm rest, Penman's...................... | J. B. Withey. | 78, 253 |
| Arms of violiu players, Regulating the movements of. | E. Mollenhauer | 75, 950 |
| Articulator | E. T. Starr. | 78, 151 |
| Ash bin | W. W. Chase | 80451 |
| Atomizing apparatus for surgical use | A. M. Shurtleff | 75, 991 |
| Auger ....... | I. T. Payne | 75, 454 |
| Auger | A. C. Varghan | 76, 278 |
| Auger | N. C. Sanford. | 79, 012 |
| Auger | L. Colt. | 80, 915 |
| Auger and bit. | J. Swan | 78, 769 |
| Auger, Earth-boring | J. W. Heath | 76, 110 |
| Auger handle | J. Swan | 76, 956 |
| Auger handle | H. D. Pennoyer | 30, 365 |
| Auger handle | T. C. Hendry | 83, 156 |
| Auger, Hollow | A. Brush | 73, 162 |
| Auger, Hollow | F. Kraus | 76, 205 |
| Auger, Hollow | J. L. Parker | 76,804 |
| Auger, Hollow | W. A. Ives | 82, 957 |
| Auger, Hollow | J. H. Beauregar | 85, 423 |
| Auger, Post... | C. Adams . | 83, 233 |

## Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentce. | No. |
| :---: | :---: | :---: |
| Basket, Peach | H. Carpenter | 83, 459 |
| Bath and oven combined | J. Perry ..... | 78, 231 |
| Bath, Electric....... | C. Winterburn and W. Kent. | 79, 929 |
| Bathing apparatus, Safety | W. H. Pitt. | 77, 480 |
| Bathing, sea, Life-line for | W. T. Street |  |
| Bath, Steam.. | L. Heine.... | 84, 971 |
| Bath tub. | J. H. Mercer | 78, 180 |
| Bath tub | A. C. Browneli | 75, 780 |
| Bath tul, Sheet metal lin | C. A. Blessing | 80, 441 |
| Bath, Zincing or tinning | F. Chaso..... | 82, 491 |
| Battery, Electro-medical | H. Fritz | 74, 905 |
| Batters, Voltaic | A. Palmer | 79,567 82 881 |
| Beam and Girder | J. Montgomery | 82, 196 |
| Beam, Metal. | R. Montgomery | 8.3, 196 |
| Bean pot lifter and carrier | G. F. Foss ..... | 76, 182 |
| Bean puller | S. R. Niles | 80, 994 |
| Bed and sofa | J. B. Reith | 80, 767 |
| Bed and sofa | W. H. Schwalbe | 81, 691 |
| Bed bottom | A. Schlingman. | 73, 052 |
| Bed bottom | S. J. Wingat | 73, 218 |
| Bed bottom | F. C. Gridley | -73, 799 |
| Bed loottom | S. L. Southard | 74, 162 |
| Bed bottom | J. Potter.... | 73, 997 |
| Bed bottom | F. S. Bradiey | 74, 293 |
| Bed bottom | J. H. Brown. | 74, 660 |
| Bed lottom | J. C. Pry | 74, 812 |
| Bed bottom | H. B. Walbridge | 75, 321 |
| Bed lottom | E. Caswell . | 75,519 |
| Bed bottom | J. D. Wilkinson | 75, 820 |
| Bed bottom | A. W. Kendrick | 75, 926 |
| Bed bottom | L. K. Hawes | 76, 077 |
| Bed bottom | B. Hitchoock | 76,633 |
| Bed bottom | W. H. Tambling | 76,674 |
| Bed bottom | J. I. Mabbett. . | 76, 785 |
| Bed bottom | P. P. Simmons | 77, 113 |
| Bed bottom | C. Walker | 77, 339 |
| Bed lottom | J. D. F. Dahi | 77, 720 |
| Bed bottom | B. D. Joslin and R. A. Newhall | 77, 738 |
| Bed bottom | W. A. Chamberlain. | 78, 184 |
| Bed lottom | E. and O. W. Gibbs. | 78, 732 |
| Bed bottom | T. B. Moore and G. De Bow | 78,753 |
| Bed bottom | W. R. S. Hunter. | 78, 876 |
| Bed bottom | B. F. Kingman and N . V . B . She | 79,839 |
| Bed bottom | J. Allen...................... |  |
| Bed bottom | P . Hinklo. | 80, 176 |
| Bed bottom | I. N. Sheets | 80, 312 |
| Bed bottom | B. Gregg. |  |
| Bed bottom | G. L. Gerard | 82, 218 |
| Bod bottom | W. M. Hamilton | 82, 521 |
| Bed bottom | J. Christie. | 82, 800 |
| Bed lottom | H. J. Hale. | 82, 829 |
| Bed bottom | A. West | 83, 809 |
| Bed loottom, Elastic | J. J. Smith. | 83, 001 |
| Bed bottom, Securing springs to slats o | Z. S. Cracraft | 84, 092 |
| Bed loottom, Spring. | G. Koenig. | 73, 188 |
| Bed loottom, Spring. | J. D. Tifft... | 73, 268 |
| Bed bottom, Spring. | A. W. Newell | 73, 744 |
| Bed bottom, Spring. | B. Rear .... | 73, 755 |
| Bed bottom, Spring. | A. M. Blako. | 73, 770 |
| Bed bottom, Spring. | P. A. Scott and J. E. Burdge | 74,153 74,353 |
| Bed bottom, Spring. | R. O. Lowrey | 74, 388 |
| Bed bottom, Spring. | E. E. Worden and H. Wilms | 74, 772 |
| Bed bottom, Spring. | B. C. English and F. Fraps | 76, 425 |
| Bed bottom, Spring. | W. J. Emens .............. | 74, 675 |
| Bed loottom, Spring. | S. F. Bouton and N. ${ }^{\text {P }}$ Ames | 74, 747 |
| Bed bottom, Spring. | R. Tattershall............... | 75, 490 |
| Bed bottom, Spring. | L. R. Bradbury. | 76, 296 |
| Bed bottom, Spring. | J. C. Taylor | 78, 026 |
| Bed loottom, Spring. | S. B. McCracken | 78, 233 |
| Bed loottom, Spring - | A. L. Sawyer and W. Baldwin | 78, 397 |
| Bed bottom, Spring. | L. Granger.................. | 78, 956 |
| Bed bottom, Spring. | N. J. Willis................ | 79, 285 |
| Bed bottom, Spring. | S. E. Tyler | 79, 705 |
| Bed bottom, Spring. | P. S Brant. | 81, 422 |
| Bed bottom. Spring | A. McDaniel. | 81, 923 |
| Bed bottom, Spring | J. M. Losie. | 82, 012 |
| Bed bottom, Spring. | G. A. Brown .: | 82, 687 |

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| :---: | :---: | :---: |
| Bed bottom, Spring | J. B. Kelley and N. P. Kingsley | 82, 960 |
| Bed bottom, Spring | C. Hacker | 83, 489 |
| Bed bottom, Spring | G. Reneky and S. Kiess ..... | 84, 069 |
| Bed bottom, Spring. | T. J. Gaffiney and C. H. Dunks | 83, 373 |
| Bed bottom, Spring | I. H. Palmer. | 84, 300 |
| Bed bottom, Spring. | H. Russell , and M. S. Fullor | 84, 581 |
| Bed bugs and other vermin, Compound | P. Seebald | 79, 151 |
| Bed, Child's. | M. E.J. Marr | 76, 336 |
| Bed clothes holder. | J. B. Munson | 78, 756 |
| Bed, cushion, \&c., Filling for | G. C. Barney | 78, 412 |
| Ber, Folding | F. C. Payne | 77, 311 |
| Bed, Hospital | II. Conway. | 74, 669 |
| Bed, Hospital | E. Gray.. | 76, 747 |
| Bed, Office | A.J. Vawter | 80, 038 |
| Bed pan attachment for invalid bed | S. G. Welling | 77, 937 |
| Bed pan, Female syringe | A. Rittenhouse. | 82, 349 |
| Beds, seats, \&c., Expanding bottom | E. H. Garretson | 81, 358 |
| Bed, Secret. | C. F. Bowers | 75, 849 |
| Bed, settee, and table, combin | C. F. Kramer. | 74, 551 |
| Bed, Spring | H. F. Clark | 80, 808 |
| Bedstead. | G. Beurer | 74, 193 |
| Bedstead. | J. C. Cline | 75,527 |
| Bedstearl. | W. L. Thomas | 76,553 |
| Dedstead. | J. Cline | 78, 647 |
| Bedstead. | I. W. Roath | 80, 688 |
| Bedstead. | W. M. Ward and P. Bennage | 82, 457 |
| Bedstead and crib | G. T. Palmer | 78, 123 |
| Bedstead and quilting frame | J. Park | 81, 936 |
| Bedstead, Book-case | E. Putnam | 81, 687 |
| Bedstead, Bureau | M. Sulzbacher | 74, 628 |
| Bedsitad, Burean | E. Shackford and D. Arnaud | 76, 604 |
| Bedstead, Bureau | A. Parker. | 80, 203 |
| Bedstead, Bureau | D. Arnand | 84, 466 |
| Bedstead, Cabinet. | W. H. and L. Young | 79, 222 |
| Bedstead, Cabinet. | W. H. Dutton. | 76,423 |
| Bedstead, Crib attachment for | H. R. Tracy | 74, 865 |
| Bedstead, chair, secretary, | W. Reclsards | 77, 814 |
| Bedstead fastener . | J. C. Cline. | 77, 457 |
| Bedstead fastener | J. Janeway | 80, 743 |
| Bedstead fastening | W. Johnson | 75, 025 |
| Bedstead fastening | B. Essig | 75, 254 |
| Bedstead fastening. | J. E. Millisen | 75, 445 |
| Bedstead fastening. | J. C. and F. J. Jackson | 77, 491 |
| Bedstead fastening | C. M. Gilbert | 82, 305 |
| Bedstead fastening | W. Johnson | 84, 949 |
| Bedstead, Folding. | S. S. Burr . | 74, 494 |
| Bedstead, Folding. | C. P. Alling, jr | 84, 337 |
| Berlstead, Folding bureau | D. B. Maynard | 85, 232 |
| Bedstead, Hospital. | A. Iske | 77, 193 |
| Bedstead, Invalid | W. Heatb. | 73, 008 |
| Bedstead, Invalid | W. Heath. | 75, 265 |
| Bedstead, Invalid | W. W. Rowles and A. J. Russell | 75, 983 |
| Bedstead, Invalid | J. Young, jr | 78, 986 |
| Bedstead, Mortise and tenon for | W. II. Elliot | 76, 611 |
| Bedstead or crib, Folding. | R. S. Titcomb | 77, 334 |
| Bedstead, Parlor | M. Crosby | 83, 936 |
| Bedstead, Sofa | J. Werner | 76,570 |
| Pedstead, Sofa | M. K. Maximilian | 81, 659 |
| Bodstead, Sofa | S. R. Roscoe. | 81, 949 |
| Bedstead, Sofa | W. P. Barclay. | 83, 025 |
| Bedstead, Sofa | B. L. Southack | 83, 333 |
| Bedstead, Wardrobe | A. A. Young | 83, 432 |
| Beef, hams, \&c.e, Curing | O. M. Martin | 84, 893 |
| Beehive. | C. Hastings | 73, 096 |
| Beehive | J. Neal. | 73, 915 |
| Beehive.. | J. A. Jackson | 74, 369 |
| Beehive. | D. S. Bear ... | 74,487 |
| Beehive. | W. Y. Singleton | 74, 618 |
| Beehive. | H. A. Stidger | 74, 627 |
| Bechive. | N. C. Mitchell | 74, 709 |
| Beehive. | M. D. Fogel | 74, 810 |
| Bechive | P. J. Severson | 74, 854 |
| Beehive. | D. Rudolph | 75. 201 |
| Beehive. | M. S. Snow | 75, 804 |
| Beehive. | A.J. Smith and H. C. Reed | 76, 258 |
| Beehive | J. I. Cassel and W. Quinn | 76, 602 |
| Beehive | E. B. Beach. | 76, 976 |
| Beehive. | O. F. Cobb. | 76, 999 |
| Beehive. | J. Wash. | 77, 139 |
| Beehivo | W. A. Flanders |  |
| Bechivo | P. Compto | 78, 762 |
|  | P. Compton |  |

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| :---: | :---: | :---: |
| Beehive. | п. Bauglman | 78, 253 |
| Beehive. | II. Fuller. | 78, 8 61 |
| Beehive | F. Moore | 78, 813 |
| Beehive. | S. I'. Shipley | 78, 898 |
| Beehivo. | J. MeDonald | 79, 243 |
| Beehive. | W. J. Elvin | 79, 4.54 |
| Beehiro. | J. S. Hooton. | 79, 471 |
| Beehivo. | S. B. Replogle. | 79, 80.091 |
| Beehive. | J. Chase ...... | 80,138 80 |
| Beehive. | S. Cuplin | 80, 395 |
| Bechiro. | Z. W. Bassett | 80, 587 |
| Beehive. | S. P. Forgy | 80, 716 |
| Beehive. | J. I. Pool. | 81, 206 |
| Beehire. | II. Burton. | 81, 747 |
| Beehive | H. A. King | 82, 006 |
| Beehire. | O. Ficld. | 82, 101 |
| Beehive. | V. Zimmerman | 82, 2\% |
| Beehive. | G. Eason. | 82, 298 |
| Beehive. | J. Tallman | 82, 363 |
| Beehive. | B. F. Nave | 82, 623 |
| Beehive. | J. N. Outteu | 82, 634 |
| Beehive. | T. Shields.. | 82, 757 |
| Beehive. | G. C. Schneide | 82, 880 |
| Beehivo. | A. V. Conklin | 83, 257 |
| Beehivo. | M. Stansbury | 83, 335 |
| Beehive. | D. Edge ..... | 83, 479 |
| Beehive. | B. Leckrone | 83, 574 |
| Beehive. | A. Niebel | 83,532 |
| Beehive. | L. M. Stoops | 83, 565 |
| Beehive. | I. King | 83, 861 |
| Beehive. | J. C. Caston | 83, 952 |
| Beehive. | S. Shrock | 84, 010 |
| Beehive. | J. Douthett | 84,052 |
| Beehive. | J. H. Thurston | 84,232 |
| Beehivo. | J. C. and I. R. Lander | 81, 286 |
| Beehive. | S. Cuplin | 84, 415 |
| Beehive. | J. Shoe. | 84. 714 |
| Beehive. | T. R. Allen | 84, 788 |
| Beehive. | A. P. Durant | 84, 805 |
| Beehive. | J. T. Fife | 84, 812 |
| Bechive. | H. O. Hughes | 84,826 |
| Beehive | S. L. Riehardsou. | 85, 401 |
| Beehive, Moth fly-trap for | J. D. Meador . | 81, 808 |
| Beehive proteetor | A. S. Johnson | 83, 388 |
| Beehive, Surplus honey-box in | 14. Moon and D. C. Turner | 81, 398 |
| Beehouse | A. Carter | 84, 994 |
| Beehouse | C. Deeker | 83, 263 |
| Bechouse and hive | W. M. Simpso | 77, 2 20 |
| Beer, ale, \&e., Composition for the | T. Hawks .. | 78, 874 |
| Beer, ale, \&e., Preserving .......... | R. Eickemeyer | 82, 394 |
| Beer and other malt liquors, Brewing | W. H. Elliot.. | 76, 177 |
| Beer, Hopping | W. S. Haight. | 79, 342 |
| Beer, Mashing and boiling wort for | J. and M. Stark | 73, 056 |
| Beer, Pine-apple | G. Pivera .- | 74, 420 |
| Beer, Small | O. F. Green and J. E. Clarl | 82, 401 |
| Bell, Call. | E. G. Cone -............... | 83, 468 |
| Bell, Door. | A. F. Brooks | 78, 308 |
| Bell, Door. | T. I yons | 80,983 |
| Bell, Door. | O. B Oakley and H. Rosekran | 81, $6 \%$ |
| Bell, Door | W. H. Nichols................ | 82, 434 |
| Bell, Door | W. Allport. | 85, 352 |
| Bell-pull | S. Bonsall and L. Hillebrand. | 75, 118 |
| Bell-pull | J. Garvey and M. II. Kinball | 83, 622 |
| Bell-pull | J. Garvey and M. H. Kimball | 83, 623 |
| Bell-pull | S. Bonsail and L. Hillelorand. | 84, 990 |
| Bell-pull, Noiseless | J. F. Cory . ...... | 83, 606 |
| Bell, Sligh | G. M. Strong | 75, 0 \%1 |
| Bells, Moulding | E. G. Cone | 82, 094 |
| Bells to their yokes, Attaehing | G. R. Meneely | 80, 422 |
| Bell, Table and burglar alarm | A. Iske | 84, 695 |
| Bellows | J. and W. Bowden | 74, 884 |
| Bellows for dry gas meter, Diaphragm | A. Tufts .. | 83, 113 |
| Bellows for musieal instrument | O. Follett | 73, 592 |
| Bellows for reed musieal instrument | A. W. Wileox | 77, 498 |
| Bellows proping appa | S. Motte ... | 81, 930 |
| Bellows, Reed organ | J. Schatz. | 77,661 |
| Belt-clasp: | T. W. Porte | 75, 970 |
| Belt-elasi, -... | J., S. A., G. E. and F. F. Readil | 75, 376 |
| Belt, Coupling | T.McMullin | 81, 391 |
| Belt, Endless. | H. Richards and J. A. Trav | 82, 640 |

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| :---: | :---: | :---: |
| Belt fastener | G. M. Beardsley | 81,331 |
| Belt fastener | F. G. Wilson | 84, 925 |
| Belt fastening | E. Schmeltz. | 75, 704 |
| Belt fastening | T. Kennedy | 82, 227 |
| Belting....... | H. Lemaistre | 75, 554 |
| Belting. | T. Standring | 81, 623 |
| Belting, Artificial leather | S. M. Allen. | 80, 048 |
| Belting, Paper | J. B. Crane ......... | 84, 263 |
| Belting, Splicing | J. W. Lyder and H. Sh | 79, 136 |
| Belting, Vulcanized India-rubbe | D. C. Gately ......... | 83, 374 |
| Belt lacer... | J. K. Priest and W. Earl, jr | 81, 537 |
| Belt, Machine | T. F. Snover. | 77, 847 |
| Belt shipper. | E. Buck. | 79, 443 |
| Belt, Shipper for shifting | T. W. Frost | 76, 739 |
| Belts, Tightening | J. M. King | 85, 012 |
| Belts, Tool for mending | G. W. Miller | 80, 756 |
| Belt, Stud. | D. M. Weston | 76, 861 |
| Belt tightener | S. Patton. | 81, 285 |
| Belt, Waist | A. R. Boylson | 84, 082 |
| Belt, Waist, or girdl | M. I. Findley | 78, 367 |
| Bench-dog, Carpente | E. B. McCoy. | 77, 998 |
| Bench or table | L. D. Hubbard | 76, 459 |
| Bench, Shoemaker's | J. A. Hahn and C. Vogler | 77, 607 |
| Bench, Shoemaker's | D. Fisk and J. M. Blodgett | 84, 871 |
| Bending circles. | W. Boyd................ | 78, 418 |
| Bending machine | W. Richardson and L. Miuller | 73, 837 |
| Beveling machine, Bookbinder's | W. P. Chase | 77, 958 |
| Bilge and keel block.... | J. T. Parlou | 73, 576 |
| Bilge water, Discharging | P. Pardee. | 77, 402 |
| Billet cover and carriage loop | N. Jenny, jr | 84, 829 |
| Bill file | C. W. Bond | 83, 908 |
| Bill holder | J. A. M. Collins | 85, 367 |
| Billiard ball, Vulcanite.. | W. H. Lippincott | 77, 223 |
| Billiard balls, \&c., Compositi | J. W. Hyatt, jr .. | 76, 765 |
| Billiard cue. | H. C. Griffin | 75, 751 |
| Billiard cue. | J. N. McIntire | 83, 397 |
| Billiard cue, Chalk holder for | A. M. Leonard and B. Perkins | 81,515 |
| Billiara cue, Composition tip for | A. Wetherbee | 84, 036 |
| Billiard cue trimmer ............. | H. Pernot | 75, 049 |
| Billiard table, Chalk and sand-pap | C. F. Ritchel | 81, 947 |
| Billiard-table cloth | D. Skidmore | 73, 660 |
| Binder, Temporary | N. M. Shafer | 73, 261 |
| Binder, Temporary | G. W. Emerson. | 79, 560 |
| Bin for sugars, \&c.. | M. L. Rich..... | 82, 035 |
| Bird, Decoy. | N. Wales | 74, 458 |
| Bird-house, Metallic | H. Miller | 76,648 |
| Biscuit, meal and other, Manufacture | J. Carr and C. Lucop | 76, 889 |
| Bit and auger. | J. Swan ............. | 78, 769 |
| Bit, Auger. | J. Swan | 76, 955 |
| Bit, Auger . | J. Swan | 80, 027 |
| Bit brace. | F. A. Wood. | 84, 523 |
| Bit, Bridle | G. Webb... | 73, 853 |
| Bit, Bridle | J. K. Norton | 74,122 |
| Bit, Bridle | W. S. Ford. | 77, 810 |
| Bit, Bridle. | P. J. McGuiness. | 78, 466 |
| Bit, Bridle | P. Schoonmaker | 80, 510 |
| Bit, Bridle | C. H. Miller . | 81, 395 |
| Bit, Bridle | A. P. Baldwin | 84, 469 |
| Bit, Bridle | W. S. Robbins | 84, 843 |
| Bit, bridle, Flexible | B. L. Rowley |  |
| Bit for boring wood | I. Cook ..... | 81, 669 |
| Bit for boring wood, Expansive | W. A. Ives | 82, 956 |
| Bit holder. | C. H. Stockbridge |  |
| Bit stock. | C. A. Amidon.... | 73, 279 |
| Bit stock | A. D. Goodell | 79, 825 |
| Bit stock. | O. G. Stratton | 81, 031 |
| Bit stock. | S. W. Davis . | 81, 260 |
| Bit stock. | R. D. O. Smith. |  |
| Bit stock. | O. H. Taylor. | 82, 044 |
| Bit stock | J. W. and F. M. Thompson | 82, 179 |
| Bit stock. | C. B. Rose .. | 82, 251 |
| Bit stock. | B. Darling | 83, 261 |
| Bit stock. | G. Richards. | 83, 410 |
| Bitters. | J. Bender. | 77, 245 |
| Bitters.................. | A. T. Hyde. | 81, 508 |
| Bitters, or medical compou | G. V. Rambaut | 74, 940 |
| Bitters or tonic | J. Heisler. | 75, 161 |
| Bitters, Tonic | F. Fullerton | 83, 273 |
| Bitting attachment | S. V. York | 77, 235 |
| Blackboard | H. L. Andrews | 82,062 |
| Blacking case and closet | J. Macferran | 74, 705 |

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| :---: | :---: | :---: |
| Blacking for leather, \&o | J. B. Merrill | 77, 069 |
| Blacking for leather, Oil | S. S. Allen | 83, 817 |
| Blacking, Japan paste | H. Lake | 73, 730 |
| Blacking, Metal founder's | J. C. Sellers | 79, 504 |
| Blank book ..... | H. Fischer................................. | 84, 869 |
| Blanket, Horso | S. W. Baker . . . . . . . . . . . . . . . . . . . . . . . | 74,742 |
| Blanks for bodies of sheet metal tea and | W. A. Munn | 77, 643 |
| Bleaehers and dyers, Implement for.. | H. W. Holly | 73, 331 |
| Bleaching apparatus ................ | E. A. Combs | 79,955 |
| Bleaching eloth, yarn, \&c | W. Luther | 73, 733 |
| Bleaehing with sulphur fumes | A. J. Crosby and O. W. Crow | 74,898 |
| Blind and shutter fastencr .... | W. 13. Farrar .............. | 84, 811 |
| Blind and shutter opener | W. E. Brooks | 83, 248 |
| Blind fastener | W. Phelps, jr | 83, 789 |
| Blind fastener | F. Veazio.. | 84, 661 |
| Blind shutter fastening | O. Paddock | 82, 980 |
| Blind slat fastening... | T. T. Rockwell | 77, 218 |
| Blind slat fastcning | J. M. Pciree | 78, 084 |
| Blind slat operator. | L. W. Sivafford, E. Butler, and J. R. Hess. | 83, 4\%1 |
| Blind slats, Tenoning | T. J. Howdle, S. R. Lawder, and T. E. Johnston. | 82, 792 |
| Blind slat tenoning machine | M. W. Clark . . . . . . . . . . . . . . . . . . . . . . . | 80, 392 |
| Blind slats, wiring, Machine for | G. Pancake | 77, 908 |
| Blind, Venetian............. | H. H. Andresen and H. Asbahr | 78, 040 |
| Blind, Window | W. Johnston. | 83, 256 |
| Blind, Window | C. H. Warner | 76, 855 |
| Blind, Window | W. Bellairs and II. Demott | 78, 359 |
| Blind, window, Boring | L. S. Colburn | 82, 803 |
| Blind, window, Fastener for | D. B. and C. C. Mosher | 76, 793 |
| Blind, window, Fastening for | G. 13. Mcleher.. | 73, 987 |
| Blind, window, Movable ..... | N. Poulson. | 80, 215 |
| Blind, window, Wiring | G. V. Orton and W. H. Doane | 81, 103 |
| Block and pulley ...... | S. and J. Roebuek | 73, 653 |
| Blottcr .. | D. Walkcr. | 77, 783 |
| Blower holder. | J. B. F. Davidge | 74,514 |
| Blower, Pressure | W. C. Grimes | 83, 846 |
| Blower, Rotary . | P. H. and F. M. Roots | 73, 654 |
| Blower, Rotary | C. W. Isbell | 75, 635 |
| Blower, Rotary | P. H. and F. M. Roots | 81, 009 |
| Blower, Rotary | J. Mitchell. | 82, 736 |
| Blower, Steam | J. Hainsworth. | 75, 011 |
| Bluing, Artiele o | E. L. Molineux. | 78,313 |
| Boards, Slitting. | J. Langham, jr. | 81,652 |
| Boat ........... | E. and G. A. Waters | 79, 421 |
| Boat, Ballast keel for | H. A. Dirkes. ............. . . . . . . . . . . . . | 76, 896 |
| Boat, Canal, and other ressel for the tra grain. | D. E. Somes . . . . . . . . . . . . . . . . . . . . . . . | 82, 887 |
| Boat-detaching apparatus................ | N. M. Ray | 82, 550 |
| Boat-detaching apparatus . | T. L. Cuthbert | 83, 136 |
| Boat-detaching bloek .... | N. B. Adams. | 75, 234 |
| Boat, ferry, Operating | E. W. Quincy and W. Fishor | 76, 943 |
| Boat, Ice.............. | T. I3. Kelley .... | $81,909$ |
| Boat, Life. | L. F. Frazee | 79, 111 |
| Boat, Life. | J. 1R. Grace | 81, 623 |
| Boat, Paper | P. S. Tyler | 83, 801 |
| Boat, Propelling pleasure | J. O. Jelknap | 78043 |
| Boat, Steering apparatus for sectional | W. Friek | 82, 614 |
| Bobbin.................................... | A. P. Holmes | 73, 185 |
| Bobbin. | W. H. Ramsdell | 79, 687 |
| Bobbin | H. J. Hubbard. | 83, 636 |
| Bobbin for spinuing | C. B. Morse.. | 74, 402 |
| Bobbin, Reverse motion for winding on | G. Riehardson | 84, 764 |
| Bodies, Moving heavy. | C. W. Whitake | 79, 883 |
| Bog cutter and drag.. | J. W. Newton | 83, 784 |
| Boiler | J. Marshall | 75, 942 |
| Boiler | C. O. Green and R. Ham | 76, 910 |
| Boiler, Agricultural | D. R. Prindle ........ | 79, 685 |
| Boiler and hot air register, Combined | B. 13. Perkins | 74,936 |
| Boiler and toaster.................. | W. F. Collier and J. H. Bigelow | 76, 032 |
| Boiler, Bottom for | G. T. Palmer .............. | 78, 993 |
| Boiler, Clothes ... | D. Kellogg. . | 84, 832 |
| Boiler, Culinary | O. Poolo. | 74, 419 |
| Boiler, Culinary | J. II. West and I. L. Camp | 74, 647 |
| Boiler feeder... | E. Broekway . .-............ | 74,659 |
| Boiler feeder. | W. C. Pickersgill | $81,679$ |
| Boiler feeder, Automatic. | S. Driver ....... | 80, 536 |
| Joiler fecder, Automatic. | E. Sheppard | $82,357$ |
| Boiler feeder, Automatic. | J. A. Davis . . . . . . . . . . . . . . . . . . . . . | $\begin{aligned} & 82,498 \\ & 83,013 \end{aligned}$ |
| Boiler feeder, Automatic. | J. F. Widgeon and E. E. Frey ......... | 83, 013 |
| Boiler feeder, Automatic. | H. McGanı. . . . . . . . . . . . . . . . . . . . . . . . | 84, 642 |

Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Boiler, Fceding | II. McGann | 78, 224 |
| Boiler feed low-water detecter | J. N. B. Bond | 74, 883 |
| Boiler, Feed-water heater for | C. Webstcr | 76,961 |
| Boiler, Fecd-water heater for | H. O. Perry | 79, 385 |
| Boiler, Feed-water heater for | E. R. Stillwell | 81, 117 |
| Beiler, Feed-watcr regulator | J. K. P. Nourse | 83, 993 |
| Boiler-flue cleaner .... | J. R. Dobbins. | 81, 351 |
| Boiler-flue cleaner | G. V. Sloat. | 84, 587 |
| Boiler-flue clcaner | W. C. Baker | 84, 079 |
| Boiler-flue plug. | W. M. Sinclair | 80,313 |
| Boiler flues, Steam-jet head for cleaning | J. M. Wheeler | 76,125 |
| Boiler for hcating apparatus ........... | C. R. Ellis .. | 73, 084 |
| Boiler for heating purposes. | J. Bradley | 77, 576 |
| Boiler for heating water. | J. Ellis . | 71, 061 |
| Boiler for making maplc sugar | G. L. Parker | 78, 391 |
| Boiler, Float for .......... | H. McGann. | 84, 502 |
| Boiler furnaces, Consuming smoke and creasing draught in. | D. E. Somes | 77, 226 |
|  | G. W. Harlem | 73, 557 |
| Boiler, Heater and filter for | J. J. Doughty | 82, 609 |
| Boiler, incrustation in, Preventing | S. G. Cabell. | 73, 872 |
| Boiler, Low-water detector for | J. Asheroft | 80, 700 |
| Boiler, Low-watcr detector for | C. F. Cosfeldt, j | 73, 301 |
| Boiler, Safety plug for | T. G. Eiswald | 73, 311 |
| Boiler, stcam, Agricultnral. | L. S. Robbins | 78, 235 |
| Boiler, steam, Feed-water heater for | B. A. Hoplkins | 83, 1.61 |
| Boiler, steam, Preventing incrustation in | H. McQuaid | 82, 859 |
| Boilers, steam, Preventing incrustation | W. Hewitt. | 80, 544 |
| Boilers, steam, Water-heater for | A. H. Walker | 79, 523 |
| Boiler, Tea kettle. | A. Berney | 83, 449 |
| Boiler tubes, Device for leaky.......... | R. A. Copeland | 73, 439 |
| Boiler tubes in sea-going vessels, Prev sion of. | G. Hawxhurst | 84, 489 |
| Boiler upon stove-pipe ................ | M. A. Shepard | $77 \%$ 327 |
| Boiler, Wash | J. C. Merrell | 77, 511 |
| Boiler, Wash | I. D. Sceley. | 77, 663 |
| Boiler, Wash | C. E. Miller | 79, 142 |
| Boiler, Wash | E. L. Buynitzky | 79,310 |
| Boiler, Wash | D. A. Danforth | 80, 397 |
| Boiler, Wash | C. E. Miller. | 80,651 |
| Boiler, Wash | P. M. Burns | 81, 134 |
| Boiler, Wash | F. Judson | 81, 174 |
| Boiler, Wash | A. W. Hall | 80,727 |
| Boiler, Wash | J. Adams. | 80, 797 |
| Boiler, Wash | A. O'Neill. | 80, 995 |
| Boiler, Wash | A. R. Ball and A. M. Phelps | 81, 460 |
| Boiler, Wash | J. B. Sweetland and S. T. Fe | 81, 556 |
| Boiler, Wash | J. Varley | 81, 847 |
| Boiler, Wash | J. Okey .. | 81, 934 |
| Boiler, Wash | O. F. Stedman | 82, 656 |
| Boiler, Wash | J. A. Hammer and T. Chadwi | 82, 713 |
| Boiler, Wash | G. Fenn................... | 82, 817 |
| Boiler, Wash | P. L. Shepler and S. L. Irwin | 83, 218 |
| Boiler, Wash | J. H. Burtis. | 83, 251 |
| Boiler, Wash | S. A. Goodwin | 83, 277 |
| Boiler, Wash | S. A. Goodwin | 83, 278 |
| Boiler, Wash | W. N. Pcirce | 83, 307 |
| Boiler, Wash | A. Sherwood. | 83, 329 |
| Boiler, Wash | C. E. Miller | 83, 399 |
| Boiler, Wash | J. B. Sweetland | 83, 566 |
| Boiler, Wash | A. Michel. | 84, 204 |
| Boiler, Wash | C. A. Totten | 84, 395 |
| Boiler, Wash | L. Granger... | 84, 487 |
| Boiler, Wash | W. F. Jenkins | 84, 493 |
| Boiler, Wash | M. W. Staples | 84, 715 |
| Boiler, Wash | D. A. Porterfield | 84, 759 |
| Boiler, Wash | C. N. Tyler | 84, 918 |
| Boiler, Wash | T. Seeley. | 85, 031 |
| Boiler, Wash | II. P. Bemiss | 85, 358 |
| Boiler, Wash | I. D. Seeley | 85, 483 |
| Boiler, Wash, (suspended) | L. T. Conant. | 84, 732 |
| Boiler, wash, Hydranlic | J. B. Waring | 84, 923 |
| Boiler, Water indicator for | W. V. Dubois | 85, 435 |
| Boiler, Water level detecte | J. Maslin and D. Birdsall | 82, 907 |
| Bolster plate.. | W. J. Lewis and H. W. Oliver | 79, 237 |
| Bolt. | B. F. Lotridge | 80, 205 |
| Bolt and fatch combined | P. P. Child. | 73, 078 |
| Bolt and rivet machine. | G. Worstenholm | 76, 873 |
| Bolt and spike | J. S. Hall. | 80, 478 |
| Bolt, Carriage | J. Strawn | 76, 546 |
| Bolt, Door, and lock | C. Sulzman | 76, 671 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Bolt, door, Prison | B. F. Haugh | 81, 165 |
| Bolt fastening | E. E. Stablos | 75,488 |
| Bolt feedcr and cooler | W. Pickens | 74,125 |
| Bolt for meter safe, Self-loeking | A. W. Adams | 79, 801 |
| Bolt for railway ears, Seat | P. A. Mann and G. P. Terry - | 84, 891 |
| Bolt head | F. S. Miles. | 82, 973 |
| Bolt, Heading | H. Thompson | 75, 221 |
| Bolt, Heading | W. Melvell | 80, 198 |
| Bolts, Hearding | A. B. Glover | 75, 675 |
| Bolt-heading maehine | J. Root. | 75, 198 |
| Bolt-heading maehine | R. Gracey | 83, 376 |
| Bolt holder. | G. W. Phelps | 80. 998 |
| Bolt, Loek | G. Washburn | 79, 879 |
| Bolt-making n | F. Watkins | 84, 7 \%2 |
| Bolt-making maehine | W. Klemm and R. Dittrich | 74, 834 |
| Bolt, Safe-door | J. Sargent | 85,246 |
| Bolts, Combined tool for cutting and shaving | T. Smith. | 81,697 |
| Bolt, Screw | F. Tudor | 83, 226 |
| Bolt, Self-acting | T. Pattenbury | 74,846 |
| Bolt, Shearing - | A. Alcxander | 76,035 |
| Bolt, Strap | W. J. Lewis and II. W. Olive | 82, 725 |
| Bolts, Threading | B. D. Bccelher | 77, 710 |
| Bolt, Threading | A. Wood. | 79, 714 |
| Bolt, Threading | J. Schnessler and J. Kennedy | 82, 252 |
| Bolt, Threading ma | W. 13. Bement | 75, 239 |
| Bolt trimmer | A. B. White | 76, 863 |
| Bolt trimmer | G. W. Lewis. | 84, 201 |
| Bonds, \&e., Preventing the alteration of numbers on. | G. WV. Casilcar | 84, 341 |
| Bone and ore crusher | A. Newell. | 81, 932 |
| Bone black, Cooling and purifying | D. H. Turner | 77, 935 |
| Bones for the manufacture of aeid phosphates, J3urning. | G. F. Wilson. | 75, 332 |
| Bones for the manufacture of acid phosphates, Preparing. | G. F. Wilsou. | 75, 329 |
| Bones for the manufacture of phosphoric acid and phosphates, Proparation of. | G. F. Wilson. | 75, 326 |
| Booklvinders roll............................................ | J. Feely | 76,065 |
| Booklinding | H. M. Shute | 74, 014 |
| Bookbinding | A. Holbrook, jr | 79, 123 |
| Bookbinding | W. Smith | 79, 263 |
| Bookbinding | J. S. Lever | 83, 180 |
| Bookbinding | L. G. Matherrs | 84,564 |
| Books, Binding | A. H. Jocelym | 85, 450 |
| Books, Binding mathematie | F. 13. Wells | 83, 345 |
| Books, Binding mercantile | J. II. Gleim | 83, 276 |
| Book-case bedstead | E. Pratnam | 81, 687 |
| Book cover and stand, Com? | W. Milliken | 75, 040 |
| Book eover protector | A. Van Patten | 84, 397 |
| Book, Music | I. Iekes | 85, 448 |
| Book, Ncodle. | J. F. Umplelay | 77,551 |
| Book, Poeket, Safety attachment for | A. McNeil .. | 76, 068 |
| Books, Musie, Turning the leaves of | A. K. Noycs | 84, 962 |
| Book, Sewing ........ | D. M. Snyth | 74, 948 |
| Boom, Gudgeon for | C. Sayward | 79, 864 |
| Booms, Out-haul for | G. W. Leighton | 82, 133 |
| Booms, Shearing | L. W. Pond | 80, 663 |
| Boot | J. Holland | 73, 010 |
| Boot. | J. P. Jamison | 82, 417 |
| Boots, \&e., Hecl for | R. Herr. | 78,667 |
| Boots, \&c., Sole for. | J. M. Hunter | 78, 970 |
| Boot and shoe.. | R. Andrews | 81, 457 |
| Boot and shoe. | M. R. Ethridge | 73, 589 |
| Boot and shoe. | E. T. Rogers. | 74, 599 |
| Boot and shoe. | G. and G. Smith. | 74, 858 |
| Boot and shoo | H. Eldridge | 75, 398 |
| Boot and shoe. | II. B. Marshall. | 77, 063 |
| Boot and shoe | E. Chestorman. | 77, 717 |
| Boot and shoe | N. Lumsden | 78, 385 |
| Boot and shoo | W. Smith. | 80, 360 |
| Boot and shoc and elog for the feet | G. W. Martin. | 80, 555 |
| Boot and shoe, Attaching solc to | F. H. Hawks.. | 81, 366 |
| Boot and shoe buttoning | C. Hay. | 82, 946 |
| Boot and shoc, Composition for the sole of | J. L. Newton | 73, 919 |
| Boot and shoe. Composition for the sole of | N. Jenkins. | 83, 637 |
| Boot and shoe, Compound rubber enamel eloth for. | E. M. Stevens | 76, 265 |
| Boot and shoe conformateur. | L. Brooks | 77, 166 |
| Boot and shoe, Counter and shank f | M. E. Savoy | 81, 690 |
| Boot and shoe, Cutting ehanncl in | L. R. Blake | 73, 570 |
| Boot and shoe, Elastic goring for | J. Harkin | 82, 944 |
| Boot and shoc fastening | 13. F. Allcn and J. R. Ryerson | 80, 109 |
| Boot and shoe, Fastening the lining to the solc of | D. H. Priest and H. S. Walcot | 79, 774 |
| Boot and shoe heel. | G. Beaty.. | 72, 963 |

## Alphabetical list of inventions-Continued.

Invention or Discovery.

Boot and shoe heel
Boot and shoe heel
Boot and shoe, Heel plate for
Boot and shoe heel polishing machine
Boot and shoe, Heel seat for
Boot and shoe, Holding.
Boot and shoe, Inner sole for
Boot and shoo, Insole for
Boot and shoe, Insole for
Boot and shoe lacing
Boot and shoe, Lasting
Boot and shoe, Lasting
Boot and shoe, Lasting
Boot and shoe, Lining
Boot and shoe, Machine made, channeled and pierced sole for
Boot and shoe. Manufacture of
Boot and shoe, Manufacture of
Boot and shoe, Moulding, rounding, and channeling sole of.
Boot and shoe, Polishing heel of
Boot and shoe, Screw peg for.
Boot and shoe, Sewing the uppers to the soles of
Boot and shoe shank
Boot and shoe shave
Boot and shoe, Siding
Boot and shoe sole.
Boot and shoe sole
Boot and shoe sole, Channeling
Boot and shoe sole, Finishing the edge of
Boot and shoe, Spring bottom for
Boot and shoe, Steel shank for
Boot and shoe stretcher
Boot and shoe, Stretching
Boot and shoe stud.
Boot and shoe toe and heel irons, Coating
Boot and shoe, Trimming.
Boot and shoe, Ventilating
Boot and shoe, Wear plate for
Boot and shoe, Work trimmer for
Boot blacking apparatus
Boot, Button
Boot, Button
Boot crimp.
Boot crimp
Boot crimp
Boot crimp.
Boot-crimper.
Boot-crimper.
Boot-crimper.
Boot-crimper
Boot-crimper
Boot-crimper.

## Boot-crimper

Boot crimping machine
Boot crimping machine
Boot crimping machine
Boots, Catting
Boot fastening
Boot, Fastening strap to
Boot form
Boot, Foxing and soling
Boot, Gaiter
Boot heel.
Boot heel
Boot heel
Boot heel
Boot log, Closing up
Boot leg, Turning
Boot, Manufacturing sewed
Boot protector
Boot shank machine.
Boot sole
Boot soling machine
Boot tree and stretcher
Borax from solutions used in treating wood, Recover. ing and reworking.
Boring and cleaning device
Boring and ditching machine
Boring and drilling machine.
Boring and mostising machine

Name of Patentoe.
T. S. Engledow
A. O. Crane
W. E. Mamlin, jr
B. Q. Budding
G. I. Mason
H. T. Dillon
R. A. Webster
A. N. Hadley
R. Heneage
W. Banister and A. H. Rowell
I. R. Rogers
J. G. Rust.
F. O. Claflin
T. Lucey and J. E. Murphy
J. H. Brown
W. and J. Keats
A. Destouy
A. Jeffers
V. V. Spear
J. M. Estabrook
M. J. Stein
A. Bertram
L. H. Farnsworth
H. T. Doggett
A. J. Basset.
H. Riggs.
M. J. Stein
C. W. Palmer
C. S. Hale and O. C. Hubbell ............ $\quad 75,900$
H. and E. Briner
W. Frederick
J. Monroe
H. S. Wolcott
H. O. Lathrop
T. C. Lambert
E. Thomas
S. Minges
A. V. Hill.
J. Vandercar
E. P. Taylor
J. L. Joyce.
II. Wright
J. Tipton and J. Carl
F. L. Kathan and E. D. Rummer
E. Mann and A. J. F. Howard
A. J. F. Howard
P. and A. Richmond and A. McFarland
J. M. Reed.
A.J. F. Howard
O. M. Adams
E. C. Jackson
W. B. Gleason
C. II. Rice
J. A. Nesbit
R. H. Dorn.
A. J. Moore, S. Bleistein and S.J. Shirk
A. A. Abbot
P. H. Baker.
J. Howo.
A. G. Smith
W. H. H. Babbitt
G. Lane
F. Robinson
G. Henning and $\mathbf{H}$. P . Willie.
J. Fearn
P. W. Newton and C. R.Tilton.
J. Sherman
J. Galli
J. U. Johnson
L. Schye
B. Van Ansdall
T. Cobourg
J. Bechtel.
S. Beer
J. B. Jordan
I. B. Jones
J. Goodwin
J. Jacob

## Alphabetical list of inventions-Continued.

| Invention or Discorery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Boring and sawing machine | T. Smith | 82,649 |
| Boring and spacing machine | J. M. Scymour | $\begin{aligned} & 8:, 649 \\ & 74,724 \end{aligned}$ |
| Boring machin | H. Dool and P. B. Whito | $74,724$ $76,171$ |
| Boring machine | A. M. Connet ............ | 80, 059 |
| Boring machine ...... | C. R. Long ... | $\begin{aligned} & 80,059 \\ & 81,655 \end{aligned}$ |
| Boring machine, Earth ... | J. E. Race | $\begin{aligned} & 81,655 \\ & 80,217 \end{aligned}$ |
| Boring machine, Post-hole Boring tool. | W. I. Hale. A. Stcinbök | $76,752$ |
| Bosom and collar combined | E. Hatch... | $80,515$ |
| Bottle. | G. G. Hickman | $\begin{aligned} & 74,355 \\ & 75,014 \end{aligned}$ |
| Bottle, Clay | E. H. and H. E. Merill | $\begin{aligned} & 75,014 \\ & 78,676 \end{aligned}$ |
| Bottle, Fastening metallic collar | E. Wattis, jr............ | $73,680$ |
| Bottle-filling apparatus. | Gr. B. Bachman | $83,904$ |
| Bottle-filling apparatus Bottle-filling apparatus | P. M. Sherwood | 84, 384 |
| Bottle-filing apparatus...- | J. Matthews, jr. | 84, 836 |
| Bottle, Filtering and pouring...- Bottle for holding hydrofluoric ac | V. M. Griswold | 85, 088 |
| Bottle, Medicine.................. | W. H. Flinn | 76,678 75744 |
| Bottle, Medicine. | W. H. Flinn | 75, 745 |
| Bottle, Mucilage | H. H. Ebaugl | $75,672$ |
| Bottle, Mucilage. | H. O. Balier. | $\begin{aligned} & 75,672 \\ & 76,379 \end{aligned}$ |
| Bortle. Mucilage | D. W. De Forrest | $\begin{aligned} & 76,379 \\ & 77,008 \end{aligned}$ |
| Bottle, Nursing. | H. W. Liblocy. | $78,881$ |
| Bottle, Nursing...... Bottle, Pcpper caster | P. J. Mcelroy | 78, 987 |
| Bottle, Securing stopper to | W. H. Richards | $\begin{aligned} & 74,869 \\ & 73,043 \end{aligned}$ |
| Bottle, Siphon, Filling ..... | W. Gce .-.. | 73,594 |
| Bottle, Soda-water. | W. W. Timmon | 74, 453 |
| - Bottle stopper. | I. Zamboni. .-. | 75, 233 |
| Bottle stopper. | S. and S. C. Cary | 76, 994 |
| Bottle stopper Bottle stopper | J. Bell -......... | 70, 536 |
| Bottle stopper. | J. Klee. | 82, 230 |
| Bottle stopper. | C. J. Converse | $\begin{aligned} & 83,485 \\ & 85,214 \end{aligned}$ |
| Bottling machin | H. Carse . . | $\begin{aligned} & 80,214 \\ & 84,795 \end{aligned}$ |
| Bowls, \&c., Detachable nose | G. Raymond | $77,914$ |
| Bowl, Wooden. | H. Mèllish | $73,740$ |
| Box Box. | W. B. Guernsey | 79, 113 |
| Box <br> Box | J. W. Wilcox | 83, 812 |
| Box .....-.-.-....... | J. J. Leighton. | 84, 200 |
| Box and cutter, Cheese ......... | S. S. Brown . | 82, 795 |
| Boxes, \&c., Removablo head for | S. Macferran. | 84,366 |
| Box, Axle. | E. P. Haskell | $84,185$ |
| Box, Ballot | J. P. Outealt | $74,932$ |
| Box, Berry ... | T. Mabbett, jr | 73,352 |
| Box, Blacking Box, Blacking | T. H. Spencer. | 77, 778 |
| Box, Blacking Box, Chalk line | W. L. Gilroy . | 85, 084 |
| Box, Chalk lime | S. Beyl Colo | 85, 202 |
| Box. Cheese and butter tul | F. H. Wilson | $\begin{aligned} & 74,797 \\ & 73,151 \end{aligned}$ |
| Box, Coal... | S. A. Simison | $\begin{aligned} & 73,151 \\ & 73,394 \end{aligned}$ |
| Box for arbor, \&c., Adjustable | B. D. and H. E. Kay | $83,859$ |
| Box for carriage wheel. - | C. H. Holdredge ... | 84,548 |
| Box for lard, butter, \&c. | C. L. Tucker.. | 84, 657 |
| Box for packing, \&c., Cementing and st | C. L. Tucker. | 81, 299 |
| Box for pills, \&c ....-...-.-.-. | B. F. Stephen | 84, 972 |
| Box for shafting, Sclf-lubricating | W. W. Crane. | 77, 261 |
| Box for street stopcock........... | H. A. Moore, E. Otis and S. | 74, 573 |
| Box, Fruit. | J. Copeland................... | 73, 300 |
| Box, Fruit. | J. M. Pcrlins | 82, 438 |
| Box, Fruit | T. B. Jones | 83, 504 |
| Box, Fruit .-.......... | J. S. Shiolds | 84, 139 |
| Box, Grait preserving. | O. E. Doolittle | 78,437 |
| Box, Letter.. | J. W. and J. D. Smith | 81,919 74,015 |
| Box, Letter | J. E. Woodruff. .-. . | 76, 0ミ0 |
| Rox, Letter | C. P. Gorely .-. | 79, 222 |
| Box, Letter .-....- | D. P. Jordan. | 79,355 |
| Box, letter, Streot. | D. and G. H. White | 76, 864 |
| Box, Lubricating | T. J. Rowley and W. Poland | 75, 465 |
| Box, Lunch | P. H. Niles .-. . . . . . . . . . . . | 75, 451 |
| Box making........ | E. James | 84, 422 |
| Box, metal, Making | C. I. Rehn. | 83,209 |
| Box, Oil.... | J. W. Rhoades | 84, 215 |
| Box opener | P. Stone . | 74, 167 |
| Box opener | H. H. Hall. | 81, 497 |
| Box opener | J. Millard. | 81, 855 |
| Box opener | A. Barbarin | 83, 022 |
| Box opener | L. Holtzscheiter | 83, 499 |
| Box, Paper | H. D. Scudder . | 76, 830 |
| Box, Paper .. | F. Leclèro. | 84,835 |

## Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Brush holder. | C. B. Clark | 80, 453 |
| lirush holder and mop head | II. P. Gregg | 81, 626 |
| Brush, horse, Rotary..... | W. W. Mckay | 84, 837 |
| Brush-making machine | A. M. White | 85, 193 |
| Brush, Mucilage | G. D. Wilcox | 77, 429 |
| Brush or broom Lolder | A. G. Davis | 73, 169 |
| Brash, Paint. | A. Cutter | 74,752 |
| Brush, Paint. | J. W. Moor'e | 76,230 |
| Brush, Paint. | W. H. Forker | 77, 475 |
| Brush, Paint. | D. White. | 84, 327 |
| Brush, Paint and varnish | J. McKittrick | 74, 566 |
| Brush, Scrab | D. E. Hayward | 75,421 |
| Brush, Scrubbing | R. M. Brooks | 80, 128 |
| Brush, Scrubbing | S. Gibson | 82, 705 |
| Brush, Scrubbing | A. E. Colman | 83, 932 |
| Brush, Scrubbing and mop | J. F. Mason | 84, 129 |
| Brush, Scrabbing and mop head combin | W.S. Van Hoesen | 83, 206 |
| Brush, Scrubbing and mop holder for | P. O'Brian | 78, 121 |
| Brush, Shoo | J. E. Noliu | 78, 683 |
| Brush, Slecve for | J. S. Tilton | 74,258 |
| Brash stock and handlo | A. A. Young | 74,026 |
| Brush stock and handle | A. A. Young | 74,027 |
| Brash, Tooth | T. F. Maury | 74, 560 |
| Brush, Tooth | T. Maitland | 78,590 |
| Brush, Tumbler | H. Lumbard | 75, 940 |
| Brush, Tumbler | G. Wiesler | 81, 718 |
| Bucket elevator | O. W. Clark | 80, 602 |
| Bucket for dredging machine | T. and. A. Walsh | 73, 678 |
| Bucket, Sap. | J. W. Currier. | 76, 168 |
| Backle. | L. Elsberg | 73, 176 |
| Buckle.. | G. I. Gerard. | 73, 243 |
| Buckle. | C. W. Smith | 73, 020 |
| Buckle. | H. Neumaun | 73, 633 |
| Buckle | F. W. Maes. | 74, 734 |
| Buckle. | A. Hurd. | 74, 367 |
| Buckle. | W. Babin | 75,722 |
| Bucklc | H. C. Grigg | 77, 033 |
| Buckle. | J. A. Mashmeyer | 77, 064 |
| Buckle. | J. M. James | 77, 885 |
| Buckle. | S. P. Burdick | 77, 955 |
| Buckle. | I. Banister | 79, 026 |
| Bucklo. | J. G. Clifton | 80, 454 |
| Buckle. | L. D. Cowles. | 80, 605 |
| Buckle | H. C. Wissel. | 81, 318 |
| Buckle. | J. Cory. . | 82, 091 |
| Bucklo. | S. A. Tenney | 82, 768 |
| Bucklo. | M. Fowler. | 82, 821 |
| Buckle. | P. W. Smith | 83, 102 |
| Buckle. | H. Herbert | 83, 381 |
| Buckle, Belt | W. Cummings | 80, 924 |
| Buckle, Belt | T. Clauseu | 82, 291 |
| Buckle, Double. | E. W. Clark | 80, 139 |
| Buckle, Hamestring | I. Wetzcll | 73, 148 |
| Buckle, Harness.. | C. B. Payne | 78, 124 |
| Bucklc, Harness.. | P. S. Crawford. | 78, 364 |
| Buckle, Harness. | A. Bedford | 78, 568 |
| Bucklo, Harncss | S. P. Taylor | 79, 519 |
| Bucklc, Harness | I. Rorabach | 79, 77. |
| Buckle, Harness. | W. H. Taylor | 79, 874 |
| Bucklc, Harness, wedge | K. Frazer | 81, 993 |
| Buckle, Halter | F. Ditton | 78, 516 |
| Buckle, Hat. . | J. N. Burton | 75, 359 |
| Bucklo, Hitching strap | P. J. Stoll | 85, 186 |
| Buckle, Self-fastcning. | W. W. Spencer | 78, 491 |
| Buckle, Suspender. | A. Pototsky | 79, 918 |
| Buckle tongucs, Tool for cutting holes in | A. Bedford | 81, 464 |
| Bucklc, Trace . | M. Gayhart | 79, 064 |
| Bucklc, Trace | H. Hise | 79, 979 |
| Buckle, Trace | C. M. Millcr | 81, 394 |
| Buckle, Trace | TV. G. Bunker ............. | 82, 489 |
| Buckle, Trace | W. W. Gordon and D. Petteng | 82, 709 |
| Buckle, Trg | G. P. Cole | 76, 162 |
| Buckle, Wedge | M. W. Pond, jr., and A. T. Ba | 74, 243 |
| Buckwheat hulling machino | J. Baysore..... | 73, 156 |
| Buggy top | V. S. Johnson | 73, 530 |
| Buggy-top fastening | D. S. Early | 83, 269 |
| Bugey-top roller | J. Palmer | 74, 414 |
| Buggy top, Shift | T. Lodge | 83, 183 |
| Building block and artificial stono | J. Leffler | 85, 231 |
| Brildins, Portabl | D. S. Whittenhall. | 76, 019 |
| Duildings, Compound for coating t | J. S. Houghton | 84, 550 |

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Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Burner, Lamp. | J. Gracie and R. H. Boyd | 77, 481 |
| Burner, Lamp. | C. M. Miles and G. W. Rem | 77, 514 |
| Burner, Lamp. | W. H. Horton. | 77, 614 |
| Burner, Lamp. | G. Lavere. | 77, 821 |
| Burner, Lamp. | W. J. Ross. |  |
| Burner, Lamp. <br> Burner, Lamp. | W. Robinson. | 78, 539 |
| Burner, Lamp. | A. H. Platt. | 78, 607 |
| Burner, Lamp. | L. J. Atwood | 78, 637 |
| Burner, Lamp. | H. M. W yatt... | 78,978 79,014 |
| Burner, Lamp. | E. A. Galbraith. | 79, 221 |
| Burner, Lamp. | G. A. Mason | 77, 369 |
| Burner, Lamp. | R. S. Merrill | 79, 488 |
| Burner, Lamp. | F. H. Fuller | 79, 969 |
| Burner, Lamp. | J. Minifie. | 80, 494 |
| Burner, Lamp. | E. J. Toof. | 80, 843 |
| Burner, Lamp. Burner, Lamp. | W. Carleton | 80, 909 |
| Burner, Lamp. | L. J. Marcy | 80, 984 |
| Burner, Lamp. | P. Baker. | 81, 128 |
| Burner, Lamp. | T. Adam | 82, 059 |
| Burner, Lamp. | J. P. McGee | 82, 334 |
| Burner, Lamp. | E. C. Blakeslee | 82, 480 |
| Burner, Lamp. | W. R. Cranna. | 82, 495 |
| Burner, Lamp. | A. Bliss... | 84, 808 |
| Burner, Lamp. | A. Neilson | 84, 875 |
| Burner, Lamp. | C. W. Cahoon. | 84, ヶ93 |
| Burner, Vapor | T. Ward | 75, 496 |
| Burner, Vapor | S. B. Hopkins and E. H. An | 77, 612 |
| Burner, Vapor | C. B. Loveles |  |
| Burner, Vapor | W. B. Loveless | 80, 926 |
| Burner, Vapor | C. Wintergerst | 82. 260 |
| Burner, Vapor | W. W. Jacobs | 83, 171 |
| Burner, Vapor | S. Holmes | 83, 83.85 |
| Burner, Vapor ........... | S. Shepherd and |  |
| Burnisher for enameled paper Burnishing and polishing apparatus, H | W. H. Willson. | 82, 465 |
| Bustle .-................................. | J. B. Loomis | 81, 281 |
| Bustle and hoop skirt combined | A. K. Young. | 81, 319 |
| Butter, \&c., Box and bag for packing | J. D. Smedtey | 76, 913 |
| Butter, churning, Mode of -...... | I. Pare |  |
| Butter from whey, Manufacturing <br> Butter pail | H. P. Westcott | 82, 048 |
| Butter, Purifying | L. S. Robbins | 80, 506 |
| Butter worker | W. Cunningham | 73, 582 |
| Butter worker | H. Garrett. | 74, 076 |
| Butter worker | S. Keen. |  |
| Butter worker | J. L. Colburn |  |
| Butter worker | E. P. Wakk | 78,502 |
| Butter worker | F. J. Peabody | 80, 563 |
| Button | F. M. Bugbee | 73, 871 |
| Button <br> Button | E. S. Wheeler | 76, 016 |
| Button | F. J. Perkins | 77, 313 |
| Button | E. Bredt... | 77, 443 |
| Button | M. D. Moore. | 78, 116 |
| Button | C. Muder. | 78, 535 |
| Button | H. Ansley | 80, 699 |
| Button | F. Wittram- |  |
| Button | J. Koberle | 83, 845 |
| Button. ${ }^{\text {a }}$............................ |  |  |
| Button, lox, picture frames, \&c., Ma manufacture of. | J. M. Merrick. | 80, 778 |
| Button, Carriage curtain. | S. Campleell. |  |
| Button, Detachable covering for a. | E. Ripley .- | 80, 224 |
| Button fastener............ | II. S. Magrane | 73, 735 |
| Button fastening | M. Rosenthal | 75, 650 |
| Button fastening | G. D. Clark. | 80, 710 |
| Button fastening. | A. Rice. | 82, 440 |
| Button fastening | R. Weaver.-. | 78, 903 |
| Button hole for paper articles | R. M. Smith . | ${ }_{76,34}$ |
| Button holes for paper articles of wearin | J. Barclay ... | 76, 695 |
| Button-hole lining for carrhige ${ }^{\text {Button-hole stitching machine... }}$ | R. H. Peabody | 78, 821 |
| Button-hole twist, Winding. | J. Lovatt | 75, 938 |
| Button hook, Setting....... | O. P. Esser and F. A. S | 78,077 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Button, Forming. | S. G. Pitts | 82,243 |
| Button, Manufacture of | L. Moses | 74, 764 |
| Button, Sash and door | M. Judd | 75, 923 |
| Button, stud, \&c., Fastene | T. S. Sedgwrick | 81, 300 |
| Button to fabric, Attaching | G. J. Capewell | 76, 600 |
| Button to fabric, Instrument for attach | H. Mauch. | 83, 193 |
| C. |  |  |
| Cabbage can or vessel | W. Shires. | 73, 130 |
| Cable, Electric. | J. L. Arman | 73, 487 |
| Cage, Bird. | C. L. Osborn | 80, 561 |
| Cake burner | J. Lafetre | 83, 069 |
| Cake or confection | W. Manning | 73, 018 |
| Calculating and registering machine | T. T. Strode | 74, 170 |
| Calculating apparatus | A. Johnson | 85, 229 |
| Calculating machine. | I. Keifer . | 73, 449 |
| Calculating machine | J. A. Loomis and A. Johnson | 73, 732 |
| Calculating machine | A. C. Pierson | 73, 995 |
| Calendar. | A. S. Vose | 75, 659 |
| Calendar | C. T. Pooler | 77, 837 |
| Calendar, Perpetual | S. L. Barinds | 78, 356 |
| Calendar tolls, Starting and stoppin | W. T. Porter | 79,080 |
| Calipers.... | J. Atkins. | 75, 827 |
| Calipers.. | S. Sawyer. | 79, 603 |
| Calipers. | T. Goodrum | 82, 514 |
| Calipers and beam compass, Combined | W. Barrows | 85, 430 |
| Calipers and divider. | E. S. Scriptare. | 73, 126 |
| Calipers and square combined. | C. W. Guerrant | 78, 591 |
| Calk for boots and shoes, Elastic | G. H. Clomens | 83, 930 |
| Calk sharpener. | H. Kime | 84, 553 |
| Camera, Photographic | S. Wing.... | 78,408 |
| Camera, Photographic | J. H. and W. K. Wyckoff | 81, 055 |
| Camera, Photographic | J. A. Scott. | 83, 247 |
| Cam for operating shut | C. H. Knowlton | 81, 792 |
| Can, Air-tight. | C. Barry | 81, 243 |
| Can, Alkali | C. Barry | 82, 914 |
| Can and case for putting up alkali, Mc | J. McCoy | 77, 899 |
| Cau and jar, Sealing | J. Bellerjeau | 76, 149 |
| Can for putting up alkali | P. Hickey | 75, 547 |
| Can, Fruit ............ | P. Numsen | 75, 189 |
| Can, Fruit.. | J. R. Williamson | 78, 346 |
| Can, Fruit | C. Becker, J.A. Ross, and J. Steuernagel. | 79, 889 |
| Can, Fruit | L. E. Holden....................... | 76,917 |
| Can, fruit, Body for | J. Pfau ......... | 79, 890 |
| Can, fruit, Sealing . | T. M. Furguson | 80, 401 |
| Can, Glue | W. F. Muchmore | 76,233 |
| Can, Marking | F. W. Marvin. | 79, 666 |
| Can, Metal. | J. Pollock and T. J. Diedrich | 83, 660 |
| Can, metal, sheet, Ve | R. Porter ..................... | 74, 244 |
| Can, Milk. | E. Abbott. | 73, 687 |
| Can, Milk. | C. A. Reight | 77, 092 |
| Can, Milk. | J. E. Dean . | 78, 072 |
| Can, Milk. | D. W. Shaw | 79, 693 |
| Can, Milk. | G. A. Huggins | 79, 907 |
| Can, Milk. | J. A. Bennett. | 80, 800 |
| Can, Milk. | I. Vanderslico. | 81, 119 |
| Can, Milk. | A. P. Cook.... | 81, 345 |
| Can, Milk. | O. J. Nutting | 83, 724 |
| Can, Milk. | L. A. Sunderland. | 84, 973 |
| Can, Milk. | H. M. Viets. | 84, 921 |
| Can, Milk | T. W. Akin. | 83, 898 |
| Can, milk, Cover for | J. Fandel. | 77, 220 |
| Can, milk, Refrigerating | W. W. Whito and M. King | 78, $77 \%$ |
| Can, Oil.... | C. J. Hauck ..... | 75, 904 |
| Can, Oil... | J. J. Marcy | 76,483 |
| Can, Oil... | J. Ogden... | 77, 755 |
| Can, Oil. | H. B. Wellman. | 78, 906 |
| Can, Oil. | 13. F. Barnes .. | 84, 405 |
| Can, oil, Cap for | W. Rigg. | 74, 850 |
| Can, oil, Cap for | J. If. Noyes. | -6, 602 |
| Can opener. | N. F. Stone | 76, 669 |
| Can opener. | C. F. Ritchel. | 77, 916 |
| Can opener. | I. S. Wyman | 80, 326 |
| Can opener..... | G. C. Humphries |  |
| Can or vessel, Cabbage | W. Shires........ | 73,130 83,070 |
| Can, Paint. | D. Miller......... | 76, 229 |
| Can, Paint | E. B. Hama | 83, 849 |
| Can, paint, Filling | J. Wilcox | 73, 272 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Cans, \&c., Steam joint for | E. A. Thomas. | 83, 107 |
| Can, Sheet metal.......... | J. Cartwright. | 76, 890 |
| Can, Sheet metal. | P. Cook | 81, 143 |
| Can, Sheet metal. | C. Seimel | 81, 692 |
| Can, Sheet metal | J. H. Stone | 82, 766 |
| Can, Soldering | M. M. Shur | 81, 430 |
| Can, Soldering the lid of | F. W. Brown | 77, 447 |
| Can, Spice. | C. T. Palmer | 79, 144 |
| Can, Tin | G. E. Hegerman | 80, 951 |
| Can, tin, Bending the top and bottom of | E. W. Bliss | 82, 481 |
| Can, tin, Soldering. | J. G. Borde | 74, 290 |
| Can, tin, Soldering | W. Scrviss | 75, 985 |
| Can, tin, Soldering | W. Serviss | 80, 673 |
| Can, tin, soldering, Supporting while bei | A. Brooks | 73, 573 |
| Can, Tool for opening | M. T. McCormick | 76, 490 |
| Can top. | L. F. Betts | 81, 585 |
| Can, while being soldered, Holding | T. Kerr and J. C. Kelly | 71, 330 |
| Canal lock gate step | H. Rexford | 77, 405 |
| Candle, Cap | J, H. Foote | 84, 104 |
| Candlestick | W. H. H. Hinds | 82, 000 |
| Candlestick or holder | S. J. Rockwood | 73, 652 |
| Candy, Making | E. K. Powers | 82, 347 |
| Candy, toys, \&c., Making | T. and G. Mill | 81, 665 |
| Cane and telescope combined | G. W. Wilson | 80,324 |
| Cane and umbrella combined | G. Bockstaller | 73, 074 |
| Cane and willow stripper | A. F. Ward and J. H. Bean | 84, 324 |
| Cane cleaner | S. Bean - | 74, 976 |
| Cane, Compartment | L. C. Heylin | 82, 949 |
| Cane juice and other liquids with sulph Impregnating. | E. Skelly | 82, 164 |
| Cane juice, Defecating .............. | A. B. Sharp, | 73, 054 |
| Cane juice, Defecating | H. B. Bond | 82, 682 |
| Cane juice, Evaporating | T. Boutte | 76, 392 |
| Cane juice, Evaporating | S. A. Poché | 84, 134 |
| Cane juice with sulphurous acid, Trea | J. E. Pattison | 73, 640 |
| Cane, Toy head for. | A. Cooke | 79, 208 |
| Cannon | J. A. Terrell | 85, 491 |
| Cannon, Revolving | A. Schausten | 74,152 |
| Canopy for tent and bed netting | J. B. Holmes | 74,535 |
| Canopy, Mosquito | I. E. Palmer | 74, 933 |
| Canvas, Painters' | C. Volkmar | 73, 060 |
| Caoutchouc and other gums, Material heating. | J.B. Newbrough and E. Fa | 73, 917 |
| Caoutchouc and others gums, Treating. | J. B. Newbrongh and E. Faga | 73, 545 |
| Caps, \&c., percussion, Water-pro | B. Burton. | 81, 057 |
| Capstan for hoisting machine | C. S. Houck | 77, 191 |
| Capstan, Operating | W. W. Vanderbilt | 84, 660 |
| Car | G. W. Hunt | 77, 883 |
| Car and track for elevating on inclined | J. W. Pearce | 81, 677 |
| Car and wagon unloader | N. Swickard | 83, 005 |
| Car, Aerial | O. Abbreuzzo | 80, 107 |
| Car berth, Sleeping | W. B. Snow. | 74, 773 |
| Car brake and starter | C. D. Moody | 77, 903 |
| Car brake and starter. | J. S. Wood. | 80,695 |
| Car brake and starter | W. J. Johnson | 80, 964 |
| Car, Brick carrying | J. K. Caldwe | 75, 243 |
| Car, Cattle | E. Fontaine | 76,067 |
| Car dumper, Railway | J. Taney and J. H. Brown | 83, 006 |
| Car, Dumping | TV. Chisholm | 79, 445 |
| Car, Dumping | P. Daniels | 80,339 |
| Car, Dumping | G. B. Goodwin and S. McCord | 85, 086 |
| Car for transporting and drying peat | D. E. Teal | 74, 255 |
| Car, Freight. | S. W. Downey | 73, 308 |
| Car, freight, Railroad | L. Savage. | 75,581 |
| Car, Grain | W. A. Long and J. E. Lavey. | 78, 383 |
| Car, House, Pole for | T. Pendergast | 85, 473 |
| Car, Mail, and mail bag rcceive | W. G. Sanford. | 78,331 |
| Car, mining, Automatic | J. Tamblyu | 84, 778 |
| Car mover | H. B. Morrison | 75, 447 |
| Car mover, Railroad | E. Springer | 84, 012 |
| Car mover, Railroad | F. L. Bailey | 84, 789 |
| Cars, Moving. | J. Douglass | 76, 421 |
| Car, Oil tank | G. W. Ilgexfritz and M. Schal | 79,573 |
| Car, Peat, Constructing | J. Bundy | 78,051 |
| Car, Passenger railway | E. Y. Robbins | 83, 731 |
| Car, Pneumatic street railway | C. W. Wailey | 84, 447 |
| Car, Railroad. | M. M. Crooker | 78,188 |
| Car, Railroad. | C. T. Harvey. | 79, 756 |
| Car, Railroad, Address case | S. W. Downey | 73, 881 |
| Car, Railroad, Bow springs fo | T. F. Allyn | 81, 969 |
| Car, Railroad, Centre plate. | G. W. Bennett | 75, 115 |

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| Invention or Discovery. | Namo of Patentee. | No |
| :---: | :---: | :---: |
| Car, Railroad, Heating | R. A. Chesubrough | 73, 781 |
| Car, Railroad, Heating | A. C. Crary | 77, 871 |
| Car, Railroad, Heating | C. Carpenter | 81, 137 |
| Car, Railroad, Heating ................ | S. M. Meddock |  |
| Car, Railroad, Heatiog and ventilating | D. H. Dottercr | 74, 899 |
| Car, Railroad, Heating and ventilating | S. Lloyd. | 74, 386 |
| Car, Railroad, Heating and ventilating | E. L. Roberts | 81, 211 |
| Car, Railroad, heating and ventilating, A | S. Darling. | 79,449 |
| Car, Railroad, Safety attachment to .. | G. W. Brady | 74, 980 |
| Car, Railroad, Starting apparatus for | E. Woodward and J. S. M | 82, 671 |
| Car, Railroad, Slat roof for .......... | W. Brown. | 73, 949 |
| Car, Railroad, Sleeping berth | A. Judson | 80,184 84,814 |
| Car, Railroad, steamer, \&c., illuminating | J. Dable | 80, 276 |
| Car, Railway ............ | G. E. Eddy. | 74, 325 |
| Car, Railway | E. T. Ligon | 83, 717 |
| Car, Railway, Constructing the heating apparatus on. | A. J. Gibson | 84, 740 |
| Car, Railway, Warming | G. W. Eddy..... | 76,175 81,468 |
| Car, Railway truck | G. K. Wood.. | 76, 285 |
| Car, Refrigeraing | D. Fisher and W. Cumming | 73, 789 |
| Car replacer | A. N. Towne | 73, 940 |
| Car replacer | C. Hurst. | 75, 020 |
| Car replacer | D. Edwa | 76, 424 |
| Car replacer | N. Pullman | 76, 768 |
| Car replacer | R. Davis | 79,325 |
| Car replacer Car replacer | II. Schreiner | 85, 137 |
| Car replacer or guide rail | J. P. Lipps. | 80, 191 |
| Car, Scraper attachment | E. B. Wells | 73, 212 |
| Car seat | C. Rowland | 75, 982 |
| Car seat | S. B. Holden |  |
| Car seat and chair | W. N. Bragg | 78, 570 |
| Car-seat back, Support | G. Higginson |  |
| Car seat, Link joint for-....... | di. Hitchcock | 73, 727 |
| Car shaft, Lubricating journal of ... | I. P. Wendell | 78, 704 |
| Car stake holder .... | G. A. Brown. | 76,596 |
| Car stake holder | W. P. Wentworth | 78, 405 |
| Car stake holder, Platform | W. J. Willit | 77, 943 |
| Car standard. | R. Clark. |  |
| Car starter. | L. Rodenhausen | 75, 981 |
| Car starter. | I. N. Bevans | ${ }^{79} 5$ |
| Car starter | II. Stager..... | 78,371 |
| Car starter an | J. McMurtry. | 74, 927 |
| Car, Starting | J. B. Waring. | 75, 818 |
|  | J. Steger .... | 73, 764 |
| Car step, Adjustable | W. Neumann | 81, 194 |
| Car, Stopping and starting | C. S. Hunt. | 75, 426 |
| Car, Street | J. I. Herric |  |
| Car, Street, Stcam. | H. C. Rroom |  |
| Car, Support for passenger | T. Stone | 79, 410 |
| Car, Wagon, and other vehiclo...... | K. Lisber | 85, 015 |
| Carbon from gas retorts, Removing.. | J. A. Bassctt and O. C. Smi | 80, 438 |
| Carbonic oxide for treating metals, applying. | T. Shaw | 34, 220 |
| Carburettor | J. C. Appleby | 79, 048 |
| Carburetter | C. 13 Willoughby | 79, 290 |
| Carburetter | M. P. Coons | 80, 918 |
| Carburetter | H. Slatter. |  |
| Carburetter, Air | W. M. Marshall | 79, 696 |
| Carburetting air and applying the | A. Brin. |  |
| Carburettring apparatus | H. Woodward |  |
| Carbnretting apparatus | W. W. Bierce.......... | 70, 268 |
| Carburetting gas and air | A. T. Boon and A. D. Perry |  |
| Card and brush, Combinod | W. H. Pronty | 73, 837 |
| Card and cribbage board | R. S. Jennings |  |
| Card board for printing. | A. R. Davis... | 83, 179 |
| Card, Clothing | E. S. Lawrence |  |
| Cards, Cutting | E. J. Hunt.. |  |
| Card for artificial teeth | A. M. Asay. |  |
| Card grinder | B. S. Ray |  |
| Card, Hand | R. H. Waite | 76, 111 |
| Card, Hand and other | E. L. Sprague |  |
| Card handle, Finishing | I. S. Waite.. |  |
| Card holder | W. I. Adams | 74, 8\%4 |
| Carding cylinders, Strip |  |  |

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## Invention or Discovery.

Carriage loek
Carriage-loop and billet cover
Carriage, Main bolt or goose neek stay on.
Carriage, Metallie scroll end for spring bar for
Carriage perch.
Carriage perch conncetion
Carriage pole
Carriage pole, Adjustable
Carriage pole, Convertible
Carriage pole support
Carriage pole tip.
Carriage prop joint.
Carriage, Runner attaehment for
Carriage, Running gear for
Carriage, \&c., Spring braee for
Carriage, sand eap for
Carriage seat.
Carriage seat, Lock for
Carriage seat, Shifting rail for
Carriage shacklo
Carriage shackle
Carriage shaekle
Carriage shaft and pole eorupling
Carriage shaft, Coupling for
Carriage, Sliding seat for
Carriage spring brace
Carriage, Steam
Carriage step
Carriage step
Carriage, Step eover and whoel fender for.
Carriage, Stump joint for
Carriage, Subjoint for
Carriage, Sustaining deviee for draught pole for
Carriage thill
Carriage thill
Carriage, Thill and pole for
Carriage top
Carriage top
Carriage top
Carriage top
Carriage top, Attaehing
Carriage top framo.
Carriage, Top prop for
Carriage, Top prop for
Carriage, Top prop for
Carriage top prop, Joint for
Carriage, Wiudow holder for
Carriage, Wooden washer for
Carrier, Chain, and tug
Cart and wagon, Dumping
Cart body
Cart, Dumping
Cart, Dumping
Cart, Dumping
Cart, Dumping
Cart, hay, Self-loading
Cart, Log
Cart, Self-loading
Cart, Self-loading
Cartridge
Cartridge box.
Cartridge box.
Cartridge box
Cartridge box.
Cartridge box, Fixed ammunition holder for
Cartridge box, Fixed ammunition holder for
Cartridge eharger
Cartridge, Explosive
Cartridge extraetor
Cartrtdge for small-arms
Cartridgo holder
Cartridge, Metallie
Cartridge. Metallie priming
Cartridge, Metallie priming
Cartridge, Metallic priming
Cartridge, Metallie priming
Cartridge, Metallie priming
Cartridge shells, Construction of
Cartridge, shot.
Carving machine
Carving machine

Name of Patontee.

## No.

77, 162
84, 8\%9
78,240
74,178
73, 438
75, 688
76, 496
82, 127
76,906
77, 382
77, 796
80, 845
85, 204
73, 941
77, 306
76,605
77, 023
83, 258
76, 959
79, 494
81, 768
82, 420
74,189
77, 769
75, 841
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74, 589
83, 305
84, 802
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73, 763
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80, 670
81, 135
80, 180
74, 809
84,573
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80, 669
78, 419
73, 725
73, 918
80, 823
85, 353
83, 749
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80,257
85,200
83, 434
73, 549
77, 016
84, 616
85, 241
75, 625
75, 626
85, 180
85, 482
73, 351
72, 982
84, 651
82, $58 \%$
73, $87 \%$
73, 739
78, 33\%
78, 953
81, 058
81, 478
75, 019
82, 145
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| Carving machine | 76,093 |
| Carving machine, W | 78, 273 |
| Case, Card or ticket | 79, 194 |
| Case for preserving flowers, \&c | 84, 445 |
| Case for tooth paste. | 73, 953 |
| Case, Lead and slate pencil | 76,488 |
| Cask and barrel for containing oil | 73, 643 |
| Casket for preserving corpses | 73, 729 |
| Cask or barrel, Raising | 73,398 |
| Castcr .................. | 74,019 |
| Caster | 78,690 <br> 84 <br> 198 |
| Caster | 84,126 78,850 |
| Caster, Ball | 78, 850 |
| Caster, Ball | 76,630 7688 |
| Castcr, Furniture | 76, 885 |
| Caster, Furniture | 75, 564 |
| Caster, Furnitu | 77, 743 |
| Caster, Furniture | 78, 798 |
| Caster, Furniture | 79, 571 |
| Caster, Furniture | 80, 990 |
| Caster, Furniture | 81, 001 |
| Caster, Furniture | 82, 783 |
| Caster stand and t | 77, 415 |
| Caster, Trunk | 79, 798 |
| Casting bearings for machinery | 85, 341 |
| Casting hollow ware | 83, 751 |
| Casting, Supporting chills in | 80,321 |
| Catamenial sack | 75, 036 |
| Catamenial sack | 75, 434 |
| Catamenial sack | 78, 414 |
| Catamenial sack | 84, 083 |
| Catch, Cubbard | 82, 108 |
| Catch for money dra | 77, 981 |
| Catheter and syringc, C | 73, 402 |
| Cattle gnard for railroad | 77, 677 |
| Cattle guard, Railway | 77, 642 |
| Cattle guard, Railway | 83, 556 |
| Cattle, Herding and securing | 78, 631 |
| Cattle, Lcading, and preventing cows an sucking the teats. | 74, 088 |
| Cattle pricker-............................ | 74,795 |
| Cattle, Supplying, with food and water on | 75, 701 |
| Caustic and carbonic alkalies, \&c., Prepa | 85, 015 |
| Cement | 84, 638 |
| Cement | 77, 537 |
| Coment | 82, 45.4 |
| Cement and mortar | 73, 882 |
| Ccment for coating wood, \& c | 76,808 |
| Cement for fastening door knobs and for o | 78, 592 |
| Cement for pavements, \& $\mathbf{c}$ | 74, 773 |
| Cement for roofing... | 80,368 |
| Cement for roofing, artificial stone, coatin $\& c$. | 77, 705 |
| Cement, Roofing ........................ | 80, 084 |
| Cement, Roofing | 77, 418 |
| Cement, Roofing | 82, 419 |
| Cement, stucco, artificial stone, | 73, 965 |
| Cement, Water-proof loather | 79, 240 |
| Center-board winch | 84, 275 |
| Centrifugal hydro-ejector | 77, 053 |
| Centrifugal machine | 82, 314 |
| Centrifugal machine for filtoring, drainin | 80, 702 |
| Centrifugal machine, Self-balancing. | 82, 049 |
| Centring device. | 82, 131 |
| Cereals, Decorticating and cleaning | 79, 970 |
| Cereals for the manutacture of flour, mea ing. | 85, 261 |
| Chafe-iron | 80,166 |
| Chains, Blocking | 82, 124 |
| Chains, Casting | 81, 565 |
| Chains, Constructing | 84,359 |
| Chain inclinometer | 73,391 |
| Chain links, Flattening and bending | 80, 354 |
| Chain machine. | 73, 518 |
| Chain power, Endless | 73, 191 |
| Chain, Spring | 75, 814 |
| Chain, watch, Swaging the swivel eye | 80,53, |
| Chair | 82, 602 |
| Chair | 84, 118 |
| Chair, \&c., Heating device | 78, 742 |
| Chair and car seat | 78,570 |

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| Chair and fastener, Railway | D. N. Ciark. | 75, 370 |
| Chair and lounge. | G. Knell. | 76, 202 |
| ¢hair and lounge. | T. Winter | 77,697 |
| Chair and support, Railway | A. Van Guysling | 84,023 86 8616 |
| Chair and writing table | P. Geiser | 82, 616 |
| Chair, Barber and dent <br> Chair, Barbers' | J. and J. Stoek ......... | 77, 548 |
| Chair, Barbers' | C. Kaestner. | 78, 525 |
| Chair, Barbers' | A. Gerdes and J. Reiche | 82, 704 |
| Chair, bedstead, secretary, and | W. Reckards | 77, 841 |
| Chair, Cottage | C. O. Collignon - ............. | 75, 373 |
| Chair, Dentists' | O. C. White and A. T. Ashmea | 82,776 80,589 |
| Chair, Dentists' and barbers' | A. T. Boon and J. B. Finchure | 80,589 81252 |
| Chair, Easy.... | D. M. Wroa | 82, 058 |
| Chair, Extension | B. H. Zinu1 | 76, 577 |
| Chair, Fanning | A. K. Hobbs and N. F. Wrigh | 76, 452 |
| Chair, Fanning and rocking | T. Kerr | 80, 970 |
| Chair, Folding | H. S. Golightly and C. S. | 74, 910 |
| Chair, Folding | J. Nieolai. | 80, 656 |
| Chair, Folding | A. Collignon. | 82, 894 |
| Chair, Folding | C. C. Schmitt and R. Wodrich | 82, 755 |
| Chair, Folding | P. Born | 82, 791 |
| Chair, Folding | A. C. Boyd | 83, 034 |
| Chair, Folding | G. MeAleer | 83, 720 |
| Chair, Folding | E. W. Vail. | 83, 744 |
| Chair, Folding | A. Collignon | 84, 344 |
| Chair, Folding easy | C. C. Schmitt and R. Wodrich | 82, 754 |
| Chair for ehildren. | J. H. Apol | 85, 050 |
| Chair for ehildren, Migh | J. Nichols. | 76, 801 |
| Chair, leg-tip. | E. Coogan and H | 83, 933 |
| Chair, Night | J. Macferrau. | 75, 778 |
| Chair, Operating | J. B. Morrison | 82, 542 |
| Chair or railroad rail clamp | J. E. Watkins | 73, 679 |
| Chair, Railroad ............. | I. B. Bidwell | 74, 882 |
| Chair, Railroad | W. S. Shotwell | 75, 475 |
| Chair, Railroad seat arm for | W. G. Creamer | 74, 10 |
| Chair, Railway | I. Tillson. | 73, 002 |
| Chair, Railway | I. Zider | 77, 794 |
| Chair, Railway | W. Wiekerslian | 80, 320 |
| Chair, Railway | S. T. Alexander. | 81, 573 |
| Chair, Railway | G. W. R. Bayley | 85, 357 |
| Chair, Railway rail | W. Wickersham | 78, 630 |
| Chair, railway, Reversiblo | W. H. Joeckel | 82, 527 |
| Chair, Reclining | B. L. Southack. | 73, 845 |
| Chair, Reclining | H. B. Braman |  |
| Chair, Reclining | C. Brada. | 80, 802 |
| Chair, Reelining. | J. W. Weth | 89, 174 |
| Chair, Recumbent | T. Winter |  |
| Chair, Rocking | C. W. Conant | 75, 246 |
| Chair, Rocking | E. Hartwell. | 79, 656 |
| Chair, Rocking and reclining | D. Cox. | 80, 919 |
| Chair, rocking, Fanning attachment | A. R. Hobbs | 78, 965 |
| Chair, rocking, Spring .............. | C. C. Sehmitt | 85, 481 |
| Chair seat | G. A. Watsou. | 76, 569 |
| Chair seat | G. A. Watkins. | 77, 228 |
| Chair seat | E. L. Buckingha | 82, 081 |
| Chair seat | C. Platt... | 83, 541 |
| Chair seat | H. C. Knowlto | 83, 713 |
| Ghair seat | G. Buekel. | 85, 363 |
| Chair seat, Dressing | H. Meyer | 76, 226 |
| Chair seat supporter | G. Butterfield and A. G. Tre | 73, 499 |
| Chair seat, Tilting. | M. V. Howe | 73, 221 |
| Chair seat, Weaving | G. A. Watkins |  |
| Chair, Sheep shearing...... | I. D. Brown. | 82, 411 |
| Chair, Sick, and washstand | C. S. Smreok | 72, 116 |
| Chair, Tilting | C. D. Smitl | 77, 117 |
| Chalk and sand paper holder for billiar | C. F. Ritchel. | 81, 947 |
| Chamber closet, Portable. | W. J. Lyman | 79, 994 |
| Chamber commodo. | E. S. Farson |  |
| Chamber, Refrigerating | J. H. Racey, j |  |
| Chamber vessel | C. Robinson. | 75, 064 |
| Chandelier. | T. J. skinner | 84, 975 |
| Chandelier | J. A. Evarts | 78,365 |


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| :---: | :---: | :---: |
| Chandelier, Drop-light for | W. C. Vosburgh | 76, 360 |
| Chandelicr, Extension fixture for | J. A. Evarts | 77, 019 |
| Channeling tool.. | G. W. Pruyn | 77, 653 |
| Charcoal, Screcning | J. S. Evans | 84, 866 |
| Charger for powder fis | I. C. Bascom | 75, 839 |
| Check, Baggage | V. W. Blancha | 72, 965 |
| Chock, Baggage | E. Flather | 73, 315 |
| Check, Baggage | H. S. Ross | 78, 391 |
| Check, Baggage | E. H. Paine | 84, 373 |
| Checks, drafts, \&c., from fraud, Securi | J. Hester | 75, 758 |
| Check hook and terret, Fastening. | A. L. Hill. | 79, 227 |
| Checse | B. Armstrong | 73, 281 |
| Cheese, Boxing, bandaging, and prepar | A. M. Utlcy, H. N. Kimball, and W. Reynolds. | 82, 895 |
| Chcese, Compound for pressing | F. Raymond and A. Millcr............ | 83, 408 |
| Cheese, Manufacture of. | W. S. Cornell | 76, 167 |
| Cheese safe, gauge, and cutter | E. G. Bulgin | 79, 548 |
| Cheese turning cover. | Q. C. Culley- | 77, 004 |
| Cheese vat. | H. H. Bent. | 75, 515 |
| Chemistry, Toaching the rudiments o | S. M. Gaines | 85, 299 |
| Chenille, Manufacturing | W. Cantcr | 80, 134 |
| Cherry stoner. | R. Wright | 74,187 |
| Cherry stoner. | R. Wright | 77,561 |
| Cherry stoner. | A. Rakcstraw | 79, 257 |
| Cherry stoner. | G. Geer | 79, 748 |
| Chest, Flour and meal | T. J. Corr | 74,200 |
| Chicken coop | S. S. Bent | 78, 044 |
| Chicken coop | J. H. Mabbett | 78, 109 |
| Chills in casting, Supporting | W. H. Wiley | 80, 321 |
| Chimney. | S. Hokc | 83, 283 |
| Chimney. | A. Wilhelms | 84, 600 |
| Chimney cap. | H. J. Weed | 76, 859 |
| Chimney cap. | W. Chappcll | 82, 693 |
| Chimney, Cast-iron | A. W. McMillen | 76, 094 |
| Chimney clasp | C. F. Espick | 78, 584 |
| Chimney cleaner | T. H. Donohue | 77, 468 |
| Chimney cowl. | D. F. Jauss | 77, 047 |
| Chimney cowl. | A. E. Clement | 79, 457 |
| Chimncy cowl. | J. W. Foard | 79, 820 |
| Chimney cowl. | W. C. Frailey | 80,618 |
| Chimney cowl. | H. S. Decker | 81,609 |
| Chimney cowl. | J. J. Currier | 82, 497 |
| Chimney cowl. | E. T. Nonalhior | 82, 637 |
| Chimney cowl. | B. Irrgang | 83, 163 |
| Chimney, Creating draught in, by mea | W. H. Marti | 76, 219 |
| Chimney, Lamp. | W. Onions and H. Roberts | 76, 239 |
| Chimncy, Lamp. | J. Robinson. | 77, 109 |
| Chimney, Lamp | M. Sweeney | 79, 277 |
| Chimney, Lamp | R. R. Crosby | 79, 958 |
| Chimney, Lamp | J. Gracie and R. H. Boyd | 80,282 |
| Chimney, lamp, Attachment for | P. MI. Shea | 80, 093 |
| Chimney, lamp, Cleaner for . | J. R. Hamilton. | 73, 324 |
| Chimney, lamp, Cleaner for | J. S. Black. | 75, 351 |
| Chimney, lanp, Cleaner for | L. J. Baker | 77, 567 |
| Chimney, lamp, Cleaner for | J. J. Wait | 78, 160 |
| Chimney, lamp, Cleaner for | J. Lco | 78, 5:88 |
| Chimney, lamp, Fastening for | J. Allen and C. E. F. Le | 73, 068 |
| Chimney, lamp, Metal top | F. J. Seymour | 75, 302 |
| Chimney scraper. | S. K. Luce | 82, 130 |
| Chimney top. | H. English. | 82, 098 |
| Chisel handlo | R. V. Hilton, J. G. Webster, and H. <br> E. Wheeler. | 77, 881 |
| Chisel, Mortising | J. M. Smith..... | 80, 428 |
| Chisel, Mortising | O. Adams and J. Hatch | 82, 058 |
| Chisel, Tenoning. | A. J. Cochran | 77, 357 |
| Chlorine and oxygen, Producing | J. T. A. Mallet | 73, 540 |
| Chlorinc, Manufacture of | H. Deacon | 85, 3\% |
| Chock for whale boats | M. Adams | 73, 484 |
| Chronometer. | P. Bantel | 80, 051 |
| Chronometer cscapement. | A. H. Potter | 73, 646 |
| Chronometer escapement | G. P. Read. | 76, 348 |
| Chuck | S. G. Dare | 85, 073 |
| Chuck | B. Haviland | 81, 500 |
| Chuck | C. F. Hadley | 84, 0.57 |
| Chuck, Planers' | W. H. Warron | 75, 498 |
| Churn | G. McWilliams | 73, 023 |
| Churn | C. Schifferly | 73, 125 |
| Churn | A. J. Heavner | 73, 327 |
| Churn | D. T. Ward. | 73, 479 |
| Churn | G. Clayton and C. B. Allen | 73, 503 |
| Churn | S. J. Whipple | 73;566 |

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| Churn | T. Haigh. | 81, 896 |
| Churn | H. Leber | 82, 235 |
| Churn | J. Shaw and W. A. Hinkley | 82, 356 |
| Churn | W. C. Smith. | 82, 446 |
| Churn | E. Spain | 82, 652 |
| Churn | W. C. Douthett | 83, 050 |
| Churn | N. C. Folger | 83, 057 |
| Churn | G. Beisner | 83, 595 |
| Churn | E. P. Russell. | 83, 664 |
| Churn | A. Schlingman, D. Glander, Campbell. | 83, 732 |
| Churn | D. Lown .................. | 83, 779 |
| Churn | S. S. Case | 83, 815 |
| Churn | S. Hewit | 83, 853 |
| Churn | A. P. Bryson | 84, 532 |
| Churn | J. K. Wood and D. R. Speer | 84, 524 |
| Churn | S. S. Elder. | 84, 619 |
| Churn | W. B. Tucker | 84, 658 |
| Churn | F. Whitton | 84, 668 |
| Churn | A. Westcott | 84, 784 |
| Churn | J. Carlton. | 84, 858 |
| Churn | S. R. Owen | 85, 028 |
| Churn | C. Sweeney | 85, 187 |
| Churn | C. W. Brewer | 85, 272 |
| Churn | W. E. Kinert. | 85, 452 |
| Churn and butter worker | S. L. Hall. | 80, 624 |
| Churn and ice cream freezer | C. Higley | 79, 349 |
| Churn and ice cream freezer, Combined | G. C. Westover | 73, 766 |
| Churn, Atmospheric ..................... | D. C. Hall. | 76, 753 |
| Churns, \&c., Operating | I. Morse ... | 77, 077 |
| Churn, Barrel. | S. H. Swasey | 73, 134 |
| Churn dasher | A. H. Brainard | 78, 511 |
| Churn dasher | M. R. Heliker | 85, 445 |
| Churn dasher | M. O. Davis | 73, 583 |
| Churn dasher | J. L. Marsh | 74, 398 |
| Churn dasher | J. W. Barton | 74, 485 |
| Churn dasher | R. Crawford | 74, 905 |
| Churn dasher | H. McDonough | 75, 286 |
| Churn dasher | B. M. Parks .- | 75, 963 |
| Churn dasher | M. E. J. Marr | 76, 484 |
| Churn dasher | J. E. Williams and M. Lemo | 77, 787 |
| Churn dasher | E. B. West | 77, 939 |
| Churn dasher | J. D. Kellogg, jr | 78, 749 |
| Churn dasher | D. S. Mriller | 79, 491 |
| Churn dasher | T. W. Tyler | 80, 685 |
| Churn dasher | H. A. Crance | 80, 921 |
| Churn dasher | J. S. Carson | 81, 340 |
| Churn dasher | J. S. Carson | 81, 341 |
| Churn dasher | A. T. Bleyley | 81, 586 |
| Churn dasher | E. H. Funk. | 82, 216 |
| Churn dasher | M. H. Thomas | 82, 892 |
| Churn dasher | M. Heliker and O. A. White | 82, 947 |
| Churn dasher | S. Yates | 83, 015 |
| Churn dasher | E. H. Lord and W. Thompson | 84, 953 |
| Churn dasher and lid | S. P. Hopkins ............. | 81, 372 |
| Churn dasher head. | B. F. and A. H. Stover. | 78, 125 |
| Churning apparatas | E. J. Moore | 76,497 |
| Churning apparatus | E. J. Moore | 83, 080 |
| Churning motion.... | D. Morris | 80, 001 |
| Churn, Portable ventilating | E. P. Williams | 78, 249 |
| Churn power, Endless platform for | A. B. Smith | 81, 833 |
| Churn, Working ........ | J. H. Monce | 74, 114 |
| Chute for river navigation | I. A. Putnam | 77, 212 |
| Cigar ...................... | C. Quartley | 74, 246 |
| Cigar | F. L. Hilbright. | 80, 284 |
| Cigar | W.C. Kneeland | 80, 287 |
| Cigar and cigarette machine | J. and A. Marengo | 78, 985 |
| Cigar and match box combined | G. Graetz | 85, 170 |
| Cigars, Bundling........... | C. A. Siecke | 78, 142 |
| Cigar case | S. N. Risley | 84, 906 |
| Cigar, Cutting, perforating, and lighting | C. F. Smith | 76, 537 |
| Cigar header. | G. Moebs | 78, 312 |
| Cigar holder | W. K. Vanderslice | 73, 478 |
| Cigar holder | M. V. B. Young | 80, 527 |
| Cigar machine | A. Weeks...... | 79, 423 |
| Cigar machine | C. Müller | 80, 204 |
| Cigar machine | R. A. Bright, jr | 83, 247 |
| Cigars, Making | J. F. Shepard. | 77, 846 |
| Cigars, \&c., Mouth-piece for | W. Thompson | 76, 119 |
| Cigars, Pressing | G. Studer | 85, 344 |
| Cigarette and cigar machine | J. and A. Marengo | 78, 985 |

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| Cinders for fixing furnace, Treating | H. McDonald | 76, 223 |
| Circles, Bending | W. Blood | 78, 418 |
| Circuit breakers, Induction soil ap | C. G. Page | 76, 654 |
| Circuit closer | W. J. Biggar and J. C. Blood | 79, 894 |
| Cistern, Automatic feeder and cut | S. H. Plumb | 75, 969 |
| Clamp | W. Sailer. | 81, 298 |
| Clamp. | E. K. Purdy. | 82, 985 |
| Clamp. | A. Anderson | 80, 894 |
| Clamp and fruit jar | A.J. H. Hilton | 76, 915 |
| Clamp, Book, Portabl | C. W. Sherwood | 75, 588 |
| Clamp, Book, Portable | W. C. Watson. | 75, 660 |
| Clamp, Clothes line. | G. R. Nebinger | 74, 713 |
| Clamp, Crimping | L. Hill. | 81, 503 |
| Clamp, Door and sash | E. F. Dunaway | 75, 880 |
| Clamp, Drawing . | J. Bouniol | 73, 947 |
| Clamp, Floor | W. Portlock and J. H. Smith | 74, 128 |
| Clamp, Floor | G. E. Banuer | 76,583 |
| Clamp, Floor | J. H. Baker. | 77, 243 |
| Clamp, Floor | E. A. Hall | 77, 610 |
| Clamp, Floor | F. S. Mack. | 80, 079 |
| Clamp, Floor | G. B. Perkins | 81, 531 |
| Clamp, Floor | J. H. Ferreira. | 82, 703 |
| Clamp, Flooring | D. D. Mackay | 81,803 |
| Clamp for filing saws | C. Kendig. | 73, 344 |
| Clamp for forming metal cones | F. I. Seymour | 75, 302 |
| Clamp for holding leather | A. Rittenhouse | 81, 293 |
| Clamp for holding leather to the currie | J. Shimer. | 78, 334 |
| Clamp for holding palm leaf warp | C. Powers | 76,246 |
| Clamp for holding pickets | P. McCarthy | 76, 644 |
| Clamp for hub-boring machine | G. V. Brecht | 78, 922 |
| Clamp for iron structures | J. M. Moorehead | 82, 738 |
| Clamp for saddles, \&c... | W. K. Rairigh | 82, 986 |
| Clamp for scrub-brush | C. B. Clarl | 75, 369 |
| Clamp for suspending pasteboard, \&c | E. H. Sampson | 84, 909 |
| Clamp for trussing cylinders or staves | IW. Shepperman | 74,725 |
| Clamp for vehicle seats | II. E. Murray | 77, 309 |
| Clamp for wood bending machine | J. B. Van Horn | 79,53) |
| Clamp, Harness maker's | J. F. Johuson | 81,787 |
| Clamp, Hawser | H. A. Ellis and C. F. Gladding | 78, 794 |
| Clamp, Joiner's | J. Kuneman | 81, 381 |
| Clamp, Joiut | D. E. Hall | 79,116 |
| Clamp, Paper, and inkstand combined | E. J. Toof. | 77, 131 |
| Clamp, Pipe and faucet ................ | J. Elliott | 85, 372 |
| Clamp, Railroad rail | W. B. Atkinson. | 82, 271 |
| Clamp, Saw | W. N. Kingstou | 79, 478 |
| Clamp, Suspending | D. P. Foster | 84, 055 |
| Clamp, Suspending | D. P. Foster | 85, 298 |
| Clasp, Bag. | E. L. Dichey | 74, 517 |
| Clasp, Belt | E. Hatch | 74, 354 |
| Clasp, Belt | J. II. Hawes and G. II. Bliss | 77, 282 |
| Clasp, Curtain | B. F. Watson and $\triangle$. Shephar | 84, 448 |
| Clasp for boots, shoes, belts, dresses, \&c | E. W. Prussia -............ . . | 80, 834 |
| Clasp for fastening garments | W. Wright | 78, 505 |
| Clasp for joining belts. | B. D. Randleman | 80, 219 |
| Clasp for trunks, \&c. | L. Rausom | 82, 988 |
| Clasp, Hoop skirt. | J. F. J. Gunning | 74, 343 |
| Clasp, Hoop skirt. | 1. J. Cross.. | 79, 210 |
| Clasp, Hoop skirt | L. Fellheimer | 80, 343 |
| Clasp, Hoop skirt | J. Ingraham | 84, 492 |
| Clasp, Hoop skirt | M. Samucls | 85, 480 |
| Clasping | L. A. Sanford | 82, 643 |
| Claw bar | M. Henuasy | 80, 072 |
| Clay, Cleaning | L. P. Norton | 73, 921 |
| Clay, Separating stones from | 1). Wellington | 81, 314 |
| Clay washing and stone separating | E. Wilzinski | 74, 967 |
| Cleaning and boring device | J. J. Jordan | 79, 35\% |
| Cleat, Belaying. | J. Bangs .... | 74, 789 |
| Cleat, Belaying. | C. S. H. Foster | 84, 873 |
| Clevis. | E. M. Potter | 73, 197 |
| Clevis. | R. C. Whitehouse | 77, 426 |
| Clevis iron | T. P. Warren .... | 78, 775 |
| Clevis, Three | J. Fowler ... | 79, 463 |
| Clock | S. B. Terry | 76, 117 |
| Clock | R. Woolworth | 76, 370 |
| Clock | J. 33. Mayer. |  |
| Clock and advertiser combined | S. M. Lerry ${ }^{\text {S }}$. | 74, 704 |
| Clock calendar | J. K. Seem. | 73, 127 |
| Clock, Calendar | W. A. Terry | 79,026 |
| Clock, Calendar | B. L. Lowis. | 85, 456 |

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| Clothes line holder | O. C. Perkins and J. R. Richard | 79,593 |
| Clothes line supporter | F. W. Tilton and M. C. Swift | 81, 310 |
| Clothes pin. | D. D. Jones. | 73, 609 |
| Clothes pin. <br> Clothes pin | P. Finley ... | 77, 7268 |
| Clothes pin. | E. Scaver | 77, 540 |
| Clothes pin. | W. M. Doty | 77, 598 |
| Clothes pin. | J. O. Couch | 78, 651 |
| Clothes pin. | J. G. Roth | 79, 502 |
| Clothes pin. | J. A. Rand..... | 81, 045 |
| Clothes pin. | J. Haigney and F. M. Hedman | 82, 114 |
| Clothes pin. | L. Matthews | 82, 624 |
| Clothes pin. <br> Clothes pin | A. L. Taylor - | 76,547 77 |
| Clothes pins, Making | J. B. Sınith | 85, 338 |
| Clothes pin or clasp. | H. C. Smith. | 75, 478 |
| Clothes post, Extensio | G. Dittenhaver | 73, 171 |
| Clothes pounder. | D. S. Morgan | 75, 562 |
| Clothes pounder. | S. T. MeDougal | 79, 671 |
| Clothes sprinkler | J. W. Walters | 79, 531 |
| Clothes sprinkler | E. H. Kirikhan | 75, 168 |
| Clothes sprinkler | W. V. Wilson | 76, 870 |
| Clothing, Fitting | R. Bisbee | 74, 978 |
| Clover separator and haller | D. M. Heikes | 77, 731 |
| Club feet and crooked legs, Straightenin | H. R. Allen | 73, 768 |
| Clutch for elevating | C. C. Blodgett | 76, 588 |
| Cluteh, Friction | A. W. Hall | 74, 0 ¢0 |
| Coach pad. | B. F. Hooper | 76, 762 |
| Coal and wood dumping apparatus | E. R. Kerr. | 85, 101 |
| Coal, Conreying and dumping | H. C. Clark and R. B. Little | 78, 401 |
| Coal cutting machine | G. E. Donisthorpe | 82, 391 |
| Coal cutting machino. | G. E. Donisthorpo | 82, 608 |
| Coal dust for fuel, Consolidating | W. Footner | 77, 970 |
| Coal dust for fuel, Preparing | A. D. Ditmars | 81, 149 |
| Coal excavating mach | J. Borton | 76, 704 |
| Coal hod and screen | A. Portcr | 74, 770 |
| Coal hod, Bottom for | E. W. Kimball | 73, 535 |
| Coal hod, Sheet metal | M. G. Fagan | 79, 564 |
| Coal hopper and petroleum scalo | F. E. and L. I. How | 77, 488 |
| Coal, Loading | D. Risher | 81,946 |
| Coal mining apparatus | G. E. Donisthorpe | 81, 759 |
| Coal mining apparatus | G. E. Donisthorpo | 81, 760 |
| Coal mining machino. | G. E. Donisthorpo | 76, 417 |
| Coal mining machino. | G. E. Donisthorpo | 76, 418 |
| Coal miuing machine. | G. E. Donisthorpo | 76, 419 |
| Coal mining machino | G. E. Donisthorpo. | 82, 390 |
| Coal chate ...... | II. Merriman | 84,749 |
| Coal chute, Extension | J. Heatherington | 74,686 |
| Coal seuttle | G. T. Page. | 85, 240 |
| Coats, Drying and pressing | J. Braun | 85, 058 |
| Coat supporter | I. C. Kelly | 84, 495 |
| Cobalt and nickel from other ores, Sopa | A. Monnier | 78, 001 |
| Cock, Compression | A. A. Howard | 78, 804 |
| Cock, Compression | G. E. Boisselier | 84, 792 |
| Cock for gas burner | S. B. H. Vance | 76, 277 |
| Coek for racking off beer | F. Wagner. | 80, 787 |
| Cock for water pip | W. Johnson | 85, 309 |
| Cock, Gas | P. Keller | 73, 534 |
| Cock, Gauge. | F. Stelbins | 81,027 |
| Cock or faucet | C. Harrison | 81, 900 |
| Cock, Stop. | J. Docring | 72, 986 |
| Cock, Stop | C. Schultz and P. Warker | 76, 106 |
| Cock, Stop | J. Regester | 82, 161 |
| Cock, stop, Steam, gas and water | W. H. De Valin | 84, 617 |
| Cockle and garlic soparator | J. W. Neal and A. J. Truxel | \$3, 198 |
| Cocoanut, Desiccated | G. W. Waitt | 79, 790 |
| Cocoanut, Desiceated | G. B. Williams |  |
| Codfish, Article prepared from | E. Crowell ... | 84, 801 |
| Coffee and tea pot | D. B. Woodworth | 76,684 |
| Coffee and tea steamer | C. G. Murch | 82, 976 |
| Coffee, \&e., Making extracts and deoo | L. Brauer | 84,609 |
| Coffee huller and polishor | C. De St. Charl | 83, 609 |
| Coffee, Hulling ........... | D. Lombard. |  |
| Coffco-making apparatus | J. Petseh and S. N. Buynitzky | 74,937 <br> 74 |
| Coffee pot | J, Nason. |  |
| Coffee pot | J. W. Patterson and J. S. Hil |  |
| Coffee, Preserving | B. T. Babbitt |  |
| Coffee, Roasted. | J. Arbuckle, ${ }^{\text {B. T. Babbitt }}$ | 73,486 75,829 |
| Coffee roaster | B. K. Maltby | 78, 386 |
| Coffer roaster | T. Hcermans. | 70, 468 |

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| Invention or Discovery | Namo of Patentee. |  |
| :---: | :---: | :---: |
| ee roaster | F. M. Bode. | 80, 329 |
| Coffee roaster | J. E. Edmundson | 82, 393 |
| Coffee roaster and corn popper | L. A. Warncr. | 76, 3f2 |
| Coffce, Roasting ............ | O. H. Taylor | 83, 889 |
| Coffee, Roasting | W. Jahnston and C. Den | 84, 83,951 |
| Coffee, tea, \&c., Yacking | G. Garsed and C. Den | 83,951 84,830 |
| Coffee urn | J. Joncs Willia | 73, 854 |
| Coffin | C. Potter and E.J | 76, 344 |
| Coffin | S. Avery and L. Delille | 76, 376 |
| offin | B. Smith. | 79, 921 |
| Coffin | J. E Evarts | 80,816 |
| C | E. Ellinger... | 81, 885 |
| Coffin | M. R. Marger |  |
| Coffin | S. Merrick | 84, 130 |
| Coffin ..................... | G. Brabrool | 75, 726 |
| Coffins, \&c., Name plate for | J. S. Cox. | 75, 377 |
| Coffins, Refrigerator | J. W. Meaker | 76, 492 |
| Coin assorting | J. W. Meaker | 76, 493 |
| Collar and bosom comb | E. Hatch.. | 74, 355 |
| Collar and cuff | J. Blakey and A |  |
| Collar and hame, Horse | A. Dunbar. | 78, 075 |
| Collar and neck-tie combined | G. F. Perkins | 75, 047 |
| Collar and neck tie, Fastening for | E. R C | 83, 927 |
| Collar, Applying re-enforcing patches to. | J. Jacobs | 73, 977 |
| Collars, cuffs, \&c., Coating and water-p | S. W. H. Ward | 83, 893 |
| Collars, cuffs, \&c., Paper, Fabric for t of. | J. Restein | 85, 397 |
| Collar fastening ...................... | C. H. L. Roberts and W. C. | $82,879$ |
| Collar for pipes in hot blast furnaces | H. McCullaugh |  |
| Collar, Fur | W. Ming | 73, 368 |
| collar, Horse | J. H. Spe | 75,590 |
| Collar, Hor'se | I. Houghtling | 76, 456 |
| Collar, Horse | E. Webber | 76, 858 |
| Collar, Horse | C. Wolf.. | 77, 698 |
| Collar, Horse | W. Youngblood | 80,682 |
| Collar, Horse | S. P. Taylor | 80, 8821 |
| - Collar, Horse | J. A. Sutnerla | 79, 024 |
| Collar, Horse, Fabric for covering. | E. Sullivan | 85, 352 |
| Collar, Horse, Fastening and strengthe | J. P. and J. E. ${ }^{\text {E }}$ | 84, 687 |
| Collar, Horse, Eastening for | A. Van Fleet . | 80, 246 |
| Collar, Horse, Fastening for | B. H. Hobart and D. C. Chap | 82, 83B |
| Collar, Horse, Metallic. | C. K. Marshall. | 79, 137 |
| Collar, Horse, Stufting | W. Fauntleroy |  |
| Collar, Horse, Stuffing | E. B. Miller |  |
| Collar, Horse, Stuffing machine | S. B. McCorzle | 77, 294 |
| Collar machine | H. F. Knapp | 83, 814 |
| Collar machine | J. F. Wakker | 78, 243 |
| Collars, Moulding | G. He. Spauld | 85, 037 |
| Collar, Paper .......... | C. Sporlord | 79, 460 |
| Collar, Paper, Applying cloth p | J. P. Courtney and C. Redma | 81, 255 |
| Collar, Paper, Moulding ... | G. W. Cilley and G. H. Span | 73, 693 |
| Collar, Shirt, Fastening | P. W. Smith | 83, 332 |
| Collar, Shirt, Fastening for | C. E. Palmer | 80, 8127 |
| Collar, Stay for- | S. Kaufman | 79, 261 |
| Collodion, Solidified | C. A. Seely |  |
| Coloring matter, Vegetable |  | 74, 312 |
| Column, Metallic | G. Walters and T. Shaffer |  |
| Columns, \&c., Constructing | G. Walters and T'. Shaffer | 82, 664 |
| Columns, \&c., Constructing . ${ }^{\text {a }}$, | G. Walters and T. Shaffer. | 83, 425 |
| Column, Constructing wrought iron | G. Walters and T. Shaffer. | 83, 226 |
| Comb - ............... | C. Foster | 73, 884 |
| Comb | J. S. Dickinson | 80, 814 |
| Comb | L. Picot | 82, 560 |
| Comb | A. A. Young | 79, 621 |
| Comb and brush combin | A. A. Toof | 77, 416 |
| Comb cleaner | B. $\dot{W}$. Remington | 74, 212 |
| Comb, Curry | J. H. Barringer, jr | 74, 974 |
| Comb, Curry | J. W. Latcher . | 80, 190 |
| Comb, Curry | C. B. Bristol |  |
| Comb, Enamelled metal | C. Foster | 85, 311 |
| Comb, Fountain | G F H Brown | 80, 855 |
| Combs, Sawing | J. P. Noyes.. | 56, 650 |
| mb , Toilet. | d. P. Noyes |  |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Commercial transactions, Teaching | C. A. Walworth | 74, 740 |
| Compass | H. Stewart | 77, 123 |
| Compass, Beam and calipers, | W. Burrows | 85, 430 |
| Composing stick | J. L. Wait | 78, 033 |
| Composition for coating motals, | B. Oertley and X. Fcudrich | 80, 085 |
| Composition for covering roof, pavements, | J. Sce. | 78, 544 |
| Composition for covering wooden bridges, buildings, \&c. | J. Heckel and M. Eichinger | 76, 443 |
| Composition for corns, bunions, \&d | A. J. Ferguson | 81, 486 |
| Composition for firc kindling. | W. P. Winkley | 82, 506 |
| Composition for forming building blocks, pavements, \&c. | S. E. Carr | 83, 037 |
| Composition for forming casts and fancy articles | M. Schall | 75, 058 |
| Composition for molded and coated arti | S. Whitemar | 79, 794 |
| Composition for kalsomining walls, \&c | N. A. Frank | 79, 337 |
| Composition for setting posts, timber, \&c | A. D. Purinto | 78, 691 |
| Composition for tile or slab for floors | I. Marsh, j1 | 78, 601 |
| Composition of matter | G. F. J. Colbu | 73, 694 |
| Composition of matter for emery cloth, polishing whiels, \&c. | L. Francis | 72, 994 |
| Compositiou of matter for forming ornaments | E. A. Hildreth | 74,225 |
| Comporud, Disinfecting | C. A. Seely and C.J. Eame | 74, 608 |
| Compound, Explosive | A. Nobel | 78, 317 |
| Compound, Explosive | J. Hafeneggcr | 81, 894 |
| Compound, Fire-proof | R. Spencer | 84, 143 |
| Compound for cleaning silverware, jewclry | G. II. Baxter | 82, 479 |
| Compound for coating the outside walls of buildiags. | J. S. Houghtou | 84, 550 |
| Compound for covering roofs, \&c | C. B. Hutclins | 79, 472 |
| Compound for curing felons and similar diseascs | R. Fcibelman | 81, 152 |
| Compound for destroying bed bugs and other vermin | P'. Scebald | 79, 151 |
| Compound for destroying pain | S. 'T. Bond | 80, 123 |
| Compound for embalming dead bodics | E. I. Crane | 81, 755 |
| Compound for insulating telegraphic and clectric wircs | S. C. Bishop. | 83, 031 |
| Compotud for rooting, \&c., Fibrous | R. O. Lowrey | 77, 992 |
| Compound for roofing, \&c., Plastic. | R. O. Lowrcy | 77, 991 |
| Comporand for the cure of dropsy | C. Brown | 83, 249 |
| Compound for treating ringbonc, spavin, \&c., in horses | W. H. Vance | 84, 3:2 |
| Compound for use in safe and powder magaz | E. II. Asheroft | 76,133 |
| Compoand, Lubricating | E. F. Gerdom and C. | 80, 471 |
| Compound, Mcdical. | D. W. Taylor | 73, 135 |
| Compound, Medical. | J. 'X. Stewart | 73, 552 |
| Compound, Medical. | J. M. Thompson | 73, 939 |
| Compound, Medical. | T. Rosbrugh | 74, 147 |
| Compound, Medical. | C. A. F. Dietz | 74,205 |
| Compound, Medical. | J. Smith | 74,622 |
| Componnd, Medical. | G. IV. C. Gamble | 74, 680 |
| Compound, Medical. | O. G. Ditmars | 75, 536 |
| Compound, Medical. | O. Gr. Ditmar | 75, 537 |
| Compound, Medical | II. Clark | 75, 732 |
| Compound, Medical | E. A. Lowdermill | 75, 776 |
| Compound, Medical | M. C. Edcy | 76, 176 |
| Compound, Mcdical | C. K. Tayntor | 76,272 |
| Compound, Medical | W. P. Thurber | 76, 555 |
| Compound, Medical | R. Alcxander | 76, 343 |
| Compound, Medical | L. Rogers | 78, 017 |
| Compound, Medical | L. Rogers | 78, 018 |
| Compound, Medical | J. P. Humes | 78, 096 |
| Compound, Medical | C. II. Whittcmo | 81, 122 |
| Compound, Mcdical | I. W. Scranton | 82, 038 |
| Compound, Medical | J. II. Butts | 81,876 |
| Compound, Medical | T. H. W. Upshur | 82, 046 |
| Compound, Medical | G. Mohler | 82, 541 |
| Compound, Medical | J. Ramsburgh, jr | 82, 873 |
| Compound, Medical | S. Bass | 83, 755 |
| Compound, Medical | E. M. and L. M. Bcrry | 83, 823 |
| Compound, Medical | J. M. Hughes | 85, 385 |
| Compound, Medical, for cattle, \&c | D. P. Mathows | 81, 920 |
| Compound, Medical, for trating horscs, cattle, \&c | G. Van Wagcnen | 81, 711 |
| Compound to be applied to the hair | B. F. Atwood | 83, 440 |
| Compound, Vitrificd | J. O'Friel | 76,509 |
| Computing apparatus | T. Wallworth | 74, 641 |
| Concentrator | J. Hendy | 78, 089 |
| Concrete bloc | L. Dodge and L. J. Magnuss | 85, 291 |
| Concreto block-making | O. V. Evans. | 88, 301 |
| Condeuscr | W. Phelan. | 76, 655 |
| Condenser | W. A. Lighthall | 76, 329 |
| Condenser | F. Kansom. | 83, 092 |
| Condenscr | W. Phelan | 83, 309 |
| Coudenscr | W. L. and T. Winans | 83, 430 |
| Condcnser and furnace for collceting quicksilver | J. C. Coult |  |
| Condenser and furnace for reducing quicksilver and | T. W. Dresser | 79, 453 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Condenser and furnace, Quicksilver | T. W. Dresser | 85, 371 |
| Condenser for spirit still ............ | P. Coats | 77, 718 |
| Condenser, Stearn....... | A. Van Orsdalc | 81, 964 |
| Condenser, Steam-cngin | J. Shirt and C. Br | 84,773 75,102 |
| Condcuser, Surface................... | I. S. Wilson an | 75, 102 |
| Condenser, surface, Connecting the tu heads of. |  | 73, 222 |
| Condenser, Vapor and steam, to be appli boilers, \&e. | C. Clifford...... W. M. Bartram | 84,995 82,195 |
| Condenser, Vapor, for lard refining kettl | E. D. Brainard. | 73, 292 |
| animal and vegetable substances. | D. L. Page. | 81, 401 |
| Confection or cake | V. Manning | 73, 018 |
| Confectionery, Making | J. Gardner. | 85, 083 |
| Connecting rod. | E. S. Pierce | ${ }^{75}, 051$ |
| Connecting rod adjustment | R. D. O. Smit | 79, 019 |
| Connection for wooden rod | A. Good, jr., and S. Strouse | 81, 270 |
| Cooking apparatus | J. M. Gale and I. M. Avery | 78, 885 |
| Cooking apparatus, Steam | J. Smith and I. E. Hall | 80,881 |
| Cooler and filter | N. Downes | 84,482 |
| Coolcr and refrigerator | A. Koch | 77, 624 |
| Cooler and refrigerator | L. R. Comstock and J. N. | 83, 467 |
| Cooler, Beer ..... | H. Shlaudeman | 77, 664 |
| Coolcr, Beer | N. Hiemenz | 77, 732 |
| Cooler, Beer | G. Fuchs and J. Luiga | 78, 659 |
| Cooler, Beer | J. A gate - | -9, 593 |
| Cooler, Becr | D. Cammere |  |
| Cooler, Beer | L. Schulze | 83, 439 |
| Cooler, Beer | G. Winter | -83, 431 |
| Cooler, Becr | J. Fallows | 83, 953 |
| Cooler, Beer | J. Yates and E. Deuell | 84, 244 |
| Cooler, Beer | A. D. Puffer. | 84, 439 |
| Cooler, Becr | T. L. Rankin and C. W | 85, 477 |
| Cooler, Becr | G. B. Turrell. | 85, 190 |
| Cooler, Butter | E. Kaufmann and A. Weber | 82, 005 |
| Cooler, Flour | J. S. Reynola | 84, 842 |
| Cooler for water, milk, \& | G. C. Cassard | 78, 925 |
| Cooler, Lard | R. Morton | 75, 044 |
| Cooler, Liquid | W. A. Colsten | 84, 996 |
| Cooler, Milk | J. C. Thayer | 79, 613 |
| Coolcr, Milk | L. B. Arnold | 85, 160 |
| Coolcr, Milk | C. G. Riggs and H. C. Mark | 85, 330 |
| Cooler, Water | J. L. Haduc | 77, 280 |
| Coolcr, Water, and refrigerator | C. C. Savery | 81, 826 |
| Cooler, watcr, Enam | C. C. Savery | 77, 106 |
| Cooler, Wine | J. Nuelleus | 81, 814 |
| Coop, Poultry...................... | A. C. F. N. De St. Vic | 73, 514 |
| Copper and cast stcel, Combining ... | J. Park, jr | 73, 375 |
| Copper, silver, \&c., from their solutio of, and preparing finely-divided iron. | G. Bischof, jr | 74,791 81,577 |
| Cord, Covering.......................... | J. Bacheld | 81, 577 |
| Cord, Covering. | J. Turner ..... | 81, 84 |
| Cord-covering machin | W. P. Prumer, jr | 87, 034 |
| Cord retaincr for picturcs and mirrors | W. Read, jr | 74, 771 |
| Core bar ...... | R. T. Crano. | 80, 607 |
| Cores for molding articles of lead, \&\&. | L. Brandeis | 85, 056 |
| Cores, Making .................... | B. S. Benson | 79, 629 |
| Cores, Venting metallic | A. Shepard | 84, 072 |
| Cork, Cutting | L. W. Felt | 76,615 83,850 |
| Cork cutting mach | J. Marnmer | 83, 7300 |
| Cork-extractor | E. Button. | 78, 513 |
| Cork-extracto | J. Autenrieth | 81,728 |
| Cork-pull | S. F. Clapp- | 73, 435 |
| Cork-pull | D. Williamsou | 74, 960 |
| Cork-puller | G. W. Schermerhorn | 82, 353 |
| Corkscrew | G. Twigg | 73, 677 |
| Corkscrew | S. E. Clapp | 74, 193 |
| Corkscrew | J. Bussey | 74, 495 |
| Corkscrew | J. E. Earle | 79, 216 |
| Corkscrew | C. L. Ridgway | 81, 202 |
| Corn and cotton seed, Planting | A. Runstetlcr and A. Win | 75, 466 |
| Coru and grain, Ventilating and drying | D. A. Dickinson | 78, 935 |
| Corn and potato coverer | J. Swart | 80,680 |
| Corn coverer.. | J. D. Haynic |  |

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| Invention or Diseovery. | Name of Patentec. | No. |
| :---: | :---: | :---: |
| Corn erib and threshing maehine, Combin | J. R. Jordan and J. Campbell . | 85, 011 |
| Corn dropper .................... | J. Nevison | 84, 573 |
| Corn husker | C. Ford | 75, 403 |
| Corn husker | L. H. Johnson | 76, 464 |
| Corn husker | I. S. Bumnell | 78, 052 |
| Corn husker | T. Pereival | 78,321 |
| Corn husker | C. O. Yalo | 78, 908 |
| Corn husker | G. E. Stewart | 79, 703 |
| Corn husker | J. M. Hartnett | 81, 631 |
| Corn lusker | S. Wessou | 82, 269 |
| Corn luasker | J. I. Gorton. | 84, 876 |
| Corn husker and straw and stalk eutter | R. Warriner and J. II. Baker | 79, 166 |
| Coru husker, sheller, de | M. Jones. | 77, 494 |
| Corn husker, sheller, and stripper | F. Hafeltinger and R. N. Eagle | 84, 419 |
| Corn, Musking ..................... | II. W. Knowlton..... | 73, 251 |
| Corn-husking machine | D. Sager | 79,011 |
| Corn-husking machine | D. Bookwalter | 83, 033 |
| Corn-husking machine and fodder eutter | M. C. Jeffers | 74, 370 |
| Coru-husking pin | E. Blair- | 82,915 |
| Corn marker | J. P. Olin | 75, 190 |
| Corn marker | W. E. Phelps | 78, 997 |
| Corn marker | J. V. Eardley | 83, 612 |
| Corn, Marking and eovering | E. Barto | 83, 905 |
| Corn planter | A. Armstrong | 76, 971 |
| Corn, Plauting | D. and W. F. Chipma | 77, 255 |
| Corn popper and eoffee roaster | L. A. Warner | 76, 362 |
| Corn sheller. | J. I. Hamilton | 73, 323 |
| Corn sheller. | P. C. Chipron | 74,300 |
| Corn sheller | M. and S. Housman | 74, 364 |
| Corn sheller. | J. A. Merriman. | 74, 569 |
| Corn sheller | J. Warren | 74,643 |
| Corn sheller. | E. F. Sherman | 74, 720 |
| Corn sheller. | J. R. Wilbur | 74,965 |
| Corn sheller | J. Brinkerlioff | 74, 981 |
| Corn sheller | C. II. Brady | 76, 154 |
| Corn sheller. | J. Warren | 77, 227 |
| Corn sheller. | J. H. Sharp- | 77,410 |
| Corn sheller. | d. C. Zinmmerman | 78, 714 |
| Corn sheller. | W. Roberts | 79,007 |
| Corn sheller. | J. H. Melheeters and P. P. | 79, 675 |
| Corn sheller | M. Day | 79, 961 |
| Corn sheller | M. Day | 79, 962 |
| Corn sheller | A. C. Mills | 30, 362 |
| Corn sheller | W. H. Whiterow | 81, 121 |
| Corn sheller. | G. F. Johnson | 81,375 |
| Com sheller. | D. Baeon | 81, 458 |
| Corn sheller. | D. Codd | 83, 832 |
| Corn sheller | E. Dond | 84, 173 |
| Corn sheller. | J. A. Canldwell | 84, 610 |
| Corn sheller. | J. P. Smith | 85, 035 |
| Corn sheller and apple grinder, Combined | M. H. Ripley and W. N. Temp | 82, 250 |
| Corn sleller and eleaner | N. Shock | 82, 039 |
| Corn sheller and straw eutter, Combined | C. R. Hewett | 73, 184 |
| Corn sheller, ILand. | C. Christian | 75, 368 |
| Corn-shelling maehine | J. S. Raekham | 83, 314 |
| Comet, \&e. | I. Fiske | 74, 331 |
| Cornice and the like from paper, Molding | L. W. Kimball | 85, 312 |
| Cornice for building. | C. C. Hare | 78, 083 |
| Cornice, Ruming | A. Leverty. | 78, 381 |
| Corns, bunions, \&e., Compositiou for cu | A. J. Ferguson | 81, 486 |
| Corpse preserver. | M. E. Mott. . | 78, 314 |
| Corpse preserver. | J. J. Reichert. | 82, 552 |
| Corpse-preserving ease | J. S. Waternan. | 76,568 |
| Corset | C. Z. Cummings | 73, 235 |
| Corset | L. II. Foy ...... | 79,647 |
| Corset | T. B. De Forest | 80, 462 |
| Corset | E. J. Meriman | 81,926 |
| Corset | W. W. Netterfield | 82, 147 |
| Corset, abodominal and skirt supporter | J. MeNeven | 80, 988 |
| Corset, Busk or stay for | 'I. B. De Forest | 82, 209 |
| Corset, Children's | MI. B. Solonion | 76, 354 |
| Corset elasp | W. B. Cargill. | 75, 856 |
| Corset fastening | W. B. Cargill. | 78, 056 |
| Corset fastening | W. B. Cargill. | 73, 873 |
| Corset fastening | P. H. Niles and F. W. Marsto | 84, 899 |
| Cosmetic. | J. M. Wilson. | 74, 781 |
| Cotton and other plants, Cultivating | P. Poullain. | 78, 233 |
| Cotton and wood, Preparing | A. G. Diru. | -77, 011 |
| Cotton ehopper | I. J. Kidd | 77, 293 |
| Cotton eleaner | J. W. Thorn | 74, 776 |
| Cotton, Cleaning | I. H. Hilton | 74,822 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Coupling, Car | C. R. Hardy | 80,730 |
| Coupling, Car | O. Hewes. | 80, 735 |
| Coupling, Car | E. W. Chadwick | 81, 067 |
| Coupling, Car | T. Arndt | 81, 323 |
| Coupling, Car | L. Monzert. | 81,397 81,551 |
| Coupling, Car | A. Sanders. | 81, 689 |
| Coupling, Car | T. II. Bomar | 81, 711 |
| Coupling, Car | A. C. Tieheno | 81, 961 |
| Coupling, Car | J. M. Cook. | 81, 985 |
| Coupling, Car | II. C. Glasgow | 82, 707 |
| Coupling, Car | H. C. Glasgow | 82, 708 |
| Coupling, Car | S. Madden. | 82, 966 |
| Coupling, Car Couplins Car | G. S. Aeker | 83, 8125 |
| Coupling, Car | J. P. Freeman | 83, 272 |
| Coupling, Car | F. Coffrin | 83, 464 |
| Coupling, Car | I. M. Bartholmess and C. | 83, 591 |
| Coupling, Car | J. K. Landis | 83, 715 |
| Coupling, Car Coupling, Car | J. Elbertson. | 83, 945 |
| Coupling, Car | J. Osman and J. F. Potter | 84, 066 |
| Coupling, Car | J. D. M. Armbrust. | 84, 465 |
| Coupling, Car | E. Russell. | 84, 648 |
| Coupling, Car | C. Kohler | 84, 700 |
| Coupling, Car | O. S. St. John | 84, 716 |
| Coupling, Car | C. MeInturff | 94, 747 |
| Coupling, Car | W. G. Bell. | 84, 147 |
| Coupling, Car | A. W. Bompson. | 85, 359 |
| Coupling, Car | O. S. St. John. | 83, 489 |
| Coupling, car, Automatie | A. J. Elder | 85, 052 |
| Coupling, ear, Automatic | W. Bragg. | 83, 358 |
| Coupling, ear, Automatie | P. Laflin. | 83, 572 |
| Coupling, car, Automatie | H. Tarbox. | 83, 673 |
| Coupling, ear, Automatie | W. W. Jeffery and C. Sny |  |
| Coupling, ear, Railway. | 1. A. Cowell | 82, 966 |
| Coupling, ear, Railway. | I. and J. S. Van Pelt | 77, 132 |
| Coupling, Carriage | A. S. Johnson...... | 81, 642 |
| Coupling, Carriage-axle | G. F. Smith. | 81, 115 |
| Coupling, Carriage-shaft | II. M. Beceher | 80, 267 |
| Coupling, Carriage-thill | H. B. Willeax |  |
| Coupling, Flexible pipe-joint |  |  |
| Coupling for railroad-ear heaters, Stean | G. A. Fullerton | 85, 377 |
| Coupling for railroad-train heaters | J. R. Guy |  |
| Coupiing for seetional vessels | L. B. Raymond and W. Ha | 75, 645 |
| Coupling for the hounds and poles of w | F. Bremerman | 84, 513 |
| Coupling, Hose. | R. J. Gaines |  |
| Coupling, Hose | C. F. Hartwig | 74, 210 |
| Coupling, Hose | J. Steger. | 74, 959 |
| Coupling, Hose | P. H. Niles. | 76, 503 |
| Coupling, Hose | W. Hamilton | 79, 343 |
| Coupling, Hose | L. W. Hauson and S. Bush. |  |
| Coupling, Hose | L. B. Forester. | 80, 820 |
| Coupling, Hose | H. C. Bull and S. T. Shelley | 83, 455 |
| Coupling, Hose and pipe | M. S. Curtis and W. D. Tew |  |
| Coupling, Hose, Conneeting dissimilar | W. H. Paige. | 79, 592 |
| Coupling, Hose, Paeking for | R. J. Gould. | 75, 151 |
| Coupling, Joint Universal | W. Smead. | 79, 153 |
| Coupling, Pipe.......... | L. Wilson. | 73, 422 |
| Coupling, Pipe. | W. H. Yeatou |  |
| Coupling, Pipe. | H. P. Garabedian | 84, 875 |
| Coupling, Pipe, Extension | J. MeCarthy .... | 77, 503 |
| Coupling Pipe, for railroad-ear heater | 'T. S. Speakman |  |
| Coupling, Railroad rail | W. S. Mallory. |  |
| Coupling, Railway rail | J. T. Wilson. |  |
| Coupling, Shaft | G. W. Hubbard. |  |
| Coupling, Shaft | J. Brayley..... | 73, 293 |
| Coupling, Shaft | D. A. Austin. |  |
| Coupling, Shaft | A. Searls.. | 76, 719 |
| Coupling, Shaft | P. G. Ros8. |  |
| Coupling, Shaft | J. Lamb... |  |
| Coupling, Shaft | J. F. Light. | 78,571 |
| Coupling, Shaft | L. Bronson... |  |
| Coupling, Shaft | T. W. Porter | 79, 168 |
| Coupling, Shaft | S. Wheeler |  |
| Coupling, Shaft | W. Crandell. |  |
| Coupling, Shaft | P. Peffer. |  |
| Coupling, Shaft | J. P. Gates. |  |
| Coupling, Shaft | J. S. Upton |  |

Alphabetical list of inventions-Continued.


Alphabetical list of inventions-Continued.

| Invention or Discovery. | Namo of Patentee. | No. |
| :---: | :---: | :---: |
| Crucibles and pots, Molding | R. Taylor and F. Strow | 84,593 |
| Crusher, harrow, and roller combined | J. Simpson: | 84,386 |
| Crutch .................................. | J. C. Rhode | 73,386 |
| Crutch | J. A. Lobb. | 77, 824 |
| Crutch | A. E. Bowen | 79, 305 |
| Cue trimmer | D. Aldrich. | 77, 436 |
| Cuff and Collar | J. Blakey and A. B. Fo | 77, 573 |
| Cuffs, collars, \&c., Coating and water-pro | S. VV. II. Ward... | 83, 893 |
| Cuffs, collars, \&c., Paper, Fabric for the | J. Restein. | 85, 397 |
| Culinary apparatus. | T. V. Moore | 73, 630 |
| Culinary apparatus. | F. Morandi. | 76, 231 |
| Culinary apparatus. | H. A. Zopff | 77, 702 |
| Culinary apparatus. | G. B. Isham.... | 77, 884 |
| Culinary apparatus. | W. IV. S. Orbeto | 80, 303 |
| Culinary apparatus. | V. M. Thomas | ع0, 315 |
| Culinary apparatus. | J. S. Field. | 81,887 |
| Culinary steamer | G. W. Worster | 74, 873 |
| Culinary steamer. | W. S. Mc Neil | 75, 944 |
| Culinary ressel | H. Poole... | 81, 534 |
| Culinary vessel | IV. II. Bennett | 73, 568 |
| Culinary vessel | H. L. Dunckele | 76, 310 |
| Culinary vessel | C. A. Johnsou. | 79, 574 |
| Culinary vessel | A. F. Marston | 81,658 |
| Culinary ressel | A. C. Kasson | 84, 194 |
| Culinary ressel | J. W. Patterson | 74, 123 |
| Cultivator | D. Churchill. | 72, 975 |
| Cultivator | IV. Frantz. | 73, 087 |
| Cultivator | W. O. Hargrave | 73, 094 |
| Cultivator | E. Doolittlo. | 73, 172 |
| Cultivator | J. W. Doud. | 73, 173 |
| Cultivator | C. A. Harper | 73, 181 |
| Cultivator | J. Widman. | 73,217 |
| Cultivator | A Bennett. | 73, 224 |
| Cultivator | J. C. Boyd | 73, 291 |
| Cultivator | J. B. Sexton. | 73, 392 |
| Cultivator | J. T. Herndon | 73, 805 |
| Cultivator | C. Mefft | 73, 891 |
| Cultivator | F. M. Barrier | 73, 945 |
| Cultivator | H. 13. Arnold and J. Grimm | 74,031 |
| Cultivator | J. Juruham | 74,044 |
| Gultivator | J. I. Hand | 74, 082 |
| Cultivator | J. C. Riekerd. | 74, $1: 38$ |
| Cultivator | T. Green and J. Sommer | 74,344 |
| Cultivator | J. Snyder. | 74, 441 |
| Cultivator | L. M. Holland | 76, 634 |
| Cultivator | J. Frank | 74,678 |
| Cultivator | C. F. Tarlor | 74, 775 |
| Cultivator | J. Crowther | 75, 127 |
| Cultivator | J. Neff jr. | 75, 185 |
| Cultivator | E. B. Roberts. | 75, 578 |
| Cultivator | J. H. Reynerson | 75, 647 |
| Cultivator | B. Anyan . | 75,826 |
| Cultivator | C. Inoagland | 75, 911 |
| Caltivator | E. W. Denuis | 76, 411 |
| Cultivator | G. W. Derreose | 76, 412 |
| Cultivator | H. A. Gastor | 78, 080 |
| Cultivator | C. A. Cogswell | 78, 186 |
| Cultivator | G. D. Hart ..................... | 78,203 |
| Cultivator | A. I. Blood, A. Hathaway, and V. R. Beach. | 78,417 |
| Cultivator | W. Walton ....................... | 78, 626 |
| Cultivator | G. Garrett | 78, 799 |
| Cultivator | S. Reed | 79, 001 |
| Cultivator | J. II. Hill. | 79, 119 |
| Cultivator | E. Terril .......................... |  |
| Cultivator | A. R. Blood, A. Hathaway, and V. R. Beach. | 79, 304 |
| Cultivator | M. E. Hanover and D. D. Bailey ...... | 79, 344 |
| Cultivator | E. Phifer ........................ | 79, 387 |
| Cultivator | I. II. Davey | 79, 450 |
| Cultivator | N. A. Rand. | 79,598 |
| Cultivator | G. W. Cook. | 79, 956 |
| Cultivator | A. P. Rontt. | 80, 015 |
| Cultivator | J. I. Skelly. | 80, 094 |
| Cultivator | H. Preston | 80, 502 |
| Cultivator | R. MeCorkell | K0, 556 81,108 |
| Cultivator | D. Menchard............... | 81, 807 |
| Cultivator | M. F. Lowth and T. J. How | 82, 423 |
| Cultivator | A. T. Heflin | 82, 406 |
| Cultivator | D. S. Early. | 82, 814 |

Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Cultivator | G. and J. Seibert | 82,646 |
| Cultivator | A. H. Allison | 82, 060 |
| Cultivator | J. H. Clifton | 82, 089 |
| Cultivator | T. Thorley. | 82, 180 |
| Cultivator | J. A. \& S. S. Woodward and T. Mason | $\begin{aligned} & 8,191 \\ & 78,243 \end{aligned}$ |
| Cultivator | O. Stone <br> I C Stroud | $\begin{aligned} & 78,243 \\ & 82,562 \end{aligned}$ |
| Cultivator | W. Rodgers | 82, 753 |
| Cultivator | J. J. Thompson and V. F. Collier | 83, 111 |
| Cultivator | W. Custer | 83, 259 |
| Cultivator | A. M. Griswold | 83, 487 |
| Cultivator | J. H. B. Kelle | 83, 509 |
| Cultivator | J. Mallon. | 83, 519 |
| Cultivator | W. H. Startzman | 83, 564 |
| Cultivator | P. R. Totten | 83, 569 |
| Cultivator | S. Day- | 83, 838 |
| Cultivator | L. Clifton. | 83, 931 |
| Cultivator | A. F. Stoner | 84,016 |
| Cultivator | J. Vowles | 84, 0 29 |
| Cultivator | A. A. Harmon | 84, 184 |
| Cultivator | T. Waito | 84, 238 |
| Cultivator | T. Arndt..................... | 84, 338 |
| Cultivator | W. F. Coulter, G. F. Trabue and W. A. Lowrey. | 84, 413 |
| Cultivator | T. E. McDonald. ........... | 84, 430 |
| Cultivator | S. Way | 84, 449 |
| Cultivator | S. G. Peabody | 84,575 |
| Cultivator | A. B. Spies | 84,588 |
| Cultivator | I. H. Chappell and J. Montgomery | 84, 611 |
| Cultivator | R. Sandiford | 84, 649 |
| Cultivator | G. B. St. John | 84, 776 |
| Cultivator | C. A. Harper | 84, 823 |
| Cultivator | C. Alvord.. | 84, 931 |
| Cultivator | D. S. Slater | 75, 211 |
| Cultivator | J. H. Brinton | 84, 935 |
| Cultivator | G. M. Dwight | 85, 001 |
| Cultivator | J. Hinds and J. Gee | 85, 095 |
| Cultivator | L. D. McClintock | 85, 233 |
| Cultivator | W. A. Dryden | 85, 292 |
| Cultivator | J. W. Jessop | 85, 387 |
| Caltivator | F. J. Underwood | 85, 412 |
| Cultivator | J. Millard | 85, 467 |
| Caltivator | I. A. Palmer | 85, 471 |
| Cultivator | W. L. Stewart | 85, 488 |
| Cultivator and chopper, Cotton | Z. Doolittle and A. M. Crowder | 74,519 |
| Cultivator and corn planter combined | C. Dyer | 83, 478 |
| Cultivator and corn plow | I. B. Arthur | 74,032 |
| Cultivator and gang plow | I. B. Mahon | 75, 941 |
| Cultivator and harrow | S. Conrad | 76, 578 |
| Cultivator and harrow | A. S. White | 82, 573 |
| Cultivator and harrow combined | C. Rich and O. L. Neilsen | 73, 547 |
| Cultivator and harrow combined | N. W. Whecler | 82, 775 |
| Cultivator and harrow combined | D. M. Harkrader | 82, 942 |
| Cultivator and hoe combined. | H. P. Eckler | 78, 442 |
| Cultivator and planter | C. Rubbles. | 77, 535 |
| Cultivator and planter combined | G. W. Kinzer | 81, 177 |
| Gultivator and planter combined. | C. L. Lee |  |
| Cultivator aud planter combined, Corm | J. S. Mason | 82, 137 |
| Cultivator and planter, Corn ...... | A. Edmister ........................ | 83, 943 |
| Cultivator and plow......... | W. H. Damron, R. H. Massey and L. F. Whitman. | 73, 081 |
| Cultivator and plow. | A. Runstetler and A. Windeck ..... | 74, 005 |
| Cultivator and plow. | J. Lane | 82, 130 |
| Cultivator and plow | S. F. Soely | 84, 911 |
| Cultivator and plow, Combined | L. R. Wright............ | 81, 054 |
| Cultivator and plow, Convertible | J. Orr and H. H. Martia | 83, 404 |
| Cultivator and plow, Steam propeller | J. Marquis | 82, 558 |
| Cultivator and potato digger combined | M. Darling and H. Gray | 77, 176 |
| Cultivator and potato planter, Combine | C. F. Hoffman | 81, 371 |
| Cultivator and revolving harrow combi | S. D. Carpenter | 85, 282 |
| Cultivator and seeder | L. Bishop. | 75,845 |
| Cultivator and seeder. | H. S. Matterson. | 73, 020 |
| Cultivator and seeder. | M. D. Smith | 78, 146 |
| Cultivator and seeder | J. S. and I. Rowel | 78,833 |
| Cultivator and seeder | C. Lobdell | 84,499 |
| Cultivator and seeder, Broadcast | G. Esterly | 79, 331 |
| Cultivator and seeder combined. | A. Ingalls | 73, 336 |
| Cultivator and seeder combined | E. F. Crawford | 78, 066 |
| Cultivator and seeder combined | L. Stadler | 83, 334 |
| Cultivator and seeding machine, Comb | O. M. Pond | 75, 575 |
| Cultivator and seeding machine, Combin | S. S. Hogle | 84, 121 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Cultivator and seed sower | C. G. Curtis. | 76, 306 |
| Cultivator and shovel plow | B. F. Ream | 74, 720 |
| Cultirator and steam plow | P. H. Standish | 75, 310 |
| Cultivator and sulky plow combined | W. G. Crossley | 72, 981 |
| Cultivator, Corn | N. S. Johns | 73, 979 |
| Cultivator, Corn | W. R. Adams | 75, 713 |
| Cultivator, Coru | A. Camplell | 78, 424 |
| Cultivator, Corn | E. F. Rato | 83, 093 |
| Cultivator, Corn | D. W. Travis | 85, 189 |
| Cultivator, Corn and cotton | J. W. Milroy | 73,988 |
| Cultivator, Cornstalk cutter, \&c., C | M. Gordon. | 76, 909 |
| Cultivator, Cotton | L. Henderson | 78,088 |
| Cultivator, Double shove | S. B. Forbes | 7.7, 474 |
| Cultivator, Drag bar for | C. Alvord. | 83, 235 |
| Cultivator, Garden, and vine cutte | P. Alling | 83, 437 |
| Cultivator, Hand. | B. Taylor | 81, 034 |
| Cultivator, Hand. | J. Scheiblein and J. Heitzman | 84, 910 |
| Cultivator, harrow and plantor combine | J. G. S. Garwood | 73, 593 |
| Cultivator, Joint, and coupling for | W. H. Edwards. | 83, 944 |
| Cultivator, planter, and corn plow combi | I. B. Arthur | 77, 238 |
| Cultivator, plow, harrow, and roller comb | S. C. Thornton | 83, 675 |
| Cultivator, revolving harrow, sower and Combined. | W. P. Byler | 74, 496 |
| Cultivator, roller, and broadcast seeder, | J. P. Long | 75, 936 |
| Cultivator, Rotary | G. F. Lynch | 80, 64:3 |
| Cultivator, Rotary | S. Mahurin | 83, 187 |
| Cultivator, seeder, and harrow combined | D. Kint. | 77, 052 |
| Cultivator. Seeding | M. Hayden | 73, 972 |
| Cultivator, Sulky | E. S. Easterday | 74, 754 |
| Cultivator, Sulky | I. Welty | 80, 102 |
| Cultivator, Sulky | W. Harvey | 79,570 |
| Cultivating teeth | L. Rogers | 74, 004 |
| Cultivating teeth | J. D. 'Turk. | 75, 669 |
| Cultivating teeth | W. B. Ready | 80, 503 |
| Cultivating teeth | M. F. Lowth and T. J. How | 75, 433 |
| Cultivating teeth | D. Dean | 79, 451 |
| Capboard and table | J. C. Mack | 82, 426 |
| Cup, Egg | C. D. P. Watters | 77, 140 |
| Cup for effervescing drinks | A. Rottanzi. | 79, 689 |
| Cup, Lubricating. | M. T. Carson | 85, 164 |
| Ciup, Nursery | J. F. Leslie and E. A. Tibbets | 80, 355 |
| Cup, Oil or suet | R. Ross.. | 81, 542 |
| Cup, Pocket drinking | J. S. Towndrow | 83, 341 |
| Cup, Soap. | J. G. Harrison | 80, 408 |
| Cup, Surgical | J. G. Hadfield | 75, 412 |
| Cupola and blast furnace | C. Truesdale | 81, 561 |
| Curb for streets, roads, \&c | O. Faurot and W. P. Harris | 76, 614 |
| Curd breaker | P. Crary ................ | 73, 508 |
| Carling iron | S. E. Condon | 74, 800 |
| Curtain, Carriage, Button-hole lining for | J. Barclay | 76, 695 |
| Curtain fisture | T. J. Marinus | 73, 108 |
| Curtain fixture | C. F. Knauer | 73, 612 |
| Curtain fixture | C. R. Jenkins | 73, 811 |
| Curtain fixture | S. S. Putnam. | 74, 135 |
| Curtain fixture | J. M. Corns . | 74, 508 |
| Curtain fixture | W. Brown | 74, 661 |
| Curtain fixture | A. Studley | 75, 072 |
| Curtain fixture | W. D. Gridley | 75, 750 |
| Curtain fixture | A. Young..... | 75, 821 |
| Curtain fixture | J. Chase. | 75, 860 |
| Curtain fixture | T. Curley | 75, 869 |
| Curtain fixture | L. J. Schaefor | 76, 252 |
| Curtain fixture | J. D. and I. W. Leg | 77, 499 |
| Curtain fixture | I. Kinman ........ | 77, 890 |
| Curtain fixture | J. P. Miller | 78, 311 |
| Curtain fixture | G. M. White and C. S. Meeke | 78, 628 |
| Curtain fixture | G. F. Beardsley | 79, 435 |
| Curtain fixture | L. E. Michell | 80, 650 |
| Curtain fixture | D. E. Long. | 80,750 |
| Curtain fixture | W. H. Woods. | 80, 793 |
| Curtain fixture | J. Shorey ..... | 81, 019 |
| Curtain fixture | J. David. | 81,258 |
| Curtain fixture | J. I. Legg | 81, 280 |
| Curtain fixture | S. S. Brown | 82, 796 |
| Curtain fixtare | A. S. Gerald | 82, 824 |
| Curtain fixture | W. H. and L. Young | 83, 680 |
| Curtain fixture | B. Handforth | 83, 957 |
| Curtain fixture | L. Smith and S. Foster, jr | 84, 443 |
| Curtain fixture | A. Lovie | 85, 010 |
| Curtain fixture | H. Fininley | 85, 295 |
| Curtaia fixture | A. S. Dickin | 85, 433 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Curtain fixtures for carriages, \&c | C. E. Thompson | 76, $2 \times 3$ |
| Cushion, Bed, \&c., Filling for .... | G. C. Barney .. | 78, 412 |
| Cushion, Pin .................. | L. J, Atwood | 83, 819 |
| Cutlery .... | R. E. Curtis | 77, 175 |
| Cutlery | M. Rubel | $78,328$ |
| Cutlery | R. H. Fisher | $79,061$ |
| Cutlery | S. Mason... | $\begin{aligned} & 79,370 \\ & 79,371 \end{aligned}$ |
| Cutlery | W. C. Mason E. Day | $\begin{aligned} & 79,371 \\ & 80,062 \end{aligned}$ |
| Cutlery | A. Day- Taylor | $80,238$ |
| Cutlery | W. D. Woods | 82, 779 |
| Cutlery | W. T. Clement | 83, 831 |
| Cutlery, Attaching handles to | J. Flood | 78, 796 |
| Cutlery, Grinding.......... | W. Fosket | 74, 214 |
| Cutlery, Pocket.. | J. Carreer. | $\text { 85, } 211$ |
| Cutlery, Sharpening | A. Thayor <br> W. Clayton | $\begin{aligned} & 78,771 \\ & 80,334 \end{aligned}$ |
| Cut-off, Rainwater | I. S. Laird and W. F. Stone | 83, 176 |
| Cut-olf, Rainwater | J. Van Norman and W. You | 83, 808 |
| Cutters and knives of mowing machine ground, Clamping. | H. J. Case .-. | 80,596 |
| Cutter and mangler, Beefsteak.......... | De Witt C. Thompson | 84, 718 |
| Cutter and wrench, Pipo. | J. L. Brierly ... | 78, 047 |
| Cutter, Anvil ............ | V.A. Dunn | 75, 395 |
| Catter, Bait and vegetable | Z. G. Greenleaf | 74, 682 |
| Cutter, Bait or meat...... | N. Richardson | 73, 464 |
| Cutter, Biscuit . . . . | S. E. Clapp. | 77, 583 |
| Cutter, Bolt . | E. A. Sloat. | 73, 205 |
| Cutter, Bolt | T. W. Moore | 74, 575 |
| Cutter, Bolt | J. Johnson | 76, 197 |
| Cutter, Bolt | F. Miller. | 7\%, 637 |
| Cutter, Bolt | A. Carbnow | 78, 055 |
| Cutter, Bolt | H. Howe. | 80, 351 |
| Cutter, Bolt | T. W. Moore. | 83, 525 |
| Cutter, Bolt and rivet | J. S. Henry and A. H. Reist | 74, 087 |
| Cutter, Bread ........ | J. Madden and J. G.. Haserot | 73, 017 |
| Cutter, Bread | G. I. Jones | 77, 383 |
| Cutter, Bread | J. D. Soles. | 81, 427 |
| Cutter, Bread and vegetable | H. A. Titus. | 74, 864 |
| Cutter, Bread, meat and vegetable | G. Stackhous | 78,149 |
| Cutter, Button-hole .-.............. | A. Humann. | 74,827 |
| Cutter, Button-hole | J. S. Crane. | 74,315 |
| Cutter, Button-hole | F. H. Walker | 79, 418 |
| Cutter, Button-hole | A.J. Lytle. | 83, 293 |
| Cutter, Button-hole | W. S. Porter | 84, 902 |
| Cutter, Cake .-. . . | G. O. Sanderson | 78, 137 |
| Cutter, Checse | M. Morse and P. W. Sawye | 78, 228 |
| Cutter, Cheese | J. G. Drehcr. | 84, 539 |
| Cutter, Cheese, and box. | S. S. Brown .... | $82,795$ |
| Cutter, Cornstalk. | J., D. and J. H. Wild | 74, 65: 76, 910 |
| Cutter, Cornstalk | M. Gordon | $\begin{aligned} & 76,910 \\ & 75,508 \end{aligned}$ |
| Cutter, Feed | T. P. Allen <br> N. McLeod | $\begin{aligned} & 75,508 \\ & 83,984 \end{aligned}$ |
| Cutter, Feed | N. McLeod <br> V. Doane, jr | $\begin{aligned} & 83,984 \\ & 83,048 \end{aligned}$ |
| Cutter, Fish-bait | E. Doane, jr | $\begin{aligned} & 83,048 \\ & 83,571 \end{aligned}$ |
| Cutter, Fodder and corn-husking mach | M. C. Jeffers. | 74, 370 |
| Cutter for leather, \&c., Cylindrical.... | J. H. Golding | 85, 085 |
| Cutter, Harvester................... | T., R. and S. Knowles | 74, 550 |
| Cutter, Harvester. | E. M. Allen..... | 76, 135 |
| Cutter, Harvester. | M. Lewis. | 78, 460 |
| Cutter, Harvester | 'T. J. Christy | 78,515 |
| Cutter, Harvester | J. T. Norris | 78,889 |
| Cutter, Harvester. | W. N. Whiteley | 81, 044 |
| Cutter, Harvester, Rest for grinding | T. Brett. . | $71,883$ |
| Cutter, Hay.......-...-. .-. - . . . . . . . | F. Gerfen -........................ | 78,369 84 |
| Cutter, Hay | H. Kinsey, F. W. Kissell, J. M. Smith. | 84, 063 |
| Cutter head. | G. Rowe and S. W. Nelson.- | 79,690 |
| Cutter head. | E. S. Wright. | 81, 859 |
| Cutter head. | S. Fawcett. | 82, 211 |
| Catter head. | W. G. Farmer | 82, 699 |
| Cutter head for tenoning blind slat | M. W. Clark | 76, 052 |
| Cutter head for wood-planing machine | T. Tostevin | 76, 556 |
| Cutter, Ice ...... . . . . . . . . . . . . . . . . . . . . | G. R. Marvin. | 74, 236 |
| Cutter, Ice. | F. G. Siemers | 81, 303 |
| Cutter, Ico. | C. W. Flint . .-. | 85, 080 |
| Cutter, Ice. | G. L. Cummings | 85, 217 |
| Cutter, Meat | J. Naeher. | 74, 409 |
| Cutter, Meat. | J. E. Smith | 74,947 |
| Cutter, Meat. | A. J. Eddy | 77, 014 |
| Cutter, Meat. | C. Welte.. | 77, 143 |

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| Invention or Discovery. | Name of Patentee. | Na |
| :---: | :---: | :---: |
| Cutter, Meat. | S. L. Stockstill and H. H. Dill | 79,085 |
| Cutter, Meat. | H. Obrecht. | 79, 679 |
| Cutter, Meat. | C. A. Foster | 79, 902 |
| Cutter, Meat Cutter, Meat | D. Slaughter <br> H. Howe... | 80,675 81,088 |
| Cutter, Meat. | F. G. Siemers | 81, 421 |
| Cutter, Meat. | J. G. Perry. | 83, 308 |
| Cutters of mo | W. H. Laubaeh | 74, 707 |
| Cutter, Paper. | T. R. Timby | 73, 674 |
| Cutter, Paper, and arm | C. 13. Dickinson | 78, 192 |
| Cutter, Peg.. | D. B. Sanderson | 76, 949 |
| Cutter, Pipe. | J. Peace | 81, 402 |
| Cutter, Pipe and bolt | G. B. Kirl | 73, 813 |
| Cutter, Pipe and rod | 1). F. Hartiord | 73, 528 |
| Cutter, Pipc, Self-feeding | M. H. Freeman | 74, 527 |
| Cutter, Root | J. and W. L. Heberling | 76, 912 |
| Cutter, Root | G. S. Perfater. | 84, 374 |
| Cutter, Rotary | H. Disston. | 79, 213 |
| Cutter, Slate. | H. Hopper and J. G. Metzell | 83, 6.34 |
| Cutter, Straw | A. J. Bell................... | 73, 157 |
| Cutter, Straw | J. F. Hammond. | 73, 180 |
| Cutter, Straw | W. H. Evans and W. H. Wain | 73, 961 |
| Cutter, Straw | L. B. Hoit | 75, 269 |
| Cutter, Straw | C. A. Lundy | 75, 437 |
| Cutter, Straw | J. J. Andrew | 76, 137 |
| Cutter, Straw | J. Langhlin.. | \%6, 209 |
| Cutter, Straw | G. W. Parsons | 77, 209 |
| Cutter, Straw | G. A. Edwards | 77, 599 |
| Cutter, Straw | J. Riley | 77, 662 |
| Cutter, Straw | D. Sturgis | 79, 513 |
| Cutter, Straw | S. B. Hilcs and J. B. Damer | 80, 175 |
| Cutter, Straw | J. T. Watson and H. E. Robin | 80, 524 |
| Cutter Straw | J. Ambrun. | 83, 682 |
| Cutter, Straw | J. W. Brockway | 82, 185 |
| Cutter, Straw | E. P. Talph and J. Hannan | 83, 315 |
| Cutter, Straw | E. and J. Strothman | 84, 317 |
| Cutter, Straw, and corn sheller eombined | C. R. Hewett.. | 73, 184 |
| Cutter, Strraw, and stalk and eorn husker | R. Warrincr and J. H. Baker | 70, 166 |
| Cutter, Stubble | I. B. Conklin. | 80, 394 |
| Cutter, Thread. | C. A. Woodibury | 79, 093 |
| Cutter, Thread and twine | J. W. Strango. | 76, 113 |
| Cutter, Tobacco. | E. L. Gilman and T. S. Smith | 83, 955 |
| Cutter; 'Tube | J. De Galleford............... | 76, 729 |
| Cutter, Tube-hole | C. H. Lavis | 74, 385 |
| Cutter, Vegctable | T. J. Hatfield | 73, 004 |
| Cutter, Vegetable | G. P. Hachenberg | 73, 597 |
| Cutter, Vegetable | J. Caldwell ...... | 73, 775 |
| Cutter, Vcgetable for animal food | R. I. Burbank. | 83, 828 |
| Cutter, Watch case | J. J. and J. Fortenbach | 75, 892 |
| Cutting machine. | W. H. Johnson. | 77, 985 |
| Cutting machine, Reversing | S. D. Tripp | 81, 707 |
| Cylinders and pipes, Drilling and boring | H. S. Fairbanks | 85, 203 |
| Cylinder, Card........................... | J. M. Stono | 79, 872 |
| Cylinder, Cutting out section of angular | J. O. Joyce. | 84, 697 |
| Cylinder for taming hides, Revolving | J. IV. Lull... | 76, 784 |
| Cyliuder, Glass, Sizing | S. R. Wilmot | 84, 040 |
| Cylinders, Lowering | G. R. Bramhall |  |
| Cylimders of carding engines, Attaching Cylimder Steam | D. H. Rowe | 85, 133 |
| Cylinder, Steam. <br> Cylinder, Turning | W. Inglis. | 85, 098 |
| Cylinter, Turning. | J. M. Poole. | 79, 683 |
| D. |  |  |
| Dairy and water elevator eombined | H. N. Brooks |  |
| Dam, Coffer .................. | E. Bell........ | 73, 566 |
| Dam, Portable and adjustable still Damper. | S. Lewis.... | 80, 492 |
| Damper...... | J. C. Hhades | 80,223 80,476 |
| Danper | D. b. Cox. | 80, 920 |
| Damper for hot-air furnace. | A. H. Mershon. | 7\%, 512 |
| Damper, Mluminating | J. H. Koyser.. | 82, 228 |
| Damper, Stove-pipe | A. Colton ... | 75, 863 |
| Damper, Stove-pipe | D. A. Whito. | 79, 041 |
| Damper, Stove-pipo | J. Healey, jr | 79, 758 |
| Damper, stove-pipe | L. S. Enos . | 79, 817 |
| Damper, Stove-pipe | J. Johnson | 79, 836 |
| Damper, Stove-pipe | F. D. Pastorius | 80, 832 |
| Damper, Stove-nipe | G. Tamkin.... | 82, 565 |
| Damper, Stove-pipe | J. C. Kennedy | 82, 848 |
| Damper, Stove'pipe | W. H. Deily | 83, 139 |
| Dimmer, Stove-pipe | L. O. Allen.. | 84,930 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Dish, Covered | W. A. Fenn | 78,366 |
| Dish washer | C. Messenge | 84, 431 |
| Dishes, Washing | L. R. and E. A. Witherell. | 85, 155 |
| Disinfectant or ozone generato | W. H. Ford and S. Logan | 85, 297 |
| Disks from metal, Pnnching and raising | C. Diedrichs .... | 73, 784 |
| Dislocations and fractures, Apparatus fo | E. H. Barnes | 76,382 |
| Distillery | H. H. Kirk. | 74, 098 |
| Distilling and condensing spirits a | H. G. Dayton | 84,479 |
| Distilling and rectifying | C. Gresiuchna | 73, 092 |
| Distilling apparatus | A.J. Rieley | 77,216 |
| Distilling apparatus | A. Webster | 78,498 |
| Distilling apparatus | A. A. Meyendorff | 78,678 |
| Distilling apparatus | D. Savalle. | 79, 260 |
| Distilling apparatus | W. Corficld | 85, 286 |
| Distilling apparatus | W. Corfield | 85, 287 |
| Distilling apparatus for spirits | J. C. Cookson | 81, 605 |
| Distilling apparatus for spirits | D. Green. | 81, 624 |
| Distilling spirituous liquids | J. F. Collius | 73, 539 |
| Ditches, Cutting open.. | J. N. Smith and W. O. Buckl | 80, 880 |
| Ditcling and boring machine, Combined | I. B. Jones | 82, 846 |
| Ditching and grading machine | F. H. De Tray | 73,441 |
| Ditching and grading machine | F. M. Howard and D. W. A | 77, 487 |
| Ditching machine. | E. Worth and C. A. Davis | 73, 560 |
| Ditching machino. | A. A. Fuselier | 74,074 |
| Ditching machine. | W. Gause. | 74, 338 |
| Ditching machino | J. King | 74,549 |
| Ditching maehine | I. M. Williams | 74,653 |
| Ditching maehine | A. C. Decker | 76, 172 |
| Ditching machine | W. A. Nichols | 76, 237 |
| Ditching machine | J. Vaughn and E. Chamness | 76, 359 |
| Ditching machine. | J. Masters | 76,788 |
| Ditching maehine | E. L. Forcman | 77,024 |
| Ditching machine | G. H. Stevenson | 77, 930 |
| Ditching machine | E. Barnes. | 77, 949 |
| Ditching maehine | T. B. Fagan | 78, 198 |
| Ditching machine | P. O'Connor and M. Collins | 79,851 |
| Ditching maehine | W. R. Selfridge | 80,092 |
| Ditching maehine | J. Marsh | 83, 296 |
| Ditehing maehine | L. Riekard. | 84, 136 |
| Divider and ealipers | E. S. Scripture | 73, 126 |
| Dog power | A. W. Hager and J. II. S. G | 84, 354 |
| Dolls' heads, Construction of | G. H. Hawkins | 81, 999 |
| Donkey, Mechanieal | A. and W. Shedlock | 74, 772 |
| Door | G. M. McMahan | 76,790 |
| Door, \&c., Cross-bar lock for | J. E. Hanger. | 78, 960 |
| Door, \&c., Retaining device f | L. T. Howell | 83, 967 |
| Door and gate elose | H. N. Conklin | 88, 804 |
| Door and shutter fastencr | J. Auser. | 84,984 |
| Door and shatter, Metallic | C. K. Marshall | 78, 218 |
| Door and paekage holder. | J. K. MeDonald | 76, 204 |
| Door and window eaps, Molding metal | J. Parkin and J. H. Smith | 83, 200 |
| Door and window eatch ............... | S. W. Gear................ | 78, 521 |
| Door, bake oven, Attachment for | S. Morton. | 78, 754 |
| Door button. | W. E. Sparks | 75, 996 |
| Door direetory | L. Burger.... | 77, 450 |
| Door fastener. | G. F. Perkins and S. F. Gibbs | 77, 651 |
| Door fastener | W. J. Ross. | 84, 767 |
| Door fastener | J. M. Clark | 85, 165 |
| Door fastener | J. O. Reillcy | 85, 243 |
| Door fastener ..... | J. I. MeElioy and J. H. Holl | 85, 321 |
| Door fastening and alarm | A. F. Kitchen ................ | 84,362 |
| Door, Guard fastener for | E. C. Cochrame | 79, 550 |
| Door holder | J. K. Clark .. | 80, 390 |
| Door holder | G. C. Bunsen | 81, 746 |
| Ooor holdcr, Spring | J. B. Okey . | 73, 829 |
| Door, Iron | L. Hover.. | 83, 063 |
| Door knols to spindles, Attaching | W. Boel | 75, 847 |
| Door of fire-proof sa | W. B. Dodds. | 75, 389 |
| Doors open, Holding | W. WV. Green, jr | 84, 352 |
| Door panel. | L. W. Kimball. | 80, 972 |
| Door retainer | G. W. Perry and J. D. Billing | 84, 756 |
| Door, Spring catch and stop for | C. W. Barnes . | 78, 355 |
| Door stop | A. G. Stevens | 77, 122 |
| Door stop. | W. May | 83, 650 |
| Door straightcn | O. N. Ross | 79, 862 |
| Dory-boat knee | E. G. Mathews | 76,487 |
| Doubletree | M. V. B. Williamson | 74, 471 |
| Doubletree...... | H. Palmer and A. N. Case | 80, 872 |
| Doubletree, Compound.. | J. Wykoff. | 82, 781 |
| Doubletrce, Draught equaliz | M. V. B. Williamson | 74, 470 |
| Doubletree, Draught equalizer for | R. F. Judson | 76;466 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Doubletree, Equalizing | E. Griswold, J. B. Cramer, and W. Blay | 74, 347 |
| Dough raiser and spon | W. Pearce | 79, 680 |
| Dough for the manufacture of bread. expanding, and shaping. | J. Perry | 78, 232 |
| Dough kneader ........................ | S. H. Lombard. | 78, 106 |
| Dough kneader | C. I. Wilmans and W.J. Wolf | 78, 778 |
| Dough mixer. | F. Grenier | 82, 710 |
| Dough, Rolling. | N. Long | 78, 300 |
| Dovetailing machine | R. Gould | 80, 942 |
| Dovetailing machine | C. F. Kuhnle | 84, 884 |
| Dovetail machine | R. Wolf. | 82,816 75,506 |
| Dovetail machine | T. D. White | 77,148 |
| Dovetail maker | J. Evans | 77, 019 |
| Dovetail mortises, Making | T. D. White | 77, 149 |
| Dovetails and lugs, Casting | G. W. Herric | 82, 715 |
| Drafts, checks, \&c., from fraud, Secu | J. Hester | 75, 758 |
| Drain and water pipe ............. | W. P. Kirklan | 76, 778 |
| Draught attachment. | M. Adsit. | 77, 433 |
| Draught bar | D. and M. Foreman | 76, 737 |
| Dranght equalizer | J. Averill and E. S. Fitch | 73, 864 |
| Draught equalizer | G. A. Mosher | 81, 669 |
| Draught equalizer | S. Shadduck | 82, 443 |
| Draught equalizer | R. Walker and G. Trumbuil | 85, 039 |
| Draught regulator | J. W. Branham | 76, 045 |
| Drawer .-................ | H. Heath | 73, 975 |
| Drawer and bracket shelf. | L. Gibbs . | 76, 434 |
| Drawers and shirt combined | E. S. Bennett | 83, 447 |
| Drawers, Cutting out bands and fronts | L. Bennet | 74, 977 |
| Drawers, Frames for stretching | J. Dyson. | 81, 263 |
| Draw gate and shafting. | H. Bowers | 77, 575 |
| Drawing ellipses, Instrume Dray | F. Bowly .................. | 73, 290 |
| Dray ................. | E. Warren and T. Brangnin | 76,856 |
| Dredge, Oyster...... | T. P. Sink | 78, 805 |
| Dreding machine | D. C. Cregier | 81, 748 |
| Dredging machine | J. Du Bois .. |  |
| Dredging machine | A. Boschke | 82, 276 |
| Dredging machine | A. J. Gove |  |
| Dress and satchel holder combin | G. McFadden | 80,196 |
| Dresses, Cutting, Measures for. | S. P. Windle. | 76,128 |
| Dress protector | T. Himes | 79, 350 |
| Dress trimming | G. A. Jolinson | 75, 921 |
| Drier | D. Barker... | 75, 113 |
| Drier | S. L. Cheyney | 77, 253 |
| Drier | L. J. Crow and G. Sanderso | 77, 362 |
| Drier | J. Brakeley. | 77, 712 |
| Drier | H. Henlej. | 78, 285 |
| Drier | E. H. Asheroft | 79, 623 |
| Drier | ©. Crane . | 81, 606 |
| Drill | F. Vester | 75, 816 |
| Drill | F. Glasser | 81, 769 |
| Drill -............... | C. W. Le Count | 85, 107 |
| Drill and countersink | P . A. Whitney. | 74, 870 |
| Drill, Bench. | C. G. Miller . | 78, 309 |
| Drill-chuck | E. H. Babcock | 78, 916 |
| Drill, Chuck | Q. S. Backus.. | 82, 583 |
| Drill, Expanding | J. L. Sayles. | 85, 334 |
| Drill gauge | W. C. Wells. | 76, 123 |
| Drill, Graiu | C. F. Davis. | 74, 515 |
| Drill, Grain | J. P. Finch. | 75,142 |
| Drill, Grain | J. H. Shreiner. |  |
| Drill, Grain | M. L. Nickels. | 77, 924 |
| Drill, Grain | D. L. Dickson. | 78, 682 |
| Drill, Grain | J. H. Shreiner. | 81,547 |
| Drill, Grain | C. O. Gardiner | 82, 822 |
| Drill, Grain | M. F. Lowth and T. | 82, 853 |
| Drill, Grain | W. N. Hamilton. | 83, 491 |
| Drill, Grain | J. T. Lynam | 83, 517 |
| Drill, Grain | C. E. Patric. | 85, 472 |
| Drill, Hand | W. C. Burch. | 78, 183 |
| Drill, harrow, planter, \&c., Combined | D. B. Platt. | 78, 998 |
| Drill holder.. | T. K. Bacon. | 78, 251 |
| Drill holder | C. Burleigh. | 80, 386 |
| Drill hoider | W. Mall jr.- | 80, 406 |
| Drill, Ratehet | C. Sinclair... | 81, 694 |
| Drill, Rock | J. H. Thomas | 76, 118 |
| Drill, Rock | I. Peevy.. | 76, 242 |
| Drill, Rock | C. Whitmore | 81, 047 |
| Drill, Rock | G. Phillips. | 84, 576 |
| Drill, Rack | M. Keefer. | 84, 883 |
| Drill, roller, and cultivator, Combinod | T. S. Mills | 73, 365 |

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| :---: | :---: | :---: |
| Drill, roller, and seeder | L. R. Wallaco | 78; 846 |
| Drill, Seed, and corn planter | J. Weaver jr | 79, 038 |
| Drill, Seed, and roller | S. Shirley | 73, 393 |
| Drill, Seed, Haud. | W. Ledlie and G. L. Gray | 83, 180 |
| Drill sharpencr | E. W. Walton | 75, 084 |
| Drill shoe, Grain | P. and P. J. Schmitt | 80, 671 |
| Drill stock ..... | M. Hainque. | 79, 115 |
| Drill stock | C. M. Daboll | 80, 812 |
| Drill, Watchmakers' | A. Wirsching | 81, 450 |
| Drill, Well | H. M. Stow | 75, 708 |
| Drill, Wheat. | J. W. Davidson | 77, 802 |
| Drill, Wheat. | C. W. Patton. | 82, 026 |
| Drill, Wheat. | D. E. Mc Sherry | 84, 895 |
| Drilling and ta | G. Cahill...... | 77, 453 |
| Drilling jars | E. Guillod. | 84, 353 |
| Drilling jars, Construction of | E. Guillod. | 78, 955 |
| Drilling machine, Carriage | C. Burleigh. | 80, 387 |
| Drilling machinc, Rock | F. B. Doering | 77,597 |
| Drilling machine, Rock | J. C. Smith... | 80, 232 |
| Drilling machine, Rock | W. Wciler. | 80, 579 |
| Drilling machine, Rock | R. Gidly. | 84, 543 |
| Drilling machine, Stone | C. W. Mermance | 73, 717 |
| Drilling machine, Stone. | C. W. Hermance | 84, 188 |
| Driving line | L. D. Woodmansce | 75, 614 |
| Drum, Hoisting | H. Stricklcr. | 74, 445 |
| Drum, Stove. | M. S. MLorgan | 73, 990 |
| Drum, Stove . | A. F. Smith. | 73, 762 |
| Dram, Store | E. Sclbach. | 74, 772 |
| Drum, Stove | J. Voegtle | 76, 564 |
| Drum, Stove | N. Downcs. | 77, 179 |
| Drum, Stove | D. W. Cutting | 79, 212 |
| Drum, Stove | C. D. F. Smith | 82, 761 |
| Drum, Stove | J. Adams.. | 85, 196 |
| Drum, Stove-pipe | L. Dowe and A. C. Colton | 74, 520 |
| Drum, Stove-pipe | D. Knowlton. | 76, 779 |
| Drum, Stove-pipe | J. A. Lakin. | 80, 026 |
| Drum, Stove-pipe | G. S. Walker | 81, 714 |
| Drum, Stove-pipe | H. Meycr. | 82, 019 |
| Drying and ventilating ap | J, Royal .. | 74, 119 |
| Drying apparatus. | F. I. Norton | 77, 205 |
| Dummy for displaying clothing | W. E. Brock. | 76, 394 |
| Dumping and hoisting apparatus | W. B. Culver. | 84, 939 |
| Dung-drag and hook | H. W. Wciss | 84, 452 |
| Dye, Aniline. | B. Bloch. | 79, 942 |
| Dye, Aniline. | J, Lambert jr | 82, 129 |
| Dye, Preparation of | J. Reynolds | 73, 756 |
| Dyestuff........ | C. E. and M. E. Fox | 81, 992 |
| Dyeing | M. Waterhouse. | 78, 559 |
| Dyeing piece goods | H. Burrows. | 74, 985 |
| Dyeing, Preparation of woolen cloth for | W. H. Salisbu | 84, 582 |
| Dycing textile fabrics with aniline color | I. O. Iversen | 83, 502 |
| Dyers and bleachers, Implement for. | H. W. Holly | 73, 331 |
| Dynamometer | J. Emerson | 79, 561 |
| Dynamometer | J. Emerson. | 79,503 |
| E. |  |  |
| Ears for can and kettle bails | T. Evans. | 76, 928 |
| Eaves trough. | J. Reinig. | 81, 818 |
| Eavcs-trouth hanger | D. Arter | 84, 467 |
| Eaves troushs, Forming | J. Brett. | 82, 077 |
| Eaves troughs, Hanging | H. M. Gilbert and F. Elberson | 80, 473 |
| Eccentric taps, Cutting | B. F. Beo........... | 77, 951 |
| Eccentric, Variable | T. Kcelcr and G. S. Avery. | 77, 197 |
| Eel-pot | G. D. Allen ........... | 82, 913 |
| Eggs, \&c., Packing | A. Thomas | 74, 257 |
| Eggs, Boiling. | I. Dimock | 83, 264 |
| Eggs, Compound for prescrving | J. B. Patterson. | 81, 104 |
| Eggs, Preserving. | A. Van Camp. | 74, 733 |
| Eggs, Preserving | J. Brakoley. | 75, 242 |
| Eggs, Preserving | N. Patten.- | 85, 328 |
| Egg beater | H. W. Louden | 74, 837 |
| Egg beater. | S. C. Wilson. | 75, 340 |
| Egg beater. | IV. H. Peirco. | 75, 787 |
| Egğ beater. | W. N. Angus | 76, 970 |
| Egg beater. | L. T. Blake . | 80, 440 |
| Egg beater. | D. D. Mackay | 85, 460 |
| Egg cartier | \%. Dorn... | 81, 151 |
| Egg curricr, Safety attachment for | A. H. Bryant | 81, 593 |
| Egg carricr, Suspension | A. H. Bryant. | 75, 623 |
| Egg holder..- | F.R.Harbaugh | 83,281 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Engine, Stcam | D. Wood and S. W. Robinson | 78, 853 |
| Engine, Stean | W. G. Savage | 79, 86.3 |
| Engine, Steam | T. Reesc | 80, 011 |
| Engine, Stean | J. B. Tarr | 83, 224 |
| Engine, Steam | E. C. Bacon | 84, 249 |
| Engine, Steam, and cane mill combined | J. Moore | 74,574 |
| Engiuc steam chest, Steam | W. Stamp | 84,014 |
| Engine, Steam covering | T. Alsop | 81, 455 |
| Encine, Steam cut-off | G. W. Rawson | 82, 751 |
| Engine, steam, Cut-off | G. J. Roberts | 82,556 |
| Engine, Steam fire | E. P. and H. S. Col | 79, 730 |
| Enwine, stean, Loe | A. Hampel and J. | 79, 341 |
| Engine, steam, Oscillating | R. J. King | 82, 126 |
| Engine, steam, Oscillating | F. Millward | 84, 206 |
| Engine, Steam-port of steam | H. R. Camfield | 85, 278 |
| Eugine, Steam pump... | J. Sutherland and F. Moakley | 75, 998 |
| Cngine, Steam pumping | J. Tufts | 77, 336 |
| Engine, Steam pumping | G. W. Perry | 82, 548 |
| Engine, steam, Reciprocating | D. Stoddart | 79, 274 |
| Engine, steam, Reciprocating | A. C. F, Frankli | 81, 766 |
| Eugine, steam, Reciprocating | J. B. Pedrick | 82, 027 |
| Engine, steam, Reciprocating | F. S. Pease | 82, 437 |
| Engine, steam, Regulator for | J. F. Belleville | ع2, 276 |
| Engine, Traction. | T. Schefller and H. Morrison | 73, 051 |
| Engine, Variable exhaust for non-conden | J. H. Baker | 75, 723 |
| Enginery, Steam | W. Goodwin | 84, 819 |
| Engraver's plate | T. Bardon | 81, 461 |
| Engraving machine | J. C. Guerrant and B. J. Field | 83, 708 |
| Engravings and photographs, Mounting | J. L. Daffee | 78,195 |
| Entrails, Clcaning | J. A. Huss | 84,358 |
| Ervelope | F. M. Shields | 73, 203 |
| Envelope | S. Ullman | 74, 867 |
| Envelope | R. S. Clark | 76, 303 |
| Envelope | C. R. M. Pohle | 77, 316 |
| Envclope | J. B. Wheeler | ع0, 257 |
| Envelope | S. Ullman. | 81, 962 |
| Envelope | S. Ulman. | 81, 963 |
| Envelope | C. R. M. Pohlc | 84.840 |
| Envelope | G. II. Mathews | 84, 501 |
| Envelope | G. W. Starr | 85, 253 |
| Envelopes, Drying | W. E. Loekwood | 73, 350 |
| Envelope machinc | A. A. Rheutan | 74,140 |
| Envelope machine | J. Ball | 78,353 |
| Envelope, Needle | A. James | 83, 284 |
| Equalizer | A. Lefever and R. K. Laraway | 77, 200 |
| Equalizer, Three-horse. | G. Cramton | 74,053 |
| Equalizer, Three-horse | G. Cramton and P. A. Spicer | 80,060 |
| Eraser | W. A. Morse and J. G. Powell | 78,887 |
| Eraser, Tubbe | W. N. Bartholomew | 84, 395 |
| Escapement. | J. V. D. Patch | 80, 209 |
| Eseapement. | W. C. Kellum. | 81,789 |
| Escapement | W. C. Kcllum. | 81, 910 |
| Ether, Sulpl | F. Renz | 80, 835 |
| Evaporator.. | P. J. Badoux | 78, 639 |
| Evaporator. | N. Evinger. | 80, 342 |
| Evaporator. | B. F. Cauffman | 81, 752 |
| Evaporator | J. Harris. | 84, 277 |
| Evaporator, Antomatic feeder for | J. Smead | 77, 666 |
| Evaporator, Drum | D. Wolf. | 81, 236 |
| Evaporator for sirup pan | O. W. and II. F. Burnham | 80, 804 |
| Evaporator, Salt and sugar | J. M. Thompson | 78, 028 |
| Evaporator, Sugar | W. C. Smith | 77, 688 |
| Evaporator; Sugar juice | J. Taylor | 83, 106 |
| Excavating maehine | J. Robertson | 80, 225 |
| Excarating under water, Method of | A. Duvall. | 75,003 |
| Excavating under water, Mcthod of | A. Duvall | 75, 004 |
| Exeavating vehicle. | J. P. Smith. | 77, 329 |
| Excavator | C. F. Woodrufí | 80, 696 |
| Excavator | 1. Brown | 81, 334 |
| Excavator | B. T. Stowell | 84, 230 |
| Excavator or shovel. | W. T. Nichols | 75, 783 |
| Excavator, Rotary | J. Deveraux | 80, 813 |
| "Excelsior." Machine for making | G. Brooks and S. Clement | 75, 728 |
| Excreiso, Apparatus for | G. H. Taylor | 75, 217 |
| Exercise, Apparatus for | G. H. Taylor | 75, 218 |
| Exercising apparatus. | G. W. S. Hall | 74, 683 |
| Extracts and decoctions from Coffce, \&c. | L. Brauer | 84, 609 |
| Extracts, Concentrating | T. W. Johnson | 81, 643 |
| Extracts from bark, \&c., Making | J. W. Joncs | 76, 775 |
| Extracts from bark for tanning, \&c., Obt | B. Irving | 85, 173 |
| Extracts from tan hark, Making | T. W. Johur | 83, 389 |
| Extracts of bark for tanning, \&c., Concen | B. Irving ... | 85, 174 |

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| Faucet, Boring | J. R. Lawrence aud I. G. Johnson. | 82, 851 |
| Faucet, Bottle | W. I. Luther | 75, 557 |
| Faucet for soda-water fountain | A: M. White and E. G. Burnhan. | 76,017 |
| Faucet, Measuring.. | F. Saunders. | $74,605$ |
| Faucet, Measuring. | J. D. Smitl | 77, 928 |
| Faucet, Measuriug | T. S. Recves | 80, 307 |
| Fiaucet, Measming | O. L. Whecler.. | 80, 847 |
| Faucet, Measuring | O. B. Blake and O. E. Colony | 80, 852 |
| Faucet or cock.... | C. Ilarrison ........-. .-. . | 81, 900 |
| Faucet, Siphou | IT. W. Plum | 75, 191. |
| Feathers, Bleaching and dyeing | A. P. Viol and C. P. Duflot, jr | 81, 709 |
| Feathers, Cleaming.............. | H. J. Beckwith .-......... | 77, 5\%1 |
| Feathers, Cleaning | I'. Taylor | 81, 841 |
| Feathers, Clcaning and renovating | D. Budd | 78, 421 |
| Feathers, Cleansing and renovatiug | H. 3. Stcelc | 76,840 |
| Fcathers, Dressiug. | A. C. Sanford | 80, 017 |
| Feather-dressing machine | S. W. Bevans. | 76, 982 |
| Feather duster............ | M. A. Goodenough | 77, 278 |
| Feather renovator | W. F. Daugherty | 80,610 |
| Feather renovator | C. E. Hendrick. | 81, 369 |
| Feather renovator | A. Bond . | 82, 200 |
| Fcather renovator | W. II. Elliot | 84, 809 |
| Feather renovator | H. I. Robluins | 81, 294 |
| Feather renovator | J. C. Moorchead and W. W. Elliott | 77,075 |
| Feather renovator | C. E. Mason and G. F. Bell. | 79,668 |
| Feather renovator | C. L. Hendrick. | 79,975 |
| Feed, Changing | İ. L. Nelsou | 74, 578 |
| Feed motion ... | A. J. Shipley | 85, 249 |
| Heed trough and rack, Combined | J. Depue. | 76, 061 |
| Fellue and spoke connection. | G. Allen | 79, 533 |
| Fellocs, Clip and ferrule for | I. dones . . . . . . . . | 73, 403 |
| Felloes, Dressiug .-.................... | W. H. Rodehcaver | 80, 013 |
| Felloes, Expanding, and tightening spo | A. N. Towne . . . | 73, 476 |
| Felt, fur, bristles, \&.c., Cutting and tri | C. F. Harlow | 79, 468 |
| Felting machine .-...................... | C. Mossant | 78, 991 |
| Felting machine | W. J. Benedict and J. Wylie | 81, 244 |
| Felting machine | A. Cattaneo | 81, 252 |
| Fence. | E. F'. Olds and Warren Clark. | 73, 257 |
| Fence. | M. D. Pratt. . . . . . . . . | 73, 260 |
| Fence. | D. Faufman | 73, 611 |
| Fence. | A. Sheldon | 73, 761 |
| Fence. | A. Todd, jr | 74, 017 |
| Fence. | A. Todd, jr | 74, 018 |
| Fence. | M. Kelly | 74, 379 |
| Fence. | M. J. Gaskill | 74, 908 |
| Frnce. | A. D. Smith and E. Stow | 75, 994 |
| Fence. | C. Lee - | 76, 475 |
| Fence. | N. L. Shaw | 7\%, 109 |
| Fience. | O. J. Everson | 77, 967 |
| Fence. | W. D. Hillis. | 79, 121 |
| Fence. | R. W. Brockway and H. Froderick | 80, 054 |
| Fence. | T. L. Burk | 80, 131 |
| Fencc | H.J. Culp. | 80, 609 |
| Fence | A. Laphan | 81, 513 |
| Fonce. | J. Southwick | 81, 836 |
| Fence. | N. Maxsou | 82, 733 |
| Fence | J. M. Chaplin | 83, 038 |
| Fence. | O. Love - . . . | 83, 184 |
| Fence and trcllis post | J. Lamont | 85, 636 |
| Feuce, Farm.... | E. Gr. McMillan | 83, 8\%1 |
| Fence, Field | D. S. Humphrey | 73, 011 |
| Fonce, Field | I. A. Gormly - . | 73, 090 |
| Fence, Ficld | I. A. Crormly | 76, 745 |
| Fence, Flood. | V. Wood ... | 78, 633 |
|  | D. P. Bird | 85, 271 |
| Fence for collecting rain-water for stocl | L. Howe | 74,699 |
| Fcnce for crossing streams ............ | W. McFarnm | 79, 141 |
| Fence for poultry yard.... | II. W. Mutt | 77, 101 |
| Feuce, Foundation for | T. W. Welch and G. B. Starbird. | 80,318 |
| Fence, Iron . . . . . . . . . . | A. Terry - .-................ | 84, 318 |
| Fence, Iron post for rail. | H. S. Brooks and J. Lchman | 78, 572 |
| Fence, Loose prairie ... | I. Van Kersou | 78, 622 |
| Fonce, Mctallic .... | M. Kelly . . - | 84, 062 |
| Fence, Panel... | C. IV. Spronll ... | 79, 698 |
| Fence, Portable | L. F. Henderson | 73, 098 |
| Fence, Portable. | H. A. Stewart | 74, 166 |
| Fence, Portable. | S. Keller ..... | 75, 551 |
| Fence, Portable. | W. E. Roberts | 76, 102 |
| Fence, Portable | L. P. Pease | 77, 687 |
| Fence, Portable. | C. S. S. Griffing | 77, 371 |
| Fence, Portable. | II. D. Smalley | 77,544 77,589 |
| Fence, Portable. | W. F. Courerse. | 77, 589 |



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| :---: | :---: | :---: |
| Filter | J. N. Lighthall | 73, 105 |
| Filter | G. T. P'almer | 73, 751 |
| Filter | L. Holms | 78, 524 |
| Filter | W. C. Long and H. A. Lowus | 81, 386 |
| Filter | T. Simmons............... | 82, 255 |
| Filter | C. H. Jaekson | 85, 449 |
| Filter and eool | N. Downes. | 84,482 |
| Filter and heater, Feed-wate | J. Arınstrong | 81, 971 |
| Filters, Bone, eoal and other | 11. Torstriek | 85, 256 |
| Filter, Cistern ............. | N. Gonner and H. Bade | 74,215 |
| Filter for faueet, Adjustable | H. G. Fuhrmann | $80,469$ |
| Filter for sacchariue and other liquids | II. Merrill | $82,735$ |
| Filtering and eooling liquids. Filtering dmaning aud dryinc Centrifu | D. E. Somes R. J. Barr | $\begin{aligned} & 82,611 \\ & 80,702 \end{aligned}$ |
| Filtering, draining, and drying, Centrifu Finish for painted surfaces. | R. J. Barr <br> H. T. Payne and W. Ayres | $\begin{aligned} & 80,702 \\ & 73,377 \end{aligned}$ |
| Fire aud steam regulator. | A. Kipp, ir . .............. | 81, 649 |
| Fire-arm | C. Slotterbek | 84, 224 |
| Fire-arm, Breech-loading | S. Belden and J. F. Crabtree | 85, 268 |
| Fire-arın, Breeeh-loading | J. E. McBeth | 73, 357 |
| Fire-arm, Breech-loading | F. E. Boyd and P. S. Tyl | 73, 494 |
| Fire-arm, Breech-loading | F. Muller | 74, 119 |
| Fire-arm, Breech-loading | II. Lord. | 74, 387 |
| Fire-arin, Breeeh-loading | J. Rider | 74, 428 |
| Fire-arm, Breeeh-loading | S. S. Rembert | 74, 590 |
| Fire-arm, Breceh-loarling | W. Morganster | 74, 712 |
| Fire-arm, Breeeh-loading | J. Werndl | 74, 737 |
| Fire-arm, Breeeh-loading | B. H. Jenks | 74, 760 |
| Fire-arm, Breeeh-loading | C. Callaghon. | 74, 888 |
| Fire-arm, Breeeh-loading | J. W. Cochran | 75, 627 |
| Fire-arm, Breech-loading | C. H. Alsop. | 76, 374 |
| Fire-arm, Breech-loading | J. Broughton | 76,595 |
| Fire-arm, Breeeh-loading | H. O. Peabody | 76,805 |
| Fire-arm, Breech-loading | F. II. Escherielt | 78, 519 |
| Fire-arm, Breech loading | S. Norris, and W. and P. Ma | 78, 603 |
| Fire-arm, Breech-loading | D. B. Wesson | 78, 847 |
| Fire-arm, Breech-loading | W. Morganstern | 79, 291 |
| Fire-arm, Breeeh-loading | T. Wilsou. | 80, 043 |
| Fire-arm, Breeeh-loarling | J. E. MeBeth | 80, 98.5 |
| Fire-arm, Breeel-loading | B. Burton. | 81, 059 |
| Fire-arm, Breeeh-loading | J. V. Meigs | 81, 100 |
| Fire-arm, Breeeh-loading | J. Merlett. | 81, 283 |
| Fire-arm, Breeeh-loading | C. B. Riehards | 81, 290 |
| Fire-arm, Breech-loading | W. R. Pape | 84, 37:3 |
| Fire-arm, Breeeh-loading | A. Wyley | 84, 459 |
| Fire-arm, Breceh-loading | I. M. Milbank | 84, 566 |
| Fire-arm, Breeeh-loading | E. Von Jeinseu. | 84, 922 |
| Fire-arm, Breeeh-loading | E. Allen | 84, 929 |
| Fire-arm, Breech-loading | J. R. Cooper | 84, 838 |
| Fire-arm, Breech-loarding | P. J. J. Noël | 85, 120 |
| Fire-arm, Breech-loading | H. Berdan | 85, 162 |
| Fire-arm. Breech-loading | E. F. Gunn | 85, 442 |
| Fire-arm, Double barrolled | E. Maynard | 83, 194 |
| Fire-arm, Magazine . | V. Fogerty. | 82, 819 |
| Fire-arm, Magazine | L. Whieeloek. | 84, 508 |
| Fire-arm, Magazine | F. Vetterlin | 8.5, 494 |
| Fire-arm, Revolving | G. Holman. | 75, 016 |
| Fire-arm, Revolving. | F. A Thaer | 82, 258 |
| Fire-arm, Revolving | F. Wesson | 84, 976 |
| Fire-arm, Revolving | J. Adams | 85, 350 |
| Fire-arm, Safety guard fo | B. P. Cutler | 76, 058 |
| Fire, Composition for kiudling | W. C. Philbrick | 73, 922 |
| Fire, Compound for extinguishing | E. A. Galbraith | 80, 720 |
| Fire detceter. | IV. C. Grimes | 76, 911 |
| Fire escape | E. Hawthorne. | 73, 007 |
| Fire escape | J. Paar | 76, 097 |
| Fire escape | A. Robinson | 76, 527 |
| Fire eseape | T. Thompson, jr | 81, 436 |
| Fire escarpe | S. A. Swahn and C. C. Sehmitt | 82, 176 |
| Fire escape | I. L. Jürgens | 82, 325 |
| Fire extinguisher | W. H. Laubaeh | 82, 42\% |
| Fire extinguisher, Steam | J. Souther | 79, 021 |
| Fire, Extinguishing | W. Mullally | 78, 636. |
| Fire, Extinguishing | J. Babcoek. | 80, 701 |
| Fire, Extinguisling | R. Lapham. | 81, 653 |
| Fire, Extinguishing | G. Clark, jr | 82, 471 |
| Fire, Extinguishing, Compor | T. Drew | 85, 434 |
| Fire kindler. | J. MeFarland | 79, 140 |
| Fire kindler. | V. G. Tansey | 80, 429 |
| Fire kindling | C. Gaudin, and Z. and J. Gran | 79, 903 |
| Eire kindling | I. Morris. | 83, 988 |
| Fire kindling and fuel | I. Bicknell | 72, 964 |
| Fire kindling, Composition for. | W. P. Winkley | 82, 506. |

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| :---: | :---: | :---: |
| Fire-lighter | L. H. Whitney | 74, 782 |
| Fireplaco . | C. B. Gregory. | 75, 155 |
| Fireplace | C. 13. Gregory. | ${ }^{76} 6751$ |
| Fireplace | W. 13. Coates .. | 80, 455 |
| Fireplace | D. Hattam | 80, 731 |
| Fireplace | G. II. MeElevey | 81, 389 |
| Fireplace ........... | J. Ervin, sr | 8.3, 701 |
| Fireplace and andiron | J. Pass Rhodes. | 78, 393 |
| Fire plug | J. P. Cummings | 79, 16 (10 |
| Fire pot, Timers | C. IV. Jolurston | 81, 614 |
| Fire-proof safc | H. H. Bryant. | 79, 003 |
| Firc-proof struct | H. H. Bryant | 79, 209 |
| Fire shield ............... | di C.ink... | c. $3,3,36$ |
| Fish and potatoes, Article of Fish, Convering live ....... | A. J. Smidth | ${ }_{8}^{83,735}$ |
| Fish, Conveying live .............. |  | 80, 533 |
| Fish, meats, \&c., Preserving and freczi | W. D. Cutter. | 81, 987 |
| Fishinge apparatus.................... | J. Koehler | 77, 893 |
| Fishing apparatus | J. Stetson. | 83, 74.9 |
| Fishinig at tachment for vess | T. Bell. | 80, 8.681 |
| Fishing.jig | E. U. Talbot | 75, 075 |
| Fisling tackle | L. D. Lothrop | 77, 6:83 |
| Fishing tackle | A. A. Dennett | 89, 151 |
| Fistula, \&c., Treating | E. F. Garvin | 84, 815 |
| Flame aerator.. | C. L. Browne. | 77, 799 |
| Flask, Clusing vulcanizing | I. M. Eitson. | 79, 816 |
| Flask, Deutists' | G. E. Hayes. | $\begin{array}{r}73,974 \\ 75.000 \\ \hline\end{array}$ |
| Flask, Dentists', | G. E. Donham | 84, 988 |
| Flask, Dentists | W.1. T. Fry | 80, 939 |
| Flask or Vottle | G. E. Hayes | 73, 326 |
| Flax and hemp tiber for the mandactul \&c., Preparing. | E. G. Wayman | 74, 736 |
| Flax, Breaking | A. S. Miller | 78, 811 |
| Flax, Dressing | A. S. Miller.. | 78, 810 |
| Fleecing cradlo | J. K. Alvord. | 83, 754 |
| Flesible abrader and polishing $n$ | J. II. Crane | 81, 986 |
| Flier for speedcrs | J. H. Aldricl | 83, 8.414 |
| Floek duster | H. Turner | 73, 676 |
| Flocking machine, Feeding apparatus | A. Armstrous | 75, 236 |
| Floor cloaner.............................. | R. O. Lowrey | 77, 193 |
| Floor cloth, leather, cloth, \&c., Producins | J. II. Williaus | 79, 712 |
| Floor cloth, Manufacture of | W. Huwell, J. C. Fimu and C. | 82, 119 |
| Floor covering | J. Barbian | 72, 960 |
| Floor: Mosaic | G. (r. Garibaldi | 76.742 |
| Floors, tiles, aud for other purposes, Co forming. | J. Neubrand. | 83, 529 |
| Floors, Waxing | IR. B. Walker | 77,784 |
| Flour, \&c, , ${ }^{\text {Flour }}$ | W. Craig .... | 73, 167 |
| Flour bolt. | E. H. Kecllogg | 73, 981 |
| Flour bolt. | S. A. Smith | 75, 307 |
| Flour bolt. | J. G. Humes | 79, 354 |
| Flour bolt. | C. B. Hortou | 81, 0=6 |
| Flour bolt. | If. N. Shultz | 81, 831 |
| Flour dispenser | D. L. Johuson |  |
| Flour dredge. | E. A. Goodes | 7\%,374 |
| Flour packer. |  |  |
| Flour packer | C. W ande C. L. Sho |  |
| Flour safe and sifter | GV. W. Mushes . . . | 74, 826 |
| Flue block ...... | J. Binns ... | 78.717 |
| Flue brazier, Portable upright | W. Grunert and G. E. Bingh | 75, 899 |
| Fluid, Burning - | G. W. Flowers, and J. C. a Hapmersett. | 74, 7.06 |
| Fluid, Buruing, Filtering | J. D. Kirkpatriek. | 74, 698 |
| Fluid clevator, Rotary | S. P. Ruggles | 79, 781 |
| Fluid for exciting galvanic chains. | F. T. Bakker' | 70, 766 |
| Fluid indicator. | J. Corduan. | 75, 245 |
| Fluids, Saccharine and other, Deodorizin | W. Clotgh. | 76, 389 |
| Flute. | T. Berterms | 83, 924 |
| Fluting maehino | S. Gr. Cabelt | 84, 792 |
| Fluting machine | W. D. Corrister | 75, 538 |
| Fluoride of silicium, Manufacture | C. M. M. DuMot | 80, 78.3 |
| Fly frame fiel | V. ${ }^{\text {d }}$. | 81, 099 |
| Fyy net for windo | W. J. and A. Coleman | 85, 070 |

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| Food, Composition for cattle | E. Payne | 84, 574 |
| Food for animals . . . . . . . . | J. S. Kirk | 85, 313 |
| Food for the sick, Article of | A. Meyer-Berck | 81, 190 |
| Food prepared from fish and potatoes, A | W. D. Cutter | 83, 8336 |
| Food warm, Device for keeping | 1. Bevan ....... | 76,390 80,753 |
| Foot rest, grate and fire-brick base, Com | J. H. Keyser | 80, 971 |
| Foot warmer, nurse lamp and sad-iron he | E. Small | 75, 802 |
| Foreeps, Dental ........................ | S. Woolverton | 75, 716 |
| Fore-part irons | J. Blease | 77, 246 |
| Forge, Blacksmiths' | T. S. Clark | 85, 283 |
| Forge hearth....... | R. W. Clark | 73, 502 |
| Forre, Portable | J. B. Bolinger. | 84, 048 |
| Forging apparatus | N. Peterson and G. W. Joncs | 78, 825 |
| Forging appmatus | D. Davies. | 8:2, 093 |
| Forging maehine. | IV. H. Defrees | 78, 266 |
| Forging machine | J. Copley, jr | 78,862 |
| Fork and hook combined, Manure | C. C. Cole | 74, 895 |
| Fork and hook, Convertible | L. Rigys | 73, 330 |
| Fork and kuifo. | C. A. Moore | 85, 0 こ 9 |
| Forks and knite handle | C. A. Moore | 81, 399 |
| Fork and knife holder. | J. W. Patten | 83, 503 |
| Fork and knife seourer | D. S. Marvin | 77, 632 |
| Fork blank | J. C. Riehardson | 84, 377 |
| Fork blank. | J. C. Riehardson | 85, 400 |
| Fork, Carving, and knife sharpener comb | IL. S. Seotield. | 80, 226 |
| Fork, Cook. | H. Smith | 76,835 |
| Fork, Grain and hay hoisting drum | H. Strickler | 76,954 |
| Fork, Hand | I. W. Palmer | 77, 906 |
| Fork, Hay | J. G. Hitchcoek | 73, 009 |
| Fork, May | H. F. Bemenderfer and D. IT. | 76, 98. |
| Fork, Hay. | G. M. Robinsou. | 81, 541 |
| Fork, Hay | C. S. Ambruster . | 81, 726 |
| Fork, Hay. | E. G. Dorchester and U. Scott | 84, 712 |
| Fork, Hay and manure | A. J. Martin | 79, 5<6 |
| Fork, Hay, Horse. | C. E. Gladding | 73, 179 |
| Fork, Hay, Horso. | J. H. Walker | 73, 211 |
| Fork, Hay, Horso. | D. W. Amos | 73, 222 |
| Fork, Hay, Horse. | L. Atwater. | 73, 223 |
| Fork, Hay, Horse. | I. C. Spear | 73, 403 |
| Fork, Has, Horse. | I. E. Dewey | 73, 315 |
| Fork, Hay, Horse. | E. Rhodes, sr | 73, 650 |
| Fork, Hay, Horse. | H. A. Estes. | 74, 064 |
| Fork, Hay, Horse | J. R. Lyons. | 74, 103 |
| Fork, Hay, Horse. | L. S. Mason. | 74, 106 |
| Fork, May, Horse. | J. H. Mullin | 74, 405 |
| Fork, Hay, Horse. | D. J. Howenstine | 74, 538 |
| Fork, Hay, Horse. | E. Mckenzi | 74, 563 |
| Fork, Hay, Horse. | N. Palmer | 74, 934 |
| Fork, Hay, Horse. | J. E. Lobdell | 75, 288 |
| Fork, Hay, Horse. | G. Kinney | 75, 430 |
| Fork, Hay, Horse | S. Page | 75, 4592 |
| Tork. Hay, Horse. | H. B. Steele. | 75, 481 |
| Fork, Hay, Horse. | H. C., and A. Stoaffer | 75, 48.5 |
| Fork, Hay, Horse | W. Scholl |  |
| Fork, Hay, Iforse | P. A. Mowers.. | 75, 956 |
| Fork, Hay, Horse. | J. W. Summers | 75, 997 |
| Fork, Hay, Horse | IV. Zimmerman | 76, 023 |
| Fork, liay, Horse. | I'Schweitzer | 76, 352 |
| Fork, Hay, Horso | J. O'Rourlie | 76, 511 |
| Fork, Hay, Horso. | T. H. Tears . | 76, 550 |
| Fork, Hay, Horse | J. II. Wilder. | 76, 573 |
| Fork, Hay, Horse. | A. Reyuchds. | 76, 661 |
| Fork, ILay, Horse. | S. M. Moagland | 76, 758 |
| Fork, Hay, Horse. | A. M. Martin and J. C. Bloeler | 76, 787 |
| Fork, Hay, Horse. | F. M. Willsou. | 76, 868 |
| Fork, Hay, Horse. | N. Starr, jx | 77, 120 |
| Fork, hay, Horse. | J. B. Sweetland | 77, 125 |
| Fork, Hay, Horse. | E. L. Walker | 77, 134 |
| Fork, Hay, Horse | J. II. Walker | 77, 136 |
| Fork, IIay, Horse. | II. C. Mapes | -77, 299 |
| Fork, Hay, Horse. | H. Krafit. | 71, 496 |
| Fork, Hay, Horse | S. H. Rhoades and W. Carroll | \%7, 760 |
| Fork, Hay, Horse. | E. Raber' | 77, 839 |
| Fork, Hay, Horse. | G. II. Robinsou | 77, 843 |
| Fork, Hay, Horse. | N. Palmer | 77, 907 |
| Fork, Hay, Horse | J. Milholland | 78, 114 |
| Fork, Hay, Horse | L. Woodworth | 78, 169 |
| Fork, Hay, Horse. | H. Laird. | 78, 234 |
| Fork, Hay, Horse | M. H. Pope | 78, 324 |
| Fork, Hay, Horse. | A. B. Sprout. | 78,330 |

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| :---: | :---: | :---: |
| Fork, Ilay, Horse | W. D. Wilson. | 78, 347 |
| Fork, Hay, Horsc. | J. Wolfrom | 78, 50.4 |
| Fork, Hay, Horse | II. D. Palmer | 78,810 |
| Fork, Hay, Horso | E. M. Parker | 78, 220 |
| Fork, Hay, Horsc | W. S. Coffman | 79, 106 |
| Fork, Hay, Horse | If. Willard. | 79, 173 |
| Fork, Hay, Horse. | A. Honghton | 79, 22 |
| Fork, Hay, Horse | J. Drinkwater | 79, 328 |
| Fork, Lay, Horse | S. Page | 79,38 |
| Fork, Hay, Horse. | W. W. Stevens and J. Patch | 79,401 |
| Fork, liay, Horso. | G. II. Strongh | 79,515 |
| Fork, Lay, Horso | E. J. Fenlı | 79,64- |
| Fork, Hay, Horse | IV. Hannalı. | 79,65. |
| Fork, ILay, Horse | E. I. Whito | 79, 711 |
| Fork, Hay, Horse | C. R. Mntay | 8.1, 0.3 |
| Fork, LIay, Horse. | G. IV. Bowlishy | ع0, 442 |
| Fork, May, Horso | II. L. Sheperd. | 80, 513 |
| Fork, Hay, Horse | A. Smith. | 80, 83: |
| Fork, Hay, Horse. | G. W. Heath. | 80, 950 |
| Fork, May, Horse | C. F. Lins | 81,517 |
| Fork, llay, Horse | J. I3. Kurtz | ع3, 175 |
| Fork, Hay, Horse | W. D. Brooks | 82, 485 |
| Fork, Hay, Horse | O. J'adrlock | 82, 812 |
| Fork, Hay, Horse | J. K. O'Neil | 8:2, 979 |
| Fork, Hay, Horse. | C. A. Howard | 83, 06:3 |
| Fork, May, Horso. | C. M. B. Kellogg | 83, 060 |
| Fork, Hay, Horse | J. Gilmore | 83, 48 \% |
| Fork, Hay, Horso. | B. S. Burgan | 83, 59 |
| Fork, Hay, Horsc | W. M. Gillam | 83, 70, |
| Fork, Hay, Horse | E. Rhodes, jr | 83, 79.4 |
| Fork, Hay, Horsc. | II. J. Beemer | 83, $8: 21$ |
| Fork, Hay, Horso | O. O. Storle | 84,017 |
| Fork, Hay, llorse | J. H. Brinton | 84, 084 |
| Fork, lay, Horse. | W. E. Derrick | 84269 |
| Fork, Hay, Horse | G. II. Dow | 84, 271 |
| Fork, Hiay, Horse | A. M. Cheney and H. B. Kir | 84, 472 |
| Fork, Hay, Horse | R. S. Frame | 84, 540 |
| Fork, ILay, Horso | J. A. Glemn | 8., 54. |
| Fork, Hay, Horse | A. W. Lozier | 84, 55 ? |
| Fork, Hay, Horse | C. W. Reed. | 84, 708 |
| Fork, Hay, Horso. | M. Dennis | 85, 107 |
| Fork, Hay, Horse. | J. S. Yinger | 8.), 416 |
| Fork, May, Horse. | J. T. Elliott | 85, 437 |
| Fork, Hay, ILorse, Ope | (i, MI. Robinson | 74, 142 |
| Forks, Making | II. Whipple and E. | 81, 960 |
| Fork, Manure | J. W. Horst. | 70, 8331 |
| Fork, shovel and hoe com | J. A. Heald | 81,166 |
| Fork, spoon, \&c., Plated | H. E. Fowler and VV. V. H | -77, 971 |
| Tork, Table | J. D. Frary | 77,020 |
| Fork, Table | L. A. Powers | 80, 00? |
| Foundation, Marine | E. Manico | 73, 617 |
| Foundation, Subaqueous | J. B. Eads | 73, 793 |
| Fountain, Crystal | J. C. Johnson | 77, 290 |
| Fountain, Soda. | J. S. Hull | 73, 24? |
| Fountaiu, Soda. | J. C. Johnson | 73, 720 |
| Fountain, Soda | J. W. Milroy, J. Vaughn, and J | 74, 708 |
| Fountain, Soda. | J. C. Kennedy | 82, 622 |
| rractures and dislocations, | 1. H. Barnes. | 76, 38\% |
| Frame, Flower............ | d. F. Carrol. | 80, 13. |
| Frame for hop vincs | A. Shocmaker and iv. Phelps | 7.5, 474 |
| Frame for neek ties | S. W. Roof.................. | 77, 765 |
| Frame for neck tie | 1 . Welch | 77, 786 |
| Frame for protecting watch works | IV. B. Smith | 84,388 |
| Frame for stretching hides and leath | T. Howell and C. P. Oliver | 77, 615 |
| Frame for stretching pants | J. H. Hulse | 76, 919 |
| Frame for supporting and moving cloth | A. IV. Tord. | 74, 636 |
| Frame for trareling bag | S. Lagowitz. | 84, 364 |
| Frame, Mosquito nct | G. T. Palner | 77, 207 |
| Frame, Quilting | P. M. Mellon. | 78, 989 |
| Frame, Roving. | W. H. Thompson | 73, 267 |
| Treezer, Ice cream. | C. Gooch. | 73,596 |
| Freczer, Ice cream. | F. G. Siemcrs | 73, 658 |
| Freezer, Ice cream. | J. Tingley | 74, 259 |
| Treezer, Ice cream | W. A. Garloch and W. D. Iric | 82, 509 |
| Freezer, Ice cream. | J. Dooling | 83, 265 |
| Treezer, Ice cream. | A. S. Ballard | 85, 420 |
| Freezer, Ice cream, and churn | C. Higley | 79, 349 |
| Freezer, Ice cream, and churn combi | G. C. TVestover | 73, 766 |
| Freezing apparatus | J. 13. Toselli | 78, 159 |
| Eriction clutch.. | A. W. Hall | 74, 080 |

## Aiphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patcntee. | No. |
| :---: | :---: | :---: |
| Furnace, Blast and cupola | C. Trucsilale | 81, 561. |
| Furnace, Boilcr ........ | N. Dc Pindray | 75, 339 |
| Furnace, boiler, Stcam | S. P. Bartley | 76, 58.5 |
| Furnace, boiler, Steam | N. L. Carpente | $78,420$ |
| Furnace, boiler, Steam |  | $\begin{aligned} & 39,51 \\ & 81,222 \end{aligned}$ |
| Furnace, boiler. Steam | S. Smith I..... | $\begin{aligned} & 81,222 \\ & 7,700 \end{aligned}$ |
| Furnace, Charcoal. | C. W. Briggs. | 81, 742 |
| Furnace, Cupola . | J. Howartí. | 773, 333 |
| Furnace, Cupola | F. C. Adams | 77, 79.5 |
| Furnace, Cupola | N. Burdick | 78,924 |
| Furnacc, Cupola | J. H. Eddy | 80, $3: 37$ |
| Furnace door | W. IV. Crane | 82, 294 |
| Furnace door dour fast | P. F. Johuson | \%1,112 |
| Furnace dour fast Furnace draucht | J. F. Neall and | 76, 081 |
| Furnace, Feeding fuel to | J. G. McCormick. | 79,914 |
| Furnace, Eceding saw dust, | J. A. MicClcliand | 80, 6.47 |
| Furnace fining | B. A. Haycock | 76, 442 |
| Furnace for boiling and puddling iron and other metals. | J. Zimmer | 78,172 |
| Furnace for burning fuel for heating motals, \&cc | T. J. Leigh | 77, $8: 2$ |
| Furnace for desulpharizing stecl and other wire | A. Cary | 84, 53. |
| Furnace for evaporating kettle, Arch of | E. Laass | 78,527 |
| Furnace for gencrating stean | D. N. Melvin | 75, 033 |
| Furnace for leating bolt blan | A. Alexander | 74, 970 |
| Frurnace for heating soldering irons | W. Hratch | $8,3,629$ 85,410 |
| Furnace for melting and refining st Furnace for meltiner plass | A. Thoma <br> L. I3. Goodli | 85, 410 |
| Furnace for melting metals | W. Shea and L. | 79,866 |
| Furnace for melting inetal, | W. P. Prickett | 78, 007 |
| Furnace for molting stcel, iron, \&e | E. I: Playle | 82, 160 |
| Furnace for decarbonizing pig iron for the preparation of stecl. | A. Thoma | 75, 078 |
| Furnace for roasting and chloridizing ores ............ | II. Tinda | 83, 122 |
| Furnace for roasting and smelting gold and other ures. | J. V. Shaeffer | 80, 020 |
| Furnace for roasting and treating ores | R. George | - 77,950 |
| Furnaco for roasting ores | C. Melling | 78, 11:3 |
| Furnace for roasting ores | E. P. Hudson | 78, 454 |
| Furnace for roasting ores, Revol | IF. Ernst | ع1, 62 |
| Furnace for sinclting lead ores | D. P. Weost | 76, $36 \pm$ |
| Furnace for smclting ores of lcad and other metals | R. H. Hall | 75, 415 |
| Furnace for smelting orcs of gold, silver, \&e | E. W. Noh | 81, 671 |
| Furnace for stean gencrators, Gas burniug | J. T. Rich |  |
| Furnace for tho manufacture of irou and | A. Ponsard | 83, 542 |
| Furnace for treating iron and steel, Revolving puddling. | S. Danks | 84, 317 |
| Furnace for treating ores. | S. II. Folsom | 80, 279 |
| Furnace for working iron | J. Meatlcy | -82, 313 |
| Furnace, Glass, | N. Granger | 80,623 $8: 3$ 8,104 |
| Frurnace, Gas, for heating soldering tool | J. II. Stimpson. | 8.3, 46.3 |
| Furnace, gas retort, \&c., Cover or door for | W. Matthews and J. noore | 8.7, $0 \times 3$ |
| Furnace grate ba | N. E. Cornuval | 74, 051 |
| Furnace, Heating | J. Watts | 76, 000 |
| Furnace, Trou | A. Ifarna | 77, 730 |
| Furnate, Ole roasting | D. C. Collier, S. Cushman, and N. E. Farrell. | 78, 918 |
| Furnace, Prorducing hot blast | T. McDowell. | 75, 442 |
| Furnace, Puddling. | W. Stevensun | 73, 66.5 |
| Furnace, Puddling | H. Ross | 73, 931 |
| Furnace, Puddling | T. J. Jones | 74,374 |
| Furnace, Puddling and boili | W. Sivindell | 77, 932 |
| Furnace, puddling, Combination of a, with a stean gencrator. | G. W. Hawksley and M. Wild | 78,370 |
| Furnace, puddling, Water bosh for.................... | J. Stokes and J. Brough | 80, 573 |
| Furnace, Soldcring.... | G. O. Sander'son |  |
| Furnace, Steam boilcr | R. L. Walkcr | 76\%, 286 |
| Furnace, Steam boiler | J. D. Gardncr and C | 80, 821 |
| Firnace, Steam boiler | II. H. Huntley | 82, 841 |
| Furnaces, Hot blast apparatus for puddling and otlier. | P., jr., and R. Hoop | 83, 382 |
| Furniture drawer and lastcuing | J. Koch | 75, 503 |
| Furniture edge | 1r. Iutwohl | 75, 220 |
| Furniture, Printers | F. T. M. A. Guyon | 85, 361 |
| Furniture protcctor | G. F. Boyder |  |
| Furniture tip | O. B. Collins | 85, 015 |
| Frurs and hides, Dressin | C. I. Weston | 76, 015 |
| Fuse, Electric | II. J. Smith | 78, 268 |
| Fuse, Manufacturin | T. Rich | 81, 291 |

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Alphabetical list of inventions-Continued.

| Patent or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Gas-lighting device | E. P. Gleason | 84, 689 |
| Gas machine. | I. Pritchard | 74, 133 |
| Gas machino | H. S. Maxim and J. F. Lookwool | 78, 46 |
| Gas maeline | D. M. Graham | 80, 401 |
| Gas machine | II. S. Maxim | 81, 922 |
| Gas machine | N. W. Baneroft | 82, 786 |
| Gas machine | H. Wain...... | 83, 34.4 |
| Gas maehine | W. Thompson | 84,021 |
| Gas maehine | E. H. and W. H. Covel... | 84, 460 |
| Gas machine | I'. II. Lawler and W. H. Gibson | 85, 104 |
| Gas machine | J. I). Spang | 85, 185 |
| Gas, Making . | J. MeGear'y | 76,338 |
| Gas, Maunfacture of..... | J. W. Brown .... | 82, 080 |
| Gas, marsh and other, Colleeting | C. S. Hunt and J. B. Kıng | 77, 982 |
| Gas pipe and hydrant stop...... | F. Shiclile | 84, 222 |
| Gas pressure regulator........ | C. C. Ramsey | 81,944 |
| Gas, Production of, and illuminating s cars. | A. Barbarin. | 82, 273 |
| Gas regulator . | W. A. Simonds | 75, 200 |
| Gas regulator | S. F. Mathews | 78,305 |
| Gas regulator | II. Giroud. | 83, 206 |
| Gas retort... | M. L. Callender ............. | 84, 679 |
| Gas retorts, Clarging | J. F. Snediker and W. F. Baile | 75, 303 |
| Gas retorts, furnaces, \&c., Cover door | W. Matthews and J. Moore | 8.5, 463 |
| Gas soeket. | T. L. Ieced. | 73, 0.40 |
| Gas stove | J. D. Spang | 79, 022 |
| Gas torch .-............. | W. A. Lawton. | 74, 6,99 |
| Gas works, Hydraulie mains for | J. R. Floyd and J. A. Sablaton | 76, 90 : |
|  | W. II. liogers | 73, 0 ! 9 |
| Gato | F. S. Sherman | 73, 129 |
| Gate | G. P. Steblins | 73,206 |
| Gato | R. Adlams | 73, 277 |
| Gate | L. Essig | 73,312 |
| Gate | C. H. Embrce | 73, 704 |
| Gate | J. Atkins | 74,034 |
| Gate | O. and C. Perry | 74,716 |
| Gate | G. W. Bishop. | 75, 116 |
|  | J. L. Janeway | 75, 276 |
| Gate. | J. Bowers. | 75, 3.76 |
| Gate. | P L Miller | 75, 607 |
| Gate. | W. W. R. Riley | 75,792 |
| Gate. | J. L. Janeway | 76, 081 |
| Gate. | Fi. MI. Hickman. | 76, 190 |
| Gate. | E. Toth | 76, 251 |
| Gate | E. M1. Naramore | 76, 200 |
| Gate | II. Ifunt | 76, 9:20 |
| Gate | 1. Livingston | 76, 931 |
|  | G. W. Winterringer | 76, 963 |
|  | J. J. Pellett.... | 77,088 |
| Gate. | J. Avams Tucker | 77, $06 \pm$ |
| Gato. | 11. Hinut | 71. 3 |
| Gate | J. P. Butz and A. McFarland. | 77, 956 |
| Gate | L. Miller.................... | 78,389 |
| Gate | W. C. Hooker | 78,452 |
| Gato | J. Lee . . | 78,598 |
| Gate | J. A. Burchard aud I. Tatters | 79. 201 |
| Gate | J. Potter. | 79, 8.57 |
| Gate. | II. İ. Raul | 80, 200 |
| Gate. | M. F. Kent. | 80, 969 |
| Gato. | W. E. Nichols | 81, 196 |
| Gate | II. A. Henterson. | 81,501 |
| Gate | J. II. MeKnight | 81, 6ifer |
|  | WV. WV. Green, jr | 82, 112 |
| Gate | J. II. King | 82, 228 |
| Gato. | A. W. Meel | 8.), 6.48 |
| Gate. | S. S. Daris. | 83, 046 |
| Gato. | J. F. Roderers | 8:3, 550 |
| Gate. | P. MeCollinn | 83, 8:\% |
| Gate | F. Faymond and A. Miller. | 83, 881 |
| Gato | E. and A. Buckman | 84, 723 |
| Gate | W. H. Cowley | 85, $07 \%$ |
| Gato | H. P. Haskin. | 85, 091 |
| Gate | N. Mi. Platt. | 85, 127 |
| Gate | U. W. Hardy | 85, 306 |
| Gate. | N. Ine..... | 85, 479 |
| Gate, Adjustablo flood | N. Tupper | 84, 3:1 |
| Gate and door closer | II. N. Conklin | 82, 804 |
| Gate attachment | II. M. Long | 85, 390 |
| Gate, Automatic... | E. Harter.. | 82, 831 |

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| Patent or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Gate, Automatic | W. W. Burson | 83, 92 |
| Gate, Automatie | T. J. Murphy | 84, 569 |
| Gate, Change, for railroad cars | J. B. Slawson | 73, 396 |
| Gate, Double sliding or turning | 12. Fieming | 77, 367 |
| Gate, Farm ........ | W. D. Clark | 72, 976 |
| Gate, Farm | I. L. Landis.. | 73, 016 |
| Gate, Farm | C. E. Goodwrin | 74, 529 |
| Gate, Farm | II. H. Batler.- | 74, 748 |
| Gate, Farm | W. Brown | 75, 517 |
| Gate, Farm | H. A. Menderson- | 75, 756 |
| Gate, Farm | 13. Weirich and J. Smith | 77, 142 |
| Gate, Farm | J. Curtis | 77, 174 |
| Gate, Farm | E. P. H. Capron | 77, 251 |
| Gate, Farmı | C. Pich | 77, 658 |
| Gate, Farm | V. W. Horton. | 78, 095 |
| Gate, Farm | T. W. Johusou | 78, 670 |
| Gate, Farnı | A. Taylor | 79, 025 |
| Gate, Farm | J. David. | 79, 109 |
| Gate, Farm | G. W. Blackwell | 80, 439 |
| Gate, Farm | IF. S. Shisler | 81, 017 |
| Gate, Farm | E. Easton. | 81, 077 |
| Gate, Farm | A. L. Butler | 81, 337 |
| Gate, Farm | W. MeGuire | 81, 521 |
| Gate, Farm | L. F. Tauner. | 81, 558 |
| Gate, Farm | J. Root. | 81, 620 |
| Gate, Farm | L. Charles | 81, 982 |
| Gate, Farm | C. S. Bonney |  |
| Gate, Farm | G. Giblus | 82,393 |
| Gate, Farm | T. B. Wiekham | 82, 663 |
| Gate, Farm | P. Mongey. | 83, 197 |
| Gate, Farm | O. E. Seymour | 84, 512 |
| Gate, Farm | 13. Snyder-... | 84, 653 |
| Gate, Farm | D. Shockey | 85, 033 |
| Gate, Farm | A. J. Potter. | 85, 474 |
| Gaie fastening | M. B. Markham | 82, 537 |
| Gate, Fence . | J. S. Jewett. | 81, 640 |
| Gate, Flood | H. A. Kephart. | 77,384 |
| Gate, Flood | J. Leatherman. | 81, 180 |
| Gate for turbine water wheels | L. S. Swett and J. Graham | 81, 557 |
| Gate, Hanging for | P. Rassar and D.J. Mayes. | 80, 305 |
| Gate, Railroad | A. Hartman ......... | 75, 013 |
| Gate, Railroad | T. R. and W. W. Huntington | 80,547 |
| Gate, Railroad | D. S. Weise. | 81, 444 |
| Gate, Road. | E. Nicholson. | 80,992 |
| Gate, Sliding | G. Motter, jr | 81, 813 |
| Gate, Sluice. | J. S. Wilson . | 85, 043 |
| Gate, Snow | A. B. Murray | 80, 423 |
| Gate, Stoek guard | W. C. Ganlt | 80, 064 |
| Gate, Waste. | J. R. Clarke | 77, 586 |
| Gate, water, Automatic | H. Besse.. | 73, 159 |
| Gate, Water wheel. | J. L. Helmer. | 81, 368 |
| Gate, water wheel, Operating | J. H. Bodine and T. A. Hill. | 78, 510 |
| Gauge ...... | L. II. Mayott .............. | 82, 969 |
| Gauge | E. W. Mathewson. | 77, 997 |
| Gauge | B. F. Merrill. | 80, 649 |
| Gauge and rest, Weather-board | I. Williams | 80, 691 |
| Gange and saw set. | V. B. Noyes and C. S. Baker | 80, 871 |
| Gaure and square combined | T. C. Heudry ............... | 74,356 |
| Gange, Bevel and tapering | 1. I. Tierney | 79, 032 |
| Gange, Boiler alarm....... | T. C. Banks. | 75, 833 |
| Gauge, boiler, Safety | J. Marshall | 85, 179 |
| Gange, Carpenters'. | W. Drocllead | 76,884 |
| Gauge, Carpeuters' | F. W. Coy- | 78,065 |
| Gauge, Carpenters' | A. H. Blais dell | 79, 052 |
| Gauge, Carpenters' | O. Brown and T. F. Jerry | 79, 632 |
| Gauge cock, Boiler | WV. G. Thomas .......... | 73, 672 |
| Gauge for anger | W. E. Whiting | 74, 466 |
| Gange for circular | W. P. Miller | 83, 524 |
| Gauge for mortising window sash | W. P. Boyd | 84, 407 |
| Gange for stoneware | A. W. Loomis | 83, 51\% |
| Gauge for weather-boarding | II. Preston. | 77, 653 |
| Gatge for weather-boarding | I. Williams | 80, 692 |
| Gange, Sewing machino | T. S. Scranton | 73, 755 |
| Gange, Steam | II. Matthes.. | 79, 669 |
| Gange, Steam generator water | J. S. Hunter | 73, 250 |
| Gauge, steam, Thermometric | D. M. Greene | 76,625 |
| Gange, Surface. | W. F. Cornell | 81, 144 |
| Gange, Water. | C. Delafield | 74, \%44 |
| Gauge, Water | H. P. and H. H. Stafford | 82, 762 |
| Gauge, Water, for steam boilers | C. L. Ridgway | 78, 234 |
| Gear eutting machine, Adjustable serol | W. M. Galush | 76, 741 |
| Gears, Worm for. | D. Harrigan and J. Whitney | 73, 095 |

Alphabetical list of inventions-Continued.


## Alphabetical list of inventions-Continued.

Invention or Discovery

Genelator, Steam
Generator, Steanm
Generator, Steam, and air heater combined
Gencratur, steam, Combination of a puddling furnace with a
Generator, steam, Drop tube
Gencrator, steam, Feed water heater for
Generator, steam, Feed water heater for
Generator, steam, Feed water heater for
Gencrator, steam, Heating and purifying feed water for
Generator, stean, Low water detecter for
Generator, steam, Preventing inerustation in.
Generator, steam, Regulating the supply of water to
Gencrator, steam, Spark arrester for
Generator, steam, Tube for.
Generator, steam, Water heater for
Generator, steam, Water indieator for
Gib
Gib and selfoiler.
Gig for cloth
Gimlet
Gin, Cotton
Gin, Cotton, saw
Ginger suaps, \&e., Making
Girder and boam
Girdle or waist belt
Glass and mica, Gilding and silvering
Glass and "moils," Iemoring metallio seales from
Glass, Applying crystal frosting to
Glass froit jars, Griurling
Glass knob
Glass light
Glass, Mannfaeture of
Glass, Manufacture of
Glass, Manufacture of
Glass, Merlieine
Glass plates, \&c., Grinding
Glass, Polishing
Glass pressing machine
Glass puessing machine
Glass, Printing upon
Glass, Sheet
Glassware
Glassware
Glassware, Mannfacture of
Glassware with handles, Manufacture of
Glaziers' points, Cuting
Globe
Glube joint
Globe, Lantern
Glowe, Oil, for steam chest
Globe, school, Coustruction of
Glove
Glove fastener
Glove fastening
Glove fastenimg
Glue, Drying
Glne, Drying
Glue, Drying
Glue, clivins, Holder for
Glue, Mannfacture of
Glue stock, Preparation of
Glue, Treating
Glyeerine, Manufacture of
Glyceriue, Nitro
Gold and silver, Amalomating
Gold and silver firom their ores, Extracting
Gold and silver from their ores, Extracting
Gold and silver ores, Amalsanating
Gold and silver ores, Treating
Gold and silver ores, Treating
Gold bullion to tond
Gold fiom its ores, Extracting
Gold from ores, Separating
Gold, silver and othcr metals from their ores, Colleeting
Governor
Governor
Goveruor
Governor
Governor
Governor, Engine
Governor, engine, Steam

Name of Patentee
G. W. Blake
F. B. Dum
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R. B. Baker and C. J. A Diek
H. P. Stalford and J. A. Laforgee
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G. E. Van Amringe
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W. M. Marshall
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H. B. Kimball.
M. Neekermann
E. D. Ives

TV. A. Demath
D. C. Ripley
L. Benclmans and L. De Give
L. Bemelmans and L. De Give
T. G. Borgs.
J. Kendall and A. Hathaway
J. Kendall and A. Hathaway
G. J. Capewell
MI. Sweeney
D. B. Wingrate
S. S. Ferris
J. P. Pears.
D. C. Ripley
J. S. and T. B. Atterbury
J. S. and 'I'. B. Atterbury
J. M. Jay.
G. I). Abbot
J. F. Hollister
C. Westlake
E. Weissenbora
R. D. Burr
P. Courvoisier
I. Cole.
M. B. Foote.
C. Wahl
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IV. Adamson
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L. E. Rivot
F. B. Miller
R. D'Heureuse
T. Rhoads
J. Corson
T. B. Mc Conaughey
E. P. Rogers.
W. Bellis.
J. W. Hayes
J. E. Gillespio
W. S. Henson
D. L. F. Chase

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| :---: | :---: | :---: |
| Governor, engine, Steam | C. II. Bacon | 77, 948 |
| Governor, engine, Steanı | L. F. Fuller. | 76, $0 \boldsymbol{7 1}$ |
| Governor, engine, Steam | J. A. Lyneh and R. K. Huntoon | 82, 33: |
| Governor, engine, Steam | J. W. Gray . . . . . . . . . . . . . . | 76, 322 |
| Governor, engine, Steam Governor encine Steam | J. A. Marderı | 82,729 80 |
| Governor, engine, Steaun | J. L. Diekinson | 81, 072 |
| Governor, engine, Steam | C. C. Cross. | 80, 533 |
| Governor, engine, Steamı | J. H. and C. E. Randall | 82, 874 |
| Governor, engine, Steam | S. Trumbore | 84, 396 |
| Governor, for steam and other enginery | B. Mackerley | 85, 113 |
| Governor, Steam | W. L. Collamor | 73, 578 |
| Governor', Steam | J. Tremper. | 74, 454 |
| Gorernor', Steam | E. H. Parker | 83, 655 |
| Governor, steam, Mar | J. B. Cullen. | 75, 863 |
| Grading and ditehing machine | F. II. De Tray. | 73, 441 |
| Grading and ditehing machine | FV. M. Howard and D. W. A very... | 77, 487 |
|  | W. C. Bartlit and J. M. Merrynan. | 76, 698 |
| Grahamite, called "Viscosine," Preparat | II. Wurtz. | 73, 862 |
| Grahamite, Compounding printers' ink fi | II. Wurtz. | 74, 188 |
| Grahamite, called "Irisene," Preparation | H. Wurtz | 73, 861 |
| Grahamite, Preparation of | H. Wurtz | 73, 860 |
| Grahamite, Refined | H. Wurtz | 73, 859 |
| Grain and corn, Ventilating and drying | D. A. Diekinson | 78, 935 |
| Grain and hay coeks, Cover for. | E. 12. Whitney. | 84, 453 |
| Grain and other products, Transporting | S. F'. Shoommak | 77, 763 |
| Grain binder. | A. S. Stone | 75, 215 |
| Grain binder. | J. F. Gordon | 77, 878 |
| Grain binder. | J. K. Bull. | 81, 875 |
| Grain binder. | J. B. Greenhat. | 81, 891 |
| Grain binder | V. Hayes, C. G. Waldo and H. A. Main. | 84, 693 |
| Grain binder. | S. D. Carpenter. | 85, 209 |
| Grain binder. | S. D. Carpenter. | 35, 210 |
| Grain cleaner | J. E. Anderson. | 8:3, 433 |
| Grain eleaner | J. Montgomery | 85, 325 |
| Grain, Cleaning | T. Mancoek and J. H. Leaman | 73, 80:3 |
| Grain, Cleaning | M. Eckley. | 77, 468 |
| Grain conveyer | J. M. Rush | 73, 529 |
| Grain, Dampening | I. Shellabarger | 78, 838 |
| Grain, Dam pening | I. Shellabarger. | 81, 016 |
| Grain drier | L. S. Chiehester | 74, 893 |
| Drier. | J. B. Johnson. | 75, 277 |
| Grain drier | J. De Bary | 75, 386 |
| Grain drier | H. H. Bingham and J. C. Iunt. | 75, 844 |
| Grain drier | W. Standing | 79, 699 |
| Grain drier | H. Speudelow and R. Heneag | 82, 170 |
| Grain drier | C. W. Mills and L. S. Chichester | 82, 432 |
| Grain drier | D. Bonnell. | 82, 589 |
| Grain drier | L. S. Chiehester | 83, 255 |
| Grain drier | H. Henley and J. J. Roinhart | 85, 007 |
| Grain, flour, food, \&c., Elevating | J. Raney | 77, 654 |
| Grain, Hulling | A. Hubluell. |  |
| Grain measure | E. O. Melvin. | 73, 112 |
| Grain, Measuring and registering | W. H. Pfrimmer | 77, 521 |
| Grain moistener | L. J. Adams and J. H. Esale | 81, 861 |
| Grain rake. | W. Baldwin | 79, 720 |
| Grain register | S. Inudson | 78, 208 |
| Grain regulator | E. W. Hitehings | 74, 824 |
| Grain seouring app | P. H. Massey | 76, 486 |
| Grain separator. | O. Holmes. | 73, 605 |
| Grain separator. | T. H. Me Cullooh | 73, 736 |
| Grain separator. | E. L. Dorsey. | 75, 133 |
| Grain separator. | S. Marris.. | 75, 417 |
| Grain separator. | W. T. Chaffee | 75, 520 |
| Grain separator. | S. E. Oviatt. | 77, 206 |
| Grain separator. | J. S. Upton. | 77, 419 |
| Grain separator. | S. S. Hurlunt. | 77, 490 |
| Grain separator. | E. C. Patterson. | 79, 497 |
| Grain separator. | D. S. Yeakel. | 79, 715 |
| Grain separator | L. II. Davis. | 79, 813 |
| Grain separator. | E. Lucas. | 79, 993 |
| Grain separator. | O. N. lich | 80, 666 |
| Grain separator. | J. F. Pool. | 81, 288 |
| Grain separator. | M. D. Williams | 81, 448 |
| Grain separator. | D. Shannon and W. Speneer. | 81, 951 |
| Grain separator. | C. W. Mills and L. S. Chichest | 82, 431 |
| Grain separator | P. N. and J. Reeker. | 82, 989 |
| Grain seperator. | D. Hathaway. | 83, 630 |
| Grain separator | S. E. Oviatt. | 84, 705 |
| Grain separator | A. B. Smith | 85, 141 |
| Grain separator and thrashing machine | L. 13. Lathrop | 73, 348 |
| Grain separator and thrashing machine, | L. P. Teed | 78,843 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Grain separators, Riddle for | G. A. Wells | 85, 043 |
| Grain separating machine, Thrashing an | J. Miller. | $\begin{aligned} & 84,367 \\ & \text { 22, } 339 \end{aligned}$ |
| Grain storer | R. M. Martin | 73, 356 |
| Grain tester, Pocket Grain thrasher..... | A. S. Whittemore | 74, 650 |
| Grain thrasher and separator | G. W. Greer and F. F. Landis | 79, 467 |
| Grain, Thrashing and cleaning | W. B. Emery | 77, 471 |
| Grain, Thrashing and cleaning | II. Gill... | 80,541 82,193 |
| Grain, Tolling | J. Armstron | 82, 83,428 |
| Grain, Tolling ................ | C. Alden.................. | 83, 7.3 |
| Grain weighing and registering machine | L. Reynolds | 85, 181 |
| Grain weighing and tallying machine | F. S. McWhorter -.................... | 83, 298 |
| Grain weighing machine ............... | H. and H., jr., Pooley, T. Roberts and L. Lic. | 74,719 78,241 |
| Grapes, Harvesting. | J. F. Single <br> Scofield | $\begin{aligned} & 78,241 \\ & 82,996 \end{aligned}$ |
| Grape trellis. | A. Scofield <br> G. Perry | 74, 416 |
| Grape vines, Cultivati | R. Rowley | 8.5, 244 |
| Grapple for sunken vessel | J. T. Mditin | 77, 501 |
| Grapple, 'Timber........... | M. N. Ward | 84, 780 |
| Grappling iron.. | W. H. Hawley | 82, 83.2 |
| Grate. | J. H. Yocum. | 75, 830 |
| Grate | J. L. Babloitt | 79, 195 |
| Grate <br> Grate | P. Murray . | 85, 470 |
| Grate and ash sifter in cooking | D. E. Paris | 78, 685 |
| Grate bar. | A. C. Fletcher | 74, 526 |
| Grate bar. | A. C. Fletcher | 76, 734 |
| Grate bar. | A. Hartupee | 77, 315 |
| Grate bar. | H. Collinson | 71,458 |
| Grate bar. | H. King | 78, 298 |
| Grate bar. | A. C. Fletcher | 79, 743 |
| Grate bar. | A. C. Fletcher $\cdot$................ |  |
| Grate bar. | J. W. Griswold and E. L. Thompson | 81, 161 |
| Grate bar | W. S. Mackintos |  |
| Grate bar for furnace | W. C. Cambridg | 73, 436 |
| Grate bar for furnace | G. H. Clarke ${ }^{\text {C }}$ | 79,845 79 |
| Grate, Coal, and stove | C. K. Marshall |  |
| Grate, Fire. | H Speeler. | 77, 745 |
| Grate, Fire. Grate, Fire | J. Vandercar | 80, 844 |
| Grate, foot-rest, and fire-brick base, Co | J. H. Keyser. | 80, 971 |
| Grate for lorick kilus. | J. Maltpress | 84, 631 |
| Grate for furnaces, Basket | J. J. Heind. | 76, 444 |
| Grate for hot-air furnace | E. S. Renwick. | 81, 109 |
| Grase for stove, range, and heater | C. Whiting and A. Hamilto | -79, 391 |
| Crate, Frictit | $\dot{W}$. G. Goodale | 81, 153 |
| Grate, Hoisting | G. Stowe | 79, 873 |
| Grate of railroad car stove | J. Stone ... | -76, 302 |
| Grate, Stove | G. Chilson. |  |
| Grate, Stove | G. Chilson | 79, 312 |
| Grate, Grave, Stove | J. H. Yocum | 79, 716 |
| Grate, Stove | J. C. Smith | 80, 233 |
| Grate, Stove | A. J. Magoon | 80, 645 |
| Grate; Stove | B. F. Holbrook and E. B. Rumrill | 81, 904 |
| Grate, Stove | G. D. Woodworth | 83, 232 |
| Grate, Stove and furnace | J. W. Griswold .................... |  |
| Grate, Stove and furnace. | B. Gommenginger and C. W. Trotter . | 80, 280 |
| Grate, stove, Cooking | L. Enmons | 73, 705 |
| Grater and fumnel... | E. A. Goodes . | 75, 541 |
| Grater and slicer. | C. W. Saladee and J. S. Hall. | 78, 612 |
| Grater, Nutmeg. | J. G. Roth | 70, 116 |
| Gratcr, Nutmeg | H. H. Barstor | 80, 110 |
| Grater, Nutmeg. | J. L. and D. H. Coles | 80, 456 |
| Grater, Nutmeg | J. B. Cox - . . . | 80,606 |
| Grave mound... | J. Meley. | 83, 077 |
| Grease or sizing | G, and R. Birtrvistle | 74, 288 |
| Gridiron | W. Andrews | 75,107 |
| Gridiron | C H. Mock | 80, 831 |
| Gridiron | E. B. Phelps | 84, 758 |
| Grinder for plane knives | J. Grant ... | 75, 411 |
| Grinding machine. | J. L. Otis | 83, 405 |
| Grinding machine | J. Flint... | 89, 081 |
| Grinding tools | D. W. Ayres | 81,611 |
| Grindstone frame | J. W. Douglas |  |
| Grindstone, Holding tools agains | E. Fernaid- | 80, 344 |
| Grindstones, Facing | R. B. Matthems | 77, 063 |
| Grindstones, Geari | F. Howlett and | 83,064 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Grindstones, minerals, \&c., Dressing | P. Leonard | 97, |
| Grindstones, Applying water to. | F. Plauss | 75, 725 |
| Grommet ... | I. W. Norcross | 84, 900 |
| Grooving machine | W. H. Bond and G. G. Lee | 83, 128 |
| Grubbing machine | C. E. Chase and B. F. Devendor | 85, 069 |
| Grubbing machine, Capstan for | B. B. Newell. | 79,380 |
| Guano, \&c., Distributiag....... | J. F. Thomas | 74, 448 |
| Guano distributer.... <br> Guard, Safety door ke | N. Foster...... | 76, 621 |
| Guide for band saw ... | J. Lemman . | 78, 7880 |
| Guide for band saw | W. J. Welch | 78, 905 |
| Gum, Artificial, for coating and water p | R. O. Lowrey | 80, 641 |
| Gum scrubber, Holder for | L. Fleckenstine | 72, 993 |
| Gun barrels to stocks, Attach | N. R. Davis. | 81, 318 |
| Gun, Blast. | C. Kirchlof | 76,925 |
| Gun carriage | C. S. Tyson | 78, 030 |
| Gun carriage | A. Moncrieff | 83, 873 |
| Gun lock. | J. F. and W. N. Crabtree | 75, 248 |
| Gun lock | S. Belden and J. F. Crabtree | 76,587 |
| Gun lock | M. Tromly. | 84, 233 |
| Gun lock. | J. Stokes. | 84, 314 |
| Gun, Magazine | W. R. Evans | 84,685 |
| Guu, Self-loading battery | T. J. Cranmer | 74, 994 |
| Gun, Toy | R. Frisbie | 73, 966 |
| Gunpowder | L. H. G. Ehrhardt | 73, 786 |
| Grupowder | W. H. Jackson . | 79, 229 |
| Gunpowder, Machinery for the manufac | P. A. Oliver | 76, 510 |
| Gutta-percha, rubber, \&c., Articles of | J. B. Newbrough and E, Fagan | 73, 916 |
| Gutter in foot pavement | J. Read | 83, 60:3 |
| Gutters, sheet metal, Forming tubular be | O. W. Stow. | 75, 487 |
| H. |  |  |
| Hair cloth | J. Noblit. | 73, 920 |
| Hair, Coloring | J. C. Aver and E. Haeffely | 73, 865 |
| Hair, Composition for dressing | J. C. Tilton . . . . . . . . . . . | $8: 2,660$ |
| Hair crimper. | S. F. Conant | 76,401 |
| Hair crimper | G. W. Wood | 76, 683 |
| Hair dressing compound | F. Stearns | 75, 806 |
| Hair dre and dressing compound | G. F. Peckham | 77, 911 |
| Hair, Dying | W. Patton | 82, 982 |
| Hair, horses', Clipping | P. Adie | 79,293 |
| Hair of animals, Clipping | A. I. Renshaw | 77,093 |
| Hair picker | F. Calvert | 76, 158 |
| Hair, Picking | E. Hoffstaetter | 76, 451 |
| Hair, Removing burrs from | F. Walpert |  |
| Hair restorativo. | E. J. Balcear | 83, 820 |
| Hair, Vegetable fibre as a substitute for | V. Staufen | 81, 702 |
| Halter | W. Garrison and C. H. Stevens | 73, 711 |
| Halter | C. A. Steinbrucke............. | 81, 551 |
| Hame. | 13. Crawford | 75,250 |
| Hame | E. F. Lacy and D. K. Woodbur | 77, 625 |
| Hame. | D. M. Nixon . . . - . . . . . . | 77, 645 |
| Hame | T. G. Brools | 81, 469 |
| Hamo. | I. B. Smith and H. C. Burr | 82, 168 |
| Hame and horse collar | A. Dunbar................ | 78, 075 |
| Hame and strap fastener | J. B. Waterman | 82, 367 |
| Hames, Coupling. | G. V. Heckhart. | 79,224 |
| Hame fastener. | W. A. Robinson | 73, 651 |
| Hame fastener. | A. Sweetland. | 75, 074 |
| Hame fastener. | E. A. Cooper. | 75, 864 |
| Hame fastener. | J. I. Miller. | 80,757 |
| Hame fastener. | J. Harding. | 79, 223 |
| Hame fastener. | A. B. and S. A. Woodard. | 79, 930 |
| Hame fastener. | J. Koch and D. Seachrist. | 81, 650 |
| Hame fastencr | R. Ir. McDonald. | 82, 142 |
| Hame fastencr. | W. II. Payno.. | 83, 087 |
| Hame fastener | T. Skelton | 85, 250 |
| Hame fastener. | J. H. McKinley | 85, 464 |
| Hame fasteuing | C. Morgan | 83, 987 |
| Hame fastening... | W. S. Thompson and İ. V. Love | 82, 045 |
| Hame for harness | D. Clenmons ............... | 83, 041 |
| Hame-lock | J. A. Stansbury | 76, 350 |
| Hammer | O. Shepard. | 74, 615 |
| Hammer | II. II. W. Wright. | 75, 615 |
| Hammer | T. H. Godwin | 79, 066 |
| Hammer | P. C. Havely and W. W. Coggsha | 79, 340 |
| Hammer | I. S. Confin |  |
| Hammer | W. Zimmer | 83, 897 |
| Hammer and drop, Adjustable | T. P. Keeler | 78, 291 |

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| :---: | :---: | :---: |
| Hammer and mallet | W. S. McNeil | 82, 017 |
| Hanmer and nail holder, Combined | R. W. Green | 84, 371 |
| Hammer, Axe, \&c., Manufacture of | F. C. Curio | 82, 60? |
| Hammer, Drop. | J. Wool. | \% 77,155 |
| Hammer, hatchet and scraper | A. Barbarin. | \&3, 021 |
| Hammer, Piano | C. W. Brewer | 81, $87 \%$ |
| Hammer, Power | A. Strube. | 75, 808 |
| Hammer, Power | T. Shaw | 84, 221 |
| Hammer, Shoemak | J. Vigcant | 73, 141 |
| Hammer, Steam | D. Joy. | 80, 550 |
| Hammer, Steam, Valve gear for | F. B. Miles | 80, 082 |
| Hammer, Trip | C. Vogel | 74, 868 |
| Hams, Beef, \&c., Curing | O. M. Martin | 84, 893 |
| Handle for dental and surgical instrumen | H. T. Fogg | 81, 616 |
| Handle for metal tea and coffee pots | W. Bellamy | 73, 567 |
| Handle for pocket cutlery | S. Barnes | 74, 279 |
| Handle for smoothing irous | R. W. Towle | 77, 681 |
| Handle for tea and coffce pot | II. Bullard | 79, 726 |
| Handle, Hainmer | D. Weiser | 78, 164 |
| Handle, Metallic | J. Hatton. | 73, 804 |
| Handle, Polisling wooden | E. Quinlan. | 80, 564 |
| Handle, Surface filc | J. Wearc | 79, 709 |
| Handle to axcs, picks, \&c., Fastoning | J. Stewart | 81, 308 |
| Handle to tool, Attaching. | G. Raymiond . | 80, 565 |
| Hand spiuning machine. | J. L. Johnson and J. W. Fous | 83, 970 |
| Harness. | J. J. Smokey | 74, 623 |
| Harness. | A. Harroun, j | 75, 632 |
| Harness. | W. S. Wood | 76, 369 |
| Harness. | R. O'Brien | 76, 507 |
| Harness. | G. M. Zell | 76,874 |
| Harness. | A. Mc.Mullen and J. H. Rock | 77, 503 |
| Harnes | J. K. Harris | 78, 282 |
| Harness | W. A. Jordan | 81, 788 |
| Haruess and saddle | R. M. LaRue | 75, 930 |
| Harness, Attaching rosettes to | W. L. Denio | 82, 927 |
| Harness attachment | W. W. Beebee | 73, 286 |
| Harness, Back pad | J. Umbach | 80,433 |
| Harness, Breast yoke for double | A. F. Hammel | 82, 830 |
| Harness, Carriage | E. Wilder. | 73, 149 |
| Harness, Cart | P. K. Curll | 73, 236 |
| Harness, Check hook for | C. H. Bassett | 84, 080 |
| Harness, Elastic draft attachment for double. | J. Barron | 82, 072 |
| Harness for breaking horses ........ | T. Hammond | 76, 626 |
| Harness for vicious horses | S. L. Gray | 78, 082 |
| Harness or vehicle, Breaking the surge o | F. P. Hart | 85, 307 |
| Harness loop. | G. W. Roland | 77, 918 |
| Harness pad | H. R. Ridgley. | 73, 389 |
| Harness pad | J. Maclure. | 74, 393 |
| Harness pad | J. Hughes | 74, 691 |
| Harness, Padding or stuffing for | H. Hauer | 84, 116 |
| Harness pad tree | J. W. Hinman | 74, 823 |
| Harness pad press | G. W. Lawbangh | 74, 921 |
| Harncss pad press | G. W. Lawbaugh | 85, 013 |
| Harness ring.. | W. Yates | 79, 797 |
| Harness rosette | C. F. Richers | 81, 110 |
| Harness saddle | G. H. Buckius | 81, 336 |
| Harness saddle tree | J. F. Knorr. | 82, 961 |
| Harness saddle tree, Safety | J. S. Hall | 81, 629 |
| Harness, Sccuring buckle and ring t | R. B. Anderson | 79, 180 |
| Harness, Slide suap for | J. and D. C. Kerr | 78, 807 |
| Harness, Single | J. S. Reid | 73, 835 |
| Harness, Single | O. V. Flora | 79, 745 |
| Harness snap | E. A. Cooper | 79, 107 |
| Harness trace | R. J. Steele, jr | 75, 593 |
| Harness tree. | J. H. Whissem | 81, 041 |
| Harness tree pad. | W. A. Sharp and J. A. Sh | 84, 071 |
| Harness trimming | T. J. Magruder | 74, 491 |
| Harness trimming | M. A. Fisk. | 75, 257 |
| Harrow. | J. Mercier | 73, 024 |
| Harrow. | J. N. and T. Wallis | 73, 061 |
| Harrow | N. B. Miller. | 73, 626 |
| Harrow | E. Forney | 73, 792 |
| Harrow | M. Boshenz. | 74, 194 |
| Harrow | M. W. Gunn | 74, 348 |
| Harrow | C. E. Steller | 74, 626 |
| Harrow | D. L. Dickson. | 74, 673 |
| Harrow | J. Ruhl | 75, 202 |
| Harrow | I. Crum | 75, 867 |
| Harrow | J. Rankin | 77, 091 |
| Harrow | F. R. Willson. | 79, 04? |

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| :---: | :---: | :---: |
| Harrow | A. Hochstein | 79,829 |
| Harrow. | J. J. Thomas | 82, 451 |
| Harrow | A. J. Craig. | 82, 923 |
| Harrow. | W. H. Barry | 83, 238 |
| Harrow | W. F. Osborn | 83,878 |
| Harrow | H. M. Hiekman and B. Gr. De | 83, 962 |
| Harrow. | M. Atwood | 84,339 |
| Harrow | J. Chase | 84, 342 |
| Harrow. | C. Manson. | 84,547 |
| Harrow. | O. W. Edmonds | 84, 807 |
| Harrow | B. T. Martin | 84,956 |
| Harrow, Adjustable | J. C. Center. | 77,354 |
| Harrow and enltivato | S. Conrad. | 76,578 |
| Harrow and eultivator | A. S. White | 82, 573 |
| Harrow and enltivator, Combined | C. Rich and O. L. Neilsen | 73, 547 |
| Harrow and cultivator, Combined | N. W. Wheeler | 82, 775 |
| Harrow and cultivator, Combined | D. M. Harkrader | 82, 9.12 |
| Harrow and cultivator combined, Revolv | S. D. Carpenter | 85, 283 |
| Harrow and plow, Combined | J. Harsha. | 73,062 |
| Harrow and plow, Combined | P. Wonsey | 74, 024 |
| Harrow and plow, Combined | J. Haessel | 83,154 |
| Harrow and roller. | J. Ginther | 82, 512 |
| Harrow and roller, Revolving | E. K. Harvey | 78, 283 |
| Harrow and seed sower | A. Walker | 80,522 |
| Harrow and seed sower, Combined | C. Curtis. | 82, 387 |
| Harrow and seed sower, Combined | A. Hallam | 85, 443 |
| Harrow and stone remover combined | E. Babeock | 74, 035 |
| Harrow, eultivator and planter combine | J. G. S. Garwood | 73, 593 |
| Harrow, drill, planter, and roller, Combi | D. B. Platt | 78, 998 |
| Harrow, Field and seed sower, Combine | D. Wilber | 74, 651 |
| Harrow, Flexible. | C. D. Blinn | 77, 574 |
| Harrow, Revolving. | B. Lyou. | 82, 623 |
| Harrow, Revolving | W. I. Toby and M. J. Bar | 84, 656 |
| Harrow, Riding attachment to. | A. D. Shaver | 79, 604 |
| Harrow, roller and crnsher, Com | J. Simpson. | 81, 386 |
| Harrow, Sulky | B. Randall. | 76, 657 |
| Harrow, Sulky | E. W. Hewitt | 84, 879 |
| Harrow teeth. | A. Jones. | 77, 737 |
| Harrow teeth | A. Patterson. | 83, 6.56 |
| Harrow teeth | P. V. Hixon | 82, 835 |
| Harvester | S. B. Haines | 72, 999 |
| Harvester | D. S. Fisher | 73, 314 |
| Harrester | W. F. Goodwin | 73, 424 |
| Harrester | W. D. Carpentc | 73, 501 |
| Harvester | H. W. Pell.. | 73, 641 |
| Harvester | II. W. Pell.. | 73, 642 |
| Harvester | E. Emmert. | 73,788 |
| Harvester | F. Nishwitz. | 73, 826 |
| Harvester | F. Nishwitz. | 73, 827 |
| Harvester | C. Moul. | 73, 914 |
| Harvester | J. W. Thompson | 74,016 |
| Harvester | S. O. Bartow. | 74, 036 |
| Harvester | 13. G. H. Hathaway | 74, 085 |
| Harvester | R. Dutton ........ | 74,208 |
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| Harvester | A. B. Graham. | 74,342 |
| Harvester | I, Laneaster | 74, 552 |
| Harvester | W. Neff. ... | 74,577 |
| Harvester | W. Rose | 74, 600 |
| Harvester | G. Esterly | 74,676 |
| Harvester | B. G. H. Hathaway | 74, 685 |
| Harvester | E. E. Lewis...... | 74, 835 |
| Harvester | J. II. Redtield and W. J. Cox | 74, 847 |
| Harvester | W. II. Ste venson. | 75, 070 |
| Harvester | A. Whiteley..... | 75, 229 |
| Harvester | J. S. Davis.. | 75, 383 |
| Harvester | E. W. Fairman | 75, 401 |
| Harvester | C. G. Miller. | 75, 444 |
| Harvester | L. Wallace | 75, 606 |
| Harvester | E. W. Merrill. |  |
| Harvester | W. F. Goodwin and A. M. Smi | 75, 7773 |
| Harvester | I. Laneaster ...... | 75, 773 |
| Harvester | C. Laneaster and iv. K . Millier. | 75, 797 |
| Harvester | D. H. Thayer ................. | 76, 001 |
| Harvester | A. Shebanck | 76,255 |
| Harvester | A. B. Graham | 76, 436 |
| Harvester | S. Rex ...... | 76,522 |
| Harvester | C. Wheeler, j r | 76, 571 |
| Harvester | G. Gr. Lyman | 77, 058 |

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| Harvester |  | C. Wheeler, jr | 77, 145 |
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| Harvester |  | J. Ramsey | ${ }^{77} 7824$ |
| Harvester |  | A. Rank.. | 77, 525 |
| Harvester |  | A. Rank Whitele. | ${ }^{77}$ 7296 |
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| Harvester |  | E. J. Leyburn | 77, 897 |
| Harvester |  | E. A. and H. G. Smith | 78, 144 |
| Harvester |  | S. Rockafellow | 78,236 |
| Harvester |  | G. Weiland | 78,245 |
| Harvester |  | G. Rector. | 78,482 |
| Harvester |  | L. D. Snook | 78, 490 |
| Harvester |  | G. W. N. Yost. | 78, 708 |
| Harvester |  | G. W. N. Yost. | 78, 709 |
| Harvester |  | G. W. N. Yost | 78, 710 |
| Harvester |  | W. F. Goodwi | 78,800 |
| Harvester |  | F. Weleh | 78, 904 |
| Harvester |  | D. Babcock | 79,300 |
| Harvester |  | C. Denton | 79, 452 |
| Harvester |  | A. Rank | 79, 500 |
| Harvester |  | C. R. and J. O. Taber | 79, 518 |
| Harvester |  | J. F. Coddington | 79,551 |
| Harvester |  | S. Johnston. | 79,575 |
| Harvester |  | J. J. Duchesne | 79, 740 |
| Harvester |  | W. Sprague | 79, 871 |
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| Harvester |  | O. Bonney, jr .-...................... | $80,124$ |
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| Harvester |  | C. W. and B. F. Witt | 80, 694 |
| Harvester |  | T. S. Brown. | 81, 472 |
| Harvester |  | A. B. Smith | 81, 832 |
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| Harvester |  | L. B. Stilson | 82, 890 |
| Harvester |  | A. Rank and J. H. Cox. | 82, 987 |
| Harvester |  | H. Howe. | 83, 164 |
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| Harvester |  | M. Hallenbeck | 83, 627 |
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| Harvester |  | W. N. Whiteley | 84, 399 |
| Harvester |  | L. Miller. | 84, 432 |
| Harvester |  | S. K. Lighter and J. Cartis | 84, 887 |
| Harvester |  | G. W. N. Yost. | 81, 927 |
| Harvester |  | W. N. Whiteley | 85, 045 |
| Harvester |  | G. W. N. Yost | 85, 159 |
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| Harvester |  | G. E. Burt |  |
| Harvester |  | G. W. N. Yost | 85, 349 |
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| Harvester, |  | P. Dismukes.. | 84, 416 |
| Harvester, |  | J. Mains. | 74, 104 |

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| Invention or Discorery. | Name of Patentee. | No. |
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| Harvester, Corm. | J. B. Swectland | 74, 447 |
| Harvester, Corn | Q. ${ }^{\text {² }}$. Messenger | 74, 928 |
| Harvester, Corıl. | E. Boswell .... | 75, 119 |
| Harvester, Corı. | G. Meader | 77, 394 |
| Harvester, Corn. | P. C. Yost | 7\%,562 |
| Harvester, Cor'u. | D. Sarver and R. Coons | 77, 660 |
| Harvester, Corn. | J. F. Winchell | 77, 696 |
| Harrester, Corn | M. and W. P. Balcs | 77, 708 |
| Harvester, Corn | E. W. Quincy | 79, 775 |
| Harvester; Corn | S. Pation ... | 81,202 |
| Harvester, Curn | N. Newman | 82, 148 |
| Harvester, Corm | J. I). Hampshire | 83, 155 |
| Harrester; Corn | E. K. Harvey | 83, 851 |
| Harvester eutter | J. Atkins | 74,272 |
| Harvester cuttcr | G. W. Chapman, jr | 80,598 |
| Harvester cutter sharpen | E. L. Bushncll .... | 79,948 |
| Harvester, Cutting apparatus | R. Intton | 74, 211 |
| Harvester, Cutting apparatus for | R. Dutton. | 74, 212 |
| Harvester, Cutting apparatus for | R. Intton | 74, 213 |
| Marvester, Cutting apparatus for | M. Hallenbeek | 83, 628 |
| Harvester, Diseharging apparatus for | J. S. Fowler | 79, 967 |
| Harvester, Divider for*. | J. J. Larrey | 83, 185 |
| Harvester dropper. | (I. M. Peters. | 81, 941 |
| Harvester dropper | G. M. and A. L. Peters | 84, 133 |
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| Harvester dropper | G. I. Clements | 83, 040 |
| Harvestcr, Uropping platform for | G. M. Peter's | 73, 380 |
| Harvester, Dropping plat form for | E. and M. Ball | 80, 112 |
| Harvester; Dropping platform for | A. II. Shreffler | 83, 735 |
| Harvester, Dropping platform for | G. Wellhouse | 84, 033 |
| Harvester, Dropping platform for | J. Miller. | 84, 368 |
| Harvestcr, Dropping platform for | C. R. and J. O. Taber | 76, 269 |
| Harvester; Dumping platform for | J. WT. Воро. | 76, 703 |
| Harvester finger bar.............. | E. T. Ford. | 83, 619 |
| Harvester finger bar | R. Dutton. | 78, 197 |
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| Harvester, Gearing for | M. G. Hubbard | 8: 210 |
| Harvester Gearing for | M. (1. Hubbard. | 82, 411 |
| Harvester, Grain | M. Vanderpool | 8:2, 396 |
| Harvester, Grain platform for | A. E. Glcason. | 75, 674 |
| Harvester, Grinding knives of | J. A. Thompson | 75, 709 |
| Harvester guard finger ... | L. Miller... | 84, 433 |
| Harvester, Memp..... | R. C. Wrenn | 75, 103 |
| Harvester knife, Grinding | J. Y. Moagland | 75, 633 |
| Harvester pitman. | G. I. and C. B. Garlinghonse | 79, 112 |
| Harvester pitman. | O. P. Drury . . | 80, 614 |
| Harvester, Pitman eonneetion for | C. Wheeler', jr | 74, 463 |
| Harvester, Ratchet attaehment for | G. E. Burt and S. B. Hildreth | 84, 475 |
| Harvester reel. . . . . . . . | G. W. N. Yost. ..... . . . . . . . | 78, 711 |
| Harvester ruel. | W. F. Timull | 79, 009 |
| Harvester reel. | J. L. Rohrer . | 84, 138 |
| Harvester recl and rake | Wr. N. Whitele | 82, 050 |
| Harvester, Tongue for | J. Wadleich | 85, 150 |
| Harvester track elearer | N. Stoneeipher | 79, 009 |
| Harvester track elearor | G. W. N. Yost. | 84, 786 |
| Harvesting maehines, Grinding the eut | W. M. Stevcuson. | 74, 730 |
| Harvesting maelines, Grinding the eut | W. II. Stevenson. | 74,731 |
| Hasp for trunk loeks . . . . . . . . . . . . . | L. Uitting | 83, 570 |
| Hasp for trunk loeks | N. P. Ryiter. | 83, 883 |
| Hassoek maehino... | C. I. Anthony | 78, 350 |
| Hat | G. Mallory . . | 74, 392 |
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| Hat, Attaching wire to brim of | C. F. Bosworth | 81, 246 |
| Hat, Bloeking - . . . . . . . . . . . . . | J. Ball and P. B. Lawson | 83, 5.30 |
| Hat, Bloeking . ............... | W. C. Griswold, A. Pelisse, and A. H. Hook. | 81, 364 |
| Hat, Blocking and stretehing | G. A. Manderville and W. E. Pino..... | 73, 541 |
| Hat, bloeking maehine. .-. --. | G. H. Hawkins. | 80,733 72,998 |
| Hat blocking maehine | J. Eborhardt. . | 79, 0.59 |
| Hat loodies, Felted. | R. Johnson . | 73, 812 |
| Hat bodies, Fulling ............ | A. Cattaneo. | 75, 122 |
| Hat borlies, Fulling and folting | W. M. Storm and G. H. Ennis | 83, 743 |
| Hat bodies, Printing | A. Barnes. | 76, 696 |
| Hat bodies, Sizing. | II. Waruer . | 73, 411 |
| Hat bodies, Sizing | W. II. Hoyt | 79833 |

Hat, Bloeking and strotching
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Hat blocking maehine
Hat bodies, Fulling
Hat borlies, Fulling and folting.
Hat bodies, Printing
Hat bodies, Sizing
J. B. Swectland

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Q. F. Messenger

74,928
G. Meader
P. C. Yost

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Hat bodies, Strotehing
Hat bodies, Stretching
Hat bodies with fur, Facing wool
Hat, brim of, Cutting and shaping
Hat brim, Pattern for trimming
Hat, Combined sweat band fastener aud size mark for
Hat conformator
Hat conformator
Hat, Felting
Hat holder.
Hat ironing machine
Hat, Pressing
Hat, Pressing
Hat, Pressing
Hat, Stretching and blocking
Hat, Sweat for
Hats, Ventilating
Hateh, Safety
Hatchet, haminer and seraper.
Hateliway
Hay and grain cocks, Cover for
Hay and straw cutting machine
Hay earrier
Hay elevating apparatus
Hay elevator
Hay loisting drum and grain fork
Hay loader
Hay loader
Hay loader
Hay loader
Hay loader
Hay loader
Hay loader
Hay loader
Hay raker and loader
Hay raker and loader
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Hay raker and loader
Hay raker and loader
Hay spreader
Hay spreader
Hay spreader
Hay spreader
Hay spreader
Hay spreader
Hay spreader
Hay spreader
Hay spreadel
Hay spreader and cocker combined
Hay sprcader and horse rake combincd
Hay sproader, Teeth for
Hay stacker
Hay, straw, and regetables, Cutting
Hay, Unloading
Hay, Unloading
Hay, Unloading
Hay, upon wagons, Binding
Head and shoulder rest
Head block
Hearl block
Head block
Head block
Head block
Head block
Head block
Head rest
Head rest
Head rest for ear seat, Portable
Head rest for seats
Heater, Air, and steam generator combined

Name of Patentec.
W. C. Griswold
P. Keffer.
R. D. Hine

IT. R. Going
C. M. Hawes
T. A. Lawrence and J. H. Murfey
B. Hogan
E. Z. Webster
M. D. Whipple
Z. Waters
G. W. Stout and J. C. Riehardson
S. Howard
J. C. Richardson
W. E. George
S. Polley
G. W. Thompson
T. R. Johnson
G. N. Creamer
A. Barbarin
J. D. Sinelair
E. I. Whitney
C. Brown
H. C. Stauffer
J. F. Nugent.
H. G. Porter
II. Striekler
E. N. Curtice
H. Hall
A. Barker
A. W. Lozier
N. B. Douglas
F. M. Reynolds
A. W. Lozier
N. L. Hateh.
W. T. Nichols
L. Clarke
M. B. Fuller
J. Harper
W. T. Nichols
J. S. Coffman and M. Graybill
A. J. Preston
O. Luce
G. B. Garlinghouse and J. C. Moore
J. M. Boorman
S. K. Morse
M. A. Dilley
S. R. Higgins
J. Ruhl and E. S. Herrington
J. A dams
W. H. Hiteshew
L. Underwood
G. G. Knowles
D. Kennedy
A. H. Caryl
J. M. Burdick
G. E. Burt and E. A. Hildreth
W. H. Butterworth
A. B. Barnard
T. C. Craven
R. T. Gill
F. E. Nearing
G. A. Squier
W. T. Nichols
R. I. Burbank
J. Backins
G. Van Sickle
G. Smith
J. W. Hodges
A. V. W. Van Veehten
I. L. Clark
E. H. Stearns
A. A. Adams
W. A. L. Kirk
C. R. Bushnell
A. C. Martin and W. Ritehie
J. F. Cook
H. C. Hun
M. Warne
R. W. Heywood
J. R. Chiles.
O. M. Stillman

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| Heater and filter, Feed water | J. Armstrong | 81, 971 |
| Heater, Car | A. H. Lighthall and C. F. No | 75, 172 |
| Heater, ear, Railroad | TV. C. Baker | 75, 345 |
| Heater, car, Railroad. | A. C. Miner | 78, 990 |
| Heater', ear, Railroad. | I. R. Amsden | 81, 322 |
| Heater, ear, Railroad. | W. S. MeNeil and O. S. Cadwel | 81, 332 |
| Heater, car, Railroad. | II. M. Britton | 81, 873 |
| Heater, car, Railroad. | IV. B. Farwell | 8:2, 210 |
| Heater, ear, Raikoad | I. Dripps ... | 82, 810 |
| Heater, car, Railroar | J. C. Eckert. | 83, 142 |
| Heater, car, Railroad | A. Davidson | 84, 735 |
| Heater, Feerl water | G. 1. Washburn | 74, 959 |
| Heater, Feed water | S. Stupton | 80, 516 |
| Heater, Feed water | L. B. Powelsou | 83, 543 |
| Heater, Feed water, for steam generat | G. Candeo | 77, 434 |
| Heater, Fireplace | J. M. Thatcher | 85, 255 |
| Heater, Flat-iron. | S. W. Smith | 75, 995 |
| Heater for fire engi | P. M. Kafer and J. M. De Lacy | 73, 015 |
| Heater for steam generator, Feed water. | D. F. Mchim | 85, 116 |
| Heater, Gas....... | S. Darling | 73, 95\% |
| Heater, Gas | D. Kellogg | 75, 429 |
| Heater, Gas. | J. S. Hull | 76, 195 |
| Heater, Gas. | P. Sehreyer | 76, 823 |
| Heater, Gas | S. T. McDougall | 77, 635 |
| Heater, Gas | C. Burnham | 78, 053 |
| Heater, Gas | O. C. Fox. | 78, 951 |
| Heater, Gas. | W. Jones | 79, 230 |
| Heater, Gas | H. Y. Lazear | 79, 989 |
| Heater, Gas | D. H. Lowe | 84, 889 |
| Heater, Gas | J. T. Greenwood | 81, 892 |
| Heater, Gas and other | J. Q. Birkey | 75, 516 |
| Heater, Hot air furnace for | J. 13. Driseole | 82, 811 |
| Heater, Hot water | G. H. Sellers | 83, 553 |
| Heater of steam generators, Feed water | H. N. Waters | 74, 735 |
| Heater, Portable service | W. H. Seanlan | 85, 136 |
| Heater, Sad-iron | S. M. Johnson | 81, 377 |
| Heater, Sad-iron | D. H. Lowe | 84, 429 |
| Heater, Sad-iron, nurse lamp, and foot | E. Small | 75, 802 |
| Heater, Steam | W. Simpson and W. Howitt | 76, 534 |
| Heater, Steam | P. F. Kessler and J. Carlisle | 78, 377 |
| Heater, Steam | J. Davis | 80, 396 |
| Heater, Steam | G. M. Woodward | 83, 351 |
| Heater, Steam | F. W. Sehultz aud J. A. Wilson | 83, 885 |
| Heater, Steam | P. D. Wesson | 84, 977 |
| Heater, Steam | J. Johnson. | 85, 176 |
| Heater, Steam | J. Johnson. | 85, 177 |
| Heater, Steam, for brewers and others | T. Williams and J. J. Xates | 74, 469 |
| Heater, Tubular air. | B. R. Hawley | 81, 781 |
| Heater, Water | H. Sabin | 83, 796 |
| Heater, Water, for steam generat | J. W. Sutton | 81, 840 |
| Heater, Water, for baths, tubs, \&c | W. H. Thomas | 74, 630 |
| Heater, water, Steam engine...... | W. A. Jones and J. L. Sherma | 84, 425 |
| Heating and ventilating apparatus, Car | S. W. Francis | 77, 270 |
| Heating apparatus. | J. Johnson | 76, 329 |
| Heating apparatus. | J. R. Jenness | 82, 322 |
| Heating apparatus for railroad car | T. Smith and J. O. Reilley | 82, 88.5 |
| Heating apparatus for railroad ear | E. Speneer | 84, 969 |
| Heating apparatus, Steam | C. C. Hall | 79, 826 |
| Heating apparatus, Steam | J. Chambers | 74, 045 |
| Heating apparatus, Water | J. C. Ryan | 83, 552 |
| Heating device for chairs, \&e | C. S. Hunt | 78, 742 |
| Heating purposes, Metallie base and | C. E. Finkle | 77, 022 |
| Heat, Non-conduetor of | J. Chalmers | 80, 709 |
| Heat, Obtaining. | J. Johnsou | 76, 463 |
| Heat radiator. | S. B. Sill | 73, 842 |
| Heat radiator | V. B. Choate | 84, 089 |
| Heddles, Wire | E. T. Hertle and R. Thompson | 79, 905 |
| Hedge plants and weeds, Extracting | J. L. Kniek . . . . . . . . . . . | 77, 385 |
| Hedge trimmer | T. C. Mathews | 79, 372 |
| Heel, Boot and shoe | J. W. Tull and G. Stereuson | 82, 662 |
| Heel easing | J. R.Moffitt | 76, 794 |
| Heel calk | G. F. Clemons | 77, 960 |
| Heel-eutting machine | R. C. Lambert | 76, 207 |
| Heel pattern, Metallic | J. Brobst ... |  |
| Heel proteetor | A. H. Southwick | 76, 262 |
| Heel seats, Cutting | A. B. Keith | 78, 211 |
| Heel trimmer | C. H. Helms | 80, 953 |
| Heliometer | C. F. L. Risch | 77, 324 |
| Heliometer | C. F. L. Risel | 78, 133 |
| Hemmer .. | E. P. Davis | 76, 720 |

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| :---: | :---: | :---: |
| Hemp and flax fibre for the manufacture | E. G. Wayman | 74,736 |
| Hemp breaking machine -........ | J. S. Hoskins. |  |
| Hens from scratching, Preventing | E. Rice | 84, 303 |
| Hide, raw, Gauge frame for splitting | J. Hofifman. | 78, 015 |
| Hides and furs, Dressing............... | C. I. Weston | 76,015 73,408 |
| Hides and leather, Suftening ............ | J. Tidd. <br> L. F. Rob | 77, 099 |
| Hides and skins, Compound for treating | L. L .J. Burcham | 78, 256 |
| Hides and skins, Tanuring ........ | P. Lennox, H. H. Robbins, and E. | 78, 380 |
| Hides, Beaming - ........... | P. Lennox, H. H. Roobins, and L. Hayes. <br> P Iempor | 80, 829 |
| Hides, Beaming. <br> Hides Composition for depilating | P. G. Sehlosser | 78, 543 |
| Hides from animals, Removing... | P. Lull | 76, 642 |
| Hides, Handling ............... | J. Hammond..... | 80, $94 \%$ |
| Hides, 'Tanning | G. 1. Starkweath | 82, 763 |
| Hides, Treating. | H. and L Royer...... | 81, 247 |
| Hides, Unhairing | E. Brock and J. Schul | 81, 8120 |
| Hinge...... | R. Reiber ...... | -33, 297 |
| Hinge. | J. Sowle ...., | 73, 661 |
| Hinge <br> Hince | J. Adt | 76, 034 |
| Hinge. | E. Lindsley | 80,639 |
| Hinge. | T. D. McCall and | 81, 805 |
| Hinge. | W. Shanion | 84, 771 |
| Hinge................ | V. Siraminon | 83, 369 |
| Hinge and fastener comb | C. B. Clark | 75, 862 |
| Hinge, Blind | 12. B. Prindle | 82, 245 |
| Hinge, Blind. | C. B. Clark | 82, 920 |
| Hinge, Mlind. | M. Adler | 83, 585 |
| Hinge, Blind. | C. B. Clark.. | 83, 603 |
| Hinge, Blind. | W. MeKce and | 83, 869 |
| Hinge, Butt. | M. A. Aver'Y................. | 75, 320 |
| Hinge, Butt. | H. D. Blake....... | 75, 724 |
| Hinge, Butt. | H. Hockemeyer. | 82, 717 |
| Hinge, Butt. | B. C. Pole | 83,659 |
| Hinge, Butt. | J. II. Carkbet | 83, 760 |
| Hinge, Butt. | G. A. Jenks | 84, 630 |
| Hinge, Butt. | J. W. Jordan ............... | 85, 310 |
| Hinge, Butt, Pintle of | L. Maschater and W. Frankfurth ... | 85, 112 |
| Hinge butts, Finishing loose | E. Luther, P. Lyon, and W. Ldwards | 85, 82 |
| Hinge, Compound safe-door | P. J. Stuhitrager. <br> C. Dupré | 73, 174 |
| Hinge, Door | G. Lune | 74, 384 |
| Hinge, Door <br> Hinge, Door | A. W. Walter | 83, 572 |
| Hinge, Double acting | G. Dumbolton | 76, 422 |
| Hinge, Double acting | J. H. Carkeet | 79, 950 |
| Hinge for sheet metal box | C. J. Hanck | 75, 903 |
| Hinge for sleeping-ear berths | J. I. Fogg. - | 76,620 74,805 |
| Hinge, Gate .- | P. Dennis.. | 76, 727 |
| Hinge, Gate and door ....... | C. Kaulbeck | 73, 533 |
| Hinge hooks, Manufacture of | E. Brown | 84, 256 |
| Hinge machine. | H. M. Ritter | 84, $90 \%$ |
| Hinges, Riveting | H. D. Blake | 75, 663 |
| Hinge, 'Self-locking shutt | E. H. Benjamin | 79, 051 |
| Hinge, Trunk. | O. Luce. | 83, 647 |
| Hod, Coal. | F. G. and W. F | 83, 301 |
| Hod, Coal, and ash screen combined | T. J. Thurston | 81, 037 |
| Hoo....... | W. T. Clement |  |
| Hoe. | G. N. Wood. | 78, 561 |
|  | C. W. Saladee and J. S. Hall | 78, 611 |
|  | J. Dodge...... | 78, 782 |
| Hoe | J. L. Fountain | 79, 462 |
| Ное. | C. P. Howell | 85, 384 |
| Hoe, Adjustable | T. Drake .... | 73, 702 |
| Hoe and cultivator combined. | II. P. Eckler . | 78, 725 |
| Hoe and garden rake combined | H. Thacker... | 84, 231 |
| Hoe and rake combined | H. Waters. | 74, 960 |
| Hoe blank | S. A. Millard ... | 80, 083 |
| Hoe, Double. | A. Burehard | 74, 984 |
| Hoe, Garden | L. Streeter... | 81, 839 |
| Hoe, garden, Compound adjustable | M. W. Wletche | 78, 774 |
| Hoe, Horse |  | 83, 719 |
| Hoe, Horse | A. Kirkpatrick ........................ | 79, 133 |
| Hoe, Implement for shislaing plan | L. T. Richardson. | 78, 326 |
| Hoe, Plowin | T. J. Mason | 84, 957 |


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| :---: | :---: | :---: |
| Hoe, and potato planter and digger eomb | F. B. Mardeu | 73, 618 |
| Hoc, Rolling | S. A. Millard. | 74, 570 |
| Hoe, Senfte, and garden trimm | I. Pardee | 76,238 |
| Hoe seed dropper | T. Nevison, jr | 76, 235 |
| Hoe, Seeding attachment to | E. L. Bergstresscr | 75, 843 |
| Hoe, Weeding | A. Coleman | 77, 258 |
| Hoc, Weerling | L. King. | 83, 290 |
| Hoe, Weeding | A. E. Lyinan - ... | 83, 866 |
| Hoe, Wheel | E. D. and O. B. Reynold | 75, 460 |
| Hoeing machine | H. C. Briggs | 84, 165 |
| Hogs from rooting, Preventing | L. L. Rinchart and P. Phillip. | 74, 002 |
| Hogs from rooting, Preventing | G. and W. L. Nixon | 74, 582 |
| Hogs from rooting, Preventing | J. D. Kirkpatrick | 77, 891 |
| Hogs, Slanghtering | J. J. Fonts. | 77, 368 |
| Hog-snout slitter | J. J. Gish. | 75, 148 |
| Hoisting and dumping appa | W. B. Culver | 84, 939 |
| Hoisting apparatus | C. I. Otis. | 76,240 |
| Hoisting apparatus | J. Sanderson | 78, 138 |
| Hoisting apparatus | J. V. and W. H. Morriek | 78, 675 |
| Hoisting apparatus | J. Christiansen | 78, 927 |
| Hoisting apparatus | D. Head | 79,071 |
| Hoisting apparatụs | J. E. Marshall and J. W. Sel | 79, 138 |
| Hoisting apparatus | E. U. and W. L. Seoville. | 80, 369 |
| Hoisting apparatus | W. W. Crapster | 181,250 |
| Hoisting apparatus | F. P. Canfield | 82, 799 |
| Hoisting apparatus | C. R. and N. P.Otis | 83, 725 |
| Hoisting apparatus for builders | L. Atwood | 85, 419 |
| Hoisting gear | W. O. Jones | 80, 968 |
| Hoisting maehine | G. R. Clarke | 78, 64i |
| Hoisting maehine | II. J. Reedy | 78, 820 |
| Hoisting machine | H. T. Goodlin | 80, 067 |
| Hoisting maehine | J. Kicmedy | 84,490 |
| Hoisting machine | G. H. Reynolds | 81,289 |
| Hoisting machine | W. C. Williamson | 8.5, 415 |
| Holdbaek | L. Kruse | 81, 651 |
| Holdbaek | I. Moody | 83, 400 |
| Holder, Blacking box | C. R. Bacon and G. D. Clark. | 74, 276 |
| Holder, Door and paekage | J. I. MeDonald | 76, 224 |
| Holder, Limb and basket. | W. Richardson | 76,248 |
| Hollow ware, Casting | J. Ziegler. | 83, 751 |
| Hone, Boxed | J. Potter and O. Abell | 73, 383 |
| Hoof expander | J. Tipton | 73, 765 |
| Hook | J. B. Sweetland | 79, 159 |
| Hook and eye | W. Law | 73, 817 |
| Hook and eye to cord, Securing | J. D. Franklin | 74,072 |
| Hook and fork combined, Manure | C. C. Cole | 74, 895 |
| Hook and fork, Convertible | L. Riggs | 73, 390 |
| Hook, Back band | C. Wack | 80, 373 |
| Hook, Belt. | F. J. Jones | 76, 082 |
| Hook, Belt | E. F. Sherman | 80, 227 |
| Hook, Belt | C. G. Sargent | 84, 968 |
| Hook, Bench, for earpenters' benelies | C. H. Weston | 74,182 |
| Hook, Benclr, for earpenters' benehes | S. Swan | 78,620 |
| Hook, blank, Cutting and forming blind | G. Orr | 77,905 |
| Hook, Cant. | E. Broad. | 73, 075 |
| Hook, Cant. | G. W. Herring | 75, 162 |
| Hook, Cant. | J. MeDonald | 81, 098 |
| Hook, Cant, and lifting jac | 1. Fasig. | 83, 947 |
| Hook, Check | A. Bedford | 83, 594 |
| Hook, eheek, and terret, Fastening | A. L. Hill. | 83, 157 |
| Hook, Clieck rein | F. U. Stokes | 73, 406 |
| Hook, Check rein | J. S. Campbell | 73, 777 |
| Hook, Clasp | D. Hayes... | 79, 347 |
| Hook, Clothes line | E. H. Gray |  |
| Hook, Fish. | I. A. Fish | 77, 365 |
| Hook, Fish | J. B. Christai | 79, 446 |
| Hook for carpenter's bench | S. Swan | 78, 620 |
| Hook for loisting apparatus, | D. Hieks and S. Doty | 77, 375 |
| Hook, Grappling | E. J. Riker ......... | 84, 510 |
| Hook, liarmess, Safety | J. L. Dickinson | 73, 958 |
| Hook, Hat | J. Harvey | 75, 159 |
| Hook, Hat. | C. L. Speneer | 83, 562 |
| Hook, Holdback ............ | N. W. Robinson | 74, 143 |
| \#ook, Hop... | E. and E. C. Denio | 80, 277 |
| Hook, Manure | M. Stoll and H. Gr | 84, 691 |
| Hook, Painters' | J. W. Pattce. | 79, 853 |
| Hook, pile, Revo | J. D. Leaeh and S. Hutehings | 84, 886 |
| Hook, Pruning | J. Stark | 79, 700 |
| Hook, Pruning | B. M. Parks | 82, 868 |
| Hook, Safety. | E. F. Brundage | 74, 043 |

## Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.



## Invention or Discovery

Hose and skirt supporter combined
Hose and tubes with India rubber, \&c., Lining flexible and other.
Hose, Elbow support for flexible
Hose nozzle, Revolving
Hose, Rubber and gutta percha
Hose tender
Hot bed sash and frame
Honses, Fire-proof
Honse for frait, \&cc., Dry
Honse, Fruit, Ventilating
Honse, Refrigerating.
Honse, Smoke.
Howel and croze
Hub and axle
Hub and axle, Labricating
Hub and box for wheels, Combined
Hưo boring machine
Hub boring machine
Hub boring machine
Hub, Carriage
Hub, Carriage
Hub, Carriage wheel
Hub fastening for eccentric
Hub for pulley, \&c., Self-oiling
Hub, Metal
Hnb, Metallic
Hub to axle, Attaching
Hub, Tool for fitting band on
Hrb, Wagon
Hub, Wagon
Hub, Wagon, Turning
Hnb, Wagon, Wheel
Hub, Wagon, Wheel
Hub, Wagon wheel, Boring
Hull of a steamboat
Husker and stalk cutter combined
Husks for mattresses, Preparing
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant
Hydrant and gas pipe stop
Hydrant, Non-freezing.
Hydrant, Self-atjusting curb for
Hydraulic apparatus.
Hydrocarbons, Burning
Hygrometer.

## I.

Ioe breaker
Ice calk
Ice chnte, Automatic
Ice creeper
Ice creeper, Parlor
Ice crusher
Ice crusher
Ice, Cutting
Ice, Cutting
Ice house
Ice house for brewers and butchers
Ice, Making, and cooling air and liqnids
Ice, Making, and cooling air and liquids, Apparatns for
Ice, Manufacture of
Ice pick and meat ponnder.
Ice planing machiue
Ice preserver
Iluminating railroad cars, steamers, \&c
Implement
Implement
Implement

| Name of Patentee. | No. |
| :---: | :---: |
| M. J. Foss | 83, 146 |
| J. B. Forsyth | 79, 220 |
| A. O. Bourn. | 80, 901 |
| H. B. Morrison | 79, 493 |
| E. M. Chaffee | 78, 260 |
| H. A. Gilbertson | 80, 941 |
| M. Cridge | 81, 881 |
| W. A. Berkey | 84, 04.4 |
| L. A. Oellig | 73, 637 |
| J. S. Honghton | 83, 163 |
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| C. Good. | 81, 995 |
| J. B. Siegfried | 82, 163 |
| N. Maxham. | 74, 841 |
| T. Wilson. | 81, 449 |
| S. Mosher | 83, 083 |
| N. Johnson | 75, 167 |
| J. W. Walters | 77, 137 |
| A. R. Silver | 80, 837 |
| S. Allaire | 75, 105 |
| M. Whelan | 77, 147 |
| H. D. Haraden | 77, 977 |
| G. W. Miller and J. D. Stev | 77, 747 |
| D. M. Weston | 75, 323 |
| W. W. Ball | 77, 568 |
| J. Oliphant | 79,496 |
| J. Weathers | 77, 785 |
| C. E. Stone. | 79, 925 |
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| W. H. Rodeheaver | 76,818 |
| F. Nichols | 88, 630 |
| J. Wharff | 78, 246 |
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| J. D., C. B., and L. N. Ric Briggs, jr, | 82, 553 |
| W. Nash and M. Kenfield. . | 83, 402 |
| T. R. Bailey, jr | 75,344 |
| B. G. Fuller | 77, 027 |
| H. J. Bailly | 78, 917 |
| T. Brown | 79, 200 |
| Z. E. Coffin | 80, 143 |
| W. Kearney | 82, 326 |
| R. Reiley | 83, 882 |
| J. Allison | 83, 899 |
| C. E. Frazier | 84, 104 |
| J. W. Marshall | 84, 202 |
| S. Tice | 84, 848 |
| II. J. Bailey | 85, 267 |
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| J. E. Carter | 83, 602 |
| J. A. Finnegan | 81, 266 |
| J. F. Thompson | 84, 719 |
| F. T. Snhr | 77, 124 |
| A. E. Lazell | 75, 432 |
| A. Flannigain | 77, 366 |
| G. W. Farley | 78, 270 |
| J. A. Wolfer | 85, 156 |
| W. C. Wells | 78, 560 |
| L. G. Hoffman | 79, 760 |
| J.V. Hollingsworth and H. | 75, 913 |
| N. Richardson | 78, 830 |
| J. Baker .-...... | 74,278 |
| C. and G. Beatty | 80,119 |
| A. Baierle. | 85, 161 |
| A. Baierle, F. Hartman and | 78, 507 |
| D. E. Somes | 77, 669 |
| D. E. Somes | 73, 936 |
| R. S. Egbert | 80, 063 |
| G. Murray, jr | 77, 752 |
| S. Lewis | 75, 029 |
| J. W. D. Patten. | 82, 869 |
| W. Foster, jr., and | 84, 814 |
| E. R. Meeker. | 74, 568 |
| T. C. Comstock | 74, 992 |
| E. F. Wilder | 78, 248 |

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| :---: | :---: | :---: |
| Implement. | A. Thayer | 79, 027 |
| Implement. | W. K. Rairigh | 83, 997 |
| Implement | B. F. Bean | 79, 100 |
| Index | H. H. Hall | 83, 378 |
| Indexing books and ledgcrs | J. H. Swindell | 77, 126 |
| Index for records, System of | A. Campuell | 74, 299 |
| India rubber, \&c., Lining flexible and other hose and tubes with | J. B. Forsyth | 79, 220 |
| India rubber balls, Vulcanized ........................ | H. A. Alden | 79, 535 |
| India rubber base ball | II. A. Alden | 79, 719 |
| India rubber in lubs of carriages, Inserting | G. F. Wilson. | 84, $3: 29$ |
| Indicator and alarm, Leakage measurc | T. P. Akers. | 75, 235 |
| Indicator and alarm, Water. | T. Flim | 77, 809 |
| Indicator, Door | A. Madley | 78,278 |
| Indicator for boilers, Wate | J. D. Lynde | 74, 389 |
| Indicator for steam boiler | A.J. Maris | 82, 856 |
| Indicator for steam geuerator | R. Berryman. | 80, 328 |
| Indieator for street railway car | J. Knight. | 79, 480 |
| Indicator for the bending or springing of railway axles | L. E. Osborn | 76, 803 |
| Indicator, Fuel-size | J. Gibson, jr . ........................ | 81, 490 |
| Indicator, Low water | T. C. Hargrave and W, B. Charlton | 77, 978 |
| Indicator, Low-water | J. C. Raymond and F. T. Allyn | 78, 481 |
| Indicator, Low-water | C. S. Watson | 79, 708 |
| Indicator, Low-water | T. G. Eiswald | 80, 399 |
| Indicator, Low-water | T. G. Eiswald | 80, 400 |
| Indicator, Low-water | T. G. Eiswald and J. Barbour | 81, 483 |
| Indicator, Low-water | G. M. Hopkins | 82, 222 |
| Indicator, Low-water | W. Moore. | 82, 974 |
| Indicator, Low-water | E. Joyce. | 83, 638 |
| Indicator, Low-water | J. W. Richards | 84, 646 |
| Indicator, Low-water and ligh stcam | L. F. Smith | 84, 444 |
| Indicator, Low-water, and steam pressure | D. McFarland | 79,672 |
| Indicator, Low-water, for stean generator. | L. H. Colborn | 76, 893 |
| Indicator, Low-water, for steam generator | L. Fulton. | 80, 162 |
| Indicator, Mcridian tim | E. Prevear | 82, 984 |
| Indicator, Power. | N. P. Bowsher | 77, 864 |
| Indicator, Pressure | F. T. Riegel | 81, 006 |
| Indicator, Railroad station | J. F, Zacharias | 78, 349 |
| Indicator, Railroad station | T. Payne | 80, 005 |
| Indicator, Station | C. K. Marshall | 81, 097 |
| Indicator, Station | E. 13. Marshall | 83, 190 |
| Indicator, Station | E. Spencer | 83, 563 |
| Indicator, Steam and water, for boilers | T. P. Akers | 78, 781 |
| Indicator, Water, for steam boilers. | A.F. W. Noynaber | 84, 298 |
| Induction coil apparatus and | C. G. Page | 76,654 |
| Injector for boilers | J. Gresham | 74, 345 |
| Injector for boilers | J. Gresham | 74,346 |
| Injector for feeding boilers | W. Sellers | 75, 059 |
| Injector for steam geucrator | S. Rue, jr | 73, 757 |
| Injector for steam generator | E. Ferguson | 74, 067 |
| Injector for steam gencrator | S. Rue, jr. | 81,622 |
| Injector, Oil, for steam and other cnginery | R. Brayton. | 84, 853 |
| Injector, Vagina | G. W. King | 81, 278 |
| Ink, Copying | A. G. Buzby | 78, 258 |
| Ink, Printers' | C. Wulsten | 79, 045 |
| Iuk, Sympathetic | D. C. McNeil | 79, 374 |
| Inking apparatus for color printing | L. B. Waterman | 75, 499 |
| Inking apparatus for color printing | G. W. Wood.... | 79, 043 |
| Inkstand. | N. G. Bartlett | 73, 284 |
| Inkstand. | J. Barwick | 73, 946 |
| Inkstand. | O. Dean | 74, 671 |
| Inkstand. | H. L. Andrews | 76, 138 |
| Inkstand. | S. Darling | 76, 409 |
| Inkstand. | S. Darling and J. E. Hall | 76, 719 |
| Inkstand | G. Merritt | 76, 792 |
| Inkstand. | C. T. Chase | 79, 444 |
| Inkstand | H. P. Andrews and M. E. Rawson | 83, 126 |
| Inkstand | W. G. Shattuek................ | 83, 328 |
| Inkstand, Revolving | J. M. Kemmedy | 84,950 |
| Inkstand and paper clamp combined | E. J. Toof.... | 77, 131 |
| Insects, Compound for destroying. | M. Haas . | 83, 280 |
| Inscets, Compound for destroying | W. R. Fairbairn. | 84, 867 |
| Insect destrivyer | A. McKenzic. | 75, 560 |
| Insect grayd for horses | B. 'Ireadwell. | 73, 851 |
| Insects on plants, Compound for destroying. | W. A. Phillips | 80, 660 |
| Insects on the potato plant, Composition for destroying | J. P. Wilson. | 82, 468 |
| Insects in fruit trees, Composition for destroying..... | B. Best. | 78, 569 |
| Insocts in trees and plants, Destroying | H. A. Graef. | 83, 279 |
| Insects in trees, Destroying | D. Daniels | 74, 317 |
| Insects in wheat, Destroying | J. Neweomer. | 80,655 |
| Insects on trees, plants, \&c., Compound for destroying | G. W. Spots | 83, 737 |

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## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.


Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentec. | No. |
| :---: | :---: | :---: |
| Knife, Hay | J. L. Ripley | 82, 612 |
| Kuifc, Oyster | G. TV. Huffinagle | 75, 917 |
| Knite, Paper-sack | L. I. Mealey | 80, 197 |
| Knife, Pocket <br> Knife, Pocket | J. E. Mcieth | 75, 955 |
| Knife, Pocket, and rulc combined | O. 13. Steele | 77, 121 |
| Knife, reaper, Grinding | C. Richardson. | 74, 94, |
| Knife ring | C. B. and IV. A. N. Lon | 80, 55: |
| Knife riag | J. C. Wilmarth and A. Fo | 82, 912 |
| Knife sharpencr | C. H. Rernolds | 78, 010 |
| Knifo sharpener and | E. S. Scoficla | 80, 220 |
| Knife sharpencr, Mower and reaper | W. B. Denel | 83, 767 |
| Knife, Shoe | N. $\mathrm{M} . \mathrm{Ray}$. | 75, 975 |
| Knife, Shocmakers' trimming | J. Reist. | 73, 462 |
| Knife, Silk cleaning | G. Singletou | 76, 109 |
| Knife, Solid steel | J. W. Gardner. | 74, 907 |
| Kuife, Splint. | S. Friend and J. McCollom | 83, 148 |
| Knitting and sewing machinc | G. Stackpole | 84, 144 |
| Knitting machine | J. Chantrell | 73, 164 |
| Knitting machi | I. Crane | 73, 697 |
| Knitting machine | J. C. Helsel | 74, 260 |
| Knitting machinc | G. P. Fuller | \%5, 260 |
| Knitting machino | H. Bogel. | 75, 353 |
| Knitting machino | 13. Ward | 76, 854 |
| Knitting machine | J. Dalton | 77, 363 |
| Knitting machine | WV. TV. Burson and J. Nclson | 79, 202 |
| Knitting machinc | O. Twombly and IW. Noyes, jr | 79, 78.9 |
| Knitting machine | C. W. Blakestce, E. 1. Beecher, and A. G. Davis. | 79, 597 |
| Knitting machine | A. J. Wale | ع0, 093 |
| Knitting machinc | D. Bickford | 80, 121 |
| Knitting machine | C. W. Blakeslec, A. G. Davis, and E. B. Bcecher. | 80, 853 |
| Knitting machine. | S. Larkin | 80, 866 |
| Kuitting machinc | J. Waldic. | ع0, 887 |
| Knitting machine | G. Johnstone | 80, 965 |
| Knitting machine. | E. K. Pray | 81, 683 |
| Kuitting machine | 3. Bollinger aud G. G. Nodlo | 82, 231 |
| Knitting machine | J. II. Rist | 82, 318 |
| Knitting machine | D. Kidtler. | 83, 390 |
| Knitting machinc | W. H. Abel | 83, 583 |
| Knitting machue | W. H. Abel | 83, 584 |
| Knitting machines, \&c., Reciprocating | S. Haslain, jr | ¢0, $2 \times 3$ |
| Knitting machinc indicator | J. W. Rist. | 82, 5.54 |
| Knitting machinc indicator | J. C. Potter. | 75, 194 |
| Knitting machine register | J. W. Rist | 82, 555 |
| Knitting machines, Stop | E. Wilder. | $8: 3,110$ |
| Knitting pile fabric | D. Bickford. | 84, 473 |
| Knob, Atmospheric | O. H. Noedham | ع2, $62{ }^{2}$ |
| Knob, door, Attaching to spindlo | W. H. Andrews | 77, 344 |
| Knob, door, Attaching to spindlo | T. Marvin | 77, 745 |
| Knobs, cloor, Attaching to their spi | S. S. Putnau | 79,597 |
| Knob, door, Rose for | IV. IF. Andr | 79936 |
| Knob, Picture and curtain | J. Garduer. | 73, 088 |
| Knobs to screws, Attaching | C. H. Thurston | 77, 550 |
| Knobs to their spindles, Attaching | W. A. Fenn | 84,868 |
| L. |  |  |
| Labcls, Apothecaries' | G. G. Percival. | 82, 028 |
| Labcl, Balc. | N. C. Jones. | 80, 967 |
| Labcl, Cask | E. A. Locke | 75, 934 |
| Label holder | G. S. | 80, 683 |
| Label holder | C. A. Dickerman | 84, 804 |
| Label on glassware, Sccuring | E. M. Daris. | 7.1, 004 |
| Labels, Pasting | W. E. Booraem | 83, 825 |
| Labels, show-tards, \&c., Manufacturing. | A. J. Connell. | 83, 763 |
| Labei to newspapers, \&c., Attaching. | J. F. Zacharias | 77, 430 |
| Label, Trunk | S. WV. Dorney. | 74, 322 |
| Lacing derice. | J. Nealey, jr | 76, 234 |
| Ladder... | A. and J. S. Simm | 73, 468 |
| Ladder | T. B. Lnzier and G. A. Hans | 74, 102 |
| Ladder | A. C. McKeurlice | 78, 988 |
| Ladder | C. C. T. Thomas and F. A. S. Raymond. | 7. 520 |
| Ladder | W. L. Burlingame | 79, 727 |
| Ladder | E. P. H. Capron | 82, 594 |
| Ladder | P. M. Papin | 83, 084 |
| Ladder and scaffold | If. Rowan. | 79, 399 |
| Ladder and scuttio en | J. Steger. | 78,152 |
| Ladder, Extension | J. Kerns | 74, 548 |

# Alphabetical list of inventions-Continued. 



Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | Vo. |
| :---: | :---: | :---: |
| Lamp chimney cleaner | N. A. Vurgason | 81, 210 |
| Lamp chimney cleancr | M. N. Lotell. | 81, 917 |
| Lamp chimney cleaner | M. J. Lourrent | 83, 391 |
| Lamp, Döberiner self-lig | G. Miiller | 78,755 |
| Lamp, Electric fan for | C. M. Masorn | ${ }^{78,674}$ |
| Lamp extinguisher | J. W Forvi |  |
| Lamp extinguisher | S. J. Batchelder |  |
| Lamp extinguisher. | J. II. Preutice | 80,085 |
| Lamp extinguisher. | C. E. Abbott |  |
| Lamp feeder | 'T. P. Gribbons |  |
| Lamp for destro | F. Mr. Briggs | 80,440 |
| Lamp, Founta | d. Samuers |  |
| Lamp, Glass | D. C. Ripley |  |
| Lamp lighting devico | A. Assman | - ${ }^{\text {che }} 5$ |
| Lamp, Miners | G. W. Tremi | 75, 603 |
| Lamp, Raising and adjusting | J. B. Alexand |  |
| Lamp, Safety | A. H. Emery. |  |
| Lamp, sacely | C. Apple |  |
| damp shate | J. Emer |  |
| Lamp shade | 1. B. Do |  |
| Lamp shade | H. M. Hartshor | -7, 918 |
| Lamp shade | NV. H. Hoete |  |
| Lamp shade | S. IV. Huntinctou | 76, 462 |
| Lamp shade | S. W. Huntingtor. | 76, 921 |
| Lamp shade. | A. A. stuith |  |
| Lamp shade. | G. 1 cuekim |  |
| Lamp shade | E. . . Haynes | 84, |
| Lamp shade. | D. W. Wilson. |  |
| Lamp siade | A. M. Treeks | 79, 593 |
| Lamp shade | E. Lecke and W N Vivecueu |  |
| Lamp shades, Packing | E. A. Locke and W. N. Weeden |  |
| Lamp shade supp | J. W. I | 059 |
| Lamp, Strcet | T. T. Markland | 76, 33, |
| Lamp, Street | V. O. Whed |  |
| Lamp, street | F. Lange | 52 |
| Lamp, street | O. Case and B. D. Evans | 84, 335 |
| Lamp, street, Name plate for | T. T. Marklan |  |
| Lamp, street, Name plate for | C. J. O'Hara |  |
| Lamp, Suspension for | J. A. |  |
| Lamp, tram | G. A. |  |
| Lamp tuve, Forming | IV. Wallac |  |
| Lamp tave, Formi | T. B. Doolittle |  |
| Lamp wick trimmer | D. Warner | ¢0, $5: 7$ |
| Lamp wick tube | F. II. Fuller and O. S. Sere | 84, 542 |
| Lance, Bomb for killing whales | Z. Kell | 7\%, |
| Land mark | W. L. Bower. |  |
| Land tiller. | G. W. Ziegler | 76,68i |
| Lantern. | J. H. Irwil |  |
| Lantern. | G. Wheeler | ${ }^{73}$, 481 |
| Lantern. | H. Wentrrorth and V. B. Clars |  |
| Lantern. | J. Caldwell | 74, 988 |
| Lantern. | W. H. Bonnell | 75, 354 |
| Lantern. | E. S. Archer |  |
| Lantcrn. | W. Westlake | 76,366 |
| Lantern. | A. S. Jackson | -8, 058 |
| Lantern | 宁 $\overline{\text { H }}$ Bra |  |
| Lantern. | T. Langston | 78, 378 |
| Lantern. | E. J. Heale. |  |
| Lanterrı. | A. Whelden | c, |
| Lantern | L. Betts | 82, 297 |
| Lantern | G. W. Putnam |  |
| Lante | N. Thompson |  |
| Latatern. | T. Langstour |  |
| Lantern, Pocket | G. JV Parcy |  |
| Lantern, Portable and stationary | L. W. Leary | 85, 014 |
| Lantern, Signal | J. Gralam |  |
| Lantern, Street car | A. A. Young |  |
| Lantern, Subm |  | 81, |
| Lanyard, Elastic | J. E. Jones. | 81, 814 |
| Lard, stirring and cooling | J. N. Meriam |  |
| Lard, tallow, de., Rendering | A. Broadna | 81, 743 |

Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Last | G. M. Wells | 74, 180 |
| Last | G. M. Wells. | 74,181 |
| Last | B. Hitchings | 82, 951 |
| Last and shoe holder | A. J. Rock.. | 77, 764 |
| Last, Application of an inner | C. Buffum. | 76,048 |
| Last block elevator and instep stretcher | S. Richmond .-............ | 84, 647 |
| Last, Boot and shoe'... | C. F. Carr and G. F. Holbrod | 74, 890 |
| Last, Boot and shoe | J. H. Swain. | 77, 931 |
| Last fastener. | H. Brown | -7\%,425 |
| Last holder or jack | G. G. Townsend | 84, 720 |
| Last, Shoo. | J. Schmitt | 81, 014 |
| Last, Side block | P. A. Newha | 74, 580 |
| Latch | A. Spangler | 84, 227 |
| Latch and bolt combined | P. P. Child | 73, 078 |
| Latch and lock combined | S. A. Green | 81, 625 |
| Latch and lock combined | N. Edwards. | 81, 990 |
| Latch and lock combined | L. F. Johnson | 84, 391 |
| Latch and lock combined | A. Sprague | 74, 791 |
| Latch, Bolt. | H. Baker-. | 73, 451 |
| Latch catch and stopper | E. P. McCen | 82, 581 |
| Lateh, Furnace do | J. L. Reilly | 75, 053 |
| Latch, Gate...... | C. E. Merrifield | 73, 624 |
| Latch, Gate | S. Ingersoll | 74, 915 |
| Latch, Gate. | G. B. Howland | 76,918 |
| Latch, Gate | P. Rasar and D. J. Mayes | 81, 209 |
| Latch, Gate. | J. C. Rogers |  |
| Latch, Gate. | B. Hendrickson | 84, 945 |
| Latch, Grate and doo | C. C. Holcomb | 77, 040 |
| Latch, Knob. | A. Bingham. | 74, 746 |
| Latch, Knob | T. C. Ball | 82,070 |
| Latch, Knob | W. T. Munger | 83, 652 |
| Latch, knob, and door lock combined | H. W. Busse. | 75, 360 |
| Latch, knob, and lock combined. | C. Brown |  |
| Latch, knob, and lock combined | G. Schumaker | 75, 204 |
| Latch, knob, and lock combined | J. H. Vickers | 77, 534 |
| Lateh, knob, Locking. | W. L. Tmlay | 73, 334 |
| Latch, knob, Locking | II. C. Stoor. | 73, 666 |
| Lateh, knob, Locking | S. W. Brown | 75, 879 |
| Latch, knob, Roversible | W. T. Mranger | 75, 184 |
| Latch, knob, Reversible. | H. H. Ellwell | 77, 264 |
| Latch, knob, TReversible. | J. E. Parker | 77, 650 |
| Latch, knob, Reversiblo | J. E. Parker |  |
| Lateh, knob, Reversible | B. Erbe | 77, 966 |
| Latch, knob, Reversible. | W. A. C. Oaks | 81, 529 |
| Latch, Locking. | J. Hardy and B. B. Floyd | 81, 779 |
| Latch, Metallic. | I. V. Holmes | 84, 881 |
| Latch, Reversible | C. R. Fisher. |  |
| Latch, Reversible | J. Kinzer |  |
| Latch, Reversible | W. T. Munger |  |
| Latch, Reversiblo | G. H. Seaver. | 84, 88. |
| Latch, Reversible | W. T. Munger |  |
| Latch, Reversible | E. Whitney ........... | 85, 419 |
| Lath, Sawing ... | E. T. Wheeler and W. | 77, 449 |
| Lath, Sawing | T. Bruno.................. |  |
| Lath, Sawing | I. A. Hedges and J. in. Story | 81, 475 |
| Lathe Sawing | L. F. Munger | 73, 027 |
| Lathe | L. Griscom.. | 77, 818 |
| Lathe, Adjustable gearing for | J. Humphreys | 83, 774 |
| Lathe carriage | G. W. Lewin. | 75, 933 |
| Lathe, Centering | B. F. Bce.- | 80, 327 |
| Lathe chuck | F. Davison |  |
| Lathe chuck | J. S. Dotrick | 80, 928 |
| Lathe chuck | J. S. Moody | 81, 571 |
| Lathe chuck | J. R. Washburn | 83, 349 |
| Lathe chuck | A. E. Whiton | 84, 698 |
| Lathe chuck | A. Huson... | 79, 134 |
| Lathe dog. | J. W. Russell | 80, 770 |
| Lathe dog | W. Emmett. | 81, 264 |
| Lathe, Engine | S. Teal. | 81, 309 |
| Lathe, Engine, for turning shafting | A. Wood. | 76, 130 |
| Lathe, engine, Tool rest for | C. Newhall |  |
| Lathe, Eyo protector and chip arrester | C. T. Lamphere | 77,158 |
| Lathe for cutting irregular forms | P. Barker | 79, 721 |
| Lathe for screw cutting |  | -7, 462 |
| Lathe for turning buttons | W. Sellers | 74, 609 |
| Lathe for turning iron .............. | W. Payton | 73, 830 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Lathe head | II. | 81, 952 |
| Lathe or pla | W. P . Lea | 78, 787 |
| Lathe planer, 110 lder for | II. K. Suith |  |
| Lathe rest. | E. Stalllbrodt | 77, 672 |
| Lathe rest | W. Tho |  |
| Lathe, Rose engine | T. Lippriatt |  |
| Lathe, Serew cutting |  | 79, 767 |
| Lathe, Screw cutting | H. F . Shaw | 83, 554 |
| Latho for turning bal | J. B. We |  |
| Lathe tool. | T. Shaw |  |
| Lathe tool holder | C. II. Fowler. | 78,520 |
| Lathe tool holder | W. O. Hielkok | 83, 963 |
| Lathe, Turning | F. |  |
| Lathe, Turnin | R. |  |
| Lathe, turning, wood | E. |  |
| Lathe, turning, Wood | G. Lewis. |  |
| Lathe, trmins, Wood | IV. Williams |  |
| Lathe, turning, Wood | W. J. Watson | 76,363 |
| Lathe, turning, Wood | S. U. King | 77,495 |
| Lathe, turning, Wood | D. Dick |  |
| Lathe, turning, Wood | A.J. van ornu |  |
| Lathe, turming, Wood | A. P. C. Bonto |  |
| Lathe, Wood. | J. Wifller |  |
| Lathing machine | O. C. Mackiett | 79, 366 |
| Lathing, Metalli | J. F. Walter jr. | 73, 765 |
| Laundry bluing, Pre | E. L. Molinens |  |
| Lead and slate peucil | 1. D. MeCangha |  |
| Lead, slieet and lead pipe, | A. Dow |  |
| Leall White | H. S. Hanuen | 80, 168 |
| Leather and hides, Softening | J. Tidd. | 73, 408 |
| Leather and skins, Finishing | G. T. Wooddury and T. Bur |  |
| Leather, Artificia | L. Alonio |  |
| Leather, Artificial | B. Meech |  |
| Leather belting, Art | S. M. Amen | 73, 848 |
| Leather belting |  |  |
| Leather, Bronze dressing | in. S. Caliill | 83, 925 |
| Leather, cloth, \&c., to render them water and fire- | R. O. Lowrey | 77, 990 |
| Leather clotll, floor cloth, \&e., Producing | R. O. Lowrey |  |
| Leather, Composition for stuffing | J. Haseltine. |  |
| Leather, Composition to be ap | W. Leliman |  |
| Leather, Compound for treati | A. |  |
| Leather, Cutting | C. S. Stern |  |
| Leather entting machine | S. II. King |  |
| Leather, Dressing and scoun | L. J. Fox | 77, 025 |
| Leather, Finishing | A. Bertram |  |
| Leather felting and for other purposes, Machine for cutting. | R. C. 'Turue |  |
| Leather, Manufacture of ............................. | W. Adamso | 79, 17\% |
| aather, Oiling | L. S. Ro |  |
| ther, | M. Fa | 77,021 |
| Leather | C. R. Quin | 74, 148 |
| Leather, Polish for | J. Herold and |  |
| Leather polishing | J. W. Hildreth |  |
| Leather, Reducing | IV |  |
| Leather, Resto | B. |  |
| Leather, Rolling | 11. 11. Leach |  |
| Leather, Scarfing | C. H. Helus | 80, 952 |
| Leather, Scouring, blacking and finishing | W. |  |
| Leather, Spl | Ta |  |
| ather, Splitting | C. S. Stearus |  |
| Leather splitting machine | F. J. Vittrm |  |
| Leather splitting machine | J. H. Al |  |
| Leather strap and tuve, sea | A. Eschenlohr | 80, 081 |
| Leather strans for ry nets, P | J. Matheis. |  |
| Leather, Stuffing | F. Fischer |  |
| eather, Stufing | H. | 78, 8 |
| ather, Stuffing | 号 | 78,8 |
| Leather, Tanning | H. Lucas |  |
| Leather trimmer |  | 76, 608 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Leather, Washing | A. and G. F. Howard. | 79, 832 |
| Leather-work ornament | L., E. Sallee | 79, 148 |
| Leg, Artificial | E. Elliott and C. E. Newton | 73, 787 |
| Leg, Artifieial | A. Strasser | 76, 267 |
| Leg, Artificial | L. Tassias | 81, 033 |
| Leg, Artificial | G. B. Head | 83, 496 |
| Legs, crooked, and elub fcet, Straightenin | H. R. Allen | 73, 768 |
| Lemon squeezer. | T. C. Smith | 76, 539 |
| Lemon squeezer | J. Klepzig | 84, 125 |
| Lens for plotographic use, Comp | J. H. Dallmeyer | 79, 323 |
| Letter balauce | B. Chambers jr | 75, 244 |
| Letter file. | A. E. Taylor | 81, 559 |
| Letter game | J. E. Wlieat | 74, 022 |
| Letter package | J. W. Burns | 83, 600 |
| Letter ponch. | P. Davis | 79, 324 |
| Letters, Stamping | C. W. Maas and C. Fische | 75, 638 |
| Level ........... | II. G. Loomis . | 79, 582 |
| Level | W. P. Catter | 80, 337 |
| Level and square con | H. G, Taylor | 78, 770 |
| Level, Spirit | L. L. Davis | 75, 553 |
| Level, Spirit | J. D. Sibley | 79, 226 |
| Level, Spirit | H. Lewis. | 79, 363 |
| Level, Spirit | C. F. Hill | 84, 880 |
| Level, spirit, Adjustable | W. J. Tate | 73, 6\%0 |
| Level, spirit, Adjustable | L. L. Davis | 75, 534 |
| Level, spirit, Adjusting | J. A. Traut | 82, 769 |
| Leveler marker and pul | L. Jones | 85, 010 |
| Lever grapnel. | E. 3. Dewey | 84, 683 |
| Lever power, Vibrating | N. Tripp. | 74, 732 |
| Lever purchase. | J. B. Case | 76, 050 |
| Lid for tea kettle | J. De Haven. | 74, 057 |
| Life line for sea bathing | W. T. Street | 84,592 |
| Life preserver. | G. M. Allerton | 79, 934 |
| Life-preserving and swimming apparatu tion of. | H. Olsen. | 74, 931 |
| Life-preserving apparatus | J. B. Stoner | 74, 168 |
| Lifting apparatus | T. W. Reilly | 76, 944 |
| Lifting maehine | A. Kriebel | 82, 128 |
| Lightning rod. | D. Manson | 74, 406 |
| Lightning rod. | W. Hall.. | 77, 729 |
| Lightning rod. | G. Kirkland | 78, 459 |
| Lightning rod. | G. W. Otis . | 80, 205 |
| Lightning rod. | D. Munson | 84, 210 |
| Ligliting apparatus, Syst | E. A. L. D'Argy | 74, 513 |
| Limb and basket holder | W. Riehardson.- | 76, 248 |
| Limb, Artificial | B. Briody | 78,048 |
| Lime, Acid phosphate of | E. N. Horsford. | 76, 763 |
| Lime, acid phosphate of, Preparation | E. N. Horsford. | 75, 271 |
| Lime, plaster, \&e., Spreading | G. U. Relyea. | 83, 816 |
| Line, Check and driving | C. M. Alexander | 79, 932 |
| Line fastener | W. P. W. Dana | 74, 203 |
| Line holder | J. H. Zinn | 79, 228 |
| Line holder | D. W. C. McMaster | 83, 075 |
| Liniment | W. P. Hamlin | 77, 814 |
| Liniment | A. J. Creel. | 78, 068 |
| Liniment | II. Fedder . | 82, 212 |
| Liniment for horses and o | W. Christman | 75, 722 |
| Liniment for rheumatism | A. M. Demmen | 82, 692 |
| Liniment, Mammalial. ... | S. Rueger. | 84, 580 |
| Liniment or medieal compound | D. C. Randall | 85, 242 |
| Lining for carpets, ehests, drawers, wardr | J. M. Perkins. | 76, 342 |
| Link.... | A. Goodhart. | 78, 275 |
| Link and eyebolt without welding, M | G. H. Sellers. | 82, 559 |
| Link, Boring. | C. Kellogg | 74, 376 |
| Link, Chain. | S. Vanstone | 76, 562 |
| Link, Connecting | W. N. Pelton |  |
| Link for endless ehains for horse powers | J. Casho | 81, 251 |
| Link joint for car seat | R. Hitehcock | 74, 359 |
| Liquids, ærated, Preparing | P. II. Vander Weydo | 74, 175 |
| Liquids, Atomizing | A. M. Shurtleff | 75, 208 |
| Liquids, Atomizing | H. Kraut | 79, 764 |
| Liquid eooler | E. and M. A. F. Haas | 80, 914 |
| Liquids, Cooling | H. C. Fowler | 76, 181 |
| Liquids, Cooling and filtering | D. E. Somes | 82, 651 |
| Liquids, Diffusing | C. II. Hudson | 77, 286 |
| Liquids, Evaporating | J. P. Dake | 80, 149 |
| Liquids, Extracting wort and similar | F. Jaeoby | 81, 785 |
| Liquid from paint and other solid subst rating. | D. M. Weston | 74, 021 |
| Liquids from solids, Expressing. | D. A. James |  |
| Liquid measure........... | W. Sprague. | 80, 3\%0 |

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## Alphabetical list of inventions-Continued.



# Alphabetical list of inventions-Continued. 

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| M. |  |  |
| Mace, Policeman's | M. Warne | 83, 228 |
| Machinery, Anti-friction wcaring for | J. Hardin | 73, 245 |
| Machinery, Changing the speed of | S. Brown. | 85, 064 |
| Machinery, Lubricating bearings | L. H. Olmstcad | 73, 459 |
| Machinery, Stationary, Operating | G. Maranville | 74, 838 |
| Magnet, Kailway.................. | C. Durant. | 78, 076 |
| Magnet, Relay. | C. Durant | 79,330 |
| Mail bag receiver and mail car | W. G. Sanford | 78, 331 |
| Mails, Receiving and delivering | F. K. Sibley and | 85, 183 |
| Mallet and hammer | W. S. McNe | 82, 017 |
| Malt and other liquids, Trcating | G. Storey | 78, 875 |
| Malt extracts, Concentrated | T. Wawks - . | 78, 8275 |
| Malt, Extract of barley --.......... | M. Wesselhoe | $\begin{array}{r} 82,909 \\ 75,509 \end{array}$ |
| Malt, Extracting saccharine matter f | W. Anheuser | 83, 589 |
| Malt, Extracting saccharine matter f Malt, Sprouting | J. Gcemen | 76, 624 |
| Malting, brewing, \&c., Apparatus fo | A. B. Walker | 76, 853 |
| Mandrel, Bending. | C. French. | 76, 432 |
| Mandrel, Expanding | D. L. Allen | 76,372 |
| Mandrel, Expanding | M. Gardner, | 77, 369 |
| Mandrel, Expanding | J. Brewer | 79, 198 |
| Mandrel, Expanding | - A. F. Nagle |  |
| Mandrel, Expanding or boring tool | J. C. Millerd | 81, 664 |
| Manganates and permanganates, Prep | B. Schmidt |  |
| Manger | W. F. Stanle | -79,188 |
| Mangle .-.-........... | J. Seaman | 80,019 |
| Mangler and cutter, Be | De Witt C. Thompson | 84, 718 |
| Manure, Deodorizing, desiccating and | II. S. Firman | 84, 686 |
| Manure distributer and planter, Comb | B. F. Whitner | 76,865 |
| Manure drag ............. | U. Hummer | 73, 894 |
| Manuring and seeding, System | A. F. Eckhardt |  |
| Map and chart holder | E. A. and A. C. | 75, 343 |
| Map to teach geography, \&c., Outlin | E. F. Anderson |  |
| Marble, \&c., Composition for grinding | J. C. Mcafee |  |
| Marble catting machine | W. Wickers | 77, 781 |
| Marble, Lettering. | J. Iurel .... |  |
| Marblc, Sawing | P. J. Torney |  |
| Marble sawing machine | D. M. Camp | -73, 617 |
| Marine foundation |  |  |
| Marine propulsion .............. |  | 77, 982 |
| Marsh and other gases, Collecting | G. Howell .................. | - 6,194 |
| Marshes, Filling Trarshes, Filling | G. Howell and W. Smith | 82, 224 |
| Marshes, Filling | J. B. Wood and J. T. Chapm | 83, 895 |
| Martingale. | W. B. Perrio | 82, 029 |
| Martingale. | P. J. McGuiness |  |
| Mast of vessels, Securing | D. S. Stevens and L. Snedcco |  |
| Mat. | J. M. Groh |  |
| Mat, Door | W. Young, jr |  |
| Mat, Rubber | F. M. Shepar |  |
| Match and cigar box co | G. Graetz. | 83, 855 |
| Match box | J. Kirchfield and F. Hey | 76,084 |
| Match box | A. Martin. | 76, 786 |
| Match composition | W. H. Rogers | 83, 412 |
| Match for lighting cigars, | G. Graetz | 84, 821 |
| Match, Friction | B. F. Wood | 73, 275 |
| Matches, Friction, Placing in frames | G. Sebold |  |
| Match machine | E. Andrews an | - 73,507 |
| Match, Making and dippin | J. A. Evarts .-. | 73, 706 |
| Match safe | M. Jincks. | 77, 984 |
| Match safe | A. Hoyt | 79, 353 |
| Maten safe | H. M. Woodford | 79, 426 |
| Match safe | H. Richmond | 82, 752 |
| Match, Safety................-.-....- | R. H. Martin | -77, 844 |
| Matches, Safety and other friction, C the manufacture of. | W. Austin... | 83, 683 |
| Match stand | G. G. Taylor. | 76,549 |
| Matting, Floor, Woven fab | I. Lindsley | 76, 783 |
| Mattress | G. Schott . |  |
| Mattress | A. G. Morey |  |
| Mattrcss, Spring | A. Gebhard. |  |
| Mattress, Spring | J. W. H. Sco |  |
| Mattress, Wire spring | A. B. Hurd. | 82, 842 |
| Measure and weighe | S. R Windle | 76, 128 |
| Measure for cuttin | W. Sinnott and J. McNaugh | 79, 083 |

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| :---: | :---: | :---: |
| Measuring and marking, Combination to | C. M. Lane | 78,974 |
| Measuring and laying out. | H. Mengel | 77, 704 |
| Measuring distances, Instrument for | G. Achelis and H. Popponlıu | 75, 824 |
| Measuring heights and distances | C. Wilson | 82, 669 |
| Meat broiler | L. Holmes | 75, 914 |
| Meat chopper | N. L. Hatel | 76, 187 |
| Meat chopper | C. L. Gilpatri | 79, 465 |
| Meat chopper | A. J. Curtis. | 80, 811 |
| Meat chopper | J. G. Hirzel | 80, 955 |
| Meat ehopper | T. Payne | 81, 939 |
| Meat ehopping mae | S. Rutsehman | 81,624 |
| Meat, Curing and presorving | M. B. Sherwood | 85,485 |
| Meat, \&e., Cutting | P. Vande Sar | 83, 676 |
| Meat, fish, \&c., Preserving and freezing | P. Nuna | 83, 533 |
| Meat, fruits, vegetables, \&c., Preserving | J. Burrows. | 82, 719 |
| Meat mincer | J. Mr. Drouyer | 78, 942 |
| Meat pounder and ice piel | G. Murray, jr | 77, 752 |
| Meat, Preserving | M. Perl. | 82, 871 |
| Meat, Preserving | J. E. Dotel | 84, 481 |
| Meat, Preserving | W. Wiesmann | 84, 038 |
| Meat, Preserving, and other p | T. Sim. | 85, 184 |
| Meat, Preserving | W. Davis | 78, 932 |
| Meat, Preserving and packing | C. E. Riehardson | 74,247 |
| Meat, Roasting, Spit for | E. W. Bigelow | 77, 349 |
| Mechanieal movement | H. C. Burk | 72, 972 |
| Meehanical morement | F. Soper | 73, 401 |
| Mechanical morement | W. R. Swinnerton | 74, 953 |
| Mechanieal morement | M. Boekman | 74, 979 |
| Mechanieal movement | W. F'. Goodwin | 75, 676 |
| Mrechanical movement | G. Tieh. | 77, 3:2 |
| Mechanical movement | J. P. Daris | 77, 464 |
| Mechanical movement | E. W. Sargent | 79, 013 |
| Mechanieal morement | J. See | 79,503 |
| Mechanieal morement | A. W. Brown and W. F. Goo | 81, 248 |
| Mechanical morement | W. F. Good | 81, 271 |
| Mechanical movement | D. S. Merritt | 81, 393 |
| Mechanieal morement | I. O. Rood. | 81, 619 |
| Meehanical movement | I. E. Palmer | 82, 436 |
| Mechanieal morement | J. R. Mettelı. | 82, 860 |
| Mechanieal movement | J. A. Shannor | 84, 007 |
| Mechanieal movement | M. Webb | 84, 451 |
| Mechanieal movement | M. Laemmel | 84, 632 |
| Mechanieal movement | A. R. Buffington | 84, 678 |
| Mechanical movernent, Regulating and | S. Seholfield ... | 77, 923 |
| Medals, \&c., Producing reduced copies of | J. Hill | 76, 631 |
| Medical compound | D. W. Tayl | 73, 135 |
| Medical compound | J. T. Stewart | 73, 552 |
| Medical componnd | J. M. Thompson | 73, 939 |
| Medical compound | T. Rasbrough | 74, 147 |
| Medical eompound | C. A. F. Dietz | 74,205 |
| Medical compound | J. Sinith | 74, 622 |
| Medical compound | G. W. C. Gambl | 74, 680 |
| Medical compound | O. G. Ditmars. | 75, 536 |
| Medical compound | O. G. Ditmars | 75, 537 |
| Medical eompound | II. Clark | 75, 732 |
| Medical eompound | E. A. Lowdermill | 75, 776 |
| Mertical eompound | M. C. Edey. | 76, 176 |
| Medical compound | C. K. Tayntor. | 76, 272 |
| Medical compound | W. P. Thurber | 76, 555 |
| Medical compound. | R. Alexander | 77, 343 |
| Medical compound | L. Rogers.. | 78, 017 |
| Medical compound | L. Rogers. | 78, 018 |
| Medical compound | J. $\mathrm{P}^{\text {H }}$ Hinmes | 78, 096 |
| Medical compound | A. J. Moibles | 79, 352 |
| Medical compound | C. H. Whitmore. | 81, 122 |
| Medical componnd | I. W. Scranton. | 82, 038 |
| Medieal eompound | T. H. Upshur | 82, 046 |
| Medieal compound | G. Mohler | 82, 541 |
| Medical eompound | J. Ransburg, st | 82, 873 |
| Medical compound | S. Bass... | 83, 755 |
| Medical compound | E. M. and L. M. Berry | 83, 823 |
| Medical compound | J. II. Iughes .-...... | 85, 385 |
| Medical compound for cattlo, \&c | D. P. Mathews | 81, 920 |
| Medical compound for treating horses, ea | G. Van Wagenen | 81, 711 |
| Medical compound or bitters | G. V. Rambaut. | 74, 940 |
| Medical compound or liniment | D. C. Randall | 85, 242 |
| Medical plaster | S. I. Merrill. | 83, 872 |
| Medical preparation | T. A. Barry and B. A Patte | 75, 837 |
| Medieal purposes, Voltaic pile f | A. C. Garratt | 85, 300 |
| Medicine. | B. IV. Donal | 76,308 |
| Medicino.. | L. P. Sedgwick | 76, 832 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Meter, Water | W. Livingston | 73, 537 |
| Meter, Water | J. Taggart | 74, 254 |
| Meter, Water | F. Wagner and L. Sexauer | 75, 225 |
| Meter, Water | E. Spencer | 75, 655 |
| Meter, Water | G. Sickels. | 77, 512 |
| Meter, Water | II. Flad | 78, 795 |
| Meter, Watcr | W. B. Daran | 79,559 |
| Meter, Water | A. L. Jaeger | 80, 488 |
| Meter, Water | A. B. Edmonds | 80, 714 |
| Meter, Water | L. Sexauer | 81, 015 |
| Meter, Water | G. R. Moore | 82, 737 |
| Meter, Watcr | I. Carey | 84, 533 |
| Metronome | II. S. Blunt | 75, 241 |
| Mica and glass, Gilding and silveriu | W. M. Marsha | 80, 754 |
| Mica to store plates, Attaching | J. H. Keyscr | 81, 176 |
| Milk, Cooling | L. T. Hawley and | 75,160 |
| Milkers, Tail clasp | II. II. Dickinson | 78, 936 |
| Milking machine | B. F. Graves | 75, 261 |
| Milking machine, C | L. O. Colvin | 79, 317 |
| Milking, Teat cup | B. F. Graves | 79, 568 |
| Milk shclves. | W. Veber, jr | 76, 120 |
| Milk stirrer | J. H. Soule | 76, 260 |
| Milk to obtain useful products, Treativ | A. E. Baldwin | 78, 640 |
| Milk, Treating | G. D. Greenleaf and D. C. Larkins | 76, 749 |
| Milk, Treating | J. A. Otis and T. Baker | 82, 866 |
| Mill and press, Cider | E. Waugaman | 80, 253 |
| Mill and press, Fruit | H. A. Holderman | 74, 361 |
| Mill brush | J. M. Evril. | 77, 265 |
| Mill, Cane | B. E. Cauffman | 73, 779 |
| Mill, Cane, and steam | J. Moore | 74, 574 |
| Mill, Cider. | W. N. Whiteley, J. Fassler, and O. S. Kelley. | 73, 417 |
| Mill, Cider. | L. Gebhart. | 73, 523 |
| Mill, Cider. | J. D. Willoughby | 75, 101 |
| Mill, Cider. | W. S. Oboru | 79, 771 |
| Mill, Cider. | C. Wilson. | 82, 261 |
| Mill, Cider | J. Walton | 78,558 |
| Mill, Clay. | N. F. Potter | 80,008 |
|  | U. Moore. | 80, 023 |
| viill, Coffee | W.J. Lane | 73, 347 |
| Mill, Coffee | I. F. Colby |  |
| Mill, Coffee | E. Watrous | 80, 317 |
| Mill, Coffee | W. H. Barns | 81, 869 |
| Mill, Combined clay griuding and sep | F. B. Norton and F. Mancock | 76,505 |
| Mill, Corn and cob | T. Ucker and A. Iutchins | 80, 244 |
| Mill, Curd | J. Macadam | 79,365 |
| Mill, Curd | W. Ralph | 80, 089 |
| Mill, Fanning | A. W. Smith | 73, 469 |
| Mill, Fanning | S. Mrc Millan | 74,567 |
| Mill, Fanning | W. C. Ray | 78,008 |
| Mill, Fanning | II. A. Suyder | 81, 955 |
| Mill, Fanning | W. Stoddard | 81, 957 |
|  | E. Lindsle | 82,011 |
| Mill, Fanning | C. Richards and D. Strickland | 83, 096 |
| Mill, Fanniog | J. P. Preston. | 83, 312 |
| Mill, Feed regtlator for | J. Ross | 78, 541 |
| Mill for pulverizing bone, \& | A. Newell | 81, 933 |
| Mill for tempering clay | G. Carnell, S. Williams, and W. Ellis . | 83, 361 |
| Till Trulin | G. S. Hull | -4,365 |
| Mill, Fulling | E. Gessner | 78,660 |
| Mill, grain and grist, Taking the toll fr | C. F. Kellcr. | 78. 099 |
| Mill, Grain chatting | G. Wilcox | 78, 907 |
| Mill, Grinding ........... | J. Nairn. | -74, 161 |
| Mill, Grinding | J. Aliston | 75, 135 |
| Mill, Grinding | G. W. Hubbard and S. A. Smith | 75, 273 |
| Mill, Grinding | A. H. Wagner ................. | 78, 624 |
| Mill, Grinding | J. P. Moore ... | 78, 814 |
| Mill, Grinding | J. A. Moutgomery | 81, 526 |
| Mill, Grinding | G. N. Anuan. | 81, 725 |
| Mill, Grinding | E. Harrison. | 81,780 |
| Mill, Griuding | F. Kaiser | 82, 532 |
| Mill, Grinding | x. Harrison | 85, 444 |
| Mill, Grinding | B. Whitney | 83, 574 |
| Mill, grinding, Attachme | D. C. Walters | 73, 142 |
| Mill, grinding, Portablc | A. W. Straub | 74, 774 |
| Mill, grist, Grinding | H. Shaw and W. D. Leavitt | 79,865 |
| Mill, grist, Hopper shoe for . | W. E. Wyche and Y. P. Dicleson | 79,620 |

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| Invention or | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Mill, Hand. | E. Alsop | 81, 5\%4 |
| Mill, Hominy and pearling | E. A. Duer | 80, 713 |
| Mill, Hominy and smut... | W. Wright | 84, 723 |
| Mill, Malt..... | J. Gardiner | 81, 994 |
| Mill, Paint | C. Belcher | 76,386 82626 |
| Mill, Pug | J. C. Mck | 82, 820 |
| Mill, Quartz | W. W. Mubbel | 79, 762 |
| Mill, Quartz | R. Plummer | 81, 680 |
| Mill, Quartz | S. Swesey | 82, 367 |
| Mill, quartz, Quicksilver fed | J. Pattison. | 82, 745 |
| Mill, Quartz stamp. | P. M. Papin | 77, 401 |
| Mill, Rolling . | J. I. Chapman | 81, 600 |
| Mill, Rolling | J. H. C. Bachelder | 81, 773 |
| Mill, Rolling | F. Nevergold and | 82,433 84,086 |
| Mill, Rolling | C. D. Olmstead | 84, 73,031 |
| Mill, Saw | J. Baillie. | 74, 277 |
| Mill, Saw | H. H. Gridley | 75, 678 |
| Mill, Saw | A. P. Barlow. | 75, 834 |
| Mill, Saw | H. D. Hinternesch | 76, 191 |
| Mill, Saw | D. B. Bartholomer | 76, 384 |
| Mill, Saw | J. L. Knowlton | 76, 471 |
| Mill, Saw | L. B. Walker | 76,677 |
| Mill, Saw | J. W. Cherry | 77, 079 |
| Mill, Saw | C. R. Tompkins and J. Wrigh | 77, 129 |
| Mill, Saw | A. P. Ehlers | 78, 443 |
| Mill, Saw | M. Hillabold | 80, 824 |
| Mill, Saw | A. Hackett | 82, 518 |
| Mill, Saw | A. McCreight | 82, 970 |
| Mill, saw, Circular | F. J. Plummer |  |
| Mill, saw, Circular | J. Orm.... | 81, 673 |
| Mill, saw, Circular | C. Roberts | 73, 465 |
| Mill, saw, Head block for | H. Batchelder | 74, 486 |
| Mill, saw, Head block fo | B. P. Perry . . | 74, 588 |
| Mill, saw, Head block for | W. S. Reeder | 75, 195 |
| Mill, saw, Head block for | D. Lane. | 79, 484 |
| Mill, saw, Head block for | D. Lane. | 80, 491 |
| Mill, saw, Head block for | S. R. Smith | 80, 514 |
| Mill, saw, Head for | N. Johnson. |  |
| Mill, saw, Lubricating the s | A. P. Barlow | 75, 835 |
| Mill, saw, Scroll | E. Robbins.. | 76, 349 |
| Mill, saw, Scroll | B. Demming |  |
| Mill, saw, Turning logs in | G. Wilett | 81, 316 |
| Mill, saw, Turning | E. Tarrant |  |
| Mill, Smat | R. Ward.. | 79, 791 |
| Mill, Smut | R. and J. Redfield | 80, 306 |
| Mill, Smut | J. C. Waggone | 82, 898 |
| Mill, Smut | C. T. Phillips | 83, 656 |
| Mill spindle, Spring equaliz | T. L. Clark | 75, 124 |
| Mill, Stamp........ | G. R. Mitchell | 73, 366 |
| Mill, Stamp | R. Uren and J. Walker | 79, 034 |
| Mill step. | C. Corbit. | 75, 865 |
| Millstone balance | W. C. Benn. |  |
| Millstone bush or shaft bea | S. Kime. | 76, 083 |
| Millstone, Composition for | D. Kindig. | 74, 833 |
| Millstone dress | II. L. Spencer. | 78, 768 |
| Millstone dress | A. C. Hartsock | 80, 171 |
| Millstone dress | J. W. Gaines. | 84, 349 |
| Millstone dress | B. C. Stephens | 84, 971 |
| Millstone, Dressing | W. Bold | 83, 243 |
| Millstone, Dressing | S. Golay | 73, 524 |
| Millstone, Dressing | A. Lane | 79, 359 |
| Millstone, Dressing | J. Pannabecker | 80, 762 |
| Millstone dressing, Tool for | J. C. Hunt and J. Temple | 81, 639 |
| Millstone exhaust. | D. Baird. | 76, 972 |
| Millstone, Face tester | P Vimmerma | 81, 912 |
| Millstone, Hanging | E. C. and R. A. Henderson | 79, 717 |
| Millstone machines | S. Benson R. A. Hender'so | 80, 954 |
| Millstone, Regulating devic | T. Renson... | 79, 508 |
| Millstone, Tram for gaugin | J. Camploll | 83, 703 |
| Millstone, Ventilating | J. Samples |  |
| Millstone, Ventilating | I. P. Tice |  |
| Mill, Wind | W. C. and P. B . Day | 75, 384 |
| Mill, Wind | A. H. Southwick. | 76, 261 |
| Mill, Wind | J. H. Van Nortwick | 76, 561 |
| Mill, Wind | J. A. Wheeler | 77, 357 |
| Mill, Wind | II. M. Shat and G. G. Tindal | 78, 333 |

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| Mill, Wind. | G. J. Thorn | 78,773 |
| Mill, Wind | V. Peek | 81, 816 |
| Mill, Wind. | J. Frazee | 83, 6,20 |
| Mill, Wind. | C. Goodryin | 84, 182 |
| Mill, Wind | S. H. Halstea | 84, 614 |
| Mill, Wine or eider | H. B. Goueher | 83, 844 |
| Mrill, Winnowing | S. Adams | 73, 485 |
| Nilling and planing maehine, Cutting | E. T. Prindle | 77, 211 |
| Mineing elever | S. J. Tongue | 80, 242 |
| Mineral and metallie substances, Collect rating. | W. T. Duvall | 80,393 |
| Minerals and ores, Concentrating ..... | S. K. Krow | 80, 747 |
| Mineral, grindstone, \&e., Dressing | P. Leonard... | 79, 990 |
| Mining shaft, Safety guard | E. O. Leermo | 79, 076 |
| Mirror | S. R. Seottron | 76,253 77 729 |
| Mirror supp | W. H. Gray.... | 84, 944 |
| Miter and square, Combined | W. S. Winterbottom | 79, 175 |
| Miter box. | C. Rolinson | 77, 217 |
| Miter box | W. H. Herbert | 81, 782 |
| Mriter box | C. Robinson ....................... | 82, 351 |
| Miter gauge | G. W. La Baw, A. T. Hutehinson, and I. W. Fleming. | 77,053 |
| Miter maehine. | J. H. Estes | 82, 504 |
| Mitering machi | J. J. Sanders, j | 78, 330 |
| Mitering maehine | J. M. Soymour | 79, 783 |
| Mitering machin |  | 81, 373 |
| Mitering machine | R. T. Thompson and H. T. Williams... | 83, 891 |
| Mittens .-.............. | G. Topping -........................ | 83, 800 |
| Models, dental, Obtaining | L. Stuck | 82, 563 |
| Molasses eup of sheet metal, Construc | G. B. Halsted | 74, 081 |
| Money, Counting | J. P. Meaker | 73, 911 |
| Mop | J. A. Wright | 82, 055 |
| Mrop and clothes wring | E. Young | 80, 794 |
| Mop and serubling brush | J. F. Mason | 84, 129 |
| Mrop and serubbing.brush holder | P. O. Brian | 78, 121 |
| Mop and wringer combi | J. A. Wrigh | 79, 428 |
| Mop head. | R. W. English | 75, 253 |
| Mop head. | W. A. Robinson | 75,796 |
| Mop head. | L. II. Emmons. | 78, 444 |
| Mop head. | J. D. Brown | 82, 236 |
| Mop head | C. B. Clark and E. L. Ferguson | 82, 353 |
| Mop head | O. Root | 84, 000 |
| Mop head and brush holde | H. P. Gregg | 81, 626 |
| Niop head and scrubbing brush combin | W. S. Van Hoesen | 83, 806 |
| Mop head and wringe | C. Gullman | 81, 272 |
| Mortar. | J. A. Fremon | 85, 223 |
| Mortar and eement | E. A. Ellswortl | 73, 882 |
| Mortising and boring maehine | J. Jacob | 82, 096 |
| Mortising and tenoning machine | H. D. Storer | 83, 671 |
| Mortising machine | C. Baggema | 73, 428 |
| Mortising maehine | J. Riehards | 81, 407 |
| Mortising maehine. | L. W. Wolfo | 74, 739 |
| Mortising machin | G. B. Phillip | 76,808 |
| Mortising machine | D. L. Gibbs | 77, 877 |
| Niortising machine | G. V. Orton and J. | 79, 249 |
| Mortising machin | J. A. Peabody | 81, 236 |
| Mortising machine | J. M. Johuson and J. Horig | 82, 004 |
| Mrortising machine | C. Carter | 82, 692 |
| Mortising machine | F. A. Deland and L. Phillips | 82, 926 |
| Mortising machine | F. Parker................... | 83, 306 |
| Mortising machine | W. L. Eppers | 84, 620 |
| Mortising machine. | D. L. Giblus. | 84, 817 |
| Mortising, slotting, and dovetailing | J. Felber | 82, 816 |
| Mosquito bar | E. Stoinel. | 78, 124 |
| Mosquito bar for window | A. C. Flint. | 78, 948 |
| Mosquito bar for windory | C. T. Warren | 79, 419 |
| Mosçuito bar frame, Adjustable | L. J. Parsons | 83, 202 |
| Mosquito frame, Folding. | S. D. Maine. | 80, 830 |
| Mosquito killer | H. D. Forbes | 78,950 |
| Moth roof bee-hive portal | E. Beard. | 75, 349 |
| Motion by means of friction, Obtaining | S. Marden | 74, 234 |
| Motion, Converting | W. H. Abel | 74, 265 |
| Motion, Conrerting | M. M. Follett | 76,429 |
| Motion, Converting | K. J. Winlow | 79, 092 |
| Motion, Converting rcciprocating into ro | D. Morrison | 73, 631 |
| Motion, Converting reciprocatiog into ro | J. G. Deshler | 82, 296 |
| Motion, Converting rotary into reciproca | E. Walker | 75, 495 |
| Motion, Converting rotary into reeiproe | C. C. Welsh | 82, 907 |
| Motion, Producing reeiproeating. | J. J. P. Ly | 82,964 |

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| Invention or Discovery. | Name of Patentce. | No. |
| :---: | :---: | :---: |
| Motion, Transmitting | E. Gallagher | 74, 337 |
| Motion, Transmitting | M. M. Ammi | 82, 67. |
| Motive power. | S. G. Monce | 79, 283 |
| Motor or meter, Wa | C. Turner. | 76, 274 |
| Mold blaoking marhi | B. S. Bens | 83, 448 |
| Mold board, Casting... <br> Mold board, Revolving | J. Sl Godfrey | 76, 784 |
| Mold, Bottle........... | L. Thomas... | 79,162 |
| Mold, Briok | W. Sangston and J. Bret | 82, 037 |
| Mold, Clay, for easting metals | J. J. C. Smith | 85, 347 |
| Mold for artificial teeth | A. A. Knowlt | 75, 027 |
| Mold for artificial teeth | J. A. MoClella | 76,221 |
| Miold for luilding block | T. J. Lowry | 30, 358 |
| Mold for easting letters, \&e | G. F. Sack... | 80, 567 |
| Mold for casting sleigh shoe Mold for easting sloigh shoe | N. W. Russell C. Sthore | 82, 81,53 |
| Mold for tassels, Covering | C. Feickert | 81, 154 |
| Mold for forming hats.. | J. E. Ward | 85, 191 |
| Mold for forming roofing til | P. A. Brown | 85, 362 |
| Mold for making aoupuneture | A. R. Brown | 82, 686 |
| Mold for making drain tiles. | H. Felthoff and L. D. Tin | 77, 969 |
| Mold for making strawberry | C. Jillson | 79, 660 |
| Mold, Glass | D. Turpin. | 75, 6412 |
| Mold, Glass ware | H. Dillaway | 79, 737 |
| Mold, Glass ware, Cooling | H. Dillaway | 79, 733 |
| Mold, Sugar | J. S. Tnskecp | 73, 810 |
| Molded and coated artieles, Composition | S. Whitemars | 79, 794 |
| Molded artieles, Manufacture or | W. B. Gleason | 75, 149 |
| Moldings, \&o., Composition for o | C. E. Bonnet. | 85, 0.55 |
| Molding and planing, Machine for | J. P. Grasveno | 82, 113 |
| Molding, Composition for gilding | D. Wright.... | 78,780 77,042 |
| Molding, Enameling | J. Johnson. | 78, 747 |
| Molding, Forming sheet metal | V. Fiseher. | 74,068 |
| Molding machine | H. A. Lee. | 79, 663 |
| Molding machine | C. H. Mellor | 80, 648 |
| Molding machine | J. P. Grosven | 81, 997 |
| Molding machincry | W. T. Horrol | 84, 279 |
| Moldings, Planing | E. H. Ripley | 79, 008 |
| Moldings, Screw | W. Potts ... | 83, 791 |
| Moldings, Tool for cutting | D. W. Perry | 84, 964 |
| Moldings, Tool for turni | W. W. Carey | 81, 338 |
| Movement, Mechanical <br> Movement Mechanical | H. C. Burk <br> E. Soper | 72, 7372 |
| Movement, Mechanieal. | W. R. Swinrerton | 74, 952 |
| Movement, Mechanieal. | M. F. Spore | 75, 591 |
| Morement, Mechanical | W. F. Goodwin | 75, 676 |
| Movement, Mechanieal. | G. Rich. | 77, 322 |
| Movement, Meohanical. | J. T. Davis | 77, 464 |
| Movement, Mechanical | M. Boekman | 74, 979 |
| Movement, Mcehanieal. | E. W. Sargent | 79, 013 |
| Movement, Mcehanical. | J. Leo | 79, 503 |
| Ihovement, Mechanical. | A. W. Browne and | 81, 248 |
| Movement, Mechanieal. | W. F. Goodwin | 81, 271 |
| Movement, Meohanieal. | J. S. Barden | 81, 3:29 |
| Movement, Mcchanical. | D. S. Mcrritt | 51, 393 |
| Movement, Mechanical. | E. O. Rood. | 81, 619 |
| Movement, Mechanieal | J. E. Palmer | ع2, 433 |
| Movement, Mechanical. | G. R. Melten. | 82, 8607 |
| Movement, Mechanical. | J. A. Shannon | 84, 007 |
| Movement, Mechanical. | M. Webl | 81, 451 |
| Morensent, Mechanical. | M. Laemme | 84, 6.32 |
| Movement, Mechanical | A. R. Buffington | 84, 678 |
| Nower and reaper knife sharp | W. B. Deuel | 83, 767 |
| Mower, Lawn..... | A. M. Hill. | 73, 807 |
| Mower, Lawn. | S. W. Sears | 76, 831 |
| Mower, Lawn. | J. Shaw. | 83, 101 |
| Mowing machine. | M. F. Mathewso | 77, 634 |
| Mowing machine | G. E. Burt | 74, 988 |
| Mowing machine | J. W. Piere | 75, 573 |
| Mowing machine. | W. Allen | 75, 723 |
| Mowing machine. | H. J. Ruggles. | 77, 407 |
| Mowing machine. | M. V. Cummings | 77, 719 |
| Mowing machine. | G. W. N. Yost | 78, 712 |
| Mowing machine | L. D. Bidwell | 84, 790 |
| Mowing machine | F. A. Geisler | 85, 378 |
| Mowing machine, Grinding cutters of | W. H. Laubach | 74, 701 |
| Mowing machinc. Clamping knives an while being ground. | H. J. Case |  |
| Mowing machine, Grinding cutters of. | B. B. Snow and J. Dickerson | 80, 571 |
| lowing machine, Grinding cutters |  |  |

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| :---: | :---: | :---: |
| Mowing machine, Grinding catters of | D. W. Jameson | 83, 067 |
| Mowing machine, Grinding cutters of | A. P. Thayers | 78, 401 |
| Mowing machine, Grinding catters of | A. French | 78, 448 |
| Mowing machinc, Grinding cutters of. | S. D. Wackman | 78, 623 |
| Mowing machine, Grinding cutters of. | G. P. Tork and W. H. Wilson | 78, 909 |
| Mowing machine, Grinding cutters of. | S. W. and J. F. Palmer | 80, 761 |
| Mowing machine, Grinding cutters of. | H. F. Phillips and H. W. Le | 81, 105 |
| Mowing machine, Holding cutters of, ground. | D. V. Janeson . | 84, 191 |
| Mowing machine knives, Grinding...... | M. C. Cronk | 78, 863 |
| Mowing machine knives, Grinding | J. A. Thompson | 79, 030 |
| Mowing machine, Sharpening cutters | G. Sanford. | 83, 222 |
|  | M. R. King | 77, 051 |
| Minffs, Forming blocks for | E. W. L. Bellander | 74, $2=6$ |
| Musical instrument | W. Vogel | 84, $0: 37$ |
| Musical instrument and school desk | W. O. Trowbridge | 83, 008 |
| Musical instrument, Key coupling for | J. Berger ........ | 73, 0 \% |
| Mrusical instrument, Metallic reed for | C. N. Cutter | 79, 321 |
| Musical instrument, Metallic reed for | C. N. Cutter | 79, 322 |
| Musical instrument, Recd | E. P. Needham | 78,536 |
| Musical instrument, Reed for | L. K. Fuller and H. K. Whi | 84,486 |
| Musical instrument, Stringed | G. Schleicker | 81, 012 |
| Musical instrument, Wind | TV. Fischer | 85, 222 |
| Musical motion | P. Phillips | 75,572 |
| Musical return ball | J. Burke. | 76, 393 |
| Music stand, Portable | D. M. White | 77, 940 |
| Music, Turning the leaves | T. Goodrum | 73, 978 |
| Mruslin for sweat linings, \&c., for hats | W. P. Wrigh | 76,685 |
| Mustard plaster. | B. I. Crew | 79, 811 |
| Miuzzle for shot guns | J. Fry | 84, 942 |
| Muzzle for shot guns, Detachable | S. II. Poper | 79, 801 |
| N. |  |  |
| Nails, Cut.. | E. Sweet and J. B. Elliott. | 85, 145 |
| Nail catting machine | W. H. Battelle | 82, 679 |
| Nail cutting machino | C. P. Munt. | 84, 189 |
| Nails, Cutting off | M. Gormby | 80, 063 |
| Nails, Drawing | H. W. Holly | 73, 330 |
| Nails, Drawing | E. P. Whitney | 77, 427 |
| Nail-driver for boo | E. Hale. | 80, 477 |
| Nails, Extracting | D. Morris | 74, 401 |
| Nail extractor | J. Edson | 73, 587 |
| Nail cxtractor | J. A. Pinnel | 78, 479 |
| Nail extractor | J. Tyzick | 78,699 |
| Nail extractor | J. Q. Breathitt | 79, 307 |
| Nail extractor | J. Tyzick and H. W. Eskilds | 82, 568 |
| Nail holder and hammer, Combined | R. W. Grecn.. | 84, 351 |
| Nail, Horscshoe | S. E. Chase | 78, 644 |
| Nail, Horscshoe | G. D. Walcott | 79, 417 |
| Nails, horseshoo, Pointing | D. Armstrong | 82, 476 |
| Nail machine | G. W. Sargent | 76, 104 |
| Nail machine | F. Daridson | 77, 262 |
| Nail machine. | R. C. Grant. | 77, 604 |
| Nail machine | E. Davidson | 80,150 |
| Nail machine, Lubricat | L. A. Dodge | 79, 326 |
| Nail, Picture. | 13. H. Bradley | 83, 913 |
| Nail-plate feeder | C. D. Hunt | 74, 094 |
| Nail-plate feeder | D. Rced.- | 85, 478 |
| Nail plates, Feeding | F. E. Boyd.. | 75, 620 |
| Nail platos, Feeding | W. Sherman and J. Russell | 81, 830 |
| Nail, Shoe - | J. M. Bent. | 74, 745 |
| Nailing machine | D. Savory. | 82, 354 |
|  | L. R. Blake. | 76,150 |
|  | J. F. Sargent | 77, 104 |
| Name piate and lettcr chute | A. M. Damon and S. G. Lyford | 85, 218 |
| Name plato for comms, \&c. | G. Brabrook | 75, 726 |
| Name plate for street amp. | C. J. O'Hara | 82, 544 |
| Napkin ring and salt cup combined | G. Pine | 75, 968 |
| Nasal irrigator | M. Mattson | 75, 285 |
| - eckties and collars, Fastening for | E. Rau | 83, 318 |
| Necktic and watch-guard com | F. J. Flagg | 79, 063 |
| Necktie fastening | R. A. Goodyear | 73, 244 |
| Necktie fastening | E. Woodward. | 79, 796 |
| Necktie fastening | D. H. Tierney | 84, 874 |
| Necktie, Retainer for | F. IH. Brown.- | 76,468 |
| Ncektie supporter | G R Metcham | 76, 312 |
| Neck-yoko. | E. and J. C. Co | 73, 581 |
| Neck-yoko | T. J. Jones | 74, 544 |
| Neck-yoke. | A. S. Dow and E. W. Wilcox | 76, 609 |

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# Alphabetical list of inventions-Continued. 

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Ottoman and hassock fill | E. G. Ganiard . G. H.C. Willia | $\begin{aligned} & 80,619 \\ & 80,322 \end{aligned}$ |
| Ottoman lounge. |  | 77, 581 |
| Oven. | E. Pussey | 78, 231 |
| Orea and bath combined | D. C. McNeill | 80,987 |
| Oven and stove, Camp Oven, Bake | J. Vale. | 79,615 |
| Oven, bake, Attachment for door | S. Morton | 78, 754 |
| Oven of cooking steve. | D. A. Paris | 78,687 78,226 |
| Oven, Portable. | F. M. W. Willer | 80,751 |
| Orcn, Stove | R. C. Whitehouse | 85, 194 |
| Oven, Stove..................... | H. Herrick....... | 79, 348 |
| Oven, stove pipe, and water | H. P. Judson | 84, 831 |
| Oxide of zinc from sulphureted ores, Ma | D. Lees | -83, 73.3 |
| Oxygen and chlorine, Producing | J. Langenbach | 73, 613 |
| Ox-yoke | J. W. Little .. | 76, 332 |
| Ox-yoke | W. Cooper | 82, 922 |
| Ox-yoke | S. G. Walke | 80, 788 |
| Ox-yoke, Adjustable | C. R. Belbin | 78, 509 |
| Oyster dredging machine | T. P. Sink. | 74, 857 |
| Oyster winder ......................................... ${ }^{\text {a }}$ S. S. Shaw -.............................. |  |  |
|  |  |  |
| Packer for packing sand in molders' llas | B. S. Benson | 83, 029 |
| Packing for car axlcs and boxes | S. R. Duncan |  |
| Packing for carriage shacklo. | F. B. Morse | 77, 204 |
| Packing for engines, pumps, \& | W. H. Miller | 75, 151 |
| Packing for hoso-coupling. | R. J. Gould | 76, 286 |
| Packing for joints....... | J. E. Wootten | 77, 954 |
| Packing for joints of steam and water n | W. Brocard | 84, 022 |
| Packing for joints of steam-engines | J. U. Adams | 78, 911 |
| Packing for piston head. ............. | B. Dinsmore | 84, 864 |
| Packing for steam and other enginery | J. Glanding | 77, 275 |
| Packing for steam-engines <br> Packing for steam-engines | W. H. Mille | 77, 903 |
| Packing, Piston....... | F. J. Roth | 77, 533 |
| Packing, Piston | F. J. Roth | 82, 331 |
| Packing, Piston ro | W. Wilso | 81, 052 |
| Packing, piston, Steam | W. C Seld | 75, 301 |
| Packing, Stcam and water | W. J. Seld | 77, 534 |
| Packing, Stuffing box | G. D. Gillet | 79, 822 |
| Pad, Attaching pad hook | L. Hays | 78,736 |
| Bad, Bosom | H. W. Libbey. |  |
| Pad, Bosom | H. W. Libboy | 76, 894 |
| Pad, Bosom |  | 77, 493 |
| Pad, Bosom | A. H. Johns | 77, 979 |
| Pad for horses' hoofs | J. Hasclitine | 80, 319 |
| Pad for horscs' hoots | H. ${ }^{\text {L W. W. Southwor }}$ | 81, 025 |
| Pad for horses hoof | W. Pomeroy ... | 81, 533 |
| Pail, Barnia. | J. Walton. | 77, 853 |
| Pail, Dinner | J. H. Foote | 76, 905 |
| Pail, Dinner | M. Saulson | 80,341 |
| Pail ear | G. H. Eastma | 77, 376 |
| Pail holder and milking stool | L. B. Hoit. | 84,572 |
| Pail, Milk. ${ }^{\text {Pre}}$ | S. Appenish | 84, 179 |
| Paint, \&c., Separatio. | D. M. Weston. | 74, 021 |
| Paint, \&c., water-proof, Composition | D. Mr. Cummings | 85, 216 |
| Paint composition....... | R. P. Hinds. | 85, 308 |
| Paint compound | J. D. Mins | 79, 196 |
| Paint compound | H. T. Wilson | 81, 721 |
| Paint compound | J. H and G O. Smi | 84, 011 |
| Paint for buildings, roofs, \&c | E. S. Ritchie.... | 77, 763 |
| Paint, litharge, \&c., Separating light from heavy particles of. <br> Paint, Manufacture of | W. Atwood $\qquad$ <br> W. T. <br> 89, 416 |  |
|  |  |  |
|  | W. C. Hurd. | 75, 915 |
| Paint, Marine. | F. G. Hollan | 80, 177 |
| Paint, Mctallic. | J. W. TVheele | 84, 074 |
| Paint or mastic, Spr | B. V. Betterson | 76, 88\% |
| Paint, Stone ....... | J. A. Miofitt | 84, 702 |
| Painted surfaces, Finish for | I. T. Payno and W. Ayr | 73, 376 |
| Painting and roofing compound | N. Trish.. | 77, 827 |
| Pallet for timepiec | C. E. Mason | 74, 121 |
| Pamphlet cover,Pan, Bake | J Chase | 75, 584 |
|  | J. Chase, |  |

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| :---: | :---: | :---: |
| Pan, Baki | R. G. Eld | 73, 703 |
| , Baking | S. W. R |  |
| Pan, bread, Forming | M. L. Be |  |
| Pan, Dust. | D. C. Colby | ${ }_{77}$ |
| Pan, Dust. | L. F. Wheaton | 78, 406 |
| Pan folding machine | P Mamiton |  |
| Pan for concentritrating | P. Marcelin and J. Saunders |  |
| Pan former | J. Finu | 77, 726 |
| Pan, Forming s | S. II. Kenncd |  |
| Pan, Frying | R. C. Whitcho | 75, 095 |
| Pan inter | C. ${ }^{\text {a }}$ S |  |
| Pan, Pertorated | C. S . Cooney | 7 |
| Pau, sheet me | W. |  |
| Pan, Wiring | J. Shepard | 1 |
| Panncls, Cuttin | F. D. Gre |  |
| Pantaloon protecting | E. Lindslcy | 73, 106 |
|  | T |  |
| Pantaloons stre | S. ${ }^{\text {d }}$ |  |
| ${ }^{\text {Paper and }}$ | H |  |
| Paper bag machio | G. 1 . Mallor | 83,648 |
| Paper bag mac | G. Amazeen | 84, 076 |
| Paper box.... | W. Armour | 88, 301 |
| Paper boxes, Manufacture | R. Smith.. | 84, 246 |
| Paper cap. | N. Watcrman and | 79, 420 |
| Paper cap. | IV. G. Imbaeh and 1. |  |
| Paper cask | J. | \%1.727 |
| Paper elip | A. H. Fatizingcr | 82, 271 |
| Paper elip | C. E. Cande | 1 |
| Paper, eloth, \&c., Water-proofing | R. O. Lowrey | 80, 640 |
| Paper cutter and | S. W. TVileox | ${ }_{83,115}$ |
| Paper, Cutting | H. Skidmore | 81, 021 |
| Paper, Cutting | H. Lav |  |
| Paper eutting mac | J. L. Alicn | 76, 373 |
| Paper cutting ma | G. Ellsworth . | 83, 143 |
| Paper catting m | G. II. Sanborn |  |
| Paper dampe | J. A. L |  |
| Paper, Enameling | M. H. Gardncr | 78,079 |
| Paper fast | M. M. rilcston |  |
| Paper fast | A. ${ }^{\text {ar }}$ |  |
| Paper file | E. J. Smith nud J. H H. | ${ }_{7}$, ${ }^{\text {a }}$ |
| Paper file | E. W. Woodruff aut | 76, 812 |
| Paper file | J. W. Boughto | 79, 441 |
| Pater | 3 Tre ${ }^{\text {a }}$ |  |
| Paper fie | B. Noy and |  |
| Paper fie | L. H. Olms | ${ }^{84} 14.505$ |
| Paper file | J. M. D. Franee | 84, 738 |
| Paper file | J. D. Field | 85,078 |
| Paper, Foldiug and cording the edge | J. E. Coffin. | 84, |
| Paper for collars, Manutaeture of .................. | J. M. Wilcox | 80, 105 |
| Paper for the manufacture of floor coverings, belting, | J. J. Ott | 81, 1.99 |
| Paper for transferring stamps and other printed mat- | M. Rosenthal | 78, 610 |
| Paper for rarious purposes, Treatin | C. F. Crehore |  |
| Paper for wrapping tobacco, sxuff, \&c., Prcparing | M. W. Brown | 74, 195 |
| Paper machine, Elastie apron | A. B. Lovell | 82, |
| Paper making machine | J. Jennings |  |
| Paper making mach | J. Viney | -84, 807 |
| Paper Mranul | , |  |
| Paper | 2. | ${ }_{83} 617$ |
| Paper, Manuacta | E. | ${ }^{85} 185$ |
| Paper, Molding corniee and the liko from | L. W. Kimball | 85, 312 |
| Paper pail, \&e | A. and J. Jennings | 82, 526 |
| Paper, Polishing | S. Shephcrd and A. M. | 88, 260 |
| Paper, Producing designs | W. Ben |  |
| Paper | H. E. Baillic | 73, 429 |
| Paper pulp | W. Miller |  |
| Paper pupe | C. C. Fit | 85, 386 |
| Rper pulp, Mixing eoloring natter with | J. Wrinklo |  |
| Paper reservoir for compresse | c. W. W | 81, 113 |

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| :---: | :---: | :---: |
| Paper ruling machine | W. S. Wilder | 79, 424 |
| Paper ruling machine | C. F. West | 79, 927 |
| Paper ruling machine | W. C. Smith | 84, 390 |
| Paper stock and other fibers, Rccovering lies from. | C. D. J. Seitz | 83, 733 |
| Paper stock, Bleaching................. | S. T. Merrill | 75, 691 |
| Paper stock, Preparing | J. Tiffany.... | 73, 138 |
| Paper stock, Washing | J. E. Andrews | 79, 935 |
| Paper tubcs, \&c., Making | J. Arkcll ... | 74, 190 |
| Paper, wall, Edging. | W. T. Yeoman | 78, 707 |
| Paper, wall, Priuting | P. H. Bowers. | 76, 1.52 |
| Paper, wall, Trimming | W. H. Guthri | 83, 709 |
| Paper, Water and damp proof, for cover | C. Gcessling | 80,620 |
| Paper, Watcr-proof or damp-proof. | S. C. Bishop. | 73, 287 |
| Papicr mache, Producing au extra | E. S. Judge | 75, 766 |
| Parasol and umbrella. | J. A. Simpson. | 78, 839 |
| Parcelling, Manufacturing | J. R. Raynard | 84, 578 |
| Paste, Dentfrice | G. İ. J. Colburn | 85, 166 |
| Paste, Making | G. G. Noah | 73, 115 |
| Pastry jigger. | J. Redding and J. B. Coo | 76,813 |
| Pattern for cutting shirts | J. W. Raud | 78,323 |
| Pattern for draughting sleigh bodies | D. Pierce | 74,126 |
| Pattern for stoves and hollow ware. | J. Owen. | 84,438 |
| Pattern for trimmiug hat brim | C. M. Hawes | 80, 732 |
| Pattern square. | N. W. Burnett | 74, 297 |
| Pavement. | H. G. McGonigle | 74, 110 |
| Pavement. | C. W. Stafford | 75, 309 |
| Pavement. | C. Williams | 75, 504 |
| Pavement. | C. Williams | 76,021 |
| Pavement. | W. W. Boyingtou | 78,046 |
| Pavement. | A. Wyckoff | 78,635 |
| Pavement. | B. F. Miller. | 79, 770 |
| Pavement. | C. Williams. | 80,260 |
| Parement. | C. Williams | 80, 261 |
| Pavement. | R. Foley | 82, 102 |
| Pavement, Asphalt. | C. P. Alsing | 77, 565 |
| Pavement, Composition for | E. Weuger. | 81,564 |
| Pavement, Composition for | G. Dubelló. | 84,272 |
| Pavement, Composition for | H. F. Snow and J. H. Dari | 81,698 |
| Pavement, Compound for | J. C. and M. V. Campbell | 73, 434 |
| Pavement, Concreto | W. H. White | 74,963 |
| Pavement, Railway | J. T. Parson | 77, 208 |
| Pavement, Street | II. M. Stow | 74, 862 |
| Pavemcnt, Street | P. Cadue and W. H. De Vali | 80,856 |
| Pavement, Street, and walks | A. Hoyt. | 78, 455 |
| Pavement, street, Compositiou | J. W. Byrues | 75, 055 |
| Pavement, Wood.. | A. Miller and C. Mason | 76, 227 |
| Pavement. Wood. | D. McKenzie | 79, 674 |
| Pavement, Wood. | D. W. Hunt | 82, 320 |
| Pavement, Wooden | H. McDougall | 75, 780 |
| Pavement, Wooden | W. D. Richardson | 81, 540 |
| Pawl and ratchet mech | J. Garficld | 82, 935 |
| Peach parcr. | J. H. Brown | 82, 794 |
| Peanuts, Picking and cleaning | J. C. Uuderwoo | 81, 562 |
| Pearl-barlcy machine | W. Rickard | 74, 593 |
| Pca sheller.. | S. Ustick | 77,683 |
| Peat crib | M. S. Robcrts | 74, 141 |
| Peat machine | J. Tisdale | 74, 635 |
| Peat machine | M. S. Roberts | 80, 309 |
| Pcat machine | N. Aubin | 83, 441 |
| Peat machine | Z. Luddington | 85,178 |
| Peat, Moİing | J. L. Lyons | 73, 616 |
| Peat, Preparing | C. W. Inglis | 75, 663 |
| Peg float | W. Miller, J. J. Becker, and | 78,227 |
| Pegs, Making | J. S. L. Babls. | 77, 241 |
| Pegging machine | J. W. Soule | 82, 448 |
| Pegging machine, Hand. | F. I. Vittrum | 84,025 |
| Pegging machincry, Peg-feed-top for | S. A. Holt and C. H. Willian | 81, 275 |
| Pegging or nailing machine | J. F. Sargent. | 77, 104 |
| Pelt punch | J. T. Carson | 74, 197 |
|  | W. A. Mors | 73, 255 |
| Pcn | E. Wiley. | 73, 419 |
| Pen | R. Mirst | 75, 909 |
|  | J. H. Holland. | \%6,454 |
| Pen and pencil case | L. F. Standish | 80, 780 |
| Pen and pencil holder | A. Tower | 78,698 |
| Pen and worm feuce | J. Will. | 73, 420 |
| Pcn, Fountain | R. H. Chinn. | 82, 598 |
| Pen, Fountain | G. Kneip | 82, 850 |
| Pen-holder | C. M. H. W | 74, 179 |
| Pcn-holder. | A. Warth . | 77, 422 |

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| :---: | :---: | :---: |
| Pen-holder | H. G. Eastman | 78, 655 |
| Pen-holder for ruling machino | I. W. Henderson | 75, 546 |
| Pen rest .......... | R. B. Huguni | 75, 164 |
| Pen wiper............ | S. Darling | 73, 956 |
| Pencil and pen case | S. F. Standis | 80, 780 |
| Pencil and pen holde | A. Tower | 78,698 |
| Pcncil case. | W. Maginn | 77,062 |
| Pencil holder | E. J. Toof. | 78, 158 |
| Pencil, Lead | E. Taber | 73, 883 |
| Pcncil, Rubbe | S. D. Hovey | 80,485 |
| Pencil sharpener | O. C. Squycr | 74, 728 |
| Poncil sharpener | J. L. and D. H. | 80, 145 |
| Pencil sheath | J. Darmer | 78, 931 |
| Pencil sheath | S. Ayers | 82, 272 |
| Pendents for sheet | N. Yoodbury | 80, 325 |
| Pepper box top fastener | J. Bounds... | 78,858 |
| Perambulator | C. Lyne | 81, 387 |
| Perambulator, Folding | A. Christian | 83, 363 |
| Percussion cap, Feeding | A. J. French | 85, 224 |
| Permanganates and manganates, Prepa | B. Schmidt. | 76,825 74,482 |
| Pessary... | B. Atkinson | 74, 482 |
| Pessary | B. Joseph | 79,231 |
| Pessary | C. R. Gorgas ... | 80, 163 |
| Pessary | IV. T Chrisman | 81,877 |
| Petroleum, cri | H. Baldwin | 75, 238 |
| Petroleum, Distilling | J. Miller | 77, 7 \% |
| Petroleum, Distilling | A. Kirk. | 78, 818 |
| Petroleum, Purifying and dccoloring | J. Ellis. | \%7, 4\%0 |
| Petroleun, Storing. | I. Mathei | 83, 192 |
| Petroleum to remove the more volatile portions, Treating. | R. G. Loftu | 81, $6 \overline{5}$ |
| Petroleum, Treating, for the manufacture of oils .... | G. O. Spence .... | 78, 545 |
| Phosphate of lime, acid, Concentrating | G. F. Wilson and E. N. Morsford. |  |
| Phosphate of lime and farinaceous matters in order to granulate them, Treating the mixture of acid. | G. F. Wilson and E. N. Horstord. | 75,337 |
| Phosphate acid, and other liquids, Conveying .......... | G. F. TVilson. | 75, 335 |
| Phospliates, acid, Drying | G. F. Wilson. |  |
| Phosphates, acid, Granulating | G. E. Wilson. | 75, 33 |
| Phosphates, acid, Grinding and pulverizing | G. F. Wilson. |  |
| Phospliates, acid, Manufacture of | G. F. Wilson. | 75, 328 |
| Phosphates, acid, Process and apparatus for the manufacture of. | G. F. Wilson | 75, 331 |
| Phosphates, acid, Treating, in the manufacture of yeast powders, \&c. | G. F. Wilson and E. N. Horsford | 75, 338 |
| Phosphates for agricultural purposes................... | G. F. Wilson | 75, 327 |
| Phosphates for the manufacture of fertilizers, Treating mineral. | J. Cominin | 74, 799 |
| Phosphates for the manufacture of fertilizers, Treating mincral. | J. Commins | 78,061 |
| Phosphates, Manufacture of, and extracting phosphoric acid from bones. | G. F. Wilson and E. N. Morsford. | 75, 336 |
| Photograph aud engravings, Mounting................. | J. L. Duffee | 78, 195 |
| Plotograph, Cutting and pasting | J. Franko. |  |
| Plotograph, Printing | A. L. Kilby | 81, 277 |
| Photograph, Produrcing surfaces for printing from | W. Bentley |  |
| Plotographers, Posing apparatus for. | G. Crammer an | $\begin{aligned} & 83,835 \\ & 74 \\ & 74 \end{aligned}$ |
| Photographic negative, Vignetting | F. Wolf | 74, 6.5 |
| Photographic pictures, Printing | I. Rehu |  |
| Photographic printing apparatus | E. and E. W. Brown | 73,948 |
| Photographic printing apparatus | U. Stellman | 75,483 |
| Photographic printing, Contact pa | J. Buchtell | 84, 168 |
| Photographic printing frame. . | S. F. Conant and H. A. Manle | 74, 311 |
| Plotographic printing frame | B. Reed |  |
| Photographic rest...... | N. Sarony | 74, 604 |
| Photographic rest. | C. E. Krüger | 83, 714 |
| Photographic room | G. K. Proctor | 83,545 |
| Photographic transfer | O. P. Howe | 76,408 |
| Photometer | II. Vogel |  |
| Piano | F. B. McGregor |  |
| Piano, \&c., Child's pedal for. | C. A. Class | 83, 84.8 |
| Piano, \&c., Mand supporter for | C. Sangalli |  |
| Piano, Sounding-board for | G. M. Guild | -79,295 |
| Piano, \&c., Key-board fo | J. S. Allen and A. P. Willian | 79, 76 |
| Piano forte. | L. Caldera and L. Mont |  |
| Piano-forte | G. W. Neill |  |
| Piano-forte. | II. Herrick. | 81.306 |
| Piano-fortc. | T. Steinway |  |
| Piano-forte actio | 1. Sejdell |  |
| Piano-forte bridge Piana-forte frame | C. Herdinand | 75, 132 |

## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Pipe, Tobacco. | H. R. Robbins | 77, 096 |
| Pipe, Tobacco | H. G. Dayton | 77, 803 |
| Pipe, Tobacco. | O. Sjöborg.. | 81, 020 |
| Pipe, toloacco, Glazing and cooling | J. H. Stark | 77, 673 |
| Pipe, Wash basin overflow and discharg | B. Kavanagl | 79, 117 |
| Pipe, Water, and drain.................. | W. P. Kirkland | 76,778 |
| Pipe, water, Cement. | E. Daston | 77, 465 |
| Pipe, water or gas, Stop boxos for cocl | J. Smith | 80,778 |
| Pipe, water, Preventing from bursting | R. H. Smith | 75, 315 |
| Pipe, water, Waste ..................... | A. C. Smith. | 84, 443 |
| Pipe Trench and cutter | J. L. Brierly | 78, 047 |
| Pisciculture. | W. H. Furmax | 78, 952 |
| Pistol and sword combi | C. E. Billings | 82, 279 |
| Pistol, Breceh-loading | D. Werner | 82, 903 |
| Pistol gallery, Portable | F. A. Spofford and M. G. Raf | 74, 163 |
| Pistol, Toy. | R. Frisbio. | 74, 904 |
| Piston | S. F. and I. Y. Chubbuch | 74, 750 |
| Piston | J. Whelock | 75, 714 |
| Piston | W. Swayno | 76, 263 |
| Piston, engine, Staam | A. Nadow. | 73, 453 |
| Piston, enginc, Stcam | H. Hinds and G. H. Lodgo | 76, 448 |
| Piston, engino, Steam | C. Bollinger. | 78, 179 |
| Piston for deep well pump | C. Jarceki | 83, 968 |
| Piston packing... | J. King | 75, 927 |
| Piston packing | T. A. Bisboo | 76, 295 |
| Piston, Pump | S. P. Gilbcrt | 73, 963 |
| Piston, Pump | S. R. Mason | 76, 643 |
| Piston, Pump | O. Salgco. | 77, 538 |
| Piston, Pump | J. Wood | 81, 451 |
| Piston, Pump | J. D. Westcott | 81,565 |
| Piston-rod adjuster | D. Bly | 78, 045 |
| Piston-rod packing | V. H. Mille | 73,454 |
| Piston-rod packing | O. Collier | 83,123 |
| Piston, Steam-eng | H. N. J. Mansficld | 83, 188 |
| Piston valve for steam-hammer | D. Davy | 78,933 |
| Pitcher, Double-walled | G. Jepson | 83, 969 |
| Pitcher, Ice | W. Bellamy | 74,285 |
| Pitcher, Ico | J. B. Bailcy | 76,378 |
| Pitcher, Ice | G. Lano. | 76,638 |
| Pitcher, Ice | R. Holnes | 76, 761 |
| Pitcher, Ice | F. J. Mille | 76,934 |
| Pitcher, Ice | T. Leach. | 80,748 |
| Pitcher, Ico | W. C. Wood | 84, 458 |
| Pitcher, ice, Double-wall | D. C. Wilcox | 83, 747 |
| Pitcher, ice, Enameled metallic | C. C. Footo. | 79, 335 |
| Pitcher, Sirup. | II. Bullard | 74, 663 |
| Pitman | E. C. Baker | 85, 263 |
| Plano | G. Buckel. | 81, 335 |
| Plane | F. Smith and J. Carpenter | 81, 425 |
| Plane | A. H. Camp | 81, 879 |
| Plane | V. Bitsch | 82, 074 |
| Plane, Carpenters' | E. M. Chapin and S. Rust | 76, 031 |
| Plane, Carpcnters' | J. P. Tarr | 82, 450 |
| Plane, Edge | C. D. McAulcy | 74,561 |
| Plane for boots, \&c., Edgo | F. Buxton and G. Crosby | 79, 203 |
| Plane for cutting blind shats | C. Kupper | 81,795 |
| Plane for cutting blind slat | J. II. Millor | 81,929 |
| Plane for cntting blind slats | R. E. Lowo | 82, 424 |
| Plane-plane | D. E. and A. A. Aiken | 77, 434 |
| Planc, Solc edge | M. Paekard. | 78,758 |
| Planer-chuck | R. N. Bruco | 74,983 |
| Planer-chuck | C. H. Riggs | 78, 132 |
| Planing | H. D. Storer | 84, 847 |
| Planing and milling machinos, Cattin | E.T. Prindlo. | 77, 211 |
| Planing and molding, Machino for | J. P. Grosvenor | 82, 113 |
| Planing and durning tool | J. P. Smith | 83, 560 |
| Planing machino | M. P. Fletcher | 74,333 |
| Planing machino | H. G. MeDuffo | 7\%, 067 |
| Planing machino | S. M. Hamilton | 81, 776 |
| Planiug machine | A. Whitcomb. | 81, 854 |
| Planing machine | S. M. Hamilton | 81, 898 |
| Planing machine | F. K. Plumbly | 83, 089 |
| Planing machino, Chuck for | J. S. Hoar | 74, 360 |
| Planing machino, Cutter hoad for | A. T. Stearns | 78, 616 |
| Planing machine, Operating the bed of | H. F. Shaw | 81, 953 |
| Planing machino or latho, Tool post for | W. H. Leach | 77, 742 |
| Planing machine, Wood. | D. A. Harris | 74, 218 |
| Planing machino, Wood. | R. N. Mcriam | 76, 791 |
| Planing machino, Wood | F. Douglass | 77, 013 |
| Planing mill, Trood | F. Douglass | 78, 728 |
| Planing machino, Wood, Cutter head | T. Iosterin | 76,556 |

## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.

| Invontion or Discovery. | Namo of Patentee. | Na |
| :---: | :---: | :---: |
| Planter, Corn, and cultivator combined. | C. Dyer | 83, 478 |
| Planter, Corn, and plow.-.............. | J. H. Frampton | 76,733 |
| Planter, Corn, and plow combined. | P. McIsaac | 73, 022 |
| Planter, Corn and seed............ | E. C. Brown | 75, 850 |
| Planter, Corn and seed. | F. W. Marriott | 78, 303 |
| Planter, Corn and seed. | N. Mendenhall | 85, 466 |
| Planter, Corn and seed drill | J. Weaver, jr................................ | 79, 038 |
| Planter, Corn, and shovel plow combined | A. M. Franklin, W. J. Hastings and J. A. Holford. | 83, 271 |
| Planter, corn, Double | W. MeLucas . . . . . . . . . . . . . . . . . . . . . . | 79, 998 |
| Planter, corn, Mand.. | J. S. Lawson | $74,231$ |
| Planter, corn, Hand. | D. Broy .-......... | $76,709$ $80.747$ |
| Planter, corn, Hand | J. F. Kinglesmith. | $80,747$ |
| Planter, corm, Mand. | J. H. Norris and T. B. Harrison | $\begin{aligned} & 84,435 \\ & 83,340 \end{aligned}$ |
| Planter, corn, Shield for | R. T. Taylor | $83,340$ $74,496$ |
| Planter, corn, sower, revolving harrow, an Combined. | W. P. Tyler................................. | 74,496 77,761 |
| Planter, Ootton.............................. | C. Richmon | 77, 761 |
| Planter, Cotton. | E. L. Barnett | 79, 433 |
| Planter, Cotton seed | Z. Doolittle and A. M. Crowder | $74,518$ |
| Planter, Cotton sced | N. B. Sherwood | $\begin{aligned} & 75,207 \\ & 75,410 \end{aligned}$ |
| Planter, Cotton seed | A. J. Going <br> B. Smith.. | 78, 614 |
| Planter, Cotton seed | G. Jessup | 81, 906 |
| Planter, Cotton seed | A. J. Going | 85, 379 |
| Plantor, Cotton seed and corn | N. Foster | 74, 334 |
| Planter, Guide for corn and sced | E. C. Brown. | 75, 851 |
| Planter, harrow, and cultivator combined | J. G. S. Garwood. | 73, 593 |
| Planter, Hedgo. | W. Young | $\begin{aligned} & 85,195 \\ & 73,086 \end{aligned}$ |
| Planter, Potato | II. Farmer <br> N. B. Sherwood | $\begin{aligned} & 73,086 \\ & 84,309 \end{aligned}$ |
| Planter, Potato, and cultivator | C. F. Hoofman. | 81, 371 |
| Planter, Rice . .-.................... | E. Wagoner. | 74, 957 |
| Planter, Seed | S. C. Wilder | 75, 613 |
| Planter, Seed | R. B. Wright. | 75, 616 |
| Planter, Seed | E. P. Harrls | 78,281 |
| Planter, Seed | A. Hays - | 78, 666 <br> 80, 585 |
| Planter, Seed | M. Atrood | $\begin{aligned} & 80,585 \\ & 81,548 \end{aligned}$ |
| Planter, Seed | T. H. Smith | $\text { 81, } 548$ |
| Planter, Seed | R. F. Osgoo | $\begin{aligned} & 82,153 \\ & 82,524 \end{aligned}$ |
| Planter, Seed | A. J. Holt ... | $\begin{aligned} & 82,524 \\ & 83,151 \end{aligned}$ |
| Planter, Seed | J. M. Gitchell <br> J. Musorave | $\begin{aligned} & 83,151 \\ & 84,751 \end{aligned}$ |
| Planter, Seed | J. Musgrav <br> I. Rexford | 84, 763 |
| Planter, Seed | B. Kuhns | 85, 455 |
| Planter, seed, Hand | H. Koeller, and W. Uecko | 74, 383 |
| Planting maehine. - | S. L. Allen... | 84, 247 |
| Planting machine, Seed. | H. Bundel and J. Williams | 72, 971 |
| Planting, Marking ground for | W. R. McKinley | 75, 288 |
| Plaster, Adhesive........ | J. Linch -- .-. | 81, 657 |
| Plaster and seed sower | D. Dick and O. Preston, jr | 74, 320 |
| Plaster casts, Preparing | T. Taslor - - | $82,891$ |
| Plaster, lime, \&e., Spreading | G. U. Relyea. | $83,816$ $83,149$ |
| Plastic composition .......... | H. C. Gaskin | 83, 149 |
| Plate, Anti-slipping. | W. B. Gould | 81, 890 |
| Plate, metallic, Bending | J. W. Bean | 74, 880 |
| Plate lifter............ | D. E. Roe. | 73, 199 |
| Plate lifter. | G. O. Roe. | 74,598 |
| Plate lifter.. | S. J. Talbot. | 76, 849 |
| Plate or salver | H. McManus and J. B. Hatting | 84, 894 |
| Plates of eombined steel and iron, Mant | J. Park, jr. | 78, 477 |
| Platform, Dumping ............... | S. C. Konaga. | 83, 288 |
| Platform for rock drills | T. Sweeney and J. Bradbura | 79, 158 |
| Plier......-........ | J. Bounds | 73, 289 |
| Pliers for bending sheet metal | M. Rothschild | 74, 601 |
| Plow ............... | J. Urio. | 73, 209 |
| Plow. | S. T. Skinner | 73, 264 |
| Plow. | W.S. Colwell | 73, 504 |
| Plow. | G. K. Smith and J. Strasser. | $73,550$ |
| Plow. | W. T. Howell | $73,606$ |
| Plow. | D. W. Hughes | 73, 607 |
| Plow. | A. Wright ... | 73, 685 |
| Plow | C. Whito. | 74,183 |
| Plow. | W. P. Everdon. | 74,327 74,474 |
| Plow. | W. B. Young | -74, 429 |
| Plow. | S. W. Standard | 74, 729 |
| Plow. | J. Bradley | 74, 885 |
| Plow. | J. D. Peck | 75,455 <br> 75,901 |
| Plow. | W. E. Hardin | 75, 901 |
| Plow. | J. Lane .-. | 76, 208 |
| Plow. | W. Pennin | 76,243 |

Alphabetical list of inventiono-Continued.


## Alphabetical list of invontions-Continued.

| Inrention or Discovery. | Namo of Patontoo. | No. |
| :---: | :---: | :---: |
|  | A. McCreight. | 81, 660 |
| Plow, Corn | A. J. Paino . | 83, 537 |
| Plow, Corn. | T. Dillon -.................. | 84,094 |
| Plow, Corn. | W. C. Rhinehart and R. Ga | 84, 763 |
| Plow, Corn. | S. I. Miller and L. Wright. | 85,118 |
| Plow, Corn and eotton | J. W. Milroy | 85,324 84,437 |
| Plow, Corn and potato ................ | W. Notman <br> I. B. Arthur | 84,437 77,233 |
| Plow, Corn, planter, and eultivator, C | I. B. Arthur. . . ${ }_{\text {I }}$ | $\begin{aligned} & 78,233 \\ & 79,706 \end{aligned}$ |
| Plow, Cotton. | H. S. Hoxio...... | 77, 618 |
| Plow, Cultivator | B. F. and J. V. Guy | 82, 938 |
| Plow, cultivator, harrow, and rollor com | S. C. Thornton. | 83,675 81,187 |
| Plow, Cutter attachment for - | T. E. Marable .-....- | 81,187 73,858 |
| Plow, Ditehing...... | J.L. R. Shalters and S. Ray | 73,858 75,988 |
| Plow, Double shovel | J. G. Flisher and E. MI. Bates | 76, 730 |
| Plow, Double shovel | A. J. Craig - . . | 77, 260 |
| Plow, Drain......... | P. Ballard. | 80, 113 |
| Plow fender | S. J. Reed. | 83, 999 |
| Plow, Four wheel | N. B. Norton | $\begin{aligned} & 82,241 \\ & 77,203 \end{aligned}$ |
| Plow frame. | S. Mareh | $\begin{aligned} & 77,203 \\ & 73,480 \end{aligned}$ |
| Plow, Gang | A. Farrow | $73,707$ |
| Plow, Gang | W. W. Mathews | 74, 238 |
| Plow, Gang | G. Steinegger | 75, 069 |
| Plow, Gang | C. Hess .- <br> w Nelson | $\begin{aligned} & 75,968 \\ & 75,567 \end{aligned}$ |
| Plow, Gang | W. Nelson <br> G. J. Dahl | $75,871$ |
| Plow, Gang | W. ${ }^{\text {W, S. Satlin and B. R. }}$ Mub | 75, 895 |
| Plow, Gang | J. L. Kesson. | 75, 925 |
| Plow, Gang | W. F. Higgins and J. Perry. | 76, 447 |
| Plow, Gang | M. Flinn. | 76, 735 |
| Plow, Gang | G. W. Mannel | 78, 111 |
| Plow, Gang | D. C. Matterson | 78, 464 |
| Plow, Gang | G. A. Davison | 79, 639 |
| Plow, Gang |  | 79, 79 |
| Plow, Gang | S. Graham | 80, 405 |
| Plow, Gang | A. Walker | 80, 521 |
| Plow, Gang Plow, Gang | A. Smith and W. P. Watson. | 80, 338 |
| Plow, Gang | P. H. Standish | 81, 700 |
| Plow, Gang | J. H. Andrews | 81,784 |
| Plow, Gang | F. P. Smith | 82, 165 |
| Plow, Gang | F. P. Smith .-.... | 82, 160 |
| Plow, Gang | C. L. Horn, jr., and L. Mance | $82,24$ |
| Plow, Gang | H. R. Huio...- | $\begin{aligned} & 83,283 \\ & 83,641 \end{aligned}$ |
| Plow, Gang | J. N. Davidson and N. Spone | 83, 698 |
| Plow, Gang | J. N. Davidson aud N. Spone | 83,638 |
| Plow, Gang | A. Smith.. | 84, 652 |
| Plow, Gang | F. MeFarnahan | 84, 748 |
| Plow, Gang | T. U. Webb | 85, 496 |
| Plow, Gang, and eultivator | I. B. Mahon... | 75, 941 |
| Plow, Gang, Seed sower and harrow atta | J. B. Webstor <br> D. Pettigrow. | 77,141 73,644 |
| Plow, Garden ..... | D. Pettigrow <br> J. Starr | $\begin{aligned} & 73,644 \\ & 80,842 \end{aligned}$ |
| Plow, Garden hand --. | G. Starl'... | $\begin{aligned} & 80,842 \\ & 78,934 \end{aligned}$ |
| Plow, Hand | J. Winecoff | 84, 331 |
| Plow, Hillside | H. B. Abbott. | 75, 104 |
| Plow land sido. | J. Baeon | 77, 242 |
| Plow lays, Forming | J. Lano . . . . . | 73, 983 |
| Plow mold board.. | R. Gaines and M. Scott | 74, 679 |
| Plow, Mold board for | J. Soymour | 75, 987 |
| Plow, Mold board for | J. Oliver. | 76, 652 |
| Plow point......... | L. D. Burch. | 83, 130 |
| Plow, Potato. | M. Stoll. | 82,043 |
| Plow, Potato and corn | C. F. Noftz | 83, 992 |
| Plow, Revolving colter for. | M. Sattley | 84,380 $-6,343$ |
| Plow, Rotary cutter for | J. C. Pfeil | -78, 400 |
| Plow, Rotary, Mounting the eutters of | P. H. Standish | 84, 798 |
| Plowshare -.-.-.... | G. W. Cooper | 84, 75,919 |
| Plowshare, Casting | J. Hackensack | 75,919 78,100 |
| Plow, Shield.... | M. Kirkham-. | 73, 231 |
| Plow, Shovel. Shovel. | T. Donely and J. B. Crossler | 73, 699 |
| Plow, Shovel | A. Jonnings . . . . - .-. . . - . | 81, 173 |
| Plow, Shovel | B. F. McCollester | 81, 188 |
| Plow, Shovel | J. Moyer.. | 81, 189 |
| Plow, Shovel | W. B. Evans........-.... | 83; 481 |
| Plow, Shorel, $\Lambda$, justablo... $\%$ | G. W. Morter and E. Berry | 85, 469 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Plow, Shovcl, and corn planter combined | A. M. Franklin, W. J. Hastings and J. A. Holford. | 83, , 871 |
| Plow, Shovel and cultivator | B. F. Ream..... | 74, 720 |
| Plow, Side-hill | H. Sloop | 73, 933 |
| Plow, Side-hill | D. A. Manue | 77, 630 |
| Plow, Snow ... | C. Lusted | 73, 189 |
| Plow, Snow | G. Place - ..... | 74,844 78,161 |
| Plow, Snow <br> Plow, Snow | S. Lewis . . . | 78,161 79,913 |
| Plow, Snow | N. S. Grcen | 81, 081 |
| Plow, Snow | H. Harris. | 84, 357 |
| Plow, snow, Rai | J. Jones and T. G. Eiswald | 82, 226 |
| Plow, snow, Railroad | J. R. Adams | 73, 276 |
| Plow, snow, Railway. | E. Robbins | 75, 979 |
| Plow, spadc, Revolving | J. W. Milroy. | 77, 830 |
| Plow, Steam | J. C. Delarig | 76, 060 |
| Plow, Steam <br> Plow, Steam, | P. A. Sray-.io | 75, 310 |
| Plow, Subsoil | S. D. Tutilo.. | 76, 2 \% ${ }^{\text {\% }}$ |
| Plow, Subsoil | C. R. Hartmana | 76,627 |
| Plow, Subsoil | J. Vaughn and E. Chamness | 78, 031 |
| Plow, Subsoil | J. Custer. | 83, 472 |
| Plow, Subsoil attachment f | C. Hayden | 75, 419 |
| Plow, Subsoil attachment f | J. C. Leonard and | 80, 356 |
| Plow, Sulky. | J. Warwick | 73, 143 |
| Plow, Sulky | A. Q. Allis | 74, 268 |
| Plow, Sulky | E. Levco.. | 74, 554 |
| Plow, Sulky. | W. B. Sutherlen | 76, 848 |
| Plow, Sulky | L. Hunt-- | 77, 617 |
| Plow, Sulky | S. J. Reed | 80, 221 |
| Plow, Sulky. | B. Slosser | 80, 427 |
| Plow, Sulky | A. C. Stanlcy and H. W. Ensign | 81, 701 |
| Plow, Sulky. | J. B. Lewis and J. E. Udall . | 81, 799 |
| Plow, Sulky. | J. R. McConnell | 82, 140 |
| Plow, Sulky, and cultivator combin | W. G. Crossley | 72, 981 |
| Plow, Sulky, and harrow. | C. N. Bakewell | 75, 032 |
| Plow, Welding together tho lay and la | J. Lane | 80, 532 |
| Plow, Wheel. | J. Kay.... | 83, 507 |
| Plumb, squaro, and level comb | A. F. Ward | 80, 252 |
| Plunger and die | H. G. William | 80, 042 |
| Pocket-book and fan combined | O. Brüch | 76, 928 |
| Pocket-books, \&c., Fastening for. | J. C. Arms. | 78, 914 |
| Pocket-book fastening | J. C. Arms. | 82,577 |
| Pocket for billet strap | II. H. Smith | 74, 859 |
| Pocket of apparel, Safety attachment | A. Arnemann | 81, 862 |
| Pocket, Safety | A. Q. Ross | 73, 655 |
| Pocket, Safety | C. Sanborn | 74,008 |
| Pocket, Safety . | J. C. Iden | 77, 192 |
| Pocket, Safety, Attachment | J. Brosius... |  |
| Poke, Extension .-....... | D. C. Brewster. | 84, 164 |
| Poke, Horse and | G. W. Bebb and G. W. Fulmer | 76, 881 |
| Poker | J. F. Brewer | 85, 425 |
| Pole attachment | G. N. Compton | 73, 234 |
| Polishing and burnishing apparatus, | W. H. Willson | 82, 46.5 |
| Polishing fabric and flexible abrader |  |  |
| Polishing machine ........ | J. Stackhouse <br> E. Quinlan | 77, 546 |
| Polishing wooden handles | G. and E. Ashworth | 80, 564 |
| Portfolio -................ | A. W. Pratt - ....... | 81, 8158 |
| Porte-monnaic, Armlet. Post, Boring. . | B. F. Mohr. |  |
| Post, cap, Hitchi | R. N. Roberts. | 74, 596 |
| Post driver .. | A. B. Clark | 80, 600 |
| Post driver | A. McClara | 83, 692 |
| Post driver | J. Ellenberger | 84, 100 |
| Post, Gatc | W. F. Veber | 75, 224 |
| Post, Hitching | B. and P. Walther | 77, 686 |
| Post-hole borer | J. K. Miller | 75, 947 |
| Post-hole borer. | A. F. Summers | 81, 555 |
| Post-hole borer. | J. M. Walter and S. Shank | 82, 185 |
| Post-hole borer | J. Cothron | 82, 293 |
| Post holes, Boring | A. Q. Allis | 74, 785 |
| Post, timber, \&c., Composition for sottin | A. D. Purinton. | 78, 691 |
| Pot and crucible, Molding. .......... | R. Taylor and F. Strow | 84, 593 |
| Pot and sauccr, Annealing | J. Hibbell. | 79, 759 |
| Pot bails, \&c., Forming the hook or eye | J. Miller | 83, 522 |
| Pot, Coffee.. | J. G. Dyer | 78, 943 |
| Pot, Coffee | B. Boardman | 79, 943 |
| Pot, Coffce | E. Hotz - ${ }^{\text {Blunt }}$ | 81, 169 |
| Pot, Coffee | E. Thatl and ju. Schiotho..... | 83, 650 |
| Pot, Coffee. | W. M. Williams ........... | 84, 456 |

## Alphabetical list of inventions-Contiuned.

| Patent or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Tot, Coffee | J. B. Smith | 85, 339 |
| Pot, Coffee and tea | S. Mcecrufion. | 77,507 |
| Pot, Coflce, tea kettle, \& | W. Wagstaff. | 80,576 |
| I'ot, Flower.... | E. Whitnan | 82, $05 \%$ |
| Pot, Glue . | J. Bracrdou | 79, 945 |
| Pot, kettle, \&ic., Cover f | G. Rruben | 85, 398 |
| Pot, Salinometer | H. Waukliu | 74,958 |
| Pot, Tea .... | W. W. Stevens | 78, 901 |
| Pot, Tea and eoffe | Mr. Simouds. | $\bigcirc 5.501$ |
| Pot, Tea and eolle | A. C. Kasson | 77, 291 |
| Pot, Tea aud cotie | E. 13. Manmin! | 81, 186 |
| Pot, Tea and coflee | I2. Stricklaud | 84,018 |
| Pot, tea aud cotice, Haudle for | II. Bullard... | 79, 724 |
| Pot, tea and coffee, Sheet metal | J. If. Stone | 75, 706 |
| Potash aud soda . . . . . . . . . . . . | A. (i. Ihunter | т8, 375 |
| Potash and soda, Carbonato of | A. (i. Hunter | 75, $3 \times 1$ |
| Potash and sotir, Manufacture of | A. (i. Ifunter | 73, 72: |
| Potato, Articlo of food from. | C. K. Marshall | 7\%, 995 |
| Potato baker... | C. H. Beeminu. | 74, $25 \%$ |
| Potato bug cleaner | J. Corbeil. | 80, 458 |
| Potato dirgel . | J. Il. (iray and C. Wr. Calhou: | 73, 319 |
| Potato digrer | E. Smith. | 7.1, 438 |
| Potato digger | G. Koenig and G. Otto | 7.1, 699 |
| Potato digiger | IV. H. Chamberlin. | 74, 991 |
| Potato digger | J. C. Clark | 75, 193 |
| Potato digger | A. Hadwen | 75, 543 |
| Potato digger | (8. Wr Kintz | -6, 200 |
| Potato diggrer | İ. P. Wright | i6, 371 |
| lotato digger | L. Finch | 76, 427 |
| L'otato disger | A. Giraves | 76, 438 |
| lotato digger | A. Graves | 77, 279 |
| Potato digger | J. W. Burnham and W. Conlon | 72, 2.57 |
| Potato digger | G. Vowles | 78, 345 |
| l'otato digger | H. B. Nortou | 78, 473 |
| Potato digger | E. Benuett. | Ti, 641 |
| Potato digger | J. W. Blodgrett | 79, 433 |
| Potato digger | M. Johnson | 79, 473 |
| Potato digerer | II. Ileuterson | 80, 070 |
| Potato digger | A. Van Norman | 80, 24. |
| Potato digger | J. P. Darison | 80,611 |
| Potato dirger | W. Stark... | 50.841 |
| I'otato digger | B. D. Vanderveer and 1). Riddel | 81, 230 |
| Potato digger | H. P. King | 21, 636 |
| Potato dirger | E. I. Ford | 81, 765 |
| Potato digiser | A. Burlans | 21,900 |
| I'otato dirger | J. Burt | 32, 59\% |
| Potato digger | IV. J. Cowanl | 82, 806 |
| lotato dicyer | J. Stewart | 83, 670 |
| Lotatu digger | A. M. Mall | 83, 847 |
| Potato digger | V. P. Corbett | -33, 833 |
| Potato digger. | If. Hrance | 8.1, 026 |
| Potato digiser | I. A. Morley | $81,29 \%$ |
| Potato digger | J. E. Giles and WV. Fess | 81, 741 |
| Potato digger | M. Jacolis ...... . . . . . . | と1, $2 \times$ |
| Potato digger | F. A. Kober | 85, 180 |
| Potato digger | I. Ammis. | 85,418 |
| 1 'otato digerer and separator. | W. Aicen. | 81, 72 |
| lotato digiger and vine puller. | J. W. Newtonı | 83, 85 |
| Potato di¢ster, hoe, and potato planter | H. IS. Morden | 73, 618 |
| Potato dig'fing maehine................ | M. M. Wiley . . . | 76, 127 |
| Potatoes, Harvesting.... | O. S. and T. ( St. John | 76,953 |
| Potato masher ...... | 3. H1. Monroe ......... | \%3, 74:3 |
| Potatoes, Preserving | J. Munford. | x3, 299 |
| Potatoes, Raking- | 1). J. Titule | 76, 85l |
| Potatoslicer | C. J3. King | 81,570 |
| Potatoes, Sacking | E. Sedy | 81, 71:3 |
| Potato washer . | E. N. Torter and P. P. Xoherts. | 74, 400 |
| Potato washer | O. H. Cooke . . . . . . . . . . . . . | 77, 461 |
| Potato washer | S. II. Tift. | 77, 679 |
| Potato waslier | D. K. Mickok | 82, 850 |
| Potato washer | L. U. Sherwin | 8.5, 405 |
| Potato washer and pan eombined | I. DI. Chaplin . . . . . . . . . | 76,399 |
| Ponltice cloth... | M. I. J. Chollet and C. IL. E. Ham | 84, 731 |
| Pounce holder | R. Cuslman and J. İ. Deemis .. | 84, 346 |
| Powder, Ilasting | P. A. Oliver .-. .-. . . . . . . . | 80, 004 |
| Pownter, Eznlosivo | G. Desiguoble and J. Casthelaz | 76, 173 |
| Powder, Explosive | F. M. Ruschhaupt . . . . . . . . . . | 79,010 |
| lowder, Ginn and blasting | (x. A. Nermmever | 81,670 |
| Powder, Preserving....... | G. A. Marinel - . | 78, 112 |
| Pover, Animal. | J. J. Argate. | 77, 236 |
| Power, Animal | T. Starr | 84, 590 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
|  |  |  |
| Power, Double ratchet lever Power, Horse............... | J. S. Williams | 81,967 82,617 |
| Power, Horse .-... | P. Geiser - Carter. | 82,617 77 7 |
| Power, Motive .... | I. W. Brown | 74, 295 |
| Power, motire, Obtaining | P. Side | 81,302 |
| Power, motive, Producing | E. Stocton and W. O. St. John | 77,674 |
| Preserving vessel and fruit jar | A. Warner | 76,008 |
| Preserving vessel, Closing . | A. Warme | 76, 009 |
| Press .........-............. | C. O. and J. H. Ritch | 76, 101 |
| Press | B. S. Norri | 78, 318 |
| Pross | II. Henly | 78, 738 |
| Press | J. E. Connor | 79, 637 |
| Press | G. Matthewman | 82, 139 |
| Press, Adjustable | N. C. Stiles | 84, 313 |
| Press cnd mill, Cider | E. Wangaman | 80, 253 |
| Press and strainer, Combinod | J. H. Littlefield. | 78, 981 |
| Press, Baling ..... | D. Cummings, jr | $\begin{aligned} & 76,407 \\ & 76,418 \end{aligned}$ |
| Press. Baling | E. Taylor | $\begin{aligned} & 76,418 \\ & 77,108 \end{aligned}$ |
| Press, Baling | G. W. Serit | $\begin{aligned} & 77,108 \\ & 81,612 \end{aligned}$ |
| Press, Baling | C. Brown and D. L. Miller | 81, 745 |
| Press, Baling | J. F. Milligan. | 83, 079 |
| Press, Baling | J. M. Albertson | 84, 989 |
| Press, Baling | M. D. Cheek. | 85, 365 |
| Press board, Tailors' | H. M. Thompson and C. W. Burbank. | 81,959 |
| Press, Brick .... | J. M. Enos | 76, 613 |
| Press, Brick | L. B. Crittenden | 78, 434 |
| Press, Brick | W. O. Leslie | 80, 977 |
| Press, Brick ............. | A. A. Torpey | 81, 560 |
| Press, Brick and concret | G. A. Frear | 84, 485 |
| Press, brick, Concreto. | T. J. Brarke | 73, 576 |
| Press, brick, Concrete. | J. H. Wirt <br> P. Wilsou. | 77, 153 <br> 79, 286 |
| Press, Cheese | P. Wilson... <br> M. B. Fraser | $\begin{aligned} & 79,286 \\ & 80,158 \end{aligned}$ |
| Press, Cheese Press, Cheese | M. B. Frasel <br> S. Y. Ives. . | $\begin{aligned} & 80,158 \\ & 81,509 \end{aligned}$ |
| Press, Cheese | J. Erdle | 81, 614 |
| Press, Choeso | J. D. Stratton and T. Wilson | 82, 174 |
| Press, Cider. | A. W. Shidler | 75, 589 |
| Press, Clothes. | J. S. Nicholson | 82, 341 |
| Press, Compressing, and beater | G. Ertel . | 76, 063 |
| Press, Concrete block ........... | L. R. Warner | 77, 854 |
| Press, Concrete building block. | O. L. Jorilan | 73, 610 |
| Press, Copying --....... | T. P. How | $\begin{aligned} & 76,457 \\ & 02 \end{aligned}$ |
| Press, copyiug, Damping apparatus for | A. Pearl ... | 83, 088 |
| Press, Cotton | P. Williams | 73,683 76,593 |
| Press, Cotton | R. M. Brooks ...-...................-.- | 76, 593 |
| Press, Cotton | W. H. Tappey, W. C. Lamsden, and A. Steel. | 82, 178 |
| Press, Cotton and hay. | W. Russell ... . . . . . . . . . . . . . . - . . - . . | 74, 603 |
| Press, Cotton or hay | J. Wentz | 76, 860 |
| Press, Cyliudrical filtering | P. Du Ricux and E. Roettrger | 80, 157 |
| lress, Die -...-.-.-....... | J. Hayes and E. W. Bliss | 73, 893 |
| Press, Drill | J. M. Culden and A. J. Bai | 83, 366 |
| Press, Drop. | J. Duff....... | $78,867$ |
| Press, embossing, Gango for | W. Richards, <br> T. J. Jones . | $\begin{aligned} & 78,130 \\ & 74,543 \end{aligned}$ |
| Press for packing fruit. | I. W. M. Castle and J. B . Couner. | 74, 795 |
| Press, Marness pad..- | G. W. Lawbaugh | 74, 921 |
| Press, Hay . . . . . . | G. W. D. Culp . | 74, 054 |
| Press, Hay . | M. P. Molleur | 74,571 |
| Press, Hay. | G. W. Lockhart | 76, 478 |
| Press, Iluy aud cotton | L. J. Maxey | 73, 543 |
| Press, Hay and cotton | C. Lent - | 74,703 |
| Press, Hay and cotton | G. Utley- | 77,872 80,681 |
| Press, May and cotton |  | 80,681 89,036 |
| Press, May and cottion | S. Q. Carey.. | 82, 83,926 |
| Press, May and cetton | S. Hutchimson | 83, <br> 75 <br> 166 |
| Press, Hop. | H. Taylor .-. | 79, 413 |
| Press, Mydranlic. | C. W. Holbrook | 75, 015 |
| Press, IIydraulic. | W. Ettenger aud II. P. Edmond. | 76, 732 |
| Press, Hydranlic.. | G. W. Rawson | 80, 877 |
| Press, Hydraulic. | J. B. Tunstall. | 83, 424 |
| Press, Lard . . . | S. S. Avis. | 77, 239 |
| Press, Lard, and sansage stuffer | A. G. Tuxell | $80,035$ |
| Press, Lard, and sausage stuffor | T. B. Cassel ....... | 81,751 82,453 |
| Press, Lard, and sausage stuffor | N. S. Underknfler | 82, 453 |
| Press, Lithographic. | C. Manrice | 74, 840 |
| Press, Lithograpluic | G. Cooper .-... | 78, 930 |
| Press, Lithographic. | A. J. Shackford - - .-... | 80,771 75,247 |
| Press, Mop - | L. R. Covey and J. Duify | 75, 24 |

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| Invention or Discovery. | Name of Patentec. | No. |
| :---: | :---: | :---: |
| Press, Oil, tobacco, and other | I. Thomas | 79, 87.5 |
| Press, Pad crimp. | G. Kennedy | 73, 186 |
| Press power, Hop | N. Carpenter | 73, 500 |
| Press, Printing | C. Potter, jr | 73, 195 |
| Press, Printing | E. Alleri | 73, 343 |
| Press, Printing | A. A. Dunklo | 75, 394 |
| Press, Printing | W. Braidwood | 77, 577 |
| Press, Printing | L. T. Wells. | 79, 617 |
| Press, Printing | W. Braidwood | 80,44 |
| Press, Printinin | J. M. sones | 80, 865 |
| Press, Irinting | i.. Cummings | 83, 471 |
| Press, Printing | S. J. Baird | 84, 40:3 |
| Press, Printing | L. and II. Roese | 84, 440 |
| Press, Printing | I. M. Inoe and S. D. Tueker | 8.1, $6: 7$ |
| Press, Printing | S. O. Tucker | 85, 49 : |
| Press, printing, Color | (.) W. Wood | 74, 741 |
| Press, printing, Feed gauge for | C. Potter, ir | 73, 190 |
| Press, printing, Guide gauge for | O. II. Rioerl. | 77, 5:7 |
| Press, printing, Inking apparatus for | T. L. Baylies. | 78, 358 |
| Press, printing, Inking apparatus for | T. L. Taylies. | 79, 72 |
| Press, Rotary embossing............. | I. AI. Willour . . .i. | 82, 461 |
| Press, Screw. | J. S. and W. B. Buell | 84,408 |
| Press spindle adjustment | A. I. Merriman | 78,225 |
| Press, Stamping | A. G. Mead and C. J. Addy | 76,647 |
| Press, Tobacco.. | 1). C. Mayo | 75, 033 |
| Pressing mathine, Tailors' | J. W. Thorp | 77, $93 \pm$ |
| Priming for noedlo gru | C. II. F. Thieme | 81, 036 |
| Prinkter and dredge | G. Jones | 73, 80.5 |
| Printers' chase. | 13. Dick | 76, 72 |
| Printers' leads | J. MI. M. Chenoy | 81, 470 |
| Printers' leads, Cutting | W. J. Clark | 81, 140 |
| Printiug apparatus, Elastic | J. MuDermott | 73, 359 |
| Printing certain textile fabries and yarm | J. Lightfoot. | 83, 182 |
| Printing, Etching relief platos for surfa | C. Henry . . | 84, 137 |
| Printing in colors | II. T. Sinart | 84, 22: |
| Printing, Inking apparatus for color | T. L. Baylies. | 79, 888 |
| Printing, Inking apparatus for color | J. Inunt. | 79, 910 |
| Printing inachine, Address.......... | If. Julien ................. | 80, 285 |
| Printing machinery, Cylindrical plate | G. F. Lewis and F. D. Stuart | 77, 890 |
| Printing luachinery, Feeding cloth | I. O. Potter | 85, 475 |
| Printing, Plates for | C. Hollday | 78,288 |
| Prisons, Construction of | I. Hodrsom............ | 7, 700 |
| Privy | J. Ingram | 75, 549 |
| Projectile | C. F. Browu | 82, 28.1 |
| Projectile | A. O. II. Hardenstein | 8.2, 714 |
| Projectile, Explosiro........ | J. Long | 84, 63. |
| Projectiles, explosive, Iguiting | E. Pertuiset, A. Mundel, a Armido do Fleron. | 78, $3 \pm$ |
| Propeller | C. M. O'Hara .-..... |  |
| Propeller | D. II. Heyer. | 78, 739 |
| Propeller | R. Aikin. | 79, 18:3 |
| Propeller | I. Munter | 79, 657 |
| Propeller | C. Gotthold | 80, 421 |
| Propeller | R. Hunter | S0, 960 |
| Propeller .-........ | II. F. Roberts | 85, 403 |
| Propeller, Application of steam to Propeller Buoyant | W. Spaulding | 79, 695 |
| Propeller for canal | S. Matteson | 82. 968 |
| Propeller, Screw.. | J. E. Kionnedy | -84, 108 |
| Propeller shaft | V. Burtes . . | 83, 601 |
| Propeller, Shifting bucket | J. Brusser | 76, 711 |
| Propelling apparatus | E. Offlazus. | 80, 497 |
| Propelling apparatus | J. Granger. | 82, 516 |
| Propelling apparatus | E. S. Barnes | 82, 787 |
| Protector for the body | J. W. Torry | 75,710 |
| Pulley. | F. Hewitt... | 77, 284 |
| Pulley | J. P. Smith | 80, 777 |
| Pulley | J. A. Burnup | 81, 860 |
| Pulley and block | S. and J. Roobuck | 73, 653 |
| Pulley block | 1. 1V. Norcross ... | 73, 029 |
| Pulley block | II. F. Shaw | 79, 264 |
| Prlley, Expanding | T. H. Savery | 78, 763 |
| Pulleys, fast and loose, oiling | W. Hamilton. | 75, 753 |
| Pulley for braiding marhine, Extension | J. Fewkes | 72, 991 |
| Pullay for mearing for machinery | S. Whoeler. | 75,689 |
| Pulley for hoisting apparatus | D. L. Millor.. |  |
| Pulloy, Friction clutch | D. Harrington | 78,961 |
| Pulloy, Friction clutch | C. K. Smicht | 80, 024 |
| Puldey, Frirtion clatch | A. B. Clemon | 84, 681 |



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| :---: | :---: | :---: |
| Pamp, Stean | A. J. Repuolds | 83,54! |
| Pump, Steam | J. S. Bardeu |  |
| ${ }^{\text {Pump, }}$ Prock, | A. II. Piland and A. H . Turner. | 79,140 <br> 81,287 |
| Pump, Stock. | W. T. Armstrong - . . . . . | 82, 06.1 |
| Pump, Submersell | B. F. Brown. | 85,063 |
| Pump to barrel, Attachin Pump valvo cleaner... | ii. ©. Taylor. | 78, 86 |
| Prmp, Water cha | T. Dutton and T. Maguire | 83,268 |
| Pump, wreckiog and fire engine, Coinbined floating. | G. W. Talcott | 82, 767 |
| Pumping, \&c., Device for | J. Johnson. | 84, 948 |
| Panch | T. C. Wuder | 84, 03.3 |
| Puncl, Belt . . . . . . . . . . . . . . . . . . | E. IIester... | 80, 734 |
| Puuch, Belt | D. M. Weston |  |
| Punch, Conductor's | J. and G. D. | 84, 73.3 |
| Punch for cutting coupons from railroad tickets | II. M. Stow | 85, 409 |
| Punch, Gang | J. I. Hichins | 80, 311 |
| Punches, Oper | L. W. Holmes | 82, 317 |
| Punch, Rotary | A. Bedford. |  |
| Puuch, Spring | A. R. Noble |  |
|  | R. J. Kellett |  |
| Punch Ticket | W. Hill |  |
| Punch, Ticket | W. J. Phelp |  |
| Punching and shoar | M. A. Lauagan | 79,91: |
| Punching and tire-b | J. M. Bryan | 78, 420 |
| Punching and upset | S. E. Lockiwoo | 25, 3 3:3 |
| Punching apparatus | 1. Lamplongh | at, |
| Puncling machine | F Telson |  |
| Puaching machino | T |  |
| Punching machino | T E TVicrin | ${ }_{\bullet 3}$ |
| Punching machine machino | W. Lyon | 83, 881 |
| Punching machine for tin or shoet metal | J. Annear. | 84, 670 |
| Putty, Stereotypors | I. M. WVilbur. | 82, 46.4 |
| Q. |  |  |
| Quartz crusher | S. M. McDougall | 74,564 |
| Quartz crusher | A. Buchaman |  |
| Quartz crusher. | B. Babbitt |  |
| Quartz crusher. | E. Castlo |  |
| Quartz crushor. | E. Ford | ${ }^{83,892}$ |
| guartz crasher.............................. | A. L. Floury |  |
| Quartz, dissolving and for cxtracting metal, Appara tus for. | A. L. Floury | 7, 744 |
| Quiltiug fr | L. A. Collard |  |
| Quilting frame | S. II. Nesbit.. | 80, 760 |
| Quilting frame. | D. T. Wallaco. |  |
| Quilting frame and bedstoad | Par |  |
| Quilting frame and tablo. | M. E. Phillips. | 78, 478 |
| r. |  |  |
| Rack and brack | W |  |
| Rack and feed trough, Combinod. | J. D |  |
| Rack and stool, D | A. N. Towno | 83, 801 |
| Rack, Bath room | M. A. If. Saur | 83, 884 |
| Rack, Billiard cue | ${ }_{\text {V }}$ E. Brunswick |  |
| Rack, Bulliard cue | V. H. Buschma |  |
| Rack, Cheeso curd | E. A. Papmer |  |
| Rack, Cloth...... | II. C. Smitl, D. A. Kelly, and J. E. | 74, 439 |
| Rack, Clothes. | C. K. Bronoman |  |
| Rack, Clothes. | I. Hogeland | ${ }^{81,694}$ |
| Rack, Coat | J. B. Rumsey | 79, 259 |
| Rack, Dish | E. A. Sawyer |  |
| Rack, double, and trough, for feeding sheep, cattle and horses, Combined. | J. D. McBride |  |
| Rack, Feed | MI. Workman |  |
| Racke for | LV. Monroo | 77, 377 |
| Rack, Hat for seats | P. Sylia | 74, 953 |
| Rack, Hay | A. T. Soule. |  |
| Rack, Hay | W. Brownell | 83, 561 |
| Rack, Mrilk | I. P . Tice | 74, 633 |
| Rack, Mult and | E. Osborn | 74, 766 |

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| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Rack, Musie | G. Tefft | 76, 551 |
| Rack, Pen. | W. E. Clarke | 80, 140 |
| Raek, Pen. | C. J. Bouché | 82, 916 |
| Raek, pen, Spr | J. M. Kecp. | 73,448 |
| Rack, Sheep. | J. D. White | 73,065 |
| Rack, Sheep | J. Taylor | 75, 077 |
| Raek, Shcep | J. Elliott and W. Lee | 83, 840 |
| Rack, sheep, Feeding | J. C. Colflesh. | 80, 603 |
| Raek, Towel | E. E. Everitt | 73, 517 |
| Rack, Towel and clothes | C. Carrier- | 82, 691 |
| Radiator | J. A. Larkin | 79, 841 |
| Radiator | W. Stcffo | 80, 883 |
| Radiator | U. S. Blake. | 84, 989 |
| Radiator, Steam | C. Whittier | 84, 037 |
| Raft | D. Quinn. | 83, 662 |
| Raft dog | C. C. Comstock | 77, 961 |
| Rags, Cleansing | G. L. Witsil. | 84, 850 |
| Rags, Cutting. | J. Collins jr | 74, 506 |
| Rags, Cutting | A. Allen . | 75, 341 |
| Rags, Cutting | A. T. Bennctt and W. O. And | 80, 531 |
| Ras cutting maehin | J. Collins jr., and N. R. Nixon | 73, 695 |
| Rail chair, Railway | W. V. Ardicn ............. | 85, 347 |
| Rail clamp or chair, Railroad | J. E. Watkins | 73, 679 |
| Rail fastening, Railroad | M. Seaman. | 75, 583 |
| Rail joint, Railway | S. J. Reeves. | 75, 977 |
| Rail joint, Railway | J. S. Sehoonover | 82, 645 |
| Rail joint, Railway | E. G. Patterson | 82, 744 |
| Rail ,oint, Railway | G. Palmer. | 83, 303 |
| Rail joint splice, Railroad | E. II. Eberman | 74, 900 |
| Rail, Railroad | P. Asheroft and G. F. L. Me | 73, 282 |
| Rail, Railroad | L. B. Prindle | 76, 942 |
| Rail, Railroal | J. H. Herman | 77, 039 |
| Rail, Railroad | Z. B. Wakeman | 78,404 |
| Rail, Railroad | A. G. Buzby | 78, 422 |
| Rail, Railroad | R. M. Brooks | 26, 309 |
| Rail, Railroad | R. M. Marchant | 80, 417 |
| Rail, Railroad | E. R. Shepard. | 82, 881 |
| Pail, railroad, Fagot or pile for manufa | W. Haywood and J. Lees | 79, 904 |
| Rail, railroad, Fastening for. | N. Haddington | 73, 529 |
| Rail, railroad, Splice | S. A. Beers. | 83, 446 |
| Rail, Railway | J. Potter. | 83, 880 |
| Rail, Railway | E. R. Shepard | 75, 206 |
| Rail, Railway | H. Zahn. | 84, 401 |
| Rail, Railway | R. Anthony | 85, 198 |
| Rail-set | G. Patterson | 73, 033 |
| Rails, Sharpening | J. Ayers | 85, 265 |
| Rail splice, Railway | R. Elliott | 77, 180 |
| Rail splice, Railway | J. Wisted | 83, 813 |
| Railroad | J. B. Christain | 77, 456 |
| Railrond, Arcade | S. B. B. Nowlen | 73, 635 |
| Railroad, Elevated | C. T. Harvey | 73, 003 |
| Railroad, Elevated | C. T. Harvey. | 79,753 |
| Railroad, Elevated | C. T. Harvey | 79, 754 |
| Railroad frog | H. S. Chapin. | 78,429 |
| Railroad sill and chair | J. Snell | 77, 119 |
| Railroad track elearer | C. P. Riley | 79,600 |
| Pailroad track clcarer | R. A. Smith. | 79,606 |
| Railroad track clearer | J. Callaghan | 80, 331 |
| Railroad track clearer | S. G. Cabel. | 80, 450 |
| Railroad track, Foundation for | J. E. Halsey | 85, 304 |
| Railroad track-laying machine | W. D. Robertson | 82, 350 |
| Railway. | E. Robbins. | 76, 348 |
| Railway. | C. Margutti | 78,462 |
| Railway | J. G. Cross | 79, 054 |
| Railway, Elevated | R. A. Checsbrough |  |
| Railway, Elcvated | E. M. Barnum | 80, 530 |
| Railway, Elevated | O. Goantner. | 83, 772 |
| Railway, elevated, Propulsion and con | C. T. Havey-.............. | 79, 755 |
| Railway frog | J. H. Dow and D. J. Riker | 73, 959 |
| Railway frog | W. Wharton jr............ | 74, 461 |
| Railway frog. | J. Gray | 82, 937 |
| Railway frog | W. H. Nobles | 82, 97\% |
| Railway joint | L. Behymer . | 74, 037 |
| Railway joint | J. Q. Swcet.. | 79,515 |
| Railway safety attaehmen | II. S. Blood. | 82, 199 |
| Rain-water eut-off. | J. Spear | 82, 653 |
| Rakc. | J. H. Butler. | 74, 987 |
| Rake and hoe eombined | H. Thacker | 84, 231 |
| Rake for horse power maehine | D. G. Terrell. | 79, 281 |
| Rake, Garden, and hoo combin | R. H. Gordon, | 73, 525 |
| Rake, Grain. | M. M. Wells. | 77, 550 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Reamer and tap | S. Glasson | 82, 618 |
| Reamer for woll | A. J. Salisbury | 79,400 |
| Reaming tool | A. Conklin. | 85, 628 |
| Reaper knives, Grinding-........... Reapers and mowers, Wrist pin for | F. Judsou..... | 81, 640 |
| Reaping maehine .................. | I. Hoftheins | 77, 181 |
| Reeeptacle for watch keys and other ar | M. Z. Crane | 83, 69.5 |
| Rectifier and coudenser for alcoholic spi | J. F. Collins | 73, 579 |
| Rectifying and distilling | C. Gresichna | 73, 09: |
| Reed instruments, Soek | D. Marshall. | 78,219 |
| Reeds for organs, | W. Monroo | 73, 114 |
| Reel | G. Bradway and N. Bradley | 76, 04:3 |
| Rool | J. Brown. | 77, 353 |
| Reel | A. H. Saunder: | 81, 8\% |
| Recl | J. S. Feumer. | 83, 270 |
| Reel | W. Baker.... | 84, 154 |
| Reel, Angler's | W. H. Bradley | 85, 065 |
| Reel, Chalk-line | M. V. B. Knowles | 84, 55 |
| Reel, Clothes-line | J. Valentine and H. IS. Stev | 84,919 |
| Reel for grain bind | S. D. Loeke . . | 84, 065 |
| Reel for yarn, \& | F. Voegtli. | 84,026 |
| Reel, Lino | L. Martin. | 73, 019 |
| Recling machinery | 13. H. Jenks | 81,424 |
| Reflector | W. Mr. Marshall | 73, 355 |
| Reflector. | J. A. J. Logan | 75, 033 |
| Retlector | W. G. Schmidlin aad J. W. | 77, 408 |
| Reflector. | L. Portner | 80, 499 |
| Reflector. Dressing-glass | C. Furber. | 84, 943 |
| Reflector for publie halls, | O. E. Dodge | 81,270 |
| Reflector, Gas. | W. J. McLea | 76, 789 |
| Refriserating aud condensing apparatus animal and regotable substances. | E. D. Brainard | 73, 29 2 |
| Refrigerator | A. Fuller and L. P. Reichert | 74, 813 |
| Refrigerator | H. A. Roberts. | 77, 098 |
| Refrigerator | J. I. Hollingsworth | 77, 980 |
| Refrigerator | E. Piper ... | 78, 308 |
| Refrigerator | A. B. Swcetland | 79, 704 |
| Refrigerator | J. Martin ...... | 80, 080 |
| Refrigerator | E. D. Brainard | 81,588 |
| Refrigerator | W. Bray | 82, 076 |
| Refrigerator | S. Child. | 82, 597 |
| Refrigcrator | T. D. Kellog | 84, 196 |
| Refrigerator and cooler | A. Koch ...... | 84, 785 |
| Refrigerator and cooler | L. R. Comstock and J. | 8:3, 167 |
| Refrigerator and cooler, TVater | C. C. Savery......... | 81, 8167 |
| Refrigerator and sideboard. | J. A. Thompson | 88, 365 |
| Rerrigerator, Bottom for ico box in | L. H. Mace | 75, 175 |
| Register. | IH. Gilbert | 76, 435 |
| Register | II. M. Phinney | 77, 403 |
| Register, air, Hot. | W. Nighton. |  |
| Register, air, Hot. | F. W. Brown |  |
| Register, air, Hot | J. D. McBride | 74,968 |
| Register, air, Hot, and loiler combined. | B. B. Pcrkins. |  |
| Register, air, hot, Attachment for | H. Sinclair... | 81, 695 |
| Register, Billiard...... | I. Kling... | 79, 233 |
| Register, Car, railroad | P. R. Gerhart |  |
| Register, Conductor's | W. C. McGill |  |
| Register, Counting | J. S. Detrick | .80, 612 |
| Register for knitting mach | B. B. Bollinger | 81, 870 |
| Resister for time and pa | S. F. Covington | 77, 593 |
| Rogister, Grain ........ | K. Sinith.. | 84, 226 |
| Register, Grain | P. Taylor . | 75,187 80,372 |
| Register, Mileago | B. Horn. | 77, 613 |
| Registcr, Passouger | A. F. Nagle | 76, 502 |
| Register, Passenger | J. Enright | 79, 060 |
| Register, Passenger | T. S. Huntington and A. Fult | 79, 911 |
| Register, Passenger | T. Jacobs. | 80, 741 |
| Registor, Steam-engine | J. S. and J. IL. Hood | 78, 967 |
| Register, Steam-ongine | T. Garsed | 77,584 |
| Register, Ticket. | S. Siched and S. Foust | 84, 622 |
| Register, Vote. | N. A. Patterson . . . | 77, 836 |
| Register, W orkmen's time | W. A. L. Kirk. |  |
| Registering and calculating machino | T. M. Strodo. | 74, 170 |
| Registering fare receiver | W. G. Smoot | 81, 223 |
| Registering scale. | D. Wolf | 83, 580 |
| Regulator for timcpieces | S. F. Estell | 73, 240 |



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| :---: | :---: | :---: |
| Roller, Leather | J. T. Harris | 79, 070 |
| Rollnr, Paving | E. W. K.ttiredge | 82, 009 |
| Rollers, printers', Recovering the matcrials of worn-ont. | J. II. Os suod. | 83, 786 |
| Rollers, Rolling "cots " on drawing | W. C. Jue!in | 76, 199 |
| Rollcrs, Washing printers' ink..... | O. H. Feer and A. L. Carricr | 84, 904 |
| Roller, Wringer | A. Mogon an | 83, 518 |
| Rolling machine | G. Hastin | 73, 598 |
| Rolling pin. | A. J. Roo: | 78, 135 |
| Rolling pin. | W. Cook... | 83, 934 |
| Roof. | E. Akinson | 76, 375 |
| Roofs, \&c., Compwund for covering | C. B. Hutehins | 79, 472 |
| Roof, compositioi, Preserving .... | F. U. Rogers . | 79,601 |
| Roof, hay and grain, Portable | J. J. Naylun | 74, 120 |
| Roof hay stack, y'ortable. | T. Munson. | 80, 301 |
| Roofs of buildings. Preserving | I. W. Dean | 81, 147 |
| Roofs, pavemente \&-c., Composition for covering | J. Sce. | 78, 544 |
| Roofs, Shingling ...................................... | B. Flowers | 85, 089 |
| Poof staging | C. M. Pease | 76,576 |
| Roof truss, Wro:sht iron | G. H. Scllers. | 77, 409 |
| Roofing ...........-.-. - | M. Elret, jr | 81, 078 |
| Roofing and other purposes, Compound | H. W. Jolins. | 76, 773 |
| Rooting and painting compound.......... | N. Irish | 84, 421 |
| Roofing, \&c., Fibrous compound for | R. O. Lowrey | 77, 992 |
| Roofing, \&c., Plastic compound fur. | R. O. Lowrey | 77, 991 |
| Roofing buildiugs | C. De Hass | 77, 177 |
| Roofing, Coment. | L. Rodney | 74, 430 |
| Roofing composition | D. Harger | 74, 083 |
| Roofing composition | R. C. Graves | 74, 343 |
| Roofing composition | C. E. Hinman | 84, 119 |
| Roofing composition | M. Gould | 84, 820 |
| Roofing composition | B. Capron. | 84, 856 |
| Roofing composition | A. Cody, J. Bartlctt, and | 72, 977 |
| Roofing composition | H. K. Schenck. | 74, 606 |
| Roofing composition | J. H. Hood. | 75, 634 |
| Roofing composition | I3. Stephens | 81, 838 |
| Roofing composition, Elastic | T. E. Wood | 82, 507 |
| Roofing compositiou for houses, boats, \&c | J. J. Wiggins | 83,576 |
| Roofing compound | J. A. Jones | 73, 5.31 |
| Rooting compound | E. B. Wclls | 76,012 |
| Roofing compound | W. P. Valentine | 76, 276 |
| Roofing compound | D. W. Denton. | 78, 269 |
| Roofing compound | L. D. Ferguson | 79, 645 |
| Roofing compound | II. M. Teasdalo | (9),029 |
| Roofing compound | J. A. Jones | $8 \% 529$ |
| Roofing compound | M. Pinner | 83, 529 |
| Roofing compound | D. Hitchcock | 84.120 |
| Roofing compound, Water and fire-pro | F. A. Curtis | 79,732 |
| Roofing, Concrete . . . . . . . . . . . . . . | S. B. and P. Pierce | 73, 645 |
| Roofing fabric. | J. J. Wiggins.... | 83,575 |
| Roofing fabric, Process and apparatus for the manufacture of. | A. Robinson . | 75,197 |
| Roofing felt | F. Curtis | 75, 128 |
| Roofing machine | J. H. Cole | 77, 557 |
| Roofing matcrial | A. Jameson | 73, 899 |
| Roofing, Metallic | E. P. Vaux | 79,522 |
| Roofing, Metallic | W. Ward. | 82, 902 |
| Roofing, pavement, \&c., Laying and spreading composition. | J. and G. Rive | 85, 453 |
| Roofing, Rolling. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | E. Richardsou and J. H. Cole | 78, 014 |
| Roofing, Sheet-metal | E. Mills . - - - - - - - . . - . . . . . . | 84, 205 |
| Rope-bearing attachmentin machines for stcam c | M. Eytli | 84, 621 |
| Rope, hair, Opening. | P. Wisdom | 76, 024 |
| Rope-making machine | C. Clark | 81, 753 |
| Rope trace. | 'T. Newrnan | 78, 757 |
| Rossing machine. | C. Gilpin and L. I. Dickinson | 82, 399 |
| Rossing machine. | C. Gilpin and L. T. Dickinson | 82, 400 |
| Roving frame. | W. H. Thompson . .-. .-. .-. . | 73, 267 |
| Roving, Making | N. F. Clark . . . . | 79, 899 |
| Row-lock | G. W. Brown | 74, 296 |
| Rubber and other coated cloth and fabrics. | J. W. Cobb and E. A. Hill | 80,809 |
| Rubber articles from the molds in which they are vulcanized, Detaching. | J. Moulton.... . . . . - - . . . | 84, 209 |
| Rubber cloth, Forming tight seams in. | G. M. Allerton. | 77, 859 |
| Rubber enameled cloth for boots and shoes, Compound. | E. M. Stevens. | 76, 265 |
| Rubber for wasling clothes. | J. Charlton | 76, 603 |
| Rubber goods, Inflated.. | G. M. Allerton | 79, 933 |
| Rubber, gutta-percha, \&c., Articles of | J. B. Newbrough and E. Fagan | 73, 916 |
| Rubber, Hard.... | W. Mullce . . . . . . . . . . . . . | 76, 293 |
| Rubber, hard, Moldiug watch cases and lockets from.. | W. H. Halsey | 81, 082 |
| Rubber or gutta-percha compound ......... . . . . . . . . . . | J. B. Nowbrough | 84, 369 |
| Rubber, soft, Articles of. | G. W. Martin.. | 80,299 |

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## Alphabetical list of inventions-Continued.



| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Saw, Chain | D. Kenncdy | 74, 097 |
| Saw, Circular | H. Disston | 73, 238 |
| Saw, Circular | J. F. Folmer | 81, 267 |
| Saw, Circular, Attaching handle to | E. Galley | 74,749 |
| Saw, Circular, Feeding roller for | E. C. Dickey | 83, 047 |
| Sawr, Circular, Guide for..... | T. Milner... | 781,752 |
| Saw, Circular, Hanging | W. McDouald | 81, 661 |
| Saw, Circular, Jointing | I. France | 82, 508 |
| Saw, Circular, Swage for | J. G. Baker | 79, 184 |
| Saw, Cross-cut | T. S. Disston. | 73, 516 |
| Saw, Cross-cut, Attaching haudle to | W. P. Miller. | 76, 228 |
| Saw, Cross-cut, Attaching handle to | P. Donough | 78,653 |
| Saw, Cross-cut, Attaching handle to | S. Disston | 84, 095 |
| Saw, Cylindrical | C. Murdock | 85, 021 |
| Saw-filing machine. | H. Clendenen | 80,141 |
| Saw-filing machine | J. Temple. | 81, 035 |
| Saw-filing machine | J. H. Van Northrick | 82, 047 |
| Saw-filing machine | D. II. Iseminger | 83, 168 |
| Saw for felling trces | T. Bauschtliker | 82, 789 |
| Saw frame | M. J. Joncs | -73, 341 |
| Saw frame | B. Butler and C. F. Ramsay. | 83, 131 |
| Saw grinder. | E., E. W., and I. C. Strange | 84,916 |
| Saw, Grinding | C. W. Hubbard | 79, 981 |
| Saw, Grinding, Circular | S. D. Tucker | 84, 721 |
| Saw grinding machine | E. Andrews. | 81, 126 |
| Saw grinding machine | J. G. Baker | 83, 443 |
| Saw gummer. | A. I. Silver. | 84,514 |
| Saw-gumming device | D. J. Barnett. | 80, 115 |
| Saw-gumming machine | T. S. Disston. | 73, 239 |
| Saw-gumming machine | T. S. Disston | 73, 880 |
| Saw-cumming or toothi | A. Bartholf | 76, 147 |
| Saw, Hand | J. E. Emerson | 82, 299 |
| Saw handle | C. W. Hubbard | 79,980 |
| Saw handle | W. T. Harvey, jr | 82, 943 |
| Saws, Hanging | A. Fellker | 85, 294 |
| Saw-horse. | A. Stanley | 77, 779 |
| Saw-horse | F. V. Mansficld | 78, 750 |
| Saw-horse | C. H. Hardy | 83, 958 |
| Saw in saw mills, Hanging reciprocating | E. Andrews. | 76, 963 |
| Saw, Jig | J. E. Chamberlin | 83, 362 |
| Saw jointer | W. B. Noyes | 75, 188 |
| Sanv plates and similar articles of steel, | G. Micreer and J. Hinton | 77, 396 |
| Saw, Scroll. | B. J. Camp. | 74, 497 |
| Saw, Scroll. | W. Dobson. | 82, 501 |
| Saw, Scroll. | C. M. Baxter. | 82, 585 |
| Saw, Scroll, Guide for | L. A.Johnson | 81, 376 |
| Saw, Scroll, Guide | G. W. Staats | 82, 171 |
| Saw set | J. F. Brodhead. | 76,046 |
| Saw set | J. Nocpel and B. Assman | 77, 082 |
| Saw set | A. Lyon, W. Shumard and J | 77, 825 |
| Saw set | bins. <br> F. Bates | 78,357 |
| Saw set | I. Estell | 79, 964 |
| Saw set | W. B. Weaver | 81, 442 |
| Saw set | J. Uhl | 81,708 |
| Saw set | C. Deyhle | 82, 500 |
| Saw set | I. T. Smart | 82, 759 |
| Saw sct | A. Johnson | 82, 845 |
| Saw set | W. E. Goodnough | 82, 825 |
| Saw set | J. J. Rcichard. | 83, 792 |
| Saw set | J. J. Reichard. | 83, 793 |
| Saw set | R. W. Tyler | 83, 805 |
| Saw set and gauge | W. B. Noyes and C. S. Bakcr | 80, 871 |
| Saw, Sctting | H. Disstoin. | 73, 879 |
| Saw, Sharpening | B. P. Poindexter | 78, 995 |
| Saw, Sharpening | O. A. Tefft | 79, 787 |
| Saw, Sharpening | A. M. Newman | 82, 240 |
| Saw, Slarpening | D. Huffman. | 83, 383 |
| Saw, Sharpening | A. R. Stewart. | 84, 229 |
| Saw, Sharpening and gumming | A. W. Nerwhall | 76,236 |
| Saw sharpening dovice. | P. M. Bristol. | 82, 078 |
| Saw, Slide for hanging upright | A. P. Barlow. | 84, 85. |
| Saw, Swage for | H. H. Gridley | 83, 956 |
| Saw, Swage for | W. A. L. Kirk | 84, 361 |
| Saw tang | E. M. Boynton | 73, 227 |
| Saw tecth, Cutting | J. Morton. | 75, 563 |
| Saw tcoth, Dressing | J. Lough. | 84, 365 |
| Saw, Wood, Frame for | J. Havens. | 73, 890 |
| Saw, Wood, Straining | J. R. Webster | 73, 413 |
| Sawing and boring machino | T. Smith | 82, 649 |
| Sawing machine. | I. R. Harman | 73, 000 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Sawing machine | J. Fry | 73,520 |
| Sawing machino | P. P. Lane and J. F. Bodley. | 73, 814 |
| Sawing machine Sawing machine | I. B. Jones................ | $74,096$ |
| Sawing machine Sawing machine | C. Root and B. Bennett | $74,432$ |
| Sawing machine | S. Jonkyn | $\begin{aligned} & 76,469 \\ & 77,195 \end{aligned}$ |
| Sawing machine | J. P. Grosvenor | $77,606$ |
| Sawing machine | A. E. Ross.... | $78,019$ |
| Sawing machine | J. R. Logali .. <br> II. A. Danicls | 78, 298 |
| Sawing machino | P. S. Beidler | $\begin{aligned} & 80,338 \\ & 81,332 \end{aligned}$ |
| Sawing machine | J. Frey and J. M. Eickholtz. | 81,356 |
| Sawing macline | M. P. Noel................ | $81,400$ |
| Sawing machino | P. I. Shopler. | $81,418$ |
| Sawillg machino Sawing machino | H. Thompson | 82, 257 |
| Sawing inachine | R. B. DeBare. | 8:2, 265 |
| Sawing machine | İ. M. Schaeffor | $\begin{aligned} & 8,3,262 \\ & 83 \quad 394 \end{aligned}$ |
| Sawing machino | G. II. Eddloman | $\begin{aligned} & 85,3: 4 \\ & 85,436 \end{aligned}$ |
| Sawing machino. | S. Hunter | $83,856$ |
| Sawing machine | I. C. Gillott | 83, 954 |
| Sawing machine, Circular | C. D. Blakesleo | 74, 04: |
| Sawing machine, Producing | J. W. NIaxey. | $75,441$ |
| Sawing machine, Scroll | W. W. Hubbard | $\begin{array}{r} 80,951 \\ 80,98 \end{array}$ |
| Sawing machine, Wood .. | D. Suell. | 83, 416 |
| Scabbard for trowel-bayon Scaffold . . | F. Chillingswo | 84, 612 |
| Scatiold | E. R. Holzor | 77, 733 |
| Scaffold and ladder | R. Rowan | 83, 994 <br> -79 390 |
| Scaftold bracket. | S. P. Van Pelt | $\begin{aligned} & 79,399 \\ & 77,133 \end{aligned}$ |
| Scaffold, Builders and painters' | C. Mudge... | $\begin{aligned} & 77,133 \\ & 77,308 \end{aligned}$ |
| Scatfold, Building - .-........... | J. Lamb and F. Liv | $73,346$ |
| Scaffeld, Roofing - | P. R. Oberdeen - | $73,387$ |
| Scaffolding | J. W. Glover, W. I. and B. | 80,346 |
| Scaffolding | M. T. Williams .-.-....... | 80, 581 |
| Scaffolding for buildings | J. H. Martin. | 75, 176 |
| Scale beanı. | C. C. Lymall | 79,583 |
| Scale beam, Box case fo | A. I3. Davis | 78,098 |
| Scale beam, Calculating. | G. A. Smy the | 69 |
| Scale beam, Hollov-headed | J. F. Keeler. |  |
| Scale, Charging | T. and H. Fairbanks | 18, 748 |
| Scale, Double platform | II. I5. Bugbee . . . . . | $82,204$ |
| Scale frame, Romuding the corne | J. Flory | $78,200$ |
| Scale, Milling the knife edge of. | T. J. Roekwoo | $\begin{aligned} & \text { 88, } 200 \\ & 81,007 \end{aligned}$ |
| Scale pan, Suspending .-............... | R. AIurdock. | $\begin{aligned} & 81,007 \\ & 75,448 \end{aligned}$ |
| Scalo, Petroleum, and coal hopper comb | F. E. and L. I. Howe | $\begin{aligned} & 75,448 \\ & 77,488 \end{aligned}$ |
| Scale platform | J. F. Kecler. . . . . . . . | $\begin{aligned} & 77,488 \\ & 74,690 \end{aligned}$ |
| Scale platform | W. W. Roynolds | $\begin{aligned} & 74,690 \\ & 76,5: 3 \end{aligned}$ |
| Scale platform | J. Decker - . . | 80, 857 |
| Scale, Postal .- | M. L. M. Hussey | $\begin{aligned} & c 0, \\ & 73 \\ & 976 \end{aligned}$ |
| Scale, Weighing | J. D. Willoughby | -73, 976 |
| Scale, Weighing | On Forsyth and d. M. Truax | $\begin{array}{r} 75,273 \\ 75,146 \end{array}$ |
| Scale, Weighing - .......................... | S. Marrís - . . . . . . . . . . . . . . | $80,169$ |
| Scale with hard rubber for the manufa lery, ec., Plating. | F. Beals. | $84,932$ |
| Scissors . - . . . . . . . . . . . - . . . . - . . . . . . . . . . | R. Cook |  |
| Scissors. | A. M. Rennio | 73,836 |
| Scissors | S. M. Brisbano | 83, 453 |
| Scissors | J. Bell .-..... | 85, 427 |
| Scissors and shears. | S. W. Huntington. | 79, 658 |
| Scissors sharpener . | A. Thayer - Gilbert | 80, 432 |
| Scissors sharpener | W. H. Leach |  |
| Scissors sharpener and scrowdriver com | G. P. Bergen | $\begin{aligned} & 76,086 \\ & 85,163 \end{aligned}$ |
| Scissors, Suspender fior. | J. M. Kuttner | 84,951 |
| Scoop .-........... | T. B. Davis . | 84, 803 |
| Scoop and sifter-. | E. J. Smith and T. I3. Perkins | 78, 922 |
| Scoop, Sand....... | IL. Molby | 73, 629 |
| Scoop, shovel, \&c | J. Sheets. | 75, 980 |
| Scoop, Weighing. | J. K. O'Neil | 80, 087 |
| Scow... | E. J. Allen. | 81, 125 |
| Scraper | D. B. Nolson and M. Dyer | 77, 644 |
| Scraper | N. and A. Maybee ...... | 78, 290 |
| Scraper -............... | F. Post........... | 78, 999 |
| Scraper, Blacking brush | J. Goodenough | 80, 621 |
| Scraper, Boiler. | A. Poirel ... | 73, 832 |
| Scraper, Cotton | I. J. Kidd.... | 77, 292 |
| Seraper, Foot | H. J. England | 76,179 |
| Seraper, root | W. L. Williams. | 76, 860 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Scraper for ice cream freezers | F. G. Siemers | 75, 20 ? |
| Scraper, Railway track | S. A. Otis | 78, 537 |
| Scraper, Road........ | E. Y. H. Capron | 78, 054 |
| Scraper, Road. | N. E. Xost Drisk | 78, 713 |
| Scraper', Road. | J. F. Winchell | 84, 330 |
| scraper, Road. | D. Noff. | 84, 570 |
| Scraper, Road. | R. S. Boyd | 85, 42 |
| Scraper, Roller tube | C. W. Tremain | 84, 320 |
| Scraper, Street. | A. Dyson | 78,583 |
| Scraper, Street railwa | J. W. A. Jones | 75, 76 |
| Screen and coal hod | A. Porter | 74,770 |
| Screen and shovel combined | A. Thayer | 77, 333 |
| Screen and sieve, Hauging | S. Thompson. | 75, 593 |
| Screen, Ash, and coal-hod combined | T. J. Thurston | 81, 037 |
| Screen attachment for wash-stand. | E. F. Gilber't. | 73.790 |
| Sereen, Carriage step | A. Q. Ross | 77, 531 |
| Screen for machine for treating cotton. | 1. Kitson | 80, 97\% |
| Screen for wash-stand | R. Nelson | 80, 496 |
| Screen, Grain | J. H. II. Wiseheart | 81, 567 |
| Screen, Grain | J. J. Crider | 84, 345 |
| Screen, Mosquito | E. Spaulding. | 78,767 |
| Screen, Sand | R. McMurray | 77, 502 |
| Screen, Window | C. C. Plaisted | 73, 92 |
| Screen, Window | R. S. Whittio | 82, 053 |
| screen, Window | F. Hatcis. | 82, 11.5 |
| Sereen, Wire. | S. Adams | 79, 176 |
| Screw. | P. N. Jacobus. | 80, 742 |
| screw. | F. Washliouse | £4, 663 |
| Screw blank, Conveying | E. S. Pierce | 74, 717 |
| Screw blank, Fending. | E. S. Pierce | 81, 404 |
| Screw, Boat crumping | B. S. Norris | 75, 784 |
| Screw caps, Threading | J. L. Mason | 76,220 |
| Screw cutting machine. | E. Royon | 76,351 |
| Serew cutting machine | J. H. Richardson | 77,530 |
| Screw cutting machine | V. Smith. | 80, 840 |
| Serew cutting machine | S. L. Wiegand | 81, 049 |
| Screw catting machin | A. Hoermann | 82, 118 |
| Screw cutting tool | I. B. Beach | 73, 431 |
| Screw driver. | I. Allard. | 80, 583 |
| Screw driver. | W. S. Goss | 80, 622 |
| Screw driver and boring tool | J. A. Bidwell | 74, 490 |
| Screw driver and countersink | P. M. Jacobus | 81, 171 |
| screw driver and scissors sharpener | G. P. Bergen. | 85, 163 |
| screw driver aud wrencl combined | E. J. Amor | 81, 970 |
| Scew for oil wells, Temper | R. B. Mageo. | 85, 461 |
| Screw, Guide for | N. Smith | 79, 509 |
| Screw haudle attachment | E. Ripley | 81, 111 |
| Sorew machine. | 13. A. Mason | 73, 110 |
| Screw, Manufacture of | G. V. Sheffield | 80, 022 |
| Screw nut, Making | F. Rheydt | 85, 399 |
| Screw, Piano-st | J. Krieg | 85, 454 |
| Screw plate | J. S. Duttou | 82, 697 |
| Screw, Shaving | J. Burnes | 78, 512 |
| serew top.. | iv. K. Foster - .ond I Farre | 83, 371 |
| screw top.. | S. A Midwell |  |
| Screw, Threading | W. $\dot{\text { F }}$ P Parker |  |
| Screw threading machino | E. Gould.... | 79, 971 |
| Screw threads, Cutting | D. Poulott. | 82, 346 |
| serew threads, Tap for cutting. | W. Mantey | 77, 994 |
| Screw, Wood | J. A. Bidwell | 74,489 |
| screw, Wood, Moulding | E. H. Keith | 78,212 |
| Scrolls, Mending | E. Gibls | 84, 181 |
| Scrubber. | J. Edson- | 76,610 |
| Scrubber. | V. A. Hacker | 77, 0.35 |
| Scrubber holder | H. B. Grebinger | 75, 154 |
| scrubbing machine | TV. E. Stoddard | 84, 146 |
| Scrubbing machine, Rotary | C. E. Wareham | 77, 554 |
| Scuttle, Coal. | T. and J. M. Scantlin | 79, 692 |
| Scuttle, Coal | O. Morse. | 80, 203 |
| Scuttle cover and | C. E Grifin |  |
| Seythe | V. ${ }^{\text {drimin. }}$ |  |
| Seams, Trimming welted | W. H. Rounds. | 85, 08 |
| Seaming and bag cutting machine | J. Collins, jr. and N. N . Nixon | 73, 299 |
| Seaming machine | W. Haslen | 77, 611 |
| Seat, Adjustable | I. Cook | 74,993 |
| Seat and desk. | H. W. White | 73, 416 |
| Seat and desk | G. A. Stewart | 82, 765 |
| Seat and desk, School | J. P. Scott and S. H. La Rue | 74, 433 |
| Seat and desk, School. | M. B. Cochran | 74, 504 |

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## Alphabetical list of inventions-Continued.

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| Invention or Discovery. |
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| Invention or Discovery. | Name of Patcntee. | No. |
| :---: | :---: | :---: |
| Sewing machine, Cording attachment for. | F. B. Conlcssa | 76, 054 |
| Sewing machine, Creasing apparatus for | H. W. Fuller | 77, 972 |
| Sewing machine, Fan for ............ | J. H. Stone | $81,429$ |
| Sewing machine, Fceding mechanism for | J. A. Minor. | 76, 340 |
| Sewing machine, Feeding mechanism for | J. L. and D. H. Coles | 83, 133 |
| Sewing machine, Feller for ...... | E. S. Yeutzer and A. K. McCain | 73, 067 |
| Sewing machine for button-holes | H. E. Reynolds | 79,393 |
| Sewing machine for button-holes. | K. Vogel | 80, 520 |
| Sewing machine for embroidering | A. Bonnaz | 83, 909 |
| Sewing machine for embroidering | A. Bonnaz | $83,910$ |
| Sewing machine for working butto | M. C. Gritzner | 76, 323 |
| Sewing machine, Friction-brake for | D. Newton. | 81, 195 |
| Sewing machine, Gathering attachment for | W. I3. Bartram | 83, 592 |
| Sewing machine, Gathering attachment for | J. Crandell | 84, 414 |
| Sewing machine guide . .-. ............... | C. Benedict and O. R. Tyler | 81, 466 |
| Sewing machine, Guide and marker for | E. W. Ingle . . . - - - - .-. . - | 80, 961 |
| Sewing machine, Guide for hat lining in | C. H. Lockwood | 75, 637 |
| Sewing machine, Guiding attachment for | J. Wensley | 84,783 |
| Sewing machine, Hemmer for. | W. H. Thomas | 75, 079 |
| Sewing machinc, Hemmer for | G. Rehfuss. | 80, 090 |
| Sewing machine, Hemmer for | J. Morrison | 80, 558 |
| Sewing machine, Hemmer for | E. Wilder and J. Crandell | 84, 454 |
| Sewing machine, Hemmer, marker, \&c., for | W. D. Heyer | 74,533 |
| Sewing machine, Marker for | J. P. White | 73, 216 |
| Sewing machine, Marking guage for | M. A. Duffy | 74,323 |
| Sewing machine, Motive power for | A. H. Enholm | 80, 815 |
| Sewing machine motor ......... | E. Shiver | 81, 219 |
| Sewing machine, Opcrating | G. Cuppers | 73, 303 |
| Sewing macline, Operating | A. U. Crary | 75, 667 |
| Sewing machine, Needle sharpening attach | J. Callan. | 80, 908 |
| Sowing machine, Plaiter for | II. Cawl, D. Corning, and J.W.Wheelcr | 74, 990 |
| Sewing machine, Power attachment to | A. C. Crary | 75, 666 |
| Sewing machine, Ruffling attachment for | A. Stewart | 80, 371 |
| Sewing machine, Ruttling device for..... | R. Brooks, jr., and W. N. Manning | 84, 676 |
| Sewing machine shuttle. | D. M. Chureh | 78, 057 |
| Sewing machine shuttle | N. B. Eveland | 78, 944 |
| Sewing machine shuttle | J. A. Davis | 82, 499 |
| Sewing machine shuttle. | A. Warth | 85, 040 |
| Sewing machine, Take-up for | J. V. D. Eldridgo | 84, 099 |
| Sewing machine, Take-up for threa | J. Fanning | 82,397 |
| Sewing machine, Tension device for | H. C. Goodrich | 81, 080 |
| Sewing machine, Tension device for | D. Porter | 83, 406 |
| Sowing machine, Thread tension mechanis | S. Snyder | 75, 654 |
| Sewing machine tradle. | B. Rutter and H. Hunt | 74,007 |
| Sewing machine treadle | A. Q. Allis | 79, 296 |
| Sewing machine treadle. | C. Kihn. | 81, 379 |
| Sewing machinc, Treadle attachment f | J. Crandell | 81,346 |
| Sewing machine, Tuck creaser for . | E. Bastock | 80, 269 |
| Sewing machine, Tuck creaser for | E. Bastock | 80,270 |
| Sewing machine, Tuck creaser for | A. Morchouse and A. R. Heath | 80,653 |
| Sewing machine, Tuck creascr for | H. C. Groodrich | 81, 100 |
| Sewing machine, Tuck creascr for | H. W. Fuller. | 83, 950 |
| Sewing machine, Tuck folder for. | C. H. Gardner | 80, 721 |
| Sewing machine, Tucking device for | W. H. Cole | 79, 447 |
| Sewing machine, Tucking device for | R. H. St. John | 83, 219 |
| Shackle and supporter .-...-....... | W. Riley | 85, 402 |
| Shackle bearer........ | J. W. Mayhew | 79, 996 |
| Shackle for platform springs of | J. Price. . . | 74, 591 |
| Shackle, Joint for .............. | J. F. Reiner | 7\%,915 |
| Shade and seat, Portable | D. E. Newton | 73, 313 |
| Shade fixture ........... | G. T. Pillings. | 78, 826 |
| Shaft bearer | W. Platt. | 82, 549 |
| Shaft, Bearing fo | J. F. La Place | 73, 815 |
| Shaft bearing or millstone bush | S. Kine ... | 76, 083 |
| Shaft, Crank .-.-..........-. .- | J. Converse | 82, 805 |
| Shaft, Device for stop motion for revolving | E. J. Manville | 79, 368 |
| Shaft for connecting power with machinery, | D. Snell. | 82, 44.7 |
| Shaft journal...................-. .-. .-. . . . | L. Patric | 81,938 |
| Shaft, mining, Safety guard for | E. O. Lcermo | 79, 076 |
| Shaft, single, Multiplying motion on a | L. S. Fithian. | 76, 902 |
| Shaft, Sinking | J. D. Brunton | 80, 056 |
| Shaft tug and draugh | H. Bowers . . | 77, 575 |
| Shaft, Vehicle | A. Bean | 81, 737 |
| Shaft, vehicle, Anti-friction bearing for | R. P. Barnett, C. P. Purinton, and N. Scibert. | 84, 470 |
| Shafting - .-.................... | L. F. Pitcher | $80,212$ |
| Shafting, \&c., Tool for turning | J. A. Clevcland. | $\begin{aligned} & 79,729 \\ & 85,393 \end{aligned}$ |
| Shafting, Anti-friction box for | J. McIlvain | $85,393$ |
| Shafting, Counter. | H. C. Weihe | $78,627$ |
| Shafting, Hanger for | J. Richards | 78, 608 |
| Shafting, Hanger for | G. V. Orton | 78, 992 |

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| :---: | :---: | :---: |
| Shafting, Hanger for | G. W. Hubbard and S. A. Smith | 80, 546 |
| Shafting, Hanger for | G. W. Loraine | 80,752 |
| Shaftiog, Self-lubricating box for | W. W. Crane | 77, 261 |
| Shafting, Straightening and rounding | IF. H. Laforge and | 76, 781 |
| Shafting, Turning ${ }_{\text {Shawl }}$ | N. W. Stiler . H . K . Porter | 82,042 85,129 |
| Shears................... | A. B. Buell and G. W. Root | 78, 255 |
| Shears | G. Bergner | 79, 191 |
| Shears | C. Bishop | 79, 193 |
| Shear's. | II. Wendt | 80, 254 |
| Shears and knifo, Pruning | J. Spear and J. A. Hall | 78, 615 |
| Shears and scissors....... | S. W. Huntington. | 79, 658 |
| Shears and scissors | A. Thayer | 80, 432 |
| Shears, Clipping ... | J. C. Wilson, A. Walker and J. Foster | $\begin{aligned} & 84,926 \\ & 84,860 \end{aligned}$ |
| Shears, Hair-cutting | L. D. Craig | $\begin{aligned} & 84,860 \\ & 85,500 \end{aligned}$ |
| Shears, Hand. | C. Witte..... | 85, 500 |
| Shears, Paper.. | A. S. Bell | 78, 918 |
| Shears, Pruning | D. Cambell | 80, 595 |
| Shears, Pruning and hedge | L. Campbell | 82, 290 |
| Shears sharpener | M. M. Morse and M. V. Collins | 79, 246 |
| Shears, Sheep.. | H. Wendt. | 80, 255 |
| Shears, Sheep | P. G. Claney | 811, 914 |
| Shearing and punching | M. A. Lanagan | 79, 912 |
| Shearing machine | S. W. Huntington...... | 84, 7935 |
| Sheave............. | A. Putnam...... | 76, 810 |
| Sheep feeder, Swing | G. Wilson . | 76, 871 |
| Sheep holder.. | C. Albert. | 77, 435 |
| Sheep holder and fleece holder combined | G. Paine. | 74, 767 |
| Sheep, Holding | G. D. A. Krigbaum | 84, 198 |
| Sheep rack and shelter combined | O. P. Norris | 74, 411 |
| Sheep, Shearing |  |  |
| Sheep, Shearing | G. Harsin and C. T. Sanders | 82, 404 |
| Sheep, Shearing | H. A. Reid. | 84, 505 |
| Sheep-shearing device | W. s. Lane. | 80, 673 |
| Sheep-shearing device | J. K. Alwood |  |
| Sheop-shearing machine. | J Diehl | -75,535 |
| Sheep skins, Lanning and coloring | E. B. Booth. | 73, 225 |
| Shelf-rest. | G. T. Swett. | 77, 676 |
| Shell and shot, Polishing | J. B. Tarr | 79, 610 |
| Shell and shot, Sphorical | J. B. Tarr | 76, 271 |
| Shield for carriage curtain button holes | W. G. Queal. | 81, 538 |
| Shield for paddling furnace | H. McDonald | 85, 320 |
| Shicid for smoothing iron | W. J. Keep. | 77, 886 |
| Shield, Nipple | T. McLaughlin | 77, 393 |
| Shingle | J. Lewis | 85, 316 |
| Shingle bolt machine | T. Thompson | 81, 435 |
| Shingle machino | D. L. Peacock | 73, 116 |
| Shingle machine | H. Woodman | 73, 219 |
| Shingle machine | E. Keith | 73, 343 |
| Shingle machine | A. G. Ritz. | 75,793 |
| Shingle machine | J. F. Chambers | 76,160 |
| Shingle machine | D. W. Roche. | 76, 250 |
| Shingle machine | W. H. Walk | 76,566 |
| Shingle machine | J. E. Austin | 76, 691 |
| Shingle machine | J. P. N. Davis | 76, 721 |
| Shingle machine | P. H. Lawler. | 76, 782 |
| Shingle machine | A. Thompson. | 77, 128 |
| Shingle machine | S. Head | 77, 283 |
| Shingle machine | D. H. Ball | 78, 508 |
| Shinglo machine | L. H. Dodge | 78, 725 |
| Shingle machine | L. Jennings. | 78, 744 |
| Shinglo machine | M. J. Hine. | 79,351 |
| Shingle machino | L. C. Robinson | 81, 295 |
| Shingle machine | J. E. Anstin | 82, 067 |
| Shingle machino | C. A. Kinney and C. Parker | 85, 103 |
| Shingle machine | G. W. Southwick and J. H. Gillette... | 77, 776 |
| Shingle tool. | T. Van Doren. | 84, 595 |
| Shipping case | M. H. Nichols. | 78,316 |
| Shin's davit. | C. G. Meinhardt | 80, 869 |
| ship's fender | E. B. Lake. | 79, 235 |
| Ship's mast, Lowering | G. Dowling | 75, 671 |
| Shirt and drawers combined | E. S. Bennett | 83, 447 |
| Shirt pattern. | J. H. Myers. | 82, 740 |
| Shoe | L. Bullard | 73, 773 |
| Shoe | L. S. Starrett | 73, 847 |
| Shoe | D. S. McNamar | 74, 707 |
| Shoo | M. Wesson | 74, 962 |
| Shoo | C. Perley | 75,048 |

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| :---: | :---: | :---: |
| Shoe | M. I. Hill | 78, 287 |
| Shoe | R. O. Lowrey | 78,384 |
| Shoe | $J$. Putnam | 81, 106 |
| Shoe | J. S. Lester and P. H. Car | 81,516 |
| Shoe buttoner | E. Card | 81, 250 |
| Shoe, Fastening for | I. Barbier . . | 72, 961 |
| Shoe, Fastening for | N. Kirchner | 75, 768 |
| Shoo for bathing and other purposes | L. D. Jeandron Ferry | 80, 934 |
| Shoe for separator . . . . . . . . | M. Laufenburge | 78, 597 |
| Shoe holder - .-. .-. | A. N. Breneman | 73, 228 |
| Shoe holder and last | A. J. Roek. | 77, 764 |
| Shoe knife guard. | G. G. 'Iownsend | 75, 602 |
| Shoe laee........ | L. Rieo | $75,702$ |
| Shoe licer | O. II. Cook. | 75, 120 |
| Shoe lacer. | D. A. Gilbert. | 77, 029 |
| Shoe lacer. | P. Thompson | 79, 087 |
| Shoe laeing | M. White... | 82, 188 |
| Shoe lacing | W. F. Oliver | 8:2, 022 |
| Shoe lacing deriee | H. L. C. Mïller | 78,888 |
| Shoe lacing, Fastening | O. H. Marstor | 74, 839 |
| Shoemaker's' imploment | A. Barbarin | 83, 023 |
| Shoemakers' shave... | J. Y. Simons | 84, 140 |
| Shoes, Manufaeture of | J. C. Touget | 85, 492 |
| Shoe, Over | L. Elliott, jr - | 76, 731 |
| Shoe, Over | H. L. Hoteliss | 78,595 |
| Shoe, Pegring | J. H. Bromin | 85, 206 |
| Shoe, Rooting | J. M. Wood. | 74, 473 |
| Shoe shave | M. M. Elliott. | 73, 588 |
| Shoe, Sole of a, Shaping | - B. Johnson | 75, 428 |
| Shoe sole, 'Testing | F. T. Andrews | 79, 181 |
| Shoe, Soling | L. A. Favre | 74, 066 |
| Shoe strings, Fastening | S. B. Parker | 75, 962 |
| Shoe tip ....... | A. B. Ely | 74, 901 |
| Shoe uppers, \&e., Folding and eutting m | G. IV. and B. F. Parrott Timson. | 85, 123 |
| Shoe, Waterproof | F. M. Shepard | 84, 650 |
| Shoe, wearing apprarel, \&e., Fastoning | R. Judson ant W. H. L.tneh | 75, 924 |
| Shot and shell, Polishing. | J. B. Tarr. | 79, 616 |
| Shot and sholl, Spherieal | J. B. Tari - . . | 76, 271 |
| Shot, Manufaeture of . | W. Glasgow and J. G. Wood | 83, 152 |
| Shoulder brace. | A. Arlamson. | 84,787 |
| Shoulder lirace and suspender | E. Jennings, jr | 83, 387 |
| Shonlder brace and suspender eombined | A. N. Eaton | 81, 488 |
| Shonder braee and suspender combined | E. Jennings | 8:2,720 |
| Shorel | H. M. Myers | 78,679 |
| Shovel and sereen combined. | A. Thayer | 77, 333 |
| Shorel and tongs eombined. | H. C. Sireo | 75, 652 |
| Shorel, hoe and fork eombined | J. A. Heald | 81, 166 |
| Shorel or exeavator | W. 'I. Nichols | \%1. 783 |
| Shorel, Snow | J. P. Spangle | 81, 549 |
| Show eards, labels, \&e., Manufaeture | A. J. Connell | 83, 763 |
| Show ease, Threarl .-. . . . . . . . - - - - . . | A. Steward | 79, 023 |
| Show case, Ventilating. | W. Hemry | 77, 389 |
| Sinatter and blind fastener | W. 13. Farrar | 84, 411 |
| Shutter and blind operator | W. E. Broke | 83, 248 |
| Shintter and door fastenei. | J. Aliser. | 84,984 |
| Shutter and cloor, Metallie | C. K. Marshall | 78, 218 |
| Sbutter and sash fastening. | W. J. Miller | 78, 115 |
| Shutter and window fastening | W. L. Barnes | 80, 266 |
| Shutter fastener ............. | B. D. Washburn | 84, 032 |
| Shutter fastener | Le Grand Dodge | 85, 290 |
| Shntter fastening | G. G. Hickmant | 73, 893 |
| Shutter fastening | J. A. Pipo and W. Walbaun | 75, 788 |
| Shutter fastening | B. Doe -.... | 76, 723 |
| Shutter fastening | A. Cntter | 7\%, 005 |
| Shutter fastening | W. Jolniston | 77, 748 |
| Shutter fastening | F. Zell. | 79, 047 |
| Shatter: Metal, Folding | S. J. Seely | 74, 155 |
| Shutter, Motallie...... | E. Perkins. | 82, 159 |
| Shutter, Opening and elosing | C. Lelmert. | 80, 414 |
| Shutter operator | M. Streeter | 79, 086 |
| Shutter operator. | J. II. Jaker | 80, 799 |
| Shutters, Operating | I. Watson | 79, 792 |
| Shutters, Operatin! | T. Q. Sloan | 80, 023 |
| Shutter. Window, Operating | S. E. Jewett | 74, 227 |
| Shutter worker .-.. | L. Munller and C. Mood | 83, 989 |
| Shuttle | E. R. Marble | 76, 090 |
| Shuttle | E. A. Paine | 78, 229 |
| Shuttle | I'. Laflin . | 79, 483 |
| Shuttle | J. A. Metealf | 79,490 |
| Shuttle. | A. H. Damon and J. Whitake | -79,556 |

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| Invention or Discovery. | Name of Patentce. | No. |
| :---: | :---: | :---: |
| Shuttle | N. Clough and J. Baldwin | 82, 090 |
| Shuttle binder | F. Haskins | 75, 545 |
| Shuttle box, Cam for operating | C. H. Knowlton | 81, 792 |
| Shuttlo box, Loom actuating - - | M. Niec | 81, 005 |
| Shuttle for loom............. | A. M. Damon and J. Whitak | 79, 557 |
| Sluttle, Tatting | J. H. Stockwell and L. C. Good | 80, 781 |
| Shuttle, tatting, Thread guiding plate fo | A. Clow .... | 79, 207 |
| Siekle sections, and method of scrrating | S. D. Sheldon - .-. | 75, 990 |
| Siclsle seetions, Separating - . . . . . . . . . . | A. A. and G. F. Simonds | $83,736$ |
| Side-board and refrigerator. | J. A. Thompson | $82,365$ |
| Side walls . .-. .-............ | S. I. Russell G. Mohler. | $\begin{aligned} & 77,766 \\ & 79,589 \end{aligned}$ |
| Sieve. Sieve | G. Mohler.. | $\begin{aligned} & 79,589 \\ & 80,966 \end{aligned}$ |
| Sieve and screen, Hanging | S. Thompson | 75, 599 |
| Sieve, Grain ....-......... | J. Corson | 74,313 |
| Sicre, Separator | J. I3. Amboy | 74, 483 |
| Sifter -........ | S. S. Hughson | 76, 327 |
| Sifter and safe, Flour | F. A. Hoyt. | 74, 091 |
| Siftel and scoop -.... | E. J. Smith and F. B. Perk | 79, 922 |
| Sittor and scoop, Flour. | H. Molby | 73,629 |
| Sifter and scoop, Flour. | G. W. and C. M. Sherman | 74, 157 |
| Sifter, Ash........... | J. A. Miller | $73,361$ |
| Sifter, Ash_ | C. Folsom. <br> F. A. Beach | $78,949$ |
| Sifter, Ash-.............................. | F. A. Beach | $\begin{aligned} & 84,986 \\ & 83,653 \end{aligned}$ |
| Sifter, ash, Ventilating attachment for Sifter, Barrel. | C. A. Newsted | $\begin{aligned} & 83,653 \\ & 77,578 \end{aligned}$ |
| Sifter, Coal . | D. Morrison | 75, 043 |
| Sifter, Coal | C. K. Rice | 84, 216 |
| Sister, ooal, Hand | G. H. Pioth | 79, 398 |
| Sifter, ooal, Parlor | S. Albee. | 75, 719 |
| Sifier, Flour .- | J. Novek | 77, 832 |
| Sign for strcet lamp | W. P. Ware | 75, 086 |
| Sigu for tobacoonist | J. W. Boughton | 78, 254 |
| Siow, glass, Grinding and ornamenting | J. B. Blair | 79, 303 |
| Sign or burner, Hanging | S. Wing | 77, 695 |
| Signal and alarm, Railway | A. C. Twining | 76,559 |
| Signal and switch ..... | J. Saxby and J. S. Farmer. | 80, 878 |
| Signal box | W. McKee | 77, 392 |
| Signal box, Railroad | J. Durand | 83, 700 |
| Signal doviee, Pocket | J. J. Detwiller | 79, 963 |
| Signal, Express . .-. . | C. P. Seawell | 82, 756 |
| Signal flag for vessels | J. F. M. King | 82, 849 |
| Signal, Pyrotechnic. | H. J. Harris | 82, 619 |
| Signal, Railway. | S. C. Thornton. | 79, 163 |
| Sional, Railway, switch | I. F. Morsell. | 84,896 |
| Signal rope guide | W. G. Creamer | 73, 698 |
| Sigual, Transmitting | P. A. Sparre | 79, 271 |
| Sionalling apparatus | S. S. Laws | 75, 775 |
| Silicium, Huoride of, Manufaeture of | C. M. T. Du Motay and E. | 75, 538 |
| Silk and woolen goods, Treating | G. Warren | 77, 138 |
| Silk cleaner . | W. G. Watson | 74, 644 |
| Silk winding machinery - | H. L. Brown | 81, 874 |
| Silver and gold from ores, Extraeting | J. TV. Kidwell | 83, 582 |
| Silver and grold from ores, Extraeting | J. Turnbridge | 85, 259 |
| Silver and gold ores, Treating - | L. E. Rivot | 78, 831 |
| Singeing maehine for fabrics | P. MeEwen and W. MeKenz | 83, 395 |
| Singletree . ......... | G. and W. Giblos | 75, 408 |
| Singletree brace | C. R. Elmer. | 78, 868 |
| Sinker for dishing line | W. H. Smith | 77, 774 |
| Sizing, Composition for preparing. | J. Dodd | 78, 866 |
| Skate ...-......... . . . . .-. -- | W. X. Sterens | 73, 405 |
| Skate | J. W. Port. | 74, 129 |
| Skate | P. G. Beekley | 74, 280 |
| Skate | J. W. Port | 74, 421 |
| Skate | L. B. Tyng | 74, 866 |
| Skate | T. Lovelidne and J. Grindrod | 76,214 |
| Skate | 11. C. Haight | 76, 324 |
| Skate | E. II. Barney | 76, 383 |
| Skate | J. Holland | 76, 453 |
| Skate | R. Pohl | 77, 089 |
| Skate | E. H. Barney and J. Berry | 77, 862 |
| Skate | A. F. Migeon | 77, 301 |
| Skate | S. A. Du Bois | 79, 329 |
| Skate | C. Gooeh | 81, 269 |
| Skate | J. Bonrko. | 82, 201 |
| Skato | E. Murray | 82, 543 |
| Skate | II. B. Hooker | 82, 952 |
| Skate | H. B. Hooker | 82, 953 |
| Skato | G. Havell | 83, 631 |
| Skate | R. J. Russell. | 83, 665 |
| Skate | W. F. Cornell | 84, 171 |

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| :---: | :---: | :---: |
| Skate attachment <br> Skate buckling tongs <br> Skate fastening <br> Skate fastening <br> Skate fastening <br> Skate fastening <br> Skate, Parlor <br> Skate, Stilt <br> Skating rink <br> Skid for elevating and lowering barrels <br> Skimmer for sorghrum evaporator <br> Skins aud hides, Compound for treating <br> Skins and leather, Finishing <br> Skins of animals, Preserring <br> Skins, Stretching and softening <br> Skirt and hose supporter combined <br> Skirt, Bustle attachment for <br> Skirt former <br> Skirt, Hoop, and bustle combined <br> Skirt, Measuring <br> Skirt supporter -........................... <br> Slat, Bedstead <br> Slat bottom, Spring <br> Slat machine <br> Slat matting for ears, \&c <br> Slates, \&e., Polishing <br> Slates, \&e., Wetting or wiping instrument for <br> Slates, \&e., Wetting or wiping instrument for <br> Slate, Bevelling the edge of <br> Slate, Cutting <br> Slate frame <br> Slate frame <br> Slate frame <br> Slate frame <br> Slate frame, Dressing <br> Slate frame, Rounding <br> Slate frame, Rounding the eorners of <br> Slate, Grinding and polishing <br> Slate pencils <br> Slate, Ruling sehool <br> Slate, School <br> Slate, school, Grinding and polishing <br> Slate surface, Artifieial <br> Slate trimming maehino <br> Slate, Writing <br> Sled. <br> Sled. <br> Sled <br> Sled and sleigh <br> Sled, Dumping <br> Sled knee <br> Sled, Log <br> Sled, Tip <br> Sleeve of knitted garments <br> Sleigh <br> Sleigh <br> Sleigh <br> Sleigh <br> Sleigh <br> Sleigh <br> Sleigh and bawy carriage <br> Sleigh and earriage top <br> Sleigh and sled <br> Sleigh, Attaching whecl to <br> Sloigh, Iee <br> Sleigh runner <br> Sleigh runners and mode of attaehing them to axles of vehieles. <br> Sleigh runners, Cast-iron. |  |  |
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# Alphabelical list of inventions-Continued. 

| Invention or Discovery. | Name of Patentce. | No. |
| :---: | :---: | :---: |
| Slicer and grater | C. W. Saladee and J. S. Hall | '78, 612 |
| Slide, Check-rcin | W. B. Potter | 77, 318 |
| Sling, Sprit-sail boom | G. Dowling | 76, 309 |
| Sluice blanket. | A. Black | 73,160 |
| Smoke and gas, Consuming and increasi boiler furnace. | D. E. Somes | 777, 220 |
| Smoke stack | G. Holton. | 82, 003 |
| Smoke stack | T. P. Peck | 82, 158 |
| Smoke stack | W. H. Parker | 80, 65 |
| Smoke stack for locomotive engine | J. Atkins | 75, 511 |
| Smoothing iron | J. Joncs | ${ }^{74,} 372$ |
| Smut machine | C. Millar. | 79, 077 |
| Smut machine | E. McLano | 30, 361 |
| Smut machine | H. Stanley | 81, 428 |
| Snow clearer. | S. Lewis | 75, 028 |
| Snow clearer | P. D. Chatterton | 81, 343 |
| Soap. | J. L. Klein | 75, 171 |
| Soap | G. W. Love | 76, 21 |
| Soap | D. C. Lincoln | 78, 214 |
| Soap | O. E. Loomis | ${ }^{78,530}$ |
| Soap | G. W. Slagle, J. L. Miller Ноу. | 78,840 |
| Soap | H. A. Pease | 82, 635 |
| Soap and detcrgent compound | H. W. Weedon. | 82, 45 |
| Soap bars, Separating | H. and A. Phelps | 73, 894 |
| Soap, Bleaehing | A. Watt | ${ }^{81}{ }^{81}, 714$ |
| Soap, Cutting | D. S. Brown | 79, 102 |
| Soap, Cutting | H. Sargent. | 79, 402 |
| Soap, Cutting | P. B. McKclvey | 82, 971 |
| Soap, Cutting and stamping | J. S. Pierson | 78, 127 |
| Soap holder | M. Safford | 77, 530 |
| Soap into slabs, Cutting | G. T. Palmer and P. P. Bus | 81, 200 |
| Soap, Making - .-. | J. Lawrence | 79, 358 |
| Soap, Manufacture of | H. A. Pease | 83, 996 |
| Soap, Transparent | M. W. Brown | 78,182 |
| Socket and ball join | M. W.St. John | 79, 408 |
| Socket, Caster | A. C. Imining | 75, 080 |
| Socket for tool | W. H. Johnson | 80, 744 |
| Socket, Gas | T. L. Reed. | 73, 040 |
| Socket, Gas | G. Mooney. | 84, 961 |
| Sod or turf, Cutting | W. Gilbert. | 74, 341 |
| Soda and potash | A. G. Hunter | 78, 375 |
| Soda and potash, Carbonate of | A. G. Hunter | 77, 381 |
| Soda and potash, Manufacture of | A. G. Hunter | 73, 722 |
| Soda and sulphnric acid, Manufactu | H. M. Baker . | 73, 689 |
| soda, Carbouate and other salts of. | J. M. Gatman | 80, 940 |
| Soda, Carbonate of | H. M. Baker | 84, 250 |
| Soda fountain, Jet attachment for | J. C. Wharton | 83, 346 |
| Sufa, Adjustable | E. Dcetz | 77, 872 |
| Sofa and bed | J. B. Reith | 80, 761 |
| Sofa and bed | W. H. Schwalbe | 81, 691 |
| Sofa bed | W. Brown | 81, 065 |
| Sofa cradle | H. A. Axtell | 74, 876 |
| Soil preparatory to planting, Scarifying | E. Crane. | 73, 876 |
| Soil preparatory to plowing, Scarifying. | E. Crane | 76, 404 |
| Soil pulverizer | C. Berninger | 81, 333 |
| Solder | L. Brandeis | 85, 057 |
| Solder for aluminium | A. Starr | 75, 312 |
| Solder for aluminiun | A. Starr | 78, 123 |
| Solder, Rearly | D. H. Priest | 77, 404 |
| Soldering galvanized iron | P. B. Bonner | 83, 451 |
| Soldering iron. | T. Beardsley | 74, 881 |
| Soldering iron, Constructing | J. Gleason | 73, 798 |
| Soldering machine | V. and P. Fath and J. Friclin | 85, 003 |
| Soldering vessel | C. Seimel | 83, 100 |
| Solc cutting machine | T. A. Curtis | 76, 409 |
| Sole cutting machine | M. Hoblos. | 82, 116 |
| Sole, India rubber | R. S. Piekett. | 73, 924 |
| Sole, Inner | R. A. Weloster | 74, 645 |
| Solution for treating vegetable fibre for ture of veretable parchment. | S. Gwym | 73, 322 |
| Sorghum evaporator.. | T. Gillespie | 76, 074 |
| Sorghum juice and other liquids, Erapor | H. B. A rery | 74, 875 |
| Sorghum juice, Purifying | W. Mathews | 77, 746 |
| Soundings, Apparatus for taking | T. and T. F. Walker | 76, 361 |
| Sower, Broadeast. | A. B. Beaumont | 79, 301 |
| Sower, Plaster | H. Rodes. | 81, 410 |
| Spacing and boring machine | J. M. Seymour | 74, 724 |
| Spade. | J. Lunemann | 83, 071 |

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| Invention or Diseovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Spade | M. Comnolly | 84, 797 |
| Spading machine | C. Moody | 85, 019 |
| Spading machive, Rotary | E. H. Kent | 83, 639 |
| Spangles to hoops and skirts, Attachmen | A. Komp | 76, 473 |
| Spangles to hoops and skirts, Attachmen Spark arrester | A. Carter <br> A. F. Smith | 80, 22.8 |
| Spark arrester | D. Eberlart | 80, 615 |
| Spectacles | E. Hunter | 77,287 |
| Spectacles | E. S. Clapp | 79,898 |
| Spectacles and eye glass | J. J. Bausch | 73,285 889 |
| Spectacles and eye glass, Mounting | I. N. Dunt and J. Lundgre | 82, 830 |
| Spectacles, Galvonic | J. Moses | 78,53 |
| Spider .-.... | N. Lewis | 80, 978 |
| Spike | W. V. Martin | 73, 908 |
| Spilie | J. H. Champlin | 74, 501 |
| Spike ... | R. K. Walton | 82, 900 |
| Spike drawer | I. W. Mead | 79, 587 |
| Spike extractor and lifting jack | J. Douglass | 75, 13 |
| Spike machine | W. Taplin | 7\%, 199 |
| Spike machine | J. Dryson and A. Po | 79, 442 |
| Spike machine | W. H. Shoeuberger | 81, 546 |
| Spikes, Pointing | L. Thomas | 85, 146 |
| Spike, Self clinching | J. Balmer | 78, 35 |
| Spike with screw threads | A. C. and J. L. Dunn | 83, 699 |
| Spindle | E. Atwood. | -7, 566 |
| Spindle, Attaching door knob | W. II. Andrews | 7, 344 |
| Spindle bearing | J. Richards | 78, 013 |
| Spindle bolster | G. H. Noble | 83, 331 |
| Spindle for shuttles | C. E. Smith | 81, 201 |
| Spindle atep | J. B. Bancroft | 81, 732 |
| Spinning, Drawing and | A. L. Houghtalin | 78, 968 |
| Spinning frame | C. B. Morso. | 76, 798 |
| Spinning frame | F. Haythorn | 78, 085 |
| Spinning frame, Ring | J. Ashworth | 80, 849 7414 |
| Sploming jack | I. Moxley | 73, 371 |
| Spinning machine | J. McCune | 73, 910 |
| Spinning machine | D. C. Wolf. | 75, 232 |
| Spinning machine | J. E. Burdge | 76, 299 |
| Spiming machine | IF. T. Carroll | 78, 427 |
| Spinning machine | I. Atherton and G. Singleto | 79, 297 |
| Spinning machine | J. M., L., and E. Pusoy | 80, 216 |
| Spinaing machine | W. A. Stevenson. | 80, 572 |
| Spinning machine | J. E. Hooper and B. Ar | 80, 863 |
| Spirning machine | C. J. Harris | 80, 949 |
| Spinning machine | J. Goulding | 83, 375 |
| Spinning machine, Bearing for fliers in | J. Brown | 81, 064 |
| Spinning machine, Bobbin and thread ho | T. L. Luders | 83, 354 |
| Svinning machine, Flier for | H. Silver. | 78, 489 |
| Spiuning machine, Hand | F. D. Moore | 74, 115 |
| Splnning machine, Hand | A. W. Silvis | 75, 063 |
| Spinning machine, Hand | J. W. Burkhart | 81, 594 |
| Spinning machine ring | J. W. Wattles | 83, 426 |
| Spinning machine, Ring and traveler | J. W. Wattles | 75, 610 |
| Spinning machine ring, Clearer for | J. W. Wattles | 75, 609 |
| Spinning, Mrule for | J. Parley and T. Rawsthorne | 2, 585 |
| Spinning, Mulc for | J. Cumnock | 76, 076 |
| Spinning throstle | O. Pearl | 7, 415 |
| Spiral gearing | U. Haskin, jr | 75, 544 |
| Spirits, Ageing and purifying | J. M. Crafts. | 80, 459 |
| Spirits, alctholic, Rectifier and condense | J. F. Collins. | 73,579 84,479 |
| Spirits and other liquids, Condcnsing an Spirits, Distilling -..................... | C. G. Dayton | $8,4,479$ 80,740 |
| Spirits, Distilling | F. Haeck | 82, 519 |
| Spirits from grain, Distilling | W. H. Ford, J. D. Burns | 80860 |
| Spirits, Manufacturing and purifying | P. Martin..................... | 80, 643 |
| Spirits, Rectifying | J. Springer | 77, 671 |
| Spirits, Rectifying | W. G. Barett | 81, 268 |
| Spirits, wood, Purifying | J. Pollock |  |
| Spirometor | G. WV. Brown | 73, 229 |
| Spittoon | F. E. Darrow | 78, 722 |
| Spittoon for cars | J. II. Scymour | 74, 600 |
| Spittoon for cars, Stationary | J. C. Tunison | 75, 222 |
| Splint, Suruical. | H. D. Ba | 82, 478 |
| Spoke and felloo connection | G. Allen | 79,533 |

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## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Spring, Wagon | C. Atherton | 81,327 |
| Spring, Watch case | E. H. Buekland. | 77, 580 |
| Spring, Watch caso | E. H. Buekland. | 77, $5: 9$ |
| Spring, Window | E. W. Munson and W. P. Th | 82, 863 |
| Spring. Wirc | D. Mauuel | 74, 233 |
| Sprinkler. | W. R. Worden | 75, 717 |
| Spriukler | G. Jones | 78,805 |
| Sprit-sail boom sling | G. Dowling | 76, 309 |
| Spur | S. Wehrly. | 78, 703 |
| Spur | S. Wehrly | 79, 793 |
| Spur and creeper combined | I. Melurnann | 81, 925 |
| Spur, Ice | C. F. Wieland | 84, 400 |
| Square and bevel, Adjustable | E. B. Foster and J. G. Witt | 8:2, 933 |
| Square aul clipper combined | C. W. Gucrrant | 78, 591 |
| Square and gaugc eombined | T. C. Hendry | 74, 356 |
| Sguare and level eombined | II. G. Taylor | 78,770 |
| Square and miter eombined | W. S. Winterbottom | 79, 175 |
| Squarc and rule combincd | W. O. Jones | 73, 532 |
| Square, Bevel. | W. S. Fisher | 79, 062 |
| Square, Bevel | C. O. Hansen | 79, 061 |
| Square, Centering | G. W. Brooks | 82, 917 |
| Square plumb and level eombined | A. F. Ward | 80, 252 |
| Square, Tailor's | D. Tierney. | 78, 338 |
| Square, Try | II. L. Ogden | 73, 828 |
| Square, Try | E. J. Toof. | 77, 130 |
| Square, Try | W. Ross | 81, 011 |
| Staging | C. S. Burton | 74, 665 |
| Staging | D. Morrisou | 78, 886 |
| Staging | J. F. Lang. | 85, 314 |
| Staching trame | H. Wood.. | 74, 472 |
| Stair carpet fastener and protector | J. Commer, jr | 78,263 |
| Stair rod. | T. Sargeant | 84, 58 |
| Stair rod, \&e | W. M. Marshall | 79,846 |
| Stair rod, Fastener for. | W. R. Auderson | 73, 563 |
| Stair, Spiral or winding | W. J. Keim | 79, 985 |
| Stake, 'Tin smiths' | A. W. Whitney | 81, 048 |
| Stalk cutter and husker combined | J. D., C. B., L. N.Rice, and E. | 82, 553 |
| Stalk, weeds, \&c., Turniug down and bi | S. Collins | 74, 660 |
| Stall, Cattle | S. D. Stone | 75, 595 |
| Stall for horses | A. Hosmer | 82, 838 |
| Stamp, Afixiug. | C. B. Still | 84, 225 |
| Stamp and die for sheet metal | W. D. Grimshaw | 84,625 |
| Stamp, Branding | W. C. Garretson and E. Drap | 82, 823 |
| Staup, Goverument reven | G. W. Bowlsby | 76, 153 |
| Stamp, IIand | J. II. Berret | 74, 657 |
| Stamf, Haud | C. Merriam and C. O. Luce | 75, 945 |
| Stamp, Hand | A. Fessler | 78,446 |
| Stamp, Mand | A. Selkirk | 81,415 |
| Stamp, Hand | N. I. Chamberlain | 83, 253 |
| Stamp, Hand | L. H. Gano | 83, 70 |
| Stamp, haid, Ink pad for | I. M. Willbur | 82, 462 |
| Stamp moistener. | J. Millcage | 73, 708 |
| Stamp, Postage | S. Carusi. | 73, 290 |
| Stamp, Postage | J. M. Sturgoon | 79, 157 |
| Stamp, postago and revenue, Canceling | H. Grunfield | 80, 943 |
| Stamp, Revenue | G. W. Bowlsby | 79, 806 |
| Stamp, Revenue, for liquor barrcls | G. WV. Bishop | 83, 127 |
| Stauchion for fastening cattle | L. S. Safford | 82, 995 |
| Stand and look cover, Combined | W. Malliken |  |
| Stand, Flour | C. J. Hauck | 73, 003 |
| Stand for mosquito nets | A. Strasser and B. M. Lowy | 80, 78 |
| Stand, Soap | J. D. Blake ... | 77, 442 |
| Stand, Spool | G. A. Pridham. | 79, 926 |
| Stand, Spool | N. P. Clarke | 76, 997 |
| Stand, Tumbler | J. C. Wharton | 82,572 |
| Stand, Wash | A. Stankowiteh | 75, 311 |
| Stand, Wash | I. Morris. | 76, 790 |
| Staple, Blind. ....... | J. 13. Sargent | 84, 585 |
| Staple, hook, \&e., Pointing | W. Malick.- | 84, 56 |
| Starch for use, Putting up | A. Irwin.. | 83, 167 |
| Starch seprarator | C. A. Owens |  |
| Starch tray | J. A. Oweus | 78, 320 |
| Starching apparatus | W. J. Coates | 77, 350 |
| Stationary machinery, Operating | G. Maramvillo | 74, 838 |
| Staves, Cutting | H. Martin | 78, 88i |
| Staves, Cutting | J. Greenwood. | 79, 65 |
| Staves, Dressing | W. S. Colvell. | 74, 309 |
| Staves, Jointing | C. B. Hutchins | 75, 021 |
| Staves, Jointing | H. S. Wiley | 77, 15 |
| Staves, Jointing | E. and B. Holmes | 80, 483 |

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| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Staves, Jointing | L. B. Eeker | 81, 613 |
| Stave machine | W. S. Colw | 73, 505 |
| Stave machine | J. Holmes | 82, 718 |
| Stave machine | W. S. Colwel | 83, 466 |
| Stave maeline | C. Murdock | 84, 897 |
| Staves, Sawing | W. K. and O. D. Bishop | 75, 846 |
| Stay for shirt bosom | J. P. Littlo | 84, 498 |
| Steak erusher | A. Castellaw | 74,304 |
| Steak masher | R. Frlym | 79, 966 |
| Steamboat stages, Handling | M. Moore and | 81, 667 |
| Steamer, Partition | S. T. MeDougall | 79, 670 |
| Steain graduator | W. A. Robinson | 84, 710 |
| Steam trap. | R. Brown. | 83, 592 |
| Steel | F. Asthowe | 78, 041 |
| Steel and iron | J. A. Jones | 78, 806 |
| Steel and iron, Carbonizing and hardening | F. E. Sissions | 75, 986 |
| Steel and iron combined, Manufacture of plates from. | J. Parks, jr | 78, 477 |
| Steel and iron, Compound for welding and refining... | J. Lehmann | 76, 087 |
| Steel and iron, for the manufaeture of plows, \&e., Compound for hardening and uniting. | W. Howell and N. W. Brow | 84, 420 |
| Steel and iron, Manufacture of | J. Jameson | 76, 196 |
| Steel and iron, Manufacture of | L. Siebert. | 79, 152 |
| Steel and iron, Manufacture of | J. A. Jones | 81, 908 |
| Steel and iron, Mixing | J. Cartwright | 73, 163 |
| Steel and iron, Purifying | J. T. Bennett | 75, 240 |
| Steel and iron, Working | II. J. Dickerson | 84, 480 |
| Stcel, east, and eopper, Combining | J. Park, jr | 73, 375 |
| Steel, east, Applying, to artieles made of iron | W. H. Singer | 85, 140 |
| Stecl, east, Compound for tempering | G. Rich.. | 77, 323 |
| Steel for hoop skirts, \&c., Preparation | C. Maxwell and I. N. Pierce | 84, 746 |
| Steel ingots, Manufacture of | J. B. Tarr | 83, 222 |
| Steel, Making | T. J. Clunbl | 79, 313 |
| Steel, Making, and refining | J. a costerdam | 84, 334 |
| Steel, Making, and refining iron | J. Absterdam | 84, 335 |
| Steel, making, and refining iron, Introducing gas fuel into a eonverter for. | J. Absterdam | 84,336 |
| Steel, Making, direct from the ore | T. J. Chubb | 79, 314 |
| Steel, making, Refining iron and | J. Absterdam. | 84, 333 |
| Steel, Manufaeture of | T. S. Blair | 85, 053 |
| Steel, Manufacture of, and converting iron articles into steel. | F. C. Currie | 80, 148 |
| Steel or iron plates, Formation of joints of. | E. T. Ligon. | 76, 088 |
| Steel, Producing | J. Myers, jr | 84, 644 |
| Steelyard | H. Maranville | 81, 388 |
| Steering apparatus. | J. L. Catheart | 73, 951 |
| Steering apparatus | G. H. Colbert | 75, 125 |
| Steering apparatus. | C. II. Sawyer | 76, 105 |
| Steering apparatus. | P. H. Jaekson | 7\%, 288 |
| Steering apparatus. | W. H. Conway | 77, 590 |
| Steering apparatus. | H. F. Shaw ... | 79, 263 |
| Steering apparatus. | A. Sargeant | 81, 114 |
| Steering apparatus. | S. C. Riehards | 85, 027 |
| Stencil plate | W. W. Potter. | 77, 759 |
| Stencil plate | E. L. Tarbox | 81, 032 |
| Steneil plate, Changeable | J. J. De Barry | 80, 711 |
| Steneil plate for numbering barrels, \&e | J. H. Bradford | 83, 912 |
| Step, Canal loek gate | H. Rexford | 77, 405 |
| Stereoscope | J. V. Starr | 73, 472 |
| Stereoscope | W. M. Kohl. | 76, 472 |
| Stereotype plates, Forming | I. M. Willbur | 82, 463 |
|  | F. P. Bush. | 76, 156 |
| Still | H. Whisler and J. S. Berry | 78, 217 |
| Still | H. C. Lloyd. | 80, 192 |
| Still | G. O. Baldwin | 31, 867 |
| Still | N. Hotz | 82, 318 |
| Still, Doubler for | E. A. Mrüller and T. Stoek | 78,118 |
| Still for distilling hydroearbon | C. W. Requa. | 77, 094 |
| Still for hydroearbon. | C. Loekhart. | 80, 294 |
| Still for turpentine. | J. E. Winants | 82, 263 |
| Still, Measuring receiver for | W. M. Blume . | 73, 869 |
| Still, Petroleum. | E. G. Kelley | 84, 195 |
| Still, Spirit | G. Kaiser | 78,596 |
| Still, Vinegar | R. L. Vanee. | 74,174 |
| Still, Whisky | J. G. and B. F. Mattingly | 79,374 |
| Stirrup | J. Bond | 8:3, 450 |
| Stirrup | E. S. Bennett. | 83, 822 |
| Stitehing horso | D. Depp | 83, 477 |
| Stocking darner | S. R. Bolton | 80, 588 |
| Stoeking, Forming | E. O. Potter | 80, 999 |
| Stoeking streteher | R. K. Chandler | 81, 981 |
| Stocking supporter | E. L. Daniel | 81, 479 |

## Alphabetical list of inventions-Continued.



## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Namc of Patenteo. | No. |
| :---: | :---: | :---: |
| Stove, car, Railw | J. Dripps | 78,074 |
| Stove, Coal. | E. A. De Camp | 74, 753 |
| Stove, Coal. | 11. B. Voorhis. | 75, 223 |
| Stove, Coal | J. Van Wormer and M. McG | 75, 491 |
| Stove, Coal | C. Williams | 75, 715 |
| Stove, Coal | E. Hosford | 76, 455 |
| Stove, Coal | F. Walker | 76,565 |
| Stove, Coal. | C. 13. Gregory | 77, 032 |
| Stove, Coal. | D. G. Littlefield | 77, 056 |
| Stove, Coal | E. A. Parker | 77, 519 |
| Stove, Coal. | T. Crane | 77, 962 |
| Stuve, Coal. | A. C. Rand | 79, 390 |
| Store, Coal. | J. Cooper | 80, 275 |
| Stove, Coal <br> Stove, Coal | D. R. Eox. Tilley | 80,532 80,935 |
| Stove, Coal. | G. O. Woodeock | 81, 053 |
| Store, Coal. | B. Oertly and X. Fendrich | 81, 197 |
| Store, Coal. | J. Fahriey. | 81, 484 |
| Stove, Coal | II. D. Suyder | 82, 169 |
| Stove, Coal. | S. B. Steuart. | 82, 449 |
| Stove, Coal. | A. J. Redway | 82, 637 |
| Stove, Coal. | C. S. Doolitt | 83, 049 |
| Stove, Coal.... <br> Stove, Coal box | A. Parodis .. | -73, 472 |
| Stove, eoal, Combustio | W. H. Whitehead | 81, 043 |
| Stove, cook, Coal. | H. Pcase... | 78, 822 |
| Stove, cook, Magazine | J. S. Perry and J. Easterly | 85, 124 |
| Stove, cook, Reservoir | S. M. Clark | 84, 343 |
| Stove, Cooking. | F. C. Adams and J. Peckove | 73, 942 |
| Stove, Cooking | J. L. Kastendike | 74, 228 |
| Store, Cuoking | G. Chilson | 75, 665 |
| Stove, Cooking | M. E. A. W. Evard | 76, 315 |
| Stove, Cooking | E. D. Weston | 77, 688 |
| Stove, Cooking | B. L. Mott, jr | 77, 751 |
| Stove, Cooking | L. M. Parsons | 77, 835 |
| Stove, Cooking | J. Magee | 78, 217 |
| Stove, Cooking | B. Newbury | 78, 315 |
| Stove, Cooking | W. Doyle ... | 78, 517 |
| Stove, Cooking | M. Woolley. | -79, 659 |
| Stove, Cooking | J. Magee | 80, 194 |
| Stove, Cooking | C. W. Smith | 80, 230 |
| Stove, Cooking. | E. O. Thomas | 80, 240 |
| Stove, Cooking | J. W. Lowrey | 80, 416 |
| Stove, Cooking | W. T. Kistler | 80, 636 |
| Stove, Cooking | J. Magee | 80,867 80 80 |
| Stove, Cooking | T. Colwell . |  |
| Stove, ${ }^{\text {Stove, Cooking }}$ | C. Williams. | 82, 574 |
| Stove, Cooking | A. J. Redway | 82, 638 |
| Stove, Cooking | N. S. Vedder. | 82, 697 |
| Stove, Cooking | E. D. Weston. | 82, 910 |
| Stove, Cooking. | A. G. Patton. | 83, 085 |
| Stove, Cooking | A. G. Patton | 83, 086 |
| Stove, Cooking. | H. Pcase. | 83, 657 |
| Stove, Cooking | D. Stuart and L. Bridge | 83, 798 |
| Stove, Cooking, ash pan | G. W. Swett .......... | 75, 073 |
| Stove, eooking, Attaehment to | J. Thorniley | 76, 554 |
| Stove, eooking, Combined tank and close | G. W. Gillett | 85, 441 |
| Stove, eouking, Double-oven ......... | E. Card. | 83, 458 |
| Stove, eooking, Extension ring for base | D. B. Cox | 79, 108 |
| Stove, cooking, Grate and ash sifter in | D. E. Paris | 78, 686 |
| Stove, eooling, Mearth and ash sifter in | D. E. Paris | 78, 891 |
| Stove, cooking, Hot air attaehment to. | J. Norris. | 83, 199 |
| Stove, eooking. Hot water tank for. | D. E. Paris | 78, 819 |
| Stove, eooking, Hot water tank for. | D. E. Paris and C. S. Davis | 78, 688 |
| Stove, cooking, Hot water tank on | A. Brown. | 79, 807 |
| Stove, cooking, Portable | H. Brown. |  |
| Stove, eooking. Portable | J. F. Quimb | 83, 407 |
| Stove, eooking, Stove, eooking, Reservoir | G. H . Phillips | 83, 790 |
| Stove, eooking, Reservoir for | A. Lyman | 81, 802 |
| Stove, cooking, Tank for | G. G. Wolf. | 76, 292 |
| Stove, eooking, Warming closet on | D. E. Paris | 78, 890 |
| Stove, eooking, Water reservoir attachi | D. E. Paris | 78, 687 |
| Stove door .......... | A. Resor. | 78,522 |
| Stove fire chamber, eooking, Attachm | D. L. Stilcs | 75, 594 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Stove flue supporter | A. J. Stover | 74, 444 |
| Stove, Gas . . . . . . . . | J. D. Spang. | 79, 022 |
| Stove grate | E. Moneuse and L. Duparque | 79,590 |
| Stove grate | J. H. Yocum... . | 79, 716 |
| Stove grate | W. C'aven | 81, 139 |
| Stove grate, \&c., Illuminator | 13. Nott .. | $83,877$ |
| Stove heartl . .-. - .-.... | W. I. Fryer. | 74, 906 |
| Stove, Meating | T. J. Frazier | 73, 793 |
| Stove, Heating | I. S. Zumstein. | 79,718 |
| Store, Heating | I. N. Ross | 84, 511 |
| Stove, Heating | E. Hawks. | 81, 220 |
| Store, heating, Fender ring for | N. A. Boynton | $77,711$ |
| Stove, Heat radiating attachment to | B. J. Watson . | 75, 087 |
| Store, Hot air . .-. .-. .-. . . . . . . . . . | M. Sehlegel | 85, 404 |
| Stove, Hot air fluc in....... | C. K. Marshall | 79, 844 |
| Stove, Hut air water tank for | G. Teunie .-. | 76, 675 |
| Stove leg-......... | G. W. Burling | 80, 706 |
| Store leg, Attaching | W. L. Newill. | 85, 237 |
| Stove, Lifting hook, guard, \&c., for | H. P. Curtis | 75, 630 |
| Stove, Magazine - . . . . . . . . . . . . . . . | J. Gray | 84, 109 |
| Stove, Oreu rack for | F. L. A. MI. Smith | 79, 018 |
| Stove, Petrolem or gas. | D. L. Emuerson. | 75, 400 |
| Store pipe, Cap for marin | G. Warner. | 78, 496 |
| Stove pipe clcaner | J. W. Mortimer | 75, 291 |
| Stove pipe, Connect | N. W. Greel | 73, 887 |
| Store pipe elbow. | C. Recht. | 76, 812 |
| Store pipe elbow. | C. Hoeller | 89,407 |
| Stove pipe elbow, Joint for | H. B. Morrison | 83, 401 |
| Stove pipe joint . . . . .-. .-. | J. Faint | 84,736 |
| Stove pipe, oven, and water heater, | H. Herrick | 79, 348 |
| Stove pipe, Return flue. | H. Vatter | 77, 684 |
| Stove pipe shelf. . | L. C. Stiles and R. P. Jae | 76, 668 |
| Store pipe shelf | H. C. Johnson | 79, 127 |
| Store pipe shelf. | J. Perham | 80, 210 |
| Stove pipe suspender | G. W. Bradford | 80, 120 |
| Store pipe thimble... | G. F. Hammer | 81, 899 |
| Store pipe thimble | J. L. Little. | 83, 646 |
| Stove plate. | 1). Stnart and A. Wemayss | 80, 235 |
| Store polish | E. C. Smith . . . . . . . . . . . - | 79, 508 |
| Stove polish or blacking | J. Lewis .- | 76, 641 |
| Stove, Portable | J. Smallwood | 79, 084 |
| Store, Radiating drum | J. H. Patterson and İ. B. N | 76, 099 |
| Stove, Window fo | C. H. Buck. | 75, 664 |
| Straight edgo.. | S. Darling | 73, 082 |
| Strainer .... | W. Westlake | 80, 790 |
| Strainer and press, Combined | J. H. Littlefield | 78, 981 |
| Strainer for fluids. | W. Dunn | 75, 002 |
| Strap and hames fastener | J. B. Watermau | 82, 367 |
| Strap fastener | S. W. Durham | 74, 807 |
| Strap fastener | J. B. Armstrong | 77, 946 |
| Strap for horses, Interfering | E. Chestermann | 81, 601 |
| Strap holder .-. - .-...-. .-. | H. WV. Burgess | 73, 230 |
| Strap holder | G. B. Kirkham | 74,916 |
| Strap holding device | J. Way . | 81, 311 |
| Strap, Shawl .-.-....... | G. Cronch | 82, 606 |
| Strap, Shawl and blanket | T. W. and II. K. Porter | 85, 129 |
| Straw and hay cuttincs mach | C. Brown | 78, 181 |
| Strawberry beds, Mralching... | J. Brett ...... | 80, 053 |
| Strawberry culture, Device for | II. C. Robbins | 80, 012 |
| Strawberry carrier. | W. Parker.... | 76, 513 |
| Street sprinkler. | L. IF. Bancroft ........ | 75, 111 |
| Street siveeper | R. Y. McConnell and G. Pring | 85, 319 |
| Stretcher, Instep - . .-. .-...... | C. C. Pease. .-................. | 73, 546 |
| Stuffing for mattresses, sofas, \&c | J. M. Gilbert - . | 74, 340 |
| Stump and stone extractor .- | M. Wieand and G. Gorr | 73,558 |
| Stump, Extracting. | A. B. Beammont .-. | 81, 462 |
| Stump extractor - | J. B. Robertson. | 73, 046 |
| Stump extractor. | S. S. Avis... | 75, 512 |
| Stump extractor. | C. E. Galligan | 75, 894 |
| Stump extractor | I. J. Bogert . . | 77, 798 |
| Stump extractor | J. Havens. | $77,879$ |
| Stump extractor | J. Loncranecker | $\begin{aligned} & 77,898 \end{aligned}$ |
| Stump extractor | I. W. Tibbels | $\begin{aligned} & 78,402 \\ & 78,450 \end{aligned}$ |
| Stump extractor Stump extractor | A. Groodrich | 78,450 78,469 |
| Stump extractor | J. G. Boyer | 78, 920 |
| Stump extractor. | C. C. Manuel | 81,918 |
| Stump extractor | T. G. Booth. | 82, 484 |
| Stump extractor | R. B. Ferris | 82, 933 |
| Stump extractor | H. E. Mead | 83, 651 |
| Stump joint, Pivoted. | A. Searles | 74, 434 |

# Alphabetical list of inventions-Continued. 

| Invention or Discovery, | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Stump machin | I. Pardeo | 80, 873 |
| Submarine exploring | H. S. Thayer | 80, 517 |
| Sugar, Beet ......... | T. Geimert. | 82, 106 |
| Sugar, Crushed | C. Spreckels | 75, 656 |
| Sugar, Draining | A. Mackey | 75, 687 |
| Sugar, Draining | W. Elmenhorst and F. O. Matthiessen. | 77, 017 |
| Sugar ovaporator | W. C. Smith | 78, 695 |
| Sugar, Filtering | W. H. Merrick | 76,495 79 7588 |
| Sugar, Filtering and refiuing | A. L. G. Deho <br> J. Meyer | 79, 758 |
| Sugar from iron, Separating Sugar from sorghum juice.- | A. M. and A. S. Folger and N. Henshaw | 79,819 80,819 |
| Sugar into blocks, Cutting | G. D. Jones | 83, 972 |
| Sugar juice, Clarifying.... | W. Dill | 80, 340 |
| Sugar, Manufacture of | H. P. Gale | 79, 464 |
| Sugar, Manufacture of | W. Knaggs | 83, 974 |
| Sugar packer | E. J. Bicderman | 81, 062 |
| Sugar pau derrick | D. Young | 77, 342 |
| Sulphate of alumina | H. Pemberton. | 78, 005 |
| Sulphate of barytes, Preparing | W. M. Page and E. B. Krausse | 82,154 |
| Sulphate, preparation of, and the manu silver therefrom. | F. Gutzkow | 85, 005 |
| Sulphate, Separating and concentrating | A. Hunter | 80, 629 |
| Sun dial | II. C. Pearsons | 78, 392 |
| Sunshade for horses | S. Ruth | 81, 412 |
| Supporter, Abdominal | A. F. Jennings | 81, 510 |
| Supporter and truss | G. W. Austindalo | 75, 108 |
| Supporter, Uterine | J. T. Boyd. | 83, 826 |
| Suppository machine | A. M. Kuowlson | 79, 840 |
| Surge on harness or vehicle, Breaking | F. P. Hart | 85, 307 |
| Surgical suppository | H. H. Seys | 75, 586 |
| Sursingle | S. V. R. York | 77, 234 |
| Sursingle | S. Mydo | 78, 289 |
| Suspender | W. P. Towles | 78, 494 |
| Suspender | A. W. Harris | 78, 872 |
| Suspender | C. H. Cleveland | 80, 142 |
| Suspender | C. H. Cleveland | 81, 984 |
| Suspender | S. W. Henlon | 84, 669 |
| Suspender and shoulder brace, Combi | A. M. Eaton | 81, 482 |
| Suspender and shoulder brace, Combi | E. Jennings. | 82, 720 |
| Suspender, Cloak and coat | J. D. Leach and E. S. Wardwel | 79, 580 |
| Suspender fastcning | W. Wright | 84, 042 |
| Suspender for stove handle, \&c | S. G. Thayer. | 76, 977 |
| Swage for saw teeth | N. Jolunson | 73, 338 |
| Swage for saw tceth | E. Hamlin | 85, 090 |
| Swaging machine | F. S. De Witt. | 79, 735 |
| Switt or reel | E. N. and P. P. Roberts. | 80, 664 |
| Swing | B. F. Shaffer | 73,123 |
| Swing | S. E. Martin | 76, 091 |
| Swing | H. F. Metzler | 82, 018 |
| Swing | G. A. Seaver. | 82, 998 |
| Swing | B. F. Shaffer | 83, 216 |
| Swing | W. B. Odenott | 85, 238 |
| Swing, Automatic | J. J. Rymal | 79, 147 |
| Swing carriage | W. Hewitt | 76, 629 |
| Swing, Rocki | T. H. B. Sanders | 79, 401 |
| Switch. | J. T. Clark and J. B. Besler | 30, 601 |
| Switch and signal | J. Saxby and J. S. Farmer | 80, 878 |
| Switch for city railroad | T. Newman. | 78, 680 |
| Switch for street railroad | G. L. Bailey | 79, 940 |
| Switching apparatus for street railway | P. S. Dusouchet | 80, 932 |
| Stritching plate, Railway | A. Philippi | 78, 126 |
| Switch, Railroad | W. P. Patton | 73, 752 |
| Switch, Railroad | H. K. Lecch | 75, 171 |
| Switch, Railroad | G. I. Duaney and J. A. Kuufima | 75, 741 |
| Switch, Railroad | E. Mercier | 77, 510 |
| Switch, Railroad | W. Whar'on, jr | 78,165 |
| Switch, Railroad | J. Dampman | 79, 812 |
| Switch, Railroad | M. Kelley | 83, 510 |
| Switch, Railway | T. G. Beecher | 73, 071 |
| Switch, Railway | W. L. Rogers and W. E. Crane | 73, 200 |
| Switch, Railway | J. B. Spurgin and T. A. Kirk | 73, 5.51 |
| Switch, Railway | M. H. Dooly | 73, 700 |
| Switch, Railway | J. C. McCarty | 74, 108 |
| Switch, Railway | W. J. Stowell | 74,951 |
| Switch, Railway | A. F. Ballas. | 76, 973 |
| Switch, Railway | W. Wharton, j | 78, 500 |
| Switch, Railway | W. J. Stowell | 81, 028 |
| Switch, Railway | W. J. Stowell | 81, 029 |
| Switeh, Railway | J. A. Heyl | 81, 634 |
| Switch, Railway | H. Beckwith | 83, 242 |
| Switch, railway, Street | W. Tuttle | 83,803 |

Alphabetical list of inventions-Continued.

T.

Table
Table
Tablc and chair, Writing
Table and cupboard
Table and quilting frame
Table, \&c., Sheep
Table, bench, \&c
Table, Billiard
Table, Billiard and dining
Table, billiard, Substitute for
Table caster
Table, Cheese
Table, Circular saw
Table-cloth protcctor
Table, dcsk, \&c
Table, Dining.
Table, Extension
Table, Extension for
Table, Extension, Slide for
Table, Fall leaf
Table, Folding.
Table, Folding or ironing
Table for compresscs.
Table, Gamo.
Table, Ironing
Table, Ironing
Table, Irouing
Table, Ironing
Table, Ironing
Table-leaf support
Table-leaf support
Table-leaf support
Table or bench...
Table, Revolving
Table, Sheep-shearing
Table, Shcep-slearing
Table, Sheep-sliearing
Table, Sheep-shearing and tagging
Table, Turn.
Table ware
Table, Watcr
Table, work, Applianco for
Tack lolder and carpet suretcher.
Tackle block.
Tackle, Fishing
Tag.
Tags, Attaching strings to
Tag fastencr
Tag fastening
Tag for straps, Metallic
Tallow, lard, \&e., Rendering
Tan arid other substances, Dosiccating leachicd
Tank for fermenting alo, beer, \&c..
Tank, Hog-scalding.
Tank, Oil
Tank, Railroad, Filling with water
Tanning
Tanning
Tanning
Tanning
Tanning apparatus
Tanning composition
Tanning composition
Tanning composition
Tanning compound
Tanning eompound
Tanning hides
Tanning hides and skins
Tanning hides and skins

| Name of Patentee. | No. |
| :---: | :---: |
| A. McLeod | 74, 926 |
| R. L. McGowan and W. Fle | 83, 396 |
| C. E. Billings | 82, 279 |
| D. B. Howell. | 79, 761 |
| F. A. Stohlmann | 75, 405 |
| M. Faloon | 79, 742 |
| N. B. Sorisborger | 73, 403 |
| M. Mattson | 75, 689 |
| J. A. Morrell | 75, 693 |
| J. C. Putnam | 82, 247 |
| J. C. Dronhard and A. L. R | 84, 618 |
| P. Geiscr | 82, 616 |
| J. C. Mack. | 82, 426 |
| M. E. Phillips. | 78,478 |
| E. Page | 79, 382 |
| D. S. Leavitt | 80, 289 |
| K. Gudenoye | 83, 153 |
| H. W. Collender | 77, 001 |
| A. G. Busby | 83, 759 |
| D. Sherwood | 74, 945 |
| E. L. Yanccy | 84, 980 |
| G. H. Sanborn. | 76, 947 |
| J. H. Mott | 83, 120 |
| E. Becker | 80, 898 |
| E. H. Bloebaum and C. H. Na | 82, 275 |
| E. R. Wolfinger and J. Barre | 83, 350 |
| De Lancey Cole | 77, 801 |
| N. Jenkins. | 75, 032 |
| J. R. Rankin | 77, 655 |
| W. Smith | 82, 360 |
| M. G. Briggs | 78, 642 |
| II. A. Burr. | 80, 132 |
| W. Kcil. | 80,185 |
| H. Park | 76,098 |
| J. T Piercy | 83, 310 |
| L. Marrington | 83, 379 |
| P. P. Carıdl | 83, 460 |
| O. C. Hotchkiss | 84, 549 |
| D. Bull. - | 72, 970 |
| S. Ehrman | 76, 725 |
| E. E. Berry | 78,177 |
| L. D. Hubba | 76, 459 |
| J. S. Heater. | 83, 960 |
| G. Wiggins | 77, 603 |
| W. C. Jones | 78, 671 |
| J. T. Styer. | 83, 672 |
| G. Fenton. | 74, 808 |
| J. K. Thompson | 78, 553 |
| H. W. Wright | 78, 562 |
| J. C. Libby. | 76, 211 |
| J. G. Lucas | 83, 072 |
| J. E. Sturdy | 84, 717 |
| J. F. Harcourt | 78, 663 |
| J. D. Leach and S. Hutchings | 84, 885 |
| G. F. Wright and W. Orr, jr. | 79, 287 |
| 13. L. Dellnison. | 83, 368 |
| W. N. Weeden | 77, 424 |
| N. M. Phillips | 80, 498 |
| E. Wadhams. | 78, 033 |
| A. Broadnax. | 81, 743 |
| C. H Moseley | 82, 739 |
| E. K. Warren | 82, 905 |
| G. King | 77, 198 |
| A. G. Wilson | 81, 968 |
| S. Love | 75, 939 |
| II. W. Adams | 76, 134 |
| D. Symonds. | 76, 957 |
| W. Windoes | 80, 693 |
| S. Snyder. | 80, 779 |
| S. Hosmer | 84, 190 |
| N. Cox | 84, 734 |
| E. Keith and A. A. Eylar | 78, 6\%2 |
| I. Wood... | 81, 237 |
| 13. F. Gross | 82,517 |
| S. Lustoll | 83, 073 |
| A. G. Eaton | 82, 815 |
| F. J. Burcha | 78.256 |
| C. Osmani . | 85, 327 |

# Alphabetical list of inventions--Continued. 



Alphabetical list of inventions-Continued.


## Alphabetical list of inventions-Continued.

| Invention or Diseovery | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Tile eutting machine | J. Shellabarger... | $78,694$ |
| Tiles, Drain.......... | J. W. Milroy and J. | -82, 83,59 |
| Tiles, floors, \&c., Composition for form | ${ }_{\text {W. }}$ W. Berni | 80, 120 |
| Tile for flooring, \&e |  | 84, 877 |
| Tile for floors, \&e | J. Shellabarge | 80,512 |
| Tile machine. | W. L. Reck | 82, 034 |
| Tile machinc | A. and A. C. Hoekett | 82, 837 |
| Tile, Malt-kiln | T. G. Arnold. | -80, 601 |
| Tile or slabs for floors, Composition $f$ | J. Marsh, ${ }^{\text {d }}$ | 83, 758 |
| Timber from decay, Prescrving | C. Brown | 78, 972 |
| Time pieee........................... | B. H. Harmon and D. B. Stu | 81, 164 |
| Tin and other coating from sheet metal | D. B. Sturdevant and B. H. | 75, 809 |
| Timners' forming maehine.. | W. Stinc... | 73,208 80,937 |
| Tinners' use, Maehine for | P. Naylor. | 75, 449 |
| Tinning................ | C. Kuehn | 77, 987 |
| Tin scraps or waste, U <br> Tinsmiths' stake. | E. II. Meigs. | 79, 376 |
| Tinsmiths' stak | O. W. Whitney | 88, 104 |
| Tin ware. | J. Mehmann | 83, 5こ3 |
| Tin ware, Bcnding oval handies for | J. Sehmucher and H. Upjoh | 80, 511 |
| 'lin ware seaming machine.......... | II. J. Noyes | 73, 636 77,929 |
| Tin work, Double seamer for | C. F. Spanlding - |  |
| Tire bender. | J. Navlor ......... | 75, 781 |
| Tire, Bending | J. M. Bryan | 78, 420 |
| Tire bending and punching m | R. Tyircll | 79, 089 |
| Tire Cast steel .... | J. B. Tarr... | 83,223 80,687 |
| Tire cooler. | N. Hampach | 79, 999 |
| Tire frame attachmen | C. E. Pierce | 75, 050 |
| Tire heater | P. P. Hemstreet . | 81,633 |
| Tire, Polling | T. E. Vickers. | 79, 416 |
| Tire setter | R. Cawthorne | 82, 605 |
| Tire, Setting and cooling | R. B. Wheatley | 75, 713 |
| Tire setting machi | E. B. Decker. | 73, 170 |
| Tire shrinker | J. Maekcy- | 78, 719 |
| Tire slurinking and punehing maeh | W Elliott | 73, 175 |
| Tire shrinking machine ..... | J. A. Green | 84, 878 |
| Tire oll carriage wheels, fastening | S. Shirley. | 78, 141 |
| Tire tightcuer | A. O. Morgan |  |
| Tire to wheels, Securing | W. H. Hovey | 78, 201 |
| Tire, Upsetting. . | S. IV. Corbin | 77, 002 |
| Tires, Tightoning | S. Lamplugh | 83,177 |
| Tires, Welding | M. E. A. W. Evard | 76, 316 |
| Toaster and boiler | W. F. Collier and J. H. Big | 76, 0.32 |
| Tobaeeo, Belting | R. T. Sitiecly |  |
| Tobaeeo, Casting | J. H. MeGowan | 79, 763 |
| Tobaceo compress | N. W. Broome | 80, 906 |
| Tobacco, \&c., Cutting | D. T. Robinson. | 74, 248 |
| Tobacco, Cutting | L. W. Spcncer |  |
| Tobacco, Cutting | C. Merimity and J. Dessin | 82, 14 |
| Tobacco dressing machine | S. T. Cotterill ............ | 83, 694 |
| Tobacco drier <br> Tobaeco, Granulating and finish | N. H. Borgfeldt and F. WV. R | 78, 360 |
| Tobaecu, Granulating and finish Tobacco hand-tying machine.. | D. C. Dellinger | 77, 7009 |
| Tobacco hill preparer ..... | B. T. Hardsey. |  |
| Tobacco, Mill-shape or mold for manuf | G. F. Marks .. | 74, 395 |
| Tobacco, Packing. | M. Falk | 75, 837 |
| Tobacco, Packing........ Tobacco, Straimhtening | J. A. Hunter | 78, 376 |
| Toe calk, and blank for the same | T. Dooley | 85, 130 |
| Toe-ealk blanks, Manufacturing | A. Rcese... |  |
| Toilet attachment for burcau | T. T.S. Laidl | 77, 988 |
| Tompion for firc-arms | J. Hyslop, jr., and C.E. Phill | 75, 427 |
| Tongs and shovel eombined | H. C. Sisco . | 75, 659 |
| Tongs, Oyster... . | J. Johnson.... | 74, 797 |
| Tongs, Pipo.. | J ir Erarts | 79, 642 |
| Tongs, Pipe | J. M. Erarwn | 79, 72 |
| Tongue depresser and automizer | O. A. Schulz | 79, 015 |
| Tongue for hay-loading machine | E. Sweet. |  |
| Tonic or bitters | A.J. Prescott | 73,648 |

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| Invention or Discovery. | Nams of Pateutee. | No. |
| :---: | :---: | :---: |
| Tool, Channelling | T. E. Droll |  |
| Tool, Combination | J. W. Marsh | 76, 218 |
| Tools, Combined | J. D. Wilkinson and E. O. Boyl | 83,577 |
| Tool, Edge-fimshing | J. B. Blanchard ............... | 76, 391 |
| Tool extractor for wells | T. M. Patterson | 81, 530 |
| Tool for cutting holes in cloth or leath tongucs. | A. Bedford.. | 81, 464 |
| Tool for gas fitters ....................... | J. Himmer . | 82, 620 |
| Tool for measuring and marking, Comb | C. M. Lane.. | 78, 974 |
| Tool handles, Bushing for ..... | A. C. Kasson | 85, 230 |
| Tool, Hand-turning | A. B. Simonds | 74,437 |
| Tool holder <br> Tool holder | F. A. Potter | 77, 522 |
| Tool holder . | J. Wratt. Haskell | 79, 684 |
| Toal holder | W.J. Linton | 81, 182 |
| Tonl holder | W. J. Linton | 81,183 |
| Tool holder | C. H. Reil. | 85, 329 |
| Tool holder for grinding | A. P. M. Jeffers | 83, 636 |
| Tools, Manufacture of edge | R. C. Grover | 82, 711 |
| Tool sharpener.. | S. Farrenberg | 79, 818 |
| Tool, Sharpening edge | G. L. Witsil. | 76, 025 |
| 'Tool, Shoemaker's | W. T. Fisher | 80, 161 |
| Tooth burr and drill, Pneumatic | G. F. Green | 77, 370 |
| Tooth pluggor | E. Coburn, jr. | 76, 161 |
| Top ........... | C. L. Johnson | 78, 745 |
| Top game board... | D. Wight | 76,572 |
| Torpedoes for oil wells | A. J. Ballantyne | 82,589 80,896 |
| Toy. | J. E. Hawkins. | 73, 006 |
| Toy | E. C. Bracket | 74, 292 |
| Toy | A.C. Fanston | 74,815 |
| Toy | D. Checkeni | 76, 892 |
| Toy | J. Pussey | 77, 320 |
| Toy | J. H. Barnes | 78, 567 |
|  | J. L. Holt | 83, 160 |
| Toy | A.H. Cassiday | 85, 212 |
| Toy, Alphabet | R.J. Clay | 78,361 |
| Toy. Automatic. | W. F. Goodwin. | 81,491 |
| Toy boomerang pistol | O. B. Brown ... | 76, 886 |
| Toy caunon | G. E. Hutchinson | 79, 073 |
| Toy, Child's | E. T. Colburı | 74, 308 |
| Toy entitled Sibyl's cave | J. S. Griffith. | 85, 057 |
| Tor ish. | I. Hunter.. | 84, 628 |
| Toy gun | S. Mubbard | 74, 825 |
| Toy gun | C. Locke | 82, 536 |
| Toy gun | F. A. Spofford and G. Raffingto | 82, 561 |
| Toy gun, Torpedo | E. W. Keys | 75, 767 |
| Toy, horse... | E. S. Russcl | 79, 782 |
| Toy, Mlusion.... | J. A. Minor | 77, 072 |
| Toy, Mechanical | II. G. Pearson | 73, 379 |
| Toy pistol. | J. W. Bailey | 75, 831 |
| Toy pistol. | W. H. Emory | 75, 885 |
| Toy pistol. | W. D. Gridlcy | 83, 838 |
| Toy pistol. | E. Ripley | 83, 211 |
| Toy pistol. | S. E. Marable | 85, 017 |
| Toy railroad and car ... | D. Douglas. | 75, 876 |
| Toy, Reciprocating ball Toy safe with puzzle lock. | C. Gresiuchat..... | 73, 093 |
| Toy, Sipring cup ... ..... | A. and G. F. Wright H. B. Ames . | 77,560 |
| Toy, Whirling | J. Groves and E. B. Turner | 76, 439 |
| Trace clip | I'Schoonmaker.......... | 76, 826 |
| Trace fastener | L. Herr | 75, 757 |
| Trace fastener | E. D. and J. P. Rhoads. | 78, 011 |
| Trace fastening | F. M. Weller. | 82, 906 |
| Trace fastening | 1. Peck.- | 81, 403 |
| Trace fastening | J. Brown... | 83, 454 |
| Trace holder. | S. Stout | 88.454 |
| Trace lug loop | Mi. Gumfory | 78, 277 |
| Track and car for elevating on inclined | J. W. Pearce | 81, 677 |
| Track cleaner. | A. A. Freeman and S. Ford | 74, 811 |
| Track cleaner, Railroad. | G. P. Floyd | 77, 102 |
| Track cleancr, Railway | R. A. and T. Kendall | 83, 860 |
| Track lifter. | C. De Bergue. | 83, 138 |
| Trammel for stair rail | G. Hoover. | 75, 423 |
| Trap, Animal | W. Cover | 72, 979 |
| 'Trap, Animal. | O. Metealf | 73, 254 |
| rrap, Animal. | S. Reed | 73, 384 |
| Trap, Animal. | $J$ P Wigal | 73,418 |

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## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Trigonometrr, Illustrating spherical | S. W. Manning | 83, 392 |
| Trimming, Fluted. | L. H. Mandelbaun | 84, 641 |
| Trimming, Ruffled | E. C. Wooster | 85, 502 |
| Trouyh and double rack for feeding and horses, Combined. | J. D. AleBrido | 73. 426 |
| Trough, Damping. | II. T. Daris | 84, 538 |
| Trongh, Eares | W. Stine | 78, 617 |
| Trough for stock, Salting | G. T. Marshall | 83, 780 |
| Trough, Hog | C. M. Rolfe | 79, 688 |
| Truck | O. F. Burtou | 80, 388 |
| Truck and bag-holding devic | J. S. Lelimann | 82, 132 |
| Truck and horse power, Combined | C. Roberts and J. A. Throp | 84, 766 |
| Truck and wa'on reach | P. Hicks | 83, 497 |
| Truck, Brick. | II. T. Carter | 73, 097 |
| Truck, Car | H. T. Carter | 73, 295 |
| Truck, Car. | A. Bridges | 75, 357 |
| Truck, Car | J. Baysore | 75, 513 |
| Truck, Car | C. F. Allen | 77, 858 |
| Truck, Car. | S. Skillman | 79, 267 |
| Truck, Car. | J. H. Densmore | 80, 858 |
| Truck, Car, for changing gaug | H. T. Carter | 79, 104 |
| Truck, car, Railroad | J. R. and D. W. Perry | 77, 520 |
| Truck for moving horse | J. S. Millikan | 78, 883 |
| Trunk, Hand | W. May | 74, 107 |
| Trunk, Mand | J. Garsted | 76, 907 |
| Truck, Hand, and sack holder | G. and J. Smoker | 7\%, 412 |
| Truck, Railroad | W. S. Shotwell | 75, 476 |
| Truck, Railroad | D. McFarland. | 77, 505 |
| Truck, Railway | W. P. Parrott | 79, 252 |
| Truck, Safety | S. Y. Bradstreet | 77, 248 |
| Truck, Store | A. V. Smith | 73, 397 |
| Trumpet, Ear | T. If. Stillw ell | 78, 493 |
| Trumpet, Speaking | F. G. Miller | 80, 557 |
| Trunk | J. Smith | 72, 988 |
| Trunk | E. Semple | 74, 723 |
| Trunk | J. H. Burnett, jr | 75, 358 |
| Trunk | C. Horton. | 76, 193 |
| Trunk | C. A. Taylor | 77, 127 |
| Trunk | R. Wearer. | 77, 423 |
| Trunk | G. Crouch | 82, 496 |
| Trunk, Bureau | A. L. Mora | 80, 200 |
| Trunk caster. | L. Horton and J. A. McGaw | 75, 017 |
| Trunk caster | J. W. C. and J. E. Haskell | 82, 310 |
| Trunk-caster frame | G. B. Jeukinsou | 80, 548 |
| Trunk corner | E. A. G. Roulstone | 75, 200 |
| Truuk handle | G. B. Jenkiuson | 83, 285 |
| Trunk-lid supporter | S. Wehrly. | 77, 785 |
| Trunk-lid supporter | P. Cohen. | 81, 477 |
| 'Trunk, Traveler's | J. N. Wunderlich | 74, 783 |
| Trunk, Traveling | G. Do Brettull. | 81,756 |
| Truss. | J. A. Sherman | 74,158 |
| Truss | S. Green | 74, 818 |
| Truss | C. A. Jeffries and E. F. Olds. | 74, 828 |
| Truss | J. A. Sherman | 75, 061 |
| Truss | J. Glydon. | 76, 184 |
| Truss | S. Ayers | 77, 947 |
| Truss | M. Fialoon. | 78, 945 |
| Truss | J. Burnham. | 82, 689 |
| Truss | W. S: | 84, 769 |
| 'Truss | E. B. Harding. | 85, 305 |
| Truss and abdominal supporter | J. Lecueq | 73, 614 |
| Truss and supporter | G. W. Antisdalo. | 75, 108 |
| Truss padi..... | 7. Taylor ..... | 73, 671 |
| Truss pad. | T. A. Stohman | 75, 484 |
| Truss supporter | J. McFradden . | 77, 999 |
| Tub, Bath. | E. J. Knowltou. | 73, 906 |
| Tub, Butter | D. A. Gilbert. | 77, 030 |
| Tub, Butter. | D. A. Gilbert. . | 78, 955 |
| Tub, Butter | A. I3. Harris. | 78, 963 |
| Tub, Butter | A. R. Bailey | 81, 459 |
| Tub, Butter. | E. Guyer ... | 82, 939 |
| Tub, Butter, and cheese box | I. H. Wilson. | 73, 151 |
| Tub, Leach | W. Bauzett . | 83, 020 |
| Tub, Mash | L. Kíleo | 78, 973 |
| Tubes aud rolls, Elastic | J. Mroulton | 84, 208 |
| Tubes, Drawiug tapered | G. P. Harding | 73, 715 |
| Tube for oilers | F. J. Seymour | 85, 484 |
| Tube, Gas | E. L. Perry | 77, 314 |
| Tubes in surface condensers, Securing | W. A. Lighthall | 75, 173 |
| Tubo, Lampwick. | A. D. Laws. | 75, 281 |

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| Invention or Discorery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Tube of steam generator | P. M. Ka | 75, 279 |
| Tube, Oil-can.... | E. B. Beach | 79, 723 |
| Tubes, Punching | T. F. Rowland | 73, 556 |
| Tube, Tapering | W. O. Shaw | 74, 614 |
| Tubes, Threadir | D. Saunders | 76, 223 |
| Tube, Well | E. Abbott. |  |
| Tube well | B. Weirich |  |
| Tabe, Well | A. S. Brown | 76, 985 |
| Tube well | C. H . Colby |  |
| Trube, Well | D. Baker. | 81, 580 |
| Tube, Well. | D. Baker |  |
| Tube, Well | D. Baker |  |
| Tubing, Welding. | J. E. Tenca | 84, 019 |
| Tubular structure | J. N. Gucer |  |
| Tug and chain ca | C. Reistle | 77, 215 |
| Tumbler washer | J. P. Milburn | 75, 443 |
| Tumbler washer | D. M. Somers | 82, 650 |
| Tumbler washing | M. Scrannage |  |
| Tannel excavator | T. A. Fisher | ${ }^{74,069}$ |
| Tuinels, arches, \&cc | G. T. Lape | 81,7971 |
| Turf or sod, Cutting | W. Gillbert. |  |
| Turning and planin | J. F. Smint and G.P. Smith | 80,467 |
| Turuiug irregular | W. H. Whitlock |  |
| Tarpentine | A. Pudigon | 77, 319 |
| Tuyero | II. Laird |  |
| Tuyere | B. Fish |  |
| Tuyere | W. H. Myers. | \%8, 771 |
| Tuyere | O. G. Newton | 83, 530 |
| Tuyere | A. Hentoig | 84, 059 |
| Tuyeres. | L. Donnell |  |
| Tuyere iron. | L. M. Bailey | 73, 490 |
| Tuyere iron. |  |  |
| Tuyere iron. | C. F. Espick. | 80, 933 |
| Tweczers, watch key, \&c., Combined | D. A. Jones | 77,621 |
| Twist, button-hole, Winding. | J. Lovett | 75, 338 |
| Twisting wax | F.K.way |  |
| Type machine | D. Bruce | -8, 545 |
| Type, Music | E. E . Ba | 81 |
| Typographcr, Mrechanical | W. W . H . Hott |  |
| ype, setting and distributin | J. T. Slingerland | 85. |
|  | F G Foster |  |
| Type-setting machine | C. G. Foster Colila | 79, 265 |
| Type-writing machine | C.L.Sholes, C.Glidden, and S. W. Soule | 79, 868 |
| U. |  |  |
| Umbrella | E. F. Schriene | 74, 944 |
| mbre | C. M. Minor and |  |
| Umbrella | W. Lang |  |
| Umbrella | W. ${ }^{\text {a }}$, inter and Frruerer |  |
| Umbrelia | W. Damerel. | 77, 963 |
| Umbrelia | G. G Griswo | 77, 975 |
| Umbrella | G. W. Pierce |  |
| Umbrella | L. Roth | 79, 780 |
| Umbrella | W. F. Turner | 80, 785 |
| Umbrella | A. G. Davis | 81,259 |
| Umbrclla | G. L. Witsil. | 84, 457 |
| Umbrella and cane coid | G. Bockstoller | 73,074 |
| Uimbrella and parasol | S. $\Pi$ A. Pimpson | 73, 378 |
| Umbrella, Case for ...... | J. M. Doubled | 75,875 |
| Unbrella framc, | A. G. Davis | 75, 389 |
| Umbrella rumer | O. M. Smith | 76, 251 |
| Umbrella runne | J. Wright |  |
| Umbrella, | J. A. Lieb and E. W. Crane |  |
| Umbrellas, Loo | H. T. Roblbi | 85, 132 |
| Upsetting and punching apparatus, Com | S. F. Lockwood | 75, 032 |
| Upsetting machine..................... | J. F. Sargen | 76, 82, |
| Upsetting machine | S. | ${ }^{8,219}$ |
| Urinal | S. Males . T ......l | 75, 658 |
| Urine, Apparatus for relief of involuntar | W Crocker |  |
| Uterine and abdominal s | E. J. Harding | 75, 902 |

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| Invention or Diseovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Uterine diseases, \&c., Instrument for making applications in. | J. R. Hamilton | 75, 158 |
| Uterine electrode and abdominal supporter | A.J. Steele | 73, 207 |
| Uterine supporter.............................. | J. A. Morre | 75, 694 |
| Uterino supporter. | S. P. Cole <br> A. Dickso | 78, 431 <br> 80, 153 |
| V. |  |  |
| Tacuum apparatus | T. Travel | 81,488 |
| Vacuum pan apparatus | F. O. Matthiessen | $77,065$ |
| Vagina injeetor. | G. W. King | $81,278$ |
| Valve, Anti-fiction steam-engin | A. Grod, jr., | $\begin{aligned} & 80,474 \\ & 82,728 \end{aligned}$ |
| Valve arrangement .-........... | P. Maey ... | $\begin{aligned} & 8,728 \\ & 80,644 \end{aligned}$ |
| Valve at the ends of tubes | J. R. Hamilton | $83,848$ |
| Valve, Balance.............. | E. B. Requa ..... | $75,646$ |
| Valve, Balanced feed-water | G. E. Chenowith | 73, 232 |
| Valvo, Balance slide | W. D. Stewart. | 76, 598 |
| Valve, Balauce slide | W. M. Stevenson | 80, 83,336 |
| Vilve, Balance slide --.......... | T. M. Herriott and S. Myers. | 84, 278 |
| Talve, balanee-slide, Steam engine | W. 'Thilmany ................ | 75, 598 |
| Valve, Boiler safety | E. Andrews. | 83, 125 |
| Valve, Check Valve, Check | P. Whito... | 77, 690 |
| Valve cock. | J. Wilson | 79, 527 |
| Valve cock | J. B. Gibson. | 80, 066 |
| Valve, Combined influx and | J. I. G. Hawes | $\begin{aligned} & 80,000 \\ & 78,873 \end{aligned}$ |
| Valve device, Steam engine. | W. Baxter .- | 83, 444 |
| Valve, engine, Steam. | W. G. Piko. | 73, 381 |
| Valve, engine, Steam. | L. Attwood | 83, 003 |
| Valve, engine, Steam. | R. H. Lee and G. H. Wren | 84, 064 |
| Valve engine, Steam. | W. O. Brooklyn | 74, 583 |
| Valve, chrine, Steam. | J. Reichmann | 74, 593 |
| Valve, engine, Steam. | A. K. Rider | 78, 483 |
| Valve, engine, Steam. | G. L. Engron | 78, 518 |
| Valve, engine, Steam. | W. D. Hooker | 80, 738 |
| Valve, engine, Steam. | IB. F. Porkins. | 82, 870 |
| Valve for gas engino.. | W. IH. Laubach | 77, 387 |
| Valve for pump, Waste ................. Valve for steam and other enginery Stop | G. E. Bretell | 77, 865 |
| Valve for steam and other enginery, Stop | II. G. Ludlow - . | 85, 263 |
| Valve for steam and other enginery...... | P. H. Kondrieken | 85, 389 |
| Valve for steam aud other engiues, Check . | J. Haydeu, jr . .-. . | 83, 380 |
| Valve for stem heaters, Self-regulating air Valve for steam passage................. | M. P. Breckenridgo | 84, 674 |
| Valve for steam passage Valve for sugar pan.... | G. Verry | 78, 556 |
| Valve for sugar pan Valre for water pipe | L. Colwell | 7\%, 359 |
| Valve gear. | J. F. Allen | 75,952 $-73,069$ |
| Valve gear. | E. I . Robinson | $\begin{aligned} & 73,069 \\ & 79,396 \end{aligned}$ |
| Valve gear, Cut-off | W. Wright. . . | $\begin{aligned} & 79,396 \\ & 76,027 \end{aligned}$ |
| Valve gear, Cut-off | A. Kendall | 77, 986 |
| Valve gear, Cut-off. ............ | S. Stanton. | 80, 025 |
| Valve gear, Electro-magnetic | E. A. Woorl | 76, 96.5 |
| Valve gear for oscillating engine | C. H. and D. B. Orerton | 82, 342 |
| Valve rear for steam engine | E. N. Diekerson....... | 75, 387 |
| Valve gear for steam engine | R. L. Reaney and J. S. Cornel | 75, 459 |
| Valve gear for steam engine | F. 1. Wilsoun ................. | 82, 190 |
| Valve gear for steam engine ....... | F. R. Wilson | 82, 575 |
| Valve gear for steam ellgine, Cut-off | C. W. Wailoy | 82,184 |
| Valve gear for steam hammers. | F. B. Miles... | 80, 082 |
| Valve gear, Steam engine ...... | H. Howard. . . . . . . Wood and S. Robin | 78,454 76,131 |
| Valve gear, Steam engino | S. S. Janison . . . . . . . . . . . | 76, 769 |
| Valve gear, Steam engino | A. Secly .... | 78, 764 |
| Valve gear, Steam engine | J. Crampton | 84,615 |
| Valvo gear, Steam cugiue Valvo, | II. Reid.... | 84, 761 |
| Valve, Globe. Valve, Globe. | W.S. Cooper... | 74, 803 |
| Valve, Globe | S. H. Whitaker | 75, 094 |
| Valve, Globe | F. Douglass | 75, 670 |
| Valve, Globe. | J. Powell | 76,164 77 |
| Valve, Globe. | J. B. T. Van Patten | 78, 342 |
| Valve, Globe | R. G. Packard. . . . | 79, 679 |
| Valve, Globe | G. A. Hadlej. | 81, 893 |
| Valve, Globe.............................. | W. Chesley | 82, 206 |
| Valve, Globe, for steam and other engines | E. II. Ashcroft. | 83, 902 |
| Valve, globe, Steam. | I. C. Pordier | 74,597 |
| Valve, globe, Steam. | A. Monre and A. D. Howes | 77, 517 |
| Valve, globe, Steam | E. A. Roek ................. | 74, 144 |
| Valve, globe, Steam. | N. Jenkius. | 82, 844 |

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| Invention or Diseovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Valve, globe, Steam engine | H. H. Hendriek | 73, 602 |
| Valve, globe, Steam engino. | I2. A. Filkins | 80, 160 |
| Valve, Governor | R. Andrews and E. Armstron | 78,410 |
| Valve in railroad ear stoves, Draught | J. E. Wootten ........ | 82, 672 |
| Valve, Melodeon | E. A. Jones and J. A. Bidwell | 83, 971 |
| Valve motions for steam engines | H. Reid | 83, 095 |
| Valve, oscillating, Steam engine | J. S. Everitt and O. Cook | 78,656 |
| Valve, Piston | M. C. Steblins | 83, 733 |
| Valve, Pump. | W. H. Pollard | 73, 038 |
| Valve, I'ump. | J. A. Niehols | 83, 302 |
| Valve, pump, Chain | O. O. Witherell | 83, 117 |
| Valve rod conneetion | J. Robertson | 76,526 |
| Valve, Rotary | E. D. Wood. | 76, 682 |
| Valve, Rotary, for steam and other en | R. D. Gray | 75, 153 |
| Valve, Safety | H. Anderson | 74,480 |
| Valve, Safety | J. Atkins | 74,656 |
| Valve, Safety | S. B. Dougherty | 75, 392 |
| Valve, Safety | F. Harden | 78, 280 |
| Valve, Safety | E. H. Asheroft | 81, 863 |
| Valve, Safety | W. R. Malone | 83, 295 |
| Valve, safety, and low-water deteetor, | D. Burns | 77, 451 |
| Valve, safety, Loek-up | R. G. Paekard and M. Hasti | 77,084 |
| Valve, safety, Spring balanee | J. Ayres | 74, 973 |
| Valve, safety, Steam | E. II. Asheroft | 76, 878 |
| Valve, safety, Steam | A. G. Buzby | 76, 992 |
| Valve, safety, Steam | E. H. A sheroft | 79, 1*2 |
| Valve, safety, Steam | G. H. and E. C. Leurens | 81, 878 |
| Valve, safety. Steam | W. H. Bechtel | 79, 436 |
| Valve, safety, Steam | G. W. Richardson and II. Wa | 83, 320 |
| Valve, safety, steam | O. R. Davis | 80, 461 |
| Valve, saiety, Steam | H. W. Hewrett | 81,167 |
| Valve, safety, Steam | J. Asheroft | 81, 326 |
| Valve, safety, Steam | E. G. Allen | 81, 329 |
| Valve, safoty, Steam | H. B. Beekman. | 81, 976 |
| Valve, safety, Steam | E. H. Asheroft. | 82, 270 |
| Valve seat | A. M. Cheesema | 82,596 |
| Valve seat, Non-corrosi | E. H. A sherof | 81, $5 \% 6$ |
| Valve, Slide | W. Wilson | 77, 152 |
| Valve, Slide, of combined high and low- | T. I Jones | 76, 776 |
| Valve, slice, Operating................. | I. Church. | 79, 204 |
| Valve, slide, Steam. | J. Martin | 77, 301 |
| Valve, slide, Steam | J. Hemphill | 78, 205 |
| Valve, slide, Steam. | J. R. Hall | 82, 520 |
| Valve, slide, Steam | E. B. Latch | 83, 716 |
| Valve, slide, Steam engine | T. A. Bisbee | 76, 294 |
| Valve, slide, Steam engine | J. S. Barden | 77, 569 |
| Valve, slide, Steam engine | L. H. Allen and J. B. Wilford. | 80, 698 |
| Valve, slide, Steam engine | J. S. Everitt and O. Cook | 84, 054 |
| Valve, slide, Steam engine | J. Lawson | 85, 105 |
| Valve, Steam | O. P. and H. D. Dunbar | 84, 175 |
| Valve, Steam | F. S. Pease | 84, 211 |
| Valve, Steam and water-chee | E. H. Asheroft | 83, 588 |
| Valve, Steam eut-off | R. Sanderson | 80, 509 |
| Valve, Steam engine exhaust | T. S. Davis | 85, 289 |
| Valve, Steam engine piston | W. R. Thomas and T. Evans | 76, 002 |
| Valve, Steam engine piston | R. Gornall . | 82, 936 |
| Valve, Steam engine slide | J. Stocking and E. P. Shaffer | 76, 545 |
| Valve, Stop | S. H. Brown | 77, 448 |
| Valve, Stop, for steam and other enginer | J. H. Davis | 85, 288 |
| Valve, Throttle, for locomotive engine. | G. Richards | 78, 012 |
| Valve, throttle, Steam engine..... | H C. Bull and S. T. Shelley | 84, 992 |
| Valve, Water-closet.. | 7. S. Cooper .............. | 74, 896 |
| Valve, Water-closet | W. S. Cooper | 75, 374 |
| Valve, Water-closet | WV. Smith... | 81, 024 |
| Valve, Water-closet | D. Morrison | 82, 057 |
| Valve, water-eloset, Slow elo | C. Harrison. | 85, 006 |
| Vane. | L. W. Cushing and S. White | 81, 146 |
| Vapor inhaler | M. M. Miles | 73, 913 |
| Vapors in lard boiling, Condensation o | C. C. and G. F. Pierso | 80, 006 |
| Vapor, metallie, Collecting and condensi | F. Formbals | 73, 519 |
| Varnish. | I. Ranney. | 83, 317 |
| Varuish, copal, $\Delta$ geing and rectifying | D. Duduit | 84, 174 |
| Varnish for metal, wood, \&c | R. Love | 81, 916 |
| Varnish for the surface of rolls used chinery. | D. Photeplace | 76, 245 |
| Varnish, Shellae . | G. S. Meikle | 81, 663 |
| Vat, Cheese | W. Howard. | 77, 734 |
| Vat, Cheese | P. Colvin | 80, 333 |
| Vat, Dyer's | W. Vine and W. H. Judd | 75, 081 |
| Vat for cylinder pap | A. Howland | 83, 165 |
| Vat, Milk. | J. A. Ed | 82, 698 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Vegetable and fruit slicer | E. Holmos | 78, 373 |
| Vegotablo fiber as a substituto for l | W. Slaufen | 81, 702 |
| Vegotablo masher ....... . . . . . . . . | E. Brown | 78, 0.50 |
| Vegetable mashing and eutting maehi | C. Vignal | 75, 605 |
| Teretables and fruit, Preserviug - | J. Mr. Blanco y Nuño | 82,583 |
| Fegetablo server | T. F. Bigelow. . . | $70,543$ |
| Vegetables, lay, and straw, Cutting | R. I. Burbank | 85, 067 |
| Vegetable slie: r . | I. Bullard. | 77, 250 |
| Vegetable slicer | G. W. Jacobs | 78,900 |
| Vegetables, Liquid extract from | G. Do Villepoix and J. F. Bo | 77, 805 |
| Tegetablo washer................ | U. A. Woodbury .-. | 77, 699 |
| Vegetatlo washer | G. H. Tift .... | $77,944$ |
| Vehiclo | G. Stricker | 73, 849 |
| Vehicle, Attaching shaft to | S. Thompson | 76,357 |
| Vehicle, Construction of .. | G. P. Kimball | 75, 026 |
| Vehiele, Draught attachment | IV. P. Brooks | 78, 049 |
| Vehieles, Equalizer for . . . . . . - | J. J. Connolly | 82, 385 |
| Vehicle, Excavating | J. P. Smith | $77,3: 9$ |
| Vehicle, Kingbolt and whiffletree pla | L. Adams. | $83,234$ |
| Vehiele, Pole tor . .-..................... | E. D. Brown | 80, 055 |
| Vehicle, Propelling | T. Rhoads | 76,814 |
| Vehicle, Running gear | D. D. Gitt | 73, 444 |
| Vehiclo, Self propelling | O. D. Poddriek. | 80, 206 |
| Vehicle, Shaft for ...... | W. L. Blaisdell | 77, 797 |
| Vehicle, Spring and body braco fo | C. C. Gleason | 77, 276 |
| Vohicles, Spring attachment for. | E. C. Brooks. | 73, 497 |
| Vehicle, Walking --...-.-...... | R. C. Veruol | 74, 176 |
| Vehicles, wheeled, Runuing gear for | W. C. Cook | 74, 802 |
| Velocipede........-..................... | L. Derozier | 74,058 |
| Velocipede | O. T. Gleason | 77, 478 |
| Velocipede. | B. T. Crandall | 79,553 |
| Teloeipede. | G. W., A. E., and F. Hanlon | 79, 654 |
| Velocipedo. | II. A. Reynolds | 80, 425 |
| Velocipedo. | A. Christian | 81, 603 |
| Velocipedo | D. Hunt, jr. | 82, 319 |
| Velucipedo | C. R Bradford | 83, 0:35 |
| Velocipedo | C. N. Cutter | 83, 696 |
| Veloeipede | E. K. W. Blako | 84, 163 |
| Veloeipede. | S. M. Skidmoro | 85, 337 |
| Velocipedo | S. A. Wood | 85, 501 |
| Velocipede for land and wator | W. G. Crossley | 75, 531 |
| Veneer .-.-.-.-.-.-.-. - .-. .-. | J. B. Wilson . | 73, 421 |
| Tencer | II. F. Shephord | 84, 008 |
| Veneer-cutting machino | E. Jewett..... | 78, 453 |
| Teneers, Catting ...... | II. Kassing | 74, 8:30 |
| Teneers, Rovolving stay log for cutting | J. N. Lyman | 84, 637 |
| Ventilating and desiccating devico..... | E. H. Asheroft | 81, 060 |
| Tentilating apparatus ............. | W. Potts .-. . | 78, 894 |
| Ventilation --........ | G. W. Blake | 84, 608 |
| Ventilator | II. B. Worth | 74,655 |
| Tentilator | R. I. Crano. | 76, 717 |
| Ventilator | R. I. Crana | 76, 718 |
| Ventilator | W. O. Cramford | 77, 003 |
| Ventilator | E. L. Roberts. | 79, 395 |
| Ventilator | J. F. Frye. | 80, 719 |
| Ventilator | A. Murfí | 81, 091 |
| Ventilator | W. Holzhäuser | 81,905 |
| Ventilator | J. and J. Peckha | 82, 746 |
| Ventilator and chimuey eowl, Exhausti | J. W. C. Arxlerson | 73,280 |
| Veutilator, Car......... | M. T. Mitchcoek. | 74,534 |
| Ventilator, Car. | D. C. Richardson | 74, 849 |
| Ventilator, Car. | IR. Mitchcoek .-. | 75, 910 |
| Ventilator, car, Automatic | I. Buckingham | 77, 867 |
| Ventilator, car, Railroad. | I. Dripps ..... | 75, 878 |
| Vontilator, ear, Railroad | M. C. Andrews | $78,174$ |
| Ventilator, car, Railroal | R. Heneago .... | 78, 206 |
| Ventilator, car, Railroad Ventilator, ear, Railroad | G. W. R. Bayley and J. Me | 79, 541 |
| Ventilator, ear, Railroad Ventilator, ear, Railroad | M. T. Hitehcock .......... | $\begin{aligned} & 80,411 \\ & 84,004 \end{aligned}$ |
| Ventilator, ear, Railroad | W. M. Russell and D. E. Hol | 81, 297 |
| Ventilators, car, railway, Opening | W. C. Stiekney and J. MeGeo | 85, 143 |
| Ventilator, Car window........... | W. Thompson ...... . . . . . . | 84, 319 |
| Ventilator, Cooking stove | C. and A. Stoddard | 82,173 |
| Ventilator, Hat .-. | W. M. Irvine and A. II. Mose | 81, 784 |
| Ventilator, Hat | W. T. Warburton............. | 84, 323 |
| Tentilator, Heat | G. Deas.. | 77, 007 |
| Ventilator, Millstone. | J. Wetherell | 81, 927 |
| Veutilator, Window | R. H. Long | 81, 184 |
| Ventilator, Window screon | J. R. Wharry | 73, 213 |
| Venting coro................. | G. G. Cressey | 83, 135 |
| Vermifuge. | J. McKinsey | 75, 561 |

## Alphabetical list of inventions-Continueu.



Alphabetical list of inventions-Continued.

| Invention or Discovery. |
| :---: |
| Wagon box |
| Wagon box |
| Wagon, cannon lumber, Regulating |
| Wagon, Car, and other vehicle. |
| Wagon, Clatiug roller for |
| Wagon clip.. |
| Wagon, Draught equalizer for |
| Wagon, Dumping - .-........ |
| Wagon, Dumping. |
| Wagon, Dumping. |
| Waron, Dumping |
| Wagon, Dumping |
| Wagon, Dumping |
| Waron, End rato for. |
| Wason, Express . |
| Wagon, Farm. |
| Wagon, Finm, Three-wheeled. |
| Wagon for loading logs, stone, \&c. |
| Wagon for unloading coal. |
| Wagon, Hopper attacliment for a |
| Wagon, liub, axlo and box |
| Waron liub, l3oring. |
| Wagon linb, Boring. |
| Wagon, King bolt for |
| Wagon lock. |
| Wagou, Lumber |
| Wason pole. |
| Wagon pole support |
| Wagon prosector. |
| Tragons, Remoring boxes from |
| Tagon, Running gear for.. |
| Waron seat.-.. |
| Wagon seat. |
| Wagon, Shaft attacliment to |
| Wagon, Shaft coupling for . |
| Wagon skein. |
| Wagon skein, Roller |
| Wagon, Spriug seat for |
| Wagon stake. |
| Wagon, Tilting. |
| Wagon tomge support |
| Wagon tongnosupport |
| Waron tongue, Werking |
| Wagon top bow |

Waist band for wearing apparel
Waiter machino
Walls, \&c., Composition for kalsomining
Walls, Decorating
Walls of buildings, Construction of
Wall, Subterranean.
Warilrobe, Extension
Wardrobe frame, Extension.
Wardrobe, Portable
Warps, Composition for sizing or dressing
Warp dresser.
Warp dressing machine, Dresser-copper for
Warping clmek
Warping frame
Warping machine, Stop motion for
Wauh bench
Wash bench
Wash board
Washi board.
Wash board.
Wash boarl
Waslr board
Wash bowl
Washer
Washer
Washer, Antifriction
Waslier for lock nut
Washer, Spring, and safety nut
Washing and wringing machine
Washing and wringing machine
Washing and wringing machine
Washing and wringing machine
Washing and wringing machine.
Washing and wringing machine.
Washing buildings, Steam device for. Washing compound
H. W. Persing
T. M. Marcy
J. W. Drew.
T. Stone
J. M. Mayhew
G. S. Zeigenfuss
C. C. Bradley
J. Priest
H. Shirey.
H. Barton
J. Holmes
G. R. and C. II. Sneatl.
W. S. Bullock and H. Hannigan
E. S. Miller
T. W. Porter.
C. Mahan

1. T. Crockett
J. Sutherland
J. H. Wood
F. Gerard
J. W. Pollock.
J. W. Emerson
J. T. Kendall
J. J. Waldron
O. A. Kenyon.
S. D. Carpenter
J. R. Madison and W. Thomas
D. C. Newton.
G. R. K. Smith
S. S. Brewater
C. M. Sexton.
A. Hunt and C. C. Chapman
I. Kinney
I. H. Mulford
C. F. Ravin

II. II. Palmer
A. Fassett
G. R. and C. II. Sneath
N. A. De Long.
J. O. Houck
A. J. Beach
S. C. LaHalt, P. Listeman, and C. Hadley.
Z. Wolfsbrnck
D. F. Myers
N. O. Frank
J. C. Finn
W. Vineland
M. Thode
J. G. Roux
E. Gill.
G. Niermann
F. Joluison
B. Saunders
W. II. Boyden
J. T. Haskins
C. H. Howard
J. Siegrist
F. Diebold
E. M. Stevars
J. H. Beidler
F. E. Marberry
M. McGarry
R. M. Mansur
II. B. Straut
J. Gilbert and P. M. Sofield
T. Shaw
J. A. Way
U. II. Reed, J. Lake, and L. Sisson.
D. Elliott and E. Secly
A. V. B. Orr
G. W. Kintz
M. Leavitt and A. Foster
R. K. Tonlinson
G. P. Fuller
R. K. Tomlinson
E. Bartholomew
C. Niverts
II. K. White

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79, 0.33
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79,882

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| Inven | Name of Patentec. | No. |
| :---: | :---: | :---: |
| Washing maehine | I. Lee | 73, 103 |
| Washing machine | F. M. H | 73, 445 |
| Washing machine | H. Helm | 73, 601 |
| Washing machine | B. F. Stover | 73, 667 |
| Washing machine | E. P. and E. Doty | 73, 701 |
| Washing machine | W. Eber hard | 73, 785 |
| Washing machine | M. V. Jennings | 73, 978 |
| Washing machine | D. Lampson | 73, 982 |
| Washing machine | E. H. Cooel | 74, 052 |
| Washing nachine. | J. Webb | 74, 459 |
| Washing machine | A. B. Clark and C. Dav | 74,592 |
| Washing machine | C. E. Wahlgren | 74, 640 |
| Washing machine | P. F. Bindewald | 74, 790 |
| Washing maehine | I. S. Enos | 74, 902 |
| Washing machine | A. Lamb. | 74, 919 |
| Washing machine. | D. E. Somes | 74, 949 |
| Washing machine | G. Custer. | 75, 129 |
| Washing machine | E. Stair | 75, 592 |
| Washing machino. | J. Cooper | 75, 629 |
| Washing machine | F. W. Heins | 75, 680 |
| Washing machine | W. C. Huntcr | 75, 762 |
| Washing machine. | J. F. Chamber | 75, 859 |
| Washing machine | J. P. Thompson | 76,004 |
| Washing machino. | D. W. Bancroft | 76, 037 |
| Washing machine. | N. T. Edson. | 76,313 |
| Washing machine | L. II. Whitney | 76, 281 |
| Washing machine. | E. Y. Boyce. | 76,393 |
| Washing machine | E. T. Tinch | 76,850 |
| Wasling machine | G. G. Hood and J. D. Kelly | 77, 041 |
| Washing machine | II. J. Case and F. J. Johnson. | 77, 252 |
| Washing machine | J. T. Wheeler | 77, 340 |
| Washing machine | O. W. Stanford and S. S. Scov | 77, 413 |
| Washing machine | N. Trowbridge | 77, 417 |
| Washing machine | D. C. Baker | 77, 861 |
| Washing machine | J. C. Crawford | 78, 067 |
| Washing machine | T. Crane | 78,187 |
| Washing machine | N. Drew | 78, 440 |
| Washing machine | S. V. Hall | 78, 593 |
| Washing machine. | W. M. Doty. | 78, 940 |
| Washing machine. | W. Hachenberg | 79, 068 |
| Washing machine | A. A. Atherton | 79, 095 |
| Washing machine. | E. E. Brewster | 79, 101 |
| Washing machine. | G. H. Kidney | 79, 477 |
| Washing machine | J. Lamb | 79,662 |
| Washing machine. | C. Milner | 80, 000 |
| Washing machine | S. Barker | 80, 114 |
| Washing machine | J. K. Dugdale | 80, 156 |
| Washing machine. | L. M. Lull and P. C. Bowen | 80, 193 |
| Washing machine | J. Phillips, jr .............. | 80, 211 |
| Washing machine. | P. Prentiss | 80, 501 |
| Washing machine. | A. G. Wilkins | 81, 0.0 |
| Washing machine | W. Hoeft | 81, 273 |
| Washing machine. | J. Osterhout | 81, 674 |
| Washing machine. | W. Ross and J. M. Adamsou. | 81, 688 |
| Washing machine. | M. Culler | 82, 386 |
| Washing machino. | J. Ballard. | 82, 584 |
| Washing macbine. | J. Stafford | 82, 722 |
| Washing machine. | C. H. Cramer | 82, 924 |
| Washing machine. | N. M. Shafer. | 82, 999 |
| Washing machine. | R. E. Ferguson | 83, 145 |
| Washing machine. | G. R. Weber. | 83, 230 |
| Washing machine. | C. F. Chambers | 83, 254 |
| Washing machine | G. A. Dabney | 83, 260 |
| Washing machine. | J. Scott. | 83, 325 |
| Washing machine | A. T. Adams | 83, 435 |
| Washing machine. | J. Dare | 83, 473 |
| Washing machino. | E. F. O'Neill. | 83, 535 |
| Washing machine. | D. Estes | 83, 613 |
| Washing machine | W. Cooper | 83, 764 |
| Washing machine | O. Schimmel | 84,005 |
| Washing machine | W. Cornell and T. L. Blakley | 84, 0.50 |
| Washiug machino. | M. S. Harsha | 84, 058 |
| Washing machine | C. F. Tlcmming | 84, 102 |
| Washing machine | W. S. Harrison | 84, 115 |
| Washing machine. | L. H. Hubbard | 84, 491 |
| Washing nuachine. | Le Roy B. Wheeler | 84, 597 |
| Washing machine | A. A. and J. Wilder. | 84, 924 |
| Washing machine | J. Leib. | 85, 315 |
| Washing machine | E. D. Hunt | 85, 447 |
| Wash powder | P. A. La France | 84, 633 |
| Washstand and sick | V. Schreck | 82, 441 |

## Alphabetical list of inventimn-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Washstand and water closet combined | A. J. Broma | 80, 129 |
| Wash, Yellow, for barns and buildings | H. Bachtold and | 81, 975 |
| Watch. | G. A. Boweu | 73, 101 |
| Watch | O. F. Steadman. | 73, 937 |
| Watch | B. D. Bingham | 74, 041 |
| Watch | A. Wadsworth | 74, 457 |
| Watch | C. S. Moseley | 7\%, 078 |
| Watch | C. Springer | 77, 848 |
| Watch | L. V. Piquet | 78, 323 |
| Watch | E. Chatelain | 78, 720 |
| Watch | M. N. Fredericl | 79, 968 |
| Watch | A. J. Harrison | 80, 480 |
| Watch | G. P. Reed. | 81, 107 |
| Watch | P. R. Bennett, | 82,197 |
| Watch | G. W. Reed. . | 83, 729 |
| Watch case | G. J. Willson | 75, 505 |
| Watch case and locket from hard rubber, | W. H. Halsey | 81, 082 |
| Watch, Changeable escapement for..... | G. F. Roskopf | 75, 463 |
| Watch cord, Pocket safe for friction | W. H. Rogers | 83, 097 |
| Watch, Dust cup for . | W. Feunimore | 74, 329 |
| Watch, Dust ring for | E. Howard. | 75, 018 |
| Watch escapement.. | J. and J. W. Hietel and J. | 84, 060 |
| Watches for canes, umbrella handles, | S. B. Simon | 76, 108 |
| Watches, Jeweling ..... | A. C. Crosby | 73, 511 |
| Watch keys and other articles, Recepta | M. Z. Crane. | 83, 695 |
| Wateh protector.. | C. Baumann | 76, 699 |
| Watch regulating adjustme | F. G. Johuson | 81,907 |
| Watch, Rejeweling ... | C. Hopkins | 78, 803 |
| Watch, Safety attachment to | J. Elson. . | 82, 097 |
| Watch, Self-winding | U. H. Rannız | 77, 213 |
| Watch, Spring and duster for a | J. H. Mor'so | 80,989 |
| Watch, Stem-winding.......... | E. Howard.. | 74,090 |
| Watch, Stem-winding and setting | O. P. Rice and J. H. Gerry | 78, 693 |
| Watch, Toy | J. Laubereau | 83, 978 |
| Watch winding click | E. Paulus. | 83, 788 |
| Watch wood, Sharpening | C. P. Carter | 77, 455 |
| Water closet. | W. S. Cooper | 75,375 |
| Water closet. | W. S. Carr. | 76,398 |
| Water closet. | H. H. Craigio | 76, 403 |
| Water closet | G. Comron - | 77, 459 |
| Water closet | W. Sprague | 78,148 |
| Water closet | W. S. Carr. | 74,728 |
| Water closet | W. S. Carr | 80, 708 |
| Water closet | TV. S. Carr | 82,595 |
| Water closet | D. Schilling | 83, 215 |
| Water closet. | H. H. Craigie | 84, 262 |
| Water closet | D. Wellington | 85, 192 |
| Water closet and washstand combined | A. J. Brown . | 80, 129 |
| Water closet, Automatically operated pa | W. A. Butler | 85, 431 |
| Water closet, Automatic supply regruato | G. Couron. | 79, 318 |
| Water closet, Ventilating | T. Hainsworth | 75, 000 |
| Water conductor and lubricator combine | T. A. Shoek. | 73, 262 |
| Water power, Floating. | A. B. Shepard | 78, 488 |
| Water, Purifying . . | M. S. Bringier | 81, 979 |
| Water, Raising.. | H. Schlotter. | 81, 013 |
| Water-wheel gate, Operating | J. H. Bodine and 'I. A. Hi | 78,510 |
| Water with carbonic acid, Charging | K. Grant. | 73, 712 |
| Waxends, Twisting .............. | F. K. Way. | 73, 270 |
| Wearing apparel, shoes, \&c., Fastening | R. Judson and W. P. Lynels | 75, 924 |
| Wearing apparel, Stiffening articles of | J. Sloanı.. | 74, 250 |
| Weather-board gauge ............... | V. E. Stoddal | 83, 337 |
| Weather-board gavge and rest | J. Williams. | 80,691 |
| Weather boarding, Marking .. | J. W. Bailey | 81,579 |
| Weather strip. | W. L. Gilroy | 74, 077 |
| Weather strip. | J. R. Mills | 76, 793 |
| Weather strip | J. Cross | 78, 790 |
| Weather strip | J. E. Sinith and M. H. Dascul | 78,900 |
| Weather strip | J. E. Lindsley ................ | 78, 980 |
| Weather strip | I3. F. Averill. | 79, 625 |
| Weather strip | J. H. 'Ihomas | 79, 876 |
| Weather strip | T. S. Fellows | 80,538 |
| Weather strip | A. C. Brown | 80,591 |
| Weather strip | E. S. Torry | 81, 228 |
| Weather strip | C. Bean... | 85, 422 |
| Weather stip and door alarm combined | G. W. Carpenter | 75, 857 |
| Weavers' cutmarks, Producing | W. G. Perry . | 84, 301 |
| Weeding implement . . . . . . .-. | C. S. Jewelí | 74,371 |
| Weeding machine.. | N. aud C. Carstens | 75, 858 |
| Weeding tool. | N. Weluster. | 76, 011 |
| Weeds and hedge plants, Extracting | J. I. Knjek. | 77, 385 |
| Weeds, stalks, \&c., 'Turning down and bur | S. Colling | 74,667 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery, | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Weights, heavy, Raising. | S. E. Tuttle | 74, 173 |
| Weights, Raising ....... | J. Pickering | 84, 577 |
| Weigher and measure eombined | A. B. Hurd ...... | 82, 842 |
| Weighing apparatus | G. and J. L. Ba | 82,477 80,036 |
| Welding eompound | S. W. Marr and E. McGuire | 72, 962 |
| Well, artesian, Constructing | N. V. Green. | 73, 425 |
| Well borer. | G. W. Bowed | 75, 355 |
| Well boring apparatus. | N. C. Clark | 74, 503 |
| Well boring apparatus. | W. Skiff | 80, 773 |
| Well eurbing . | C. W. Perry | 81,532 76,672 |
| Wells, Curbing, ........... | J. D. Dale ...... | 76, 672 |
| Wells, Diseovering fissure | T. B. Conklin | 77, 171 |
| Well, Drive. | J. S. Armistrong | 83, 901 |
| Well, Drive.. | W. and G. H. Burdett | 85, 428 |
| Well, Side seraper for | E. Beach | 84, 852 |
| Well, Tube .... | R. C. Welch and J. B. Miller | 73, 414 |
| Well, Tube. | S. E. Skilling | 77, 772 |
| Well, Tube . | W. H. White. | 77, 941 |
| Well, Tube . | O. D. Chapman | 77, 957 |
| Well, Tube | A. B. Parsons | 78,689 80,875 |
| Well tube. | I. Lovejoy.... | 81, 801 |
| Well tabe | W. T. Horner | 73, 446 |
| Well tube, Deep | A. Rhoades and J. Adams | 80,504 |
| Wheat, Debrauning | J. G. Moxey | 82, 238 |
| Wheel | H. Poth | 78,480 |
| Wheel and axle, Car | J. Montgomery | 78, 467 |
| Wheel and axle for railroa | T. C. Hargrave | 81, 083 |
| Wheelbarrow | F. Parkerson | 78, 7603 |
| Wheelbarrow | E. B. Marshall | 83, 189 |
| Wheel bender, Fifth | G. W. Heekart. | 18, 902 |
| Wheel, Bending fifth | W. Morgey | 79, 677 |
| Wheel, Bushing for | T. Blake... | 82, 790 |
| Wheel, Car | J. Raddin. | 74, 939 |
| Wheel, Car | G. Doek Chapman | -75,521 |
| Wheel, Car | J. Raddin..... | 76, 811 |
| Wheel, Car | E. Stiles .- | 76, 844 |
| Wheel, Car | W. R. Thomas | 79, 029 |
| Wheel, Car | C. T. Harvey | 79, 757 |
| Wheel, Car | W. Wilmington. | 80, 323 |
| Wheel, Car | A. Atwood..... | 80, 380 |
| Wheel, Car | W. Wimington | 82, 466 |
| Wheel, Car | W. H. Noble | 82, 722 |
| Wheel, Car | W. | 82, 086 |
| Wheel, Car, and frog. ${ }^{\text {Whel }}$ | W. J. Cochran | 83, 603 |
| Wheel, car, Annealing | G. G. Gobdell. | 79, 842 |
| Wheel, ear, Chill for casting | W. Wilmington. | 85, 046 |
| Wheel, ear, Lnbricating .... | W. W. Martin. | 73, 621 |
| Wheel, ear, Metal for and mode | W. G. Hamilton | 85, 089 |
| Wheel, Carriage | W. F. Morton. |  |
| Wheel, Carriage | J. C. Sparks | 75, 213 |
| Wheel, Carriage | L. Adams.. | 76, 033 |
| Wheel, Carriage | S. Toomey | 77, 680 |
| Wheel, Carriage | A. B. Smith.. | 78, 143 |
| Wheel, Carriage | J. and T. Nevis | 79, 495 |
| Wheel, Carriage | G. Clark | 81, 8141 |
| Wheel, Carriage | G. Kenney | 81, 175 |
| Wheel, Carriage | S. W. H. Ward | 85, 259 |
| Wheel, Carriage | J. T. Shimer | 81, 545 |
| Wheel, Carriage | W. H. De Valin | 81, 758 |
| Wheel, Carriage | J. B. Jones | 82, 530 |
| Wheel, Carriage ........... | J. G. Buzzell | 82, 7590 |
| Wheel, earriage, Securing the ends spokes in. <br> wheel Cast iron | J. Switzer | 75,314 79,611 |
| Wheel, Cast iron.......... | J. B. Tarr... | 83, 469 |
| Wheel, Cog, for gearing....... |  | 83, 083 |
| Wheel, Combined hab and box | A. H. Smith | 79, 403 |
| Wheel, Cutting teeth of a | E. Roberts. | 78, 896 |
| Wheel, fifth, Forming. | G. Feightner. | 76, 899 |
| Wheel for animal eage | G. R. Peckham | 81, 678 |
| Wheel for locomotive, Driving | J. Birkenhea | 80, 305 |
| Wheel gear, Molding. | W. Rowell |  |
| Wheel gear, Teeth fur | J. Letsk |  |

## Alphabetical list of inventions-Continued.



Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Wheel, water, Casing for. | J. D. Bryson | 82, 486 |
| Wheel, water, Curb for. | P. H. Wait................ | 81, 439 |
| Wheel, water, Curb for | J. B. Dryson and J. | 81,474 79,870 |
| Wheel, water, Regulator for | T. D. Snow | 79, 870 |
| Wheel, water, Scroll for. | T. Rose . | 79, 804 |
| Wheel, water, Scroll for | J. Hidden | 74, 687 |
| Wheel, Wind. | E. J. Hall | 75, 752 |
| Wheel, Wind | J. T. Braum.. | 78, 921 |
| Wheel, Wind | B. H. Goodale | 82, 307 |
| Wheel, Wind | C. P. Chapman | 83, 928 |
| Wheel, Wind | R. Waite. | 84, 237 |
| Whiffle tree.. | D. Austin | 74,273 74,287 |
| Whiffle tree. | D. W. Winkley | 74, 761 |
| Whifl | II. Webster | 78, 034 |
| Whiffle tree | J. W. Kelley | 80, 551 |
| Whiffle tree, Attaching trace | S. Smith | 75, 803 |
| Whiffle tree attachment. | I. Massey. | 85, 462 |
| Whiffle tree, Equalizing | II. W. Austin | 82, 785 |
| Whiffle tree evenor | F. N. Corbin | 78,064 |
| Whiffle tree plato ... | J. B. Clark | 83, 234 |
| Whiffe tree plate and king bo | M. Adams ..... | 82, 233 |
| Whiffo tree swivel. | T. R. Markellie | 78, 461 |
| Whiffle tree, Tight | D. A. Underhill | 74, 274 |
| Whip.... | J. S. Cook | 73, 165 |
| Whip | J. R. Gillett | 77, 477 |
| Whip. | D. Avery. | 79, 299 |
| Whip, Carriage and riding | R. V. Salada an | 79, 691 |
| Whip, Covering..... | A. C. Ran | 81, 507 |
| Whip handle | I. Hull | 82, 840 |
| Whip hanger | P. F. Cooley. | 81, 754 |
| Whip holder | A. Worden. | 77, 233 |
| Whip holder | A. C. Rand ... | 79, 776 |
| Whip holder | A. W. Johnson | 81, 786 |
| Whip lashes, Braiding | P. L. Slayton | 85, 032 |
| Whips, Repairiag | C. Christain | 80, 359 |
| Whip soeket | L. J. Parsons | 81, 675 |
| Whip soeket | L. J. Parsons | 83, 203 |
| Whip socket | J. Julien | 83, 287 |
| Whip socket, Attaching | J. W. Kelley |  |
| Whip socket, Fastening for | B. N. Shelley |  |
| Whip tip. | C. R. Shelton.-......elil E. H. Child- | 74,435 79,926 |
| Whisky, Manufacture of | H. Vaughn, T. Chadwell, E. H. Childress, and G. A. Webber. |  |
| Whistle | P., J., and F. Slevin | 77, 328 |
| Whistle, Air | C. H. Parshall |  |
| Whistle, Steam | B. Weinmann. |  |
| Whiting and Paris white, | W. W. Schastau.. |  |
| Wick, Lamp .- | W. A. Greuseh | 81, 359 |
| Wiek, Lamp .... | E. J. Toof | 75, 318 |
| Willow and cane stripper | A. F. Ward and J. II Bean | 84, 324 |
| Windlass ................ | L. L. Treman. | 73, 059 |
| Windlass | W. G. Mc |  |
| Windlass | G. L. Woods | -9, 885 |
| Windlass | G. L. Brown | 81, 470 |
| Windlass | A. Day . | 82, 295 |
| Windlass ................. |  | 84, 434 |
| Windlass and horse power -...-. | E. and B. Hol | 81, 274 |
| Windlass power, for making easks ... |  | 74, 399 |
| Window and door blind, and awning. | J. Parkin and J. H . Smith. | 83, 200 |
| Window and door caps, Moulding sheet | S. W. Gear ................ | 78, 251 |
| Window and shatter fastenin | W. L. Barnes. | 80, 266 |
| Window blind slat holder | J. Boyd | 84, 530 |
| Window eross bar or sheet iron, Hollow | T. A. Cambarsy | 82, 919 |
| Window eurtain fixture. | G. L. Miller. | 77, 338 |
| Window frame. | O. E. H. Sturcken ir Mer |  |
| Window frame |  | 85, 394 |
| Window frame. | J. M. Wharry. | 75, 612 |
| Window netting |  | 78, 844 |
| Window, Raising and lowering | E. H. Lobey | 77, 603 |
| Window safety guard |  | 75, 556 |
| Window sash | H. Gros | 81, 493 |
| Window sash fram | O. R. Hight | 83, 632 |

## Alphabetical list of inventions-Continued.

| Inrcation or Discovery. | Name of Patentec | N |
| :--- | :--- | :--- |

## Window sash frame

Window sash fastener
Window sash fastcner
Window sash fastencr
Window sash, Harging
Window sash, Hanging
Window sash holder
Window sash lock
Window sash, Opcrating
Window sash, Raising and lowering
Window sash stop
Window sash stop
Window sash stop
Window sash supporter
Window scrcens, Frame for
Window scrubber
Window shade
Window shade
Window shade
Window shade, Embossing
Window shade fixture.
Window shade fixture
Window shadc fixturo
Window shutter
Window shutter
Window shutter
Window shutter
Window shutter holder
Window shutter, Iron.
Window shuttcr, Operating.
Window strip attachment.
Window, Store.
Winc, Artificial
Wirc eloth
Wirc cloth, Painting
Wirc cloth, Printing figures on
Wire, Rcducing and pointins
Wirc, telegraph, Stretching
Womb supporter
Wood and coal dumping apparatus
Wood and paper, Combination of
Wood, Articles mado of moulded
Wood, Bcuding
Wood, Bending
Wood, Bending
Woorl, Beading
Wood, Bending
Wood, Bending
Wood, Bending
Wood bending machine
Wood beading machino
Wood bending machine
Wood bending machine
Wood bending machine
Wood, Boring.
Wood boring machine
Wood boring machine
Wood boring machine.
Wood boring machine.
Wood, Carving.
Wood, Carving
Wood, Carving in
Wood cleaver
Wood, Composition for filling the porcs of, for varnish ing
Wood, Composition for stuffing and filling
Wood, Compound for preserving
Wood, Cutting and splitting
Wood, Distilling
Wood, dye, Cutting
Woorl, dyc, Cutting and scparating
Wood for covering walls, \&e., Trcating
Wood, Forming raised ornaments on
Woorl, kindling, Bundling
Wood, kindling, Bundling
Wood, kindling, Bundling
Wood, kindling, Splitting
Wood, metal, canvas, \&c., Preserving
Wood of coffins, Preserving
Wood, pine, Distilling

I. Pierson . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
O. S. Garrcttson.................................. 78,274
C. H. Palmer .................................... 74,413
1.
W. H. Betts
F. Baumgartner...................................
J. D. Cramcr . . . . . . . . . . . . . . . . . . . . . . . . . .
A. R. Dyett 74, 324
76,582
19, 835
, 20
80, 330
75, 037
75, 152
75, 974
,
-7,
82, 442
82, 031
83, 053
4, 913
76, 170
84,124
-9,
82, 904
74,946
, 019
84,520
84, 521
3, 109
84,128
85, 101
-1, 11
13, 003
78, 983

1, 095
81,365
$83,0 \% 8$
73,493
73, 496
74, 688
79, 489
79, 640
-5, 813
75,891
-8, 910
81, 「ஜ2
75, 413
78,613

82,25
85,009
78, 743
73, 647
74,056
75, 358
74, $40^{7}$
74,63
81,123
73, 246
77,636

Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Wood planing machine. | J. J. Russ | 75, 984 |
| Wood planing machine. | O. P. Turman | 76, 740 |
| Wood, Polishing Wood, Polishing | G. F. Hammer | 76, 785 |
| Wood, Polishing | J. S. Loomis | 78,215 |
| Wood, Polishing | S. Hagaman | 81, 774 |
| Wood, Preserving | J. Calkins... | 78,514 |
| Wood, Preserving | C. M. Crosson | 79, 554 |
| Wood, Preserving ${ }^{\text {Wood, }}$ | E. L. Cowling | 84, 733 |
| Wood, Purifying, seasoning, and preser | T. W. Hensemann | 76,757 |
| Wood sawhorse........................ | W. Tripp .... | 79, 614 |
| Wood, Seasoning and preserving | S. Beer. | 73, 565 |
| Wood splitting machine. | L. Tilton.... | 80, 241 |
| Wood, Tamping and blasting machine f | E. W. Walton | 73, 555 |
| Wood to paper pulp, Reducing. | H. Max | 84, 640 |
| Wood, Treating. | E. Spaulding -...- ${ }^{\text {S }}$ - ${ }^{\text {S }}$ | 77, 777 |
| Wooden rod, Connection for | A. Good, jr., and S. Strouse | 81,270 75,980 |
| Wool, \&c., Cleaning | I. S. Robbins | $\begin{aligned} & 75,980 \\ & 83,976 \end{aligned}$ |
| W ool, Bundling Wool, Burring | J. T. La Richols | 83, 976 |
| Wool, Burring | I. Primbach | 77, 249 |
| Wool, Compound for destroying burrs in | W. H. Jubb | 73, 980 |
| Wool, cotton, \&c., Preparing. | A. J. Dern | 77, 011 |
| Wool, Oiling . | M. Mayall | 73, 909 |
| Wool, Oiling | T. A. Campbell.-.. | 74, 300 |
| Wool, Picking. . | W. Wardsworth and E. H. Se | 84, 236 |
| Wool, Pressing, packing, and weighiag | A. W. Fox ......... | 82, 103 |
| Wool, Removing burrs and other vegetabl | J. W. Boynton and J. A. McG | 72, 966 |
| Woolen and silk goods, Treating | G. Warren. | 77, 138 |
| Worm for gears .-.... | D. Harrigan and J. Whitney | 73, 093 |
| Wort and similar liquids, Extracting | F. Jacoby | 81,785 |
| Wrench. | H. S. Wrightson | 73, 561 |
| Wrench. | T. Pratt. | 74, 245 |
| Wrench. | H. S. Ross | 75, 199 |
| Wrench. | J. J. Ellis | 75, 399 |
| Wrench. | A. S. Petrie | 76, 519 |
| Wrench. | E.P. Smead | 76, 536 |
| Wrench | I. Morse | 77, 076 |
| Wrench. | T. A. Searle | 77, 107 |
| Wrench. | J. B. Barnes. | 78, 176 |
| Wrench. | D. W. Colburn | 78, 861 |
| Wrench. | W. Bradshaw and C. Lyon | 79, 306 |
| Wrench. | J. Madden | 79, 665 |
| Wrench. | G. C. Taft | 80, 237 |
| Wrench. | E. W. Quincy | 82, 033 |
| Wrench. | L. Chapman. | 82, 085 |
| Wrench. | J. Goodwin | 82, 513 |
| Wrench. | E. J. Leybura | 82, 962 |
| Wrench. | E. P. Russell | 82, 994 |
| Wrench. | E. T. Ford | 83, 618 |
| Wrench. | F. I. Oliver | 83, 654 |
| Wrench. | A. C. Greth | 84, 111 |
| Wrench. | W. S. Smoot | 84, 142 |
| Wrench. | W. Baxter | 84, 605 |
| Wrench. | H. E. Anthony | 85, 049 |
| Wrench. | J. Burt. | 85, 276 |
| Wrench and screw-driver | E. J. Arnor | 81, 970 |
| Wrench, Carriage-wheel | I. B. Fisk. | 76, 900 |
| Wrench, Hose coupling | A. F. Allen | 76, 579 |
| Wrench, Pipe. | N. F. Loi. | 78, 299 |
| Wrench, Pipe | P. H. Lecky | 79, 361 |
| Wrench, Socket | J. M. Seymour | 74, 156 |
| Wrench, Supplemental jaw for | R. Faries. | 79, 219 |
| Wringer ....................... | A. M. Bailey | 79, 09 ¢ |
| Wringer and mop combined | J. A. Wright | 79, 428 |
| Wringer and mop-head. | C. Gullman | 81, 272 |
| Wringer, Clothes | W. Q. Douglass | 73, 584 |
| Wringer, Clothes | E. H. Covel | 74, 201 |
| Wringer, Clothes | II. E. Smith | 75, 065 |
| Wringer, Clothes | G. L. Witsil | 75.231 |
| Wringer, Clothes | R. B. Hugunin | 75.425 |
| Wringer, Clothes | W. Mont Storm | 75, 707 |
| Wringer, Clothes | B. Read. | 76, 659 |
| Wringer, Clothes | M. Pierce | 77, 315 |
| Wringer, Clothes | A. F. Lapham | 77, 3Е6 |
| Wriuger, Clothes | P. Cramer. | ع0, 2336 |
| Wringer, Clothes | J. Webb | 82, 29 |
| Wringer, Clothes and mop | E. Youngs | ع0, 794 |
| Wringer, Mop. | J.II. Mears | 74, 400 |
| Wringer, Mop. | J. II. Gridley | T5, 679 |

## Alphabetical list of inventions-Continued.



## EXTENSIONS



## Alphabetical list of extensions-Continued.

| Invention or Discovery. |
| :---: |
| Caoutchouc compounds, Vulcanizing |
| Carding machine. |
| Carding machine, Cleaning top cards of |
| Carding machine, Stripping top plate for |
| Carding machine, Stripping top plates in |
| Card teeth, Sticking. |
| Car, Railroad. |
| Car, Replacing, upon railroad tracks |
| Car seats, railroad, Converting, into beds |
| Cartridge |
| Clamp, Spring, for clothes lines |
| Clapboard joints |
| Clock, Alarm... |
| Clock, Calendar |
| Clock-case front |
| Cloth, Tentering |
| Coffee, Hulling and scouring |
| Corn sheller. |
| Crommets, Metallic |
| Cultivator |
| Cultivators |
| Cutters, Straw |
| Cutters, Straw |
| Cutters, straw, Feed-rolle |
| Cylinder, Cotton-picker ............... |

## D.

Dagnerreotype cases
Derrick

## E.

Earth, Excavating
Engine, Air
Eyelet machine
Eyelet machine

## F.

Feathers and hair from insects, Cleansing
Fire-arms
Fork, Hay-elevating.
Furnace, Air-heating
Furnace, Glass
Furnace or heat generator and radiator

Generators, Divided tubular
Governor, Windmill
Grate-bars
Guide for sewing or binding
H.

Hair and feathers from insects, Cleansing
Hammer, Machine
Hammer, steam, Vaive arrangement for
Hammer, 'Trip
Harvester
Harvester, Clover and grass seed, No. 1
Harvester, Clover and grass seed, No. 2
Harvester, Clover and grass sced, No. 3
Harvester, Grain
Harvester, Grain and grass.. (Reissued in six div., Nos. 721-726.)
Heddles, Metallic
Heddles, Weavers'
Hinge.
Hinge for inkstand covers
Hinge, Shutter
Hinge, shutter, Self-fastening
Horse power
Hot-water apparatus
Houses, Warming, by steam
Hydrocarbon vapor with air, Combining
L. O. P. Meyer
H. N. Gambrin
W. B. Bates
W. M. Bates
G. W. Coats and J. Russell
B. J. La Moth.
L. B. Flanders
H. B. Myer
II. Smith and D. B. Wesson
D. M. Smith
W. Baker..
J. S. Turner
W. II. Akins and J. C. Burritt
E. Ingraham
W. Shaw and P.G.Green
R. P. Walker
T. D. Burrall. (Original number, 4,300
private number, 102.)
T. Alexander
D. W. Shares
G. Lightenthaler
W. Gale
W. Gale
R. Sinclair. jr., and R. F. Maynard
J. Pitts
E. Mascher
J. B. Holmes.
J. Taggart
P. Shaw
H. L. Lipman
H. L. Lipman
W. Wisdom
H. Smith and D. B. Wesson
T. T. Jarrett
C. R. Havey
F. G. Schaum
G. Chilson
F. Latta
D. Halladay
S. Van Sycke
W. H. Sweet
W. Wisdom
D. Noyes
J. Watts.
B. Hughes....
T. A. Steadman
T. A. Steadman
T. A. Steadman
A. Palmer
P. Sylla and A. Adams
J. Senneff
J. Senneff
E. Brown
J. Nock
H. Lull
A. Nicholson
J. Brayley and M. Pitts
J. Brown.
S. J. Gold
O. P. Drake
C. Swan

## Alphabetical list of extensions-Continued.



## Alphabetical list of extensions-Continued.

| Invention or Discovery. | Name of Patenteo. | No. |
| :---: | :---: | :---: |
| Spoke machines, Holding pieces in | M. Starks | 11, 084 |
| Spring, Combined india-rubber and stcel | E. T. Russell | 10, 280 |
| Square, carpenters', Figuring | N. Millington, S. M. George, A. B. Gardmer, and L. J. Mattison. | 10, 136 |
| Square, carpenters', Graduating | N. Millington, L. J. Mattison, S. M., and D. J. Gcorge. | 11, 489 |
| Steel direct from the ore, Making | G. II. Smith | 11, 338 |
| Stone and marble, Sawing | A. H. Tinglcy | 11, 347 |
| Stove plate .................................... (Design).. | C. J. Wilson | 1, 349 |
| Syringe, Enema.......................................... | M. Mattison | 10,742 |
| T. |  |  |
| Tecth, artificial, Plates for | M. Loomis. | 10, 847 |
| Trough, caves, Suspending | C. D. Woodruff | 10,606 |
| Trunk-lock hasp ...................................... | C. Liebrich | 10, 862 |
| Tube, wrought-iron, Heating skelp for the manufacture of. | J. McCarty | 10, 747 |
| Turning or cutting irregular forms | N. Gear. | 10, 204 |
| Turn-key | M. Jenks | 10,312 |
| Type, Machinery for composing | W. H. Mitchell | 10, 929 |
| $\nabla$. |  |  |
| Valve cocks, Governing the action of.-(Nos. 1 and 2) .- | F. M. Bartholomew | 11, 113 |
| Valve, cut-off, of steam engines, Operating | W. Wright | 10, 398 |
| Valve, safety, of locomotive engine, Constructing | H. Waterman | 10, 243 |
| Veneers, Catting......... | C. Hart -.. | 10, 739 |
| Vessel for holding liquids | J. M. Colburn | 11, 819 |
| Vise, Cast-iron.... | C. Parker. | 11, 137 |
| W. |  |  |
| Washer for securing wheels to axles, Safety .......... | W. Thornley | 11, 705 |

DESIGNS.

| A. |  |  |
| :---: | :---: | :---: |
| Advertising panel.. | G. Fay. | 3,157 |
| Axle box for railway carriages | J. Corrigan | 3, 266 |
| B. |  |  |
| Badgo. | E. Moore | 3, 078 |
| Badge. | N. P. Chipman and W. T. Collins | 3, $20 \varepsilon$ |
| Badge, Good Tomplar | W. H. Wilson. | 2,904 |
| Base and figure | C. Müller | 2,944 |
| Base or stand. | N. Müller | 2, 920 |
| Basket, Card. | G. L. Underwood | 3, 094 |
| Boll, Sleigh . | E. G. Cone. | 3, 160 |
| Bottle.. | L. Lacour. | 2,915 |
| Bottle. | T. Stearns | 2,920 |
| Bottle. | F. Stearns | 2, 928 |
| Bottle. | M. Jackson | $\stackrel{2}{2}, 90$ |
| Bottle | A. Legrand Arne | 3, 077 |
| Bottle. | J. Hart ......... | 3, 100 |
| Bottle. | M. B. Powell and C. W. Stutenroth | 3, 141 |
| Bottle, Glass | N. N. Brown... | 2, 930 |
| Bottle, Glass. | J. B. Bartless | 3, 213 |
| Bottle, Perfumo | H. Whitney | 3, 066 |
| Bottle, Toilet | H. Whitney.. | 3, 067 |
| Box, Match | W. H. Savournin | 3, 016 |
| Box, Snuff. | F. C. Smith | 3, 171 |
| Box, Tobacco | G. M. Ball ...... | $\stackrel{3}{2} 2.7$ |
| Bracket. | IF. W. Brocksieper | 3, 020 |
| Bracket. | I. W. Brocksicper | 3, 021 |
| Bracket. | F. W. Brocksieper | 3 3, $\mathbf{x} \times 2$ |
| Bracket. | F. W. Brocksieper | 3, $1: 3$ |
| Bracket. | F. W. Brocksicper | 3, 024 |
| Bracket. | F. W. Brocksieper | 3, 0:5 |
| Bracket. | F. W. Brocksieper | 3, 0:26 |
| Bracket. | F. W. Brocksieper | 3, 027 |
| Bracket. | F. W. Brocksieper | 3, 028 |
| Bracket. | F. W. Brocksicper | 3,029 |
| Bracket. | F. W. Brocksieper | 3, 030 |
| Bracket. | F. W. Brocksieper | 3, 031 |
| Bracket | F. W. Brocksieper | 3, 03 2 |


| Invention or Diseovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Braid, bonnet, Imitat | S. A. Blake | 3,019 |
| Braic, bonnet, Imitation | S. A. Blake | 3, 097 |
| Bridle frout, de | C. Fraser |  |
| Brush, horse, On | J. A. Bradley and F. N. Smith | 3,002 |
| Burial easket | W. G. Algoo .. |  |
| Burial casket | J. M. Hall | 3,063 |
| Burner, Vapor. | P. Baumgrass | 3,229 |
| Bust of F. Douglass | D. Morgan. | 3,151 |
| c. |  |  |
| Can, Oil. | C. J. Hauk | 2, 862 |
| Car basket. | W. G. Creamer |  |
| Cardect | F. W. Broeksiepe |  |
| Carpet or floor oil eloth pattern | C. T. Meyer | - ${ }_{2}^{2,917}$ |
| Carpet pattern. | L. G. Malkin. | $\stackrel{\text { 2, }}{264}$ |
| Carpet pattern. | L. G. Malki |  |
| Carpet pattern | H. G. Thompson | 2,871 |
| Carpet pattern- | H. G. Thompson | ${ }_{2}^{2,872}$ |
| Carpet pattern | H. G. Thompson | 2, 874 |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern | II. G. Thompson |  |
| Carpet pattern | II. G. Thompson | 2,880 |
| Carpet pattern | H. G. Thompson | 2, 881 |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern | II. G. Thompson |  |
| Carpet pattern | II. G. Thompson | 2, 884 |
| Carpet pattern | H. G. Thompson | - ${ }^{2}$, 885 |
| Carpet pattern. | II. G. Thompson |  |
| Carpet pattern | H. G. Thompson | 2,888 |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern Carpet pattern | H. G. Thompson | 2,891 |
| Carpet pattern | II. G. Thompson |  |
| Carpet pattern | II. G. Thompson |  |
| Carpet pattern. | H. G. Thompson | 2, 895 |
| Carpet pattern | II. G. Thompson | 2, 896 |
| Carpet pattern | H. G. Thompson | 2,897 |
| Carpet pattern | H. G. Thompson |  |
| Carpet patte | II. G. Thompson | 2, 899 |
| Carpet pattern. | H. G. Thompson |  |
| Carpet pattern | H. G. Thompso |  |
| Carjet pattern | H. G. Thompson |  |
| Carpet patteru. | H. G. Thompson |  |
| Carpet pattern | II. G. Thompson |  |
| Carpet pattern. | II. G. Thompson | 3,172 |
| Carpet pattern | II G. Thompson |  |
| Carpet pattern. | H. G. Thom |  |
| Carpet pattern | II. G. Thomps |  |
| Carpet pattern | H. G. Thompson . |  |
| Carpet pattern. | II. G. Thompson . | 3,177 |
| Carpet pattern. | II. G. Thompson |  |
| Carpet pattern. | H. G. Thompson | 3,179 |
| Carpet pattern | H. G. Thompson |  |
| Carpet pattern. | H. G. Thompson | 3,181 |
| Carpet pattern. | H. G. Thompson. | 3,182 |
| Carpet pattern. | II. G. Thompson |  |
| Carpet pattern. | 1. Christio..... |  |
| arpet pat | 1. Foster.. | - ${ }^{3,201}$ |
| Carpet pattern | I. Foster . |  |
| Carpet pattern. | I. Foster |  |
| Carpet patter | I. Foster |  |
| Carpet pattern | I. Foster, | 3,268 |
| arpet pattern. | B. Crabtree, jr |  |
| arpet pattern. | B. Crabtree, jr | 3,145 |
| Carpet pattern. | B. Crabtree, jr |  |
| 隹 | B. Crabtree |  |
| Carpot pattern. | L. G. Malkin.. |  |
| Carpet patter | B. Crabtreo. | 344 |
| Carpet pattern......... | J. Allinson | 3, 143 |

## Alphabetical list of inventions-Continued.

| Invention or Discovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Carpet pattern. | R. R. Campbcll. | 3,10 |
| Carpet pattern. | E. J. Ney ....... | 3, 27 |
| Carpet pattern. | E. J. Ney | 3, 27 |
| Carpet pattern. | E. J. Ney | 3, 28 |
| Carpet pattern. | I. J. Ney | 3, 28 |
| Carpet pattcrn. | E. J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3,28 |
| Carpet pattern. | E. J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3,28 |
| Carpet pattern. | E.J. Ney | 3, 28 |
| Carpet pattern. | E. J. Ney | 3, 29 |
| Carpet pattern. | E.J. Ney | 3, 29 |
| Carpet pattern. | E. J. Ney | 2, 92 |
| Carpet pattern. | E. J. Ney | 2,92 |
| Carpet pattern. | E. J. Ney | 2, 92 |
| Carpet pattern. | E. J. Ney | 2,92 |
| Carpet pattern. | E. J. Ney | 2,92 |
| Carpet pattern. | E.J. Ney | 3,11 |
| Carpet pattern. | E.J. Ney | 3, 12 |
| Carpet pattern. | E.J. Ney | 3,12 |
| Carpet pattern. | E. J. Ney | 3,12 |
| Carpet pattern. | E. J. Ney | 3,12 |
| Center-piece | H. Berger | 3, 06 |
| Center-picee | H. Berger. | 3, 09 |
| Centcr-picce | H. Berger | 3, 09 |
| Chair | L. Heywrod | 2,85 |
| Chair seat bow | H. C. Knowlton | 3,263 |
| Churn body. | A. D. Smith. | 3, 01 |
| Clock case | C. Müller | 2, 94 |
| Clock case | N. Pomeroy. | 3, 00 |
| Clock case | G. B. Owen | 3, 04 |
| Clock case | G. B. Owen | 3, 06 |
| Clock case | P. Converse. | 3, 09 |
| Clock case | N. Müller. | 3, 13 |
| Clock case | S. C. Spring. | 3, 21 |
| Clock case. | K. Müller. | 3,212 |
| Clock case | G. B. Owen | 3,22 |
| Clock case | P. Converse. | 3,238 |
| Clock case | C. Müller | 3,24. |
| Clock case | S. C. Spring. | 3,25: |
| Clock case | N. Müller. | 3, 27 |
| Clock case front. | I. Ingraham | 2,969 |
| Clock case front. | C. Mûller | 2,976 |
| Clock case front. | C. B. Owen. | 2, 973 |
| Clock case front. | G. B. Owen | 2,978 |
| Clock case sash | E. N. Welch | 2, 959 |
| Clock front. | A. Wilder and C. W. Stout | 2, 940 |
| Clock front | I. Ingraham | 2,968 |
| Coffee urn | G. Jones . | 3, 076 |
| Coffin | W. G. Algeo | 2, 860 |
| Coffin handle | C. L. I. Nieberg | 3, 047 |
| Collars and cuffs, Ladies | R. McDonald | 3, 247 |
| Collars, Shirt. | C. K. Brown | 3, 115 |
| Collars, Shirt. | R. S. Jenuings | 3,133 |
| Corset | L. L. Chapman. | 3, 180 |
| Cuffs and collars, Ladies' | R. McDonald | 3,247 |
| Cuffs, Shirt | R. S. Jennings | 3,134 |
| Cuspador | J. P. Connolly | 2,942 |
| Cuspador | S. and J. Roebuck | 3, 25 |
| D. |  |  |
| Desk and seat, school, Frame of a | H. M. Sherwood | 3, 057 |
| Desk, School | W. P. Uhlinger | 3, 297 |
| Desk, school, standards of a | C. W. Sherwood | 3, 262 |
| Disk, Scale. | J. W. Kissam. | 3, 246 |
| Drawer pull. | J. E. Parkor . | 3, 140 |
| E. |  |  |
| Emblem, Army and navy | P. Reynolds. | 3, 103 |
| Envelope, Scroll to be applied to | M. S. Chapman ............ | 3, 082 |
| F. |  |  |
| Fabric, Knitted. | J. P. Delahenty. | 3, 062 |
| Fabric, Knitted | T. Dolan .... | 3, 132 |
| Fabric, Pattern for knitted. | J. D. McKee | 3, 191 |

## Alphabetical list of designs-Continued.



Alphabetical list of designs-Continued.


## Alphabetical list of designs-Continued.

|  |  |  |
| :---: | :---: | :---: |
| Scarf ring <br> Scarf ring, Medallion <br> Scarf ring. Medallion <br> Screen <br> Seat and desk, school, Trame of a <br> Sewing maclinc frame <br> Shorel and tongs stand. <br> Show caso <br> Show-case frame <br> Skate rumuer <br> Skirt, Hoop. <br> Skirt, Lower portion of a gored <br> Sleigh, Exterior of the body of a <br> Spouge cup, pen rack, and inkstand <br> Spoon and fork handle <br> Spoon and fork haudle <br> Spoon handle <br> Spoon or fork handle <br> Spoon or fork handle <br> Spoon or fork handle <br> Spoon or fork handle <br> Spoou or fork handle <br> Spoon or fork handle Spoon or fork handle <br> Spoon or fork liandle <br> Spoon or fork handle <br> Spoon or tork handle <br> Spoon or fork handle <br> Spoon or fork handle, called "Bridal <br> Stake to mark graves <br> Stand or basc <br> Stand, Shorel and tongs <br> Statuary, Group of <br> Statuette <br> Statuette of W. E. Channing. <br> Stocking fabric pattern <br> Stocking fabric pattern Stocking fabric pattern <br> Store <br> Store <br> Store <br> Store <br> Stere <br> Stove <br> Store <br> Store Store <br> Stove, Base of a <br> Store, Box <br> Store, Cooking <br> Store, Cook's <br> Stove, Cook's <br> Store, Cook's <br> Store, Conk's <br> Store, Cook's <br> Store, Cook's <br> Store, Coolis <br> Store Coore, <br> Stove, Coolis <br> Store, cook's, Door and leg of a <br> Stove, cook's, Door of a <br> Stove, coonl's, Door of a <br> Store, cool's, Plates of a <br> Stove, cooks, Plates of a Stove, cook <br> Stove, cook's, Plates of 2 <br> Stove door <br> Stove door <br> Stove door <br> Stove, Fire cylinder cap for <br> Stove, hop, Inbricating ring for <br> Stove, Leg and door of a <br> Store, Ornaments of a.. | R. S. Jenuings <br> R. S. Jennings <br> C. N. Jombars <br> II. M. Sherwood <br> II. J. Hancock <br> C. Zeuner <br> J. H. Frazer <br> A. C. Tallman <br> C. S. Chaffee and C. U. Vaudercook <br> T. Dolan. <br> C. P. Kimball <br> T. S. Hudson <br> II. H. Hayden <br> II. II. Mayden <br> 13. D. Deidcrhaso. <br> L. S. White. <br> G. Wilkinson <br> G. Wilkinson <br> G. Wilkinson <br> G. Wilkinson <br> G. Wilkinson <br> G. Wilkinson <br> A. Conradt. <br> A. Conradt.. <br> C. F. Richers <br> II. G. Reed. <br> G. Wilkinson <br> G. Arnd <br> N. Müller <br> C. Zouner <br> J. Rogers <br> T. R. Gould <br> T. Dolan <br> T. Dolan <br> W. Hailcs <br> F. Leibrandt and W. L. McDowell <br> I. J. Baxter <br> IV. N. Moore <br> W. Hailes. <br> V. Hailes <br> W. Hailes <br> C. Harris and P . W. Zoiner <br> T. J. Modgkins. <br> A. Snyder <br> J. Martino, J. Beesley, and J. Currio <br> J. Martino, J. Beesley, and J. Currio. <br> G. Smith and H. Brown. <br> G. Smith and II. Brown...-. <br> J. Steffe <br> J. G. Anderson <br> J. A. Mitchell <br> W. C. Daris <br> W. C. Davis <br> C. S. Lord and W. N. Walker <br> J. Martino, J. Boesloy, and J. Curric <br> C. J. Woolson <br> D. S. Colby and IR. Scorer <br> G. Smith and II. Brown <br> J. D. Flausburgh <br> J. R. Tose and E. L. Calcly <br> D. S. Colby and M . Scorer <br> T. Walker <br> J. R. Rose and E. L. Calely <br> G. Smith and II. Brown <br> N. S. Vedder <br> D. S. Colby and In. Scoror <br> J. Dwyer |  |
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# Alphabetical list of designs-Continued. 



## Alphabetical list of designs-Continued.

| Invention or Diseovery. | Name of Patentee. | No. |
| :---: | :---: | :---: |
| Water eloset receiver | W. Smith | 3,060 |
| Weather glass | C. F. Martino | 3, 013 |
| Well curb. | D. Benson | 3, 230 |
| Well eurb. | D. Benson | 3,231 |

## REISSUES.

## $\Delta$.

Aeid for uso in tho preparation of soda powders, farinaceous food, \&e., Pulverment.
Acid, Carburetting.

## Aeid or gas, Carburetting

Anchor
Axlo.
Axlo box, Railroad ear

## B.

Basket
Basket or box, Fruit
Bed bottom, Spring
Bedstead
Beehiro.
Bell attachment.
Belt fastening
Belt fastening
Belt laeing
Bolt or nut, Cutting throads on
Blower, Cross head for
Boats, Construetion of

## Boiler.

Book eover proteetor
Boot and shoo, Metallie shank for
Boot and shoo tip
Boring maehino.
Bottles, Nursing
Bores, \&c., Material for the manufaeture of
Braee, Bit
Briek maehino
Bridge, Suspension
Bristles, Cleaning and assorting
Bristles, Cleaning and assorting
Brush
Brush, Dusting
Bucket, foot tub, \&c
Buckle.
Buekle.
Buckle, Polishing
Burner, gas, Ligliting street.
Burner, Hydroearbon
Burner, Lamp
Burnex, Lamp
Burner, Lamp

## C.

Can, Fruit
Can, preserve, Sealing
Cans, Opening sealed and other
Cane fibre from eano
Cannon, Breeeh loading
Carpet linings, Sewing
Carriage, Check brace for
Carriage, Children's.
Carriage, Children's.
Car, Sleeping
Car, Sleeping
Car starting apparatus
Cement for fixing door knobs
Cement from slags, Preparing
Chair, Folding
Chair legs, Tip for the feet of
Chemicals, paints, \&c., Rubbing and mixing

## Tho Rumford Chemical Works

2, 979
E. L. Mix and the Monamental Antotomatic Gas Machino Company.
J. A. Bassett

3,225
3, 124
F. Wittram ........................
T. Bakewell and J. Lippineott

3, 083
T. B. Stewart

3,243
L. Marble and T. North

2, 892
J. W. Hayes ..................................... $\quad$, 2,894

Tueker Manufaeturing Company .....- 3, 081
W. Heath
J. M. Beebe
A. E. Taylor
J. A. Green and II. A. Tweed
J. A. Green and II. A. Jweed
II. C. Babeoek

Sehweitzer Patent Bolt Company
P. H. and F. M. Roots
A. Van Order.
E. Whitely
C. L. Alexander and V. A. Osburn
E. Heaton ...............................

2, 984
3, 234
3, 064
3, 065
3, 236
2, 889
$\stackrel{\stackrel{2}{2},}{2}, 00$
2, 873
3, 058

Tho American Shoo Tip Company
A. Wyekoff

2, 886
M. S. Burr.

2, 935
3, 0.0
G. Stal $\quad 3,230$
G. Stackpolo and J. N. Winslow
I. Dneberg

3, 005
C. Bender
N. H. Spofford
N. II. Spofford
J. I. Whiting.
J. O. Adams and A. Warfield.
J. W. Kendall

Tho West Haven Buckle Company
T. G. Bailey
E. Andrews.
E. P. Russell and P. Tromain
J. Leo.

2, 985
3,073
3,990
3, 221
3, 221
3,235
2,303
3, 053
2, 955
3,07\%
J. Leo -

М, 927
W. and C. Painter

3, 195
3, 146
R. H. and H. W. Childs

2, 854
J. Downing

3, 158
W. W. Lyman
S. B. Rawley

2, 988
C. Barry .

3, 115
E. H. Bourne, E. Damon, jr., and M. Knowles.
S. C. Long, F. Schumaker, and J.

Warner.
C. F. Brown
J. F. Fales.
I. D. Johnson
F. Boylston .
A. Christian
J. M. Pullman
J. Swan
J. Stoger.
P. Keunedy.
J. J. Bodiner
B. J. Harrison and J. Condier

3, 143
2, 551
2, 983
3,211
3, 247
3,067
3, 224
3, 074
2, 862
3, 160
2, 830
2, 916
2, 933
E. S. Winehester.

2, 891
R. Poole

3, 187
3, 233

## Alphabetical list of reissues-Continued.



## E.

Ears for attaching handles to pails and like vossels, Metallic.
Elevator, Grain
Elerator, Water, (Div. A)
Elevator, Water, (Div. B).
Engine, Fire .
Engine, rotary, Steam.
Eyeglass.
Eyeleting machine
Eyeleting machino
Eyeleting maehine
Eyeleting machine
Eyeleting machino
Eyeleting machine
Eyeleting machine
Eyeleting machine
Eyeleting machine
Eycleting machine

## F.

Fabric, Corded clastic
Fagot for railroad rail
Faucet, (Div. 3)
Fence post
Fertilizers, Treating mineral phosphato for the manuffacture of.
File blanks, fliers, \&c., Rolling and shaping
File, Paper.
Filter, Sirup
Fire annihilator
Fine-arms, Brecelh-loading, (Div. A)
Firc-arms, Breech-loading, (Div. B)
Fire-arms, Brecch-loading.
Fira-arms, Magazino.
Firenlace
Flask, Vuleanizing.
Fluids under gaseous prcssure, Bottling
Fluted puffing
Fluting machine
Fork, hay, Horse
Work, hay, Horse.
Frame, Picture eard
Fruit box or basket
Fruit gatherer
.

Name of Patentee.
No.
M. Sweeney................................. $\quad 3,149$
J. IB. Raynor
G. Moebs
G. Moebs
G. Moebs

G
L. F. Robertson
J. M. Wilson
II. Valentine
A. Broadnax and R. B. Gray
G. G. Larkin
T. Weleh
J. S. and I. Rowell
D. C. Matterson and T . P. Williamson
F. B. Hunt
F. B. Hunt
J. Whitworth and W. H. Hawkins.
C. W. Sherwood
C. W. Sherwood
D. Whistler
E. M. Montague
J. H. McLean
E. B. Bishop
H. T. Love.
C. E. Patric
F. H. Smith.
W. Ryner and H. Hopwoll
B. Blóck
T. Evans
L. S. Chichester, G. H. Nichols, and C. W. Mills.
W. B. Wadworth
W. B. Wadworth

The Gould Machino Company
Metropolitan Rotary Engine Company
C. Parker

TV. N. Ely
W. N. Bly
W. N. Ely
W. N. Ely
W. N. Ely
W. N. Ely
W. N. Ely
W. N. Ely
W. N. Ely
W. Smith
T. E. Purchaso
A. Fuller
R. Ramsey
J. Commins
D. Blake
H. E. Woodbury
M. Washburn \& Co
C. T. Jerome.

Berdan Firo-arms Manufacturing Co. Berdan Fire-arms Manufacturing Co
F. E. Boyd and P. S. Tyler.

Winchester Arms Company
T. D. Guseman
A. B. Woodard.
P. Sehmitt.
G. E. King
G. E. King
M. J. Laird
S. and D. A. Harris
G. P. Bergen
J. W. Hayes
V. H. Lyon

3, 012
$\stackrel{1}{2,}, 989$
2, 990
3, 141
3, 132
2, 947
3, 168
3, 013
3, 06
3, 105
2, 857
$\stackrel{2}{2}, 909$
3, 097
2, 837
2, $83 \varepsilon$
3, 040

2, 86.5
2, 866
2, 923
2, 860
2, 853
3, 025
3, 142
3, 17
3, 017
2, 978
3, 103

3, 063
3, 208
3, 050
3, 0.57
2, 954
3, 131
2, 908
2, 875
2, 876
$\stackrel{2}{2}, 877$
2, 878
2, 879
2, 880
2, 959
2, 960
2, 961
2, 962

3, 014
2,902
3,135
2,945
3, 003
2, 904
2, 900
3, 056
2, 839
3, 117
3, 118
3, 245
3, 2.7
2, 924
2, 938
3, 175
3, 001
3, 000
2, 8.50
2, 987
3,125
2,894
3, 050

Alphabetical list of reissues-Continued.

| Invention or Discovery. |
| :---: |
| Fruits, mcats, \&c., Preserving |
| Furnace, Blast. ..... |
| Furnace, Boiler |
| Furnace, boiler, Steam |
| Furnace for roasting ores |
| Furnace for treating iron, \&c., (Div. B) |

Furnace, Smelting and melting

## G.

Galley, Printcrs'
Gas apparatus ...........
Gas or air, Carburetting
Gearing . . . . ................

Gearing -
Generator, Steam
Glass ware with handles, Manufactnre of
Glue
Glue, Article of
Gluc, Drying
Glne, Drying
Grain and grass cutting machine, (Div. A)
Grain and grass cutting machine, (Div. B)
Grain, Weighing and bagging.
Grass and grain cutting machine, (Div. A)
Grass and grain cutting machine, (Div. B)
Grate bar
Grater, Nutmeg.
Gunpowder
II.

Harness, Securing bnckles to rings to
Harrow, planter, and cultivator combincd
Harrester
Harvestcr
Harvester
Harrester
Marrester
Harvester
Harvester
Harvester
Harrester
Harrester, Combined rake and reel for.
Farvester, Crank pin and box for
Harvester cutter
Marvester, Grass
Harrester, Grass
Harvester, Grass
Harvestcr pitmen
Harvesting machine, (Div. A)
Harvesting machinc, (Div. B)
Hat borties
Hat bodies, Stretching
Hay raker and loader
Hay spreader
Heater, car, Railroad
Heater, car', Strect
Heating apparatus
Heel stiffener
Hides and skins, Componnd for treating
Hogs from rooting, Preventing
Hogs, Slanghtering
Mook, Solf mousing
Hoop skirt.
Hoop, Skirt
Horse power
Horses, Raising and securing the legs to shoe them Hydrocarbon rapor apparatus

## 1.

Tron and steel, Pefining
Iron, cast, Refining and converting, into cast steel Iron into stcel, Converting
Iron, Refining

Alphabetical list of reissues-Continued.


## L.

Lamp
Lamp
Lamp
Lamp
Lamp
Lamp
Lamp, Coal oil
Lamp, Glass
Lamp, Glass
Lamp shade
Lantern
Lard, Stirring, mixing, heating, cooling, \&c............
Lard, Manufacture and preservation of, (Div. A).
Lard, Manufacture of, (Div. B)
Lard, Putting up for storage and transportation (Div. C.)

Lard, Stirring
Last
Latch, Door and gate
Lath maehinc
Leather, Punching
Leather, Rnbber coated
Leather, Splitting and stripping
Lightning rod
Life preserving apparatus

## Lock, Alarm

Loom
Loom, Operating the treadle of
Lounce, Convertible
Lubricating deviee.
Lubricator
Lubricator for steam engines

## M.

Malt, mash, \&e., Fermenting and oxidizing
Matcrial for rarious structures
Matcrial for constructing bridgcs, arches, beams, \&e
Material for constrncting ships, boats, \&e
Material for constructing and finishing houses, \&c
Material for decorations, furniture, \&c.
Material for constructing boxes, trunks, buckets, \&c
Material for constructing, pipes, tubes, funnels, \&c .
Material for constructing carriages, cars, \&e..........
Meat chopping machine.
Meat chopping machine.
Meats, fruits, \&e., Preserving.
Medical vaeuum chamber
Medicinal preparation
Melodtcon
Metal, sheet, Bending
Meter, Fluid
Mill, grist, Grinding plate for
Miill, saw, Cirenlar.
Mill, saw, Mcad block for
Mill, saw, Head bloek for
Mop head
Mop head
Mop hear
Mop head
Mon head
Moulds for rubber goods, Filling eylindrieal
S. B. Rawley
J. J. Squire
S. B. Rawley
H. Wright, II. H. and B. F. Collins
F. E. Hoffmann
P. O. Soper.
M. L. Roberts
D. Skidmore
C. W. Cahoon
W. N. Ely
P. Hannay and H. Taylor
P. Hamay and H. Taylor
L. J. Atwood.
C. A. Klecman
R. S. Merrill and W. Carleton
J. Ridge

Ripley and Company
Ripley and Company
J. Emery
F. Marands
E. M. Allen
C. L. Tuckor
C. I. Tucker
C. L. Tucker
W. J. Wilcox
A. Taylor.
J. A. Parks
J. C. Brown
J. M. Bent .
J. J. Fields and A. H. King
C. S. Stearns and T. Corey
W. Hall.
J. B. Stoner, L. Mondelson and T.Crommclin.
J. S. and R. Porter.
G. Crompton.
R. W. Andrews
L. H. Baker.
B. H. Jenks.
E. Miller
J. Storer
R. D'Heurense
J. K. Mayo and A. and G. B. Cushing
J. K. Mayo and A. aud G. B. Cushing
J. K. Mayo and A. and G. B. Cushing
J. K. Mayo and A. and G. B. Cushing J. K. Mayo and A. and G. B. Cushing
J. K. Mayo and A. and G. B. Cushing J. K. Mayo and A. and G. B. Cushing J. I. Mayo and A. and G. B. Cushing

Metropolitan Washing Machine Co...
Metropolitan Washing Machinc Co.
W., S. H. and D. Davis.
G. Halfield
C. L. Lege
L. Louis
O. W. Stow
N. Auloin
H. Shaw and W. D. Leavitt
G. and C. Place.
S. F. Stanton.
D. Lanc

Colby Brothers and Company
Colby Brothers and Company
Colby Brothers and Company
L. Taylor

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L. II. Taylor
J. W. Cobb and IE. A. Hill

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## Alphabetical list of reissues-Continued.


0.

Ores, Separating
Oyster dredgo..

## P.

Packing, Steam, engino
Paint
Paints, ehemicals, \&c., Rubbing and mixing
Paper, \&e., water-proof, Composition for tho manufaeture of.
Paper, Polishing enamelled
Paper stock, Manufacturo of
Pattern for cutting boots.
Pavement, Wooden
Pawl, Friction
Pegging maehine
Petroleum, Refining
Phosphate for the manufaeture of fortilizers, Treating mineral.
Photographic pietures, Printing
Piano-tortes
Piano with melodeon and tromolo attachment
Pipe, Draiu
Pipe, Tobaceo
Pitcher, Iee.
Planer cluth.
Planing maehine
Planter, Corn
Planter, harrow and cultivator combined
Planter, Seed
Planter, Seed
Planter, Seed
Planter, Seed
Planter, Seed
Plow.
Plow
Plow.
Plow ........................
Plow, Gang
Plow, Gang.
Plow, Gang.
Plow, Subsoil
Pot, Coffeo.
Pot, Tea and Coffee
Press, Die .....
Printers' cliase
Printers'
Pulley attachment for raising weights
Pump
Pump
Pump, Rotary

## R.

Raek, Card
Rail and splico, Railway
Rako, Harvester
Rake, Harvester

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M. Sweeney, J. E. Mathews and T. 3, 181
T. A. Havemeyer, J. L. Elder and C. F. Loosey.
A. M. İills
S. W. Sears
H. W. Whitall
II. Richardson
L. Louis
T. C. Riehards

Turner, Seymour, and Judds
Tho Union Nut Company
M. II. Foster and H. C. Hart

Schweitzer Pateut Bolt Company
S. R. Krom
T. P. Sink
W. H. Miller
D. R. $A$ verill.
R. Poole
I. O. Lowrey
S. Shepherd and J. Greeley
H. Betts
b.
E. Shopbell
D. MeKenzie
T. Moore
W. N. Ely
F. Euot..
J. Commins
J. Velin.
G. C. Manner
L. Louis
B. F. and M. R. Pierco
G. Lautenselulager
11. G. Read, G. Brabrook and II. H. Fish
C. H. Riggs
J. A. Woodbury
J. Selly y.
P. P.Runyon, J. Letson, G. J. Janoway and T. E. McDonald.
A. R. Reeso.
D. S. Holman
J. Case
J. II. Thomas and P. P. Mast
J. II. Thomas and P. P. Mast
G. Watt

Nixnn and Company
D. C. Matteson and T. P . Williamson
J. C. Bethea

ح1 Riehards and J Vando................
J. Gibbs
W. B. Ready.
D. C. Matteson.
R. Baxter
C. R. Martman
G. I. Chittonden and C. A. Smith.
A. C. Kasson and N. C. Gridley
J. Mays and E. W. Bliss
R. Yeoman.
F. G. Fowler
G. W. Gregory
W. Shoup
E. Perry
J. O. Joyco.
J. Adair
Z. B. Waireman
A. J. Holmaz
C. Aultman

2, 936

3, 061

Alphabetical list of reissucs-Continued.


Alphabetical list of reissues-Continued.

| Invention or Diseorery. | Name of Patentoe. | No. |
| :---: | :---: | :---: |
| Tecth, artificial, Plate for | A. B. Ely | 2, 968 |
| Threshing machine and separator | II. W. Matthews........... | $\stackrel{\text { 2, }}{2} 852$ |
| Tie, Neck........................ | H. Pendir and J. H. Fleisch | $\stackrel{\text { 2, }}{243}$ |
| Trellis for strawberry and other plant | W. W. Wradstrcet |  |
| Truck, Safety <br> Tube, Well | F. A. Mack | 3,024 <br> 2, |
| Tub, foot bucket, | J. W. Kondall | 3, 053 |
| Tumbler washer... | J. Soltor | 2,883 |
| V. |  |  |
| Vacuum chamber, Medical. | G. Hatficld. | 3,139 |
| Valve, Float ...... | J. If. Guild ............................. | 3, 212 |
| Valre, Globe. | J. G. French and R. A. McCaulay..... | $\stackrel{2}{2,898}$ |
| Valvo, Oscillating | G. Daris | 3, 152 |
| Valve, Refitting stop ..................... | C. S. and C. I | 3, 3,043 |
| Vapor, Collecting and condensing metallic Velocipede. | F. P. Crandall | 3,207 |
| Vessel for holding liquids | J. Mr. Colburu. | 2,981 |
| Vessels, Ballasting....... | J. B. Stoner, L. Mendelson and T. Crommelin | 3,167 |
| Vulcanizing vessel | G. E. Hayes............................ | 3,141 |
| W. |  |  |
| Walls, building, and cxtracting stumps, Apparatus for | G. W. Packer, jr | 3, 022 |
| Washing machine........................................ | W. M. Doty. | 2, 897 |
| Washing machine. | A. Lamb, M. E. Layman, and W. H. Morse. | 3, 162 |
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| Watch | S. D. Englo | $\stackrel{2,907}{2}$ |
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| Water and carbonic acid, Charging | R. Grant.......... |  |
| Weather strip................ | E. S. and J. Torsoy. ${ }^{\text {B. }}$ Savery and F..... | 3,174 3,202 |
| Weather strip for doors and w | IV. Smitlı . . . . . | 2,843 |
| Weaving | W. Smith | 2, 844 |
| Whoel, Carriage | J. D. Sarven | 3, 079 |
| Whecl, Water. | J. Tylcr. | 3,015 |
| Wheel, Water | J. Tylcr | 3, 018 |
| Wheel, Water | R. Dunbar | 3, 099 |
| Whecl, Water, (Div. A) | J. S. Goode and J. W. Bookwaltor | 2,168 |
| Wheel, Water, (Div. B) | J. S. Goode and J. W. Bookwaltor | 3, 169 |
| Wheol, water, Case for, (Div. A) | J. S. Goode and J. W. Bookwalter |  |
| Wheel, water, Gato for, (Dir. B) | C. S. Pratt........................ | -3, 925 |
| Whip, Covering | C. C. Pratt. | 2, 926 |
| W oot and other fabrics, Clean | O. McDaniel | 3, 239 |
| Woolen and other fabrics, Cleaning | O. McDaniel | 3, 240 |
| Wringer, Clothes | C. H. Knox | 2, 840 |

## DESCRIPTIONS.

# DESCRIPTIONS AND CLAIMS OF PATENTS 

## ISSUED IN THE YEAR 1868.

## ILLUSTRATED WITH ENGRAVINGS．

72，959．－HenRy W．ADams，Milton，Pa．－ Churn．－Jamuary 7，1868．－The cream box is sceured to rockers，and is oscillated in the direction of its length．At each eud is a perforated board，against the under side of which the cream is dashed．

Claim．－1．The construction and arrangement of the two dashers D D，in combination with the churn B，substautially in the manner and for the purposes described．

2．The rockers R R ，in combination with the churn $B$ ，when comnected and operated substantially iu the manner and for the purposes herein set forth．
g2，960．－Joseril Barbian，Chieago，Ill．－Ice－ House Floor．－January 7，1868．－The wooden floor has a transperse strip cut away between the central joists，and the floor is corered by sheet zine，which is bent downwarl to form a trough where the floor is eut amay．The metal is protected by strips of wool．

Clam．－An ice－house floor，composed of the groored zinc plate F ，strips C C，and strips E，con－ nected by metallic bauds D ，all constructed and arrauged substantially as lescribed．
ga， 961 －Join Barmier，Boston，Mass．－Fasten－ ing for Shoes：－January 7，1868．－The lace is passed behind anti－friction rollers，whose arbor pins are secured to the bent arms and the strips．The arms and strips are riceted together and secured to the sides of the opening in the shoe firont．

Claim．－＇The bent arms or plates $C$ ，when con－ structed aud attached as set forth，in combiuation with the entire strips $B$ ，as herein described，as and for the purpose set forth．

72，362．－Samuel W．Barr and Edwin Mc－ Guire，Beloit，Wis．— Well－Tube．—Jannar＇7， 1868. The gauze cylinder surrounds an inner perforated tube，to which it is soldered．The conoidal poiut has a drill plate let into it axially．

Claim．－＇The combination and arrangement of the well－tube，soldered filter，and drill－point，all substau－ tially as and for the purpose set forth．

72，963．－GEOLGE BEATY，Middlebury，Ohio，as－ signor to W．W．Kitcinen，West Union，Iowa．－Boot and Shoe Hecl．－Jamuary 7，1868．－The heel is made separate from the boot，and attached by flattened spikes and serews．

Claim．－Constructino a metal boot－heel lollowr， When its upper tace is bereled，so as to form a broad bearing for the shoe to rest in，and also having a series of spikes arranged in the center thereof，is lerein described and for the purpose specifed．
 Findling and Fuel－January 7，1868．－Composed of sereened slack，妾 bushel；rosin or pitch， 25 pounds； crude coal oil， 1 gallon；sawdust， 1 businel；heated， mixed，and cast in molds．

Claim．－The fuel combination，using for that pur－ pose the aforesaid compound of rosin or pitcl，fine coal，sawdust，and coal oil，or any other substantially the same，and which will produce the same effect．
\％』，9GJ．－Virgil．W．Blanchlard，Bridport，Vt．－ Baggage－Check．－January 7，1868；antedated Janu－ ary 2,1868 ．Explained by the claims and illustration．
Claim．－1．The circular plate $A$ ，with the names of the stations of any particular railroad stamped upon its swface，near its periphery，with notehes or recesses，cut in the periphery of a circular opeuing． in the central portion of said plate，said notches or recesses correspondiug with the names，figures，let－ ters，or other symbols stamped upon the surface of the plate，near its periphery，in combination with the bolt or $\operatorname{dog} \mathrm{D}$ ，for the purpose of fixing the pointer $B$ at any particular name，station，or symbol，ou the outside of the plate．
2．A plate，bearing the number of the check at－ tached to the plate bearing the pointer，the circular plate having the names of the stations of auy partic－ tular road stamped mpon its surftee，near its peri－ phery，revolving hetween them，when not locked by the bolt or dog，for the purpose specilied．
3．A bolt or dog，playing frecly in a recess be－ tween the plate bearing the pointer aud the one bearing the number of the check，in combination mith the notehes or recesses cut in the periphere of the circnlar opening in the central part of the circular plate，for the purpose of fixing the pointer at any particular name，number，or symbol．
4．A bolt or dog in combination with a slit or openinge ent in the plate bending the pointer，and the onc bearing the number of the check，so arranged， With a strap conuecting the check to the bagyage or freight，that when the strap is withdrawn fiom the said slit or opening the weight of bolt or dog will cause it to fall into sad opening or slit，relieving the circular plate，so that the pointer may be turmed to any particular uame，station，or symibol，when the pointer may be locked in its placo by passing the strap throngl the opening or slit，and attaching it to a piece of baggage or fieleht in the usual way．

名，966．－JoInN W．J3oviton，East Hartford， Comn．，ank Join A．McGAw，Newiark，N．J．－Re－ moving Burs and other Vegetable Matters from Trool．－January 7，1868．－The wool after scouring is placed upon slats within a tight chamber，and sub－ jected to the fumes firom burning．sulplur in a recep－ tacle bencath a pan containing mitrate of soda，moist－ ened with su！platurie acid．Steam is also admitted to assist the action of the nitrous gases aud to heat the chamber．

Claim．－1．The employment of chemical rapors in the process of destroying burs and other foreign vegetable smbstances in wool，substautially as de－ scribed．
2．The employment of steam as a joint arent in diflusing the rapor and leating the apartment to prodnce the result described．

3．The process of destroying burs or other for－ eign verctable substances in wool，substantially as set forth．
gi2，DGy．－DARIUS C．Brown，Lowell，Mass－ Harness for Looms．－January 7，1868．－Explained by the claim．

Claim.-Manging the heddles in their frame at ono end to a common bar, but at their opposite ends to two or more bars, substantially as and for the parpose described.
grange.-T. Yardley Brown, Reading, Pa.Fastening Artificial Teeth.—January 7, 1868.-After the plate is swaged and fitted to the month, the gauge is taken in the usual way. The toeth are then arranged aceording to gatige, the wax eovers only so mueh of the plate as is to be occupied by the alloy. The case is then inserted in a packing flask. After the wax is removed and the plate cleansed holes are punched through the plato over the teeth and commtersunk on the palatine surfiace, to reeeive the fusible alloy whieh secures the teetli to the plate; holes are made thomg the plaster for passage of the alloy. riae flask is heated before pressing the metal, and allowed to cool before removing the denture.

Claim.-The attacliment of artificial tecth to swaged plates by meaus of a fusible metal or alloy, as herein deseribed.
 Cuc Rack:-January 7, 1868. - The holder turns on braekets. The cue ends are reccived in radial recesses, the lower reeesses opening to allow the eues to be removed. A simpler form has an upper socket plate and a lower rest with peripheral danges.

Claim.- The revolving billiard-cue rack, constructed and operating substantially as and in the mamner herein doscribed and specified.
ay. $99 \%$.-Daniel Bull, Amboy, Ill.-Table Leaf Support.-Janmary 7, 1868. The brace is hinged to the frame, and when the leaf is raised, the stop bar falls before its upper end and locks the leaf. To lower the leat the stop bar is raised.

Claim-1. The eombination of a link A, a recessed bar D , provided with a spur $f$, and a movable stop-bar E, arranged and operating substantially as and for the purposes herein set forth.
2. The eombination of the bar D , or its equivalent, provited with the spur $f$, and the movable batr E, provided with the prong or fork $g . g$, arranged in the manner and for the purposes described.
3. The recess $l$ in the bar D , and the projoetion $m$ on the bar E , arranged substantially as speeifiod, to prorent the longitrdinal displacement of the bar E , as described and shown.
4. Providing the bar $D$ with slots $d d$, to admit of the adjustment thereof, as and for the purposes specified.
ge9y\%to-HENRY BUnDEL and JaMES Williams, Dajton, Ohio.-Seed Planting Mrachinc.-January 7, 1868. - The shoes are eonneeted by chains to a bar turning on cecontries, whieh rotate so far in raising the shoes that the strain upon the chain prevents the returning of the eccentrics and the descent of the shoes.

Claim.-In eombination with the lifting bar D, for raising, supporting, or lowering the slioos, the arms or braekets c $b$, for forming its hinged eonnection with the main frame, substantially as and for the purposes herein deseribed and represented.
g2, DG: -H. C. BuRK, Mineral Point, Ohio.Mechanical Movement.-Jannary 7, 1868.-The motive wheel is traversed eeeentrieally by an arbor parallel with the axis, and having a spur wheel scenred to one end and a pitman lod to the other. The spur wheel engages a pinion turning on the shaft of the motive wheel. The wheel and pinion being of the same size, a double rotation of the latter ensues to eaeh revolution of the former, and a reeiproeation is given to the pitman.

Olaim.-The eombination of the main wheel $A$, spur-wheel $B$, with its pitman $E$ and pinion-wheel C , all arranged to operate substantially as and for the purpose set fortly.
 N. Y.-Match Safe-January 7, 1868.-The matehes are put into the box in a single eourse with a spring forrwarder beneath them, terding to keep the upper one in contact with the forwarding slide. This slide has a trigger projeeting from the top of the box, and
has a catch which engages the upper match and causes its end to project from the box. The forvard movement of the slide is accomplished by a spring. The match is drawn out through a serrated hole and is ignited thereby.

Claim.-1. The propelling arm B, construeted substantially as described, in combination with the aetaating lever $e$, spring $f$, and mouth $k$, arranged and operating substantially as and ior the purpose set forth.
2. In combination thorewith, the dom $g$ and spring $h$, arranged and operating substantially in the manner and for the purpose specified.
 Scwing Ifachine.-January 7, 1868.-Improvement on patents of D. W. G. Humphrey, August 29 and October 3, 1865. The object is to provide a means by whieh the movement of the disk may be made whatever is desired instead of being confined to fixed divisions of a cirele like those of ratehet tectl. The device is explained by the elaim and illustration.

Claim.-In comlination with a disk provided with gear teeth, and having a cam for working in connection with a stationary plate cam, as deseribed, a pinion whicli meslies into the teeth of the disk, and on whiel pinion a friction elamp or gripe operates to impart intermittent rotative movements to said disk, for the purpose of giving movement to a stoek or or cloth clamp, substantially as described.
 vator.-January 7, 1868. Tho frame has tiro bars projecting downwardly and outwardly from the tongue, end giving attachment for the short axles. The horses are hitelied to the out-turned ends of two levers which are eonmected to the inelined bars, and whose upper ends have holes leceiving the downturned ends of a connecting bar. By means of the position of the eonnecting bar in the holes the relatire draught of the horses is adjnsted. The plow beams are connected to the frame by side plates hinged on end plates, allowing vertical morement to the beams, and the side plates embraee betreen them studs upon plates attaehed to the frame, the connection being sueli as to allow lateral swing.

Claim.-1. The plates I and $F$, when constructed and arranged to operate substantially as described. 2. The plates $J$ provided with the studs $c$, for sceuring and holding the beams to the main frame, and having also the slots for adjusting them, as set forth.
3. The combination of the bent rods $\mathbf{T}$ and cross-rod H , piroted to the main frame, and arranged to operate as described.

写: 9 g6. Williair D. Clark, Ottatra, Ill.Farm Gate.-January 7, 1868.-The rear end of the gate is attaehed to an inclined frame carrying antifrietion rollers tracking. along the upper and lower rail of the fence. A roller whose bracket is attached to the post, supports the gate by its lower rail, and a cateh takes over its upper one.
Olaim.-The peeuliar and particular arrangement of the guides and rollers described when attached to the gate, operating and coustructed as set forth.
\%2,9\%g.-A. Cody, James Bartlett, and H. II. Jones, Ukinlı City, Cal. - Composition for Roofing. January 7, 1868.-Clay is ground clear of lumps, made into brieks, and afterward thoroughly pulterized. Pulverized brick 2, pulverized shale 1, and coal tar, 2 parts, are made into a mortar and spread orer tight sheathing.

Claim.-A compound cement for roofing purposes, preparod and appliod substantially in the manner and for the purposes set forth.

78,988.-E. Merritt Cole, Sonthbridge, Mass. - Eyc Glass.-January 7, 1868.-The lips of the frame have snitable soekets and projections to render unneeessary any but a single screw.

Olaim.-The arrangement and appliention of the tenon and mortise with the lips, and with respect to the joint serew or pin of the spectaele or eye-glass frame, sulbstantially as specified.

Roads, Pa.-Animal Trap.-January 7, 1868.-The
rat enters the open part of the eylinder. In eating the bait the bolt is so mored that its onter end enters the groove, when the weight eanses the semi-rotation of the cylinder. The partition prevents the cseape of the rat except into the condermed cell.

Claim.-A trap, consisting of a box, $A$, haring one part closed by a corer, and a partition B , haring an opening through it, and will the rerolving wire eylinder C mounted in the open portion of the box A , all constructed and arranged for operation, as shown and described.

92,951.-F. W. Crosby, Toledo, Iowa.-Roasting Metallic Ores.-January 7, 1868.-The roasting. chamber is plaeed preferabily over the furnace mind small perforations made through the separation between them. Small rertical rods are run through the top of the roasting chamber and monto the sail perforations. The pulverized ore is dampened and mixed with straw and placed in a chamber. and the rods withdrawn, learing the mass open to the percolation of the caloric currents.
Olain. - The method, substantially as herein described, of obtaining a porous disposition of pulverized ores within the rectucing chamber of a furmace, for the prirpose set forth.

92,981.-William G. Crosshix, Shellsbirg, Wis.-Conbined Sulliy Plow and Cultivator:-January 7 , 1868.-The frume has two cross-beans, between which is the axle. The plow beam is piroted to the rear beam and secured to the front beam by a spring eatch. A rod is attached to the shifting devices and to the bean of the plow, by which the latter may be raised from the ground when the beam has been loosened from the eatch. 'The draw-bars of the outer culti rator shorels pass thronghl loops upon the pendent arms of a barr, by which they may he simultancousls drawn from the gromed by a lever: The inner shovel standards are attached to the bar, and raised with it.

Claim.-1. The arrangement and combination of the beam $C$, rod $i$, spring catch $y$, and lever $h$, for regulating the position of plow E, substantially as and for the pmry)ose set forth.
2. The comblination of rod S , haring a lerer $\mathrm{S}^{\prime}$, with arms Q Q, elbows T T, loops P P, and shanks M L, arrauged to raise and lower shovels $f f f f f$, and hold them in position as described, in coinjuaction with bars $\mathrm{O} O$, as set forth.
3. The loops K H, in combination with a morable brace G , having the plate J arringed so as to fit cither loop, as and for the purpose set fortl.

98,982. -Thomas Cullex; San Francisco, Cal. - Cartridge for small Arms.-January 7 , 1868. - Formation explained by the claim and illustriation. The paper cylinder is charged like a gun and used as long as the paper remains good, after which a freslh piece is sulsstituted.

Claim.-The method and arrangement of seeuring the raetallic base or cap $a$ to the paper tube $d$, which holds the charge, by means of the nipple e screwing into the interior washer $u$, as substantially herein sot forth and described.

72,953.-James Davis, Buffalo, N. T.-Suw.January 7, 1868. - The rectangular sides of the teeth are toward the midheight, both above and below that point. Thle projections on the culds of the teeth are to lessen the amount of filing necessary in sharpening.

Claim.-1. Making the snrr-teeth above aud below the center line $1-2$ with their cutting edges toward said line, and the rake or set abore the reverse of that below the center line, in the manner and for the purpose described.
2. The projection D at the point of the saw-tooth, for the purpose set forth.
ga, 934.-Frederick Devaler, North Vernon, Ind.-Car Brake.- January 7, 1868.- The brakcs are suspended from the truck and connected to a lever in such manner as to be both applied or reliered together. The lever has a curved yortion nearr its free end, and the operative lever lias an anti-friction roller which acts on the curred part. To the free cad of the lever is attaehed the claain through which it is
operated. The brakes may be operated by a chain which is coiled around the shaft of a wheel, which may, through the mediun of a friction wheel, be put in conncetion with a wheel on the axle.
Claim.-1. The lever B and roller C, acting on the eurved lever $A$, all combined and operating snbstantially as describecl.
2. The wheel H' fixed apon the axle, the whecl $u$ and cogred wheel $v$ and pawl, and the intermediate roller $w$, all constructed and operating in combination with each other, as deseribed.

72,955.-Davin Dick and O. W. Preston, jr., Corming, N. Y.-Car Brake.-Janmary 7, 1868. When the hand lerer is thrown back and the kieker ont of gear with the dog, but the doo in gear with the spur wheel, the brake may be used in the ordinary manner. When the hand lerer and dog are ont of gear, and the licker down, while the ears are in motion, by turning the hand lerer the worm is brought into gear with its whecl, which puts in motion the rertieal chain bar, and thereby applics the brakes. By drawing the engineer's conncetion, the worm wheel is brought in gear with the endless worm, and the brakes applied throughout the train.

Claim.-1. The don D, as construeted, in combination mitl spriag $i$, operating conjointly, substantially as set forth.
2. In combination with dog D and spring $i$, we claim kicker $l$ and spur wheel $g^{\prime}$, substantially as deseribed.
3, The engineer's connectingrod W, when in combination with the brake apparatus, substantially in the manner specilied.
4. Pitell-chain wheels $f$ g and chain-loop M, in comhination with locking shaft $b$, chair-bar $B^{\prime}$, and braking derices, substantially as des, $\because$ bed.
5. The roeking shaft $b$, worm wheel d, slide $c$, conneetins rod $\chi$, chain-bars $B^{\prime} E$, and engineer's comnecting rod W, all combined smbstantially in the maniere nid for the purpose set forth.
assignor to self, A. T. Shelly, and C'Harbes DiAEY, same place.-Stop Coch:-Tanuary 7, 186s. (Antedated December $26,18(3 \%$.) - The plurs tims in a finstoconical slecre which has ting's titting in groores of the cock. The wings mrerent the slecve from turning, but allow it to be raised rertically from its socket.

Claim.-The combination of the case and conical valre of a cock, and in conical stationary sleere, fitting the rase, and in whieln the ralve turns, and which is so constructed and comected to the valre that it may be withdrawn with the latter from the case without the necessity of detaching any luts or other fasteniugs, all substantially as deseribed.
 off Mechamism for Looms.-Tanuary 7, 1868.-The loom is adjustable to prevent the strain upon the Warp, ensendered by beating up, from operating on the "let-off" mechanism, when weavin" heary goods; the let-off being only influenced by the steady strain on the warp. When Trearing light material the lom is so adjusted that the beating up will assist in operating the let-off.

Claim.-1. The said combination of derices, sul)stantially as above deseribed, for operating the said ratelet, the warp guide and beam, in manner as specified.
2, Their combination with the warp beam and its gearing and ratehet, and with the warp gaide, and the lay, the whole being substantially as explained.
g2,988.-Jonatuan S. Eaton, Roxbury, Mass.-Trumk.-January 7, 1868.-The top and sides of the trumk are corered by narrow strips of wood to strengthen the same.
Claim. The combination, with the frame of a trunk, of the strips or pieces $a$, substantially as and for the purpose set forth.

72,989.-Willian H. Elliot, New York, N. Y. -Brewing.-January 7, 1868.-The Tipor from the boiling wort is condensed in a surface condenscr and retmrned to the wort before fermentation.

Claim.-1. The process herein described of brewing malt liquors, viz, condensing the vapor of
boiling wort, returning it to the wort in a liquid state, and fermenting the two liquids together, substantially as herein set forth.
2. Cooling the wort and condensed rapor separately, and afterward mixing the two liquids together, before ferinentation, substantially as hercin specificd.
3. Employing a tank or reservoir $l$, with its cooling device, in combination with tank $b$, with its usual heating device, sabstantially as shown and described.
4. The eombination with these two tanks of a surface condenser, $c$, as speeified.
(92,990.-Vanderlyn F. Fect, Rochester, N. Y. -Harvester Rake.-January 7, 1868.-The rake-head is eonnected by hinged rods to a bar extending across the platform and attached to a segmental slide bar. The slide bar is eonnected by a pitman rod to an endless ehain stretehed on two wheels, one of which receives rotation from the axle, when clutched thereto by a treadle lever. The rake-head has an arm eoming in eontact with a projection of the platform at the backward end of the stroke, and serves to lift the rake, a latch transferring a projection at the other end to a position beneath the guide, and raising the rake by that means during its forward stroke.

Claim.-In combination with the reciprocating rake $F$, provided with projections $q r$, the arrangement of the connecting and operating parts, eonsisting of the loose pulley ir, provided with the reaetingspring $l$, and operated by lever $\mathcal{K}$, the endless ehain $G$, the hinged bar $o$, and the stop and projection $m^{\prime} n$, the whole operating in the manner and for the purposes set forth.

192,921.-Jesse Fewkes, Newton, Mass, assignor to Silver Lake Manueacturing Co.-Expansion Pulley for Braiding Machines.-January 7, 1868.-The face of the expansible pulley consists of a series of jointed bars whose free ends are inelined inward and pass through the holes in a disk whieh is adjusted by a set serew.

Claim. -The combination of the rods $b$, piroted to the pulley $A$, with the plate $C$, construeted as deseribed, and the screw D, for governing positirely the position of said rods, substantially as deseribed, and for the purpose set forth.
rga,9292-B3. G. Fitziugar, Sykesville, assignor to self and William G. Maxwell, Baltimore. India-Rubber Door Spring.-January 7, 1868.-Explained by the elaim.

Claim.-An India-rubber door-spring, that is rulcanized in a eurved or cireular form, and applied to a door in a straighter form than that in whieh it was ruleanized, substantially as and for the purpose herein described and represented.
g2,993. - Leonard Fleckenstine, Manor Township, Pa.-Holder for Gum-serubber-January 7, 1868.-Explained by the claim and illustration.
Claim.-The arrangement of the two corrugated or fluted plates PR, for the purpose of folding the serubbing-edges of India rubber, together with the use of a socket and serew-bolts, substantially in the manner shown and specified.
g马,994.-Lewis Francis, New York, N. Y., assignor to himself and Crrus H. LouTrel, same place--Oomposition of MKatter for the Manufacture of Emery Cloth, Polishing Whecls, dee--Jannary 7, 1868.-Glue and glycerine, with or without saccharine matter, are eombined with any of the metals or their insoluble compounds finely divided, or with solutions of their soluble salts.
Claim.-A composition of matter for various purposes, when the same shall be made substantially as herein deseribed.
giz,995.-Lucien M. Gilbert, Warren, Mass.-Scissors-sharpener-January 7, 1868.-The eylindrical serrated eutter is attaehed by an eyelet to the brass guide-disk.

Claim.-A seissors-sharpener, consisting of the bevelled file $\Lambda$, eombined and arranged with the eircular guide-pieeo C, the parts being constructed and
the whole arranged substantially as and for the pur. pose specified.
G2,996.-GEORGE W. Gish and William H. Ferguson, Dariess County, Ky.-Medicine for the Cure of Hog Cholera.-January 7, 1867; antedated December 12, 1867.-Composed of sulphate of eopper, 1, and extract of $\log$ wood, 2 parts.

Olaim.-The medicine made by mixing, or by using at the same time, the ingredients deseribed, for the purposes set forth.
g2,99\%.-Georae D. Goodrich, Jolict, Ill.Manufacture of Clay Pipes.-January 7, 1868.-The earriage on which the trough is plaeed and moved is operated by a spring treadle, and standard. The mouth-picee of the die is made movable to better support the following pipe during the operation of eutting off a section. A water-box is placed over the orifice of the die by whieh it is kent moist.

Claim.-1. The improved method of fastening the trough-earriage in, and disengaging the same from, its rigid and deseribed position on the frame on whieh it rests, substantialiy as herein deseribed and speeificd, or other equivalent devices.
2. The movable mouth-picee H, arranged substantially as herein described and specified.
3. The eombination, in a maehine for the manufacture of clay pipes, of the trongh for receiving the pipe, and the apparatus for lubricating the pipe as it issues from the mouth of the machine, substantially as described.
4. Each of three devices to be used in combination with the elay-pipe-making machines, running the pipe eontinuonsly, and using the metallic or metallic-lined troughs.
g9,998.-William C. Griswold, New York, N. Y.-Hat Blocking Mrachine.-January 7, 1868.The ring to whieh the clamps are hinged rests upon spiral springs whieh surround the three posts supporting the said ring. The lever, with its band ring, is lowered down npon the hat body, and the clamps raised into a horizontal position to "break" the band.
Claim.-The ring $A$, to whieh the clemps are hinged when elastieally seated, substantially as and for the purpose specifica.
gi,299.-Samuel B. Haines, Lewistown, Pa.-Harvester.-January 7, 1868. The reel shaft is driren by chain comneetion with the leading wheel. The grain-wheel travels direetly in the rear of the divider.
Claim.-1. The leading-wheel A, attached to the shoe $G$, as herein described and represented, and performing the donble function of supporting the inner end of the finger-beam and operating either the rake or reel, or both, as and for the purpose set forth.
2. The grain-wheel M, in combination with the divider I, provided with the flanges of $d d^{\prime \prime}$, the latter being notehed at $d^{\prime}$, and adjustable bearing $O$, all eonstrieted and arranged substantially as deseribed, so as to admit of the adjnstment of the wheel M, and seenre the protection of the latter by the divider, as explained.
gB,000.-I. I. Harman, Whitestown, Ind., assignor to himself and Thomas J. Meginnis, same place.-Sawing Machine.-Jamuary 7, 1868.-The saw is attaehed to a bar whose fore end has an antifriction roller reciprocating in guides at the free end of a beam whieh is pivoted to the frame at its rear end. The rear end of the saw-bar is comnceted by a pitman to the erank by which it has motion, and has an anti-firietion wheel traveling in a cam-groove around a lateh operated by a spring. This eammotion causes the oseillation of the sawr.

Claim.-The combination of the movable center 15 with slides 7 and 7, 4 and 6 , and ceeentric-cam 5, and spring 13, all eonstructed and operating substantially as set forth.
g3,001.-L. P. Harris, Crestline, Ohio.-Apparatus for Clarifying Saccharine Juices.-January 7 , 1868.- The top or pure portion of the juice is dramn off by the bell-mouthed siphons. The mouths of the
siphons are turned up and used as funnels, throngh which to fill the pipe.

Claim.-1. The adjustable float, and its eombination with the siphon.
2. The combination of the adjustable float and siphon with the tube $c$ and pipes $d$ and $c$, substantially as deseribed.
3. A canc-jnice elarifier, construeted and operated substantially as deseribed.

4, The combination of a eanc-juice elarifier, when coustrueted and operated substantially as described, with heating and evaporating pans, for the purposes set forth.
g8,002.-Javes Harsila, Circleville, Ohio.Plow and Marrovo Combined. January 7, 1868.The harrow is secured to the plow by the bars, and is held in such position as to harrow the freshly turned furrow.

Claim. - The bar or chain $A$, lever $B b$, and chain D , arronged and applied, substantially as described, for the purpose of combining an ordiuary plow and harrow.
g3,003.-Charles T. Harvey, Tarytomn, N. Y.-Elevated Railroad.-Jannary 7, 1868.-Explained by the claims and illustration.

Claim.-1. The arrangement and combination with the column $a$ of a false base $t$, made in sections, and secured around the column at the surface of the gronnd, substantially as deseribed.
2. In a supporting commn, the supplementary are-shaped pieces $V$, in combination with the braneliing arms of the column $a$, with or withont the triangular filling pieces $u$, substantially as described.
3. The base-plate $n$, in combination with the ears $m$, arranged to fit the triangular interspaces of the column as ribs or flanges $\underset{2}{2}$, substantially as described.
4. The arrangement and combination, in one picee, of the plate $l$, the eap-plate $i$, and the con-necting-erlinder $j$, substantially as deseribed.
5. The constrnetion of the eap-plate $i$, with its frietion-roller's $l$, snbstantially as deseribed.
6. The arrangement and combination, in the ea-ble-guide $c$, of the wooden fonndation 4 and wooden side beams 5 with the metallie bottom plate $f$ and top right-angled bars $g g$, substantially as shown.
7. The return eable-guide $e^{\prime}$, made substantially as deseribed, by inverting the eable-guide $e$, and eombining therewith the inverted cap $b$, substantially as deseribed.
8. The arrangement and combination of the upper rail $b$, the I-shaped rails or beams $c$ c, and the Trooden filliug $d$, snlbstantially as above deseribed.
9. Arrangement of the main rail b mpon the top of an under rail or bean with a layer or enshion of wood iuterposed between them, substantiully as deseribed.
10. The eolnmn $a$, composed of ribbed segments $p$, in combination with the flanged bars $r$, which serve to unite the segments together, substantially as deseribed.

1g3,004.-T. J. Hatrield, Warsaw, Ind.-Vegetroble Cutter.-Janmary 7, 1868.-The reciprocating bed has a series of oblique eutters, and is operated by a crank. The eabbare is placed iu the hopper, and steadied, and crowded down by the corer, to whieh a lever is attrehed.

Claim. -The eombination of the reciprocating-bed $B$, adjustable knives 1 2 3, plates $\mathrm{B}^{\prime} \mathrm{B}^{\prime}$, arranged With set serews X X, bos D, follow cr $\mathbf{E}$, and springlerer $o$, substantially as and for the purpose herein set forth.

183,005 - Charises J. HaUck, Williamsbmrg, N. Y.-Flower Stand.-January 7, 1868.-The stanid has a series of rests with an upper guide ring connected thereto by standards.

Claim.- A floirer stand, composed of one or more scetions, caeh made of a platform $a$, with a ring $b$, and one or more stindards $c$, supporting a guide ring $d$, all as shown and deseribed.

第: 306 .-TOHN E. HAWKINs, Lansingburgh, N. Y.-Toy.-January 7, 1868. -The pocket is at the top of an axial pin, which is thrown upward to
elerate the ball; the latter is then eaught in the flaring eup.
Claim.-The combination and arrangement of the ball driver or proeket C , and its spindle 13 , with the stock or landle A and eup D, in manner substantially and for the purpose as herein deseribed.
g3,007.-EDWARD Hawthorne, Mountain View, Cal.-Fire-Escape.-January 7, 1868.-Tho supporting picees are connected to the windowframe, and have a eloss-bar with an eye througll Which the hoisting rope is passed from the ear aud brought down again to the ear. The rope is operated by the oceupant of the car, being passed around a belaying pin on the frime.

Claim.-The apparatus, construeted, arranged, and operated substantially as aud for the purpose deseribed.

73,00S.-William Heath, Bath, Me.-Invalid Bedstead.-J wnuary 7, 1868. -The bed bottom lias four jointed scetions, and may be bent to ehange the couch into a chair by the operation of a windlass upon two sido frames, upon which the lower two and the upper section rest; the raising of the head section simultancously acting to lower the foot and leg rest. The knees may be raised by turning the right and left-hand serew rod, whiel draws the wedges up the inclines, and elerates the foot end of the seat seetion.

Claim.-1. The arrangement and the application of the windlass $G$, and its cord $\Pi$, and the gear $g$ and bolt $\%$ thereof, witl the back frame I;, and the main frame A of the bedstead, substantially as described.
2. The combination of the morable braeket N , and its supporting cord and weight $O$, with the soatframe C , ind its arm I , is set forth.
3. The seat-elerating mechanism, and its arrangement with the main frame and the sent frame, as speeified, sueh seat-clevatiug mechanism consisting of the shaf't $H^{\prime}$, its serew or serews $k k$, and one or more wedges I I, and inelined planes K $\mathbf{K}$, to operate togetlier, as explained.
4. The combination of the toggles P Q with the movable bracket $N$, its supporting weight $O$, and arm $R$, as hereinbefore deseribed.

IG,003.-John G. Hitcicock, New Tork, N. T.-IIay Fork-January 7, 1868.-Explained by the claims and illustration.

Ciaim.-1. Holding the tines against end pull by means of the projections or shonders $b$, arranged to loek against the ferrule or eap $\mathbf{C}$, while the latter is fixed on the handle by the serew D , or its eqnivaleat, all snbstantially as herein set forth.
2. The within-deseribed construetion of the forktines $B$, with a shoulder $b$, at the commencement of the root of the tiue, adapted to apply agrainst a solid end of the eap C , substantially as and for the purpose herein set forth.

73,010.-Tames Holland, Conshohoeken, Pa.-Boot.-January 7, 1868.- The poeket formed inside the boot top for reception of valuables is protected from being ent open by it wire ruming around the boot top, beneath the flaps.

Claim.-A metal ring or bent wire d, applied to the upper edge of the boot-leg, within the folds of the strips $A$ and $\Lambda^{\prime}$, as set forth, for the purpose specified.

7:3,011.-D. S. Humpiney, East Townsend, Ohio-Fich Fence.-Jamuary 7 , 1868.-Explained by the elain and illustration.

Claim. -The combination of two or more wires $B$, With the posts $A$ and sluts or piekets I, when seeured thereto by means of the hook-spikes $C$, as speeified.

73,012.-JoIn H. Invin, Chicago, Ill.-Lan-tern.-January 7, 1868. - The air to sn' pport combns. tion is earried downmard through the heated tubes at the outside of the lantern.

Claim.-In combination with the burner of a lamp, and a globe or protector thereof, one or moro tubes or passages $D$, or their equivalent, arranged to operate substantially as specified and deseribed.
239,01:3.-Antiony Iske, Lancaster,Pa.-Alarm Lock for Doors.-Jannary 7, 1868.-The morement of the handle or latch draws in a hooked bar, and
releases the detent of the alarm attached beside the lock.

Olcim.-The combination and arrangement of one or two hooked belts C , lever D , sleeve E , with the arm $B$, on the vibrating plate, with or without its knob $b$, when applied to a lock for the purpose of connecting the same with the bell or alarm, in the manner specified.
g3,014.-Jeremiah F. Johnson, New York, N. X.-Fastening of Jar Cover--January 7, 1868.The side of the metallic lid is pressed inward, forming inclines, which engage those formed on the neek of the jar.

Claim.-The use of two or more inclines in recess on the neck of the vessel, in combination with a metal cap or stopper, with corresponding inclines, substantially as described.
 Trenton, N. J.-Water Heater for Fire Engines.January 7, 1868.--When in the enginc-honse, the boiler of the fire engine is in communication with a heating coil, through which the water continmally circulates. The engine in passing from the engine-honse, automatically closes the commmication, and diverts the current to the condensing coil.

Claim. - The arrangement of the checks A A and E, elastic pipes $F F$, condensing coil $D$, and with cocks B B and D D, levers c d, pin e, compensating levers $b b$, wrenches $a b$, constructed substantially as set forth.

1g 09016.-IsRaEt L. Landis, Lancaster, Pa.Farm Gate.-Tanuary 7, 1868.-Cords pass from posts up and down the road to a lever by which the latch bar is drawn back, so that a draught upon the cord will serve to retract the latch and open the gate.

Claim.-l. The upright lerer K, its spring N, clip M, and latch $P$, when arranged, combined, and operated by the rope $S$ and pulleys $T$, as hercin describet, and for the purposes set forth.
2. The construction and combination of the bent hinge C withits inside block F , as herein described, and for the purposes set forth.
3. The diagonal rail $X$, with its $\operatorname{clip} Z$, when combined and operated with the upper rail $G$, of the gate, as herein described, and for the parposes set forth.
gis, DTy.-JJHN MADDEN and I. G. Haserot, Cleveland, Olio.-Bread Cutter.-January 7, 1868.The knife has two plates, whose edges are inelined to each other, and form together an angular recess, into which the loaf is forced by the sliding plate. The height of the knife, and consequent thickness of the slices, is adjusted by the spiral cam beneath the table.

Olaim.-1. Operating the hinged or jointed table F by means of the cam H, substantially as and for the purpose set forth.
2. The adjustable table $F$ and cam $H$, in combination with the knife, substantially as and for the pirpose set forth.
3. The arrangement of the knife in two sections D D, and jointing the same together, as seen at $J$, in combination Twith a table and slide, for the purpose set forth.
m3,018.-WM. Manning, Chelmsford, Mass.Confection or Cake.-January 7, 1868.-Grated cocoanut and sirup in equal quantities are boiled together to cook tho cocoannt. To this mass an equal quantity of pulverized parched corn is added.

Claim.-A new and improved combination cake, as lierein described, using for that purpose the aforesaid ingredicnts or composition of matter, or any other substantially the same, and which will produce the intended resuit.
rg. $019 .-\mathrm{Lyman}$ Martin, Indianapolis, Ind.Line Reel.-January 7, 1868; antedated Deeember 18, 1867. - The line is wound on the drum within the frame, and passes through the slot of the metallic plate. When sufficient of the line is paid out, the stop pin is put into the framework.
Olaim. - The combination of the frame $A$, clrum $B$, crank $C$, the plate $D$, and pin $G$, for the purpose of a
line reel, all arranged and operating as set forth and deseribed.

3,020.-HENRY S. Matteson, Stockton, Cal.Seeder and Cultivator.-January 7, 1868.-The metallic seed slide is operated by the lever at the end of the hopper. Above each seed aperture is a foot of the rocking agitator, which reccives motion from a crank pin on onc of the ground wheels.

Claim.-1. The beams C $B$, in combination with beams D, and cross-beams I with draw-bar I.
2. The chest $A$, wooden shaft $h$, and iron slide $i$, in combination with crooked pin $k$, handle $O$, cramk $b$, connecting rod $c$, when used and arranged for the purpose herein specified.

1g3,0121.-TAMEs T. McDougall, San Franciseo, Cal.-Apparatus for Collecting Precious Metals.Jantary 7, 1868.-An ordinary sluice box has tubes or bars of copper placed within it, in such a manner as to intercept the stream and cause it to form a suecession of eddies, and bring the particles of gold in contact with the copper.

Claim.-1. A sluice containing obstructing standards, so placed as to convert the current into eddies, substantially as herein described.
2. The irom standards B C, together with the removable copper tubes $D$, or an cquivalent device, constructed and arranged substantially as above specified.
3. The plugs a $a$, for raising and lowering the tubes, substantially as described.
4. The copper plates $b b$, when employed and attached to the sides of the sluice, as and for the purpose herein described.

18:328.—Patrick McIsaac, Waterloo, Iowa.Corn Planter and Plow Combined.-January 7, 1868. -The seed hopper is secured between the moldboard and landside, and the seed slide is reciprocated by a crank on the shaft of a roller running in the furrow.

Olaim.-The herein described arrangement of the several parts constituting the corn planter, and the mode herein described of attaching the same to a common plow, as specified.
v: 6\% -Churn.-January 7, 1868.-The cream is alternately drawn into and ejected from the lower end of the open-bottomed tube by the tightly fitting piston.

Olaim.-Tle tube B, piston $F$, as arranged in combination with the case $A$, and operated in the manner as and for the prupose set forth.

祭, 02 0 .-John Mercier, Detroit, Mich., as signor to Israel Kinney, same place.-Harrow. January 7, 1868. -The beains are loosely connected by stay-chains and the strut-bars, whose ends enter deep radial sockets in the balls. The draft bar turns on a pin at the center of the harrow, but may be prerented from turning by a pin by which it is secured to the disk.

Claim.-1. The blocks or balls A A, \&c., with holes cast or bored, and the rods $\mathrm{B} B, \& c$., when constructed substantially as and for the purpose described.
2. The combination of the above-deseribed blocks or balls $A$ junction with harrows or cultivators, when constructed substantially as described and for the purposes set forth.
3. The disk $G$, the draught-bar $H$, and the pin I, when attached to cultirators or harrows, in the mamer and for the purposes described.
\%3,0.25.-JOHN Mirler, Plymouth, Mich.Sleigh Thunner.-January 7, 1868.-One of the runners is connected to the rim of each wheel by the clips and grib and serew-key. The fore end of the rear sleigh is connected to the rear end of the fore sleigll by the straps, which allow the turning of the fore axle.

Claim.-1. The construction of metal runners, of the shape set forth, provided with clips $B$, and pro vided with means of conneetion, smbstantially as de scribed, and for the purposes set forth.
2. The attachment, construeted from iron straps

H and I, prorided with the adjusting bolt $K$ and the slot $J$, operating substantially as and for the purpose deseribed.
3. The combination of the abore-described runners and attachments, when constructed substantially in the mamer deseribed.

73,036.-CARson Mudge, Née Orleans, La.Cotton Bale Tie. January 7, 1868.-The usual tie plate for hoop iron has circular holes formed in its ends, to enable its use with wire or wire rope.

Claim.-The making of the two additional openings or holes A in cotton ties, designed for use in connection with hoop iron, so that the same may be used With equal ease for fastening together the ends of wire-rope or wire, as hercin described.

73,02y-LL. F. MUNGER, Rochester, N. T.Lathe. Tanuary 7, 1868. - The sliding rest works on wars in front of the lathe, and has a formard, horizontal exteusion. giving support to the tool slicle. Which has longitudinal, trausrerse, and turning motion, and forms a table for the attachment of any article when the machine is used as in pliner. For this latter purpose a stock is secured to the shears, the said stock haring a tool holder sliding thereon, and receiving motion from an eccentric pin on the face plate of the lathe.

Claim.-1. In combination with the lathe-centers, placed reptically, or nearly so, over the fiont of the lathe, the ways $a b$, on said front of the lathe, for the slide-rest to more on, for the purpose of adapting the parts to the different operations, as herein described and represented.
2. The combination of the centering rod mith the mandrel and its adjustable bearings, substantially as described.
3. In combination with a planing or chasing tool, that receires motion fiom the face-plate or mandrel of the lathe, a slide-rest or holder that has a rertical, horizontal, and swirelling motion with reg'tral to said tool, as and for the purpose substantially as described.

78,0æ8.-H. O. Nauen, New Tork, N. T.-Tise Ciamp.-January 7, 1868.-Explained by the claim and illustration.

Clam.- A rise clamp, composed of tro jarrs: 1 , linged together by means of shanks a, and a pirot or pivots $b$, and provided with lips d, on their backs $d$, removable lining $e$, on their working faces, and a spring $c$, which opens the jaws, substantially as herein set fortli.
 Felocipede.-January 7, 1868.-The pawls are jointed to sliding plates, and slip over the iee or gromnd while moviug in one direction, but are effective to cause propulsion while moving in the other direction.

Glaim.-The device for propelling relocipedes, construeted substantially as herein shown and de. scribed.

73,930.-I. W. Norcross, Boston, Mass.-Pulley Block.-Jamary 7, 1868.-The cheelis, which are cast in semarate pieces, are attached together by rirets, which piass axially through the studs, which may be cast with the eyes. The upper eye is east open, so as to allow its insertion into the eye of the hook, a section of the stul being cast on each ent of the eje-piece. Anti-friction rollers may be placed in recesses of the check-pieces to receive the bearing of the pulley journals.

Claim.-1. In pulley bloeks, making the sereral cheeks by casting them independently and separate from the other parts, substantially as ileseribed.
2. The cast studs E , interposed betreen the checks, and held thereto by rivets or other suitable fastenings, substantially as described.
3. Dividing the stud E , and combining the same with the eye D , substantially as described.
4. The skeleton partition of cheek in, substantially as described.
5. Arranging anti-friction rollers $I$ beneath the axles of the pulley, substantially as above deseribed, in combination with a pulley block of any form or construction.
6. The hollow partition $\Pi$, made substantially as described, for the purpose of containing the antifriction roller, one or more, to support the axles of the pulleys, and to form a recess for the shank of the eye.
g3,031.-C. D. Oixistead, Williamsport, Pa. Saw Mill.-Jinuary 7, 1868. - The lower end of the saw is connected to the "section of a ball" which fits into a suitable soclect in that side of the stirrup which is fast to the cross-head, and is adjusted ly set screws traversing the detachable part. The slide head has a conrex back resting against the stationary column, and is adjusted by side wedges.

Claim.-1. The stirrup, with its fast and loose sides, holding in one side the section of a ball, and prorided with set serews for adjusting purposes, all arranged and constructed as shown and described, and for the purposes indicated.
2. In connection with the stirrup, as shown, the construction and arrangement of the rarious parts which constitute my muley-block, as deseribed and for the uses indicated.
73.032.-Citamles E. Palarer, Manchester, N. IL.-Steam Trap.—January 7. 1868. - The coupling is formed of non-oxidizable metal, and is screwed to the end of the escape pipe.

Claim.-The morable valre-seat C , constructed with a partitioned coupling $\mathrm{A} B$, substantially as set forth.
73.033.-GEORGE Patterson, Augusta. MichRail Set.-January 7, 1868. -The hooked ends of the frame take over the rail, aud the press-serew is brought against a point between the ends of the fiame to straighten the rail.

Claim.-The within described device, C D E, adapted for bending or straightening railroad rails, substantially as specified.
\%3,03.-Joshua L. Phillirs, Washington County, Miss.-Cotton-Bale Tie.-January 7, 1808.Explained by the claim and illustration.

Claim.-The derice herein described, consisting of the central bar A, when provided with the wings IS $B^{\prime}$, in which, at the points a $a^{\prime}$, are groores to reeeire the band, a longitudinal opening for the ends of the band, and holes $d d^{\prime}$, as and for the purpose herein set fortll.

㘶3,08.5.-D. C. Pience, Clayton, N. Y.-Anchor. —Tantary 7, 1868; antedated İecember 28. 1867. The side frame keeps the anchor in proper position for engaging the bottom, and is attached as stated in the claim.

Claim. -Tho fenders or rods C C D, constructed as shown, attached to the flukes and stock ot the anchor substantially in the manner as and for the purpose set forth.
g3, 0.36.-D. C. Pierce, Clarton, N. T.-Anchor. -January 7,1868 ; antednted December $25,1867$. Whe fluke is pivoted to the frame so that its point will decline ank engage the bottom on whicherer side the fiame mar lic. Projections on the lead of the fluke hok the same to position for entering the bottom.

Claim.-The shackle E, in combination with the bats $C$ C , and the piroted fluke $A$, all arranged substantially as and for the purpose specified.

73,0:3y.-Joserit Pidkington, Frankford, PaPicker Ifotion for Looms. January 7, 1868. -The horizontal arm at the lower end of the picker-staff is slotted to receire a cross-pin at the end of a meighted lever', by which its back-stroke is effeeterl.

Claim.-The combination of the weight 2 , shaft O , arm $g$, and staff d, all constructed and arranged as and for the purpose described.
 N. Y., assignor to Downs \& Co.'s Manufacturing Conipant, same place.-Pump Valve.-January 7, 1863. -The deviee is intended specially for driven wells. The disk is of rubber, or other elastic material, so as to make a tight joint upon the raised valve seat when sand is present in the water.

Claim.-The combination of the concave disk $g$ of the valve with the elevated seat $a$, arranged as deseribed, and operating in the manner and for the purpose specified.
\%3,039.-Thomas L. Reed, Providence, R. I.Lock Coupling for Gas Fixtures.-January 7,1868 ; antedated December 26, 186\%.-One portion of the coupling has a socket with an annular recess at its inner end to receive a packing ring, and a spiral groove in its side to engage a pin projecting from the eylindrical end of the other part of the eoupling, whose end bears upon the paeking.

Claim.-The conpling, eonstrueted substantially as deseribed, with a male and female sleeve, and an annular packing cavity, and a helical groove, and a peg or stad, in combination, all as and for the purpose set forth.
Also, the paeking ring, composed of India rubber and leather united together, substantially as deseribed, for the purpose specified.

173, 40. - Thomas L. Reed, Providence, R. I.Gas Socket.-January 7, 1868; antedated Deeember 26, 1867.-The lower end of the gas burner is tapering, and fits into the annular packing of the socket.

Olaim.-The shell of the soeket, construeted with a eylindrieal carity and a shonlder $e$, and a lip or ledge $i$, as deseribed, and in combination with the paeking $n$, construeted substantially as and for the purpose set forth.
'g. 9,041 .-Thomas RHOADS, Ottawa, Ill.-Apparatus for Separating Gold from Ores.-Januar'y 7, 1868.-By the deseribed arrangement the crushed quartz is fed continuously into the separator or amalgamator, and beneath the body of lead or mereury. It is maintained for a long time in contaet with the metal forming the bath, and is kept continuously moving. When lead is used the ore is previously heated, to avoid ehilling the lead.

Olam.-The inside double helix C , the helix B , inside kettle $A$, the feed pipe $I$, and the heating flue II, when in combination with each other, eonstrueted substantially as and for the purpose deseribed in the foregoing specification.

599042-Arcimbald Rice and Lewis Leach, Fresno, Cal.-Driving Bridle.-Jannary 7, 1868.The reins pass throngh eyes of snap hooks upon the bit rings, and through the gag loops to the eheck hook. The gag straps pass over the poll and diagonally down the face to the bit rings.

Claim. - The combination and arrangement of the straps a a with loops or pulleys $c$ c and $d d$, with the reins A hitehed to tho post hook, and rumning through the loops or pulleys $c e$, and to the hames or saddle, substantially as cleseribed.
rog, 048.-Willian H. Richards, Auburndale, Mass.-Device for Securing S'toppers to Bottles.January 7, 1868. -The hasp collar eneireles the bottle meek beneath the bulb, and has a scries of staple slots to render it adjustable to snit the size of the neek. It is eonnected to a eap whieh receives the top of the eork, and is seenred by a padlock.

Claim.-A device for scemring corks or stoppers to bottles, demijohns, \&e., substantially as deseribed.

93, 044.—John C. Rictiandson, Newark, N. J., assignor to himself and James H. Prentice, Brooklyn, N. Y.-.Machine for Pouncing IIats.-Jannary $\%$, 1868. -The bloek frame and the frame of the pouneing disk have partial rotation to bring every portion of the surfaees iu eontaet. The pouncing disk shaft is elevated somewhat above that of the bloek. The sand paper is confined to the berel edge of the disk by an inelosing ring having grooves to receive the latehes at the rear side of the disk.

Claim.-1. Mounting the partially-revolving frames B and C , and their connections on the centers $b$ and $c$ arranged ont of line with the shafts $D$ and M, and arranged to operate relatively to cach other, substantially as and for the purposes herein set forth.
2. In pouneing maehines, the sand paper $W$, or its equivalent, the berelled parts $P$ and $R$, and the buttons V and grooves $r$, or their equivalents, com-
bined and arranged for joint operation as a pouneing wheel, substantially as and for the purposes herein set forth.

173,015.-Elisha RobBins, Worcester, Mass.Check for Pieker Staff.-January 7, 1868.-The spring brake binds on the top of the pieker staff When it is in its backward position, thus holding it to plaee and serving to prevent its blow against the shuttle box.
Claim.-The arrangement and application of the adjustablo spring brake with the pieker staff and shuttle box, as deseribed.

Also, the combination and arrangement of the adjustablo spring brake and the arch spring with the shuttle box, the pieker, and the sword of the lay, the whole being substantially as specified.

73, 1016.-TOHN B. Robertson, New Orleans, La.-Stump Extractor. - January 7, 1868. - Tho frame is supported on broad-tread wheels when moving from plaee to place, and has legs to let down for additional support when in operation. The hoisting lrook is eonneeted to a screw rod, engaged by a nut, whicl is turned by a sweep.
claim. - The truncated pyramidal frame strueture B C, when the same is supported at its front end by the axle of the whecls $A$, and at its rear end by the pivoted adjustable standards E , in combination with the rod F , serew, collar, or nut N , metallie plate M , eirenlar collar $b$, and piroted standards $b$, when these several parts are eonstructed and arranged for conjoint operation, substantially as herein described, for the purpose set forth.
\%3, 17. - D. D. Robinson, Niles, Mieh.-Hook for Whifletrees.-January 7, 1868.-Explained by the claim and illnstration.

Claim.-The hook C , piroted in the groove at the outer end of the soeket $A$, connecting ${ }^{\circ}$ closely to the projection $B$, forming a perfect loop, and held in place by the spring a, when all are constructed and arranged as herein set forth.
\%B, 018.-Ichabod R. Rogers, Lynn, Mass., assignor to Geonge E. Bartuett, same placeLastirg Boots and Shoes.-Jamuary 7, 1868; antedated Jnly 8, 1867. -Improrement on the patent of Gilbert Hamlis, June 26,1866. A line of loop stitehes is run along the midale of the insole; the edge of the upper, when "lasting," is conneeted to the line of stitches by sewing.

Claim.-An inner sole, $A$, of any suitable material, provided with a row of stitehes $a$, by whieh the upper leather is united to it by stitehes, substantially as and for the purpose sct for'th.
g3, 49.-Willian H. Rogers, Farlen, Ml.-Gate.-Janmary 7, 1868.-The top rail of the gate is extended baekward and weighted so as nearly to balanee the gate. The uprights and posts are conneeted to the bars by pirots. The rear end of the top bar has ropes whieh pass around pulleys at the bottom of the gruide posts, and from thence to posts up and down the road. In opening, the gate is tilted backward, and eloses together on the prineiple of the lazy tong's.

Olaim.-1. The combination of the gate $a a^{\prime}$ witl the cord $n$ and the roller $u$, sheares $v w$, and handle $m$, or an equivalent, arranged for the purpose of opening the gate sulastantially as deseribed.
2. The combination of said gate with the cord $e$ and the sheares $h i$, and handle $l$, or an equivalent, for elosing the gate, substantially as described.

193,050.-GEORGE E. Rust, Boston, Mass.Horseshoe Cushion.-Janmary 7, 1868.--Explained by the elaim.

Claim.- The double pad or cushion, composed of leather and felt or other fibrous eloth, and interposed between the hoof of the horse and the shoe, substantially as lerein deseribed.

9\%9051.-THEODORF SCHEFFLER and HENRY Monrison, Paterson, N. J. -Traction Engine. January 7 ', 1858.-Double elutehes are attaehed to the driving shaft in eommeetion with levers aeted on by a steam piston. The elutehes are connected with
the driring wheels by chains. The driving engine and truck for the forward whecels turn together on a frame through which the steam and exhanst pipes of the eylinder pass. The steering is aecomplished by hydraulic power operating the forward truek througli chains and a dram.

Claim.-1. In traction engines for common roads, supporting each wheel on an independent short axle, running in suitable bearings, situated on oach side. and close to the wheel, in the manner and for the purpose described.
2. The arrangement of the loose clutch $J$ and the internal and cxtermal clutches $K$ and $L$, in com bination with the levers $a$ and $b$, or their equivalent, onerated by the steam erlinder M, the whole being arranged and combined in the manner and for the purpose substantially as set forth.
3. Connecting the driving wheels H with the driring shaft $F$ through chains, or their equivalents, passing over clntches, arranged and operating snbstantially as specified.
4. Driving the formard mheels P P by a separate and independent cylinder or erlinders attached to the movable truck $Q$, and turning with said truck and wheels.
5. The center pin R , fast to the truck Q , with suitable passages for the steam and exhaust through said center pin in combination with the socket $S$ and guide frame T , supporting the smoke box C , or end of the boiler, the whole being constructed and arsanged in the manner and for the purpose described.
6. Operating the ropes or chains that turn the forward treck and whecls of the engine, to guide or direct its morements by neans of hydranlic cylinders operated by a force or steum pump, substantially in the manner and for the purpose set fortly and deseribed.

73,052.-Avoliph Schlingman, Alexandria, Ohio.-Bed Bottom.-Jannary 7, 1868. - The longitudinal cords pass through transrerse slats, and are tightened by a roller at tho head.

Claim.-1. A ber bottom, consisting of the cord $F$ and trausverse perforated slats $G^{1} G^{2} G^{3} G^{4}$, With or without the longitudinal stiffening slats $H$, the cord being rore forth and back through said slats, and hold at the ends by pins, smbstantially as described and represented.
2. The combination, with the cord $F$ and transrerse $\mathrm{G}^{1} \mathrm{G}^{2} \mathrm{G}^{3} \mathrm{G}^{4}$ of an acljusting or tightening mil E or K , applicd and operating substantially as described and lepresented.

73, $053 .-C a r l$ Schumann, Freiberg, Saxony, assignol to EnwakD H. Jackson. Boston, Mass. Rock Drilling Machine.-January 7, 1868.-The drill is automatically partially rotated at each stroke, and is mored formard as the hole deepens.

Claim.-1. Imparting a forward and rotating movement simultancously to the valye rod of a rocli drill, by means of the levers $e^{\prime} e^{\prime}$, and their connections, substantially as deseribed.
2. The rotating device, consisting of the lerers $c^{\prime} e^{\prime}$, oprerated by means of the guide $b^{1}$ on the piston rod E', the link $f$, suide rod $f^{\prime}$, pawl o, piroted on the guide rod $f^{\prime}$, pawl $o^{2}$, pivoted on the gaide picee $n$, and the guide pieces $m n$ and ratehet $\pi$ meel $H$, substantiolly as doscribed.
3. The deriee for operating the valve rod, consisting of the lerers $e^{\prime} e^{\prime}$, operated as described, the forked lerer $h$, toothed wheels $k k$, serew rod $j$, bar $i$, and bar $l^{\prime}$, provided with shoulders $l$, snbstantially as described.
4. The derice for rotating the piston rod and rock drill, consisting of the levers $e^{\prime} e^{\prime}$, operated as deseribed, lever a, slottni gnide rod $g^{\prime}$, pawl $p$, piroted to thu shoudder $d$, and the piston rod $\mathrm{E}^{\prime}$ and slotted ratehet wheel $c^{\prime}$, substantially as deseribed.
5. The combination of the pieces I I', with the mortised shoulder's J, cylinder $K$, with tong'ue $s$, clamp L, and ratchet wheel H, operated substantially as set forth.
6. The arms e e, extending from the back plate $G^{\prime}$ of the valre chest $G$, forming the bearing of the main shaft of the device, substantially as described.

23, $054 .-A$. B. Silater, Paincourtville, La.Defecating Cane Juice.-Jauuary 7, 1868.-The fumes
of sulphur are passed through the aritated mater to cause a nore thorongh purification of the fumes.

Claim.-The supplemental or additional revolving cylindrical water cister'n 13, when constructed and operating in connection with Putterson's cylinder A, or any other cylinder substantially the same, and specially employed for purifying the fumes of sulphur to be subscyuently used in the defecation of canc juice, as set forth.

73,05.̄.-Calvin D. Smitr, Baldrinville, Mass. - Journal of Axles or Shafts.-Jannary 7, $1868 .-$ A ciremmferential groove is formed in the journal, and a longitudinal groove extends from this groove in each dircetion. A hole is bored from the end of the journal to the intersection of the g'rooves. The hole has a screw stopper at tho onter end.

Claim.-The arrangement of the inclined passage $c$ and the grooves re and $b$, together and with the journal, as specified.

93,0.56.-JJOHN STARK and Micimal Stark, Buffalo, N. Y.-Machine for Mashing and Boiling Wort for Beer.-January 7, 1868.-The boiler has steam pipes beneath the lower perforated false bottom. A second false bottom consists of a perforated plate which is connected to the mash-bucket wheels, and is raised therewith by means of the rertical serews. 'The vertical screws ongage by serew gearing with a shaft inade to lotato by clutching to one of two loose pullers revolving in opposite directions upon it. One of the mash.bueket shufts engages by a bevel-sear wheel with a similar wheel having rertical movement on a vertical shaft, and connectod thereto by a spline key. This bucket shaft drires the other by spur wheels.

Claim.-The combining of a beer mashing and boiling apparatns, in the manner and for the purpose set forth, or any other principally the same.

73,05\%-LEVI Sterens. Washington, D. C.Manufacture of Illuminating Gas.-Jannary 7, 1868. - The stcam space of the generator communientes with an annular chamber surrounding the exit flue, and the lydrocarbon is forced into this chamber by an injecting apparatus. The mixed gases are taked through a retort filled with coke or iron parings.

Claim.-1. The use of a close chamber for mixing a hydrocarbon and hepdro-oxyen under heat and pressure, which mixture is to be afterward retorted, to convert it into a fixed gas for illuminating purposes, as deseribed.
2. In combination with the close leating or mixing chamber, an injecting apparatns, worked by a rolume of escaping steam, to force the hydrocarbon into said ehamber against the pressure of steam therein, substantially as described.

28:358.-Isatah Tillson, Sonth Abington, Mass. - Railway Chair.-January 7, 1868.-The ends of the rails are held by the jaws, which havo bearing against the web froin the lower to the upper flange, and are held in their recesses by the corering plates, Which slide in dovetail grooves. The jaws are some what inclined to the horizon, and hold tho rail ends slightly above the bottom of their recess in the chair ; the passing wheel serving to depress them to their hottom bearing, and cansing the jars to clamp tightly.
Claim.-The arrangement and combination of tho jarr arms and their chambers in the chair with the jaws and the rails arranged within the chair, as set forth.

Also, the combination of the coveriner plates with tho jars, their arms. and the chamber's for receivin such arms, as set forth, sueh corering phates serving to prevent the jaws and their arms from being thrown ont of the chair by vertical movements or vibrations of tho rails.

Also, in combination with the chair, movable jaws to act agaivst or grasp opposite sides of the rail or rails, and be pressed against such by a weight on wheel while resting on or passing along on such rail or rails, or cither of them, as set forth.

98,059.-Llafayette L. Treman, Ithaea, N. Y. -Windlass.-Jannary 7, 1868.-Explained by tho claims and illustration.

Claim.-1. The enlarged ends of the levers extending and bifureating over the ratehet wheels $\mathbf{E}$, so as to embraec the said ratchet wheels by a sliding surfaee at $\Gamma^{\prime \prime \prime}$, as set forth.
2. The adjustment of the said levers and ratchets, made as described, on the shaft $C$ within the bits $A$, for the purposes speeified.
3. The combination and arrangement of the le. vers, ratehets, and elieks, constituting the working parts of the wiudlass, within or iuside of the bits, for the purpose of giving free seope to the chain, cable, or rope on the heads, and a roiding their interference with the said moving paits, with the heads on the ends of the shaft, outside of the bits, as set forth.

73,060.-Charles Volkmar, Baltimore, Md.Painter's' Canvas. January 7, 1868. - The callvas has applied to it a compound of albumen aud white lead, or of albumen alone, and the latter is then eoagulated by boiling.

Claim.-A canvas or other material prepared for receiving colors or other substanees by means substantially as herein deseribed.

73,061.-JOHN N. Wallis and Theodore WalLIS, Fleming, N. Y.-IIarrow. January 7, 1868.The tooth is fixed in a thimble whieh turns iu a bisceted nut serewed into the frame, and forming the box of the said thimble.

Claim.-1. The flauged eylinder C , when used as and for the purpose specified.
2. The double nut or shell piece $F$, when used in the manner and made to subserve the purpose above set forth.
3. Supporting the teeth of drags or harrows by means of a eylinder whieh shall allow the tecth to rotate as and for the purpose speeified.

73,062.-Preston Ware, Newton, and Calvin R. Tilton, Tisbury, Mass.-Mode of Closing up Boot Legs.-January 7, 1868.-Explained by the claim.

Claim.-Making a boot leg whose diverging edges are united by a lap seam by machinery, substantially as described.

83,053.-ALBIN WARTI, Stapleton, N. Y.Sewing Machine.-January 7, 1868.-Explained by the claims and illustration.

Claim.-1. Making the needle slide M and the guide rod $P$, either or both, in the form of tnbes, closed below, so as to prevent oil used in lubricating them from falling on the table, substantially as described.
2. The combination of the guide rods $O$ and $Q$, with the holding plate S, substantially as and for the purpose described.
3. Making the needle and pressure guide rods 0 and Q, either or both, hollow, to allow the escape of air, substautially as described.
4. The combination of the thread guide $s^{7}$ with the presser foot, snbstantially as deseribed.
5. The hook 28, formed substantially as and for the purpose deseribed.
6. The combination of the grooved shuttle with the hook 28, as and for the purpose set forth.
7. The diseonnecfed friction pins in the shattle, arraneed substantially as described.
8 . The shuttle $\mathbf{S}^{\prime}$, constructed as shown and described.
9. The spring L, arranged so as to bear upward against the needle slide, substantially as deseribed.
10. The combination of the eccentrie $r^{7}$, universal joint $G$ I, rod $F$, and needle lever $C$, constructed and operating substantially as and for the purpose described.
11. The tension device $X \quad y$, and the take-up $W$, arranced aud combined substantially as described.
12. The combination of the reversible slide $r$, the nut $n$, having arms $p, p$, and the rock-shaft $u$, having toes $t t$, substantially as described.
13. The lever $w$, provided with two shoulders, 11 , in combination with the spring $x$, substantially as described.
14. The adjustable plate 7 , for regulating the length of the stitches, in combination with the jarrs 55 of the feeding apparatns, substantially as described.
15. The box that holds the feed rheel, composed
of the rigid plate 11, the spring plate 12 , and the elastie rings 14 and 16 , subsantially as deseribed.
16. The hollow axis in whieh the feed wheel turns, in combination with the hollow hub, elosed at one eud, substantially as shorm and deseribed.

193,064.-Albin WARTH, Stapleton, N. Y.Sewing Machine.-January 7, 1868.-The serring mechanism is secured to the table by a swirel shat beueath the throat picee to admit of turning in either direetion. 'The palley through which motion is imparted is nouuted on the cam shaft, around whieh the mechanism turns. The serving deviees are explained by the elaims and illastration.

Claim.-1. The arm D and brace H , in combination with eaeh other and with the shaft C , table $A$, and platform $G$, substantially as and for the parpose deseribed.
2. The independent take-up $K$ and eam $E$, in combination with the double-pointed shuttle S , constructed and operating substantially as and for the purpose set forth.
3. Making the shoulders $h$ of the double-pointed shuttle $S$ radiating from the eenter of the shuttle laee, substantially as and for the purpose described.
4. The arrangement of the winding attachment $m$, in combination with the elastie ceuter $j$, substan tially as and for the purpose set forth.
5 . The cap $k^{\prime}$, in combinatiou with the elastic center $j$, aud with the shuttle race, construeted and operating substantially as and for the purpose described.
6. The looked pin $p^{\prime}$, in combination with the pin $p$ in the shuttle, substantially as and for the purpose set forth.
7. The movable center $v$, in combination with the adjustable center point $r$, construeted and operating substautially as and for the purpose set forth.
8. The adjustable cam $\bar{M}$ on the main eam $\mathbf{E}$, eombined and operating in connection with the feed bar L, substantially as and for the purpose set forth.
forth. The recess $w$ in the presser foot, in combi nation with the adjustable spring $x$, constructed as described, which keeps the braid up against the shonlder $y$, substantially as and for the purpose set forth.

73,065.-JACOB D. White, Kilbourne, Ohio.Shecp Rack.-January 7, 1868.-The rack is piroted at bottom and settles down as hay is withdrawn.

Claim.-A feeding-rack or manger a a $a, b b, c$ c I I, prorided with an inclined hinged lid or corer, $d d$, and a self-adjusting feed rack, $g$ g $g^{2}$, J J , which is held in a vertical position by the pieces of leather $h^{2} h^{2}$ affixed to cach end of the rack, and so arranged as to pross backrrardly on the fecding material by its own grarity, without any auxiliary appliances, eonstructed and arranged substantially as herein shown and described, for the purpose set forth.

73,068.-JOHN B. WOOD, Cranstou, R. I.Attaching Fandles to Dippers.-January 7, 1868.Radial, wedge-formed picces are removed from the end of the handle entering the socket, to prepent the fracture of the latter by expansion of the wood owing to moisturc.

Claim.-Slitting or otherwise remoring a porfion of the material of the. stick or handle whiel is held in the metal soeket piece, when combined with the metal soeket, substantially as and for the purpose deseribed.
\%3,06\%.-ENOCH S. YeNTZER and AlFRED K. MCCAIN, Ottawa, Ih.-Feller for Seving Jachines. - January 7, 1868. -The "feller" is attached to the presser foot. One of its edges is bent so as to form a tapering, turuing position. A gange lies close to the seam first made.

Claim.-1. The attaehment of both the single turner $a$ and the gauge or guide $b$ to the prosser-foot, by the means and in the manner substantially as herein deseribed.
2. The single turner $a$, in combination with an adjustable gauge or guide $f$, adapted for felling seams, substantially as described.
3. The attachment of the turner $a$ of a feller to an elastic holding plate B , substantially as deseribed.

73,06S.-JOHN Allen and Cifarles E. F Lewis, Washington, D. C.-Lamp Chimney Fastening. January 7, 1868; antedated December, 24, 1867.-The annular chimney catch is bisected, and one sectiou hinged to the other at one end, and engaged to it at the other by a thumb screw.

Claim.-1. The cireular and groored holder, dirided into segments, operating on hinges, and held by fastcnings, as herein described and for the purposes set forth.
2. The use of an clastic or rubber ring, fitted into the groove of the holder, for the purposes set forth.

73,069.-John F. Allen, New York, N. Y.Valve Gear.-January 7, 1868.-The two eccentries are connected to a link-motion, which is adjusted by connection to the governor stem.

Claim. - The arrangement of the gorernor and link-motion with reference to the wrist-motion, cons.rueted as described, to produce an automatic control of the induction valves, substantially as specified.
$73,070 .-$ Thomas A. Ballou, Clereland, Ohio.Friction Roller for Band Saws. January 7, 1868.Anmular pieces of raw hide (edge outward) are confined betwcen the flange of the pulley and the annular follorrcr.

Claim.-'The roller $A$, consisting of the head $A^{\prime}$ and follower piece $D$, and pieces of raw hide $C$. clamped between the head and follower by means of clamp screws I, all constructed to operate substantially as described.

73,071.-Truman G. Beecher, Beaver Dam, N. X.-Railway Switch.-January 7, 1868. -The derice forms a raised connection between one track and a parallel track beside it.

Claim.-1. The rails of a portable switeh, coustructed with flanges, for attaching them to the main track of a railroad, aud locking them in position, substantially as set forth.
2. In combination with such rails the ties D , constructed substantially as described.
3. The ties D, formed with flanges, arranged substantially as set forth, to form locks to hold the tie on the bed rail, when in proper position to sustain the temporary track.
4. So censtructing the rails of a temporary switch that the temporary track may be carried orer the bed rail, said portable rails being formed substantially as set forth.
5. In combination with the tie D , the brace $\mathrm{D}^{1}$, so arranged as to act both to support the rail laterally and to form a chair to hold the rail down, substantially as described.

73, 182.JJonas Berger, Knoxville, H1.-Key Coupling for ITusical Instruments.-Jannary 7, 1868.-Improvement on his patent May 14, 1867 . In operating the oetare the first key of the same is pressed down, the lever of the coupling depresses the slide in the groove of the standard, and thus operates the valves without depressing the octave key.

Claim.-1. The construction of a key coupling, in which the octave is operated mithout depressing its key, substantially in the manner and for the purpose as herein specified.
2. The construction of the key-board F with standards E, and providing the same witle groores and slides a in combination with the strilps G, crosspicces $f$ and $c$, standards D , ralres C C , and springs $a$ a, all arranged substantially in the manner and for the purpose as herein specified.

73,073.-WILliam W. Biercie, Cleveland, Ohio. - Apparatus for Carburetting.-January 7, 1868.Improvement on his patent April 1, 1867. The carburetting ressel is immersed in water in the tank, into which the lower end of the gravitating air holder dips. The air from the holder passes into a chamber communicating with the central chamber of the float, and passes radially through the perforated plates forming the sides of the annular chamber, containing the fibrous material, which is supplied with the hydro-carbon through vertical tubes passing through the sustaining chamber. From the anumar carbu-
retting chamber the carburetted air passes to the exit pipe.

Claim.-The immersed carburetting ressel $Z$, with its coutained float $D$, in combination with the gravitating air holder M , tank L , and inverted siphons F I Q R, when arranged and employed substantially as and for the purpose set forth.

73,074.-Georg Bockstaller, New York, N Y., assignor to Lewis Scinveider and W. W. Ifc-KAY.-Cane and Umbrella Combined.-Jantrary 7, 1868 ; patented in Bararia July 17, 1862.-The cover has a hole for traverse of the stick end and eyes to pass orer the ends of the ribs. It is detached when the article is used as a cane, in which case the sheath is drawn over the frame-work.

Claim. - The combination of the cover, detachable from the stretchers and fiom the stick and the sheath $F$, arranged to take the place of the cover, and to give to the umbrella the appearance of a walkingstick, all as sct forth.

73,075.-Elisifa Broad, St. Anthony's Falls, Minn.-Cant Hook.-January 7, 1868; antedated July 8, 1867. - Explained by the claim and illustration.

Claim. - The plate $D$, witl its ears and stops $x x$. as shown and described, whereby the hook C , as constructed, is hinged to the landic a and prerented from falling too far back or formard, suljstantiatly as herein specified.
73,076.-STEPHEN D. Carpenter, Madison, Wis. -Construction of Lumber Wagons.-January 7, 1868. -The tongue and coupling reach are connected to an iron frame betwcen the bolster, by which tho lounds and ordinary fiftli wheel are dispensed with. The reach is adjustable in length, having upper and under parts engaging each other by ratchet faces, held in contact by a ring and wedge. The end boards have pins entering the box bottom, and transperse rods which enter recesses in the sides, and are engilged by links hinged to the box sides.

Claim.-1. 'The rocker' block and the coupling block attached to the pole, for the purposes and substantially as herein deseribed.
2. The manner of fasteniug the stakes to the bolster, for the purposes and substantially as herein described.
3. The manner of fastening the reach together and operating the same, the cast-iron socket C, the sleeres and wedges, the shank E , and the wrought iron fillet for strengthening the same, for the purposes and substantially as herein set forth.

73,077.-A. J. Cilase, Boston, JIass.-Watch key Protector.-January 7, 1868.-The loop engages the ling of the key and retains its point within the bolt.

Claim.- A rulcanızed India-rubber key gruard consisting of the bulb $d$ and loop $f$, made substantially as and for the purposes herein shown and set forth.

173,078.-Pascal P. Cimlld, St. Louis, Mo., as. signor to S. R. Fox Manumacturing Company, same place.-Combined Latch and Bolt.-Jammary 7, 1868. -The latch is slotted where piroted, so that it can be mored endways into the staple of the striker and perform the office of a bolt.

Claim.-The sliding-bolt latch C , in combination with the keeper and striker $D$, the latter being constructed as described, with rebated projections $l^{2}$, which act as strikers for the latch when it is used as such, and the hasp rail $d$, which confines the latel when acting as a bolt, as shown and described.

73,075.-William H. Coombs, Fort Wayne, Ind. -Machine for Pressing Brick.—Wanuary 7, 1868.The partially-dried brick is placed before the feerler, and by it moved into the course of the pluncer, by which it is foreed into the mold. On the rettirn morement the bottom plunger is drawn forward and cjects the pressed brick from the mold.

Claim.-1. The improved brick-pressing machine, constructed and operating substantially as herein described.
2. In combination with the mold in which the bricks are pressed, and a plunger or piston, ope-
rated by a crank and pitman, to press the briek in the mold, the movable baek piston $P^{\prime}$, moved by the means and in the manner substantially as herein deseribed, to remove the pressed brieks from the mold.
3. In eombination with a plunger or piston, operated by a erank and pitman to press the brieks in the mold, the feeder $i$, operating in the manner ind by the means substantially as herein deseribed, and for the purpose set forth.
4. In combination with the mold, and a pressing plunger or piston, the elastie backing $\mathrm{O}^{\prime}$, substantially as and for the purpose set forth.

73,080.-William Cooper, Deposit, N. Y.-Ifelodeon.-January 7, 1868. -The dip of the lower lieys is automatieally regulated by the pressure of air in the reeciver. The two bellows have eaeh a reeciver, by whieh one portion of the seale may be played loud and the other soft. Communieation may be opened between the reeeivers.

Claim.-1. Graduating the dip or depression of the keys by meehanism eontrolled by the reeeiver, substantialy such as hercin deseribed, for the purposes speeified.
2. The two receivers $A$ and the two exhausters, with their operating pedals so eombined that the aforcsaid reeeivers may be worked either together or separately, at the pleasure of the player, substantially as herein set forth.
3. The slide $b$, or equivalent device, arranged in such relation with the two receivers that the latter may be cither separated or made to communicate with each other, substantially as and for the purpose herein set forth.
gB,081.-WILLIAM H. DamRON, ROBERT H. MASSEY, and Lorenzo F. Whitman, Maeomb, Ill.Oultivator and Plow.-January 7, 1868. - The wheels are adjustable laterally and vertieally in relation to the frame, so that the machine may be adjusted to operate either as a gang or snbsoil plow.
ctaim.-1. The combination of the wheel $a$ with the wrist $e$, sliding ehases $e^{\prime}$, and eross beam $a^{\prime}$, as and for the purpose deseribed.
2. The eombination of the plow beam $c$ with the sliding crotehes $i$, the cross beam $a^{\prime}$, the guide $n$, and slotted eross beam o, substantially as set forth.
3. The eombination of the plow beam $c$ with the crotches $i$, provided with the holes $i^{\prime}$ and pins $k$, as and for the purpose set forth.

7\%,082.-SaMuel Darling, Bangor, Maine.Straight Edge.-January 7, 1868. -Explained by the claims and illnstration.

Olaim.-1. A straight edge, hardened at its edge or edges and not at its eenter, substantially as de seribed.
2. Straight edge, having a hardened cdge or edges, aud admitting, when warped by hardening, of being bronght into true, substantially as deseribed.
3. A straight edge, made of tro or more thin picecs, having onc or both edges hardened, for the purpose of making it thieker, substantially as deseribed.
4. A straight edge, eomposed of a thin plate, with hardened edge or edges, and a sipporting bed or plate, substantially as deseribed.
5. A straight cdge, eomposed of two or more hardened straight edges, secured end to end, upon a supporting bed-plate.
6. A straight edge, when eonstructed as herein set forth, whether the same be used as a single edge or with two opposing edges, as in a gauge, substantially as cleseribed.
7. The mode herein described of under-graduating the straight edges to eompensate for the stretch in hardening.
8. The process herein deseribed of redncing the sraduated edges to the proper standard by tem. pering.
\%B;032.-JOHN H. DuHME, Cincinnati, Ohio.Steam Generator:-Jannary 7, 1868.-Explained by the claim and illnstration.
Gtaim. - The steam boiler construeted as deseribed, cousisting of the seetions C placed one above the colisisting of the seetions end connceted together at the onds by means of the pipes $a$; said sections eonsisting each of the
corrugated longitudinal plate $c$ and corrugated transverse plate $d$, seeured together at their points of interseetion, all arranged as deseribed, as and for the purpose speeifiod.

73,084.-Charles R. Ellis, Brooklyn, N. Y.Boiler for Heating Apparatus.-January 7, 1868. Eaeh one in the vertieal series of pipes has an upper and lower thimble at eaeh end, communieating with the pipes immediately above and below. The pipes are hold together by stay rods traversing all the thimbles. The pipes are somewhat inclined, and pipes from the heaters eommunieate with the lowest and highest eorners of the series.

Claim.-A series of pipes for a hot-water heating apparatus, formed with the water-way thimbles near the ends of the tubes, in combination with the pipe ( $g$ or $h$, ) having a range of thimbles on one side, the whole being connected together by tie-rods, as set forth.

73,055.-JoHNP. ELLIS, Flushing, N.Y.-Water. proof Safe.-January 7, 1868.-One or more eases or bags are inelosed in an outer ease, and the whole may be immersed in water or buried.

Claim.-A water-proof safe or reeeptaele for papers and other valuable doeuments, eonstrueted substantially as herein specified.
ge,086.-Henry Farmer, Pontiac, Mieh.-Potato Planter. January 7, 1868. - The earriers are on an endless belt, and consist of eurved forks, whieh, in rising into the hopper, pass up through a grate.
daim.-The arrangement and combination of the said iron fungers, hopper, and plows, aeting together, as and for the purpose above specified.

193,08g.-William Frantz, Piqua, Ohio.-Cul-tivator.-Januai's 7, 1868.-Explained by the claim and illustration.

Claim.-The eombination of the standards $\mathrm{D}^{\prime}$ and shovel plows $\mathrm{E} \mathrm{E}^{\prime}$, adjustably attaehed to eross beams $\mathrm{C} \mathrm{C}^{\prime}$, and the adjustable rake F , arranged to operate substantially as set forth.
g3,088.-John Gardner, New Maven, Conn., assignor to Samuel Peck \& Co.-Picture and Cur. tain Knob. January 7, 1868. -The knob is eomposed of gum shellae and rosin, in about equal proportions, mixed with sufficient sarrdust or fibrous material to give tonghness, and eoloring matter for the tint. The material is molded and the shank inserted while the former is soft. The knob arid shank may be made of the same material.

Claim.-As a new artiele of manufaeture, a pieture or curtain knob, or knob for like purposes, make of the material and in the manner substantially as hercin speeified.
'g3.089.-E. J. GERDOM and C. W. Schindler, Albany, N. Y.-Lubricating Compound.-January 7, 1868.-Composed of tallow, 100 ; potash, 3 ; borax, 5 ; and alum, 3 parts. The chemicals are dissolved in water and boiled with the tallow nntil incorporated therewith, and the watcr evaporated.

Claim.-A lubricating compound, made of the ingredients above specified, and having the property that it will melt at a temperature of from $100^{\circ}$ to $110^{\circ}$, as set forth.

78,090-I. A. Gormix, Bueyrus, Ohio.-Field Fence.-J anuary 7, 1868.-The metallic standards are attaehed to fomdation bloeks, and have sockets for reception of the metallie pins by which the bars are attached to them. The pins have at one end a liead, at the other a liole for a key.

Claim.- The combination of metal posts, anehors, and braces, with dowel-pins and wedges, substantially as deseribed.
\%3,031.-JAnes Gray, Albany, N. K.-Base Burning Hot-Air Furnace.-Jannary 7, 1868.-Explained by the elaims and illustration.

Claim.-l. In a base-burning stove or furnace, which has a supply cylinder, an eseape passage from the chute $J$ through the horizontal pipe $d^{\prime}$, or the hollow ring $e^{\prime}$, into the flue $\mathrm{F}^{\prime}$, substantially as described.
2. Providiug chute $J$, leading through one side of the exterual casing into the cylinder E , with a damper or ralve $g$, substantially as described.
3. The construction of the double wall cylinder $\mathrm{D} \mathrm{D}^{\prime}$, annular chamber $d d$, and air-passages $f f$, substantially iu the manner shown and clescribed.
4. The combination of the magazine E , outer casing $H$, with the hollow open-work section $F$, and the annular chamber $d d$, with air passages $f f$, crossing it, of a base-burning air-heating furnace, substantially as described.
5. The combination of the magazino E , central exit-flue $\mathrm{F}^{\prime}$, and ascending aunular flue $d$, leading from the fire-chamber, substantially as and for the purpose described.
6. Conducting the heated products of combustion, rising from the fire-pot C , around aud orer the coal-supply cyliuder, (and discharging them into a oentral flue, directly over the center of the said supply cyliuder, ) in combination with warm-air chamber $G$ and $\mathrm{G}^{\prime}$, such chamber being inclosed by wall H , all for the purpose of heating air which is to be used for warming apartments, substantially as described.
7. Making the iron protector or the guard-plates $k k$ of the fire-bricks (or their cquivalents) portable in segments, so that they may be removed through the lower cnd of the magazinc E , substantially as described.
8. In the construction of a base-buruing air-heating furnace, having a magaziue $\mathbf{E}$, an anuular cir-culating-air chamber, and an annular smoke-pascage, both surrounding said magazine, and situated between the same and the annular wall D , the iuclined chutc or passage $J$, provided with a ralve $g$, and gas-escape conduit, and adapted to serve as a meaus for introducing coal into the magazine from a point which is below the top of the outer casing, substantially as described.
9. The flaring arched opening of the ash-pit $A^{\prime}$, formed by the inclined plate $a^{2}$, substantially as described.
10. The combination of the sectional lining $h h$ with annular circulating space $G$ and jacket or wall $D^{\prime}$, substantially in the manner described aud shown.
11. The combination of the magazine E , damper or valve $g$, the horizontal pipe or pipes $d^{\prime}$, and the Lollow ring $e^{\prime}$, substantially as described.
12. The arrangemeut of flues $d^{\prime}$ and $e^{\prime}$ so that they can be cleaued by using a flexible-handled brush Gom inside of the door leading into the coal-supply cylinder or reservoir, substantially as described.
13. Iu a base-burning air-lneating furnace, having a magazine E , a doorway or passage, provided with a door or window, and opening into the combustiou chamber through the outer casing of the furnace, substantially as deseribed.
14. In a base-burniug air-heating furnace, having a magazine E, a passage, covered by a door or window, and leadiug into the combustion chamber, through and across the air chamber formed by the exterior casc or wall and the outer wall of the furnace, substantially in the manner and for the pur: poses described.

73,092.-Callir Gresiuchna, New York, N. Y. - Apparatus for Distilling and Rectifying.-January 7, 1868. -Improvement ou pateut of C. Gresiuchna aud L. Jarchow, July 2, 1867, (No. 66,323.) The vapors from the still pass into an inverted eup whose adges descend below the top of the conducting pipe, and enter the low wine in the receiver. The vapor is thereby washed in the low wine, in passing beneath the cup edge. After impinging against the condensing surfaces of the receiver, the upper one of Which is cooled by water contained in a vessel to which it forms the bottom, the vapor passes into the reetifier, in which it passes through a series of wrashbasius. The top and side of the rectifier are cooled by water contained iu vessels each of which overdlows into the onenext beneath. A radial pipe connecting with the bottom of cach basin communicates with an outer rertical pipe, by whieh water may be flowed through the basins to wash away the impurities which colleet in them.

Claim.-The blow-off pipe P , in combination with the cups $d^{1} d^{2} d^{3} d^{7}$ iu the rectifier $G$, substantially as and for the purposes described.
(g,093.-Theodone D. Haehñen, Philadelphia, Pa.-Reciprocating Ball Toy.-January 7, 1868.-The ball is at the end of an clastic cord, and by the movement of the handle may be thrown upward through the ring, and may descend through the same.

Claim.-The combination of the ring A, the elastic corcl $C$, the ball $D$, and handle $B$, substantially as specified.
$73,094 .-W$. O. Hargrave, Ripon, Wis.-Cul-tivator.-Jauuary 7, 1868. -The draw bars are pivoted beneath the axle, and have a trausverse bar beneath them, which is attached to a frame running forward of the axle, and conuected by toggle lerer's to the lower side of the tougue. By straighteuing the toggle levers, which is accomplished by a sliding bar, the fore end of the frame is depressed, and the cultivator shares raised by the transverse bar.

Claim.-1. The board H, connected to the tonguo C by the hinge $H^{\prime}$, so that the clrill teeth eau be elevated by the driver, in the manner as set forth.
2. The axle A, with its blocks D D D, between which are hinged the beams E E E, provided with their shovels e e e, when used in connection with the board H, bars d d, securing the horizontal resting har $G$, and operated by the rod $b$ upon the beam $E$, by the hinge $H^{\prime}$, the whole constructed aud used in tho manner substantially as specified.
y3,095.-Dennts Harkigan andJoel Whitney, Winchester, Mass.-Worm for Gears.-Jauuary 7, 1868. -The thread in contact with the driven wheel projects toward the center of the latter, and the general outline of that portion of the thread is concentrio with the wheel.

Claim.-An endless screw or worm, with its threads so formed as to have their general directiou from root to summit such that, if prolonged, they would meert at a poiut distant from the roots of the threads equal to the radii of the wheel they are intended to drive.

Also, the forming of these threads upon a body whose bounding lines, in a direction parallel with tho axis of the worm, are concave, the radius of the coneavity being equal, or nearly so, to the radius of the wheel to be driven.
g3,096.-Charles Hastligas, Downgiac, Mrich. -Bee Hive.-January 7, 1868. -The sides are double. The movable fiames liave paper spread above them, and the upper bars of the frame have apertures cut transversely across them to allow passage to the bees.

Claim.-The combination of the box $A$ with an air chamber $a$, and a series of movable comb frames B B, with recesses $x x$. Said frames and reecsses are covered with paper C , or equivalent material, as aud for the purposes specified.

193,097.-Napoleon B. Heafer, Bloomington, 111.-Brick. Truck.-January 7, 1868. -The truck whecls are made sufficiently wide to act as rollers. The thills have hooked irous, which cugage eyes iu a frame attached to the axle. The hand tongue is arranged to slide beueath tho box.

Claim.- A truck which is adapted for general usa in a brick-yard, consisting of a platform $A$, with remorable liead and tail boards $A^{\prime} A^{\prime}$, mountod upois rollers C C, and provided with a sliding hand tongene E , aud also means for attaching thills I , substantially as described.
re3,098.-L. F. Hendenson, Treeport, Tll.-Port able Fence.-January 7, 1868.-The uprights taper upward, and each consists of two pieces attached to a transverse base piece, and also held together by cleats. The top rails have cleats which take over the euds of the uprights, and serve to hold them in longitudinal position.

Claim.-The uprights A A, secured with eleats F F , and to bases B B , in combination with top rails D, stakes C, and lower rails G, substautiolly as and for the purpose set forth.
y3, 0!9.-JACOB C. Honton, New York, and James Milligan, Brooklyn, N. Y.-Spirit Mcter for Distilleries.-January 7, 1868.-Explained by the claims.

Claim.-1. The method of aseertaining the quantity of spirits prodnced in a distillery in a given time, by using, in combination with an automatic meter to measure the spirits passing from the worm, another automatic meter to measure the becr passing from the fermenting cistcrns to the still, said meters being arranged and provided with automatic registcis, substantially as described.
2. The method of ascertaining the quantity of spirits produced by a clistillery in a given time, by passing the beer through an automatic registering meter on its way from the fermenting cisterns to the still, whether in combination with a meter to measure the distilled spirits or not, substantially as herein described.

73, 100.-GEORGE W. Hubbard, Philadelphia, Pa., assignor to Cresson \& Smith, same place.Shaft Coupling.-Jannary 7, 1868.-The cylindrical coupling is cut through longitudinally, and the opening closed by set screws so as to closely embrace the shaft end. A key lies in seats in the shafts and coupling cylinder, and its inturned ends occupy recesses in the shafts.
Claim.-The combination of a clamp or gripingcoupling A, constructed substantially as deseribed, and provisional safety key $D$, with the shafts $B$ and $\mathrm{B}^{\prime}$, as and for the purpose set forth.

73, 10耳.-Ezra Hutson, Brockport, N. Y.Pushing Jack for Railroad Cars.-January 7, 1868. -The pawl bar is placed against a tic and the hinged jaw against the car, and the latter mored by depression of the lever.

Claim.-The hinged jaw $g$, in combination with hinged lever $C$ and band-lcver A, substantially in the manner specified.
r3,102.-William M. Jones, Horicon, Wis.Device for Sharpening Horseshoe Calks.-Jannary 7, 1868.-The file has two plates, whose beveled faces are turned toward cach other to form an anscular recess, into which the end of the calk is received.

Claim.-The within-described V-shaped filc, constructed and used substantially as and for the purpose specified.

73,103.-JOEL LeE, Galesburg, Ill.-Washing Machine.-Jannary 7, 1868. -The pins depend from a head which has reciprocating rotary motion from its vertieal journal shaft, but has vertical movement on the latter, limited by a spiral spring. The shaft has a piniou engaged by a rack npon a pitman reeiplocated by a crank.

Claim. -In combination with the box, with wheel $B$ and crank shaft for operating the pitman, rack bar, and pinion E, the arrangcment of the solf-adjusting pins G G directly over the pedestal I, constructed as described, and plaeed over the bottom of the box, as speeified.

193, 109. -Wrlliam H. Lewis, New York, N. Y. -Bread Board.-January 7, 1868; antedated December 24, 186\%. The boart is arranged to hang up, and has a recess in one edge, in which the bread knife is held by a pin and spring catch.

Claim.-The cutting board for bread, \&c., formed with a recess or case for receiving the knife, as set forth.
geg, 105.-JOSEPH N. LIGGHTHALL, Joliet, Ml.-Filter.-January 7, 1868.-The filter is placed within a barrel and the water passes through a coarse filter beneath it, and up a central tube to an upper chamber, and from this chamber through the filtering material contained between two perforated diaphragms. 'The water is drawn from the lower' annnlar chamber by a siphon having a stop-cock.

Claim.-A filter, consisting of a vessel A, proricled with a central inlet pipe C, a removable cover B, perforated partitions $\mathrm{F}^{\prime} \mathrm{G}$, and an outlet pipe $\mathrm{G}^{\prime}$, substantially as described.

78, 106.-EDWaRD Lindsley, Cleveland, Ohio.Pantaloon Protecting Guard.-January 7, 1868.The graard is a flat metallic ring, which is placed inside cach $\operatorname{leg}$ of the pantaloons at their lower end,
and attached to the hem by pins which pass through metallie loops.

Claim.- First, the guard plate A, loops 13 B, and pins $C$, whon combined and arranged in relation to the pantaloons. substantially as and for the purpose describecl.

Second, the button D and guard A, arranged as described, in relation to the boot and pantaloons, substantially as and for the purpose set forth.

63, $10 \%$--HENRY LUMBard, Chicago, Ill.; assignor to himself, Geo. E. Gents aud John SChmidt, same place.-Broom.-January 7, 1868.-The reeds are doubled around the wedges, which are inserted in the groores of the head, and held therein by transverse pins aud vertical nails, as well as by nails which secure the metallic tips to the hea d.

Claim.-The arrangement of the rceds on the wedges $\bar{B} \mathrm{~B}$, and the manner of securing them to the block $A$ by means of said wedges, substantially as and in the manner helein set forth.
In combination with the above, the rivets $C \mathrm{C}$ and plates D D, arranged as deseribed and specified.
gis, 108.-T. J. Marinus, Independence, Iowa.Curtain Fixture.-January 7, 1868.-The hoisting cord passes through a hole in the top of the case, and through an eye at the lower end of the pendent arm of the weighted clamp. The latter has a projection, which is pressed against the cord by the weight of the clamp, aud relieved therefrom by drawing the cord away from the window frame.

Claim.-1. The automatic clamp $G$, when constructed substautially as and for the purpose specitied.
2. The combination of the automatic clamp $G$, wire $H$, and cord $E$, all arranged and operating in the mauner and for the purpose set forth.
\%\%, 109.-HENRY A. Martin, Roxbury, assignor to Josepir H. Adams, Boston, Mass.-Fibrous MIcbterial for the Manufacture of Rope, Cord, and for Covering Wire, Cord, de.-January 7, 1868; antedated Deeember 28, 1867.-Gntta-percha is rolled into thin sheets and then separated into fibers which are subscquently spum into cords.

Claim.-A fiber formed from gutta-percha for the purposes set forth.
 Y.-Screw Machine.-January 7, 1868.-A ringformed blank-carrier is moved intermittingly, and through this carrier, and at right angles to the same, passes a second ring that carries the cutting tools, and is rerolved gradually and continuously. The cutters only occupy a portion of this ring, and the movement of the blank-carrier ring takes place cluring the time that the cutters are not in contact with the screw.

Claim.-1. The receiver $n$ and pnsher 11, in combination with the blank carrier $f$, substantially as and for the purposes set forth.
2. The ring-blank carrier $f$, in combinatiou with the ring-tool holder $d$ and cutters $r$, the holder nassing through the carricl, as and for the purposes set forth.
3. The arrangement of devices, as described, for operating the pusher.11, as and for the purposes set forth.
4. The remorable chucks, constructed and ap plicd as set forth, in combination with the ringblank carrier $f$, as and for the purposes specificd.
5. The delircry-slide $w$, actuated as specified, in combination with the ring-blank holder and ringtool holder, as sct forth.
6. A machine for cutting screms, in which the tools and their supporting-ring are mored continnously by gearing that is comnected with the screirdriver by a changeable gearing, all arranged substantially as set forth, so that the pitch of the sererrthread may be raried, as specified.
7 . The cams $k$ and 8 , or projections applied to the ring $d$, substantially as specified, in combination with the parts that supply the blank, foree it into the hlank-holder and move the blank-holder and the screw-driver, the parts bring arranged aud operating substantially as set forth.

73,111.-Thos. B. McConaughey, Newark, Del. -Governor.--January 7, 1868.-The tripping lerer is connected by a hook and staple to the pivoted arm carrying the governor-pulley, and in case the belt beeomes broken the arm descends and trips the lever, whieh applies the stopping-brake to the periphery of the main wheel.

Claim.-1. The hinged arm D , in combination with hook $e$ and tripping-lerer E, whell constructed and operating substantially as set forth.
2. The governor-pulley $h$, when driven by aud combined with pulley $g$ and belt $H$, iu tlic mauner substautially as specified.

73,112.-E. O. Melvin, Brooklyn, Wis.-Grain Mectsure.-January 7, 1868.-A measure is placed ander each branch of the chute, and as the gate is moved to dircet the graiu into either brauch the act is denoted by the register:

Claim.- The combination of the bifureated ehute A a $a^{\prime}$ with the gate $B$, lever $I$, rod $S$, and the reg. isteriug apparatus above deseribed, substantially as deseribed, for the purpose herein set forth.

133,113.-I. Ferguson Morsell, Stamford, Conu.-Railway-switch Alarm.-January 7, 1868.A elock morement is connceted to the lever operating the switch. When the main line of traek is unbroken the alarm is at rest, but when the main line is broken the alarm continues to sound.

Claim. - The combination, with the switeh-bar and lever, eapstan, or other deviee for operating the same, of a cloek morement, provided with an alarmgong attachment, substantially as and for the purposes herein spccified.

193,114.-William Munroe, Cambridge, Mass. -Recd for Organs.-Jamary 7, 1868.-The reed plate has upward projections, which are grooved to reeeive the fixed ends of the tongues.

Olaim.-As an improved manufacture, musical reeds, in which the tongue is seeured in place between two projections, in the manner substantially as described.

Also, the eombination with the tongue sceured in place, substantially as described, of a depression in the middle, or elevation at the ends of the bed, to whieh it is sceured, substantially as aud for the purpase set forth.

73,115.-George G. Noair, Boston, Mass.Machine for Making Paste.-Tanuary 7, 1868; antedated December 26, 1867.-The vertieal shaft is tubular at the lower end, and reeeires steam through its step-block, which is serew-threaded for coupling to the steam pipe.

Olaim.-1. Iutrodueing steam into the perforated arms and into the eontents of the tub, for the purpose above deseribed, and in the inanner substantially as set forth, or by any equiralent means.
2. The combination of arms attached to the shaft, wholly. perforated or partly perforated, and partly not perforated, for the purpose above de seribed, and in the manner substantially as set forth.

73,116.-David L. Peacock, Rockport, Ind.Shingle Machine.-January 7, 1868.-The bolt is held in the hopper, and on the reeiprocation of the lonife table a shingle is eut off, which fulls into a recess and is earried between the upper and lower rotary plaucrs. The upper planer is jourualed. in arms, which are raised by projeetions of the table, so that this eutter slaall form the taper of the shingle.

Claim.-1. A cutter frame, composed of two parallel plates $m m^{\prime}$, the upper one holding a knife N , and the lower one having a raised bed $\mathrm{m}^{\prime \prime \prime}$, arranged and combined substantially as and for the purpose spceified.
2. The combination of a entter frame, having tapering arms $t$, with the movable planer $G$, bearing in hinged arms H H, substantially as and for the purpose specificd.

73,11\%.-Charles W. Pierce, Albany, N. Y.Friction Roller.-January 7, 1868.-The ends of the shatts liave collars upon them that are reeessed to receive the opposite ends of the frietion rollers which are journaled in them, and roll both on the
shaft ends and against the inner surface of a surrounding box.

Claim.-The collars A A, made in trwo parts, and provided with slots or openings, in which tho rollers D D are held, as and for the purpose set forth.

73,118.-B. F. Prettyman, Alcxandria, Va.Skate Sharpener.-January 7, 1868.-'The concavefaced rotary eutter is flanked by adjustablo guide blocks, between which the skate runner is passed.

Claim.-1. The adjustable guides 13 13, in eombination with the adjustable file or cuttiug-tool E , sul)stantially as deseribed and for the purpose set forth.
2. The combination of the file or cutting tooi $E$ and key F , when the same are, eonstrueted and arranged substautially as described.
73,119.-George Rehfuss, Philadelphia, Pa., assignor to the American Button-Hole, Cording, Braiding, and Embroidering Machine Company, New York, N. Y.-Sewing Machine. January 7, 1868. -The ncedles are arranged to form an cmbroid ery or button-hole stitch. The thread of the upper ncedle is conducted through an eyc in the needle arm, to the eye at the necdle point. The thread of the lower needle is passed through an eye near to itlower end, and in a spiral groove to the eye at the point. The upper necdle has a regular and the lowel ncedle an irregular reeiprocation, the slide being operated by the lever; a vibrating motion is thus imparted to the lower needle slaft.

Claim.- The combination of the upper and lower eyc-pointed needles, when the movements herein described are imparted to the two needles, so that by their joint action they may produce, with two threads, the stiteli herein described, in the body or on the edge of a fabrie.

93,120.-Reuben Rember, Lebanon, Pa.-Hinge -January 7, 1868.-The pintle is removablo with a plate seenred to its head and to the blind.

Claim.-1. The pivoted plate $c$, with serew hole to fasten it to the slintter or other object, in eombinatiou with the leares $\mathbf{A} \mathrm{A}^{\prime}$ and pins $a a^{\prime}$, all construeted and arranged and operating substantially in the mammer and for the purpose described.
2. The right and left-hand hinge loaves $A A^{\prime}$ $b b^{\prime}$, fastened together by a pin $a$, whieh lias a head $a^{\prime}$, and to which head a plate $c$ is piroted, all substantially in the manner and for the purpose doscribed.

73,121.-E. J. Ricimaidson, Lowell, Mass.Ticket Holder.-Jannary 7,1868 ; antedated Jaunary 2,1868 . - The holder is attaehed to the coat and the ticket held therein by the spring wire.

Claim.-1. As a new artiele of manufacture, a ticket-holder, formed of a single wire, in the manner deseribed.
2. The holding-spring or elamp E, arranged and operating as deseribed.

93,122.-Daniel C. Ripley, Pittsburg, Pa. assighor to Rirley \& Co., same plaee.-Glass Lamp. -January 7, 1868. -Explained by the elaim and illustration.
Claim.-A lamp whieh is eonstrueted with a pressed base $A$, and one or two handles $B$, and a globe $C$, blown thereupon, substantially as deseribed.
g3,123.-JAMRS SANGSTER, Buffalo, N. K.Machine for IIandling or Piling Brick.-January 7, 1868. - When the handles are extended, the partitions are forced outward by the springs and the divisions are filled with bricks from the maehine. The handles are then raised and operate to drive the partitions in and elamp the brieks.

Claim.-1. The partitions B, when made movable by means of the handles $C$ and pins $I$, sulb. stantially as and for the purposes herein deseribed. 2. In combination with the above, the springs $G$, so arranged as to foree said partitions $B$ apartt snbstantially in the manner and for the purposes herein deseribed.

73, 124.-Daniel F. Scueaf, Dayton, Ohio.Apparatus for Gererating Gas.-January 7, 1868.The gasoline passes through a strainer eousisting of
a perforated plate which supports a sheet or mat of fibrous material, and forming a diaphragm within the tank. A pipe, having a stop-eock, leads from the bottom of the tank to a coil within a store; the coil pipe is extended and conveys the gas to the upper part of the tank from whence it is carried to the reservoir. The rising top of the reservoir is conneeted by a chain to the weighted lever operating the stop-cock between the tank and store to shut off the supply when the reservoir is nearly filled.

Olaim. - 1. The arrangement of the tank $A$, pipe $C$, and stove $B$, in such a manner that the made gas is passed back through the oil tank, the various parts being construeted and operating substantially as set forth.
2. The arrangement of the reeciver top with chain $N$, lever $P$, and pipe $C$, provided with a stopcoek, in such a manner that the flor of oil to tho generator is regulated by the rise and fall of the receiver top, snbstantially as and for the purposes specified.

73, $195 .-C O N R A D$ Scmeternly, Bourbon, Ind.-Churn.-January 7, 1868.-The disk upon the dasher rod is to prevent eseape of cream through the orifiee in the lid.

Claim.-In eombination with the dasher $b$, the sau-cer-shaped disk $e$, as and for the purpose described.

73, 125.-Eliphalet S. Scripture, Brooklyn, N. Y.-Dividers and Calipers.-Jannary 7, $1868 .-$ One of the head plates has an annular, wedge-formed rib whieh enters a suitable annular depression in the other head. One leg of the inside ealiper is nieely adjusted by a set serew.

Claim.-1. The wedge-shaped circular rib R and groove $\mathrm{R}^{\prime}$, seeured by a set-screw $s$, or an equiralent thereof, for the purpose substantially as deseribed.
2. Acjusting the leg $B^{\prime \prime}$ of the caliper, by means of a sct-serew $e$, in the manner as above set forth, and shown in the drawings at Fig. 1.
3. A miversal divider, with braces $1,2,3,4$, and having the inner snrfaces or disks of the head A corrugated, or ribbed and grooved, as shown at Figs. 3 and 4, for the purpose as above set forth.

73,12q.-J. K. SEEM, Canton, Pa.-Oloek.Calen-dar.-January 7, 1868.-The month, the day of the montl, and the day of the week are exhibited through apertures in the face. The plates having the names thereon are connected to the clock-work.

Claim.-The construction and arrangement of the wheels B C D, and the plate d, substantially as deseribed, for the purposes set ficith.

193,128.-BENJAMIN F. SHAFFER, Dayton, Ohio. -Swing.-January 7, 1868.-A treadle bar is attached to cords secured to a fixed objeet and afford means of oscillating the swing.

Olaim.-In combination with the seat $g g^{\prime}$ of a swing, the hinged pedal, attached to the swing, and the cords e $c^{\prime}$, fastened to the pedal and carried over pulleys on the swing-frame $h h^{\prime}$, and then fastened in front of the point of suspension of the swing, said several parts being respectively constructed and arranged snbstantially as set forth.

73, 189.-Franklin R. Sherman, Dowagiac, Mieh.-Gate.-Jannary 7, 1868.-The gate is supported in a slot of the pivoted post, and may be slid baek to a balance in the post, and then swung around; or it may be swung on the pivot post without slidiug. In the latter case a lateh at its lieel engages the bottom bars. The gate is raised by the piroted angular frame when slid backward, and therofore tends to shut.

Claim.-The frame E, used in eombination with the gate, the wheels $G$ and $H$, and the post $C$, substantially as and for the purpose set forth.

78, 130.-William Shires, Cineinnati, Olio.Garbage Can or Vessel.-January 7, 1868.

Claim.-A garbage vessel, consisting of the sheetmetal body $A$, wooden staves $B$, and base $C$, for the purpose set forth.

73, 131.-Pinneas L. Slayton, New York, N. Y., assignor to self and Almet Remb, samo place. -

Machine for Braiding Whip Lashes.-January 7, 1868.-The stationary, spherical frame is opon at top and bottom. It is divided into segments with ehannels between them for a series of fingers, which aro moved around to lay the strands, by segments of an external shell which rotate on their own axes.

Claim.-1. The eireular disks F, with slots $h$ gearing into cach other to earry the braiding fingers herein described, construeted, arranged, and operating as set forth.
2. The braiding fingers herein deseribed, traveling in guide-ways $a \quad a$, with their ends pointing imward, and approaching near to the center of the hollow sphere herein deseribed, all construeted, arranged, and operating substantially as and for the purpose set forth.
3. The oscillating guide blocks $s s$, the carred plates $n n^{\prime}$, and the pin $o$, in combination fith the plates $i i^{\prime}$, construeted, arranged, and operating substantially as deseribed.
73,132.-GEORGE R. K. SMITH, Brooklyn,N.Y.Wagon Protector.-January 7, 1868. - The points are on rock-bars, and may be depressed out of the ray, or raised, to act as a guard around the wagon box.

Olaim.-The construction, application, and asrangement of a protecting guard, substantially as and for the purposes deseribed.

73, 133.-GEORGE W. Stevens, Albany, I. Y.Safety Padlock for Railroad Cars.-Jannary 7, 1868. - The notehes at cach end of the yoke are engaged by spring catehes on insertion, and can only be disengaged by turning the blank side to the springeatch, whieh is preeluded by their connection, so that the yoke mnst be destroyed to effect an entrance.
Claim. - The lock composed of the shell A, yoke $B$, and springs or spring eatches $C$, combined and operating in sueh manner that the lock may be dotached only by severing tho yoke, substantially as herein set forth.

73,131.-Samuel H. SWasex, Morristown, Vt.Barrel Churn.-Jannary 7, 1868. -The float frame nearly fills the cavity of the barrel. and has radial floats extending inward nearly to the central arbor. The central dasher has radial arms alternating with those on the frame, and may be rotated therewith, or held stationary. The dashers may be held in the same plane while rotating, or at right angles to each other.

Claim.-1. A float frame, made to fill or nearly fill the diameter of the barrel or churn, when provided with floats extending to or nearly to the centrad float arbor, and operating in connection with said float arbor, substantially as describcd.
2. The central float arbor, provided with floats alternating witl those on the float frame, so arranged that it may be made to rotate with the float frame, or held stationary, when desired, substantially as and for the purposes described.
3. The means for adjusting or setting the float frame and float arbor, whereby the floats may be set or held in the same plane with or at right angles to each other, for the purposes and snbstantially as deseribed.
4. The adjustable shaft $b$, provided with the squared end, and with the grooves $e e^{1}$, for controlling the relative operation of the float arbor and frame, substantially as described.
5. The grooved perforated pirot $b^{l}$, provided with the squarcd end fitting in the float arbor, whereby said arbor may be held stationary for working the bntter, substantially as described.

73,135.-DanIEL W. Taylor, Bell County, Texas.-Medical Compound.-January 7, 1868.-For destruction of "screw worms" in cattle an" other live stock. Composed of concentrated extraci of tobacco, 16 oz ; potash, $8 \mathrm{oz} . ;$ camphor, $2 \mathrm{oz} . ;$ oil of turpentine, 4 oz.; asafetida, 2 oz . ; sulphur, 2 oz. ; and lard oil, 4 oz.

Olaim.-The preparation or medieine herein doseribed, for the purpose set forth.

73,136.-M. P. Thatcher, Pontiao, Meh.-Padlock.-Jannary 7, 1868.- One of the side platos has at each end a eylindrieal tube projecting rectan-
gularly therefrom, and the other plate has bolts which enter the cylinders. One of the cylinders is slotted to admit the passage of a spline upon the bolt which is inserted therein. The spline has projeetions enter ing annular reeesses within a scries of wheels turning on the cylinder. The rings have each a single noteh admitting the passage of the projeetions, so that the bolt cannot be withdrawn unless all the rings are in proper position, which is determined by letters or figures upon their periphery.
Claim.-The arrangement of the plates A and B with their shafts and cylinders, as constructed and used, in combination with the wheels F F , as and for the purpose speeified.

93,137.-William A. Thompson, New York, N. Y.-Machine for Treating Ores of Gold and Silver with Vapor of Mercury.-January 7, 1868. -The colinder is supported on tubular radial trunnions, and has an axial shaft turned by a wineh, and carrying radial arms with floats to stir the powdered goldbearing quartz. The cylinder has windows for obperving the eontents, and apertures closed by slides, and serving to ladle out a small quantity; or when the cylinder is tilted, to allow the contents to disaharge. The quartz is supplied through hoppers. Vaporized quicksilver is furnished through one trunnion and steam through the other.

Olaim.-1. The eylinder A, when suspended upon hollow trunnions $\Pi$, one of which is connected with a retort for vaporizing mercury, and the other with a steam generator, and so suspended that one and may be turned down to allow the contents to be drawn off, substantially as set forth.
2. The cylinder A, suspended upon hollow trunnions, and constructed with opposite windows $G$, and openings $D, E$, and $F$, and used in combination with the stirrer B, substantially as and for the purpose set forth.
73,138.-Joel Tiffany, Albany, N. Y.-Apparatus for Preparing Paper Stock:-January 7, 1868.The stock, after cutting and bruising, is packed in the reducing vessel, and treated to the caustic solution at a pressure of from 200 to 500 pounds on the square inch, and at an equivalent heat. From this versel the stock and solution are blown out into the washing tub.
Claim.-1. The use of a strong, close ressel for heating the entire liquor to be used in the reducing vessel to its maximum heat before introdueing the same into the reducing vessel, in combination with the redueing vessel, substantially in the manner and for the purpose abore described.
2. The use of a close vessel B, in combination with a reducing vessel $G$, to bo used with their several connecting pipes, substantially in the manner and for the purpose above deseribed.

73,139.-William H. Towers, Boston, Mass.Water Proof Fabric for the Manufacture of Travel. ing Dags, Trunks, Carriage 'Tops, and other Arti-des.-January 7, 1868.-Stiong paper is cemented to o woren fabric, and the paper coated with enamel similar to that used in manufacture of "patent leather."

Olaim.-1. The improved fabric, made substantially as hercin described.
2. The combination of one or more thicknesses of paper with a woven fabric, and finishing the ame with enamel, substantially as herein described.
3. The manufacture of traveling bags, trunks, valises, table covers, carriage tops, and similar artiales, by eombining enamelled paper with other textile fabric, substantially as described.
4. The application of glyecrine to compound fabrics of paper and cloth, such as herein described, to render them tough and pliable, substantially as set forth.
5. The combination of gums, rosins, paraffine, ootlodion, drying oils, and the like, with a fabric composed of paper and cloth, substantially as described.
r3, 140.-Jacob N. Vandegrift, S. T. VandeGmat, S. D. French, and E. S. Stone, Wabash, Ind, - Oar Coupling, January 7, 1868.-Explained by the claims and illustration.

Craime-1. The method aud means described for
self-eoupling cars of a railroad train, to wit, by forcing the link held by the coupling bolt of the bumper of one car up to and past the beveled eoupling bolt $D$ of the bumper of the other car, Which coupling bolt is fixed by a rivet, P P , to an attachment, $E$, which tilts as the coupling bolt rises and falls, and which attaehment is kept in place by the spring $b t$.
2. The method and means, above deseribed, for uncoupling and detaching railroad cars at will, whether the cars are in motion or at rest, viz, by the use of a cord or chain, $R$, in reaeh of the conductor, and attaehed to a compound lever, $U \mathrm{~m} T$, affixed at U to the side of the bumper, and at T to the attachment by which the coupling bolt is raised or depressed, so that the eoupling bolt may be raised and depressed at will.
3. The method and means, above described, for uncoupling and detaching railroad cars when run off the track, viz, by using eorresponding couplers, as above described, on the bunpers of eael ear, and so that when the forked lever $F$ of the bumper of one ear rests on top of the spring $i$ of the forked lever on the bumper of the othicr car, and, being mored laterally, pushes the wheel I, at the end of the attachment of the coupling bolt, against the inclined planes 0 of the forked lever, the effect will bo to depress the coupling bolt and detaoh the cars.

73,141. -Jacob Vigeant, Marlborough, Mass.Shoemakers' Hammer.-January 7, 1868.- The plane of the faces if extended would cut the handle at its point of oseillation within the hand.
Olaim.-Constructing the hammer with the inclined striking-face set at an angle with the handle, substantially as shown and described.

Also, combining with the handle, having uniform opposite sides, the tro inclined faces, arranged with respect to each other and to the handle, substantially as shown and described.

73,142.-David C. Waltere, Warsaw, Ind.Attachment for Hoppers of Grinding Mills.-January 7, 1868.-The "float" is a hinged flap at the hopper bottom, and it raises when the weight of grain has been removed from it, and causes the opening of a spout of an upper hopper, from which the grinding hopper is sapplied.

Claim.-1. A bell, so operated and arranged within the hopper that, when surrounded by the grain, it will be held stationery, but when uncovered will be caused to ring, substantially as and for the purpose specified.
2. The loaded lever D and connecting rod $d$, so combined with the float B , in the bottom of the hopper, that the said lever may operate when the float is released from the weight of grain in the hopper, substantially as and for the purpose specitied.
3. The bell F , wire $f$, and adjustable amnular block E , in combination with the standard C , rod $g$, and bar ${ }^{\text {Gr, }}$, substantially as and for the purpose specified.

73,143. - Josepir Warwick, Springhorough, Ohio.-Sulky Plow.-January 7, 1868.-Explained by the claims and illustration.

Claim.-1. The derice for lowering and raising the plow beam, consisting of the plates $g$ and $i$, the former being slotted, piroted as deseribed, adjusted by means of the set screws $k$, and operated by means of the lever $G$ and bow rack $H$, substantially as described.
2. The screw shank $\delta$ of the sheath $k$, and nat $t$, in eombination with the standard P , attached to the land side L by means of the bolt $p$, for the purpose of lowering the plow point, substantially as described.
3. The mold board I J, with its part $J$ bent around the sheath and sccured to the same, substantially as and for the purpose described.
4. The share M , with its bent part N connected to the land side L, and with the latter forming the point, attached and constructed substantially as deseribad.
5. A plow with scparate mold-boards and share both attached to the sheath in such a mamer that no bolt or rivet is used on their surfaee, substantially as described.

73, 144.-Miles Waterhouse, Passaic, N. J.-Floek-Duster.-January 7, 1868.-The flock is fed into the hopper at one end of the case, and is discharged at the other end. It is dusted and loosened by the inclined brushes which impel it forward. The dust eseapes through a semi-cylindrical sercen.

Claim.-The rotating brush eylinder $d$, with its spirally-arranged brushes and beaters $d^{\prime} d^{\prime} d^{\prime}$, when combined together, and with the sereen $e$ and the openings $c$ and $f$, in the manner and for the purposes shown and deseribed.

73, 145.-H. B. Wellman, Allegheny City, Pa. -Lamp.-January 7, 1868.-A tube conneets with the bottom of the oil receptacle of the lamp, and water oceupies both the lamp and tube to a slight distance above the point of communieation. The oil is supplied through the tube, in which it has sufficient clevation to foree it through the water.

Claim.-The pipe $C$ for oil, and the pipe $E$ for water, having chamber $D$ between them, when arranged in combination with the lamp $A$, and used for the purposes set forth.

73,146.-Samuel Wetherill, Philadelphia, Pa. - Proeess of Manufceturing White Oxide of Zinc.January 7, 1868.-The vapors of combustion from coal, chareoal, or wood nsed in the manufacture of white oxide of zine are passel through ineandeseent charcoal, whereby the coal-black and oxygen are consumed and the oxide of zine vapor is redueed to a metallic vapor of zine, which is supplied with oxygen by a hot blast that is intended also to consume any speck of coal-black which wonld otherwise injure the color.

Claim.-Passing the produets of combnstion from the furnace into an anxiliary chamber or chambers containing ineandeseent carbon, and thence, throngh the incandescent coals, into contact with a hot blast, substantially as and for the purposes deseribed.

73,147.-Samuel Wetherill, Philadelphia, Pa. - Apparatus for the Manufaeture of White Oxide of Zine.-January 7, 1868. -This relates to an apparatus for the mannfacture of the oxide of zine with bituminons coal, coke, or charcoal as fuel, and is deseribed in his previons patent, (No. 73,146 .)

Claim.-The combination, with the furnace, of one or morc chambers, communicating with said furnace, and adapted to contain ineandescent coals, and permit the passage of the products of combnstion from the furnace through the said coals, substantially as and for the purposes described.

Also, in combination with the ineandeseent chambers, hot air flues, into which the vapors of zine may pass from said chambers, to mingle with and be carried off by a lot blast, substantially as described, for the parposes set forth.

Also, the arrangement of the blast-tnbes $g$ immediately over the furnace, and communicating with the chambers E E, as and for the purposes described.

78, 148.-LUDWIG WETZELL, Washington, D. C. -Hames-Tug Buckle.-Jannary 7, 1868.-The hame clip is riveted between two plates, the outer one of which has another plate hinged to it and with it, forming the loop for the end of the trace. It has an apertnre to receive the end of the pin passing through the trace, and is held down by a frame, bencath whose outer transverse bars the trace passes.

Olaim.-The hames-tug buekle $g$, with loop-cover $\alpha$ and pin $f$, when the parts are constructed, conneeted, and fitted to produce the result substantially as deseribed within.

73,149.-EzRA WILDER, South Hingham, Mass. Carriage Harness.-January 7, 1868. - The sides of the saddle are adjustable to conform to the contour of the horse. The tugs are adjustable vertically on the harness.

Claim.-ILaking the parts of the saddle relatively adjustable, substantially as shown and deseribed.

Also, making the parts of the hames relatively adjustable laterally, snbstantially as above described.

73,150.-Courtland B. Wilson and Abner S. Hougrionn, Trenton, N. J.- Water-Wheel.-January 7, 1868.-The top plate is attached to a central drum and to the lower rim, which latter revolves in
an annular groore of the bed-piece. The buckets have gudgeons entering the top plate and rim, and are turned outward by the abutments which stand in the space between the rim and drum ascending to the top plate. The water is discharged through vertical pipes, which, bcing carried downward, act by suction on the buekets.

Claim. - The combination of the top plate E and the rim $G H$ with the movable self-adjustable buckets L L, stays K K, the groove or channel O O, and stops or abutments $\mathrm{P} P$, all substantially as above described and for the purpose set forth.
73,151.-Frank H. Wilson, Wethersfield, N. Y.-Cheese-Box and Butter-Tub.-January 7, 1868The projections on the outside of the box and inside of the lid rim, engage by turning the latter on the former.

Claim.-The arrangement of the box or tub A with its cover $B$, box $A$ having a flat metal shoulder, $d$, on each side, near its top, and cover $B$ having similar metal shoulders, $e$, on its inner flange, as and for the purposes set forth.

73, 152.-LINUS YaLE, ju., Cooperstown, N. I.-Vise.-January 7, 1868; antedated December 21, 1867.-The nut has a ratehet engaging in a ratchet rack at the lower side of the socket. When the mut is at its most extended position upon the serew, it is raised elear of the ratehet, and the jaw may be slid in or outward; the serew being then turned formard the nut is bronght down on the rack.

Claim.-1. A screw capable of operating the mov. ing jaw of a vise, in combination with a nut having an inclined plane thereon, and an inclined plane attached to the moving jaw, these parts being and operating in combination, substantially as described.
2. In combination with a rack attached to the stationary jaw of a vise, and an inelined plane attached to the moving jaw thereof, a racked nut, prorided with a serew, and an inclined plane, the combination being substantially such as described, and operating substantially as set forth.
3. In combination with the jaws of a vise, a serew, a rack, and a racked nnt, a spring, located as deseribed, and operating in combination with the parts with which it is combined, substantially as described, to control the position of the rack, substantially in the manner and for the purpose specified.
4. A sectional collar, in combination with a moving vise jaw, and the serew which operates it by means of recesses therein, the combination being and operating substantially as hereinbefore set forth.

73,153.-Frederick Yeiser, Danville, Ky.-Pump.-January 7, 1868. -The agitator rods are connected to the pump lod and agitate the surface of the water to cffect its purification.

Clarm.-The rods or shafts D D, provided with agitating cross-pins, and used with the stock $A$, substantially as and for the purpose set forth.

63, 154.-Louis Baum, Washington, D. C.Time Alarm. January 7, 1868. -The weight is cle vated by coiling its supporting cord upon the shaft and is raised so high that when the shaft is connceted to the spindle of the minnte hand the required time shall clapse before the weight descends sufficiently to depress the detent of the alarm. A seale on the post indlicates the height to raise the , weight.

Claim. - An alarm, arranged to be operated by an ordinary watch, through the medium of the weight $' T$, cord $l$, and revolving shaft $F$, arranged to operate substantially as described.

193,155.-G.W.R.BaYLEY and John McCluskey, A giers, La.-Car Seat Loek.-January 7, 1868.-The seat backs have projecting lips which engage pins on a turning bar, and the bar is locked in position by a staple which engages its square end and is secured by a padlock. The device is intended to prevent inversion of the seat backs.
Claim.-1. The bar A and pins $a$, disposed on the said bar a, substantially as above described, in combination with the lips E , or their equiralent, in manner and for the purpose substantially as above set forth and described.
2. The said bar A, in combination with the half
cap $F$ and padlock $G$, in manner and for the purposes abore set forth and described.

193,156.-Joserh Baysore, Freeport, Ill.-Buckwheat Hulling Machine.-January 7, 1868. - The spindle at its lower end is journaled in a box, within which the step block is loosely held; the box thus serving to hold the spindle and step to place writhout eramping, them in their vertical adjustment. The "runner" is balanced on the segmental cross-heads of the bail by set screws. The suction pipe of the blower is curred orer the top of the mill, and its end forms the discharge spout of the same, so that the hulls and finely broken grain are sucked up and discharged with the air.
Claim. - The arrangement of the tightening bar N , spindle-step $c$, knockers $d$, for operating the trashscreen, spindlo $a$, bail $g$, fan-hlower E , and curved spout $G$, as herein shown and described.

73,1.5\%.-A. J. Bell, Bloomingburg, N. Y.-Straw-Cutter.-January 7, 1868.-The inclined top bar of the sash gires bearing to.a series of angular cutters. The sash is operated by a transversely projecting handle, and has a horizontal lower bar whose slot is traversed by a wrist pin on a balance wheel.
Claim. -The toothed cutter-blade C, in combination with the frame G, guides F, and box B, all constructed, arranged, and operating substantially as described.

73,155.-William Bennett, Rushville, Ind.Attachment for Plows.-Januar'y 7, 1868. -The fender is for protection of small plants from rolling earth, but gires way to heary clods.
Claim.-1. The rertically adjustable fender $H$ attached to the bar E, sliding in the guide $F$, when such bar is attached to the spring $J$, whose formard end is secured to the beam $A$ in sueh a manner that the fender shall field to a clod of earth, and be thrown into the proper position by the spring $J$, after pass. ing such clod, as herein shown and described, for the purpose specified.
2. The spring $J$, when secured to the sliding bar E , bearing the pendent arm G and fender $H$, for the purpose of allowing a yielding movement to the fender when brought in contact with clods of earth, as herein shown and described.

73, 159.-H. Besse, Delaware, Ohio.-Automatic Water Gate.-January 7, 1868.-The water gate is hinged at the bottom and is secured by a drop lateh. The drop latch is connected to a float by which it is raised to free the gate when the water in the stream is high. The gate is connected to a heary float by Which it is opened as the water rises, and closed on its subsidence.
Claim.-1. A water gate A, piroted at or near its lower margin, and provided with a projecting float B, all substantially as shown and deseribed, and operating as and for the purpose set forth.
2. The latch $e$, or other cquiralent deviee, operated by a float $m$, or other equiralent device, substantially as shown and described, and in combination with the water gate $A$, all as and for the purpose set forth.
93, 160 .-Abraifay Block, San Francisco, Cal. -Sluice Blanket.-January 7, 1868.-A heary thread is thrown in at intervals in wearing so as to project upward from the body of the cloth. The ribs are intended to arrest the escape of metallic particles in the sluice.
Claim.-A sluice blanket provided with woven ribs, substantially as herein described.

93, 161.-GEORGE A. Bowex, Trenton, assignor to himself and Samuel C.ParrotT, Bordentown, N.J. -Watch.-January 7, 1868. -The ring has a spring eateli which engages the drum. On breaking of the main spring the catch is rcleased and prevents damage to the maehincry.

- Olaim.-The ring C, formed within the drum $A$, and fastened to the main spring B , When combined with the catch E and shoulder $a$, substantially as and for the purposes herein shown and described.
9.3,162.-Albert Brush, East Constable, N. Y. -Hollow Auger.-January 7, 1868.-The boring bit
has adjustable cutters which make a cylindrical recess at the inner cnd of the hole in the felloe to reccire a shoulder upon the spoke.

Claim.-1. The hollow auger D, prorided with the linives $e e^{\prime}$ for forming upon spokes the tenons $b$ and shoulder $s$, adapted to fit into the recess in the fellocs formed by the auger C, having the extended cutting lips $c$ aud adjustable guide $d$, construeted to operate as herein shown and described.
2. The auger C when proviled with the projecting cutting lip $c$ and adjustable gauge $d$, constructed and operating as herein described, for the purpose specified.
g3, 163.-James Cartwhight, Youngstown, Ohio. - Process of Mrixing Iron and Steel. January 7, 1868. - After preparing the bottom of a puddling furnace with sand or iron "fixing," an inch thick layer of wrought and cast-iron turnings is spread, and above this a layer of cast steel and wrought iron cut small, the layers silternating in this manner; the mass is leated to a white heat, rolled into a ball, and then rolled out into bars.
claim.-The process of mixing and combining steel and iron, substantially as herein described.

73,164.-John Chantrell, Bristol, Conn.Knitting Machine.-Jannary 7, 1868.-A flat web is knit by two sets of hooked needles combined with sinkers playing between the horizontal needles. The yarn is taken from a single spool, is laid over the bodies of the horizontal needles, and is then depressed between the needles by the sinkers. The loops thus formed are taken up by the vertical needles and east off the ends of the latter upon loops held between the vertical and horizontal needles, and thus locked.
Claim.-1. The manner herein shown and described, of connecting the arms of the sinkers $m$ by means of annular plates $r^{\prime}$ and rivets, as set forth.
2. The needle carrier $G$, when connected with the sliding rack $F$ and with the plate $H$, in such a manner that a combined longitudinal and transverse sliding motion is imparted to it, substantially as herein shown and described.
3. The reciprocating thread carrice $R$, when arranged as described, in combination with the arms $e^{1}$, needles $I$ and $J$, and sinkers $W$, all made and operating substantially as herein shown and deseribed.
4. The device hercin shown and described, for communicating motion from the needle carrier $G$ to the bar P, holding the thread carrier, said derices consisting of the spring plates $a^{1} b^{1}$, eams $c^{1}$, and stationary cams $d^{1}$, all made and operating substantially as herein shown and described.
5. The derices herein shown and described for adjusting the stroke of the sinkers W, consisting of the grooved plate V, vertical slides $g^{\prime}$, eccentric shafts $h^{\prime}$, gear wheels $i^{\prime}$, and sliding rack $j^{\prime}$, all made and operating substantially as herein shown and deseribed.
6 The combination of the perforated disk $d$, adjustable comnecting rod $g$, and the segment D , as and for the purpose set forth.

193,165.-J. S. Cook, West Groton, Mass.-Whip.-January 7, 1868.-Explained by the claim and illustration.
Claim.-A whip having its lash secured or hung to its stick, through a swivel ring or eye, substantially as and for the purpose described.

73,166.-S. H. Cox and W. H. Pence, Mattoon, IIl.-Corn Plow.-January 7, 1868.-Explained by the claims and illustration.
Claim.-1. Conneeting the forward ends of the plow beams H to the frame C by means of the clevis I, construeted as described, and the long adjustabI bolt J, substantially as herein shown and deseribed and for the purpose set forth.
2. The combination of the lever 0 and toothed parvl $P$ with the shaft $N$, grooved segments $M$, chains L , and beams H , in connection with the clevises I and long bolts J, for raising the plows vertically from the ground, substantially as herein shown and described.
3. The combination and arrangement of the plows
$\nabla$, having catters $v^{\prime}$ attached to them, and turnmg the dirt from the hills, plows $W$ rumning at a Lower level than the plows $V$; and turning the dirt toward the hills, standards R and T and beams H with each other, snbstantially as herein shown and describcd, and for the purpose sct forth.

73,16\%.-William Craig, Uniontown, Pa.Flour Bolt.-January 7, 1868.-The bolt has two hexagonal bolting cloths arranged one within the other, and having between them a closer cloth. These annular spaces receive the meal from the different runs of stones and deposit the prodncts in scparate compartments.
Claim.-The bolt, constructed as described, having the partitions $v^{2}$ between the outer and inner bolting cloths $v v^{1}$, operating snbstantially as described for the purpose specified.

73,168.-F. S. Davenport, Jerseyville, Mil.-Low-water Alarm for Boilers.-January 7, 1868.The valve stem has a float at bottom which sinks with the depression of the watcr and allows the escape of steam when the water falls below the proper level.
Claim.-1. The construction and arrangement of the hollow tube C, provided at its apper end with the screw-plug D , having valve seat $g$, the hollow tube E fitting in tube C , and having the opening $j$ communicating with the interior of the float, and provided at its upper end with the pointed valve $h$, all operating as described for the purpose specified.
2. In combination with the outer and inner tubes C and E , when arranged as described, the valve seat $g$, the valve $h$, and the orifice $j$, substantially as and for the purposes set forth.
73,169.-Anthony G. Davis, Watertown,Conn., assignor to himself and AUGUSTUS N. Woocson, same place.-Broom or Brush Holder.-January 7, 1868.The spring jaws are attached to the wall and operate to clasp aud sustain the broom handle.

Claim.-The broom-brnsh holder, constructed as described, consisting of the curved spring arms A, made in one piece, and sccured in position under the bar B, and slotted to receive the sliding bar C, as herein described for the purpose specified.
73, 1 79.-EDWARD B. DEcker, Bedford, Ill.Tire Shrinker.-January 7, 1868.-Explained by the claim and illustration.

Claim.-The combination of the operating lever or handle $D$, pivoting straps $C$ and $E$, pivoted levers or bars $A$ and $B$, liaving clamps with stationary jarrs F G, and piroted eccentric jarms II I attached to them with each other, substantially as herein shown and deseribed, and for the purpose set forth.
g3,1\%1-GEORGE Dittenilaver, Napoleon, Ohio.-Extension Clothes Post.-Jannary 7, 1868.The post is extensible vertically, and has a catch for the cord, operated by a thumb screw. A bent plate at top tnrns the rain. The standard has a latcliet on one side engrged by a spring catch on the raising portion of the post.

Claim.-The combination of the sliding part $B$, provided with the spring pawl $b$, and having the removable clamp D secured to its upper end, and adjnsted by means of the thumb screw $F$, all constrncted and operating substantially as described for the pnrpose specified.

73,172.-EDwin Doolittle, Pawnee, Ml.-Cultivator. - January 7, 1868.-The fore ends of the plow bcams are connceted by gimbal joints to cleviscs having anti-friction rollers running on the front cross-bar of the frame. The forc ends of the beams are also hnng by pendulous links to the frame, so that they admit of lateral movement by the driver.
claim.-1. The hinged slides M, frietion whecls N , and bent bar E , with each other and the plow beams I, and with the beams or bars D, snbstantially as herein shown and described, and for the purpose set forth.
2. In combination with the above, the knees or bars $O$, cross-bar $P$, and lever $R$, all arranged and operating in the manner and for the purpose set forth.
3. The combination of the adjnstable connecting
and brace bars $W$, mprights $V$, and plow beams $I$, When arranged to operate in the manner herein described and represented.

193, 173.-Joinn W. Doud, Forrostville, Iowa.-Cultivator.-January 7, 1868.-Explained by the claims and illnstration.

Claim.-1. The combination of the frame $C$, strengthening braces D , and diagonal plow beam E , to which the standards F of the plows G are attached, with cach other, the said parts being constructed and arranged substantially as herein shown and described, and for the purpose set forth.
2. Connecting the axle $B$ to the tongue $I$ of the frame C by the inclined bars $J$, and jointed or link connection $K$, substantially as herein shown and described.
3. The combination of the cross-bar $M$ and adjustable chains $L$ with the inclined bars $J$ and frame C, substantially as herein shown and described, and for the purpose set forth.
4. The combination of the lever $N$, chain $P$, and bail or bar $R$, with the frame $C$ and axle $B$, snbstantially as herein shown and described, and for the purpose set forth.
5. The combination of the levers $S$ and $T$ with the frame $C$, axle $B$, and inclined bar $J$, substantially as herein shown and described, and for the purpose set forth.
193.174.-CHarles Dupré, Louisville, Ky.Door Hinge.-Jannary 7, 1868. -The hinges are secured to the top and bottom of the door, and have out-turned ears by which they connect with the parts attached to the jambs. The lower hinge turns on a set screw which is stepped in a block, and by which the door is adjnsted vertically.

Claim. -The hinge plates $a$ and $b$, furnished with the arms or ears $\mathbf{E}, \mathbf{E}^{\prime}$, and $e$, in combination with the pin C , screw D , and socket F , or their respective equivalents, in manner substantially as and for the purposes described.
ges, 195.-James Elliotir, Milford, Wis.-Tire Shrinking Machine.-January 7, 1868.-The tire is clamped between the cmrved serrated bars and the scrrated cams, and the carriages are moved toward cacll other by the levers to upset the tire.

Claim.-1. The combination of the connecting rod or chain $G$, for opening the carriages, with the carriage E and cam levers F , substantially as described.
2. The slot $b$ in the bed piece $B$, and the groove $a$ in the platform $A$, making together a $T$-shaped groove, in combination with a T-shaped lig upon the carriages, all as substantially specified and described.
-3.176.-Louis Elsberg, New York, N. Y.-Buckile.-January 7, 1868. -The strap is engaged by the numerous serrations upon the lateral bar of the tongue.

Clain.-The buckle, constructed as described, consisting of the buchling loop $A$, having the flattencd center C and bent edge D , its extremities B bent at right angles to the center C , forming bearings for the loop E , the latter having the serrated tongue I fitting between the arms B upon the flat snrface of the loop $A$, beneath the edge $D$, as herein described, for the purpose specified.

73, 1 多多-Charles A. Fisher, Geneseo, Ill.Hay Knife.-January 7, 1.868.-The edge, back, and bracing piece form a triangnlar frame, and are in one piece with the staff bar, which has a spade handle at the cnd, and a rectangularly projecting handle part way down.

Claim.-As a new article of manufacture, the hay knife, when formed from a piece of metal as shown and described, and provided with the handles F G, as hercin set forth.

193,178.-David Forrest, Eastport, Me.-Sew. ing Machine.-January 7, 1868.-The bell-crank hand lever has a vertical cross-bar through which the thread passes, and which is connceted by a link to the needle carrier. The looper is operated by sliding rods actuated by the levor.

Claim.-The bent hand lever D, in combination with the slide rods $e k$, mounted on the base B, and connected with the needle $\alpha$ and the looper $d$, as set forth, the whole construeted and operating as hercin described.
g3, 179.-C. E. Gladding,Troy, Pa.-Horse Hay Fork:-January 7, 1868. - Improvement on his patent May 11, 1858. The head is hinged to the staff and is held rigidly thereto by a tongue and tripping eatech. The cutch is attached to a cord passing axially through the handle.
Claim. 1. In combination with a porror hay fork the connection D, or its equivalent, formed of the parts E, F, and G, or their eqnivalents, substantially as and for the purposes herein shown and described.
2. In combination with the connection D , or its equivalent, the bail C, substantially as described.
7:3, 1S0.-J. F. Hammond, North Sudbury, Mass. -Strawo Cutter.-January 7, 1868. -The sliding frame has two knires, which make the reciprocation of the slide effective in both its upward and downward strokes; and both the upper and lower sides of the throat have linives acting with those on the slide. The feed is fed by rakes which are antomatically thrust into the feed from abore and below, and while inserted are mored formard and then withdrawn.
Claim.- 1 . The combination and arrangement of the bereled kuives L, M, N, with each other and with the sliding frame $D$ and feod box $C$, substantially as herein shown and described, and for the purpose set forth.
2. The combinations of the slotted lever arms R T, sliding frames O, and sliding rake heads S, one set or both, with each other, with the feed box C, frame B, and knife firame D, snbstantially as herein shown and described, and for the purpose set fortli.
g3,181.-C. A. Harper, Whecling, Ind.-Cul-tivator--January 7, 1868.-The spiral plate has a berel wheel engaging a similar wheol on the mainwheel shaft, and operates to clear the clods and trash from before the plow.
Claim.-1. The combination of the wheel $D^{\prime}$ with the cnltirator frame $\Lambda$, sulbstantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the spiral or serew plate II with the wbeel $D^{\prime}$, and with the cultivator frame A $B$, substantially us shown and described, and for the purpose set forth.
'93,182.-Sam'l'T. Hemintat, Saratoga Springs, N. Y.-Burglar Alarm Lock.-January 7, 1868.The alarm is combined with an ordinary lock, and is set in operation when the latch is drawn in.
Clain.-The combination and arrangement of the piroted lever $B$, haring its onter arm projecting through the apertmere $T$ on the top of the lock, the notched arm A seenred to the rerge, the spring C and arm Ii, sulustantially as doscribed, for the purpose specifice.
73, 183.-George H. Henfield, San Francisco, Cal.-Car Axle Box.-January 7, 1868.-The ends of the semi-eylindrical soft metal linings enter groores in the eaps, and have studs entering the shells to prevent them from rotation. The shonlders of the axle have bearing against the caps.
Claim.-The combination of the groored caps $e$ e, the linings $a$ a, provided with pins $e c$, and the shells A A, arranged as and for the purpose herein described.

73, y8u.-Clamk R. ITwwett, Waupun, Wis.Sircho Cutter and Corn Sheller Combined.-Jannary 7, 1868. - The balance wheel has cutter knives on one side and shelling tecth on the other. The knires have a backing of rubber to keep them in contact with the metallie month of the fodder box. The ear of corn is fed in at the top and subjected to the action of sheller tecth and a serrated surface; the eob is ejected from the side and the corn has exit at the bottom.
Claim.-1. The combination of the shafts J N , bevel-gcar whecls L M, eutter knives P, and sheller teeth $S$, with the balance whed $O$ of a combined
fodder cutter and corn sheller, snbstantially as described, and for the purposes set forth.
2. The combination of the rubler springs $R$ with the knives $P$ and balance whecl $O$, substantially as described, anci for the purpose set forth.

93,185.-A. P. Holmes, Great Falls, N. H-Bobbin.- January 7, 1868.-Explained by the claim. Claire.-The spool or bobbin, haring its solid wooden body surrounded by the metallic crlinder between the end disks, the bearings of said spoot being composed of wood, as hereiu described, for the purpose specified.
73, 186.-GEORGE KENnEdy, Clarksville, Iowa, assignor to himself and A.J. Tompkins, same placeI'ad Crimp Press.-January 7, 1868. The crimp is used in formatiou of harness pads, and the forming blocks are removable to suit different sizes and forms.
Claim.-1. The frame or press A B , adapted to receive the blocks C D, constructed and operated substantially as hercin shown and described, and for the purpose set forth.
2. The remorable crimping blocks C D, or their eqnivalent, constructed and operated substantially as herein shown and described, and for the purpose set forth.
3. The combination of the removable crimping blocks C D, or their equivalent, with the frame or press A B, substantially as hercin shown and described, and for the purpose set forth.

73,15\%-J. M. W. Kitcuen, New York, N. Y.Fruit Jar.-January 7, 1868.-Conrex-topped lugs on the lid engage conrex-bottomed liggs on the inside of the neek, and confine the lid down upon a packing ring. A rubber ring covering the joint between the lid and jar is covered by a rubber ring having a plug attached, which fills a safety opening in the lid.
Claim.-The rent plug, when attached to an elastre band, or its equivelent, and arranged for operation substantially as described, for the pmrpose set forth.

73,188.-Gottlieb Koenig, Plymouth, Mich.Spring Bed Bottom. -January 7, 18vi.- The bottom is supported on X-frames, which aro piroted at the interscetion, and sustained by spiral springs connecting the two upper corners and the two lower eorners.
Claim.-The bars C, the springs D, and the regulating rods E, constructed, combined, and operating with the platform B and the base frame $F$, in combination with a bedstead, substantially as deseribed.
73,189.-Charles Lusted, New York, N. Y.Snow Plow.-January 7, 1868.-The oscillating share is hinged to the stationary share and connected and operated by a crank upon the axle, to throw aside the snow collected upon it. The oscillating mechanism may be thrown in or ont of operation by a clutch.
Claim. -1 . The hinged oseillating plonghshare D, when made and operating substantially as and for the purpose hercin shown and deseribed.
2. A snow plow, provided with an oscillating share D, which is linged to the upper edge of a stationary share C, and which has dlanges $h$ at the ends, substantially as herein shown and deseribed.
3. The hinged share D of a snow-plow, eonneeted by moans of a jointed rod or rods $g$, with a crank or cranks $a$, on the axle of the plow-truck, as deseribed, the crank or cranks being loose on the axle and connected with clutches, so that the share ean be made to oscillate or not, as set forth.
g:3,190.-Harvey McCown and Luther M. McCown, Enon Valley, Pa,-Hay Elevator.-January 7, 1868. - The carriage frame is conneeted by a spring-cateh to a hook, whiel holds it orer the load until the hay is sufficiently elevated, whea the spring hook is raised, and the framo runs along its trick to convey its charge to the mow.

Claim.-1. The earriage E, constructed as deseribed, when its bottom consists of the bar E, hung at one end, $e$, of the carriage, its free cud extending beyond the opposite side of said carriage, and notehed at $f$ to fit over the eatch $h$ upon the
pendant $i$, said bottom, E , being held in position by means of the eoiled spring $F$, and released by the pressure of the hook $d$, as herein deseribed, for the purpose speeified.
2. The eombination of the hinged and notched bottom E , coiled spring F , hook $d$, pendant $i$, eateh $h$, rollers C C, and side bars $a a$, all eonstrueted and arranged as described, for the purpose speeified.

73,191.-William McCreery, Pittsburg, Pa.Endless Chain Power.-January 7,1868.-The motive whecl of the ehain is upon a shaft, having a bevel Wheel engraging two loose bevel wheels upon the main shaft. Either of the loose wheels may bo connected by a eluteh to the main shaft to cause either right or left rotation of the chain wheel.

Claim.-The arrangrement of the shifting elutehes $e c$, the bevels $a c a$ and $b$, the pulleys $c c^{1} c^{2} c^{3} c^{4}$, and the endless chain $d d$, when applied as and for the purposes herein deseribed.

73,192.-FREDERICK E. NEARING, Brookfield, Conn.-Combined Horse Rake and Hay Spreader.January 7, 1868. -The rake is connected by a belt to a drum turning loosely on the axle, but connected therewith by a eluteh, and may be used as a tedder by continued rotation. When used as a rake the catches on the rake head engage the end of a treadle lever, and the semi-rotation of the rake is aecomplished by the drag of the hay, when the forward end of the treadle lever is depressed.

Claim.-The frame G, fitted loosely on the axle B, and earrying the revolving rake $H$, in combination with the loose pulley E and clutch F on the axle B , and the lever bar $J$ on the frame $G$, with the spurs $g g$ on the rake head, all being arranged to operate in the manner substantially as and for the purpose set forth.

73, 193. DANIEL OVERHOLTZER, Polo, Ill.-Bag Fastener.-January 7, 1868.-Explained by the elaim and illustration.

Claim.-The bag fastener, construeted as deseribed, consisting of the link $b$, having an open hook at one end, between the sides of which the bend of the locking hook $d$ is pivoted, in sueh manner that, the link C, when placed over the locking hook, will clamp the bend of said hook in the hooked end of the open link $b$, as herein shown and deseribed.

193,194.-Walter Payton, Sewardstone Road, Victoria Park, England.-Water Meter.-January 7, 1868. -The case consists of two segments of eylinders, and the vanes rotate therein so as to pack against each other and the inside of the case. Steam or other fluid may be passed through to act as a motor, and an index apparatus may be attached to form a meter by denoting the number of rotations.

Claim.-The eombination of the axes $b b$, vanes $b^{1} b^{1}$, gear whecls $b^{2} b^{2}$, worm d, gear wheel $f$, worm $f^{2}$, gear $g$, shaft $g^{1}$, worm $g^{2}$, and gearing for the operation of the indieators $g^{3}$, chambers $e c^{3}$, and $a^{1}$, all arranged as described, for the purpose of measuring the passage or flow of liquids, or for raising and forcing fluids, or for obtaining motive power, substantially as herein shown and described.
\%3,195.-C. Porter, Jr., Westerly, R. I.-Printing Press.-January 7,1868 . -The cylinder shaft is journaled in two eccentrics, which have segments of gears that are engaged by segmental gears on the ends of arms at both sides of the press. These arms are on a common transverse shaft, and are oseillated by a cam lever. The device affords means of raising the cylinder from the form.
Claim.-1. The combination of the eceentric bearing E , adjustable box F , segmental pinions G , segments H, lever L, and cylinder C, substantially as described for the purpose speeified.
2. The wheel $\mathbb{K}$ and cam $c$, in eombination with the eccentrie bearing E , for the purpose of returning the cylinder after having been lifted to its original position before taking a sheet, substantially as herein shown and deseribed.

9B, 196.-C. Potten, Jr., Westcrly, R. I.-Feed Gauge for Printing Presses.-January 7, 1868. -The guide is supported on the mpper seetion of a box,

Which is clamped to the shaft by the adjusting serews of the guide.

Claim.-The two serews $D \mathrm{D}^{\prime}$ and slotted guideplate $B$, in combination with the box, composed of two parts, E E', fitted to the shaft A, and all arranged substantially in the manner as and for the purpose set forth.

73,19\%.-E. M. Potter, Kalamazoo, Mich.-Clevis.-January 7, 1868.-The double-tree is secured to the ehain upon the smaller pulley, and the single tree for the third horse upon the ehain on the pulley of double the diameter.

Claim.-The employment of the two pulleys $A$ and $\mathrm{A}^{\prime}$, substantially as shown and described, in combination with the ropes or chains D and $\mathrm{D}^{\prime}$, and the clevis-iron C, or other equivalent deviee for the purpose of working three horses abreast in plowing or other equivalent operation, all as set forth.

193,198.-Jonn Rancevau, Carthage, Ohio.-Ioe Sleigh.-January 7, 1868.-The sleigh is driven by a toothed wheel whieh runs on the iee, and which is operated by gearing conneeted to a winch. The wheel and gearing are contained in a hinged ease depressed by a rubber spring. The rear end of each runner has a dog-brake operated by a treadle.

Claim.-1. The wheel D, having its bearings in the hinged frame, in combination with the elastic strip I, whereby the wheel is held upon the ice and permitted to conform to its irregularities, as herein set forth, for the purpose specifica.
2. The construction and arrangement of the pivoted brakes K L, connecting rods $O$, foot levers $M$ and $N$, and springs $P$, substantially as deseribed, for the purpose speeified.
3. The combination and arrangement of the spm Wheel $D$, hung in the hinged frame, gear wheels E F G , clastic strip I, braee $J$, springs $P$, foot levers II N, conneeting rods O, piroted brakes K L, block U , and thumb nut V , substantially as .described, for the purpose speeified.

13, 199.-D. E. RoE, Elmira, N.Y.-Plate Lifter. -January 7, 1868. -The staff has a fixed jaw at the end and a pivoted jaw which is drawn in by a spring.

Claim.-1. The eombination of the spring C with the claws $A$ and $B$, substantially as and for the purpose shown and deseribed.
2. The loop $b$, or other equivalent device for holding the elaw B at a proper distance apart from the claw A, substantiall.y as shown and described.

73,200.-W. L. Rogers, North Cornwall, and W. E. Crane, New Britain, Conn.-Railway Switch. -January 7, 1868.-One of the fore wheels of the engine presses down the rack bar, and turns a erank having pitman eonmeetion to a bell-erank lever, conneeted by a link to the switch rails, so as to connect the single track with the track on which the train is traveling. Accidental moving of the switch is prerented by the hook of one rod fitting in the notehed plate of the tube, and a pin on the rod within the tube fitting in a slot therein. The whecl first depresses the rack bar operating the releasing meehanism, and then the bar operating the switeh.

Claim.-1. The bent or right-angular levers $\mathrm{D} \mathrm{D}^{\prime}$ rods $E E^{\prime} \mathrm{F}^{\prime} \mathrm{F}^{\prime}$, eranks $G \mathrm{G}^{\prime}$, pinions a and raek: bars I I', all arranged and applied to a switeh to operate in the manner substantially as and for the purpose set forth.
2. The rods $J \mathrm{~L}$ and tube K , notehed as shown, and provided with the spring $i$ and plates $g h$, in combination with the rods $\mathbf{M} \mathbf{M}^{\prime}$, shafts $l l^{\prime}$, pinions $m$, and rack bars $\mathrm{N} \mathrm{N}^{\prime}$, all arranged substantially in the manner as and for the purpose speeified.
g8,901.-James Sangster and D. P. Dobbins, Buffalo, N. Y., and John S. Richards, Eric, Pa. -Brick Machine.-Janvary 7, 1868. - When the upper and lower pistous are at their highest points, and the charger his advanced and filled the mold, the rotation of the wheels brings the upper piston downward, the cam allowing the lower piston to fall. The charger is mored by a cam to the starting point. The material is pressed, the lower piston moving somewhat slower than the upper one. The motion of the pistons is then reversed, and the briek raised from the mold.

Claim.-1. The combination of the lug or projection Q and the morable jointed connection $\mathrm{D}^{2}$, or ts equivalent, when constructed and arranged substantially as and for the purposes herein described and set forth.
2. The projecting pieces or rims marked $\mathrm{F}^{2}$, within the molds, in combination with the rims $\mathrm{G}^{\prime}$, or any oquivalent thereto, on the upper perforated piston or pistons I, substantially as and for the purposes herein described and set forth.
3. The combination of the mechanism $X \mathbf{X}$, spring $Y$, and cross bar $A^{\prime}$, with the vertically-moring perforated pistons, substantially as and for the purposes described.
4. The combination of the verticallr-moring perforated pistons I, when the perforations in the lower pistons $G$ are made larger than those in the upper pistons, for purposes substantially as herein described.
5. The combination of the upper and dower perforated pistons with the cams $R$ and friction roller $D^{3}$, or its cquiralent, substantially as and for the pur'poses herein described and shown.

73,202.-F. J. SHEFFERLY, Detroit, Mich.-Preserve Jar.-January 7, 1868.-The neck of the jar and the stopper have each two somicircular inclines beneath, upon which the lid rests. The upper parts of the neek and stopper are contracted so that a rubber band may be interposed between them and pressed by turning the stopper, the inelines acting to raise it.
Claim.-Sealing a preserve jar by raising the corer in the neck of the jar, instead of lowering it, substantially as described.

73,203.-F. Marion Sfieldos, Macon, Miss., assignor to himself andJ AMEs A.JARNAGIN, same place. -Envelope.-January \%, 1868. -The envelope is arranged so as to admit of reusing, by means explained by the claim and illustration.
Claim.-The cuvelope, constructed as described, consisting of the parts B C, provided with the wings G G, and tlaps H H E E ${ }^{2}$, having their edges gummed, as shown and specified.'

73,204.-JOHN F. SKNNEER, Brasher Tron Works, N. Y.-Thrashing Machine.-Jannary 7, 18 fis.-The belt operating all the mechanism, with the exception of the cylinder, passes orer an idler pulley, jourwaled at the end of a lever connected to a spring.

Claim.-1. The operating of the shoc C , through the medium of the lever $G$, and the cam composed of the double spiral thread or flange e on the pulley H, snbstantially as shown and described.
2. The spring $N$, pulley $h$, and lever Mr, arranged in connection with the belt $L$ and wheel $O$, substantially as and for the pmpose specified.

73,205.-E. A. Sloat, Theresa, N. Y.-Bolt Cutter.-January 7, 1868.-Explained by the claim and illustration.

Claim.-The stationary eutter A, the morable cutter C , the lerer E , and the plates B , constructed and arranged substantially as herein shown and described for the purposes set forth.

73,206.-Gains P. Stebbins, Sparta Center; Mich.-Gate.-January 7, 1868. -The platform is connected by a cord to a barrel, which has a portion of considerably larger diameter, on which are coiled the cords connected to the gate. The gate is hung on rollers, and the depression of the platform by the wheels of the rehicle draws the gate open. The gate is closed by the weight.

Claim.-The sliding gate B, hung or suspended on rollers a a, in combination with the weight $k$, the pivoted bar E , platforms F F , and the pulleys 1 ) $j j^{\prime}$, all arranged to operate in the manner substantially as set forth.

73,207.-Albert J. Stemle, New Kork, N. Y. -Uterine Electrode and Abdominal Supporter.January 7, 1868. -The patient grasps one pole of the battery, and the other is conneeted to the insulated wire which conveys electricity to the part affected. Olaim.-1. Wire eleetrodes, insulated and covared with sponge, substantially as shown and for the purposc specified.
2. The strap $\dot{B}$, for sustaining the electrode in
place, substantially as shown and for the purpose specified.
3. The form of electrode having a ring $g^{\prime}$, and stems $f f^{\prime}$ attached thereto, snbstantially as shown and for the purpose specificd.
4. The form of electrode having the ring $g$ and cross-pieces $h h$, substantially as shown and for the purpose specified.
5. The form of electrode having a single stem $f^{\prime \prime}$, and cross-piece $h^{\prime}$, substantially as and for the purpose shown and described.
6. Elastic straps $c$ c, in combination with the strap $B$, substantially as and for the purpose shown and described.
7. The abdominal belt $\mathbf{A}$, in combination with the above described electrodes, substantially as and for the purposes shown and described.
8. The non-conducting plate D, in combination with the wire electrodes, as hereinafter described, smbstantially as shown and for the purpose specified.

73,209.-William Stine, Elmore, Ohio.-Tinners' Forming Machine.-January 7, 1868.-The gauge has a tapering side extending to the rollers, where they come in contact; and as the cylinder is formed its end is pressed npon the gange, which flares it outwardly.

Claim.-'The flaring gange $a$, in combination with the rollers of a tinman's forming machine, arranged and operating substantially as and for the purposo herein described.
$73,209 .-J a m e s$ Urie, Evansville, Ind.-PlozaJanuary 7, 1868. -Explained by the claims and illustration.

Claim.-1. The standard $C$, constrneted as described, having the flange $c^{1}$ extending its entire length npon one side, and the horizontal part or land-side forming two flanges upon its rear end, gradually decreasiug in width towned the forward part, all cast in one piece, as herein described, for the purpose specified.
2. The point A, when cast in one piece, as set forth, in combination with the standard $C$, constructed as described, having the flange $c^{1}$ extending its entire length upon one side, and the horizontal part or land-side forming the flanges upon its rear end gradually decreasing in width toward the forward part, all cast in one piece, as herein shown and described.

73,210.-George Walker, Middletown, N: Y. -Saru.-January 7, 1868.-A hole is drilled into the tooth near where the cutting-point usually is, and a stecl rod inserted whose point forms the cutting-edge. When the friction is not sufficient to hold the rod in place, a ratchet is formed upon it, and a parl upon an ammar liret commeets therewith. The rivet is within a hole drilled through the plate and connecting with the lole containing tho rod.

Claim.-'The annular rivet $c$ inserted in the side of the saw-tooth, engaging with the notehes a upon the cutter B , whereby the latter is held in the groove of the tooth, as herein shown and described.

73,:11.-Joserfi H. Walker, Grand Rapids, Mich.-Horse Hay Fork.-January 7, 1868. -The suspension bar is piroted to the fork frame, and the latter has a segmental bar sliding in a guide socket of the former. The tines are secured in a horizontal position by a spring bolt, which enters a notel in the segmental bar. When the bolt is withdraven by the cord, the points of the tines descend and discharge the liay.

Claim.-The vertical spring boit $\mathrm{D}^{\prime}$, wrorking in projections mpon the side of the suspension bar $C$, near its upper cud, and fitting into the notch $e$ in the under side of the curved frame 13 , passing throngh the mortise in the suspension bar C , above the spring bolt $\mathrm{D}^{\prime}$, arranged and operating as described, for the purposo specified.
73,21\%.-E. B. Wells, Northampton, Mass.Scraper Attachment to Cars.-Tanuary 7, 1868.-The derice is intended especially for street cars. It is operated by levers connected to hand and treadle levers.

Claim.-1. Tho adjustable scrapers D, held down
upon the track by means of pressure upon the bar $H$, the spring E permitting said scrapers to yield to the inequalities of the track, as herein set forth, for the purpose specified.
2. The construction and arrangement of the scrapers D, attached to the end of the inclined springs E, curred bar $F$, stnd $a$, slotted and jointed rod $G$, its sectious $c$ d pivoted to the ears $b b$, the section $c$ conneeted to the operating bar $H$, as heroin set forth, for the purpose speeified.

73,213.-John R. Wharry, Moundstille, W. Va.-Ventilator and Window Screen.-Jamary 7, 1068.-A gauze frame is fitted in the space beneath the upper sash, and a shutter with movable slats in front of the gauze.

Claim.-1. The combination of the wire sereen and fiame $\mathrm{F} G$, shutters $\mathrm{C} \mathrm{C}^{\prime}$, and window frame, as herein deseribed, for the purpose specified.
2. The shutter $\mathrm{C} \mathrm{C}^{\prime}$, metal bar e, and lever E , substantially as describod, when disposed without the lower part of a window frame, substantially as above set forth and described.
3. The shutter $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, in combination with the slot $g^{\prime}$, in screon frame G, substantially as above set forth and described.
73. 2 If.-Emery T. Wheeler and William H. Vaugian, Canneltou, Ind.-Jüachine for Sawing Laths.-Jamary 7, 1868.-The cylindrical $\log$ is mounted on journals upon gravitating guide bars, and supported and rotated by rollers. The laths are sawn from its periphery by saws cutting reetangularly to each other.

Claim.-1. The adjustable rests $p p^{\prime}$, in which are mounted feed wheels $u u^{\prime}$, in combination with the sliding supporting rods $r$ and bars $s$, all construeted, arraged, and operating substantially as and for the parpose herein shown and deseribed.
2. The carriage $B$, on which the vertical saw $b$ and horizontal saw a are monnted, when arranged to be moved on the ways $A A$, by means of a rack and pinion, and when arranged to operate a rod $l$, through the medium of a pin $f$, on the same, substantially as and for the purpose described.
3. The rod $l$, provided with pins $f f^{\prime}$ and double incline $i$, when arranged to be operated from earriage $B$, in combination with the parrl $z$ and gauge ratchet wheel $y$, constructed, arranged, and operating substantially as and for the purposes set forth.
4. The toothed feed wheel $u$, to which motion is given by worw $w$, on shaft $g^{1}$, through the medium of elitch pulley $n^{2}$, on same shaft, substantially as described.
5. The combination of the clutch palley $n^{2}$, arm $v$, gauge ratelet wheel $y$, and shaft $g^{\prime}$, all constructed and arranged substantially as described.

7es, 9 是 5. George W. Wheeler and George V. Alcen, Hartford, Vt.-Water Wheel.-January 7, 1868. - The water is received at top, and flows outward and downward between the two sets of buckets at the periphery.

Claim.-The combination of the three sets of buckets $a b c$, and the inclined rim $d$ and bottom $e$, to form the wheel C, in conmection with the case D, applied to the wheel, and all arranged substantially as and for the purpose specified.
 Marker for Seving Machines.-January 7, 1868.The pencil passes through a socket piece pivoted to a seale plate, and is depressed upon the fabric by a spriag.

Claim.-1. The spring cateh $e$ and handle $d$, in combination with the presser $C$, bar $c$, and gange $A$, all made and operating substantially as herein shown and deseribed.

2 The hemmer $D$, composed of two pieces, in and $i$, constructed as set forth, in combination with its sliding supporting block $f$, bar $B$, and gauge $A$, as and for the purpose herein shown and deseribed.
3. The marker E $I$, hinged to the sliding block $k$, and provided with the spring $m$, substantially as herciu shown and deseribed, in combination with the presser C , all made and operating as set forth. 4. The adjustable gange $A$, when provided with
set-loles $b b$, in combination with the presser $C$,
handle $d$, spring eatch $e$, adjustable sliding hemmer D , and hinged and sliding marker E F , all made and operating substantially as herein shown and described.
r3,21\% -JOSEPH WIDMAN, Panola, Ill.-Cultb-vator.-Janmary 7, 1868.-The plow beams are gim-bal-jointed to standards depending from the axle, and have vertical and latcral movement by two hand-levers.

Claim.-1. The detachable seat bars E E, seeured to the main fratae $A$ of the machine, substantially in the manner as and for the purpose set forth.
2. The attaching of the front cnds of the plow beams $G G$ to the pendants I I by incans of universal joints H , when this attachment is used in connection with the pivoted arms 0 O, commecting bar P , and lever $Q$, for giving a lateral motion to the plows, substantially as described.

73, 218.-STANSBERRY J. WINGATE, Decatur, 11.-Bed Bottom.-January 7, 1868. -The levers rest at one end on the cleats on the head and foot boards, and their other ends rest in the rubber loops attaehed to the slats at their mid-length. The slats have cross bars resting on the levers at their mid-length.

Claim. - The combination of the bars or lerers E, elastic straps or bands I, and cross bars I with caeh other and with the slats $F$ and frame of the bedstead, substantially as herein shown and described and for the purpose set forth.
98.219. - Horace Woodman, Saco, Me. Shingle Machine.-January 7, 1868. -The blocks are held between ribbed eylinders in a rotating frame, and ure carried to the cireular saw and planer; the latter smoothing the face of the block subsequently to the removal of a shingle. Each end of the bloek is fed alternately farther than the other, to canse the taper. Each eylinder has a pinion at the end, which is engaged by a serew gear upon a shaft, which is turned $90^{\circ}$ at each rotation of the table; the same shaft actuating both of each pair of eylinders, and the worm gear being arranged to cause the unequal feed of the ends.

Claim.-1. The rerolving table, with its feeding and securing mechanism, constructed substantially as described, in combination with the rotary planer $V$ and saw $C$, as and for the purpose specified.
2. The combination and arrangement of the outer grooved eylinders $K$, adjustable frame $P$, lever $Q$, segment rack $R$, and spring $S$, substantially as deseribed, for the purpose specified.
\%,820. - W. ADAMSON, Philadelphia, Pa.Holder for Drying Glue.-January 14, 1868.-Tho supporting cords of the drying glue are saturated with paraffine, stearine, or wax to prevent adhesion.

Claim.-The within-deseribed holder on which to dry glue, the said holder consisting of cords, wires, strips or sheets of suitable material, saturated or coated with parafine, or its equiralent, for the purpose speeified.
Meg, PBE.-Moratio Allen, New York, N. Y. Connecting the Tubes with the Heads of Surface Con. densers.-January 14, 1868.-One hend of the condenser is made thicker than the other to take a firmer hold ou the tubes, and cause the movement attributable to extension and contraction of the trubes by Triation in tcmperature to take place only in one head, and thus prevent the gradual drawing out of the tubes. The tongues are cut in the tube end for the same ultimate object.

Claim.-1. Masing one of the tubo-heads of greater thiekness than the other in the manner and for the purpose herein described.
2. Cutting and bending into bell-mouth form, tongues in the ends of the tubes, for the purpose and substantially in the manner herein described.

17: 28æ§.—Daniel W. Anos, Brond Top City, Pa.-Horse Hay Fork:-Janmary 14, 1868.-The upper ends of the incurved tines are connected by a chain whieh is engrged by the hoisting hook to bring the tines together upon the hay. The chain is tripped from the hook by a pivoted section thereof operated by the tripping line. When tho chain is
tripped, the toggle, which is connceted to the hook, spreads the tines and releases the hay.

Claim.-1. The combination substantially as de seribed, of piroted tines $A$, link-rods $C$, and a spreading link $D$, with a tripping lateh and hoisting ehain $B$, for the purpose set forth.
2. The arramgement, as deseribed, of the link rods C , below the joint of the tines, whereby the fork is opened by its own weight in desecnding.
\%3,223.-LEWIS ATWATER, Ithaca, N. Y.Horse Hay Fork--Jannary 14, 1868. - The tines are spread into working position by depression of the togele levers, and these are drawn up by tho tripping cord to discharge the hay.

Claim.-1. The tines $C$ D, constrncted in the form of hooks at their upper ends, and branching below the said hooks to a broad bearing support near their center, and to double prongs at their lower cuds, all in one picee, substantially as set forth.
2. The combination of the levers $F^{\top} G$ and buil A, all constructed and operating substantially as and for the purposes set fortl.
3. The combination of the tines C D, levers F $G$, and bail $A$, arranged and operating substantially as set forth.

73,2•24.-A. Bennett, Rockford, M1.-Cultiva-tor.-Jannary 14, 1868; antedated Janua'y 4, 1868.The fore euds of the plow beams are so commected to the frame as to allow lateral and rertieal morement; the former is aceomplished by the levers by whieh their rear ends are adjustably suspended, and the vertical morement by stirrups hung to chains passing through the frame and attaebed to the suid beans.
Claim.-1. The hitching iron $a$, in combination With the plow beams C C, and the front cross beam D, arranged and operating substantially as and for the purposes herein described.
2. The chain $h$, with the stirrup $m$, at one end, connceted with the plow beams C C at the other cnd, and passing over the rear cross beam E , to ruise the beans and shorels, as described.
3. The npright hand levers $e e$, hinged or piroted to the plow beams $C$ C, and passing through the staples $g g$ on the cross beam E, to which they are sceured by pins $k k$, arranged and operated as and for the purposes deseribed.
4. The movable foot-picee or steps $f$, on the levers $e e$, held in place by notches in the sides of the levers as and for the parpose specificd.
5. The adjustable braces $p p$ and slotted bolts $r \quad r$ arranged in relation with the beams C and standard $d$, to regrulate the pitch of the shovels, as
herein shown and described.

73,225.-EdWard B. Booti, St. Louis, Mo.Sheep Wash.-Jamnary 14, 1868.- Wash to keep sheep clear of scab and vermin, composed of refuse and stems of tobaceo, 100 pounds ; boiled in water, 50 grallons ; redueed to 40 gallons ; pulverized ehalk is added until efferrescence censes; to this when cool is added tersulphide of ealcium, 1 gallon. For the bath, to each gallon of water is added one pint of
the compound. the compound.

Claim.-A sheep wash composed of thoingredients above naned, or their cquivalents.

73,226.-Enen Moony Boynton, Grand Rapids, Mich.-Saw.-Jannary 14, 1868.-Explained by the claim and illnstration.

Claim.-As an improrement in the constrnetion of saws, providing them with the ganging and clearing teeth 13 , consisting of the inclined points $c$, and the horizontal faee or berring $e$, with a shoulder between the point and the bearing $e$, substantially as shown and deseribed.

73,927.-EbEN M. Bornton, Grand Rapids, Mich.-Saw Tang.-Jimuary 14, 1868.-The cud of the saw is passed through the slotted serew bolt which passes through the arm secured to the sucket, and is held by a thumb nut. The socket is placed as a ferrule on the frame.

Claim.-The detachable sawt tang, consisting of the socket $A$, with the arm $B$, having the groove $n$ formed in its under side, in combination with the slotted bolt D and the thumb nut E , substautially as deseribed.

73,228.-A. N. Breneman, Lancaster; PaShoe Holder.-January 14, 1868.-Explained by the claim and illustration.
Claim.-The arrangement of the too and heelpicees A $B$, when connected by a hinge $C$, in combination with the sliding wedge, and band D E , or its equivalent, for separating the parts below, substantially in the manner and for tho purpose specitied.

73,229.-GEORGE W. Brown, Rockford, Mll.-Spirometer.-January 14, 1868. - The breath passes anto the reservon and raises tho same in tho watertank, the index denoting the quantity in cubie inches.

Claim.-1. The arrangement of spirometers and index $H$, and shield $I$, in the mamer speeifiod, and for the purpose as described herein.
2. The metal tube B , which rises through the water in the reservoir $A$.
3. The arrangement of the guides E E and eyes F whe spirometcr, for the nso and in tho manner herein described and set forth.

73,230.-H. W. Burgess, Ithaea, N. I.-Strap Holder. January 14, 1868. - The stribl is held between the rolute interior of the bed piece and tho fite of the cam.

Claim.-1. The construction of tho strap holder, When the said surfaces of the movablo piece or part I3 and of the bed or opposing piece or part A are made to be a part or section of tho volnte curve F , as figured and deseribed.
2. The giving, by the above-named rolute-shaped surfaces, an adaptrition to varied thickness of straps, and a parallelism to each other of tho said surfaces, thereby safely and surely holding the raried straps placed between tho grasping surfaces, as herein deseribed.
3. The combination of the bed-pieco A, morable pieee or part IB, volute-shaped sinficeos $F$, handle $G$, and hinge $D$, the same making a strap holder, as set forth, as an article of mannfacturo.

73,231.-Miram C. Chandleh, Erio Township, Inch.-Whovel Plow.-January 14, 1868. - The trio forestandards are removablo and aro adjustable vertically by the slotted brace rods, ame laterally by the wedge bloek, which is insorted betwoen the standards and beneath the beam.

Claim.-1. The notehed beam at D , for the purpose of adjusting the handles to the desired heirht by a bolt passing through them and the noteh.
2. The double-slotted wedge $F$ and method of application at the point $G$ mader the beam hetween the standards 13 B to adjnst them as to width, and the slotted rode E E sceuring a forward or bisckward movement of the standards 13 B and tho shovels attached thereto, and fistened to the beam in the slots by a bolt or other similar device.

73,23®-GEOLGE E. Chenoweth, Baltimore, Md.-Balanced Feed Water Vabve.-Jammary 14, 1868. - The stem is conneeted to an olastie cliaphiagm covering an air chanber bencath the viblve. The aim is to balance the valve to render it sensitive to a light power exerted npon it.
Claim.-In combination with the ralve, valye stem, ind passages, in clastic, impermeablo diaphragm, and air chanber underneath it, for the pmrpose of holding the valve in a balaneed condition in any of the positions of the valve, substantially as hercin described and represented.

73,233.-Charles J. Clifford, New Hampton, N. J.-Apparatus for Determining Deviation of Locomotive Crank Dins from True Center.-Jam-
 rest against the facing around tho baso of the pin. When the frame is turned, the sprine scribor marks a circle upon the end of the pin which indicates by comparison with the turuing conter whether the pin is bent.

Claim.-The instrument for ascertaining, without quartering or centering, whether or not crank pins on locomotive driring wheels aro bout or sprung, construeted with the arms $a$, feet $b$, brace $c$, adjusting screws and spring marking point, Fig. 2, all arranged and combined substantially as shown and spocitied.

73,234.-GEORGE N. Compton, Canton, Ohio.Pole. Attachment.-January 14, 1868. The singletrce clevises are double-ended, and they are conneeted to the double and single trees by bolts, and to each other by a hollow stem. The breast rings upon the noek yoke are hinged to plates upon the ents of the said yoke. The neek yoke is jointod to as swivel upon the end of the tongue.

Claim.-1. The combination of the part I , with the pins $a$ a and the ring $G$, the wholo forming the ring pieces L G, shown in Figs. 6, in tho manner and for the purpose herein speeified.
2. The clevis $F$ ', composed of the two U's, united by a hollow neck, and cast either in a single pieec or in two pieces, which are connected by a bolt or rivet, in the manner and for the purpose herein speeified.
3. The tongue shield S , with pins a a thereon, construeted and arranged in the mannor and for the purposes herein specified.
'73,2B5.-Clara Z. Cummings, Buffalo, N. Y.Corset. -January 14, 1808; antedated Decembor 38 , 1867.-Explained by the elaim and illustration.

Claim.- A corset, having a portion of its back formed of clastic goods B, and provided with elastic buekle straps C' and D, for the purposes and substantially as described.

73,236.-Pearce K. Curle, Elk Ridge Landing, Md.-Cart Harness.-January 14, 1868. -The thills are supported on the hooks at the opposite ends of a lever pivoted to the bridge picee of the saddle.

Claim.-A cart-harness suddle, provided with the lever $D$, pivoted in the upper end of a bolt $C$, satid bolt being arranged to turn loosely in the eross-picce A, all construeted and arrangced to operate substantially as shown and deseribed.

73,237.-TOHX DEAKN, Glouccster, N, J., assignor to himself and D. and'C.KELIY, P'hiladelphia, Pa.-Loom.-January 14, 1868.-The motion is eommunicated to the treadles by revolving cams. One of the eams is upon a sleevesliding on the eam shaft by the action of levers aetuated by projeetions upon an endless toggle chain. The meehanism operates to change the pattern.

Claim.-The combination and arrangement of the heddle levers, pattern chain, and adjustable cams, with levers E H, or their equivalents, the whole being constructed and operating substantially as specified

93,238.-Henry Disston, Philadelphia, Pa.Cireular Sau.-January 14, 1868.-The baeks of the teeth form seetions of epicyeloidal curves.

Olaim.-A eireular saw, every tooth of which has its back edge so formed in the are of a eircle, having a center eecentrie with tho center of rotation of the saw, that the sharpening of eaeh tooth may be cffected by reducing the front odge in a spiral course, as herein set forth.

73,239.-Thomas S. Disston, Philadelphia, Pa., assignor to Henry Disston, same place.-Saw Gumming Machine.-Jannary 14, 1868.-The eutter is rotated by a wineh and turns in a bloek which is adjustable in radial slots of disks that are rotated by a lever. The frame being clamped to the snw, and the cutter rotated while the lever is swept around, a sog. mental pieec is eummed from tho saw.

Claim.-1. The rotary eutter $G$, arranged to recolve in disks adapted to and admitting of boing turned in a suitable framo securod to the saw, all substantially as deseribed for the purpose specified.
2. The combination of the rotary eutter $(G$, its bearing bloeks D D, adapted to tho morablo disks B , all substantially as and for the purposo herein set forth.
3. The rod $J$, rendered adjustable on the machine, and having a notehed end, sdapted to the point of one of the tecth of the saw, as set forth for the purpose described.
4. The recesses $k k^{\prime}$ in the disks $B$, for the recoption of the forked ond of tho lever H.

73,240.-Samurl F. Estell, Rielimond, Ind.Regulator for Iimepieces.-January 14, 1868.-The
free end of the regulator lever is slotted to receive a pin projecting from a nut on the operative serew.

Claim.-The combination of the regulating lever C, having a slotted end, in combination with serow F and nut E , substantially as described and for the purpose set forth.

73,241.-A. L. Fleury, New York, N. Y.A malgamator.-Tanuary 14, 1868.-The tailingrs pass throngh the perforated bottom of the mixing hopper and descend through a pipe of sueh length as to balance the mereury in a retort conneeted with the open vat into whieh the tailings dischargs. Within the vat is a series of horizontal and vertical concentric perforated eopper partitions which foreos the contents to take a derious courso. The vat and retort me survounded by steam jackets. Tho fumes of mereury aro injected into the descending body of tho tailings within the pipe.

Olaim.-Sho herein deseribed amalganator, comstructed and operating substantially in the manner set forth.

73,242.-GEORGE L. GERARD, New Haren, Conn., assignor to himself and David Fobbes, same place.-Buckle.-Jammary 14. 1868; mitedated. December 28, 186\%. -The buckle is formed of a single corrugated plate haring a central bar for attaeliment of the fixed strap and slots near the ends for passage of the adjustrble strap.

Olaim.-The combination of the central bar $f$ and bars $h$ and $l$, and the ribs $r$ and $s$, tho whole constrneted and arranged so as to operate in the manner spocified.
73.243.-ANDREW GOODYEAR, Albion, Mieh.Machine for Sealloping Leather.-Jamuary 14, $1868 .-$ The pressure of the bed roller against the scalloped disks is increased by a eam lever at one ond of the supporting lever of the bod roller. Motion is giren to the sealloped disks by a wineh.

Claim.--1. A entting-edged disk A, with radial corrugations or other orwamental shape indentations formed around it on both its faees next the periphery, substantially in the manner and for the purpose heroin deseribed.
2. The use of one or more revolving entting disks $A$, with faces shaped radially in ornamental forms, in combination with an adjustable bed roller $B$, and levers $L$ and $M$, monnted in a suitable frome, and arranged, adjnsted, engaged, and operated, substantially as and for the purposes set forth.
193.244.-Robert A. Goonyear, New Haven, Comn.-Neck-tie Fastening.-January 14, 1868 ; antedated Deeember 28, 1867. -The fingers of the spring clasp are foreed behind the button, and the plato to Which the eravat is attached is bent downward in front thereof.

Claim.-The spring clasp $c$, formed as shown at 1 1, for grasping the button, and so bent, at or near the hinge $b$ of the plate $a$, that a spring is produced for keeping the plate $a$ toward the clasp, as and for the purposes set forth.

73,245.-JOHN HARDEN, Chieago, Ill-Antifriction Bearing for Machinery. Jannary 14, 1868.A piate of glass is let into the friction surface and flexible matter is plaeed beneath the glass.

Claim.-The glass bearings B, in eombination with the working parts of maehinery A, flexible sent $d$, arranged as set forth, and for the purposes specificd.
173,246.-LouIS HARMYER, Cineinnati, Olio.Composition for Preserving Wood, Metal, Canvas, de.-Jannary 14, 1868.-Composed of tar, 1 barrel; rosin, 10 pounds; sulphmrie acid, $2 \frac{1}{2}$ ponnds ; pulver: ized copperas, 10 pounds : salt, 6 pounds ; alum pulrerized, 6 pounds ; lime, 60 pounds ; and earbon iron, a pounds. Mixed under heat.
Olaim.-The composition itself, and the manner and proeess of compounding and using the same, substantially as herein set forth.

73,24\%.-M. W. Helton and J. II. Redfield, Bloomington, Ind.-Automatic Alarmo for Grist-mills.-January 14, 1868.-Whon the grist is changed,
the alarm mechanism is pat in operation and sounds the alarm when the flour of the previous grist has run from the bolt. It is sot to approximate as elosely to this result as may be.
Claim.-1. The apparatus, substantially ns deseribed, and which is construeted so that when applied to mill machinery, and properly adjustod thereto, it will automatically give an alarm at the proper time for ehanging the saeks, for the purpose sot forth.
2. In combination with alarm mechanism and deviees, which will automatically somd the alarm and then be disengaged from the main driving power, substantially as showh and set forth, means, substantially as deseriborl. by which the maehine can be adjusted and set to sound the alarm at any given time, for the purposes set forth.
3. The adjustable index wheel K , with its stop i and perwl m, or their respective equivalents, in combination with the land or arm L upon the slaft $h$, and an alarm mechanism, operating substantially as described.
4. The vibrating lercr D and eateh I , in combination with the tripping wheel E, worn wheel shaft C, and driving shaft B, operating substantially as deseribed.
5. The pawl and elanp $m . s$, or their equivalents, applicd to the wheel K , for holding this wheel firmly in phace when properly adjusted, substantially as deseribed.
(i. Sustaining the worm-wheel shaft C at one ence, by means of a lever D , in combination with a eateh II, and also with means for tripping this eateh, when said shaft C has made a given number of revolutions, substantiallyous described.

7:3,248.-Benjamin F. Horton, Ithaea, N. Y.Horse licke.-Jinuary 14, 18ti8. -The thimbles hare side projections cast upou them, to which the teeth are attached. The teeth are raised by loops connected, through a system of rods and levers, with the hand lever.

Claim.-1. The arrangement of the teeth and the knobs projecting from the lower sider of the thimbles 13, substantially ав deseribed.
3. The combination and arrangement of the deseribed levers and rods $F, G, H, I$, and $J$, substantially as set forth.
3. The combination of the hand lerer J, rod I, pivoted lever II, rod $G$, lever $F$, and lifting bar E , when all are construeted and operated substantially as deseribed.

73,249.-Join S. Hull, Cineimati, OhioSodal Fountain.-January 14, 18si. The air-pump by which the fountain is elarged is placed beside the soda fountain, and the contentis of the latter foreed up into the cooler by the pressure of air. The contents of the eooler are ejected from a pipe reaching to the bottom of the cooler and upward through the ice ehamber:
Claim. -Tho soda fountain $G$, tnbes $H, I$, and $J$, and cooler E , combined and arranged for ejecting the water by compressed air foreed into the water fountain, substantially as described.

73,250.-John S. Hunter, Martford, Conn.-Stearn-generator Hater Gauge.-January 14, 1868.The three-way cock has ducts to allow the blowing out of the passiages between the stean generator and the gauge.
Chaim.-The arrangement of the three-way eocks $b$ and $c$, with their respective outlets $\mathbb{G}$, in combination with the tube E and the connections D, so as to operate substantally in the manner and for the purpose hercin set forth.

73,251.-H. W. Kxowlton, Saratoga Springs, N. Y.-Machine for Husking Corn-Junnary 14, 1868; antedated January 1, 1868. - The ear is removed from the stalk by the bladed roller, and falls upon the inelined rollers, over which the India-rubsber aprons are carried. The husks are drawn from the cars in passing over these rollers and the ears diseharged over an iueline.
Claim.-The eombination of the rollers C D with the elastic aprons K, on the rollers I L, substantially as and for the purpose set forth.

73,252.-Ferdinand King, Richmond, Va., assignor to self and Charles W. Neudecrien, same place.-Generating Illuminating Gas.-January 14, 1868.-Composed of oil which rums from gas tar. 2, and ervide petroleum, 1 part From the above the gas is cencrated.

Claim.-1. The method herein deseribed of generating or produciug ilnminating gas.
2. The eompound oil herein duseribed, for the purpose set forth.
 -Tanary 14, 186is.-Explained by the elaim aud iilustratión.

Clam.-An inclosed anmlar space around the pump eylinder, deriving a supply of air from the Well, substantially ths and for the jurpose deseribed.

73,354.-Oniver Metcalf, Salem, Ind.-Animarl Tran.-January 14, 1868.-The spring shatt has four dadial platiorms, cach having a spring eatch rod, Which is drawn back by the rat in pulling the bait. The shaft then turns gro. From the chamber into Which the rat is precipitated he escapes to the condemned cell.
Olaim.-1. The combination of a eatch $a$ upon a hinged door $\mathrm{A}^{\prime}$, with the latch rods $f$ upon the rerolving platforms C, substantially as described.
2. The hinged platform $d$, hed up by a spring $a$ and combined with the revolving platform C ind apron $b$, substantially as desefibed.
3. Connceting the platform C to the suring shaft c by means of a removable key rod $h$, applied substantially as described.

23,25.5. Whlleak A. Monse, Philadelphia, Pa. -Pen-January 14, 1868.-The heel-piece lias is tongue passing beneath a strap eut upon the nibpieee, and furnishes an ink holder.

Chaim.-A fountain union pen, made of two parts a cand F, the same being adjustable and connected substantially as described and shown, for the purpose specified.

93,256. Thmes E. Nute and GeoraE I. HaTHom, Lineoln, Me.-Mand Loom.-January 14, 1868.-The Furn roller is placed in an eloratod and forwark position, so as to enable the lessening of the loom in depth, to allow of its passiage through doorways. The shed may, at option, be kept open until the filling is beaters up, or the warp may be elosed npon the thread previons thereto. The bobbins. by comection with the driving meehanism, are filled with yarn from a reel, secured to the loom.

Claim.-1. The combination with the loom frame of the piroted arms $a^{\prime}$, warp beam C , rod $c^{\prime}$, and eye $d^{\prime}$, and serew nut $e^{\prime}$, or equivalent securing' deriees, substuntinlly as dereribed.
2. Combining with the treadles F the adjustable deviees herein describen for lolding the shed open till the reed beats ul? the thread, or which will allow the shed to elose when the shuttle passes, when eonstructed and arranged to operate by means and in manner substantinlly as described and specified.
3. The combination with the loom frame of the shart $f$ and spooling mechanism, substantially as deseribed, so that the motor which drives the foom shall simultancously operate the spooler, substintizally as deseribed.
4. The spooler as construeted, with the sliding serrated bar $s^{\prime}$, slide $r^{\prime}$, actuated by eam $z$, or its equiralent, and with the pawl $t^{\prime}$ and cye $\mathrm{P}^{\prime}$, arbor $\mathrm{Y}^{\prime}$ and support $w$, or their equiralents for suspending the bobbin, all constructed and arranged to operate in manner substantially as and for the purposes specifiod.
'93,25\%.-E. F. Olns, Brighton, and Warren Clazk, Green Oak, Mich.-Fence-January 14. 1868.-Each post consists of four pieces, comnceted by a cap. The rails pass between the posts longitudinally and the braces and base blocks transversely.

Claim.-The special arrangement of the braces C, in combination with the posts 13 , when the said braces are connceted to the post and to each other in the mamer and for the purpose substantially as described.

73,258.-Samuel J. Parker, Ithaca, N. Y.Brick Machine.-Jamary 14, 1868.-The olay is fed into the molds upon the vertieal wheel, and the bricks are first compressed and then ejocted by the eam surfaee, which aets on the anti-frietion rollers of the spring plunger rods.
claim.-1. The perpendicular adjustable cam C in connection with tho plungers and mold wheel, arranged and operating togother, as shown and doseribed.
2. So arranging the mold wheol A, feod plate $\mathrm{E}^{\prime} \mathrm{E}^{\prime \prime} \mathrm{E}^{\prime \prime \prime}$, and contraeted feed pipo $\mathrm{G}^{\prime} \mathrm{G}^{\prime \prime} \mathrm{G}^{\prime \prime \prime}$; in comnection with cach other, that noarly the entire surface of each brick shail be subjocted to the smoothing oontact of motal, as deseribed.
3. The arrangement of the adjustable auxiliary cam $N$ in conncetion with tho main oam $C$, as and for the purposes deseribed.
4. The eatting wheel $X$ arranged in conncetion with the feed pipe $G^{\prime \prime}$ and feed plate $\mathrm{E}^{\prime \prime}$, as set forth.
5. The sceondary feed pipe Z and its side groores, in eonnection with tho feed pipe $G$ and feed plate $\mathrm{E}^{\prime \prime \prime}$, substantially as deseribed.
6. The eombination of the wheel A on the horizontal shaft $L$, adjustable eam $C$, feed plate $E^{\prime} E^{\prime \prime}$ and $\mathrm{E}^{\prime \prime \prime}$. When substantially mado and oporating as described.
7. The combination of the wheel $A$ on its shaft $L$, adjustable cam $C$, auxiliary eam $N$, eam surface $T a$, plate $\mathrm{E}^{\prime}$, and tablo H , arranged and operating substantially as desoribed.
8. The feed plate $\mathrm{E}^{\prime} \mathrm{E}^{\prime \prime} \mathrm{E}^{\prime \prime \prime}$, when made adjustable and arranged with refereneo to tho mold wheol A, substantially as shown and deseribed.
\%3,259.-JOHN A. Owens, Little Falls, N. Y., assignor to himself and Hexry I. Petrie.- Apparatus for the Mranufacture of Starch.-January 14, 1868.The ground grain is passed through the agitator tank previous to sereening; and in the lattel operation the inaterial passes first through a wire sieve and then orer an inelined plane to the silk bolt. The ends of the sieves aro curved, to prevent sagging.

Claim.-1. The tank $A$, with tho shaft and arms $A^{1}$, construeted and operating as described, and for the uses and purposes mentioned.
2. The sereen C , eonstrueted of the sieres $\mathrm{C}^{1}$ and $\mathrm{C}^{2}$, and the inelinod plane $\mathrm{C}^{3}$, substantially as deseribed, and for tho uses and purposes mentioned.
3. Forming the front end of the sioves $\mathrm{C}^{1}$ and $\mathrm{C}^{2}$ With the angle $\mathrm{C}^{9}$, substantially as clescribed, and for the uses and purposos mentioned.
4. Forming the end of the sieves $\mathrm{C}^{1}$ and $\mathrm{C}^{2}$ with a eurve, substantially as deseribod, and for the uses and purposes mentioned.

73,260.-M. D. Pratt, Copley, Ohio.-Fence.Jannary 14, 1868.-.The corners of the fence have braees, standing out altornately to the right and left. The fonee is slightly wormed and tho braces projeet from the eoneave eormers.

Claim.-The eombination and relative arrangement of the stake braecs $C$ and short braces $D$ with the rails $A$ and posts $B B$, in the manner herein shomn and specified, the said stake braees being plaeed in the hollow of the angles of the fenee, and aiternating from side to side, as and for the purposes described.

133,261. -N. Mendal Shafer, New York, N. Y.-Temporary Binder.-January 14, 1868; antedated January 2,1868 . - The sheets are drawn into the elamps by the stocl strips, which are hinged at one end and held domn by the slide at the other.

Claim.-1. The series of elamps A A, intersected by the steel hars $E$, hinging on the wire $B$.
2. The morable slide C C, and the lug or key $d$, for seeuring the same.
3. The back, to be usod in tio manner as set forth and deseribed, in combination with the other parts.

73,262.-THOMAS A. SHOCK, U.S. N., Boston, Mass. - Combined Lubricator and Water Conductor. -January 14, 1868. -Oil is furnished throngh the inner space, and water through the annular spaee, of two coneentrie tubes; the water eirculates through an annular ehamber in the boxes.

Olaim.-The combined Iubricator and water con.
duetor, eonstrueted substantially as and for the purpose deseribed.

23,26:3.-Matthew Simms and James V. CHamBERs, Whecling, W. Va.-Hay Crane--January 14, 1868.- 'I'he upper end of the erane standard turns in a ring to which the guy ropes aro attwehod. The erane has pulless attached to its hoad, beam, and standard, and the hoisting ropo is passed through the pulley blocks.

Olaim.-1. Tho applieation and arrangement of the guys C C C, in their connection with the ring $b$, and collar $a$, and pin $c$, in combination with the movable post $A$, arm 3 , braeo $C^{\prime}$, and lever D , when used substantially in the mauner and for tho purpose as herein set forth.
2. The arrangement of the pulleys $F^{F} F$, in eombination with the post A and arm B, when used substantially in the manner and for tho purposo as herein set forth.

73,264.-STEPHEN T. SKINNER, Jacksonville, Mo.-Plow.-January 14, 1868. -The axle is dirided at mid-longth, and piroted by vertieal pins turning in soekets on the outside of tho frame, to give means of guiding the machine by inclining the whecls, and to assist the turning at the ends of the bouts.

Claim.-1. My forward upright frame $F$, with swing-bar G and flat chains II H, for tho use and purpose as specifiod and herein sot forth.
2. The attaeling of my pole to tho conter, or near the left side of my machino, for the use and purpose as speeified and heroin set forth.
3. My triplo whiffletroo, with the triple link $x$, as represented in Fig. III, for the use and purpose as speeified and herein set forth.
4. My crank axles, as mado, attrohed, and operated on my maehino, for tho uso and purpose as specified and herein set forth.
5. My "compound regulating shaft" $X$, with the revolving sockets $j \dot{j}$, spring lever K , and eirele L , for the use and purposes as speeified and herein fully set forth.
6. The combination of my erank axles, eompound regulating shaft X , and spring lever, for the use and purpose as specified and herein set forth.
7. My double orank shaft M, with lover N and slings $Y Y$, for tho use and purpose as specified and herein set forth.

73,265.-JAMES H. SMILEY, Caroline, N. Y.Wagon Brake.-January 14, 1868.-Explained by the claims and illustration.

Claim.-1. The extension of the rear-axlo braees M and N behind the rear axlo, and suspension on the extremities theroof of tho brake-bar and brake, as deseribed.
2. The construction of tho metallie braees $S$, from beneath the rear-axle braees, in front of the hind axle, to the under side of the axlo, and thence to the end of the braces II and N , where they support these braces, and give boarings for tho brakes and bar, as sot forth.
3. Construeting the joint botweon the tongue and reach by the loop on the end of the tongre rod, and playing in tho slot $\mathrm{D} a$ of the plato D , when arranged substantially as deseribed.
4. Construeting the tongue rod or bar by the long part under the tonguo, held by the loop near the yoke pin, and extending thenee to the rear end of the tongite, whero it makes the loop $C a$, and thence is continued, over the top of the tomgue, to the evener of the whifflotrees, and thas binding the lower part of the bar to tho upper and the tongme, by the evenor bolt in its slot in the tonguo, for the purpose of aetuating tho brake by the yoke pire, and releasing the brake by tho whiffetrees, in the manner substantially as set forth.
5. The eombination of the forward and broad end of the plate D with the slot $\mathrm{D} a$. for the tongue and reach joint, and tho slot for the king-bolt, and eonnecting with the reach rod in the rear of tho plate, as described.
6. The combination of tho bolt E, in the boles E E c $\mathrm{E} b$, with tho bolt aud lioles F , for tho purpose of lengthening tho reach, as doseribed.
7. The combined whole, mado substantially as described, for the purposes sot forth.

73,266.-Oliver Strong, Green Centre, Ind.Hand Loom.-January 14, 1968.-The lathe is connected to the cloth beam and the harness, so as to operate the let-off mechanism and heddles.

Claim.-The tappet wheel E, lover F, pawl G, and latchet or eloth beam, the weighted lover and arm, the same being combined in tho mannor and construetel as and for the purposos substantially as set fortll.

73,26\%.-William II. Thompson, Biddoford, Me.-Roving Frame.-Jannary 14, 1868.-The transverse rail is eonnterbalanced by weights connected to it ly flexible steel bands, which pass over rollers.

Claim. -The eombination of a series of flexible metallic bands with the transvorse rail E, snbstantially as herein describod and tor the purposo speeified

73,268.-T. D. Tiffr, Cuyahoga Falls, OhioSpring Bed Bottom.-January 14, 1868.-The spring bed bottom is hinged at its mid-length, and bencati the head section is a frame, whose forward extension has a cord attached, which passes to a wineh slaft between the head posts, and is eoiled thereon to raise that end of the berl bottom, two springs beneath the head of the frame assisting.

Claim. -The combination of sections $B^{\prime} \mathrm{C}^{\prime}$ and independent frame $D$, operated by the cord and puller, and hinged to section $\mathrm{C}^{\prime}$, all in the manner as and for the purpose set forth.
g3,269. - William W. Tratr, Hartford, Comn., assignor to Tobias Koins, same place.-Machine for Polishing Thread.-January 14, 1868.-The thread passes from the bobbin through a twisting flyer, and between the reeiproeating rubber pins and the singeing deviee to the spools. The whole mechanism is actuated by a single shaft; the rubber earriages by erauks, and the bobbins, Hyers, and winding rollers by belts.
Claim.-The guides around which the threads pass, arranged substantially as deseribed, in combination with the reciproeating rubbers so that each thread in its travel slall present two parts moving in opposite directions to the action of the rubbers, substantially as and for the purpose described.
g3,270.-Fraxcis K. War. Spriugfield, Ohio.Machine for Twisting Wax Ends.-Tanuary 14, 1868. -The terminations of the "wax ends" are clipped to the rotating clamps and its middle passod around the bent pin. Tho arbors are turned by bolt connection to a common crank wheel.
Claim.-The arbors D, provided with the spring clips for lolding the threads, and pullers for imparting motion, in combination with the driving pulley C, all momed in the frame B, and arranged to operate substantially as and for tho purpose lerein set forth.

73,291.-E. B. Whitmore, Rochestor, N. Y.Fruit Jar.-January 14, 1868. -'The covor is held down upon the gasket by a spring bail laving upward bends serving for handles. The onds of tho bail tako under liges on the neek.
Claim.-The double-bowed bail C, provided with the finger places $h h$ and spring bends $i k k$, eonstructed and arranged substantially as and for the purposes set forth.

73,279.-Joun Wilcox, Springfield, Mass.Machine for Filling Paint Cans.-January 14, 1868 . -The paint runs from the mixing hopper into an ascillatable measure eylinder when the plunger is retracted. When full, the cylinder is turned $180^{\circ}$, bringing its ontlet to the funnel to fill the cam, and the plunger is moved forward to ejeet tho paint.
Claim.-1. The adjustahle wing $q$, when construeted and arranged substantially as deseribod, and for the purpose specified.
2. The movable collar $M$, in combination with the wing $q$, shaft $J$, and tube $a$, substantially as described, and for the purpose specified.
3. The angle box D, when reeessed as describor, in eombination with the tabe $a$ and eylinder E , substantially as described, and for tho purpose set forth.
4. The eylinder E, when constructed with a shoulder and side aperture as describod, in combination with the angle box D , packings $\boldsymbol{c} \mathrm{c}^{\prime}$, nut $c$, and eheck nut $e^{\prime}$, substantially as speecincel, and for the propose set forth.
5. Tho packings $c c^{t}$ when eonstrneted and arrangod in the manner describel, and for the parpose specified.
6. The rest $G$, construeted and arrangod as described, and for the purpose set forth.
7. The stops $i i^{\prime}$, in combination with the slotted rest G, rod $h$, and pin $s$, as and for the purpose specifior.
8. The rorl $h$, when providerl with a pin $s$, in eombination with the rest $G$, planger $\Pi$, and eylinder E, substantially as described, and for tho purposo specified.

73,273.-J. D. Willoughby, Shippenshurg, Pa.-Wcighing Scale-Jamary 14, 1868; antedated Decomber 28, 1867. -The spriug tends slightly to raise the weirht seale so as to cause a morement when the weight is nearly manle up, and set tho operator on his guard. When the sealus are even the spring does not act.

Claim.-The spring I or its equiralent, in combination with the scales, for the purpose set forth.

73, eg 4.-Jonn S. Wrilson, Indianapolis, Ind.Scaffolding Tracket.-January 14, 1868.-The platform has a sumporting frame which stradules the window sill and engages its top. By the addition of props the seaffold may be used against any purt of the wall.

Olaim.-The bracket for scaffolding, composed of the elements $A, B, C$, and $D$, constructed and arranged substantially as and for the purposo set forth.
g3,2g5.-Bentamin F. Woodside, MeDonald, Tenn.-Friction $\mathbf{1}$ atch.-January 14, 1868.- - tapel is eoiled around a spol within a case, and is coated at intervals with an igniting compound.

Claim.-1. A twine or eord, coated at intervals with igniting composition as a series of friction matches, substantially as above described.
2. Sueh twine, in combination with a spool, or wound into a ball, substantially as speeified.
3. The caso 1), in combination with the continuous match, substantiall as specified.
4. A twine, or other suitable material, when wased and forming a contimous flexible taper, substantially as sct furth.

73,976.-TOHN Resco ADAMs, Cisen. Cal.-Railroad Sinow Plow-T]auary 14, 1868.-The shovel is secured to an inelined woden frame ona low truck, and has upright side picees whieh support a grato that may be let down to prevent the escape of the load. The side pieces are sceured to an upper platform having land wheels to operate the gate. The snow may be thrown off on either side, or may be retained upon the plow and conveyed awry.

Claim.-1. The dash-board or share G, and the falso bottom or slide F , operated by the hand wheel $g$, and eord or chain $g^{\prime}$, substantially as and for the purpose speeified.
2. The bomet or gate E, for retaining the load upon the incline, and the hand wheel and pinss $b$, parl $d$, and cord or chain $b^{\prime}$, for raising or lowering said bomet, substantially as deseribed; and
3. The side pieces D and $\mathrm{D}^{\prime}$, movablo in the ways $i \quad i i^{\prime} i^{\prime}$, substintially as and for tho purpose deseribed.'
4. Tho platform C, upon which the hand wheels aro placed, as described.

19:3, $2 \mathrm{z} \%$ - Ralpil Adams, Ottawa, Ill.-Gate.January 14, 1868. - The hinge upright of tho grate has a segmental gear which is chgaged by a raek har extending beside the road and operated by levers. Cords ennneet the levers to the gato lateh so as to raise tho same.

Claim.-1. The levers L and rods R , in combination with the rack E , substantially as shown, for the purposo of opening a gate, all as set forth.
2. The latch bar P and eord $m$, in combination with tho levers $I$, substantially as shown and for tho purpose specificd.
3. The pawl $v$, in combination with the levers $l$ and L, and noteh $f$, for the purpose of holding a gate open, substantially as shown.
73.978.-TOMN ALLEN, Now York, N. Y.-Lamp.-Tanuary 14, 1868; antedated Janmary 4, 1868. - The upper portion of the wiek tube within the lamp is suronnded by water in a conoidal chmmer.

Claim.-Tho combination of the conieal holder of the non-eonducting inaterial compartmont $C$ with wiek tube I, when construetod as horein described, for the purposes set forth.

193, 299.-Cifarles If. Amidon, Grcenfield, Mass. -Bit Stock.-January 14, 1868. -The bit soekot is bisected and oconpies a diametrio slot, in the end brace. The expansion of the sockot is limited by the thimble. and adjusted to fit the taper of the bit, and is also elamped upon the bit by tho serew thimblo.

Claim.-1. In combination with the jaws G G, or their equivalents, eonstrueted to more away from or toward each other in the manner described, so that they may conform to the taper of the bit shank, the serew thimble $F$ or its equivalent, to force the said jaws upon said shank, as and for the purpose set forth.
2. The jaws G G, construetod with the groove, formed substantially as set forth, so as to inclose the taper sides and the shoulders of the shank, as and for the purpose deseribed.
3. The cavity $D$, formed with a beveled orifice as snown, in combmation with the jaws $G G$, construeted with correspondingly beveled onds, as and for the purpose shown and described.

79,280.-Tames W. C. Anderson, New York, N. Y., assignor to Heniry Demarest, same place. Exhausting Ventilator and Chimney Cowl. January 14, 1868.-The upper edge of the cylindrical part has an ont-torned flange, and is capped by a conieal cover. Beneath the cover is an annular, frusto-conical ehamber surrounding the rpper portion of the erlindrical part, and communicating therewith and throngh holes in its lower plate with the outer air. Beneath this chamber the eylindrical part communieates with the onter air by a series of down-cnrved pipes.

Claim.-1. Tho collar or water stop $a$, arranged relatively to the cone $B$ and body $A$, substantially as and for the purpose within set forth.
2. The within deseribed construetion and arrangement of the body $A$, ineline $B$, connoetion $C$, and holes $D$ and $E$, as and for the purposes herein specified.

193,281.-D. Armsteong, Huntsburg, Ohio.Hachine for making Cheese. Jannary 14, 1868.-The congulated mills is cmptied into the hopper and passes through the annular spaee between the eylinder and case, whieh cach have radial knives extending nearly aeross the ammar spaeo. Tho ease is made in seetions so as to be removable.

Claim.-1. The cylinder E, provided with cutters I, in combination with the mouth $\mathrm{K}^{\prime}$ and ease D , as and for the purpose substantially as set forth.
2. The shell or ease $D$ and projection $X$, constrmeted and arranged, in relation to the cylinder $E$ and eutters, substantially as and for the purpose set forth.
3. The ring $G$, in eombination with the cylinder E and ease $D$, as and for tho purpose sot forth.

73,289--PETER Ashcrofr, Riehmond Road, Dalton. and Grorge F. L. Meakin, London, England.Railroad Rail.—Tanuary 14, 1868.-Tho T-shaped steel rail is clampod between two angle rails of iron.

Claim.-A compomed stoel and wronght iron rail, in whiel the atjaeent (or bearing) vertieal surface of the steel and iron portions are formed with angnlar interloeking ribs and grooves, and the upper faces of the iron plates and lower frees of rail head form taper bearings, all substantially as deseribed.
g3,283.-H. J. Bailey, Pittshurg, Pa.-A ir Condensing Apparatus.-January 14, 1868.-A number of yessels eommunicates by pipes eontrolled by ralves or cocks, which are operated by floats whereby the apparatus is made automatic. The air is foreed from the vessels by the water rising within them.

Claim.-1. The combination, with a ressel for receiring and retaining air under pressure, of two vessels for reeeiving air and water alternately, eo-operative by incans of eylinders, pistons, and pipes, for the purposo of condonsing air, substantially as describod.
2. In combination with tho apparatus above named, an eight-way cock or valve, and a three-way coek or valve, substantially as shown and described.
3. A condonsing apparatus, to which air or water may be applied, for working the valves, and thereby rendering the operation of the samo self-uctiug or antomatic, in tho mamner described.

73,281.-N. Gray Bartletr, TKeoknk, Iowa.-Inkstand.-Janurry 14, 1868. -'The bottom of the overflory chamber is level with the top of the cluct eonneetirg the rescrvoir with the dipping. pool, so that the ink will bo withdrawu from the said chamber when the canse of overflow has ecased.

Claim.-The overflow ehamber D, in eombination with a fomtain inkstand, substantially as herein shown and cleseribed.

78,285.-J. J. BaUsch, Rochestor, N. Y.-Eye Glass and Spectacles.-January 14, 1868.-The gnards are attrehed at both ends to the bows, and have a series of holes for the attaching serews so as to allow adjnstment.

Claim.-The combination of the connecting spring C, guards D, and plates E, adjustahly attaehed to the bows B, substantially as described and for the purpose specified.

18,256.-W. W. Beeree, Dubuque, Iowa.Harness Attachment. -January 14, 1868.-The bent rod forms an extension of the tongue, and is fastened to the harness of the true horse and to the bit of the balky one.

Claim.-An attachment for harnesses, substantially as and for the purpose described.

73,28\% --Samuel C. Bisiof, New York, N. I., assignor to Bishop Gutta-Percha Company, same plaee.-Water-Proof or Damp-Proof Paper. January 14, 1868.-Explainod by the elaiun.

Claim.-A damp-proof paper, prepared with valata or balata gnm or milk, in any way, substantially as herein specified.

73,288.—SAMUEL C. Bishor. New York, N. Y., assignor to The Bishop GutTa-Percha Company, same plaec.-Water-Proof Cloth.-January 14, 1868. -Explainod by the claim.

Olaim.- A wator-proof cloth prepared with valata or balata gum or milk, applied to or used in connection with eotton in any suitablo way, substintially as specified.

33,289.-TAMEs Bounds, Brilgeport, Conn.-Pliers.-January 14, 1868.-The adjustable jaw may be turned to the required position for artieles of ditferent diameter or form, and elamped in position by the dog. Tho pivot pin traverses a slot in ono lever, and the levers are conncetod together noarer to the hand by a link.

Olaim.-The adjustable jaw $d, \operatorname{dog} g$, shanks $A B$, and link e, the wholo being constrincted and combined substantially as herein set forth and deseribed.
g3,290.--Tranklin Bowly, Winchester, Va.Instrument for Drawing Ellipses.- Jimuary 14, 1868. -The marking bar is set to the longest radius in the soeket upon the sliding rod, and the pivot sooket of the other sliding rod is set upon the marking bir to the smallest radius of the ellipse. The marker at the end of the bar is then swept around and doseribes an ellipse whose smaller diameter is in line with the slotted handlo.
Claim. - The combination and arrangement of the slotted handle $A$, tho marling bar $B$, the sliding rods C D, and the eomneeting rod E, constrncted and operating substantially as and for the purposo heroin described.
rg:291.—Tesse C. Boyd, Milroy, Ind., assignor to himself, C. P. Wrison, and L. L. Boblet.-Culti-vator.-January 14, 1868.-The axle is arehed mpward
and the beams are hinged to it. Each beam carries two standards. The imer standards are connected together by bars which are piroted to the standards. The plows are swayod on their points by a lever fulcrumed on the axle areh and passing throngh a staplo upon the upper connecting bur.

Claim.-The arrangement of the beans D, with their attachment directly to the axle $A$, by means of slifting-clerisen, with hantle H, bar I, and bars F and $G$, the sereral parts being construeted and operating substantially as and for the purpose spocified.

73,2D2.-EDWIN D. Brainalm, Albany, N. Y.Refrigerating and Condensing Apparatus for Preserving Animal and Fegetable Substances. January 14, 1868. -The ceilings of the chambers are formed of angularly corrugated metallie plates; and the drip from the salient angles is caught in troughs by which the liquid is eonveyed to the exit pipe.

Claimb.-1. The combination of the drip gutters and condensing and refrigerating troughs or condensers, forming the eciling of a chamber, construeted and arranged substantially as deseribed, and operating as and for the purposes herein set forth.
2. The method of forming the oondensing troughs, by miting the sides to a cap with closed double senms, substantially as deseribed.

73,293. Tames Brayyey, Buffalo, N. Y.-Shaft Coupling.-Jamary 14, 1868. -The pins of the gimbalshaft coupling are prevented from end movenent hy the guard ring.

Claim.-Proriding the gnardring A with concealed recesses $g h$, on its interior surface, for receiring the ends of the loose pins $c e$, in combination with the holes $f$ and openings $i i$, of the forked heads $B$, construeted and arranged snbstantially as and for the purposes set forth.
193.294.- ToIIN BURGER, Elizabetl Port, N. J., assignor to himself and Albert Marvil, same plate.Apparatus for Taising Sunken Vessels.January 14, 1868; antedated January 4.1868.-The hull is covered by a tarpaulin contined at bottom by rubber ropes which are strained thereon by anehors, blocks, and cords. When the hull is sunk in shallow witer a frame may be ereted supporting an upwiard extension of the entelope reaching abore the surface.
Claim.-1. The en velope C, construeted and applied to the hull of a ressel, substantiully as described, in combination with a suitable binding eable, substantially as and for the purpose specified.
2. The construction of the binding eable D , in two or more scetions, of India rubber, or like clastie material, substantially as and for the pmepose specified.
3. The frame 13, arranged npon the hall of the ressel, and in combination witl the on relope C , surrounding the same, substantially as and for the purpese specified.
4. The smpplemental sheet or wing E, arranged in relation with the envelope $C$ and the hull of the vessel, substantially as and for the purpose speeified.
5. The anchorg $G$, straining eables $F$, and pulleys $h$, arranged in relation with each other, and with the hull of the ressel, the envelope C , and binding cable, substantially as and for the purpose specified.

73,295.-HENRY T. Carter, St. Louis, Mo.-Car-truch.-January 14, 1868. -The sides of the truek are connected by transverse end bars, by a central sliding bar, and also by diagonal brace bars Whieh are pivoted to the said sliding bar. The diagonal bars are connected to the side frames by pins whieh traverse slots in their ends. The sides are held by set screws to proper adjustment for the track.

Olaim.-1. A ear-truck, construeted as deseribed, with braces or bars $\mathrm{B} \quad \mathrm{B}^{\prime}$, having slotted extremitios connected by pins or bolts, substantially as and for the purpose set forth.
2. In combination with the abore, tho sliding bar H, rods $d d^{\prime}$ and $c$, and their connections, substantially as deseribed.

173,296.-Samuel Carusi, Wrahington, D. C.Postage Stamp.—Jannary 14, 1868.-The edge of the stamp earries the name of the office where issued. The center has a blank space on which the date is
marked by the party writing, or by the postmaster to eancel the stamp. There is also spaoe in the eenter for direetions, which will indieato the inportance or return destination of tho lotter, to be added by the superseriber.

Claim.-Constructing a pestage-stamp, as do seribed, with a blank space upon its firoe, for the purposes set forth.

73,297.-Samuel A. Chamman, Waterbnry, Conn.-Minge.-January 14, 1868.-Explained by the claims and illustration.

Clatim.-1. An iron hinge wrapped or oorered on its edges and faees with shect brass, substantially as deseriferd.
2. In irou hinges eneased by sheet-brass wrappers, buring or sinking said wrappers into the serew holes of the hinge, for the donble purpose of preventing exposure of the iron, and of holding or seeuring the wrappers, essentially as speeifiod.

73,298.-Ronert W. Clark, Pittshurg, PrThuere Iron.-January 14, 1868.-The tuyere iron boxes hare a separate top piece so held by two simple keys that it may be removed when bumed out and a new one substituted.

Claim.-1. The combination of the air-chamber $A$, remorable top $B$, and keys $C$, whon tho same are construeted and arranged substantially as deseribed.
2. 'The combination of the air-chamber $A$, turning' valve $E$, and removable top 13 , when the sime are connected and arranged substantially as deseribed.

73,999.-TOHN COLLINS, jr., and Nr. R. NixON, Riohmond, Ind., assignors to N.'R. Nixoñ, Thomas Nixos, and Ablan ' I'. BENNEIY.-Sedming and liag-cutting Dfachinc.-January 14, 1868.-Tho lags are curried by the belts past the rotating knife, and are divided into strips or have tho seams removed in their passage.

Claim.-1. The combination of the belts F F, G $G$, II II, and I, and their supporting rollers, as and for the purposes shown and deseribed.
2. The entters K K arranged and operatling between the belts, substantially in tho manmor and for the purpose specified.
3. A series of knires or cntters in cembination with alternate double belts, substantially in the manner described, for the purpose of cutting rigs into strips of any desirable width, to bo woven into earpets.

23,300.-Ira Couchand, North Bridgewater, Mass.-Frut Box.-Jmuary 14, 1868.-Explained by the claims and illustration.
Claim.-1. A box, in which the cover is secured to the body by means of one or more elastie mediums, aranged so as to operate substantially as deseribed.
2. Iroviding t cover, when seenred as duseribed With crose-picees on its onter surface, so that said cross-picees serve to keep apart the bottoms and tops of adjacent boxes when packed in erates, and thus permit cirenlation of air between the boxes, and also serve as feet for the boxes to rest upon whon the cover is secured bencath the box, as in filling, or Fhen used as a show-hox, and prevent injury to any marks or labels which are non tho outer surface of the eover.
3. In combination with a box in which the eover is seeured as deseribed, and with sueh cover, the dowel or steady-pins and holes, substantially as and for the purpose specified.
4. In combinution with elastic mediums, sueured to the sides or ends of boxes substantially as deseribed, cross-bars, or slats, or strips of wood, or other suitable material, which serve to redueo the lougth and cost of the elasties.

73,301.-C. F. Cosfeldt, jr., Philadelphia, Pa -Low-water Detecter for Boilers-January 14, 1868. -The float lever extends into a pipe scemred in the boiler end, and sufficiently large to allow tho neeessary movement in the said lever. A valvo is operated which sounds a steam-whistlo on the water falling below a certain point, the steam passing through the pipe inclosing the lovers.

Claim.-1. The arrangement of the levers G H:
and valve D , constructed substantially as herein set forth.
2. The combination of the set-scrow $i$ with the levers $G H$, and valve $D$, substautially as herein describerl.

73,302.-F. H. Crandall, Ontario, N. Y.Device for Straining Wire Fences.-January 14, 1868.-The pickets are supported by being wovon in between warp wires, which are attached to the posts by staples and bolts.
Claim.-The threadod bolt C, construeted, arranged, aud applied substantially in the mauuer aud for the purposes herein set forth.

93,303.-Gustavus Cupfers, Now York, N. Y. -Mechanism for Operating Sewing Machines.January 14, 1868.-The machine is driven by a spring. The power is freed to operate, and the speed regulated by movement of a brake which is' operated by a pedal. The foree of the downward movement of the needle-arm is regnlated by an adjustable enunterpoise weight which may be removed whou sowing heary material.

Claim.-1. The combinatiou and arrangement of the shaft $a$ of the spring-power mechanism with the crank shaft and comeeting rods for operating the needle arm, shaft for operating the feed and hook, and brake for regulating the movement of the said parts, in the manner herein shown and set forth.
2. The employment, in connection with the needle bar, of the movable weight or counterpoise, applied to the said bar snbstautially in the manuer and for the purposes deseribed.
3. The friction brake, constructed as hereiu described, and applied to the shaft for actuating the feeder aud shattle, substantially as shown and sot forth.

73,304.-Henry T. Dillon, Big Lick, Va, Device for Holding Boots and Shoes.-Tmuary 14, 1868.-The last is placed upon a standard rotated by a lever to bring the toe of the boot against the rest standard at either end of the base. One standard gives an upward support for pegging, and the other a side support for sewing. The lever is held by a ratchet.

Claim.-1. The standard A, provided with two shanks $d d^{\prime}$, the levers R and 0 , and the hinge $h$, supported by the brace N , by means of the collar $c$, as construeted, and for the purpose specified.
2. The standard A, in combination with the ratehet $M$ and the adjustable staudard $\mathcal{B}$, as and for the purpose set forth.
3. The standard A, when used in combination with the standard C , and its ratehet $f$, as is herein fully set forth.

93,305.-Bartlett Doe, Boston, Mass.-Sash Stop.-January 14, 1868. - The hollow bolt has bearings in the sash and a spiral spring which forees it into the recesses of the frame. It is retracted by a lever.

Claim.-1. In combination, the hollow cylindrical bolt and the outside lever, when arranged in conneetion with a helical spring, substantially us and for the purpose specified,
2. The bent wire link $b$, wheu applied to the hollow bolt and lever, substantially as set forth.

73,306. - Henry Donnelly, Virginia City, Nevada.-Ore Concentrator.-January 14, 1868.The firame of the shaking-tables is invertible on the roek shaft, so that the tables ean be used as coneentrators alternately ; the one which is out of use beconing washed in the reeciving trough.
Claim.-1. The eoncave reversible shaking tablos C $\mathrm{C}^{\prime}$, attached to and operating upon the opposite sides of the shaft $B$, together with the trough A, substantially as and for the purpose deseribed.
2 . The key $c$ and spring $d$, together with the arms $a a^{\prime} b b^{\prime}$, loosely attached to the shaft $B$, for the purpose of reversing and looking the tables, substautially as hereiu specified.

93,307.-P. A. Downer and A. P. Stuart, Monmouth Township, Towa.-Seeding Machinc.January 14, 1868.-The slides by which the size of the
soed holes is adjusted, or by which they are closed, are conneeted to a head which is adjusted by a bell crank lever. The cleats projoct over the soed holes to prevent the stoppage of the holes by foreign matters.

Claim.-1. In a seeding maehine having a revolving cylinder, the combination of the sliding head E , disk $e^{1}$, slide $g$, lever $h$, and standard $L$, sall arranged and operating substantially as and for the purpose deseribed.
2. The cleats $d^{\prime}$; constructed and applied substantially as aud for the purpose specified.

73,808.-STEPHEN W. Downey, Piedmont, W. Va.-Freight Oar:-January 14, 1868. -The roof is hinged to the sides of the hopper car and folded inward over it.
Claim. - The constrnetion and arrangement of the hinged top or roof, in combination with the car $A$ a and rail or rod C, when the same are construeted and arranged substantially as described, and for the purposo specified.
g3,301.-E. D. Draper, Hopedale, and Edward W.Glover, Medford, Mass.-Fire-Proof Safo.-January 14, 1868.-To prevent the heat passing by conduetion into the inside of the safe, the metallic edges of the jambs and door are grooved out so as to insulate the iuner and outer cases by layers of miea and fusible metal, the latter runuing out under heat and giving place to air for the aforesaid purpose.
claim.-1. The combinatiou and arrangement of a heat non-tonduetor $c$, of miea or its equivalent, with each or either of the metallic jambs or sides of the door frame, and the filling thereof, the whole being substantially as and for the purpose specified.
2. The combinatiou and arrangement of one or more strata of fusible metal $d$, with the mica or heat nou-conductor $c$, arrangod in a sate, substantially in mamer and for the purpose specified.
3. The combination and arrangement of mica or its equivalent, or of mica and fusible metal, with the sides of the burglar-proof and the next adjacent internal surfaces of the safe, the whole being substautially as specified.

73, 310 .-A LEXANDER L. Dunbar, Sheldon, Ill. -Carpet Stretcher.—January 14, 1868.-The staff consists of a series of toggle seetions. I'he serrated heads engage the opposite edges of the earpet.

Claim.-The earpet streteher, construeted as described, consisting of the sections $B$ of equal length, pivoted together, said stretcher provicled at each end with a toothed head, whereby the earpet ean be stretehed to be nailed down upon trro sides of the room at onee without removing tho stretcher, as herein shown and deseribed.

133,311.-Theodor G. Eiswald, Providerice R. I.-Safety Plug for Boilers.-January 14, 1868. The fusible plugs are inserted iu the inwardly flaring holes of the cap.

Claim.-The fusible plugs, eonstructed substantially as shown and deseribed.

73,312.-Lewis Essia, Canton, Ohio.-Gate. January 14, 1868. - The hinge upright bas a pulley at its top engaging by a cord a pulley on the post, and the latter pulley is connected by cords to the windlasses beside the road at a distanee from the gate. The action of the wincllasses is to tilt baek the gate so as to froe the lateh, aud then to swing the gate open.

Claim-1. The opening and closing of any farm or other gate $A$, by means of the winclasses $b$ and ropes $\mathrm{HH}^{1}$ and $\mathrm{H}^{2}$, substantially as shown and do seribed.
2. The windlasses $b$ and the ropes or chains $\mathrm{H} \mathrm{H}^{1}$ and $\mathrm{H}^{2}$ and the pulleys E and $\mathrm{E}^{\prime}$, in combination with each other, and in combination with the posts $G$ and the post $B$, and any gato $A$, substantially as shown and deseribed, and for the purposes set forth.
3. The slotted eap $c$, in eombination with the gate A, substantially as shown and deseribed, and for tho purposes set forth.

73,313.-DANA Estes, Nowton, assignor to himself and Casper W. Eoeth, Boston, Mass.-Portable

Shade and Seat.-January 14,1868; antedated January 3, 1868.-The awning is carried from the winding roller orer a roller which is adjustable on the posts, and then to the fiont bar at the ends of the piroted arms, and serves to shade the person sitting beneath.

Claim. -The eombination of the adjustable rail C and the posts $B$ B, provided with notehes $a$, as set forth, with the settee or seat $A$ and the arrning $D$ applied thereto, by means and so as to operate as specified.

93,314.-D. S. Fisirer Cedar Spring, Ind.-Harvester.-January 14, 1868. -The caster wheels are adjustable vertically, and are comected to a bar', one end of which is piroted to the frame and the other encl adjustable on a concentric guide bar to change the points of support laterally. The pitmen of the entter bars are hinged to the ends of a lerer which is oscillated by another lever actnated by antifrietion rollers ruming on the sides of the conrongated rim of the main whecl. The dropping frame is operated by the projection from a wheel mon the axle, the said projection raising a lerer connected to the frame.

Claim.-1. The combination of the caster wheel C, piroted adjustable standard $a$, piroted arm $b$, piroted bar d, and perforated horizontal segment plates D, whereby the rear end of the frame and cutters is raised and lowred, and the direetion of the harvester changed, as herein shown and deseribed.
2. The combination of the projection ax, grooved wheel $l$, spring $m$, lever $T$, pendent arm U, erank $m x$, shaft $V$, rod $p$, arm $q$, rod $W$, and finger's $n$, as herein described, for the purpose specified.
3. The combination of the piroted shaft M, frame $L$, and lerer $Q$, with the vibrating arm $N$, haring the piroted head O and rollers $p$, the lever K , and connecting rods $J$, all constructed and nranged as deseribed, whereljy the ribrating arm is throrrn in and out of gear with the drising wheel B, as herein shown and deseribed, for the purpose specified.
73.315.-Edward Flather, Bridgeport, Conn. -Baggage Check.-January 14, 1868.-The arm has an aperture through which is exhibited the name of the required station. The arm turns on the disk upon which the nanes are stamped, and is fixed by a steady pin and set screm.

Claim.-The indieator arm C , rerolving on the set screw or rivet 15, and their respective equivalents, in combination with the disk A B, sulostantially as herein set forth and deseribed.
73.316.-Robert M. Fryer, New York, N. Y., assignor to Univerisal Pumi and Manufacturing Company.-Pump.-Jamuary 14, 1868. - The ain contained in the water is colleeted in an mpper chamber from which it may be diseharged as desired.

Claim.-1. The vertical clambers $\mathrm{D} \mathrm{D}^{\prime}$ laring sediment chambers $E \mathrm{E}^{\prime}$, vertical eylindrical chambers $P P^{\prime}$, with conical tops $\mathrm{U} \mathrm{U}^{\prime}$, and diaphragm chambers $\mathbf{F} \mathrm{F}^{\prime}$, in combination with a horizontal cylinder $A$, arranged as deseribed, and operating in the mammer set forth.
2. The arrangement of the valre chambers $S^{\prime}, T$, and K, in their relative positions one to the other, to operate substantially as specified.
3. The diaphrag'm chamber F , in combination with the valve chambers K, S, and T, substantially as deseribed.

73,317.-W. W. Goff, Aroca, N. Y.-Thill Coupling.-January 14, 1868.-The conpling bolt is held to place by in India-rubber spring loop which passes aronnd a hook upon one end of the bolt, and a hook slidisig on the other cud.

Claim. -The bolt A, sliding hook B, and Indiarubber ling or spring, when combined substantially as and for the purpose set forth.
'93,318.-L. A. Gossin, Lafourehe Parish, La.Stopping Crevasses.--January 14, 1868. - The foating dock is straight on one side and eonyex on the other, and has a series of tongrued and groored vertical piles which are foreed down to the river bottom when the doek has been sufficiently snbmerged by the inflowing of water through the valves.

Claim.-'The construetion and arrangement of the
boat A and piles $F$, in the manner and for the purpose substratially as lierein set forth.
m:3,319.-Jomn II. Gray and Cmarles W. CalHoun, Florence Township, Mieh.-Poteto Digger.January 14, 1868 . -The digger fiame is pivoted at the fore end to the wheel fiame and adjustable at the rear. 'The digerer seoop delivers the potatoes to the rerolving rake, by which they are separated fom the earth in being earried backward on the sereen drate.

Claim.-The construction of the mathine with the inner firame $b$ b hinged to the front end, with the scoop attached, in combination with the other devices, as shown and described.

7:3,3:30.-A. P. Green, Stenben, Ohio.-Élactic Coupling for Seeding Jachines, de._January 14, 1868.- Intended for applieation to the pitmen of mowing machines. Elastie packing is so secured in the eoupling as to moderate the jar eaused by lappid reciprocation of the cutter bar.

Claim.-1. The shank C prorided with shouldered collars D , in combination with the ring E , clastic filling or ball F , in the manner and for the purpose set forth.
2. The thimble or sleere $G$, arms $H$, in combination with the ring $I$, washer ${ }^{\prime}$, and clastic filling $\mathrm{F}^{\prime}$, in the manner and for the purpose substantially as set forth.
73.321.-Remig Grotz, Chicagro, Ill.-Barrel Meading, Circling, and Beveling Machine.-Junnary 14, 1868. -The blank is placed between the elamping disks and the frame, turned so as to bring the blank in contact with the disked saw ; this movement illso brines the berel whecel upon the arbor of the clamping disks in connection with its motire wheel mpon the saw shaft. The frame is duplicated, so that while one blank is being operated on, another may bo clamped in position.

Claim.-1. The frames J, with their clamping (lerices mounted on the central pivot $D$, and tho operating derices, so arranged that as one is mored to the sar the other shall move from it, substantially as deseribed.
2. The piroted sleeve D, provided with the slotted arins F , for smpporting and adjusting the frames $J$, as teseribed.
3. The udjustable locking levers $p$, arianged to operate as cleseribed, for the purpose of holding the frames in position, as set forth.
4. The clamps M, haring the adjustable segments $O$, with the springs $k$ applied to plates P , in combination with the square inandrel $h$ with the spring $i$ and cam-lerer N , applied thereto, all mounted on the arm I of the swinging frames J, when arranged to operate snbstantially as deseribed.

73, 822 -GTUART GWYNn, New York, N. Y.Solution for Treating Tegetable Fiber for the Manufacture of Vegetable Parehment.-January 14, 1868. - The transforming fluid is composed of sulphmric achd, 50 ; saturated solution of sulphate of magnesia, 47 ; to which, when cool, is added hydrochlorie acid, 1; and nitric aeid, 2 parts. The neutralizing fluid is composed of liot saturated solution of sodia, with an addition of 20 to 50 per cent. lime. After the neutralization of the acid, erlyeerine is added.

Claim.-1. The mode of prodacine the flnids, nmmbered (1) one and ( 2 ) two, substantinlly as deseribed, to be used consecutively in transtorming cellulose into "recetable mombraine."
2. Fluid number one, produeed substantially as cheseribed, as a " new composition of matter."
3. Fluid number two, produced snbstantially as described, as a "hew composition of mater"."
4. The use of these fluids, produced substantially as described, in combination with machinery and apparatus, hereafter to be patented, for manufacturing ecllnlose, in the form of "regetable felts," into a "new composition of matter," to be patented under the name of "regetable membrane."
m3,323.-चonatian R. Mammion, Portland, Oregon, - Corn-Sheller. - January 14, 1868. - The plunger is placed between two shellers and is reciprocated by a berer connected by a rod to a crank. The plunger acts on the butt of the car and forees it
between the spiral "rowers" and "serapers" by whieh corn is shelled.

Claim.-l. The apparatus, as constructed, with a series of rowers, $a$ a a arranged in a eircle; also the serapers $f f f$ in the rear of the rowers, substantially as and for the purpose herein set forth.
2. The rowers, as arranged alternately, the one forvard of another, the same being pressed by springs toward the center; so as to aet as a wedge, parallel with, between, and under the rows of eorn.
3. The sliding plunger H, to push ears of colll between and through bars a a a a with the rowers or points $b 4$ attached either vertically or horizontally, as and for the purposes herein set forth.

73,324--JONATHAN R. HAMilion, Portland, Oregon. - Lamp-Chimney Cleaner.-January 14, 1808. - The instrument is elamped to the table and carries rotating rubber disks, whose edges are cut into radial arms to operate on the inside of a chimney or rial. Arms project forward firom the hub for attachment of a eloth to cleanse the outside.

Claim.-1. The sermbers or wipers $\Lambda$. A'and C C, when constructed and applied so as to operate substantially in the manner as and for the purposes herein set forth.
2. The wiper, as construeted, in combination with the gear meehanism for operating the same, as specified.

73,325--John W. Hansel, Peoria, Ill.-Win dow-Sash Fastener.-Januiuy 14, 1868.-The lock is attaehed to the casing, and fiuted lerer and bolt are operated by the same spindle, and aet respeetively to support the sash in any position, and to lock the same when shint.

Claim.-1. The combination of the weight A on the bolt B with the arm C on the lever D , operating together substantially as and for the pmrpose herein speeified.
2. One or more spurs, $s s$, on the upper edge of the bolt B , in combination with the mortises in the window-firame, with the said weighted bolt and the fluted lever D, operating substantially as described.
g3,326-GEORGE E. HAYEs, Buffalo, N. Y., assignor to Buffalo Dental Manufacturing ComPANY, same place.-Steam Compresser for Vulcanizing Flasks.-Janmary 14, 1868.-Explained by the claims and illustration.

Claim.-1. The proeess, substantially as herein described, of elosing the flasks under pressure of steam or vapor, during the operation of vuleanizing the rubber in the molds, by means of a steam ram or compresser comnected with the flasks by a clamp or otherwise, and having the heat neeessary to effeet vuleanization transmitted through it in such manner as that the steam which is thas derired fiom a ressel that is distinet from the valeanizer, though arranged within the latter, operates to elose the flasks in advance of outside steam pressure on the latter, and while the rubber is at a comparatively low temperature, and plastic, essentially as herein set forth.
2. The steam eompresser, composed of eyliuders A and $B$, in eombination with a suitable clamp for holding the flask sections in conncetion therewith, substantially as speeified.

73,32\%-Andrew J. Heavner, Time, Hl.-Churn.-January 14, 1868.-The two dashers are coneentric, the wings of one being conneeted to a radial frame for rliose passage the erlindrieal rod is slotted longitudinally. The dashers move reciprocally by means of a compound erank shaft.

Clatim.-1. The double dasher. consisting of the parts $D \mathrm{E}$, construeted and arranged substantially as lescribed, to work one within and through the other: as speeified.
2. The double dasher, eonsisting of the parts $\mathbf{D ~ E}$, operated by the double crank $G$ H, throngh the medium of the eonnecting rods F I, substantially as described aud speeified.

193,328.- (rottlifeb Hening and Herman P. Willie, Binffalo. N. Y.-Boot Heel. January 14, 1868. The metallic frame is placed in a mold and the rubber east upon it. The frame is seeured to the leather by two loose serews, and by a screw
fixed to the frame and inserted in the leather by rotation of the framc.

Claim.- $A$ boot-hecl, eonsisting of the imbedded skeleton frame $A$, provided with the flanges on the rim $c$, fixed serew $e$, and rubber $g$, constructed and arranged substantially as set forth.
73.329.-N. W. Mess and J. H. Fry, Fort Waync, Ind.- Wagon Jack--January 14, 1868.Explained by the claim and illustration.
claim.-The lever A, the concavo-conrex or crescent-shaped step or link B, in eombination with the convex surface of the stud or lifter $C$, the samo being eonstructed in the manner and for the purpose described.
rys,330.-HENRY W. Molly, Norwich, Conn.Implement for Draving Nails.-January 14, 1868.Explained by the claim and illustration.

Claim.-The jarrs A A, eonstrueted to open and elose as deseribed, and with their upper ends or arms having converging sides, $g$, forming an opening, $f$, between them, so that by lifting on the same through a lever inscrited as specified, to extract the nail, the grip of the nippers is tightened on the latter in the manner substantially as set fortl.
'g3,3:31.-II. W. Holly, Norwich, Conn. - Im plement for Dyers and Bleachers.-Janmary 14, 1868. - The implement has knobbed tines to hold any object which may be coiled around it when inserted into the dye vessel.

Clainn.-The forked implement, having the extremities of its tines knobbed or enlarged, substantially as herein set forth, for the purpose specified.
193.332.-THOMAS C. Hopper, Philadclphia, Pa -Dr"y Gas Meter.-January 14, 1868.-Explained by the claims and illustration.

Claim.-1. Producing both of the ehannels $a^{\prime} a^{\prime \prime}$ on the same side of the partition $A$, substantially as and for the purposes described.
2. In the valve-seat $B^{\prime}$, the annular channel $f^{\prime \prime \prime}$, in eombination with the closed eenter, and narrowfaced dividing partitions $b^{\prime \prime} b^{\prime \prime}$ of the four openings, which are surrounded by the said annulir ehannel $b^{3}$, substantially as and for the purposes doseribed.
3. Casting the seat $B^{\prime}$ of the valre and the projecting portion $b^{\prime \prime}$ thereof in one piece, so that both of the channels $a^{\prime} a^{\prime \prime}$ ean thereby be produced exelusirely on one side of the partition $A$, substantially as described, and for the purposes specified.
4. In the rotary disk B of a gas-meter, the ontlet 3 , in combination with the space abore the faces 22, and the amnular ehanuel 4 , arranged substantially in the manner deseribed and shown, tor the purposes specified.
5. Passing the spindle C loosely throngh the rotary disk $B$, and giring it a bearing in the seat $B^{\prime}$, substantially as and for the purpose deseribed.
6. Giving rotary motion to the disk 13 upon the seat $3^{\prime}$, by means of the eross bar $c^{\prime}$, fixed in the spindle C, in combination with the studs $c^{\prime \prime} c^{\prime \prime}$, fixed in the said disk $B$, when the spindle $C$ passes loosely throngh $\mathrm{B}^{\prime}$, substantially as and for the purpose do. seribed.
7. Arranging the packing box $F$ of the spindle $C$ in the top of the valve eover $E$, in the position shown as below the worm wheel, for the purpose of admitting of the "repacking," as oceasion may require, without removing the ling post $G$, as described.

78,333.-TOHN Howarth, Salem, Mass.-Cupola Furnace.-Janunry 14, 1868.-The air and steam, or either of them, are heated by waste heat from the eupola or by other means, and are injeeted into the tweers while the stean is in a superheated condition.

Claim.-l. In combination with a enpola, blast, or other firmace, (in which eombined air and steam are used as deseribed,) the superheater chamber, located directly over the firnace, substantially as deseribed.
2. The superheater base $f$ and its upright return bends $g$, combined anil arranged together and relatirely to the furnaec and air-blast, substantially as shown and doscribed.

73,334.-TVilliay L. Imlay, Philadelphia, Pa. -Locking Krob Latch.-January 14, 1868.-Explained by the olaims and illustration.
Claim.-1. Construeting the key bolt B with a projection, F, for the purpose of locking and unlocking the knob latch $A$, by means of its deseribed action in the slot of the kiob lateh, as set forth.
2. The constructing and arrauging of tho knob latel $A$ with the surface $a$, (for the action of the key,) and the slot in its inmost ond, for the purpose of giving the knob latel a dead-lateh actiou, and for the purpose of conjoined looking with the koy bolt 13, thus making the latel A subserve any one or all of the three uses, as follows: of a simple knob latch, a dead or night latel, nnd an additional security to the key bolt 13 , as set forth.

73,335.-William L. Imhay, Philadelphia, Pa. -Hydrocarbon Burner:-January 14, 1868.-Tho annular retort is above the outer edge of the annular burner pipe, which is fed from tho upper part of the retort. The retort is fed from the reservoir.
Claim.-1. The construetion of the rapor and gas chamber B with two walls, the outer ono of any suitable form, and the inner ono cone-shaped or inclined inward, and operating substantially as set forth.
2. The construction of the blast equalizing chamber E larger than the flow-pipe D, and with the inclined apertures or eseape Fr arranged just boneath or just within the lower part of the generator, as set forth.
3. An apparatus for burning hydroearbons, constructed and made of the pipe A from the resorvoir, the chamber B, flame-blast aporture $G$, tubo $D$, receiver E , and eseape apertures F , operating substantially as set forth.

93,336.-A. Ixgalls, Independonco, Iowa. Seeder and Cultivator Combined. January 14, 1868. -The quantity of seed sown is adjusted by a slide operated by a serew. Tho axlo passes longitudinally through the seed box and carries wings to agitate the seed over the exit apertures. The driver, by is pressure upon the foot board, drives tho draw bars of the shares into the ground.
Claim.-1. The slide G, as arranged, in combination with the lever $H$ and adjusting rod I, for the purpose and in the manner as set forth.
2. The graduating seale $F^{\prime \prime}$, in combination with the rdjusting rod I, for the purpose and in tho manner as set forth.
3. The foot bourd $Q$ and swing bar $O$, as arranged, in combination with the cultivators N , for tho purpose speeified.

73,337.-Palph S. Jevnings, Philadelphin, Pa. - Card and Cribbage Board.-January 14, 1868.Explained by the elaim and illustratiou.
claim.- A card board, construeted as deseribod, ond so arranged as to be used for plaving thereon the ordinary ganes of eards, or the game of eribbage.
93,33S.-Neeson Johnson, Jasper, N. Y.Swage for Saw Teeth. -January 14, 1868. -The point of the tooth is hekl betreen the adjnstablo dio and the tool. The tooth is also held by the side pins, and the serrations of the stock. Tho tooth is swared by a blow of a hammer on the tool, which is held by a spring.
Claim.-1. The provision of notehes or teeth a on the swage stoek, to hold the notehed or serrated saw tooth ugainst displacement, sulstantially as de-
seribed. scribed.
2. The actjustable swage pin or dio B , or its deseribed equivalent, whereby tho strage is made to aceommodate or adapt itself to irrecularities or variations in the saw teeth, sulstantially as deseribed.
3. A reversible supporting cie or swage pin B, having a convex or oval face, in order to either Spread the tooth sideways or draw the same endways, sulastimtially as deseribed.
4. The die or stamping devico C , in combination with the spriug holder $\mathrm{C}^{1}$ aud adjusting serow $\mathrm{C}^{2}$, substantially as and for the purpose set forth.

7:3,333.-W. W. Johnson, Nashville, Tonn,Machine for Pointing Ficliets.-January 14, 1868. The picket is clamped to the oscillating frame by the
occentric lever, and the kuifo is attrehed to thoflixed frame. Tho latter has an adjustable guiks for the paling end. This latter is cut to a conoidal form.

Claim.-The swiuging arm D, provided with the oceentric lever F and tho holding elamp E, when constructed and arranged to operato the picket against the kinfo $a$, sulstantially as and for the purposo herein doseribed.

7:3,340.-Daniel Jones, Sm Franciseo, Cal.Axle for Wagons.-January 14, 1868.-Tho butting ring is comntersunk in such manner as to fit the round aud square parts of the arle at their junction.
Olaim. - Tho countersunk collar C, oither in combination with tho strap D or whero used alono, constructed and arranged substantially as and for the purposo deseribed.
93.341.-MLoses J. Jones, Fredonia, N. T.Saw Frame.-Jamary 14, 1868. - Tho end of tho saw frame consists of a metallio spring.
Claim.-The sibw frame 1 B , constructed as describod, and used for the purposes set forth.

73,342.-Artiul I. Judge, Baltimore, Mrd.Expanding Wheel Hub.-Tanuary 14, 18ti8. -The ends of the spokos aro beveled and rest upon conical ammus which is adjusterl by set serews to oxtond the spokes radially.

Claimb-1. An adjustable baso with an inelincd face, against which the onds of the several spokes of tho wheel bear, so arrangel that tho spokes may be simultancously more or less extented through the hub by ehanging the position of the inclined base, substantially as and for tho purpose set forth.
2. In combination with a chambered hub the conioal baso IB and adjusting serows $A$, substantially as and for the purpose set forth.

73,343.-Edsund Keith.-Buffalo, N.Y.-Shingle Machine.-January 14, 1868. -The bolts are held iu the rotating whoel, and are alternately formarded more at one end than at the other to givo the taper to the shingle.

Claimb-1. The sliding bar P and frame Q. provided with inelinod arms $q q$, arranged and operating the piroted tilting frame N, substantially as set forth.
2. The coneentrically groored wheel $H$, in combination with the bar P , groores $u t$, dog $e^{\prime}$, with projections d' and pin $v$, all constructed and operating substantially as doseribod.
3. The sliding spring jaw or clamp $F$, in combination with the lover E and eceentric G , for alter nately operating to reloaso and hold the bolts, all constructod and arranged substintially as set forth.
g9,344.-Curistlan Kenide, Safo Marbor, Pa. -Clamp for Fizing Sicws.-January 14, 1868; ante. dated January 2, 1868.-Tho instrument is attibelod to tho bonch by tho serems passing througth tho longitudinal, rertical fireo block, and one of the horizontal baso pieces. The clamps are drawn together upon the saw by serows.
Claim.-Tho bed pieces $A$ and $\Lambda^{\prime}$, when prorided with the sorews e e, the face block B, provided with the seror $f$, the jatrs $\mathrm{C}^{\prime}$, and the clamps $\mathrm{D}^{\prime}$, arranged substantially as deseribed and set forth.

93,345.-H. A. Kmphart, Flotcher, OhioStream or River Fence.-January 14, 1868. -The sills aro ripidly fixod to roeks, and tho fonco hinged to the sills in such numer that when the water is low the eurrent shald keep the fonco sufficiently orect; but that the power of water upon its npper part, lurms a freshet, shall canse it to assume a horizontal position.
Claim. -The sill pioces 4 A, secured in position, as shown, or in any equivalent way, and having the slats B attached, in comncetion with tho counterpoised slats I), arranged substantionly in the manner as and for the purposo specified.
73,346.-Tames Lamb, Ahrora, and Francis Tivings, East Enterpriso, Ind.-Scaffold for Build-ing.,-January 14, 1868. Tho frame has laterally and rertically extendod bearings against the wall, and is held theroto and sustained by the shore timbers.
Claim.-The horizontal bar B, noteled near its inncr ond, provided with diagonal braoes D D and
rertical bars $f f$, bolted together as described, between which are passed the shore timbers C, connecting into the notch in bar B, for supporting one end of the platform $A$, all construeted and used as specified.
73.347.-W. J. Lane, Washington, N. Y., assignor to self and J. G. Lane, same place.-Coffee Mill.-January 14, 1868. - The eonieal grinding surface has at its lower elge a horizontal grinding surface, and at the outer edge of the latter is an annular vertical discharge.

Claim.-The external shell or cone D of a coffee mill of the chass deseribed, when proyided with the pendent flange a, surrounding tho conical griuder E , for the purpose of giving a downward direction to the ground coffee, and preventing it from being scattered about in the mill, as herein shown and described.

193,349.-Levi B. Lathror, San Josó, Cal.Threshing Machine and Grain Separator.-January 14, 1868.-A tossing motion is given to the corrugated sereen by an eccentric, and by the inclined guide slots whieh receive pins projecting from the sides of the screen. The edges of the sereen have leather packing to prevent grain from falling between the sereen and frame. The end of an arched suction pipe is placed inmediately over the screen to convey away the chaff and dust.
Claim.-1. The device for imparting the peculiar motion, as herein described, to the scrcen $E$, said deviee consisting of the inelined guides C , arm G , and erank shaft H, or their respective equivalents.
2. Providing a sereen E , with alternate depressions and eleyations, similar to wares, substantially as and for the purpose herein shown and described.
3. The packing $e$, when arranged at the sides of the frame of the screen, substantially as and for the purposes herein shown aud described.
4. Passing the grain by any suitable conveyer dircetly under the cud of a suction pipe, as set forth.
5. The sereen E, when arranged and operated as set forth, in combination with the suction tube I, the same being arranged substantially as leseribed.
6. The tossing motion of the screen $\mathbf{E}$, when applied to the purpose of separating grain from straw, or for separating it from chaff; or for simply conveying light artieles, substantially as described.
g3,349.-William E. Lockwood, Philadelphia, Pa.-Fastening for Wire Fences.-January 14, 1868. -The fenee wire is inserted in a hole in the periph. ery of the pulley, which is turned by a wrench and secured by a key which bears upon its prismatic part.

Claim.-The pulley D, and its many-sided projeetion $d$, when the said pulley is arranged to turn in the braekets $B$ aud $B^{\prime}$, or their equivalents, and is confined by a key E, all substantially as and for the purpose herein set forth.
93,350.-Williax E. Lockwood, Pliladelphia, Pa.-Apparatus for Drying Envelopes.-January 14, 1868. The cuvelopes are carried by tapes around a series of rollers, so as to dry them withont the addition of heat or a blast of air, whieh cracks the gum.

Claim.-1. Two sets of endless tapes or bands, in combination with a train of pulleys, arranged substantially as described, for the purpose specified.
2. The combination of the narrow pulleys $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$ with the broader pulleys $D$, and the two sets of bands, for the purpose specified.
\%3,351.-Horace Lord, Hartford, Conn.-Cartridge Extractor.-Jantary 14, 1868.-A projeetion of the breech bloek strikes the upturned end of the lever, and raises the latter by a positive action to throw out the shell after extraction from the cartridge chamber.

Claim.-Discharging or throwing out the empty cartridge, after it has been extracted from the charge chamber, by means of a vibratory or lifting lever or haminer, arranged to strike the case, substantially as described.
g3,352.-Truman Mabbett, Jr., Vineland, N. J.-Berry Box.-January 14, 1868.-The ends are grooved to receive the edges of the curved piece.

Claim.- A box for berries and other small fruit eonstructed of two upright end pieces A A, and a body, B, of semicireular form in its tiansverse soction, and seeurcd to the end pieces, as shown, the body and end pioees being perforated or not, as desired, substantially as herein shown and described.

73,353. - Terrmiait A. Marden, Chel sea, Mass., assignor to W. N. Ely, of Stratford, Comn.- Let-off for Loom.-January 14, 1868.-Tho whip-roll is ennnected to a spring frietion brako, so as to lighten the samo from the whoel whon the tension of the yarn is inereascd.
Claim.-1. The combination of parts D, F, and E, with parts C and H , eonstrueted, arranged, and operating substantially as doscribed.
2. Tho double-friction brake e $e^{\prime}$, operating upon the periphery of the wheel C , and aetuated by means of spring $H$, and the whip roll and lever D F, and yarn G, substantially as described.
3. Tho above in eombination with a take-up mechanism, substantially as described.
73,354.-G. F. Marks, Petersburg, Va.-MillShape or Mold for MLanufacturing Tobacco-January 14, 1868.-Explained by the claim and illustration.

Olaim.-Tho iron plate A, or other motal, of snitable thickness, and seeuring the same to the followers or sinkers 3 B , and tho plates $e e e$, With strong rivets C C C, for tho eonstruetion of millshapes or molds for manufacturing tobacca, substantially as herein set forth.
g 3 ,355,-William Marot Marsinall, Philadelphia, Pa.-Reflector.-January 14, 1868.-The refleetor has facets of silvered glass jointed together, and supportod by a flexible frame.

Claim.-1. The flexible base B, of pasteboard, papier-maché, wood, or sheet metal, in eombination with the silvered strips of glass A A, the metal frame C C, and the curved wire mesh work D D D, and the metal elasps F E F and H HII, substantially as described.
2. The wire frame C C, the curved wire mesh work D D D, and the metal clasps F F F, in eombination with the glass plates A.A. A, and the base $B$, when arranged togethor so as to form a refleetor or seetion of a refloctor, substautially as described and for the purpose sot forth.

93,356.-B. Mabtin, Prairio du Chien, WisPocket Grain Tester.-January 14, 1868.-Explained by the elaims and illustration.

Claim.-1. The grain tester, with the seale $c c^{\prime}$ gractuated from sixty-one degrees downward, as describel, and with a straight edge $r r^{\prime}$ upon ono side, for tho purpose of lovoling the grain in the bueket $P$, as herein shown and describod.
2. The combination of the spring $L$, rod $m$, and bucket $P$, with the inder finger if and scale $c c^{\prime}$, as horein described and for the purpose specified.
g3,35\%-James E. McBetir, Now Orleans, La., assignor to himself and Sheldon Sturgeon, same place.-Breech-Loading Fire-Arm.-January 14, 1868. -The breoch bloek swings out sideways, and is retained in firing position by a spring catch. The hammer is ontirely inelosed within the breech block, and is cocked by one trigger and tripped by the other.
Claim.-The elosa-hinged box D, in which are completely ineased tho lock and coek, and which is herd in position by means of the spring $\operatorname{dog} I$, as and for tho purposes specified.
ra3.358.-Edgar P. McCenney, Washington County, D. C.-Lock Catch and Stopper--January 14, 1868. - Tho cord passes through a boveling notch in the framo, and has pressure from tho ond of the bent lever. The slide is thrust boneath the handle end of the lever to canse a frictional pressure on the rope. The devico is used with davit eords in lowering ships' boats.

Clainn--So combining and arranging a bent Tever $b$, and a slide bolt $c$, with a frame $a$, in tho manner substantially as and for the purposes set forth.
93.359.-James McDermotr, Frederiek, Mri. Elastic Printing Apparatus.-January 14, 1868.The type is held on a eurved bed, and the inking. roller has a complementary shape. The type is formed of rubber, and is retained by the flanges of the adjustable rules which rest on the baso piece of each letter. The iuking apparatus is at ono end of the bed piece, and has various colorod inks for different lines of tho matter.

Claim. -1 . The arrangement of the frame $A$, movable bottom $B$, set serows $H$, yokos IE, and adjustable types, substantially as described.
2. The coneave roller I, shaft K, reciprocating frame $J$, guifle-grooves $O k$, lugs $j$, frame $\Lambda$, and inking apparatus $m m^{\prime} n$, when combined and arranged in the manner described.

73,360.-Willian Grailam McIvor, Liverpool, England. - Tindlass.-January 14, 1868.- The barrel has spiral springs, which are wonnd up by the running-out cable, and serve to prevent jar and to assist in winding in.

Claim.-The application of springs to a windlass to operate in the manmer substantially as and for the purpose specified.

73,361.-Tosepil A. Miller, New Tork, N. Y. -Ash Sifter:-January 14, 1868. -The box is partially filled with water, and the ashes are washod by working with a hoc. The fine portion passes through the grate.

Claim. - The combination, in a box or case, of the upper and lower chambers A 13, grate C ID, the one portion, $D$, of which inclines npward, and sluiee or grate E, for eleansing ashes or cinders by a water process, essentially as herein set forthi.

93,362.-Josepil A. Miller, New York, N. Y. - Apparatus for Singeing Cotton-Cloth.-January 14, 1868. - The passage of the caloric current through the singreing erlinder is regulated by a conical damper at its lischarge end.

Claim.-1. In eombination with a rotating $\sin$ going borly or surface, the reflector E , substantially
2. The combination of a damper $F$ with a rotating singeing body or surface, essentially as specified.
73,363.-Jnseril A. Miller, Providence, R. I. -Steam Generator.-January 14, 1868.-A sories of fines passes upward from the fire dome, and an amular series from a lower and outer position in the fire space. The former tubes have conieal dampers at their upper ends controlling the currents through them, and consequently through the outer serics.
Claim.-1. The combination of the fire dome $F$ with the fire chamber C and tubes $\mathrm{G} J$, arranged and operating essentially as herein set forth.
2. The arrangement of tho valres 11 within the smoke box, for controlling the central or fire dome flues, substantially as shown and deseribed.
73,364.-Josepir A. Mildere, Providence, R. I. -Steam Generator. -January 14, 1868.-Curvents of heated water rise in the spaees beside tho fire boxes and beneath the shicks, being discharged at tho upper surface and earried down through pipes into the space beneath the fire boses.
Claim. -1 . The combination of the tubes C and E with the shiclds D , erown shects $c$, and lowor sheets $d$, substantially as specified.
2. The combination of shields $\bar{D}$ with the sodiment tubes E and outer tubes C , essentially as herein set forth.

73,365.-T. S. MilLs, Kendallsville, Ind.-Combined Drill, Roller, and Cultivator-Jamary 1.4, 18tis. - The implement is divided longitudinally into two sections which are hinged together, and each section has a roller, seed hopper, and furrow openers. The latter may be raised from the ground if desired, and the inplement usell as a rollor. The seed shaft is driven by one of the rollers in sowing smaller seed, but oseillated by a leror when planting corn. The seed shafts of the different seetions are conneeted by a universal joint.
Claim.-1. Constructing the frame of the machine
of two parts A A, connected by joints $a$, and each part provided with a roller 1 , when said parts, thus constructed and arranged, are nsed in combination with a seed-dropping apparatus for planting sotd either in hills or drills.
2. The operating of the toothed wheels $G$ from one of the rollors $B$, through the medium of the gearing J M, pitman I, comected with the bar K, and with the erank pulloy H, on one of the slafts $F$ of tho wheels $G$, all arramgod substautially as and for tho purpose set forth.
3. 'The bar' $O$ attached centrally and longitudinally to the framo at its rear end, and provided at its front end with a caster wheol $P^{\prime}$, in conncetion with the wheel $R$ and strap $l$, or their equivalonts, for raising and lowering the front part of tho maehino, as set forth.
4. Operating the seed-distributing wheels U through the merlium of the toothed segment $W$, at the lower end of the bent lever $\boldsymbol{\lambda}$, and tho pinion Y, on ono of the shafts F , substantially as and for tho purposo specifiod.
73.366.-Geonge R. Mitchell, Nevada, Colo-rado.-Stamp Mill.-January 14, 1868.-The lower box of tho stamp has an enlargemont of tho insido diameter at its lower side, forming io space into Which the water is injected to keop the stamp-stem clear of grit.
Claim.-1. The bearing D, having the lower portion onlarged, forming a water-chamber $a$, substantiably as described.
2. In combination with the abore, and with the stom 13 of stamp A, the water-supply pipe $\Pi$, tubo F, stop-eock G, ind flexiblo hose E, substantially as described and for the purposo speeified.

73,36\%-GEORGE Muoney, Providenco, R. I., assignor to himself, JOB Arioln, and Janies Silaw,
Jr., samo place Jr., same placo. - Mamufacture of Argand Gas Burners.-January 14, 1868.-The gas passes through radial passages into the amular space, at the top of which it is ignited. The flow of gas is regulated by tho set serew.

Claim.-1. Forming an argand gas burner of one pieco of motal, substantially as doseribed.
2. Forming the gas-jet apertures through the top or rim of the burner without drilling, and substantially as deseribed.
3. The serow forming an adjustable check, in eombinatiou with quin argand burner, for the purpose of producing a still light, as heroin shown and described.

73,368.-Tiromas Moone, New Tork, N. Y.Horse Collar.-January 14, 18i8.--The scams of the collar are on tho front and rear odges, learing a smooth convex surfine to the horso.
Claim.-Forming a horso collar with one outside and ono inside leather pieee, joined together at the sidlos, with two seams only, and bent around contimuously at the bottom so as to make a collar with is whote throat, having no cross seam, arrauged substintially as herein deseribed.

73,369.-Davin R. Morgan, San Francisco, Cal.-Wye Medicine.-January 14, 1868.-For treatment of an ophthatme disease incident to tho Pacifio coast, rud in which exerescences form ou tho inuer membranes of the cyelid. It is composed of sugar of lead, 1 ounce ; sulphate of copper, 6 ounees; sulphate of zine, 6 ounces ; alum, 6 ounces; nitrato of silver, (6 grains; water, (distilled,) $\frac{1}{2}$ gallon. Lix hot and filter.

Claim.-Tho above-deseribed composition for treating the oyos, made of the ingredients emumerated, mixed or' compounded in about the proportions specified.

73,370.-James Morton, Philadelphia, Pr. Cork Extractor.-Sanuary 14, 1868.- 1 pair of levers with hand rings are piroted together near thoir midlength, and their ends havo respeetively a hook to engage the cork-serew handle and a post with a socket foot to rest on the top of tho bottle neek.
Claim.-A double lerer eork extraetor consisting of the hars A, C, and D, all made and operating sub. stautially as herein shown and deseribed.

73,371.-Robert Moxley, Muscatine, IowaSpinning Machine.-January 14, 1868.-The mechanism is all actuated by a single wheel, the power being communieated to the carriage by two bclts which run so looscly as to be inoperative unless tightened by treadles; one treadle acting to extend and the other to cause the return of the carriage. Another treadle operates the brake which stops the carriage and allows the yarn to twist. The bell is sounded at caeh rotation of the main wheel to denote the trist. The "faller" is operated by a hand lever.

Claim.-1. The combination and arrangement of the shaft $a^{\prime \prime \prime}$, belts $a a^{\prime}$, shafts $\mathrm{F} \mathrm{F}^{\prime \prime}$, brake ' T , trendles for tightening the belts $a a^{\prime}$, belt c, and earriage C , all the said parts being, constructed and operating together, substantially in the manner and for the purposes specified.
2. The arrangement of the said parts with the belts $b$ and $d$, wheel D, apron J, faller I, slide L, set sererr $l$, inclines $g g$, and gate G, the whole constituting a combincd land roll and twisting machine, snbstantiolly as described.
3. The adjustable apparatus for indieating the twist, consisting of the slide $O$, belt $u$, knot $o^{\prime}$, lever $v$, and hell W, all arranged and operating together substantially as and for the purpose set forth.

73,3'2.-GEORGE Nellson, Boston, Mass.-Lamp.-January 14,1868 .-The mnular cork packing is placed in a suitable recess in the top into which the cap serews, the lower part of the latter coming in contact therewith.

Claim. -In eombination with the tops of lamps for using burning flrids, an annular cork packing, made, arranged, located, and held in position in the lamp, in the manner and for the purpose herein deseribed and represented.

73,373.-II. Norton and J. S.B. Norton, Farmington, Mie.-Apple Slicer.-January 14, 1868.-A series of curved cutters is fixed to the sides of the frame and a tnbular cover flanked by radial cutters to the cud. The peeled apple is forced betrecn the entters by a follofer and is thereby corel and sliced.

Claim.-The combination as well as the arrangement of the corer K with the knives $\mathrm{L} \mathrm{L}^{\prime}$ and $\mathrm{II} \mathrm{H}^{\prime}$ $\mathrm{H}^{\prime \prime}$. substantially as described and for the purpose set forth.

193,3\%4.-Benjahin Oldfield and Edwin Oldfield, Newark, N. J.-Loom. January 14, 1868 ; antedated Jannary 4, 1868.-Explained by the claims and illustration.

Claim.-1. The combination of a brake $c^{2}$ or $d$, with the tension spring $c$, reel $R$, and shattle $S$, substantially as and for the purpose set forth.
2. The spring eatch or bridge picee $\alpha$, in combination with the shuttle $S$ and reel $R$, constructed and operating substantially as and for the propose described.
3. The loose peg $f$, in combination with the shattle earriers C , gaide bars $h$, cams $g$, and shuttle S , constructed and operating substantially as and for the purpose set forth.
4. The arrangement of slide bars $D$, moving on the top of the batten, in a straight line, without rise and fall, having uprights attached thereto with holes in to reccive a loose peg or stud capable of earrying a shuttle, each peg or stud recciving motion by a cam or its equivulent, substantially as and for the purpose set forth.
5. The arrangement of eams F , attached to or formed by the cog-whecls E , in combination with stops $k$ on the slide bare D, substantially as and for the purpose described.
6. The arrangenent of a cam and eccentrie $t$, attached to and operated by the shaft that carrics the sluttle actuating devices, and in combination therewith the spring stop 8 , bar $\mathrm{E}^{\prime}$, and helt shipper $\Pi$, constructed and operating substantially as and for the perpose sct forth.
7. The arrangement of a brake $G$, in combination with the stop motion and shuttle motion, constructed and operating substantially as and for the purposo deseribed.
8. Operating the harness by chains and chain Whecls N , and levers $L \mathrm{M}$, substantially as and for the purpose set forth.
9. A harness motion, composed of loose arms $L$, each of which is pivoted at one end to a lever M, and at the opposite end to a cirenlar or segmenta ${ }^{\text {B }}$ ehain wheel $N$, substantially as and for the purpose descril)ed.
10. The vihrators $j^{\prime}$, in combination with the rods $i^{\prime}$ carrying the hooks $l^{\prime}$, and with the interrening hinge $O$ and pattern chain $Q$, construeted and operating substantinlly as and for the purpose set forth.
11. The arrangement of clastic springs or cushions under the pins or stnds of the protern ehain, in combination with the T-hended shanks of suid pins or studs, and with suitable ridges or carities on the inner surfaces of the sereral leavos of tho pattern chain, substantially as and for tho purpose dosoribed.

73,37.5.-James Patik, Jr., Pittsburg, PaCombining Oopper and Oast Stecl.-Janury 14, 1868.- A copper ingot at a bright red heat is piaced in a mold and molten steel pourod around it, forming a compound ingot which is subsoquently hammered and rolled.

Claim.-Combining copper and cast steel by heating the copper to a good rod hoat and teeming or pouring thereon liquid molten cast stcel substantially as and for the purposes heroimbefore described.
\%3,376.-Joserf T. Parlour, Brooklyn, N. Y., assignor to himself and Wimlian Braph.-Keel and Bilge Dlock.-January 14, 1868. -Tho wedge bloeks are slid upon ench other by chains actuated by a windlass and operate to raise the vesscl when placed beneath the kecl and bilge.

Caim.-1. The eombination, with the blocks $B$ $C D$ and sidc pieces $E F$, of the chains $G K$, pulleys M I L, ratchet wheel Q, and pawl R , all construetel, arranced, and operating substantially as described.
2. The side strips to the supporting or cap-piece of a bilge or keel bloek, substantially as and for the purpose specified.
 San Franeisco, Cal.- Finish for Painted Surfaces.January 14, 1868. -The galena ore is pulverized to fineness of coarse sand and caused to athere to a heavy coat of paint.
Claim. - A finish for paint, consisting of erude galena, prepared and applied substantially as and for the purpose herein described.
73,3\%S.-Shadrach H. Pearce, Boston, MassCase for Umbrellas.-Jnnuary 14, 1868.-The scams are sccured by ecment in placo of sewing to enable the formation of the cover without turning "inside out," and thus permit a neat attachment of the feriule.
Claim.-An umbrella cano composed of enameled cloth, the parts of which are secured together by cement, substantially as deseribod.

73,379.-Hevily C. Prarson; New York, N. Y.-Mechanical Toy.-Tannary 14, 18ti8. - The horse is pivoted to a diametric bar, and the man is spitted on a radial pin within rolling rings. The morement of the rings oceasions the limbs of both amimals to nxecute diverting motions.
olaim.-1. A meehanical toy, the positive motions of whose parts are derived froin a cramk or cranks on the axis of a rolling or revolving hoop.
2. The combination with sueh a crank or cranks, of a system or systems of compocting links, snbstantially as shown and described.
3. In combmation, a rorolving hoop, carrying a suspended image or toy which does not rovolve, but whose members are giren positive and determined morements, substantially as described.
4. The combination with the rolling hoop of a mechanieal tor, of a radial arm, projecting from the loop toward its center, as and for tho purpose set forth.
5. The combination with such a hoop and redial arm, of a jointed imago.

93,389.-G. M. Peters, Laneastor, Ohio-Dropping Platform for Harvestcrs.-January 14, 1868.The slats of the dropping platform run parallel with the cutter bar, and the platform is swung around $90^{\circ}$, and is depressed sufficiently to allow the stubble to assist in the discharge of the garel. The eut-off bar
reccires the aceumulating grain while the gavel is being discharged.

Claim.-1. A slatted dropping platform, adapted to turn upon a pirot located at its inner frout corner, and to tilt or drop upon a hinge, or fulerum snpports, arranged in a line parallel with the finger bar, substantially as described.
2. The semicireular plato E, provided with the incline or offset $e^{\prime}$, in combination with the quatrant plate, or its equivalent, attached to the platform, and onerating substantially as deseribed.
3. The slatted platform, piroted at its inner front corner, in combination with the plates E and F , or their eqniralents, substantially as described.
4. The dropping platform, pivoted at its inner front corner, in combination with the forked levor J and cam whecl K, substantially as deseribed.
5. The combination of the turning and dropping platform with the cut-off MI, in the manner substantially as deseribed, whereby tho cut-off is operated by the same lever which throws into gear the mechanism operating the platform, as set forth.

93,381.- William G. Pike, Philadelphia, Pr.Valve for Steam Engines.-January 14, 1868.-The supply and exhanst valves are side by side on the cylinder, and extend radially therefrom. The ralvos are operated by a common rock shaft, the arm operating the exhaust valve, beiug somowhat the longer, to give greater throw, the steam ports of that ralvo being wider thau those of the supply. ralve.

Claim.-1. The stean supply cinest and supply valves B, and their stem E. in combination with the two exhaust ralve boxes $\mathrm{N}^{\mathrm{N}} \mathrm{N}^{\prime}$, oxhaust pipes $\mathrm{O}^{1} \mathrm{O}^{1}$ torminating in a single pipe $O^{2}$, exhanst valves $J J^{\prime}$ and their stem, all arrangod and operating in the manner and for tho purposo substautially as set forth.
2. Arranging the exhanst valres $J J^{\prime}$ below the exhaust yalve box corers $\mathrm{K}^{\prime} \mathrm{K}^{\prime}$, so that said valves move upou and against the under side of said covers, substantially as set forth.

73,382.-J. F. Pool, Momroo, Wis.-Separator. January 14, 1868.-Tho screons and riddles havo distinct longitudiual shaking, by connection to a rortical oscillating shatt, receiving motion from the funshaft crank:

Claim.-1. The thumb serews P and W, when operating to adjust the serecns $m$ and $n$, in tho mamer described.
2. The serew $X$, in connection with a roller $y$, for regulating the hopper sereen and hopper, as herein set forth.
3. The bar F , furnished with plates $g$ and $e$, in combination with shaft H , plate K , and hooks $s$, the wholo constructed substantially as set forth.

73,353.-Jos. Potter and Olif Abell, Whitehall, N. T.-Boxed Hone--January 14, 1868.-Explained by the claim and illustration.

Claim.-As a new article of manufacture, the circular hone, ineased in a circular wooden box, having wooden cover C, in such a manner as to protect tho hone and keep its upper surface level, or from having depressions formed therein by the action of the tool being ground, as herein shown and doseribed.

73,384.-Samuel Refd, Whitestown, Pa.-Animal Irap.-January 14, 1868. -The trap proper has openings, with inwardly converging wires, and is surrounded on three sides by a ease of considerably larger dimensions, and haring smooth openings, allowing ingress and egress. The onter ease is linged to the trap and may be thrown back or removed.
Claim. - The combination of the linged vestibule A and trap $B$, constructed and arranged substantially as and for the purposo herein specitied.
73,385.-Horace Resley, Cumberland, Md. Car Coupling.-January 14, 1868. - The heads of the coupling bar are oblong, and the sloulders rectangular. The ends of the head are beveled, so as to turn in entering the bar, turning back again to engage the shoulders at the sides of the draw head.

Claim.-1. The links or bars A, with shouldered heads and beveled cuds, and snspended by a flexible comnection, so that they can rock or turn in the line
of their length when they are to connect or disconsneet the train, substantially as deseribed.
2 . In combination with the link or bar A, construeted and operating as above deseribed, the box $B$, with shoulders c c and rounded ond $j$, as and for tho purpose lierein doseribed and reprosentod.

93,386.-James C. Rhodes.-Stillwater, Minn. -Orutch.-January 14, 1868.-The spur is driven out of tho bottom of the crutch by a spiral spring, and may be dramin inward by the handlo, which serews upon its upper end. The point may bo secured in its contracted position by screwing the liandlo upon the rod.

Claim. - The handlo G, in combination with the rod $A$, spur 13 , and the derices for projocting and ros tracting said spur, substantially as set forth.
73,357.-Peter Richmond, Aberdecn, assignor to himself and James Lamb, A mrora, Ind. - Koofing Scafold. Jannary 14, 186z. - Tho side pieces are adjusfably seeured to the firane to regulate the inclination platform, attached to their upper ends. Tho platform and frame have spurs to engage the roof.
Olaim. The side pieces A $A$, platform $B$, plates I I, and the frame $\mathrm{C} C$, , and seantling $H$, for forming a scaffold, the sereral parts being constructed and nsed substantially as and for the purpose set forth.

73,389.-Samuel C. Ridgaway, Baltimore, Md. -Harvester Rake. January 14, 1868. -The heel bur of the rake slides beneath a roller and within a slot of a post, and is connceted to one end of a lever, whose center is connected to a eramk and whoso other end has a stad traversing a cam groove. The fore end of the rake is guided by a can rib on the platform.

Claim.-1. Operating a harvester rake by means of a cam of suitable form, in combination with a rotating arm and lever, or their equivalents, substantially as described.
2. The combination of the rotating arm $a, \operatorname{rod} \mathrm{D}$, and rake $R$, with the cam $B$, when constructed and arranged to operate substantially as and for the purpose set forth.
93,389.-Meiber R. Ridgley, Mansfield, Ohio. -Harners Pad.-January 14, 186s.-Explained by the claim and illustration.

Claim.-As an inproved article of manufacture, a harness pad and iron, construetel as deseribed, consisting of the solid flanged iron $m$, having the crupper loop east npon and with it, and the continuous pad $d$, with its upper surface $m^{\prime}$, formed of soleleather, covering and receiving the burs $e$, as herein doseribed, for the purpose specified.
93,300.-Lyman Rigas, Lansing, Mich.-Convertible Fork and Mook:-January 14, 1868. -The head of the fork turns on the shank so as to be convertible into a dung drag; a catch holds the head in position.
Claim.-1. The pin F, constructed and operating substantially as and for tho purposes set forth.
2. In combination with the shank of a fork, having notches $A, B$, and $C$, the spring: $D$ and $\mathbb{E}$, construeted and operating substantially as spocified.
73,391.- Hermann Sciüssler, San Francisco, Cal.-Chain Inclinometor.-January 14, 1868.-The level is hinged to the firme at one end and is piroted at the other, to indicate upon the seale tho inelination of the smrvejor's chain, to which it is attached.

Claim.-A chain inclinometer, having the lerel I and the seale A. A, together with the handle I I I, for ascertaining the correet horizontal distance wheu measuring, tho whole constructed and operated substantially as and for the purpose horein doseribed.

73,392.-James B. Sexton, Pella, Iowa, assignor to hinuself and JoIn L. A NDREW, same place.-Cul-tivator.-Jamary 14, 1868. -The draw bars are hinged to bars which are adjustably secured to a frame, ab tached to the lower side of the tongue.

Claim.-1. Tho adjustable iron bars $G$, constrncted substantially as hereiu shown and deseribed, and odjustably attached to the end bars $a^{2}$ of tho fiane $A$, as and for the purposes set forth.
2. The beams H , coustructed substantially as herein
shown and described: that is to say, curved ontward at their forward ends and strengthened at their rear ends by the cross-bais $J$, as and for the pnrposes set forth.
3. The cnrved adjustable bar or yoke L, cnrved edgewise, and adjustably bolted to the cross-bars J, substantially as herein shown and described, and for the pnrpose set forth.

73,393.-SILAS Shirley, Guilford, Ill.-Seed Drill and Roller.-Jannary 14, 1868.-The seed mechanism is actnated by the roller, which forms the earth into ridges, for protection of the sced. The relative vertical position of tho parts is adjnstable, to regulate the depth of planting.

Claim.-1. The whecls $A^{1}$, with attachment $A^{2}$, in combination with framo A, when arranged as deseribed.
2. The frame $o$, cutter E , hopper O , drill poiut $\mathrm{O}^{1}$, and rods $s s^{\prime}$, whon combined and arranged as and for tho purpose explained.
3. The roller $P$, with the $V$-shaped projection, having a triangular section cnt out, as shown, as and for the purpose explained.

73,394.-S. A. Simison, Earlvillc, Tll., assignor to himsclf and BoYD D. Simison, same place. - Coal Box.-January 14, 1868. -The aperture between the hopper and "senttle" may be closed by a sliding platc, aetuated by a rack, spur wheel, and winch. The drawer is for storage of shallow cooking vesscls.

Olaim.-The hopper B and drawer $R$, in combination with slide $C$ and scuttle $G$, the last two eonstrueted and operating substantially by means as doscribed, or other equivalent means, and the whole arranged snbstantially as deseribed, forming a coal box of any desirable shape and size, for purposes herein set forth and specified.

93,395.-P. J. Skinner, Oswego, N. Y.-Movable Barrel Stand.-January 14, 1868.-The pivoted standard has a ratehet to cugage the rear chino of the barrel, to koep it elevated when nearly empty.

Claim. - The combination of the barrel stand with the lollers $D$ and upright $B$, as and for the purpose spceified.

73,396.-J. B. Slawson, New York, N. Y.Ohange Gate for Railroad Cars.-January 14, 1868. -Explained by the claims and illustration.

Claim.-1. A self-closing oscillating gate B, when arranged in the door or front wall of a railroad car, omnibns, or other public vehicle, snbstantially as and for the purpose herein shown and deseribed.
2. A sclf-closing gate B , when arranged as described, and when combinod with a bell I, so that whenever the gate is opened the bell will be struck, as set forth.
3. The arrangement of the headed pin E and spring $h$, in combination with the oscillating, self-closing gate $B$, all made and operating substantially as and for the purpose hereiu shown and described.

93,39\%.-ANDREW V. SMTH, San Francisco; Cal.-Store Truck.-January 14, 1868.-The brake is operated by the hands, or by pressure of a sliding brake bar on the body of the operator.

Claim-1. The roller B, brakebar E , brakes C C, holders $\mathrm{D} D$, metal arm H , and springse $c$, when applied to store trueks, substantially as described, for the purpose specified.
2. The cross-bar I, handles $a$, straps $b b$, and ring $b^{\prime}$, when arranged and operated substantially as described, for the purposes specified.

3,398.-ROBERT Smith, Brooklyn, N. X.-Device for Raising Casks and Barrels.-January 14, 1868.-The barrel is placed upon an upper fiame, whieh may be inclined so as to allow easy loading or uuloading, or to carry the barrel in a vertical position on an inclined track. The trnck has a multitude of wheels, so as to allow its conveyance over uneven surfaces.

Claim.-1. A device for transporting barrels, casks, \&c., whieh is made and operating substantially as herein shown and described.
2. The wheels $B$, when arranged in rows, the axles in one row not being in line with those in the other
rows on the same side of the frame A, snbstantially as and for the purpose herein shown and deseribed.
3. The frame A, when provided with slotted upper bars $d$, and blocks $g$, in combination with the frame $C$ and rollers $e$ and $f$, all made and operating substantially as and for the purpose herein shown and described.
4. The devioe for changing the respectire positions of the frames $A$ and $C$, consisting of the lever $E$, conneeting rod $G$, cross-bar $k$, ears $i$, ancl pin m, all made, operating, and seeured substantially in the manner hercin shown and described.
5. The rollers D D on the framo C , in combination with the frame $A$ and rollers $B$, as set forth.

193,399.-T. S. SMitm, Boston, and A. B. ELT, Newton, Mass., assiguors to William N. Ely, Stratford. Conn.-Let-off Mechanism. for Looms. Jannary 14, 1868. - The let-off mechanism is governed by the tension of the yarn over the whip roll, counterbalanced by tho weight.

Claim.-1. The arm J, in combination with arm I and whip roll F , when $J$ is made adjnstable in I, and the parts are scverally arranged, substantially as described.
2. The whip roll F and arm I, haring an adjustable arm $J$, in combination with tho single detent lever or pawl $K ~ \hbar$ and escapemeut wheel $E$, when severally constrncted and arrangod for operation, substantially as deseribed.
3. The lever $G g$, with or withont adjustable fulcrum, and having an adjustable weight $I$, as set forth, in combination with rocking-shaft roll $F$, all arranged substantially as clescribed.
4. The combination of lever $G g$, weight $L$, arm a, levers F I J K, and escapement wheel E, all arrauged and opcrating snbstantially as and for the pmposes set forth.
5. The rod $o$ and brake $p \mathrm{P}$, arranged in combination with and in relation to the yarn beam and whip roll, snbstantially as and for the purposes doseribed.
6. Tho rod $o$ and brake $p \mathrm{P}$, in combination with a let-off meehanism, operated by the strain of the yarn, substantially as described.
7. The mechanism for throwing back the $\operatorname{rod} n$ or rod $o$, to free the yarn beam, substantially as de scribed.

73,400.-William Snodgrass, Cold Spring, Wis.-Water Wheel.-January 14, 1868.-The floass are formed in two sections, the inner one being jointed to tho other, and opening to allow the escapo of air when the floats are cntering or leaving tho water. The edge of each float has a flexible valvo which packs against the seroll. The sides of the rim are made tight by the segments whieh are foreed out by spriugs, whose action is adjnsted by set serews.

Claim.-The float $D$, with its valves a aud $c$, the scroll B , and the segment $f$, with the sliding piece $g$, the spring $h$, and serew $i$, when arranged and combined, substantially as described and for tho purposes set forth.

73,401.-Ephraim Soter, Now York, N. Y. Mechanical Movement. Jamnary 14, 1868. -One of the engaging spur-wheels is rigidly attached to the connecting rod and the other to the main shaft. Tho wheels being of equal diameter, the shaft will have two rotations to each revolutiou of the motive wheel.

Clain.-A crauk, When composed of the gearwheels $B$ and $D$, or their equivalents, and of tho plates $C$ and pin $a$, all made substantially as described, and operating so that the veloeity of the shaft is increased without increasing the nnmber of rovolutions of the crank.

93,402.-N. B. Sornborger, Nortlampton, Mass.-Combined Catheter and Syringe.-January 14, 1868. -The syringe nozzle consists of a catheter tube. An adjustablo collar regulates the insortion of the tube.

Claim.-1. The slide or collar on the body to a syringe, in combination with a collar in the discharge -tnbe, when the two are conneeted together and arrauged for operation substantially is and for the pnrpose described.
2. The loops applicd to the cylinder of a syringe
for reeciving fastening straps, substantially as described.

93,403.-Isaac C. Spear, New Wilmington, Pa. -Horse Hay Fork.-January 14, 1868. -The claw tines are held together by toggle levers, which are tripped by a cord.
Claim.-In connection with the curved lines of a hay elevator, a locking derice, consisting of arms be, link $d$, aud detaching lever $f$, or its meehanical equivalent, construeted and arranged snbstantially as and for the purposes hereinbefore set forth.
93,404.-E. M. Steveas, Boston, Mass.-Wash Bocrd.-January 14, 1868. -The ribs are formed of India rubber und fibrous material, vuleanized after forming.

Claim.-A corrugated wash board, when made of India-rubber mixed with fibrous material, and shaped and ruleanized in the mold, substantially as deseribed.

93,405.-W. X. Stevens, Waterford, N. I.-Skate.-January 14, 1868.-Explained by the claims and illustration.
Claim.-1. Forming the sole and blade of a skate from one continnous picee or sheet of metal by first slitting or cutting, and then bending the said metal sheet, substantially in the manner and for the purposes herein shown and deseribed.
2. A combined skate sole and blade, formed from a continuous sheet of metal, as deseribed, and corrugated or indented at the angle formed by the sole with the blade, so as to form braces for stiffening the said parts, substantially as shown and set forth.
3. The combination, with a skate of ordimary or suitable construction, of the herein deseribed spring elateh for grasping the boot sole, the same being pivoted to the forward part of the skate, so as to extend diagonally across the sole of the same, under the arrangement and for operation as shown and set forth.
4. The combination, with a skate of ordinary or suitable construction, having a stationary jaw or equivalent bearing for the rear of the boot heel of the pivoted eatch and adjustable set-serem, for holding the said boot heel to the skate, under the arrangement and for operation as herein shown and set forth.
73,406.-F. U. Stokes, Cincinnati, Ohio.-Checl-Rein Hook- January 14, 1868; antedated Jannary 2, 1868.-The drop picee is piroted to the rear end of the cheek hook, and prevents the eseape of the rein.

Claim.-The drop pieec C, secured to the point of the check hook as shomn at $e$, for the purpose of closing the check hook and preventing the rein getting ont.
73, 107.-TV. P. Thomas, Catasauqua, Pa.-Annealing Furnace.-January 14, 1868.-Explained by the clain and illustration.
Claim. - The rings F, placed between and supporting the ear wheels, and fitting snugly within the furnace A, whereby the heat is prevented from reaching the chilled tread of the wheel, while the center is being annealed by intense heat, the whole supported upon the offset $a$ in the furnaee, as herein set forth for the purpose specified.

73,408-Jonathan Tidd, Woburn, Mass.-Machine for Softening Leather and Hides.-Jannary 14, 1868. -The bed has a series of depressions, and the cross-head a scries of matehing projections, between which the leather is passed. The cross-head has vertical reciprocation from two cranks ou a rotating shaft beneath.

Claim.-1. A leather-softening machine, construeted and irrranged to operate substantially as deseribed for the purpose speeified.
2. The perforated bed $B$, or its equivalent, and the pins $e$, or their equivalents, with the vielding cross-head G and the supporting beam K, for the purpose and substantially as deseribed.
3. The shaft H, wheels or eranks I, pitmen $k$ and rods $m$, combined with the cross-head $G$, in the manner and for the purpose substantially as deseribed.
4. The nuts $d$ and $e$ and springs $g$, combined with
the rods $m$ and the eross-head $G$, for the purpose and substantially as deseribed.

73,403.-Howard Tildex, Boston, Mass.-Lamp.-January 14, 1868. - The colle rests on a perforated annilus, which is in turn supported hy the closely perforated base of the burner. The chimuey is supported by a ring and curved spring wires attached thereto.

Claim.-1. The openings $i$, in the flange $\mathbb{C}$, arranged in relation to the eap 13 , in the manuer and for the purposes specified,
2. The ring $D$, when provided with the sustaining wires $e$ e, and combined with the base $A$, substantially as and to operatc as set forth.
3. The base $A$, the ring $D$, and the eap $B$, when arranged with relation to each other substantially as deseribed.
4. The ring $j$, arranged upon and used to lift the eap B by, as described and set forth.

93,410.-Tohn P. Troxell, Haneock, Md.Sausage Stueffer-January 14, 1868.-Explained by the claim and illustration.

Claim.-The sausage-stnffing machine herein deseribed, consisting of the hinged cyliuders $\mathrm{C} \mathrm{C}^{\prime}$, rack bar's $H H^{\prime}$, provided with disks I I $I^{\prime}$, situated as deseribed, and operated by wheels E F G G', so that while one eylinder is filling the easing, the other cylinder may be filled with meat, and prepared to fill its casing as soon as the first eylinder has done its work, and vice versa, substantially as deseribed.

73,411.-Henry Warner, Newark, N. J.-Machine for Sizing Hat J3odies.-January 14, 1868.The table has a simple horizontal reciproeation, and the platen an oseillatory as well as a reciprocating motiou, being rigilly attached to the pitmen. Jets of hot water or stean may be applied to the bat from pipes which end in a finely perforated box.

Claim.-1. The combination of the reeiprocating rocking plateu or board C, platen or board D, and connceting rods $z y$, with the crank shaft $B$, as and for the purpose deseribed.
2. The injectors $G$ and $H$, and the distribnter w, when used in combination with the boards C and 1), substantially as shown.
3. The expressing rollers $F$ and the weights I, when combined with the deseribed sizing machine, in the manuer and for the purpose specified.

73,412.-William H. Warien, Woreester, Mass. - Crank Planer. - Jamary 14, 1868. - The wrist pin of the connecting rod is fitod in a block sliding radially in a disk, said movement being accomplished by a serew-rod turned by a bevel wheel upon a shaft turning within the tubular disk shaft; the axial shaft is caused to rotate in cither direetion by a eluteh.
Claim.-1. The combination, with a crank planer or likc machine, of meelianism substantially as herein described, for regulating the throw of the erank without stopping or interrupting the continuous operation of the machine, as shown and set forth.
2. The combination, with gear F and frec-plate E , of the tubular shaft $g$, central shaft 3,. sererv shaft 8 , and gears 4, $h, 6$, and 7 , substantially as and for the purposes set forth.
3. The combination, with the shaft 2 and gear 1 , of the loose gear 5 and pulley 12 , or its meehanical equivalcut, operating substantially in the manner and for the purposes herein shown and described.
4. The combination, with gears 1 and 5 , and pulley 12, mounted on the shaft 2, as described, of gears 4 and $h$, and their respective shafts, arranged for operation substantially as and for the purposes herein shown and speeificd.
5. The combination, with the frietion pulley 12 and beveled pin 13 , of the lever II and shoulder 15 , substantially as and for the purposes set forth.

173,418.-Joseph R. Webster, Boston, Mass.Straining Wood Saws.-January 14, 1868.-The stay bar is comnected to one side picee, and has a pin engaging the lever hinged to the other side picee, and adjusted by a scrow and thumb nat.

Olaim.-In combination with a hand-saw frame, the lever $i$, and mechanism by which it is connected with the frame, and is operated to strain the saw blade, substautially as set forth.

9:3, 414.-RoLinN C. WheciI and Joseph B. Miller, Buffalo, N. Y.-Tube Well.-Jannary 14, 1868.-Explained by the claim and illustration.

Claim. -The imperforated external tube D, connected with the perforated internal tube A by means of the inner collar $c$ and the outer collar $b$, so that the tube D comes in contact with an external shoulder of a conical plag, $B$, of the tube $A$, during the operation of forming the enlarged water chamber $a$, and rests upon a spring.eateh when the tube-well is adjusted for operation, substantially in the manner and for the purpose described.

193,415.-GEORGE WHERLER, Chicago, Ill.Lantern. Jannary 14, 1868. - The draught of air through the bottom of the lamp is increased by a frusto-conical upward extension of the globe.

Claim.-1. The arrangement of the conical tube or chimney D with the globe of a lantern, substantially as and for the purposes specified.
2. Providing said chimney $D$ with one or more diaphragms E , arranged and operating substautially as and for the purposes set forth.
3. In combination with the said chimney D and the openings $b b$ in the lantern top, the arrangement of the perforated disk $c$, in the manner and for the purposes described.
4. The arrangement of the draught openings $\alpha b$ in the lantern top with the chimney D , operating substantially as described.

73, 416.-HIRAM W. Whita, Olney, Hl.-Desk and Seat.-January 14, 1868. The desks and seats are supported on $X$-frames, whose legs are pivoted at their intersection. The intersections of the end frames arc connected by a bar, and their upper ends by bars, by which they are connected to the top. One of these upper bars is unchangeably pivoted to the top, and the other occupies notehes therein, by which it is adjusted to reg.ulate the height of the Wesk. The adjustment devices of the seat are similar, and its legs are piroted to one desk at the lower ends of cach.

Claim.-1. The folding legs C C $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, in combination with the notches $1,2,3,4$, and locking-plates F F , or their cquivalents, as a means for adjusting desks, tables, and chairs vertically, substantially as described.
2. The blocks H H and rod I, in combination with a desk $\mathrm{A}, \mathrm{C} \mathrm{C}^{\prime}$, and chair $\mathrm{D}, \mathrm{C}^{\prime}$, snbstantially as and for the purpose specified.
$73,41 \%$ - W. N. Whitelis Jerone Fassler, and O. S. Kelxy, Springfield, Ohio.-Cider Mill.Jannary 14, 1868.-Explained by the claims and illustration.

Claim.-1. Constructing the griuding box in two parts, substantially as set forth, and attaching the parts, surings of the crushing rollers to the upper part, as aud for the pnrpose set forth.
2. Mounting the journals of the grinding rollcrs $V$ V in boxes, which are attached to the lower side of the sidewise-projecting flange hy screw bolts, and so that the said boxes may be slightly adjustable as to their distance from each other, as set forth and described.
3. The construction of the press frame with the press beam $I$, the stay rods $J J$, the firont posts A A, the girder $B$, the tie rods $\Pi \Pi$, and the angle irons II, as set forth.
4. The two ribbed erusling rollers $S$ S, and the two grinding rollers $\nabla \mathrm{V}$, dircetly beneath them and runging at different speeds, combined and arranged in a metallic grinding box, constructed in two parts, and the bearings of oue set of rollers connected to one of said parts, and the bearings of the other set connected to the other of said parts.

73,418.-James P. Wigal, Henderson, Ky.A nimal Trap.-January 14, 1868. -The distnrbance of the bait moves the catch lever, which allows the spring shaft a semi-rotation and closes the angular spring shaft a semi-rotation and closes the angular
chamber allows a further semi-rotation of the shaft, and resets the trap.

Claim.-1. The combination of the coil spring H , crank $G$, lerer catches $I$ and $J$, spiral spring L , or its equivalent, connecting rods E and F , and arm D, with ench other and with the wings $B$ and $C$, substantially as herein shown and described, aud for the purpose set forth.
2. The combination of the pivoted platform M, arm N , connecting rod or wire $O$, elbow lever P , and bar R , with each other and with the lever cateh $J$, for the purpose of springing the trap, substantially as herein shown and deseribed.
3. The combination of the arm $T$ and conneeting rod or wire U with the drop gate $S$ and lever cateh I, for the purpose of resetting the trap, substantially as herein shown and described.
4. The combination of the curved arm W with the wing $B$ and drop gate $V$, substantially as herein shown and described, and for the purpose set forth.
v:3, $1 \mathbf{1 9}$.-EDWIN WILEY, Brooklyn, N. Y.Manufacture of Pens. - Jannary 14, 1868. - The point and heel blanks are cut transversely fiom two strips of gold and silver respectively. The pieces are then united by solder, rolled to form, and fill ished.

Claim.-In the manufaeture of pens, eomposed of both gold and silver, and known as the Union Pen, giving the seam between the two metals an extra thiekness by means of soldor, or otherwiso, substantially as and for the purpose described.
'g3,420. - John Will, Bryan, Ohio. - Worm Fence and Pen.-January 14, 1868.-Explained by the claims and illustration.
Claim.-l. The worm-fence, constrncted as doscribed, whereby pens or yards can be formed by interloeking from either side, as herein showll and described.
2. The sections, provided with notehes at one end in the under part of each board, and at the other end in the top part of each board, the notches in the nnder side of one section engaging with the npper notches of the other section, and held in position by means of the cleats upon each side of the boards, near each end, all constructed and arranged as heroin set forth, for the purpose specified.

73,421.-Joun B. Wilson, New York, N. Y.-Veneer.-January 14, 1868.-The vencer is cut in corrugated form to increase the "figure" in a veneer cut from straight-grained lumber.

Claim.-The reneer produced by a corrugated or zigzag cut, substantially in the manner as described.

73,422.-Lewis Wilson, Ovid, N. K.-Pipe Coupling.-January 14, 1868.-The annular packingpiece of metal is conoidal in radial section, to allow the sections of pipe to be slightly inclined without opening the joint. The gasket enters recesses in the ends of the sections.
Claim.-The double convex metal Hng $b$, interposed betwoen the ends of pipes A A, and fitted into recesses c c formed thercin, and retained in position by extermal pressure, applied through seren bolts a a, or their equivalcnts, substantially in tho manner and for the parpose described.

193,423.-E. K. Wisell, Warren, Ohio- - Woodturning Lathe.-January 14, 1868.-Improvement on his patent Mrarch 3,1863 . The carriage is atjustably hinged to tho adjustable slide rod, and carries upon the free side, centers for a pattern which runs upon a roller, whose periphery agrees with the line described by the revolving cutters. The blanks are supported on centers and rotated simultaneously with the pattern. The partial and -intermitting rotary movement is eaused at the ends of the strokes by a pawl upon a bell-crank lever, which receives motion from inclined projections on the main frame.

Claim.-The reeiproeating and vibrating frame $H$, piroted to the adjustable rod K , and carrying the adjustable live and dead centers $\mathbf{M} \mathbf{M}^{\prime}$, arranged concentrically with the axis of the revolving eutter head $B$, and operating substantially as and for the purposo described.

73,424.-William F. Goodwn. East New York, assignor to Samuel Johnston, Syracuse, N. Y. Marvester.-January 14, 1868. - The drum turns with the drive wheel and its axle, and engages the planet wheel upon an arm attached to a sleeve turning on the axle. The planet wheel engages a gear wheel turning upon the sloeve and having an arm carrying a planet wheel engaging the drum gear. This latter planet wheel drives the bevel wheel, through which motion is communicated to the cutter bar.

Claim.-1. The arrangement of pinions II $I^{\prime}$, and the transmitting wheels on arms $\mathrm{F}^{\prime \prime}$, on and around the axle and within drum E, whereby the required number of rerolutions is obtained, substantially as described.
2. 'The spur' and bevel pinions $H H^{\prime}$ and $I$, monnted on the tnbular sleere or axle, and operated by means of the drum and transmitting wheels, substantially as described.
3. The secondary arm $F^{\prime}$, carrying the transmit ting wheel, gearing with the drum and secondary pinion $\mathrm{HI}^{\prime}$, for the purpose set forth.

73,425.-NELSON W. Green, Cortland, N.Y.Construeting Artesian Wells.-January 14, 1868.
Claim-The herein described process of sinking wells, where no rock is to be penetrated, riz: by driving or forcing down a rod to and into the water under ground, and withdrawing it, and inserting a tube in its place to draw the water through, substantially as herein described.
-3,126.-JAMES D. McBRIDE, Mansfield, Ohio. -Combined Trough and Double Rack for Feeding Sheep, Cattle and Horses.-January 14, 1868.-The rack is hinged to one side of the trough so as to turu down for filling the latter.

Claim.-1. The box-trough $A$, constructed subdantially as described, and provided with the rack T and the smpplementary tronghs formed by the linged boards $13 B$, as and for the purpose lierein set fortll
2. The rack, composed of the bars $D \mathrm{D}$ and $\mathrm{D}^{\prime}$ and bars E , forming a double rack, and hinged cover for the box $\bar{A}$, when used in combination with sail box, substantially as set forth.
3. The graduated end bars $P P$, used in combination with the bar $D^{\prime}$, for enlarging or contracting the upper and lower racks, as and for the purpose set forth.
\%3,427.-Stephen M. Allen, Woburn, Mass.Artificial Isecther Belting.-January 21, 1868.-Improrement on his pafent March 13, 1866.-Skivings or other scraps of leather are macerated in water to separate the tannin, aud softened in solution of lime. Blood may be mixed therewith to render it impervious to moisture. The pulped leather may be ruu off in a papor inachine.

Claim.-1. A new artificial leather belting and banding for driving machinery, made by combining tannerl and untanned scraps of skins or hides, after preparation, with vegetable fiber, pulperl and r'un off into sheets, substantially in the manner and for the purposes horein set forth.
2. As a new article of manufacture, belting and banding for driving machinery, made by combining tannet and untanned animal fiber with regetable fiber, and by the further combination of bullock's blood or fibrine, the same being manufactured substantially as and for the purposes above described.

73, 128.-C. Bagoerman and John Green, St. Louis, Mo.-Mortising Machine.-January 21, 1868. - The holdors operate to forco the sash rail to be operated upon against tho fixed abutment. The tool arbors are connected to a sliding framo. The holder fiame and the tool frame have anti-friction rollers throngh which they are operated by cam bars on the sides of a wheel. The tools cut a mortise into ono side of the rail, and then finish the mortise from the other side; the rail is then released by retraction of the liolders.

Claim.-The combination of the sliding chisel arbors $\mathrm{C} \mathrm{C}^{\prime}$, the sliding holders E , the cam rods $d$, the connecting rods $d^{1}$, the cam-wheel D, and tho cams E, constructed and operating substantially as described.
73.1213.-H. Emile Batlliene, Hoboken, N.J.assighor to Americin Fibre Co.-Manufacture of Paper Pulp.-January 21, 1868. - Improvement on the patent of A. S. Lyman, Angust 3, 1858.-The material, directly after disintegration by Lyman's process, is rubberl, crushed, or mound in wat (er, and the usual boiling dispensed with.

Olaim.-A fiber for the manufacturo of paper \&c., produced from disintegrated bamboo, \&c., sub stantially as described.

93,430.-Pinneilas Bali. Worcester, Mass.Water Ifeter.-Tannary 21, 1868. -The cylinder has an onter cast-iron shell and an inner lining of slieet metal pipe; the space betroen the shell aud lining is filled in with cement. The piston rod slides in the hollow piston, and is acted upon in the forward movement of the latter by a temper screw. The rod is comected to a rack engasing a sogmental gear operating the conical valve to clanire the course of water from one end of the cylinder to the other. The onter ond of the piston rod has rarlial pivoted levers, whose onter eads are commected to springs, so as to quickly complete the oscillating movement of the valvo when past tho center.

Claim.-1. Tho lollow piston $P$, in combinadion with the ralye, bar, or rod $I$, arranged to slide within said piston, substantially as and for the purposes set forth.
2. The sprimes S S, or other equivalont device, compressed by the power acting upon the piston within the cylinder, so that when they roach the central line of equipoise, they react and releaso the Talve, substantially as set forth.
3. The combination of the springs and ralve bar, or rod with the valve and gearing, or racks for actuating the same, under such an arrangement that the compression of said springs sball tako place partially or wholly during the time the valre remains at rest, substantially as set forth.
4. 'The arrangement of the adjusting rol $f$ within the valve, bar, or rod T, whereby the learth of the stroke of the piston is readily adjusted, substantially as set forth.
5. The combination of the angular valve $V$ and ports formed in the cyliuder caso, as described, of the piston, valye rod, springs, and gearing for actuating said valve, substantially as and for the purposes set forth.
gis, 431.-Enciar B. Beach, West Meriden, Conn.-Serew Cutting Tool.-Jauuary 21, 1868.-The tool has a doretail lib upon one side, which is ad justable in a dovetail groore in the shank. One side of the groove consists of a plate which is clamped upon the rib by a set screw.

Claim. - Tho cntter $\dot{\mu}$, provided with the flange $B$, attached to one side of a sliank, substantially in the manner herein set forth.

73,432.-Whluam H. Bexham, New Haveu Comm.-Rein Snap.-Janmary 21, 1868.-The device is placed on a rein to secure a horso to the hitching post. It is so arranged that a strain of tho horse upon it is exerted on the fixed hooks. In mhooking, the casing is slipped forward, which contracts the spring and releases the snap hook from tho locking piece.

Claim.-1. The spring snap described, having a lever or arm C , actuated by a spring E , and liberated by pulling on the rein, adapted to serve in the manner and for tho purposo herein set forth
2. In connection.with the above, tho employment of one or more fixed hooks $B^{1} \mathrm{~B}^{2}$, anranced relatively to the casing B , arm C , spring E , and tho locking piece D, substantially the manner and for the purpose herein set forth.
3. In combination with the driving rein or its equivalent, the employment of the spring suap, substautially of the character herein represented, and adapted to be liberated by the movement of tho rein or its equivalent, substantially in tho manner and for the purpose set forth herein.

73,133.-John K. Caldwell, Allogheny City Pa.-Brick Drying.Apparatus.-January 21, 1868.Cold air is admitted into or forced through the pipe coiled over tho furnace, the air discharging into the
drying ehamber. Tho trueks sustaining the brieks or lumber are run in upon tracks laid over the furnaces. Spaces over the mouthis of the farmace have communication with the onter air thromgh registers, and communieate with the drying chamber on the inner side.

Claim.-1. The arrangement of a coil of pipe $i$ orer the fire spaee of the furnace of a drying house or oven, substantially as and for the purposes hereinbefore set forth.
2. A furnace so constructed, with double walls, as to have a chamber $m$, sueh chamber boing furnished with registers $n$, or other equivalont deviee for admitting air, and opening, by any suitable apertnes, into the drying honse or oven, snlostantially as and for the purposes heroinbefore set forth.
3. "The ventilators $\varnothing$, so arranged, relative to the hot-air chamber $m$ and coil or coils of pipe $i$, as to secure a curront or draught of air therofrom throngh the flrying house or oven, substantially as and for the purposes hereinbefore set forth.
 Syracuse, N. Y.-Compound for Pavements. Tantary 21, 1868.-Composed of gravel, 1 bushel ; coal ashes, $\frac{1}{4}$ bushel; ground charcoal, $\frac{1}{8}$ bushel ; ground plaster, $\frac{1}{8}$ bushel; east-iron borings, 5 pounds; coal tar, 3 gallons.
dlaim.-The within compound of gravel, coalashes, ground chareoal, grouud plaster, cast-iron filings or borings, and coal tar, as and for the purpose set forth.

73, 135.-SETH E. Clapr, Cambridge, assignor to himself and George B. Clale, Boston, Mass. Cork Pull.-January 21,1868. -The grappling prongs are contracted upon the eork by the sliding ferrule.

Claim.-The combination of the spear $13 B^{\prime}$ with the sleeve $C$ and the grappling prongs $H^{\prime} H^{\prime \prime}$, substantially as described, and for the purpose set forth.

73,436.-George H. Clarke, Brooklyn, N. Y., assiguor to the Salamander Grate Bar Co., New York, N. Y.-Grate Bar for Furnaces.-January 21, 1868.- Improvemont on patent of Samuel Vansyekle, October 19, 1855. -The object is to allow the removal of any bar without the previous removal of those whieh were laid subsequently thereto. Tho bars are prevented from sliding by the transverse interloeking bar, and upon its withdrawal any one bar may be slipped forward, so that the connection of the interlocking side projeetions will bo broken.

Claim.-The arrangoment of the locking rod B and recess $C$, in combination with the interlocking bar A, when constructed and operating as set forth and specified.

J3, 4 3\%.-William T Clement, Northampton, Mass.-Manufaeture of Hoes.-January 21, 1868.The eye and blado are made separately, cach having a darrow lip lapping orer a portion of the other, and forming a provision for welding the parts together.

Claim.--The within-described method of mannfacturing hoes, consisting in the produetion of wrought-iron cyes $B B^{\prime}$, and previously-prepared blades $A A^{\prime}$, and in melding them together in the manner substantially as herein set forth.
y3,438.-Winliam H. Cooper and George Gregory, New Haren, Conn., assignors to Law. rexce, Bradlet, and Pardee, samo place.-Carriage Perch.-January 21, 1868.-The perch is jointed to the rear part of the frame to which the upper section of the fifth wheel is attached, the joint bending vertically.

Claim.-The attachment of the perch D to the body forward of the wheel-heuse, in the manner substantially as herein set forth.
(98, $\mathbf{1 2 3 9}$ - -ROBERT Avis Coreland, Baltimore, Ma.-Device for Leaky Boiler Tubes.-January 21, 1858. - The sides of the nut are rabbeted together and are expanded by the frusto-conical bolt by which the flange is held to the surface of the tubesheet. The inturned odge of the flange has an annular packing groore.

Claim.-The flange $A$, serew boit C , and expanding nut B, constructed and arrauged substantially as horein set forth.
3.3,449.-Thomas B. De Forest and. Thomas S. Gilbert, Birmingham, Conn.-Corset Spring.Jamuary 21, 1868.- Lach front spring cousists of trpo or more namow strips of steel, held edge to edge by the clasps whieh surround them.
Claim. - The herein-described corset steel, consisting of two or more wires or steels, united and soeured in position by the elasps, in the manner speeified, as an article of manufacture.

等3, 414.-F. H. DeTRAY, Odin, Ill.-Ditehing and Grading Machine. - Jannary 21, 1868. -The earth is earried from the elevating slide by an endless apron, and deposited at a distance from the diteh.

Claim.-1. The diteler or plow B $b$, in combination with the inelined way or dirt-slide $B^{1}$, as deseriberl, and for the purpose set forth.
2. The conreyer $C$, in eombination with the diteher $B b$ and slide $B^{1}$, as and for the purpose set forth and deseribed.
3. The stand $e^{3}$, wheel $e^{4}$, and the out-hangers $e^{2}$, when combined and arranger in an adjustable manner, so as to regulate the rertieal height of the ont end of the picees $e^{2}$, as deseribed, and for the purpose set forti.

193,4.4.-JOIN C. Fish, Barnstable, Mass.Tree Feeding Tube.-Tanuary 21, 1868.-The tube has a eonieal point and side-slots for the outflow of fertilizing liquid poured into its top when it is driven into the earth.

Claim.-A trec-feeding tube, having a construction substantially as set forth.
:8,443.-SAMUEL W. Fowler, Brooklyn, N. Y. -Lamp.-Tanuary 21, 1868.-The chimuey-base has two outward projections whieh enter the cireular groove and are secured by turning therein.

Claim. - The construction of the top of the burner, With its eollar or flange C , cireular groove E , perforations $G$ around its lower side, and grooves D D on eael side, when used in eombination with the flange $J$ of the chimney $H$, as herein deseribed, and for the purposes set forth.

73, 44.-Daniel D. Gitt, Arendtstille, Pa.-Rumning-Gear for Vehieles.-Janaary 21, 1868.

Claim.-1. Interposing a joint between the spring and the body or axle of a vehiele, either at the front or rear end thereof, said joint being so eonstrueted as will allow one of the axles to vibrate vertically and independently of the body or bed of the vehicle, snbstantially as described.
2. Conneeting the eoupling-bar or reach of a vehiele at one end, by means of a swivel-joint, so as to prevent said reach from being twisted or strained by the motions of the axles, substantially as deseribed.
3. The combination of a joint-pin $f$, placed betreen one of the axles and the body of a velicle, with a reach, whieh is connected at one end by a swirel-joint, substantially as deseribed.
4. The application of anti-frietion rollers $e e$, to the sliders $b b^{\prime}$, sulbstantially as described.
5. The sectional head-block $\mathbf{E}$, construeted with a recess in it for receiving a head and neek, whieh is formed on one end of the reaeh, substantially as deseribed.
6. The construction of plates $F$ and $G$, substantially as deseribed, so as to form With pin $f$ a loose pirotal connection between the axle and body of a vehicle.
7. The bearing $h$, rising from slider $b^{\prime}$, and adapted to serve the purpose deseribed.
g. $445 .-$ Fratcis M. Harris, Winnamac, Ind. -Washing Machine.-January 21, 1868.-The fixed and moving boards hare segmental series of rubbing rollers whieh are kept in close contact by Iudia-mbber straps.

Claim.-1. The combination, in a washing-maehine sueh as deseribed with the stationary wash-board of the swinging boards, and spring bands of rnleanized rubber applied to the jourmals of said swinging boards,

## in the manmer and for the purposes shown and speei-

 fied.2. The combination, with the stationary washboard, swinging board, and springs for induciug the pressure of the latter, of the wash-tub, with its peculiarly-shaped bottom, arranged with relation to the said wash-boards, substantially as herein shown and set forth.

33,446.-T. T. Horner, Buffalo, N. Y.-TFell Tibe.-January 21, 1868.-After insertion the inner or main tube is drawn up and turned so that the cross-bar of the outer tube enters the side notehes of the slots, and the inner tube is sustained thereby. The outer tube is perforated.

Claim.-The combination of the outer tule $B$, provided with the eross-bar 10 , with the inner tube C, prorided with the slots $c c$ and recesses $d$ d at the bottom thereof, coustrueted and arranged in the manner and for the purposes set forth.

73,447.-B. B. Hotcuriss, New Yorli, N. Y.Rifling Ordnance.-January 21, 18b8.-The reliering groores are made in both the lands and rifle groores, but do not extend back to the expansire part of the shell. They miklen as they extend forward, and are intended to decrease the firietion between the projectile and the gun.

Glaim.-The reliering groores C , for the purpose herein set forth.
73.449.—TAMes M. Keep, New Tork, N. X.Spring Pen Rack. - January'21, 1808; antelated July 22, 186\%.-The narrow flexible ribbon is attached by staples and brads to a stand, and is bent into a suitable form to hold the pens clear of the table.

Olaim.-1. A spring pen rack, when the sprines are made of rubber, gutta-pereha, or of any of their compouuds, or of sleet metal, the same being of narrow strips or sheets, and of one or more picees, When bent, curred, and operating substantially as herein deseribed.
2. The method of attaching the springs of penracks to their bed pieces, substantially as lerein deseribed.

73,119.-Levi Kerier, Catamissa, Pa.-Calculatiny Machine.-January 21, 1868 ; antedated Janu-
 99 and the smaller one from 1 to 100, both inclusive. From the serew-shaft upon which they are mounted, a longitudinal section is remored and numbered on the spaces agrecing with the turns of the thread from 0 to 30 . The small disk turns on the serew and is commeeted to the larger one which does not. In using, the disks start from 0 on the serew-rod, aud 1 on the small disk at 0 on the larger. In adding, the point on the smaller disk standing at 0 on the larger one is in every ease turned formard to the number. on the larger disk equiralent to the number added. The hundreds are indlicated on the serew, and the units and tens on the part of the smaller disk in conjunction with 0 on the larger one.

Claim. - The two disks C and D, graduated serewshaft $B$, and guide-bar $E$, when arranged, combined, and operated as herein deseribed and for the purposes set forth.

73,450.-Calvin Kline, Brooklyn, assignor to himself and R. L. Peabody, New York, N. I.Stuffing Box for Valve Stems, de.-January 21, 1868. - The cap has an oil eup around the stem which has a collar kept in tight contact with a seat on the lower side of the eap by a spring, which may be compressed to allor entrance ot oil.

Cidim. - The collar $\mathrm{C}^{\prime}$, on the rotating or partiallyrotating stem $c$, arranged as represented relatively to the easing $A$, spring $D$, ancl cap $E$, so as to allow of lubrication, all as and for the purposes herein set forth.

83,451.-Henry O. Lothror, Milford, Miss., assignor to himself, Crawford Pierce, and Joserii R. Pierces, same place.-Coating Heel and Toe Irons for Boots and Shoes:-January 21, 1868.

Claim. - As a new article of manufacture, a heel or toe iron, coated with tin or other anti-corrosive metal, substantially as and for the purposes herein shown and set forth.
13.452.-William G. Merrell, Auburn, N. Y assignor to himsclí and Crreves Wheeler. Jr:Marvester Rake. Jamuary 21, 1868. -Therake malies a portion of the eireuit in the same path with the real, and at the end of each cirenit is thrown ont of aetion, and so remains until thrown into aetion by a lerer operated by the drirer and aetuating a elutch. The rake passes between the arms of the reel.

Claim.-1. In combination with the hollow eolumn supporting the rerolving and stationary hubs, the jointed shatt D that passes up through it, and drires the reel, as and for the purpose deseribed.
2. In combiuation with the reel, and a rake that moves and operates in conjunction therewith. a clutching incehanism, and a citu ledge that operates substantially as and for the purpose (aseribed.
3. In combination with a reel whose axis of rotation is parallel to the cutting apparatus, adjustabic rertically in relation thereto, and is supported by one end only, a rake so arranged as to rerolve arontid the support of the reel, and be thrown into and out of aetion by a meehanism operating substantially as deseribed
4. A support for the rake and reel, so arranged that it may be mored about the driving genl axis for the purpose of adjusting the mac to the different inclinations of the platiorm, substantially as deseribed.

193,453.-Puincies Miles. New Tork, N. Y. assignor to Tmodokr Mace, same place.-Scusuge Stuffer.-January 21, 1868.

Claime-l. The swinging double piston, the one part sliding on the other, in combination with the hopper, contracted as and for the purposes set forth.
2. The elliptical groores or ribs $l$, in combination with the hopper and sliding and swinging piston, as and for the purposes set torth.
73.454.- William Hantley Miller, Philadelplia, Pa.-Piston Rod Paching.-January 21,18 Be $^{\text {P }}$ The tube is made in concentrie lavers saturated with a lubrieant.

Claim.-The above deseribed packing tube, tubes, layers, or cord, or their equirulent, substantially as shown, as a new article of manufacture.

73,45.5.-A. T. Murray and A.B. Mowtavi, Titusville, Pa.- Argand Lamp for: Burning I'etio. leum.-January 21, 1868. -The trick dosecnds into an ammular space in enmmmacation with the vil reservoir, and surrounded by an ammar space through which air passes downward and enters the lower end of a eentral tube supplying tir to the middle of the flame.
Claim.-1. The emplosment of the partition or flange $n$, or its equivalent, arranged with relation to the air passages $e$ und $l$, substantially as and for the purposes set forth.
2. The arrangement and combination of the disk $m$, pertorated casing $k_{i}$, and partition or flange $n$ mith the annular wiek tubes, substantially as and for the purposes set forth.
3. The general arrangement and combination of the flange $n$ and air-passages $e$ and 6 with the anmular mick tubes, substantially as and for the purpose's set forth.

- 3,456 - Alexander NaDow, Springfield Mass.-Steam Engine Piston, -January 21, 18ve. The steam passes throngh the piston ends into the annular space behind the packing rings, and operates on the valves within the head to prevent commmieation between this annular space and the exhanst end of the eylinder:

Claim.-The valve $g$, when used in eombination with the piston 13 and ports $k k^{\prime}$, substantially as deseribed.

73,457.-Oziel Nivison, Hector, N. Y.-Horse Ralie.-Jamary 21, 1868.-The turuing of the rake head to discharge the hay is performed by a stimup, assisted by a spring, and the head is adjustably pivoted to cause its weight to assist more or less in its turning, aecording to the weight of the article operated upon.

Claim.-1. The foot stirrup S, arranged in connection with the spring $G$, so that the operator can
thercby aid the spriug in unloading the rako, as doscribed.
2. The hinge plates $P$, connecting the staple bar $C$ and rake head $B$, and provided with a series of holes, in combination with the hinged rods L, so that the weight of the head thereon aids in unloading the rake, as set forth.
3. The combination of the spring $G$, rod E , provided with the foot stirrnp $S$, circular piece D, hinge plates P , pressure bar C , and head 13, arranged and operating substantially as and for the purposes set forth.

73,458.-Whlitam II. Noble, Bridgeport, Comn. -Apparatus for Preventing the Ourculio from A8cending Fruit Trees.-January 21, 1868.-Who hammer is connected to clockroriz, and is made to strike the trec or the trellis frame on which the vines are traned.

Claim.--The arrangement of a hammer, operating automatically, in such relative position to trees or vines that the blow of the hammer may communicate a jar thereto, substantially as and for the irpose horein set forth.
\%3,459.-M. Olmsted, Stamford, Conn.-Lubricating Bearings for MLachinery.-Jannary 21, 1868. Claim.-The lubricator receptacle C, provided with an opening or opeuings, said openings being closed with leather, or any other substance that will prodnce the intended effect, for the purpose set forth.

73,460.-Caleb Platsted, Kcrokee, Mich.Hay Raker and Loader.-January 21, 1868.-The upper arms of the elerator frume tnrn on bolts at thicir lower ends, and are raised by turning a winch shaft, having a pulley at each side of the frame, and connected by cords to rigid bars ext anding upward from the wheel framo. The rake is raised by cords attached to its head and coiling on similar pnlleys.

Clceim. -The standards P P in connection with rods $C^{\prime}$ and $S$, and with the pnlleys $I I$ and $J J$.
g3,461.-Louis Raymond, Rockland, Dcl.Making Barrels.-January 21, 1868. -The annular sections are rabbeted together and the heads rabbeted thereto.

Claim.-A keg or cask made of a series of wooden rings, put together with a glued break-joint, substantially in the manner and for the purpose set forth.

9:3,462.-JoHn Reist, Philadelphia, Pa.-Shoemaker's Trimming IKnife.-January 21, 1868.-The guard passes between the sole and upper, and prerents the cutting of the latter while trimming the edge of the solc.

Claim.-The slotted ghard D, fastened by screw $E$ to handle $B$, snbstantially as and for the purpose above described.
v:3,463.--E. D. Reynolds and O. B. Reyrolds, North Bridgewater, Mass.-Sced Sower.-Jamary 21. 1868. - The tilting board with the hopper attached is raised by the side projections npon the wheel. The opener spout and standard of the presser roller are hinged, so that they may be drawn from the ground by a connecting catch-bar.

Claim.-1. A seed sower, having the conlter hinged in such manner that it may be elevated and seenred in elevated position, substantially as and for the purpose set forth.
2. Bracing the coulter, when made with the above provision, by the brace or latch-bar o and its loeking device or mechanism, substantially as shown and described.
3. Applying the hopper or seed box to the tilting board, substantially as shown and deseribed.

93,464.-Nathan Richardson, Gloncester, Mass.-Bait or Meat Cutter.-Jannary 21, 1868.The stationary cutter bars are removable, and have plates internosed bchind them to compensate for wear in the cutters.

Claim.-The removable blocks or heads $c e$, containing the stationary cutters, and attached to or forming a part of the fruming, in combination with the adjustable strips $c$, placed between the blocks or
heads $c c$ and the framing, as and for the purpose described.

73, $465 .-$ Cithries Roberts, Lake Village, N. H.-Head Block for Saw Mill.-January 21, 1868. -The head rests of tho carriage ure so connected that they may bo moved simultancously by a single lever, or mary be disconnocted so as to be operated separately
Olaim.- The combination of the tubular shaft or shafts K with the other shaft or shafts $I L$, and the lever M, with its pawls, or their equiralent, constructed and operating substantially as and for tho purpose herein specified.
73.466.-Georam Sciott, New York, N. Y.-Mattress.-January 21, 1868.-The mattress has rectangular compartments filled with feathers to admit shaking up, but insure an even surface.
Claim.- A mattress, in which the space between the upper and nnder side of the ticking or case is divided up into boxes or cells by strips of cloth or similar material, attached at their edges to such ticking or caso, subitantially as and for the purposes specificd.

73,467.--Samuel J. Seely, New York, assignor to J. M. Brown, Brooklyn, N. Y.-Iron IRoll.January 21, 1868 ; antedated January 2, 1868.-The outer portion of the roll is in sections of cast iron, Fhich are attached to a polygonal central shaft of wrought iron. The polygonal sides are parallel with the axis, but inclined in a tangential direction, so that a lip is formed at each corner to support tho rolling straiu upon the sections.
Claim.-A roll for rolling iron, having a solid wrought iron arbor and a sectional cast irou surface, when constructed substantially in tho manner described, for the purpose set torth.
\%3,468.-Abrainam Smmerman, Glassboro, and J. S. Smmerman, Millville, N. J.-Ladder-Jannary 21, 1868.-The ladder is formed of jointed sections, which may be folded together or arranged as a self-snpporting ladder.
Claim.-The sections A B HK, in combination with hooks $g$ g $h h$, arms $m i$ and legs $c f$, all arranged to form a perfect self-bracing ladder, snbstantially in the manner describod.
73.469.-Andrew W. Smith, Dudleyville, Ala. -Fanning Mill.-Jannary 21, 1868.-The frame containing the riddles and screen has longitudinal motion from connection to a rock shaft beneath it. The vent of the hopper has a rotating agitator roller, with radial pins.
Claim.-The feeding roller $c^{1}$ with its projections, in combination with the pins $c^{3}$, slide board $c^{4}$ and hopper C , when arranged as described.
M3,47日.--T. S. SMTH, Boston, Mass.-Let-off for Looms.-January 21, 1868.-The whip-roll has an arm carrying a wedge-block, which slides between the jaws at one end of the clatch and causes the other end to act as a friction brake on the yarn roller.

Claim.-1. The double-arm clntch, constrneted, arranged, and operating substantially as described, When the grasp of the clutch is loosened by the pull or tension of the yarn, substantialiy as set forth.
2. The lerer $\mathrm{D} g$, in combination with the cluteh, when arranged and operating substantially as describer.
3. The combination of lever, clutch and spriag, substantially as and for the purposes described,
4. The combination of lever, wedge-block, clutch, and spring, substantially as and for the purposes described.
5. The combination of whip-roll, wed. $\cdot \mathrm{e}$-block, and cross-arm clutch, substantially as and for tho pur. poses described.

73,471.-Charles Stebbins, Orrego, N. T. Wagon Bolster.-January 21, 1868.-Rubber blocks are secured to the bolster and support a bar sliding on the standards and supporting the box.

Claim.--The application of tryo or more rubber springs to the bolsters of a buggy, lumber wagon,
eart, or any rehiele drawn or moved by eattle or horses, iu the manner and for the purpose abore deseribel
g3,4g2.-Jour TV. Storrs, Birmingham, Conn. -Stereoscope--January 21, 1868. - The eye shade is eomeeted to the frame by the bellows, by whielt the focal distanee is adjusted. The ease has provision for the insertion of the ordinary stiff views, and has riews upon a eontinuous seroll or ribbon, wound around rollers whieh are turned by hand.
Claim. -1 . The rolls $\mathrm{P}^{1} \mathrm{P}^{2}$ and the eonnceted seroll Q . tinted substantially in the manner and arranged to operate in eombination with stereoseopie views, substantially as and for the purpose herein speeified.
2. Arranging the seroll $Q$ to traverse diagonally so as to carry the tinted seroll nearer the pie. ture at the top than at the bottom, while the rolls $\mathrm{Pl}^{1}$ $P^{2}$ are equally near the pieture, substantially as shown in Fig. 4, for the purpose hercin set fort h.
3. The vertical rollers $G^{1} G^{2}$, earrving a series of transparent pietures joined as speeificed, in combination with a stereoseope, and arranged to operate the eonnceted seroll II, substnutially in the manner and for the purposes herein set forth.
4. Mounting the rollers $G^{1} G^{2}$ and eommeted seroll $H$ in frames $I^{3}$, adapted to be used in a stereoseope, substantially in the manner and for the purpose herein set forth.
5. Removing and exehanging the rolls $\mathrm{G}^{1} \mathrm{G}^{2}$ and the connected seroll II, wifhout disturbing the gearing, substantially as and for the purpose herein set forth.
g3, 473.-George Stieat, New York, N. Y.Oiled Fabric.-January 21, 1868.-The faee of the fabrie is singed by passing over a beated eylinder, so as to render it smooth for the applieation of the drying oil.
Claim.-The oiled fabrie specified, mado in the manner set forth, as a new artiele of manufacture.
73,474.-Eli Sweet, Whitney's Point, N. Y. assignor by tro deeds to T. W. Vricent, Enera Sifeet, and Beyjailin J. Jones. - Tongue for Lay Loading Machines.-January 21, 1868. The tongue is recessed longitudinally on its lower side to reecive a metallic rod, to which the double-tree and neekfoke are connceted. A spring eateh holds the bar in its rearmost position, and when the catel is raised the bar may be drawn forward.

Claim,-1. The sliding bar B, in combination with the tongne A, draught-bar e and spring eateh C, when arranged to operate substantially as and for the purpose set forth.
2. The slotted plate $a$, guard plate $c^{*}$ and spring cateh C, combined in relation with each other and with the sliding rod B and tongue A , substantially as and for the purpose speeified.
73, 495.-N. S. Thompson, Germantorm, Ohio.Animal Trap.—January 21,1868 . -The box top consists of two trap doors, whieh are weighted so as to return to position after having been spruag. The rat is eonfined to a passage over the free ends of the boterds, and in passing strays the hanging trigger, and trips the eateh spring by a eorl connection.
Claim. - The combination of the weighted doors $\mathrm{E} \mathrm{E}^{\prime}$, peudant P , spring-eatches $n s$, pulley and cord $m o$, trigger $j$, and ledges $e e$, arranged in relation to box A , guides C D, and the open trigger box $g h$, in the manner and for the purpose deseribed.

73,476.-Alban N. Towne, Chieago, Ill.-Expanding Felloes and Tightening Spoles.-January 21,1868 .-The thimbles receive the conical ends of the spokes, and are turned thereon to expand the rim through their action on the nuts which are sunk into the felloes.
Claim.-The combination of the revolring soeket, having a recess to receive the spoke, and a serew chased on its external surface, and the nut, with lugs for retaining it in place, inserted into the inner face of the felloe, and having an internal serew to reeeive the serew in the socket, the parts being arranged to operate substantially as and for the purpose set forth.

73,477.-A. N. Towne, Chieago, Ill.-Coal Box Stove.- January 21,1868 . The stove is supported ou a reetangular fuel receptacle.

Claim. - The arrangement of the stove C, flangel hearth plate $B$, and stationary fuel box $\Lambda$, said parts being respeetirely construeted, and the whole arranged for use, substantially as and for the purpose set forth.

73,478.-Whlliam K. Vandelaslice, Jr., San Francisco, Cal.-Cigar Holder.-Janua'y $21,1868$. The end of the eigar enters the frame and is piereed axially by the pointed suetion pipe.
Claim.-1. A cigar holder having the perforated pointed tube $b$ entering the center, and lying in the longitudinal axis of the eigar and month-piece, together with the supporting ring $c$ and wires $d d$, substantially as and for the purpose deseribed.
2. The adjustable point $e$, substantially as and for the purpose set forth.

73,479. - D. 'I. WARD, Cardington, Ohio. Chum.-January 21, 1868.-The amular piece is adjusted against the inside surfaee of the cylindrical churn and has pendent wings, against which the eream is dashed as it is throrrup by the dasher.

Claim.-l. The adjustable annular ring $F$, when composed of the ring $F$, made either in ono piece or in scetions, and the wings $G G$, with eoneave surfaces $b b$, the whole being used in the manner and for the purpose herein speeified.
2. The use of the dusher C , construeted as shown, in combination with the amular ring $F$, in the manner and for the purpose herein specitied.
3. The peeuliar arrangement and combination of the uprights $K \mathrm{~K}$, bottom P , and hoop Q , for the purpose of holdiug the ehurn in position, in the inull ner herein set forth.
4. The peeuliar arrangement and eombination of the chum A, annular ring $F$, dasher $C$, pulley $H$, belt I, and driving pulley $N$, with erank $O$ thereon, the several parts being urranged as and for the purpose herein specified.

73,430.-Seth Way, Laporte, Ind.-Gang Plow. -January 21, 1868. - The plows are raised tion the ground by conneetion to a windlass. The wheels are adjustable to regulate the depth of furrow, and so as to cause the arle to stand horizontal.
Claim.-1. The mode of supporting the weight by the tongue I, and of elovating. and lowering the plows D D by the axlo $B$, lever $\dot{G}$, windlass $F^{\text {S }}$, and eateh J, respectively, constructed and arranged substantially as set forth.
2. The combination of the axle $B$, lever $G$, windlass F , tongue I , and equalization doubletree H , respectively, constructed and arranged substantially as set forth.

73,481.-Hiram Wentwortif and V. B. Clairk, Ripon, Wis.-Lantern.-January 21, 1868; The lamp has a horizontal flange whieh rests against the flange at the bottom of the ease, and has an upper flange which rests upon the braekets and spring, which are attaeled to the ease.
Claim.-1. The spring F, as applied to lantern bottoms.
2. The bracket $G$, and manner of attaching it opposite to the spring F .
3. The arrangement of the spring $F$, so as to be operated both above and below the flange $J$, at $L$ and K.
4. The guard E.
5. The flange C, on oil pot B.
6. The projection D, at the top of the oil pot B.
7. The arrangement of the different parts, substan. tially as deseribed, and for the purposes speeilied.

73,482.-Jamrs R. Woodworth, Nunda, N. Y. -Dcvice for Pulling Hop Poles.-January 21, 1868. The fulerum disk is eonnected by rods to arms upon the jaw shafts, and the pressure on the fulernm brings the jaws upon the pole. When the lever is raised the weight of the fulcrum reopens the jaws.

Claim.-The jaws B B, fulerum F, joint G, rods E E, in eombination with the handle or lever A, constructed substantially in the manner herein shown and deseribed.
m3, 483.-Minny Wrigur, Saco, assignor to James R. Chari, Biddeford, Me.-Boot-Crimp.January 21, 1868.- To the usual form is udded the back bar, having inclines cast thercon. A straining' bar incloses the other bar on three sides, and is held by the screw. The bur is operated by the serew to force it outward and downward to crimp the boot front.

Claim.-1. The combination and arrangement of the screw bolt S , the straining bar D , the serew $\mathrm{H}^{\prime}$, and the incline bar $B$, all made substantially as and for the purposes set forth.
2. The combination of the dovetail M, substantially as described and for the purpose set forth.
3. The flexible metallic comection $\mathrm{E}^{\prime}$ in combination with the lower straining bar E.

73,484.-MAYMEW ADAMS, Chilmark, Mass.Choek for Whale Boats.-January 21, 1868.-Part one is secured to the boat, and part two being piroted to the former, serves to throw a tangled part of the line out of the channel.

Claim.-The eonstruction and use of the chocks, consisting of the parts one and two, operating substantially as and for the purpose specified.

73,485.-SandFond Adams, Boston, Mass. Winnowing Mill.-January 21, 1868.-The rollers on which the feeding hopper and the shoe vibrate are fluted, to give a jarring motion and prevent eloggiug. Inclined slats are arranged at the tail of the shoe, which carry back the grain, but allow the blast to act upon the chaff.

Claim.-1. The fluted rolls H , for cither the hopper A or shoe $\mathcal{J}$ to vibrate upon, substantially as described and for the purpose set forth.
2. The shaft L and spring O, arranged substantially as described, to gire an additional motion to tho piroted end of the shoe $J$, substantially as and for the purposes set forth.
3. The slats $e$ e e, fastened on to the sides $S$ S, both swinging from the pivots $f$, substantially as and for the purpose set forth.
4. The combination of the hopper A, slide I, and screw $t$, as and for the purpose set forth.

73, 486.-JOHN ArBuckle, Jr., Allegheny City, Pa.—Roasted Coffee.-January 21, 1868.-The roasterl coffee is coated with a preparation composed of the following: Irish moss, $\frac{1}{2}$ ounce; gelatine, $\frac{1}{2}$ ounee; isinglass, $\frac{1}{2}$ ounce; white sugar, 1 ounce; eggs, 24. The first three are boiled in water, and the moss strained.

Claim.-Coating roasted coffee with any glutinous or gelatinous matter, for the purpose of retaining the aroma of the coffee, and also aet as a clarifying agent, as herein described and set forth.

73,48\%.-JEAN LUCIEN ARMan, Bordeanx, Frauee.-Electrie Cable.-January 21, 1868.-Around a eentral core of manilla are coiled strands of telegraph cable of usual construetion, and manilla cords; the whole is eovered with bast cordage or netting. In laying down, the cable is fixed at a proper depth by weights and buoys.
Claim.-An eleetric cable, having a core $A$, of fibrous strands, snrrounded by insulated wires $\bar{B}$ and fibrous strands D, and inclosed in an outer eovering of strands E, of buoyant material, when the said strands and wires are twisted and arranged, in respect to each other, as set fortli.

73,488.-LEwis J. Arwoon, Waterbury, Conn., assignor to himself and Holmes, Bootr and HAr. Dexs, same place.-Lamp.-Jannary 21, 1868.-The base of the chimney enters within the flexible, upturned points of the perforated base plate; and the burner has an annular helieal spring around its edge, whieh serves to steady the chimney.

Claim.-1. The helieal expansive interior chimney clamp $m$, applied substantially as and for the purposes specified.
2. The closed cap $b l$, in combination with the removable air ristributor $e$ and tapering wick-tube guide $y$, as and for the purposes set forth.
3. Supporting the chimuey upon the burner by the joint action of the draught plate $h$ and the vertieal springs or seallops around the edge of the air distributcr $e$, substantially as set forth.
4. The removable air distributer $e$ and tapering guide $g$, in eombination with the draught plate $h$, substantially as and for the purposes specified.

78, 489.-MEnRy Bailey, New York, N. Y., assignor to I. L. Romer, II. I. and W. R. Pease. Steam Engine.-January 21, 1868.

Claim.-The combination with the cylnder $B$ and head D, for inclosed operation within them of the piston, pitman, and crank, as described, of the interposed slide H, with its roeking joint pieee or bloek I, all for action together, essentially as herein set forth.
\%3, $430 .-\mathrm{LymaN}$ M. Bathey, Landgrove, Vt., assignor to himself and Joseph P. LoNG. same plaee. - T'uyere Iron. - January 21, 1868. -The blast is regulated by the valve. The sliding door permits aecess to the air chamber for removing ashes.

Claim. - The combination of the chamber 1 , porforated cap plate $C$, solid valve $D$, and sliding door F, all constructed as set forth.

73, 491.-Henry Baker, Lancaster, Pa., assignor to self and Chiristian G. Heriz, same place. Bolt Lateh.-January 21, 1868. -The cateh is extended in form of a socket, into which the lateh may be projected to act as a bolt.

Claim. - 1 . The arrangement and combination of a shatter bolt with its open slot $h$, and recess for the pin $e$ with its handle $\bar{I}$ and horizontal and vertical beveled latch and lock cateh $G G^{\prime}$, with or without the loek lever K , all arranged and operated in the manner and for the pmrpose specified.
2. In combination with the foregoing arrangement the latel lever M, with its neck $m$ and roeker L, when applied in the manner and for the purpose shown and set forth.
13.492.-GEORGE A. Blair and A. L. GladDJNG, Johnsonburg, N. Y.-Manging Carriage Bodies.-January 21, 1868.-The body is supported by eonnection to bows whose ends are attached to the axles and whieh are connected by elastic straps at their mid-length to pulleys beneath the seat.

Claim.-Suspending the circular lever frames $G$ $G^{\prime}$ on the two pulley bearings $n n$, arranged with relation to the seat $B$ and body $A$ of the earriare by means of the elastic strap I, substantially as and for the purposes set forth.
(93, $193 .-I S A A C$ W. Bowers, Boston, Mass. Wood-Bending Machine. - Jannary 21, 1868.-The timbers are elamped between the "former" and the follower bloek, and are then steamed. In bending the piroted "portions " are foreed down upon the lapping ehain and the timber, aeting to bend the latter and prevent the formation of splinters on its outer side.

Claim.-The portions D D pivoted together in eombination with the former C, operatiug substantially as set forth.

73, 494.-Francis E. Boyd and P. Shelton Tyler, Boston, Mass.-Breech-loading Irre-arm. January 21, 18.3.- A elamp fitting orer the edge of the breeeh-plate is attached to eath barrel. The breenh-plate has cam projections which tighten the clamps. A washer attaehed to the spindle apon which the barrels turn has a eurved portion that bears against a raised portion on one side of the plate throngh which the spindle passes and which is attaehed to the under side of the barrels.

Claim. - 1 . The plate or washer $c$, formed as deseribed, and attached to the spindle $e$, in eolubination with the raised or cam-shaped surface of the bearing plate $d$, as set forth.
2. The combination of the elamps $g g$ and the curved and cam projections of the fece-plate with the bearing plate $d$ and plate or disk $c$, constructed and operating substantially as and for the purpose set forth.

193,495.-Ovette Boynton, Hinesburg, Vt.Lamp. - January 21, 1868.-The upper portion of the well tube is surrom, ded by an amular water ehamber traversed by the lamp supply pipe.

Claim.-The burner, constructed and arranged
substantially as set forth and described, that is to sar, with its water chamber interposed between the flame and lamp, provided with oil and water-feeding ducts, and a well-tube, through which tho wick deseends to the oil.
g3, 496.-D. F. Breed, Valparaiso, Ind.-WoodBenling M1achine.-January 21, 1808. -Intended for bending plow handles and simllar articles. The slotted plate is attached at one end to a longitudinal rod on the drum, and runs beneath the wood, its other end engaging the follower which moves forward the article to be bent. The adjustable gundes are onerated by levers and may be held against the stuff on one or both sides. The onter former is inflexible and made in two portions, the inner one of which is remored with the stuff.

Claim.-1. The slotted plate P in combination with the rod $m$ and drum $D$, operating substantally as and for the pmrpose set forth.
2. The adjustable guides 4, rods W, levers $Z$, bed plate 2, bands II and I, arrauged to guide the stuff to bo bent and to prerent a lateral motion, constructed and operating substantially as and for the purposes described.

193,49\%.-Elipitalet C. Brooks, San Francisco, Cal.-Spring Attachment for Tehicles.-Junuary 21, 1868. -The jack springs are attiehed by one cond to the axle and bs the other to the shield to whieh the thorough brace is connected. The perches are attached to the springs above the points of their attachment to the axles, and the ends of the perches are turned upward, acting to rigidify the springs.

Claim.-The combination of the shield $A$, bolts $F$ and $G$, with the perch D , axle E , in combination with the spring C and thorough brace $B$, substantially as shown for the purposes specified.

7:3,198.-Coniad Brown, Goshen, N. Y.Combined Inob Latch and Lock:-January 21, 1868. -The thin bars of the skeleton key pass thiongh keyholes beside the upright pieces, and operate the tumblers, which engage a reetangular noteh in the bolt and a eatch, which engages notches in the bolt.

Claim.-1. The npright pieees D D ${ }^{1}$ provided with vertical slots $h h^{1} h^{2}$ and slanting cross slots $i i^{1} i^{2}$, substantially as and for the pnrposes specified.
2. The combination of the eateh de with the noteres c $e^{1} c^{2}$ in the door bolt C , substantially as and for the purposes deseribed.
3. The combination of the falling tumblers $\mathrm{E} \mathrm{E}^{1}$ $\mathrm{E}^{2}$, uprights $D \mathrm{D}^{1}$ and key $J$ with the eatch $d$ e and door bolt $C$, provided with notehes a $c^{1} e^{2}$, for the purpose of changing the locking device, snbstantially as described.

73, 499.-GEORGE Buttelefeld and A. G. Ireantvell, Boston, Mass.-Chair S'eat Supporter. -Januay 21, 1868 ; antedated January 11, 1868. Wooden or metallie slats are applied beneath the cane seat, to prevent sagging.

Claim. - The slats $b b$ to be nsed substantially as herein deseribed and for the purpose specified.

73,500.-NEwell Carpentel, White Creek, Wis.-Hop Press Power.-Janniry 21, 1868.-The upright is reciprocated by the forked, bell-crank lever, to and from each pawl in tnru, and is raised thereby.

Claim.-The lever D provided with the lngs e, in combination with the bar E , having the grooves $h$ in its sides and the notelies $g$ on its edres, with the parfls $h$, all arranged for joint operation, substantially as described.

73,501.-William D. Carpester, Sonth Berwiek, Me., assignor to himself and J. STackpole same plaee.-Harvester.-Jamaary 21, 1868.-A slide and jointed conneeting rod between the driving shaft and cutting bar are arranged to reciprocate in contrary direction to the cntter bar, to counteract the jar upon the maehine.

Claim.-1. The reciprocating slide, intermediate between the driving gear and the reeiproeating sickle bar, arranged to operate in reverse direetion to said siekle bar, for the purpose and substantially as described.
2. The tubular pinion and crank wheed H H',
mounted on a stationary stud or pin on standard $g$, in combination with its driving gear, arranged and operated as described.
3. The bevel wheel $D$, beycl pinion $E$, shaft $F$, spur wheel G, erank and pinion wheel II II', pitmen $i j k$, slide $J$, and lever $K$, all arranged and operated as described, and for the purpose set forth.
73.502.-KOBERT W. CLakk, Pittsburis, PaForge IIearth.-Jinuary 21, 1868.

Claim.-The use of a single fire-clay briek or tile in blackimiths' forges, substuntially as described, as a new article of mannfacture.
y 3.503 .-GEORGE Clatton and Collis B. AlLEN, Willonghby, Ohio.-Churn.-January $21,1868$.
Claim. - The special construetion of the triangular frune $A$, standard I), as arranged in combination with the churn $\Pi$, when operated in the manner as and for the purpose set forth.

73,301.-William S. Colivell, Pittsburg, Pa.-Plow.-Janmary 21, 1868.-The general form of the mold-board is convex, from lieel to point and side to side.

Claim.-A plow prorided with a moltl-board, having the smriace conrex, in the manner and for the purpose herein described and set forth.

73,605.-Willam S. Colwell, Pittsburg, Pa. assignor to Janks M. Menminhl, Allegheny Cits, P'a.-S'tave Mrachine. Jaunury 21, 1868.-The eon eare and conver-edged knires are adjusted by the wedge and set serews, and the whole head is swung upon its pirot by the transverse serew, whose thread engages a pln projecting downward fiom the backward portion of the head.

Claim.-The hollow wedge, constructed as herein deseribed, and used in conneetion witl the knives C and I ) and set screws $f$ and $e$, in the manner and for the pirpose herein set forth.

73,506.-Fredme Cook, New York, N. Y. Hydrocarbon Burner.-January 21, 1868.-The liydrocarbon is distributed in the furnace by fine jets, from a rotary liead.

Claim.-l. Tho introduction and distribution, by contrifugal foree, of liguid hydrocarbons into furnaces as fuel, substantially as shown and described.
2. The introduetion and distribution of water, in combination with liquid hydrocarbon, into furnaces by centrifugal foree, substantially as shom and described.
3. The revolving distributer D , with its head F , construeted, arranged, and operating as and for the purpose set forth.
\%ob,50\%.-JANES F. Cranston, Springfield, Mass., assignor to himself and S. W. Ponter, samo place.-Machine for MFaking and Dipping Matches. -January 21, $186 .-$-The blanks are fed to the cutting and pressing rollers in thin strips, in which the grain rmens in the direetion of the breadth. From the rollers the eylindrical splints pasis between equalizing springs to belts, which run at suilicient speed to cause a slight interval between the splints. The splints are caried over the snlphur and phosphorus pans, which are raised to dip the ends, tho belts pansing cluring the eleration of the pans. Between the pans the matehes pass over the drying space.

Claim.-1. The arrangement of the eutters $C$ and B , belts F and G , and dipping pans I aud X , having the melting cups $P$ and $P$, operated in commection with each other by the horizontal shaft $O$, substantially as and for the pmpose deseribed.
2. The device for the purpose of transferning the match stems firom the cutters $(\mathcal{C}$ and B to the belts F aud $G$, consisting of the springs $t$ and $t^{\prime}$ and guides $s$ and $s^{\prime}$, construeted and arranged as deseribed.

73,508.-PalmyRa Crary, Lowville, N. Y.Curd Breaker.-January 21, 1868.-An oblique handle is attached to the entting fiame, which has flat bars supporting longitudiual cutting wires, and operates to divide the curd in all directions.

Claim.-The implement so constructed and do scribed as herein set forth.

98,509.- William G. Creamer, Brooklyn, N. Y.-Car Brake.-Tanuary 21, 1868.-The spring drum, when wound up, is prevented from rotation by a pawl on a fixed pirot, and this pawl is connected to a lever, so that by raising the lever the drum is released and turns the brake shaft to put the breakers down. To fiee the brakes the "jointed" pawl is raised, by which the drum and brake-shaft are disconnected and the brakes released.

Claim.-1. The jointed mawl D, in combination with the arm on the brake-shaft $I$, and the ratehet on the drum K, substautially as deseribed and for the purposes set forth.
2. In combination with the drum and jointcd pawl, as above elaimed, the ratchet wheel $A$ and pawl'B, the wheel being fixed on the drum, as deseribed, and for the purposes set forth.
73.510.-Wimliam G. Creamer, Brooklyn, N. Y.-Car Seat.—January 21, 1868.-The plate forms an easy elborr rest and protects the arm from passers.

Claim.-The combination with and attachment to the seats or chairs of railroad cars of an armrest and proteetor, substantially as doscribed aud for the purposes mentioned.

193,511.-A. C. Crosby, Piqua, Ohio.-Jewaling Watehes.-January 21,1868 . -The bezel is spread by the spring arms, which are pressed outward and guided by the acutely conieal spindle.

Claim.-The adjustable tapering spindle B , the spring arm D, with or withont the eurves $\alpha$, in eombiuation with the hub or sleevo $A_{2}$, for the purpose and in the manner set forth.
v3,512.-Tmonas Crossley, Bridgeport, Conn. - Mranufacture of Carpets and other Artieles from Jute, Flax, dic.-January 21,1868 ; antedated July 22,1867 . - The eloth is immersed in a bath of water with wheat-bran and bicarbonate of soda therein, at a temperature of $90^{\circ}$ to $120^{\circ} \mathrm{F}$. The material is then washed in elear water, and then immersed in cold water mixed with a solution of muriate of tin, with 20 per eent. of sulphurie aeid. After being takon fiom this bath it is washed and treated to a bath of a weak solution of ehloride of lime, after which the cloth is washed clean and is ready for dyeing.

Claim.-1. Treating fabrics composed wholly or partly of jute, flax, cotton, or other suitable vegetable fiber, substantially in the manner herein set forth, so as to prepare the same for dyeing or printing, and the mamfacture of earpets or other articles for whieh such fabrie may be applicable.
2. The manufacture produced thereby.
\%B, 解: -JOHN D. DALE, Rochester, N. Y.Apparatus for Diseovering Fissures in the Sides of Wells.-January 21, 1868. -The gauge plate has horizontal slots by which it is adjusted to the size of the bore. The slotted arm is thrown out radially to seareh for erevices. This arm is actuated by a sliding rod.

Claim.-1. The combination, with the head, of an adjusting gauge E , for adapting the device to the diameter of the bore, as specified.
2. The eombination, with the head, of an incticator, F , as described, and for the purpose set forth.

193,514.-Abel Claude Felix Niepce De St. Victor, Paris, France, assignor to P. A. G. Niepce De St. Victor and M. L. J. Lavater.-Proeess of Multiplyirog Copies from Manuscript.-Januniy 21 , 1868.-Copying ink should be used. The color is brought out by the use of the alkaline or aeid vapors to which the sheets are subjected on leaving the press.

Claim.-1. The process of taking copies from manuseripts by submitting the copies, on issuing from the eopying-press, to the action of ammonia, substantially as herein deseribed.
2. The treatment of inanuscript copies with either alkaline or acid vapors to derelop the writing, aecording to the eonstituents of the ink, substantially as herein described.
3. The impregnating of the copying paper with sngar or other adhesive matter, substantially as and for the purpose herein set forth.
73.515.-Herbert E. Dewry, Aurora, Ill.Horse Hay Fork.-January 21, 1868.-The fork has a straight stem with a spiral at the end. In turuing the spiral into the hay the forked ends of the hoisting eord are woind around the drum at the head, aud retained thereon by a ratehet engaging the drum. When the parl is tripped the eord causes the back rotation of the drum and releases the hay.

Claim.-In combination with a serew fork A, operating substantially is described, the spool D E F and sheaves C C, arranged with the cord K , substantially as and for the purposes specified.
73.516.-Thomas S. Disston, Philadelphia, Pa., assignor to Meniry Disston, same place.-Cross-cut Saw.—January 21, 1868.

Claim.-A bolt, D, with a slotted head $f$, in combination with a handle $B$, slotted for the leception of one end of a saw blade, and having serews $b$, or other equivaleut bearings, for the end of the said blade, when the latter has openings de, adapted for the reception of the head and end of the bolt, all substantially as described.

193,517.-EElisfia E. Everitr, Philadelphia, Pa., assignor to himself and H. F. Hover, same placeRack for Towels.-January 21, 1868.-The wire frames hare eoils at certain poiuts, into which the rods are screwed.
Claim.-A raek or holder, to the side pieces of which are sccured coils a of wire, adapted for the reeeption of the ends of rods cxtending letween the side pieees, all substantially as deseribed.

193,518.-LUKe Fitzpatrick and Jacoi Schinneller, Temperanceville, Pa--Chain Mrachine.Januar'y 21, 1868.-The bar of metal is passed around a rotating mandrel within a bisceted nut and driven ont of the cnd of the latter, to be automatieally swaged to form and eut off in links.

Claim.-1. The combination of the nat $B$ with the mandrel $A$, construeted, arranged, and operating substantially as herein described, and for the purpose set forth.
2. The spring'set $D$ and guide $e$, when used in combination with the eutter $C$, construeted, arranged, and operating substantially as herein doscribod, and for the purpose set forth.

73,519.-Ferdinand Formhals, San Francisca, Cal.-Machine for Collecting and Condensing Metallic Vapor.-January 21,1868 . - The rotating cylindrieal case has a spiral diaphragm, and serves to force the fumes from the upper portion of the box through the water contained therein and in the tanks eonnceted by dipping pipes therewith.

Claim.-1. The construction of the eagniardelle blower principally of wool.
2. The eombination of the eagniardelle witl the furnace, in eombination with tanks, substantially as set forth and shown, and for the purposes specified.
\%3,520.-JOIN FRY, Brookficld, Il.-Sawing Machine.—Tanuary 21, 1868.-The fiame is supported on wheels at one end and a saw-horse at the other. The saw is connected to one cud of a vertieal lever, which is oscillated by counection with a crank-pin on the balanee-wheel.

Claim.-Providing the frame of a portable sawing machine with an arm or prolongation, so construeted and arranged that a saw-horse ean readily be attaened to or detached from the same, as and for the purposes specifiod.
93.521.-Robert M. Fryer and Annrew R. Fryer, Net York, N. Y., assignois to National Gas-Light Company, same place.- Manufacture of Illuminating Gas.-January 21, 1868.-The eoal is heated to $700^{\circ} \mathrm{F}$. in the first beneh of retorts, and the rolatile products pass through the traps to the second bench, where they are treated to a heat of $900^{\circ}$. The prorluct of the latter retorts passes to the condenser, and the unconverted portion from the latter is redistilled in the third bench of retorts under a temperature of $1400^{\circ}$. The traps consist of inverted eups, whose edges enter annular troughs surrounding the tops of the rertical escape pipes of the retorts, and prevent the admission of air to the passages.

Claim.-1. The process above deseribed for manufacturing illuminating gas, which consists in dis. tilling the coal at a low heat and converting the distillate and condensable produets into gas, in separato benches or retorts, sulstantially as deseribed.
2. The process of converting the volatile produets or fluids, given off from the first bench of retorts, into gas, by suljeeting the distilled produets to the different temperatnres required to convert the same into gas, subsfantially as set forth in the foregoing speeification.
3. The construetion and use of the automatic sealvalves, which are employed for the same purpose, and instead of the ordinary hydraulic main of gas-works, substantially as abore set forth.
4. The manner of distributing the distilled products or fluids given off from the first bench of retorts equally to the several gas-producing retorts, by means of the several traps and conneetions, substantially as above set forth.
5. The manner of separating the gas, generated in the second bench of retorts, from such fluids as escape couversion into gas in these retorts, and the method of passing the gas thus gencrated into pipes leading to the gas-holder, while tho fluids aro conveyed direetly into the third bench of retorts, where they aro subjected to a higher heat, neeessary to convert the same into gas.
6. The combination of tho whole gas-generating apparatus, as described in the foregoing specificatiou, and for the purpose therein named; and this we claim, whether the eonstructed apparatus be preeisely in the form described by us, or otherwise, it it produces substantially the same results.
73.522.-R. Mr. Gaxo, Allegheny City, Pa.Brick Machine-January 21, 1868; antedated January 17, 1868. - The molds, immediately after filling, pass under the pressure roller.

Claim. - The pressure roller C , arranged to operate in eombination with the rotating table, provided with a series of molds for forming bricks, substantially as pescribed.

73,523.-Lewis Gebilart, Orangeville, Ohio. Cider Mill.-January 21, 1868.-After passage botween the toothed roller and concare, the pulp is carried between pressure rollers by endless aprons. The cider runs through the strainer into the receiver.

Claim. - The cider mill, consisting of the toothed eylinder $B$, strainer $F$, endless aprons $O Q$, pan $G$, spring $L$, adjustable roller $H$, and roller $I$, all constructed and arranged to operate in the manner as aud for the purposes set forth.

73,524.-Samuel Golay, L'Asso Mill, near Noyon, Switzerland.-Dressing Millstones.-January 21, 1868.

Claim.-1. A cutting tool, armed with a diamond or diamonds, or othor hard stones, and so constructed and operating that while it is caused to traverse, it will cut or ehip a furrow or groovo in a millstone by a succession of blows, as set forth.
2. The disks $l l^{\prime}$, hung to a spindle $J$, and having sockets $p$ of different sizes, in which the cutting stones are held when the disks aro brought together, as deseribed.
3. The cutting-tool $k$, construeted substantially as speeified, in combination with the mechanism herein described, or any equiralent to the same, for imparting to the said tool a rotary, longitudinal, or lateral motion, as and for the purposo horein set forth.
4. The adjustable framo $A$, guided by the central spindle $P$, and carrying the adjustable plates $c^{\prime}$, in combination with the piroted framo B .
5. The reversiblo gnide-bar C, so seeured to tho frame $B$ by bolts $f$ that it may bo inclined, for the purpose specificd.

173,525.-R. H. Gordon, Sr., Brooklyn, Ohio. Hoe and Garden Lake Combined.-January 21, 1868.
Claim.-A combined hoo and rako, constructed with flukes $B$, enlarged or widened at the point $a^{\prime}$, and provided with the shanks E , in tho manner as and for the purpose speeificd.

73,526.-C. P. Goss and Adrian Rais, Waterbury, Conn.-Steel Trap.-January 21, 1868.-The
bottom plate has a tongue formod therein, whose end is curred up to receive the piroted ends of the jarrs. The strips lift on each side of the tongue, slide up the jaws, and close them together when the trap is sprung.
Claim.-Constructing a steel trap with a compound spring or springs and base plate of one piece of sheet steel, substantially as herein described.

7:3,52\%-Join C. Guerrant and Benton J. Field, Leaksville, N. C.-Rat Trap.-Jannary 21, 1868. - The rat, in drawwing on the bait, trips the trap door on which it stands, and drops upou a rod which resets the trap.
Claim.-1. The combination of the spring $\mathrm{D}^{2}$, lever E , connections $f^{\prime} g \mathrm{~A}^{\prime}$, and morable platform B with the movable wing $B^{\prime}$, connections $b$ d $i$, and stop-pin $i^{\prime}$, all arranged and operatints substantially as and tor the purpose herein specified.
2. The combination, with the above, of the rod $H$, stop $h$, and spring $h^{\prime}$, arranged and operating in tho manner and for the purpose set forth.

73,538.-D. Frank MartFond, Boston, Mass., assiguor to self and Edmuxd Tarmell, same place.Pipe and liod Cutter-Tanuary 21,1868 . The pipe is received in the hooked end of the bar and eut by revolution of the tool.
Olaim.-1. The entter holder C, combined with the feed-serew $P^{2}$ and the adjusting-screw $O$, made substantially as described, and•for the purpose set forth.
2. The cutter holder C and kuife D, combined with the supporting -bolster C , made substantially as described, and for the purpose set forth.
73,5®9.-Nicholas Headragon, Cineinnati, Ohio.-Railroud Rail Fastening.-January 21, 1868. -The fastening is made between the ties, the rail ends resting on a sole-plate whose corners are turned up in angular projections, which enter notehes of greater longitudinal extension in the base of the rails. The rail ends are secured to the sole-plate by the yoke which enters longitudinal horizontal slots in the rails, and whose lower ends have slots for a gib and key passing bencath the sole-plate.
Claim.-1. In the deseribed combination, with a sole-plate and keying device beneath the rail erds, the yoke D, occupying the notelies $\mathrm{C}^{\prime}$ in the rail ends, substantially as and for the purpose set forth.
2. The sole-plate $I$, constructed with the upturned corner's or lugss $i i^{\prime} i^{\prime \prime}$ and $i^{\prime \prime \prime}$, for the purpose above explained.
73.530.-Williais S. Johnson, Henderson, Ky. -Buggy T'ap. January 21, 1868. - The temper.screir acts as in jam-screw to fix the "tap" to any adjustinent to eompensate for wear in the washers or bos.

Clain.-A bnggy tap E, whose serew-threaded orifice $c$ is prolonged to its outer end, and provided with a tempor-screw $F$, adapted to operato as set forth.

193,-631.-Join 4 . Jones, Baltimore, Ma., assignor to self and E. A. F. MEARS, same place.-Roofing Componend.-January 21, 1868.-Composed of washed eoal tar, 10 gallons ; borax, $\frac{1}{6}$ pound; soapstone, $1 \frac{1}{2}$ bushel; and ashes, $\frac{2}{3}$ bushel. Whis is spread on felt.

Claim.-Tho within-named ingredients used together, substantially in the proportions and for the purpose set forth.

73,532.-W. O. Jones, Portland, Mo.-Combined Rule and Square.-January 21, 1868. - Tho rnle opens back sufficiently to form in square, and has a scale by which the inclination of a more obtuse angle is denoted.

Claim.-Making the joint in the manner deseribed, so that the rule cin be used as a square, and this in combination with the graduated scale, so that it can bo used as a bevel.
r93,533.-Charles Kaulbeck, Boston, Mass., assignor to self and Watson W. Ronerts, same place.-MIanufacture of Hinge Hooks.-January 21 , 1868. - The blanks are stramped from a strip of metal, the shank being stamped from the bifureation of the neat blank.

Claim.-Tlic mode, substantially, as above described, of manufacturing shutter or blind hinge books.
g3,534.-Peter Kelder, New York, N. Y. Gas Oock.-Jinuary 21, 1868. -The gras tube has a perforated top covered by a serew eap, which is adjustable, and whose lower end descends into a water bulb, through which the gas passes on its way to the burner.

Claim.-1. A gas cock, which, when opened, forms a space $d$, and an annular channel $e$, substantially as and for the purpose described.
2. The arrangement and combination of the pipe B with a perforated tip, adjustable shell C, and buib A, substantially as and for the purpose set forth.
g3,535.-E. W. Kmmall, Hndson, N. Y.-Bottom for Coal Hods.-January 21, 1868.

Claim.-A cast-iron bottom for coal scuttles or hods, when the same is east with a lower rim or base C , having a hand recess 1 , and is also provided with snitable means of attachment to the body of the scuttle or hod, substantially as described.
\% $\%$,536. -John L. Kvowlton, Philadelphia, Pa.-Circular Saw Mill.-January 21, 1868.

Claim.-1. The combination and arrangement of the carriage M and rokes N and R , or their cquivalents, the latter bearing the circular saw S , when the parts are so constructed and arranged that the yoke R rests upon the yoke N , and the lateer is pivoted to the carriage, so that the saw can be moved to and from the $\log$, or inclined in any direction, the carriame being at liberty to move back and forth as the inclination of the saw may require, and without the aid of any mechanical arrangements, substantially in the manner and for the purpose specified.
2. The combination of the wedge roller P tith the yoke R , and constructed with lateral movement in such a manner as to allow angular movement of the saw mandrel without disturbing its relative position with the log.

7:3,53\%.-Willina Livingstone, N. Y.-Water Meter:-Jamary 21, 1868. -The induction and eduction pipes both communicate through valve ports with the ends of the cylinder. The piston is connected to its rod by toggle levers, and reciprocates the slide ralves by an inclined block at the upper end of the rod. The block slides in an inclined cavity or slot in the valve stem. The reciprocations of the - valye stem are registercd.

Claim.-1. The construction of a water or fluid metcr, consisting of a measuring vessel or cylinder, enclosed in an outer casing or jacket, the intervening space or spaces forming the water ways to and from the measuring cylinder.
2. The combination of a piston with jointed plates or bars, or other proper flexible material, that will extend and close up with the motions of the piston, and give positive action to the valves at either cud of the stroke.
3. The combination of a piston and intermediate flexible attachments with the valves, either slide ralves or other valves, by means of the rod $F$ and its inelined plane $S$ rorking the valve rod E , or, by means of a bell crank or other lever, taking motion from the piston at ccrtain points of the stroke, and transferring the same to the valves, substantially as described.
ges, $538 .-$ Edward A. Locke and William N. Weeven, Boston, Mass.-Lamp.-January 21, 1868. -The chimney is secured to its support by tongues on the latter, which hold against the construction at its basc. This supporting amnulus is slipped on to the cone, and serves to hold its bi-sections together.

Claim.-1. A sectional lamp cone, made to open and close, as and for the purpose substantially as set forth.
2. A removable chimney-supporting ring or basc, holding the parts of the cone together, substantially as described.
73,539.-Orazio Lugo, New York, N. Y., assignor to Jonv F. Collins, same place- - Apparatus for Distilling Spirituous Liquids.-Jahuary

21, 1868.-A blast of hot air is forced through a strong solution of caustic soda and mingled with tho spirituous rapors. The curvent of air is passed through a ressel containing sulphuric acid to change the alcololic vapors into ether, which is collected.
Claim.-1. Introducing into a distilling apparatus a current of alkalinetted air, substantially in the manner described and set forth.
2. One or more receivers or analyzers between the still and condenser, having enclosed rotating and stationary fans, for the purpose described and set forth.
3. Producing, in connection with or continuation of the process of distilling alcohol, cthers during the same operation, substantially as described and set forth.

198,540.-J. T. A. Mallet, Paris, France, assignor to Jeari Marie Onesime Tamin, same place. -Producing Oxygen and Chlorine.-January 21, 1868. -Sub-chloride of copper is transformed by the air into an oxi-chloride, which parts with its oxrgen when subjected to a red heat in rotating retorts lined with fire clay. The oxi-chloride is mixed with 15 or 20 per cent. of sand in the retorts. The oxygen passes throngh a wasling vessel to the gas holder. The oxygen is restored to the contents of the retort by first cooling by jets of stean, and then forcing a current of air through it. For production of chlorine and oxygen combinct, hydro-chloric acid is injected in place of steam. According to the amount of acid injected oxi-chloride or pure chlorine may be cvolved.

Olaim,-The process for producing, conjointly or separately, oxygen and chlorine gas, substantially as herein described.
g3,541.-George A. Maydeville and TV. E. Pine, Newark, N. J.-Mcchine for Blocking and Stretching Hats.-January 21, 1868.

Claim.-1. A forming block, combined with a sys. tem of radially adjustable brim-supporting arms, constructed and operating substantially as described.
2. A circular scries of radially-sliding brim-supporting arms, to enter the body of the hat, and adjustable in fixed positious to and from a center, substantially as shown and described.
3. The adjustable ring 4, sliding in the inclined slots, to vary the positions of and hold securely the radial brim-supporting arms in the desired fixed position, cither to or from a center.
4. The combination, with a radially mortised plate, of a circular system of radial brim-supporting arms, arranged to receive the hat block within the circle they describe.
5. The radial arms of the system of brim-supporting arms, constructed with their onter surfaces tapering gradually down ward from the top of the sectional band plate, as and for the purpose described.
6. The combination of the ring 4, its supporting frame, and an adjustable lever, for operating it and holding the brim-snpporting arms positively and firmly in the position to which they may be adjusted.
7. The combination of a perforated hat-forming block with a grooved, perforated, or skeleton supporting plate, for the purpose sct forth.
8. The arrangement of the series of clamping fingers with the series of stretching arms, and with their supporting frame, whereby is provided the means for adjustment of the clamping fingers, independent of the means for the adjustment of the stretching arms, substantially as described.
9. The combination of grooved cam plate F, whether witl or without its rim or handle, with the system of radial stretching arms, substantially as and for the purpose set forth.
10. The arrangement, in a hat-bloeking machine, of lever 18 with the adjustable stop 22 , to limit the upper movement of the hat block, for the purpose set forth.
11. The combination of a set of radial stretching arms with a set of slides, the inner surfaces of such slides forming the banding rim, substantially as described.
12. The combination of the loose adjustable ring $J$ with the outer system of stretching arms, for the purpose of graduating the amount of stretch to bo given to the brim of the hat body, substantially as described.
13. The loops or guards npon the radial stretehing arms, to sustain the ring of, and serving therewith to form slots or guides, to insure the positive expansion of the system of stretehing arms by the action of the ring when raised.
14. The eombination, with the stretcher carrying sliding frame, of the eounterbalancing weights, substantially as shown and deseribed.
15. The eombination of an outer system of rising and filliug stretching arms with an inner system of radially sliding brim-supporting arms, which have no rising and falling motion.
16. The eombination in the same machine, and for joint action, of a system of radially-adjustable brimsupporting arms, it system of stretching arins, aud a rising hat-forming block, the same operating substantially as described.

93,512.-Louisa J. Maxey, Troy, Ind., admin istratrix of the estate of EDWARD G. MAXEI, (deceased,) and Wimbin R. Mason, Lewispoirt, Ky.Hay and Cotton Press.-Jawuary 21, 1868.-The followers are eonuceted to a raek bar, and the press is double-aeting; one pair of followers returning while the others are acting upon the eotton or hay. The outcr and inmer follower of each box are moved simultancously. The motion is communiented br a sweep revolred in one direetion to compress the contents of one box, and reversed to aet upon that of the other.

Claim.-1. The combination of the geariug wheels c def $g g^{\prime}$ with the double reciprocating rack and compressing beam Fe, eonstructed and arranged snbstantially as and for the purposes herein deseribed.
2. The pitmen $i i^{\prime}$, in combination with the outer head blocks $b b^{\prime}$ and the doons $k^{\prime} k^{\prime \prime}$, and their selfacting apparatus for ehocking the head blocks, and releasing them when the doors are opened to take the bale out, eonstructed and arranged substantially as and for the purposes herein described.
3. The reliering sides $p p^{\prime}$, iu combination with the paeking eompartments $\mathrm{C} C$, arranged substantially as and for the purpose herein described.
\%3,543.-Wilhiam E. Micinadel, New Holland, Pa., assignor to himself and Abram Setcey, same place.-Stuffing Seats.-January 21, 1868.-The eushion is supported on a firame which has movement in an inclosing case, and rests on half-clliptical springs adjusted by serews.

Claim.-The combination, with the slats E, of cross strips D and B, serews C, and rounded cover, When construeted and appliod substantially in the manner shown, for the purpose speeified.

73,544.- AbEL Mott, Seott, N. Y., assignor to himself and Warren Kenyon, same place.-IIay Elevator.-Jannary 21, 1868. - The hoisting cord is passed over a groored pulley, whose serrated flanges engage the scrations on a hanging frame of a rib. grooved pulley under whieh the eord passes, and When the load is suffieieutly elerated and the pivoted pin has entered the socket of the stationary frame, the serrations of the frame and pulley engage, and upon the backing of the horse the load is sustained until the pin is tripped, and in its withdrawal swings baek the serrated firame and frees the cord.

Claim.-The frames A and H, with their eords and pulleys, the frame $F$, and pin $G$, eonstrueted and used substantially as and for the purpose set forth.

73,545.-JT. B. Newbhough and E. FAGAN, New York, N. Y.-Ireating Caoutchouc and other Gums. -Jannary 21, 1868.- Lodine and bromine, previous to mixture together, are each mixed with a compound of oil of turpentine, 3 ; and sulphurie acid, 1 part. The proto-bromide of iodine, 3 ounces, is mixed with caoutchoue. I poume ; and after molding, is subjeeted to a heat of from $200^{\circ}$ to $320^{\circ} \mathrm{F}$. to harden it.

Claim.-The within-described new manufacture or substanee, consisting of caoutchouc, or equiralent gum, incorporated with iodine and bromine, (after treating the said iodine and bromine with turpentine, or equivalent oil, substantially as describod, and subjeeted to hent.
73.546.-C. C. Pease, Jamestown, assignor to himself, Giles Milks, and S. B. Brininstool, Ken-
nedy: N. Y.-Instep Stretcher.-January 21, 1868. The instep piece is laised by a set serer stepped in the bodr of the last.

Olaim.-1. The slide, slot, and serew 2 , as lierein described, for raising and lovering the instep block of a last, as and for the purpose speeified.
2. Comecting the slide, slot, and serew, to a last, when arranged so as to be usad and operated for tho purpose deseribed.
73.547.-Chalules Ricir and Oscar I. Neisleer, Poughkcepsie, N. Y.-Combined Cultivator and Harrou.-January 21, 1868.-A two-row aljustable cultivator and harrorr.

Claim.-1. The adjustable hars $\mathrm{K}^{\prime} \mathrm{K}^{\prime}$, when arranged on the sides of the hill, and when provided with handles $j j$, connected at their upper ends so that the teeth ein be accommodated to irreorulurities in the hill, or ean be connected for broateast harrowing or tilling, substautially as herein shown and deseriber.
2. The deviec for connecting the harrow frame C With the axle $A$ and driver's seat $I$, eonsisting of the bars E and $F$ on tho axle, of the links $G$, levers H and $J$, nnd connceting rods $h$ aud $i$, all mado and operating substintially as and for the purpose herein shown and described.
3. The above, in combination with the notehed bar M., when made as and for the purpose deseribed.
4. Sceuring the dranglat bars $N$ to the rear of the harrow holders $I$, substantially as and for the parpose herein shown and described.
5. The hollow enltivator tooth $P$, when arranged so that it ean be fittea to and easily remored firom a harrow tooth L, sulsstantially as and for the purpose herein shown and described.

73, 5 48.-A. Rowe, W. H. Mrtcimele, and E. B. Hammile, Maeomb, Ill.-Seed Sower.-January 2l, 1868. - The segmental sced opening in the hopper bottom is adjusted in size by the oscillating ralve to regulate the amount of seal sorm. The seed is distributed by the rotating, fluted disk.

Claim.-1. The thuted or ribbed coneare disk D , made of a single plate struck up with the ribs $k$, in the form and manmer substantially as shown and deseribed.
2. The oblong eurved opening I, for the passage of the grain from the hopper to the disk, as set forth.
3. In combination with the openins $I$, the oseillating slide Falve $f$, for regulating the delirery of tho grain at different points of the disk, as deseribed.
4. The rotating arin $p$, monnted on the shaft $F$, and arranged to revolve within the hopper E , as shown and described.

73,540.-P. F. Scincmer, Hartford, Conn., as signor to lamself and W. II. I). Callender, and B. C. ENGLisil.-Cartridge Box.-Jamuary 21, 1868.The periphery of the eylinder has a series of radial soekets eontaining metallie cartridges. The eylinder is arranged to turn in the ease, and is actuated by a spring euteh at the end of a spriug arm journaled concentrically with the eylinder, the eateh actiug on a ratchet ipon the eylinder.

Claim.-1. 'the spring lever $G$, provided with spring lug a, operating the ratchet $D$ of the cartridge chamber in its forward motion, and returning to its origiual position, sliding over the ratehet in the manner deseribed, substantially as specified.
2. The plate or lid $J$, provided with slot 1 , through Which plays the handle II of the spring-lerer $(x$, having spring lug a operating the ratchet wheel of the cartridge chamber, allowing the ejection of but one eartridge at a time, and admitting the operating of said ratehet wheel continually from the samo point, and the lever to return to its proper position, ready for its noxt operation, substantially in tho manner represented and described.
739550.-GEORGE K. Simm and Josepll Stras SER, Allegheny City, Pa.-I'low.-Jannary 21, 1868. -The heel of the beam and the beam handle aro attached to a slotted plate which is adjustable on the landside to regulate the depth of furrow.

Claim.-1. The eombination of the graduate C , with the beam 1 , constructed, arranged, and operating as herein described, and for the purpose set forth.
2. The combination of the movable cap $B$ with the be am II and gradnate C , eonstructed, arranged, and operating as herein described, and for the purpose set forth.
g\%,551.-Joseph B. Spurgin and Thoaras A. Kirk, Karisas City, Mo.-Railway Switch.-January 21, 18F9. -The switeh is intended to allow trains to pass without the ail of a switehman, and to furnish means, by baeking the train, to transfer the same from one side to the other.

Claim.-1. The combination and arrangement of the tro main tracks, $A$ and $B$, one or more oblique or inclined tracks $D$, and one or more switch traeks ©, with caeh other, substantially in the manner herein shown and deseribed, and for the purpose set forth.
2. The pieces $G$ and $H$, one or both, eonstructed substantially as deseribed, in combination with the rails of two traeks, at the point where the said tracks meet and unite to form one track, substantially as herein shown and deseribed, and for the purpose set forth.
73.552.-James T. Stewart, Peoria, Ill., assignor to Samuel R. Whitlow, Rochester, Ih. Medical Compound.-January 21, 1868.-Used as a tonie, and composed of whisky, 1 gallon; water, $\frac{1}{2}$ gallon; white sugar, $\frac{1}{2}$ pound; tincture of orange peel, 4 ounees; compound tincture of gentian, 2 onnees; compound tincture of eardamom, 2 ounces; tineture of cureuma, 2 ounces; and oil of lemon, 64 drops.

Claim.-An improved medical componnd, prepared of the ingredients and in the proportions and manner substantially as herein set forth and described.

93,553.-Washington Stickiey and Nathan B. Chase, Lockport, N. Y.-Composition for Fuel. Jamnary 21, 1868.-Composed of coal screenings, 3 ; spent tan bark, 2 ; sawdust, 2 ; peat, 1 part; and coal tar sufficient.

Claim. - The improved composition for fuel, prepared of the materials and sulstantially in the manaer herein set forth.
g3,554.—JOHN TiPton and J. Carl, Malaga, Ohio, assignor to John Tipton.-Boot Crimp.-January 21 , 1868. -The leather is foreed against the crimping-board by plates whose edges are ont-turned, and whieh has arms traversed by right and left hand screw bolts. The bolts have spur wheels engaging together to insure simultaneons rotation, and act to press the plates and leather against the board. The plates are drawn back by arms whieh hook over a ratcheted cross bar that is traversed by a serew stepped in the board.
Claim.-1. The eombination of the plates A A with the two right and left serews $r r^{\prime}$, and the spur wheels $g g$, substantially as and for the purpose speeifica.
2. The combination and arraugement of the plates A $\Delta$ with the arms $e e$, braces $e^{\prime} e^{2}$, joints $l$, and arms C C, substantially as and for the purpose speeified.
3. The bar M, when constructed with slotted ends, a ratehet surface on its upper side, and a central female serew, substantially as and for the purposes set forth.
4. The eombination of the plates A A with the arms C C, bar M, serew rod $h$, and board $B$, substantially as and for the purposes specified.
5. The eombination of the plate 0 , board $B$, jaws 000 , and serew rod R , when the parts are construeted and applied together, substantially in the manner and for the purposes speeified.

193,555.-Elisha W.Walton, Drytown, assignor to Joseril H. Atkinson, Sau Franeiseo, Cal.-Tamping and Blasting Machine for Splitting. Wood.-January 21, 1868. -The barrel is inserted into an auger hole in the wood, and the eontained eharge exploded by drawing off the spring hammer with a cord.

Claim.-1. The eonstruction of the barrel with a eharge earity and screw, with eross-head, handles, nipple, and himmer, substantially as described, and for the purposes set forth.
2. The screw cleaner, for the purposes set forth.
73.5.56.-J. Whrpple, Orville, Cal., assignor to self and Josere H. Atrinson.-Ohurn.-Jannary 21, 1868.-Tlie rectangular ehurn has journals on its diagonal corners.

Claim.-A metallic or wooden churn, in which all the parts described and represented are arranged in the manner set forth.
73.55\%-Gigbert White, Marlem, assignor to himself and Gustavus Prerrez, New York, N. Y.Hand Hole Joint for Boilers.-January 21, $1868 .-$ The outer faee of the head is flat, and the gasket extends all orer it, and has outside it a flat plato whiel fits the hand hole. The latter plate is kept in plaee by a key driven throngh the bolt.

Claim.-The packing $C$ of the face $a$, and the cover $A$, in combination with the plate $D$, all construeted and arranged substantially as shown and described.
-3.558.-MOSEs WIEAND and George Gorr, Emaus, Pa.-Stone and Stump Extractor.-January 21, 1808. - The windlass is supported on a frame on the running sears.

Claim. - The portable power, consisting of the mechanism arranged substantially as deseribed, and provided with the ehain $f$, having the stationary hook $p$ and the sliding hook $p^{\prime}$, all mounted on the frame, constructed as set forth.
73.553.-Daniel Witt, Hubbardston, Mass., assignor to Dexter Howe, New York, N. Y.Spring Holder.-January 21, 1868.-The ends of the springs are passed through the elamping bolts and rest in the eoncare portions of the soekets.

Claim.-The spring A, in combination with the screw-bolts $C$, sockets $B$, and nuts $b b$, substantially as clescribed, for the purpose speeified.

73,560.-E. Wortir and C. A. Davis, Osweso, Ill.-Ditching Machine.-January 21, 1868.-The point of the mold board is jointed, and conmected to a cutter bar passing throngh the beam and adjusted by a screw. The sides of the ditch are cutby knives, and the carth raised by inelines.

Claim.-1. The knives L, arranged to operate substantially as and for the purpose set forth.
2. The point F , jointed to the shoe E , in combination with the cutter-bar $K$, serew $J$, and standards I I, arranged to legulate the depth of the machine in the ground, sulstantially as set forth.
3. The combination of the horizontal shears D , in: elined flanges C , with eutter-bars $\mathrm{K}^{\prime} \mathrm{K}^{\prime}$, knives L , and mold board B, substantially as set forth.

73,561.-Hugh S. Whightson, Baltimore, Md., assignor to M. M. Welby and C. H. Slicer, same plaee,--Trench. January 21, 1868. - The portions of the head comneeted to the adjustable and movable jaws have eounterpart ribs, grooves, and serrations. When placed together a button on the fixed part takes over the adjustable part.

Claim.-1. A wrench, with its adjustable jaw constructed and applied to its handle and stationary jaw, as deseribed, when its ratchets or teeth are located as and operated in combination with groove $b$ and tongue $d$, in the manner and for the purpose speciticd. - 2. Button E, in eombination rith groore $b$ and tongue $d$, for holding the remorable jaw to its seat, as herein described.
73.562.-G. M. Amsden, Wooster, Ohio.-Sash Fastener.-Tanuary 21, 1868.-The spring bolt slides horizontally in the sash and engages soekets in the frame. It is operated by a lever on the face of the sash.

Claim.-The spring bolt $b$ in the side of the sash B , provided with the shaft $e$, working in the slot $f$ of the sash, and operated by means of the slotted lever C or H , piroted to the sash B , eonstrueted and arranged as clescribed for the purpose speeified.
73.563.-W. R. Anderson, New York, N. Y.Fastening for Stair Rods.-January 21, 1868; antodated January 8, 1868.

Claim. - The combination of the stationary framework $A$, movable arm B , and book $h$, substantially in the manner and for the purpose set forth.

73,564.-P. D. Beckwtif, Dorragiac, Mich. Plow Gauge Wheel.-January 21, 1868.-The spindle is east upon one side of the wheel, and the box upon the lower end of the shank.
Claim.-1. The axle or skein B east upon the whoel $A$, as aud for the purpose set forth.
2. The shauk C, with a liub cast upon its lower end, and used in combination with the wheel $\mathbf{A}$ and its axle $B$, substantially as herein set forth.
73.565.-Sigismund Beel, New York, N. Y.Process for Scasoning and Preserving Wood.-January 21, 1868.-The wood is immersed in a boiling, saturated solntion of borax, and remored therefrom and immersed in a fresh solution of the same streugth. The discoloration may be removed by washing.

Claim.-Scasoning, preserviug, and purifying wood, by extracting its perishable matters, without injuring the wood substance, and associatiug therewith a durable and autiseptic substance, which makes it harder, water-proot, indifferent to atmospheric chauges, and less combustible, by the process above described, in which borax or some other borate or boracic acid, or a like compound, is cmployed, substantially as and for the purposes specified.

173,566.-EdwLy Bell, St. Paul, Minn.-Coffer Dam.-January 21, 1868. -Two barges hare between them two frames, each giviug beariug to planks which are driven iuto the ground, leaving a space between the two walls of driven boards, iuto which the apron is sunk by the weights in the pipe at its lower edge. The upper edge of the apron is fixed abore the water liue. When the pipe is sunk it is filled with water to pack against the plauling.

Claim.-1. In combination with a foating "coffer dam," construeted substantially as deseribed, the flexible bag, sack, or pipe F, for packing the same and exeludiug the water.
2. The use of an aprou, of rubber cloth, eanras, or other flexible material, made water-proof, for packing the joints between the tiers of planks forming the inner Walls of the dam, substantially as described.
73.567.-William Bellamy, Newark, N. J.Construction of Handles for Metal Tea and Coffce Pots.-January 21, 1868.-The plaster is introdneed as a non-condnctor of heat to lieep the handle cool.

Claim.-A tubular metal handle filled with plaster of Paris for metal tea and coffce pots, substantially as aud for the purpose set forth.
73.568.-W. H. Bennett, New York, N. Y.Culinary Vessel.-January 21, 1808.-Improrement on patent of John Zimmerman, May 9, 1865. The bottom of the inner ressel is restricted to the same diameter as the bottom of the sides of the said ressel, so as to permit the elcansing of the aunnlar space betreen the said ressel and the case.

Claim.-The combination of the vessel D, dirided into various compartments by the vertical partitions $c$, each compartmeut haviug its own tap, the perforated receptaclo $B$ leaving the space between its sides aud the outcr casing Copen, and widest at the bottom, and the hot-water vessel A, all arranged as described for the purpose specified.
73.569.-Balnbridge Bishop, New Russia, N Y.-Violin.-January 21, 1868.

Claim.-1. The supplementary bridge $J$, to the extended finger-board 10, substantially as and for the purpose spccificd.
2. The combination of the bridge E, supplementary bridge $J$, aud fiuger-board aud tail-picee, made in oue piece, substantially as deseribed for the purpose specificd.
73.570.-Lyman R. Blake, Boston, Mass.-Cutting Channels in Boots and Shoes. January 21, 1868. -The following knife, by which the string of leather is remored from the bottom of the slit, is made adjustable so as to expose more or less of its cdge below the sheltering back of the leading knife, thus regulating the size of the groore.
Claim.-1. The combination of leading and following knives, for the purposo of forming different sized grooves in channels, when the leadiug knife is constructed with such a breadth of back as will cover
the eutting edge of the following linfo. substantially as described.
2. The formation of the channel, substantially as shown and deseribed.
73.571.-Lewis R. Boyd, New York, N. Y. Manufacture of Locking Rings for Closing Fruit Jars.-January 21, 1868.-The cylindrical riug is formed firm a strip of sheet metal whose ends are soldered together, and the thread is then spun on.

Claim.-The above-clescribed improred method of mannfacturing Berew rings for fruit jars and other analogous artieles, substantially as and for the purposes set fortlı.
73.572.-SOlomon Brock, Brooklyn, N. Y.Paper File.-January 21, 1868.

Olaim.-1. The employment of threaded needles, arranged stationary in the file, and operating with a paper flap, for the purpose of passing a thread in the letters or papers, with the operation of filing the same iu the file, so that the letters or papers may thereby bo secured when removed from the file, substantially as herein shown and cleseribed.
2. The combination and arrangement of the file case or frame $A$ with the side B , and needles E E , the flap D , and springs $\mathrm{F} F$, and notehes II $\mathrm{I}^{\prime}$, operating together substantially as aud for the purpose herein shown.

73,573.- Almonn Brooks, Columbus, Ind. Machine for Supporting Iin Cans when being Sol dered.-January 21, 1868.-The segmental blocks forming the frame are foreed apart by blocks which slide down their iuclined iuuer surfaces.

Claim.- The combination of the adjustable frame pieces $A$, with inclined faces and grooves $A^{\prime}$, the spider $B$, tubular shaft $C$, internal rod $D$, plate $E$, clastic bands $F$, and pawl $G$, construeted and arranged to operate substantially in the manner and for the purpose set forth.

73,574.—Jairus Brown, Portland, Mich.-Tuyere Iron.-Tanuary 21, 1868. -The cap has a series of blast openings, and the false cap a series which may be brought in coujunctiou by turning the latter. The falso cap is turned by a crank upon its rertical stem to which a bar is connected.

Claim. - The construetion and arrangement of the cylinder A, the head or cap $B$, prorided with more or less openings $\mathrm{C}, \mathrm{D}, \mathrm{E}, \mathrm{H}$, and G , the rod $I I$, the false cap $I$, provided with appropriate openings $J$, the erank $K$, the lever $L$, the eylinder $M$, the false bottom $N$, aud the door $O$, irlen constructed aud operatiug substantially as and for the purposes set forth.
$73,575 .-C h a r d e s$ F. Buck, Racine, Wis.-Axle Tree.-January 21, 1868.-The metallic bar passes beneath the axle and axially through the outer end of the spindle, forming an attachment for the mutand a brace to the axle.

Claim.-The rod $C$ applied to the straight axle $A$, its ends passing through the under sides of the thiuble skeins $B$, securing them in place, and its center held in position by means of the brackets a, the rod C being tighteued by means of the nuts D , as herein shown and deseribed.

73,576.-T. J. BuRke. Chicago, Ill.-Concrete Brick Press.-January $\approx 1,1868$. - The brick receives pressure by the eam wheel, whieh is operated by a lover. The block is raised from the mok by the rack lever, which ongages a rack bar counceted to the follower.

Claim.-The cam wheel R, in combination with lever $J$, follower $D$, slides $\mathbb{X}$ X, lever $N \mathrm{~S}$, and box $\mathrm{B} B$, arranged to operato in the mannor as horein set forth.

73,57\%.-John F. Carde, Brooklyn, N.Y.-Sand Pump for Oil Well.-Jannary 21, 1868. -The valve stem passes through a yoke which is slotted to reccive a pin projecting from the stem, and also to receive a piu traycrsing the stem, and projecting on both sides. When the pump is lowered the pilt oecupying the oblique slot prevents the turning of the stem to allow the traversing pin to pass through its
slots, so that the upper valve is kept closed and the lower one open. When the lower chd of the valve stem strikes the botton of the hole it is turned by the pin in the oblique slot admitting the transverse pin to pass through the yoke, and the upper valre being raised the water and sand rush in, taking the place of air which escapes through the safety valve.

Claim.-1. A sand pump provided with valves D $J$, and their connecting agencies, arranged in such manner that the valres will be operated antomatically, and the pump filled with sand or debris under the static pressure of the water within the well or hole, substantially as herein shown and described.
2. The valve stem $G$, with the tube $H$, joke I, oblique slot $e$, pin $g$, and the slots $f f$, all arranged to operato in connection with the ralve $J$, substantially as and for the pnrpose specified.
3. The safety valve $F^{\prime}$, arranged in relation to the Falves D J, applied to tie cylinder of a sand pump, to operate in the mamer substantially as and for the purpose set forth.

73,578.-William L. Collamore, Warrch, R. I.-Stcam Governor.-Jannary 21, 1868.-The governor operates the valve through a lever, whose free end has a segmental rack cngaging a pinion on a shaft having arms upon which the supplementary weiglats aro adjustable.

Claim. -The combination of the supplemental weights $H$ and lever $B$ with a governor, substantially as herein specified.

73,579.-John F. Colenns, New York, N. Y.Rectifier and Condenser jor Alcoholic Spirits.-January 21, 1868. The pipes in the rertieal series are polygonal in horizontal outline and ellipstieal in transverse, vertical section. The pipes are connected by vertical elliptical pıpes so as to form a continuous pipe.
Claim.-1. The construction and use of a rectifier for alcoholic or other spirituons vapors, in the manner and form substantially as described and set forth.
2. The construction and use of a condenser or worm, in the manner and form and for the purposes substantially as deseribed and set forth.

73,580.-Ransom Coók, Saratoga Springs, N. Y.-Scissors.-January 21, 1868.-The blades are forced together by pressure on the roughened, flattened handles, and opened by a spring.

Claim.-As a new article of manufacture, scissors constructed and arranged substantially as hereinbefore described.

73,581.-E. Covert and J. C. Covert, Farmer Village, N. Y.-Neck Yoke.-January 21, 1868.-The tougue socket is in a flap of leather secured by a metallic strap at the bar.

Claim. - The metallic clasp $B$ connecting the leather C to the neck yoke A, substantially as and for the purpose set forth.
*3,582. - Washington Cunninghant, Oxford, N. Y.-Butter Worker.-Jannary 21, 1868.-The roller frame has springs whose ends carry lollers running beneath the side guides of the table and operating to depress the roller upon the butter spread upon the table.

Claim.-1. The spring roller C, as herein set forth, which allows the compresser $A$ to lise and fall, for the purpose herein set forth.
2. Extending the side rail E for the purpose of preventing the carriage $F$ from falling, as herein set forth.
y3,583.-MORGAN O. Davis, Warrensburg, N. Y.-Churn Dasher.-Jannary 21, 1868.-The dashers pass through diametric mortises in the rertical dasher rod and each one resting upon the one beneath; the upper one is held in position by a medge above it.
Claim.-A dasher composed of the shaft $F$ and dasher boards $a$ and key K, substantially as shown and described and for the purposes set forth.
73.584.-Williams. Douglas, Richmond, Vt.Clothes Wringer.-Janunry 21, 1868.-The pressure
is brought apon the upper roller by levers. The lower lever has bearing upon a rubber spring upon a rod pendent from the free end of the upper lever. The water is turned into the suds tub by a fixed donbly inclined board and a tilting board above it.

Claim.-1. Regulating the pressure of the wringing rollers $d$ and $d^{\prime}$ by means of the levers $D$ and $F$, rod $E$, and spring $e$, when the same are combined and arranged substantially as described.
2. In combination with the abore, the tilting and drain boards II and I, when the same are constructed and arranged substantially as described.

73,535.-ANDREW Dow, Brooklyn, N. Y.-Apparatus for Manufacturing Sheet Lead and Load Pipe. January 21, 1868. - In making sheet lead the metal is formed into thin pipes which are opened longitudinally and flattened out. In making. pipe the lead is forced through an annular space between a core and an inclosing pipe. Hydraulic power is used. Claim.-1. The combination of the water cylinder block B, post C, piston D, cross-head E haviug central bolt F , bearing head $\bar{b}$, eylindrical ram $I$, and annular bloek $G$, all eonstructed as described for the purpose specified.
2. The combination of the rater clyinder block $B$, tnbe I, ressel K having core C , and annular block $G$, constructed as described for the purpose specified.
73.586.-A. K. Eddowes, Philadelphia, Pa.-Window Sash.-January 21, 1868.-The glass is held forward to its position in the rabbet by a flexible packing backed by a metallic frame. The lower edge of the grlass rests on an elastic strip.
Clain.-1. The hollow or solid crlindrical flexible packing D or $\mathrm{D}^{1}$, and grooved clamp or molding D 2 , in combination with the rabbeted frame A, for securing the glass in said frame, essentially as shown and described.
2. The arrangement within the rabbet $a$, of a strip or bearing $b$, made of a soft and pliable material, such as gum or cork, for the standing edge of the glass to rest upon, essentially as specified.

193,58\%.-JACOB EDSON, Boston, Mass.-Nail Extractor.-January 21, 1868.-The head of the nail is nipped between the teeth which are brought upon it by depression of the lever.

Claim.-The combination of the levers $A$ and $B$, the wheel C , and the adjustable tceth $e$ and $l$, the whole being constructed, applied, and arranged, substantially in manner and so as to operate as and for the purpose or purposes set forth.

93,588.-Marius M. Elliott, New England Village, Mass.-Shoe Shavc.-January 21; 1868.-The cutter'is secured by serews which engage its rectangularly projecting arms. Each of these arms rests against two set screws which vary in distanee from the cdge and serve to regulate the inclination of the latter to the guard.

Claim.-A share for boots or shoes, having its blade hung in the guard for adjustment, substantially as described.

73,589. - Martiv R. Ethridake, Locke's Mills, Me.-Boot and Shoe.-January 21, 1868.

Claim.-1. The new arrangement of the upper A and the cushion cover B with the wooden sole D , fund the leather sole E placed underneath the said wooden sole, the upper A and the cover B, under sach arrangement, being carried around the edges of the wooden sole, and being serred to the sole E , as specified.
2. And in combination with the wooden sole, cushion cover, upper and metallic sole, arranged as described, the finishing welt $G$, applied between the upper and the metallic sole, as set forth.
73,590.-Albert I. Ferguson, Sharon, Pr.Process of Recutting Piles.-January 21, 1868. -The files are cleaned in a weak solution of potash and then washed and dried; they are then laid in a wooden vessel and covered with water, 1 pint; to which is added pulrerized blue ritriol, 2 ounces; and boras, 2 ounces; to this is added sulphuric acid, 7 ounces; and vinegar, $\ddagger$ onnce. The files are turned to bring the liquid to aet on both sides equally. When re-
mored from this they are Washed, dried, and coated witll olive oil.

Claim.-The combination of the Withiu deseribed ingredients, when used for reentting files, substantially in the manner herein speeificd.
(33.591.-Martin Feuerstein, Williamshurg, N. X.-Sausage Filler. - Jannar' 21.1868. - The plunger is hinged to a rach bar, which is engaged by a spur wheel, actuated by a winch.

Claim.-1. The pistou rod $i$, when pisoted to the end of the bent ratehet har $g$, with which har the piston rod is arranged and mores parallel, substamtially as herein shorrn and described.
$\underset{\sim}{2}$. The machine for filling sausages, consisting of the upright crlinder A, piston E, piston rod $i$, piroted to the reciprocatiag bar $g$, and of the tabe $a$, prorided to receive and hold the remorable tube $c$, all made and operating substantially as herein shown and described.
73.532.-Oliver Follett, Pittsfield, Mass.Bellows for Musical Instrument.-Januar'y 21, 1868. -The springs or weights used in the bellows are relieved of part of their tension by other springs or weights regulated by stops or pedils.

Clatm. - The applieation of the subsidiary weichts or springs to the bellows of musical instruments, Whercby the performer can regulate the pressure of mind by meaus of pedals or stops, substantially as herein specified.
93.593.-J. G. S. GARWOOD, Vermillion, Ill.Harrow, (wltivator, and Planter, Combined.-Janutre 21, 1868 . - The whecls are rigidly attached fo an axle which carries the seeting eylinder, and is remorable when the machine is used as a harrow.

Claim.-1. The combination, in one machine, of the harrow A B, plow standards $G$ I, plows II J, seed hox C, dropping cylinder D , axle E , and wheels F . substantially as herein shown and described, and for the purpose set forth.
2. In combination with the above the curred spring plate or apron N , seed box C , and dropping ejpinder I, substantially as herein shown and teseribed and for the purpose specified,
3. The eombination of the slide $K$, lever $L$, and hook $\$ I with each other and with the seed box C and dropping eylinder D, substantially as herein shown and described and for the purpose set forth.
$73.594 .-$ Willian Gee, New Tork, N. Y.-Apparatus for Filling Siphon Bottles.-Jannary 21 , 1868. -The top of the siphon bottle rests in a cup at the upper cnd of the treadle rod. The cup acts on a siphon ralye lerer so as to depress it when the bottle is in position for filling. The elevation of the treadle bring's the nozzle of the siphon into the month of the filling pipe. The two-way coek in the reservoir pipe is first turned to eompress the air within the bottle by introdnction of liquid, and then allows its discharge, after whicl the coek is agrain turned to complete the filling. A shield protects the operator from bursting bottles.
Claim.-1. The teleseopic bracket C , adjustable substantially as describerl, when applied to an apparatus for filling siphon bottles, for the purpose specified.
2. The foot $G$ applied to a sliding rod, $D$, and arranged to operate in conncetion with the bracket C and the parts thereto attached, substantially as and for the purpose set forth.
3. The adjustable notehed eollar $j$ on the part $a$ of the bracket C , in combination with the pin $h$ of the arm $g$ of the guard H, all arrauged substantially as and for the purpose specified.

M3,505.-HENRy GERNEI, New York, N. X.Steam Gencrator.-January 21, 1868.- The steam generator has two eylindrical sluells, one inside the other. Two frusto-eonical shells are placed, one inside the other, in such a manner that two fire flues are obtained, which gradually contract as they extend from the furmace first to the rear, and then on the return of the smoke stack.

Claim.-1. A steam boiler having a conical flue F , situated in a conical shell E , which is surrounded by cylindrical shells A D , substantially as herein set furth.

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2. The combination of the conieal flue with the conienl shell E and with the grate $(G$, substantially as and for the purposes described.

73,536.-Charles GOoch, Cineinmati, Olio.Ice Cream Freezer.-January 21, 1868. -The aspitutor shaft carries a spur wheel which engrages a pinion commonicating motion to the cam by an inside ring gear.
Claim. - The internal spur wheel $K$ in combina. tion with the wheels Land M, substautially as lerere in deseribed, for the purpose of securing an opposite motion to the agitator and the can.

83,57.7.-Grorge P. Machennerg, Coxsachic. N. Y. - Fegetuble Cutter.-January :21, 18, - The cabbage is plated in the fised eylindrical hox and pressed donnmard by the follower upon the rotating cutter disk.

Claim.-The combination of the stationary ressel A, revolving toothet ring D, having flange F mules the lower edre of the ressel $A$, slotted levolving disk $G$, fitted by slots a upon the lugim of the tootheat ring, enters I. indjusting serews K, sockets U, fixed bar M, in the ressel $\Lambda$, follower $N$, and gear wheel Q, all operating as described for the purpose specified.
73.508.-Gborae Hastings, Jh., Wheeling, W. Ta.-liolling Machine.-Jamary 21, 1868.-The 1olls are geared together, and the middle one is of smaller dianeter. 'I'he urper two are adjustable rertically.
Claim.-1. The rollers $\mathrm{C}, \mathrm{D}$, and E , and the rider's, carriages. and boxes $I^{\prime}: G$, and II, with the support$i n g$ rods $5 . J$, combined and armanged substant ially as shotrn and described, for the purposes set forth.
2. The collars N , groores O , and elutel coupling $M$, in combination with the rollers $\mathrm{C} D \mathrm{~F}$, sides and carriages imd boxes F G $H$, and supporting rods $J$, as herein described, for the purpose described,
3. In three high rolls, comecting the middle and upper rolls, so that they shall move up and down together, substantially as shorn and described.
g: 3 , $559 .-H i m a n$ W. Haydex, Waterbury, Conn. -Lamp.-Jannay 21 , 1868.-The ehimney holder is supported on fras catending from the cap. 'The combined deflector and perforated air chamber is slipped down the wick tube to give access to the wiek. C'laim.- I perforated air-chamber, $h$, ankl deflector $g$, fitted to slicle vertically upon the wick tube, in combination with the chimney holder, sustained by arms to the burner cap, substantially as aud for the purposes set forth.

73,600.-Miran W. Hayden, Waterbury, Comn. -Lamp.-Jammary 21, 1868. -The perforated cup be neath the deflector slides downward to give access to the wick for trimming and lighting.

Claim.-1. A chimney holder, connected permanently to the burner shell, and provided with a short deflector, in combination with a stationary wick tube, and arranged as set forth, so that access is given below the chimney holder for trimming the wick, as set forth.
2. A sliding perfornted cup, having a bottom with a slot for the wick tube, and applied between the burner shell and chimmey holder, substantially as set for'th.
3. The perforated eup $k$, stud $e$, deflector $g$, and chimney holder $f$, in combination with the burner and wick tube $h$, substantially as and for the pur. poses set forth.
4. A friction spring, in combination with the perforated cup $k$, for sustaining the same at any point to which it muy be mored, as set forth.

7:3,601.- Hevily Helar, Pittsburg, Pa.—Washing Machine.-Sanumy 21, 1868. -The upper largeribbed roller is tumed by treadle and cranks, and acts in commection with a series of small-ribbed rollers turning in wheels, eommocted by clastic strips to an elastic ring concentric with the shaft of tho maiu roller.

Chaim.-1. The elastic rings e, upon the grooved whecls $r$ of the rollers 11 , attached by the elastic strips a to the centrial elastic ring' $e^{\prime}$, upon the shaft D, all constracted mul operating as described, for the narpose specified.
2. The eombination of the rollers H, suspended from the shaft $D$, by the elastie bands and rings, grooved rollers $r$, washer W, strips $f$, box T, divided into three eompartments ly the vertical partitions $u$, erank wheel $W$, rods $C$, treadle $t$, pivoted seat $S$, as herein deseribed, for the purpose speeifica.
3. The eombination of the elastie rings $e e^{\prime}$ and elastie strips $a$ with the rollers II, slaft D, and vibrating washer $W$, as herein deseribed, for the pruppose speeified.
gatabor.--H. H. Hindrick, Dayton, Ohio.Steam Engine Globe Valve.-Jauuary 21, 1868. -The valve has an annular lip resting on a flat seat, and turns in the soeket at the lower end of the stem.

Claim.-As a new article of manufneture a disk vakre 13 , formed of elilled or ease-hardened iron, in the manner deseribed, and loosely attaehed to the stem, substantially as shown and speeified.

73,603.-Samuel B. Henry, Bridgeport, Conn. -Arlicles Mfade of Molded Wood.-Janary 21, 1868. - The blocks of wood are pressed between molds in the direetion of the grain, and impregnated with a solution of India-rubber. The blocks are then dried and immersed in ehloride of sulphur.

Claim.-A bloek or strip of molded rood, the fibers of whieh have been displaced by the aetion of dies applied to the ond grain, as deseribed, and the pores of whieh are filled with rubber, or its equivalent, applied in solution.
'gis, 604.-Thomas Hile, Now Centreville, Wis. -Lathing Machine.-January 21, 1868.-The laths are elamped to a frame and the frame elamped to the joists or' studs while the laths are being nailed.

Claim.-1. The stand A, in combination with the sliding or adjustable frame $B$, when used in conneetion With bars $G$, in whiel laths are elamped or seeured, and all arranged in the manner substantially as and for the purpose set forth.
2. The sliding or adjustable frame C, eonneeted with the lever frame Gx by the racks and pinions D E , when said parts are used in conneetion with the frame $B$, and the bars $G$, providedewith the slides $l$, and arranged to operate in the manner substantially as and for the rurpose speeified.
3. The slides $l$ and springs $m$, plaeed on the rods $j$, within the bars $G$, and arranged to operate in connection with the frame C , substantially as and for the purpose set forth.
4. The rods $\theta 0$, arranged with the noteh $r$, frame C , spring's $g$, and the plates $h$ and $t$, to operate in connection with the slides $l$ of bars $G$, substantially in the manner as and for the purpose set forth.
5. The clamps I, applied to the bar J, in eombination with the bars $G$ and the slides $l$, whieh hold the laths, ail arranged substantially as and for the purpose speeifice.
m3,605.-Orsamus Holmes, New Lenox, Ill.Grain Separator.-January 21, 1868. - Two of the piroted bars on which the straw shoe is supported are piroted at their lower ends to the grain shoe, and eause the shaking motion thereof.

Claim. -The bar's S, pivoted near their centers, U, to the frame of the maehine, and supporting the straw shoe $B$, their lower ends pivoted to the grain shoe $T$, whose outer end is supported by the pivoted bars $\vec{V}$, all arranged as deseribed, whereby the movements of the straw shoe $\bar{B}$ and the grain shoe $T$ are simultaneous, as herein set forth, for the purpose speeified.
-3,606.-W. T. Howell, Alfred, N. X.-Plow. -January 21, 1868. -The share is secured to the standard by a loop whieh is slipped on the lower end of the standard and retained by a pin driven into the latter. The brace-rol enters a noteh in the share and prevents turning.

Claim.-The attaching of the share E to its standard D by means of the band F, fitted on the eylindrieal part $b$ of the stand, the pin cx on which the band rests, and the braee rod Fx, fitting in the reecss or depression $e$ in the top of the share, all arranged substantially as shown and deseribed.

7B,G0\%.-David W. Hughts, Quincy, Ml.-I'tow.-Januar'y 21, 1868.

Claim.-1. The placing of the plows at the oater sides of the wheels B B, substantially in the manner as and for the purpose set forth.
2. Having the plows or shares I J plaeed in reverse oblique positions for the purpose of dispensing. with a landside, to aroid frietion and draught, and to keep the implement in line with the line of draught, as set forth.

73,608.-Benjamin Irvivg, New York, N. Y.Steam Generating Apparatus for Heating Build-ings.-January 21, 1868. - The water is contained in a reservoir oommunieating with the lower ends of the helical eoils of pipe within the eylindrieal vertical furnaec. The upper ends of the eoils communieate with the steam space in the reservoir, and form an injector to supply the said reservoir with waste water from the heaters. Dampers above the coils regulate the eireulation within the furnaee.
Claim.-1. The eombination and arrangement of the dampers N and S , made and operating substantially as hereinbefore set fortli.
2. In eombination with the eoiks of pipe, and dampers N and S , the perpetual reservoir of water E , inalle and operating substantially as hercinbefore set forth.
3. The eombination and arrangement of the nozzle II with funnel I, substantially as hercinbefore set forth, and for the purposes deseribed.

193,609.-DAVID D. Jonts, Seranton, PanClothes Pin.-January 21, 1868.
Claim.-The pins A and B piroted together at one end, and provided with the eollar C and spring D , the several parts being eonstrueted and used as and for the purpose speeified.

73,610.-Orlan L. Jordan, Dowagiae, Mieh.Concrete Building-Block Press.- Januar'y 21, 1868.The bloek is eompressed by a toggle lever, and ejeeted from the mold by a simple iever and rod eonneeting it to the plunger bottom.

Claim. - The eombination of tho frame A with box $B$, bars $G$ F, lever $E$, follower D, bars $I X$, and lover II, the whole being constructed, arranged, and operating in the manner substantially as and for the purposes set forth.
g3,611.-Dariel Kaufman, Boiling Springs, Pa.-Fence-Januar'y 21, 1868.- The fenee is supported on the lower ends of the braces which are pivoted to metallie shoes and raised above the ground thereby.

Claim.-1. The fonee-posts A, when supported above the ground by means of the metallie shoes D , piroted to the lower ends of the inelined braees C , as herein described, for the purpose specified.
2. The posts $A$, formed of tifo parts, slotted for the reception of the rails $B$, the ends of the rails of one pancl fitting against the ends of the rails of the opposite paucl, in the center of said posts, in corubination with the braces C , horizontal pieces $e^{1} e^{2}$, and metallie supporting shoes D , as hercin deseribed for the purpose specified.
g3, 612.-Christian F. Knauer, Pittsburg, Pa.Curtain Fixture-Tanuary 21, 1868. -The eord is prevented from flying off the pulley by a covering flange upon the bearing braeket. The siles of the pulley groove are in sections, a projeeting seetion upon one side being opposite to an aperture on the other to inerease the tension ou the cord.

Claim.-1. The pulley bearing B, with its aperture or flanges $i$, slots $e$, arranged and construeted substantially as described and for the purpose set forth.
2. The cord pulley D, provided with teeth e on its periphery, and journals $J$, when arranged and operated in combination with the eord E, sulstantially as described and set forth.
'g3,613. - Joserit Langenbach, Dorehester, Iowa.-Ox Yoke.-January 21, 1868.-The padled bows eonsist eaeh of two side picees, whieh are piroted to the yoke and their lower ends eonmected by hame straps.

Claim.-1. The padded bows B, made in two parts and pivoted within slots in the stock $A$, when provided with a serics of looles $d_{\text {, }}$ in tho tonons $a$, all
construeted, arranged, and operating substantially as and for the purpose deseribed.
2. Providing the stock and the upper ends of tho bows, or either, with a series of set holes substantially as described, so as to inuke the roke adjustable for larger and smallor animals, as set forth.

T3,614.-Jules IECOCQ, Now York, N. I.Truss and Abdominal S'upporter. Tanmary 21, 1868. Claim.-Forming trusses, abdominal supporters, \&e., of wire A, bent into the form required, and corered with rubber tubing $B$, substantially as herein shown and described, and for the purpose set forth.
\%3,615.- Abrailam Lutz, Orangeville, Ml-Machine for Sawing Hoops.-Janmary 21, 1868; antodated January 17, 1868.-The pole is fed between top, bottom, and side guides, to the reciprocating saw.

Cluim.-The construction and arrangement of the ineliued fixed bearing E, haring the pin $e$ and concave head $e^{\prime}$, spring F , provided with the horizontal roller $G$, and bent spring $H$, with eoneave arm $b$, as herein shown and described, for the purpose specified.

73,616. Tames B. Lyons, New Haven, Conn., assiguor to Lyons Peat, Coal, and MLachine ConPANY, New Kork, N. Y, Machine for Molding Peat. -Jannary 21, 1868. -The peat is foreed by the rotating snail out through the series of spouts, and upon the drying trays, mat the eylinders of peat are nicken so as to render them easily dirisible.

Claim.-1. Delivering the peat, in rolls or bars, on the drying raeks, for the purposes set forth.
2. The revolring marker E, with its blades e e e e, as arranged, in combination with the delivering mechanism and drying raeks, substantially as herein described, for the purpose deseribed.

73,61\%.-EDWARD MLANICO, London, England, assignor to John P. Manico, New Orleans, La.Marine Foundation.-Jannary 21, 1868. - Patented in England Oetober 23, 1857.-The angular erate is made of bars erossing each other at right angles, and riveted at the intersections. One side is removable, to allow the introduetion of stones.

Claim.-The combination of parts and articles herein deseribed, when the same are used for obtaining fonndations for marine and other struetures roquiring them.
73.618.-Fraxcis B. Marden, Bangor, Me.Combined Potato Planter, Hoe, and Potato Digger. -Jannary 21, 1868.-The digger is detachable from the double plow. The plows are adjustable and operate upon both sides of the row simultaneously.

Claim.-1. The mode of operating the shaker F by an eecentric $b$ and pitman $f$, so arranged and eonnected with the hanging irons $j j$ that, by raising or lowering the handles to any given point, it does not prevent the free and easy working of the shaker $F$.
2. The digging point $G$, shaker F , finger reel $\dot{E}$, comb $P$, with the cccentric $b$, pinion $a$, and driving wheel C, in eombination with the journal boxes $h h$, having projecting axles $i$ i for attaeling the draught irons $j j$, when constructed and arranged snbstantially as and for the purposes hercin set forth.

73,619.-TAMes S. Matesh, Lewisburg, Pa.Harvester Ralic.-January 21, 1868.

Claim.-1. The combination, substantially as dcscribed, of a main frame, smpported upon two wheels, and a laterally-projecting platforin and cutting apparatus, so hinged to the main frame that the entting apparatus shall be in advance of the main axle, with a series of combined rake and reel arms, all revolving on a rertieal axis, or one nearly so, on a support mounted on the platform, near its inner front eorner, for the purposes set forth.
2. The combination, substantially as described, with a two-wheeled front-cut harvester, of a series of combined rake and reel arins, having a vertical axis, or one nearly so, on a standard or support, mounted on a hinged platform, near its inner front corner, the arms being independently hiaged, and having a rising and falling movement independent of their axis of rotation, for the purpose set forth.
3. The combination, substantially as deseribed, with a two-wheeled front-cut harvestcr, of the inain frame between the wheels, the intermediate hinged coupling arms $\mathrm{F}^{1} \mathrm{G}$, the cutting apparatus, and platform, and a serios of rake and reel arms, pivoted to a crown whecl or central hub, revolving on a vertieal axis, and driven by an extensible connection from the main axle, for the purposes set forth.
4. The combination, substantially as described, of two driving wheels, a frame arranged between the wheels and projecting beyond their periphery at either end, a laterally-projecting eutting apparatus, and platform pivoted to said frame by hinged conncetions, both in front and rear of the wheels, the eutting apparatus being in advanco of the main axle, and a eombined rake and recl, revolring on a vertieal axis near the inner front cormer of the platform. and always revolring outside of the wheels, for the purposes set forth.
5. The combination, substantially as described, in a two-whecled front-cut hinged-bar machine, of a combined rake and reel, mounted on the inner front eorner of a platform, suspended from the main frame by flexiblc comncetions attached to the compling arms, and with the lifting devices attached to the rear end of the tongue, for the purposes set forth.
6. Attaching each of the rake or reel arms to their pivoted shanks by means of a slot and set serew or bolt, so that these arms can be adjusted and set to work at different heights abore the platform, to suit different heights of graim, substantially as describect.
7. The eombination, substantially as deseribed, with a combined rake and reel, mounted on the inner or gearing side of a grain platform, of the divider $\mathrm{D}^{1}$, and inwardly-inelined removable deflecting board $D^{3}$, for the purposes set forth.
8. The combination, substantially as deseribed, with a revolving rake and reel, mounted on a hinged platform, of an adjustable inner graiu guard E , at tached both to the shoe and to the inner eurved guard $\mathrm{D}^{4}$, for the purposes set forth.
9. The eombination, substantially as described, with a two-wheeled front-ent machine, having a revolving rake and reel, momnted upon a hinged platform, of a lateral hinged curved brace or coupling arm, or its eqnivalent, attached to the inner side of the platform and main frame, in rear of the wheels, and suspended from the main frame by a chain or other flexible eonncetion, for the purposes set forth.
10. The folding joints $g g$, or their eqnivalents, as a means of commnnicating motion to rake or reel arms, which are so supported as to move in harmony with a hinged platform, substantially as deseribed.

193,620.-C. W. Martin, Mount Plcasant, Iowa. - Juckle.-January 21, 1868.

Claim.-1. The buckle, constructed as describer Whereby the trace is passed under the end bar $F$ of the part $B$, and over the eonvex side of the plate $H$, under the notehed bar F , orer the tongue M and beneatli the bar K, as and for the purpose specified.
2. The bnekle, eonstrueted as described, consisting of the $S$-shaped frame $B$, having the loop $G$ and coneavo-convex plate $I$, and provided with the lugs D , to which the curved frame C is pivoted, said frame having tho cross bars K L aud tongne M fitting into the noteh $N$ of the end bar $F$ of the part $B$, as lerein shown and described.

73,621.-William W. Mantin, Alleghany City Pa.-Lubricating Oar Wheels.-January 21, 1868.The interior of a ear wheel has an oil reservoir, which commnnicates with an oil chamber in the opening for the axle. The oil hole passes through a radial projeetion into the reservoir, so that when the wheel is at rest the oil will not flow to the joumal.
Claim. - The reservoir A, provided with projection O, furnished with an opening 3 , for eommmieating between the reservoir $\Lambda$, chamber $n$, and opening $B$ for the axle, the whole being construeted, arranged, and operating substantially as herein described, and for the purposo set forth.

173,622.-Natiian Maxey, Plymonth, Ind.-Bed Bottom.-J anuary 21, 1808.-The slats are eonnected together by metallie loops and links, and suspended from the bed rails by India-rubber loops.

Claim. -The slats C C, provided with loops D D
and collars $G G$, and connected to the side rails and end rails by the springs I I and $a$ and staples $I I$ and $e$, substantially as and for the purpose set forth.
7.3.62: -J. B. McCormick, St. Louis, Mo.Harvesticr Rakc.-January 21, 1868. -The grain is laked fiom the platform npon a tilting table, which is operated to deliver the garel to the binders.

Claim.-1. Operating the pivoted rake head II by means of the fixed cam $G$, into the groove $f$ of which the outer end of the rake arm $F$ is fitted, in connce. tion with the rods $j k$ and the bent lever $I$, all arranged to operate in the manner substantially as and for the purpose set forth.
2. The hinged table M, operated through the medium of the eecentrie $N$, from the driving wheel $B$, substantially as set forth.
3. The eombination of the rake $I I$ and hinged table M, constructed and arranged for joint operation, in the manner substantially as and for the purpose specified.
 Ind.-Gate Latch.-January 21, 1868.-The latch oscillates in a horizontal plane, and its inner end is commected to a woighted bell-crank lever, by which its tree end is thrust outward. The knob spindle has an arm operating on the lever.

Claim.-1. The cateh G, formed by a series of parallel flanges, in combination with a horizontally swinging lateh $F$, substantially as deseribed.
2. The eombination and arrangement of the shank $C$, arm $D$, bell crank-formed lever $E$, and latch F , substantially as set forth.
\%3, 6:35.-John H. Miller, Vernon, Ind.-Animal Trap.-Jannary 21, 1868. -The bait is plaeed on a platform, whose deseent trips the sliding doors at eaeh side of the first chamber, and the rat, in entering the second ehamber, treads on a platform and closes eommunication between the first and seeond, and resets the trap. The rat passes into the third chamber, beneath a rising, grated door.

Claim. An animal trap, construeted with a case A, subdivided into eompartments, with the openings closed by doors $\mathrm{C} \mathrm{C}^{\prime}, \mathrm{K}$, and L , which are aetuated by means of the platforms $G$ and $H$, trigger $F$, shaft I), and arms E aud I, arranged to operate substantially as set forth.

煦:626.-Nicholas B. Miller, Orion, Mich.-Harrove.-January 21, 1868.-The harrow has whecls, supporting it at a eertain height.

Claim.-The frame A, teeth D D, bars B B, with wheels C C, and wheel E, when construeted, eombined, and arranged as and for the purposes specified.

93, 627.-JOHN D. Mills, Dayton, Ohio.-Paint Compound.-January 21, 1868.-Composed of airslaked lime, 5 ; oxide of zine, 4 ; wood ashes, 3 ; soft sandstone, 2; and plaster of Paris, 1 part. Linsced oil and a dryer are added.

Claim. -The eomposition of the above named inigredients as a paint, and to be applied as I apply them, by grinding, bolting, oiling, and painter's brush.
73963.-Rufus S. Mitchell, Elizabeth, Ind.Flour Scoop and Sifter.-January 21, 1868.-The seoop bottom eonsists of a sicve, through which the flour is foreed by the beater.

Claim.-A flour seoop, eonsisting of the sides $A$, having shoulders $a, \operatorname{lip} D$, sieve $B$, wooden baek $C$, beater E , and spring F , all construetad, arranged, and operating as and for the purpose set forth.

73, 629.-Horace Molbr, Davisburg, Mieh.Corm Harvester.-January 21, 1868. - The eutting frame is earried beside the wheel frame which is somewhat similar to that of a wagon. The corn is eut by the rotating cntter and carried by a lower and upper reel to the eireular stand, which reecires a semi-rotation by tightening the belt eonnceting a pulley upon its shaft with one on the main shaft. The turning of the stand presents the stalks to the operator who ties them into a bundle and plaees them upon the hinged frame which is operated by eords
and is swung over to deposit the bundles on a wagon alongside.

Claim.-1. In eombination with the frame $A$, provided with the raek $D$ and cords $d d$ and standards $a$ $a$, the hinged frame C , rotary cutter, eord $s$, and lever I', arranged in the manner and for the purposes set forth.
2. The revolving platform K, with its bars L L and $R$, for supporting the cornstalks, and operating as and for the purpose speeified.
3. The arrangement of the eutter wheel $O$ with the revolving platform $K$ and the reels $P$ and $q$, substantially as and for the purpose speeified.
\%3,630.-T. W. Moore, New York, N. Y.Culinary Apparatus.-January 21, 1868.-The water draining from each one of the vertieal scries of steamers is returned to the boiler without eontaminating the matters in the steamers lower in the series.

Claim.-1. Proriding the inner side of the ehannel a at the joints with holes or reeesses, substantially as and for the purpose herein shown and described.
2. The inclined ehannels $c$, when arranged within the vessels $B$ and $C$ along their walls for conducting the eondensed steam baek to the boiler, substantially as herein shown and deseribed.
3. The steam way D, when arranged as deseribed so as to convey the steam from the boiler into the upper vessels $B C$, and to reconduct the eondensed steam to the boiler, as set forth, the steam way being either attached to the upper vessel BC , or to the boiler, or both, as deseribed.
4. The perforated pipe $D$, when arranged as set forth, in combination with the recessed or perforated flange of the ehannel $a$, and with the inelined ehannel or ehannels $c$, all made and operating substantially as and for the purpose herein shown and described.
5. Making the bottoms of the vessels $B$ and C in. elined to one or more sides so as to guide the liquids. to a eertain desired point or points, as set forth.
6. The vessels B C having inelined bottoms and provided with pipes E and steam pipes D , in combination with a ressel $B$, as and for the purpose dcscribed.
7. The vessels A B C, when protided with perforated channels a and steam pipes D, and when otherwise made as described, in combination with the ehannel or channels $c$, pipe or pipes $E$, and vessel or ressels F , all made and operating substantially as herein shown and deseribed.
g: 6:31.-DUACAN Morrison, Portland Me.Converting Reciprocal into Rotary Motion.-January 21, 1868. -The oseillating arm has a pawl on caeh cad. The pawls aet alternately on the ratehet gear.

Claim.-The weighted swinging arm $\alpha$, swinging on the pirot $b$, aud the two pawls $c$, one abore and the other below the pivot $b$, and operating upon the gears c $f$ alternately, so as to impart to the slaft $g$ a continuous revolving motion, as deseribed, together with the standard $x$, eateh $w$, rod and pulleys $u t$, all arranged and operating for the purposes set forth.
\%3.6B3.-John F. Mullen, New York. N. Y.Top Prop for Carriages.-January 21, 1808.-The serew has a left-hand thread and serves to prerent the eseape of the right-hand serewed nut beneath it.
claim.-The screw $f$, construeted and applied substantially as and for the purpose deseribed.

93, 633.-Melmann Neumana, New York, N. X. -Bucklc.-January 21, J868.-The tongue turns upon one side bar and its point passes through a noteh in the inner side of the other side bar. The tongrue lies in the bight of the strap.

Claim.-The arrangement of a noteh or reeess in the sicle bar Gr of a buekle frame, substantially as and for the purpose described.
"33, 684.-Augustus W. Nrwell, Bradford. Pa. - Stcam Gencrator.-January 21, 1868.-The fire box is made separate from the eylindrical part of the steam generator and is attaehed thereto by angle brackets. The steam and water spaces are eomsceted by pipes with expansion joints.

Claim. - The construetion of an adjustable fire box, as horeinbefore described, provided with suitahe
fastenings C C, steam pipes D, with expansion joints E and proper "ater pipes F , arrauged substantially as and for the purposes described.
73.635.-Samuel B. B. Nowlan, New York, N. Y.-Areade Railroad.-Januarr21,1868.

Claim.-The areade road and railroad, constructed and arranged as described consisting of the road Fars $\mathrm{A}, \mathrm{B}$, and C , the upper roadway supported by iroin columns D , and having gas and water tubes $a$, aud the second by masonrs, through which the seners $c d$ and pheumatic dispatel K pass, said roads prorided with open spaces $F$ for the admission of light, and haring the stairrays E, substantially as herein sbown and described for the purpose speeified.
73.636.-H. J. Noyes, Aslitabula, Ohio.-TinTare Scaming ILachine.-Jannary 21, 1868.-When the cylindrical part of the can is formed and the flange turned upon the bottom the seam is completed lis the grooved roller and pressure head. The pressure head is drawn downward by a treadle and raised by a spring.

Claim.-1. The adjustable rotating gauge pressure bead E with the spring $\mathrm{F}^{\mathrm{F}}$ and support $\mathrm{E}^{\prime \prime}$, coustructed and operating substantially as specifica.
$\because$. The inclined rotatiug pressure head B, when construeted substautially is shown, and operating on the seam of the ware in the manner stated.
3. The rotating seaming head $A$, and slotted bearing $\mathrm{C}^{\prime}$, constructed and operating as deseribed, in combination with the said pressure head $B$ and adjustable gange pressure head $\mathbf{E}$, as and for the purpose specified.

73,637.-L. A. Oellig, Martinsburg, Pa.-DiyHouse for Fruit, de. -January 21, 1868. - The cylinalrical dry house has an air register at bottom and a furnace whose flues pass up wardly between the rectangular sides of the trays and the shell.
Claim.- A circular dr'y house, made in sections of shect iron or other suitable material, with drawers, furnace, pipes, and slides, arranged substantially as deseribed.

93,638.-Charles W. Palarer. Lemm, Mass., assignor to L. B. Fraizer, tristee for ${ }^{\circ} \mathrm{C}$. W. Palmehe L. B. Fraizer. II. E. P'almer, and Charlis Movorllos-Machine for Finishing the Elges of Boot and Shoe soles.-Jinuary 21, 1868. -The edge of the detached sole is submitted to the aetion of the rotating rollers, which may be heated to increase their action.

Claim.-For the purpose of finishing the edges of detached soles, the machincry construeted and operating substautially as deseribed.

93, 639.-Charles H. Parshall, Detroit, Mieh* - Air Whistle. -Janlary 21, 1868.-The punp is double acting, diseharging through valres at its upper and lower ends into a chanber having a whistle upon its head. This chamber' is in communication with a eylinder in whiel a weight plunger gravitates to furnish a constant supply of air to the whistle.

Cluim.-The combination of the pump b, the air ehamber C , the cylinder E , plunger K , and whistle or horn A. constructed and arranged to operate substantially as set forth.
 Apparatus for Treating C'ane Juicewith Sulthurous Acil.-January 21, 186.-Tmprovement on his patent, September 11, 18 citi. The juice is retained at a fixed depth in the eylinder by the partition, and is raised by the recolving troughs and poured through the sulphurous acil was with which the upper portion of the erlinder is filled.

Claim.-1. A stationary erlinder A, in combination with recolving troughis E , one or more or their equivalents, said trougis being contained withiu suid erlinder and mmployed to raise and drop the juice in order to bring it under the effective action of sulphurous acid, substantially as deseribed.
2. The projectiou or partition F , arranged and cm ploved in the manner and for the purpose set forth.
3. The provision in the troughs E of the partitions $\boldsymbol{c}^{\prime}$, suinstantially as and for the purpose set forth.

93, 641.-Henry Wr. Pell, Rome, N. Y.-Mar-vester.-January 21,1868 . The object is to orereome side draught. A segmental bar is secured beneath the tonguc. The lever to which the doubletree is connected is supported on anti-friction lollers tracking on a segmental bar attached to the lower side of the tongue.

Claim.-1. The segmeutal strap or guide-Tray D, mounted on the tongue $A$, in combination with the lerer' G . substantially as set forth.
2. The lever $G$ in combinatiou with the dranght chain I, comected to the frame $B$, substantially as and for' the purposes specified.
3. Alounting the whifletree bolt in line with the tongre, or nearly so, upon the center of a lerer fulerumed at one end and at the other connected by a draught chain to the frame of the machine, substantially as described.
83,642.-Menry W. Pell, Rome, N. Y.-Har. vester-January 21, 1868.-The draw-holt of the donbletree is peudent from the longitudmal bar, swinging on links beneath the tongue. The drawchain is connected to the said bolt by a cleris.

C'laim.-1. The longitudinal bar C, connected at cach end to the tongue, by swinging arms $\mathrm{B}^{3} \mathrm{~B}^{\prime}$, and carrying a stud or bolt, D ou which the doubletree and iraught cleris are mounted, substantially as and for the purposes set forth.
2. One or more pairs of swinging arms, $B$, supporting the draught clevis and whiffetree bolt, rerticaily and lateralls, and permitting their free play lougitadimally bencath the tonguc.
73.643. - Antonio Pelcetier, Washington, D. C.-Barrel and Cask for Containing Oil, dec.January 2l, 186ie.-A paint composed of red lead, 4 onnees, and silicate of soda, 1 sallon, is applied to the inside or both sides of a barrel.
Claim.-1. The composition cousisting of silieate of soda and red lead united, as a coating for oil barrels and similar ressels, is deseribed.
2. As a new article of manufacture, an oil baxel or similar vessel, when coated with the composition hereiu deseribed.
73.644.-David Petticretw, Westrille, Ohio.Garden Plow.-Jannary 21, 1868.-The fore end of the beam is supported on a roller, and the plow is driven by the person holding the handles.

Claim.-A garden plow, construeted with a single shorel, A. standard B, handles R, beam C, and wheel $G$, said parts being respecticely constructed and ilrranged substantially as set forth.

73,64t.--Samuel B. Pierce and Pembroke Pierce, Homer, N. Y.-Conerete Roofing.-January 21, 1868.-Composed of gravel, grouud sand, asphaitum, ground sandstone, rosin, tshes, lime, coal tar, cach 1 part, and "Ioscudile" cement, 8 parts.
Claim. -The mixtme of the above-named iugredients, when used substantially as and for the purpose specifica.
73.646.-A. IN. Potter, Williamshurg, N. Y.Chronometer Escopement.-Jtunary 21, 18i8. Each of the teeth of the scape whed comes in course in eontact with each of the three pallets. The first pallet scres to lock and unlock only, and the others have morement with the teeth of the seape whecl. A pin on the roller carrying the last pallet enters the fork of an arm on the shatt of the other two pallets.
Claim. -The pallets 13 and $B^{\prime}$, rigidly attached to the arbor K, in combination with the obtusels-pointed toothed eseape wheel A A A, lever C, tork L, pin Q, roller $R$, and pallet $D$, all constructed, arranged, and operating substantially as herein deseribed and specificd.
73.6ay.-Oxsthle E. Pray, Portsmouth, N. H. -Machine for Cutting Dye Wood.-Tanary $21,1868$. - The rotating drum las aljnstable serrated eutters. The wood is fed on in inclined slide, and propelled by a toothed follower, actuated by a spur wheel and rack.

Olaim.-The drum B, construeted as deseribed, its radial arm $c$ provided with chambers d in their outer ends for the reeeption of the adjustable cutters $C$, and
the periphery of said wheel, provided with transverse slots $d x$, as herein doscribed, for the purposo specified.
73.645.-Andrew J. Prescott, Catawissa, Pa. -Tool.-Jamary 21, 1868.-The tool is intended for cutting grooves in the sides of holes in flue shects. The cutter is upon a hinged lever, whose inner end is thrust ontward by a spring, and is dramn inward Dy the flaring portion of the feed nut, to project the cutter.
Claim.-1. The eutter shaft B, provided with the cutting projection $a$, pirnted in a slot in the mandrel, through an elongated hole, and adjusted in one dircetion by means of the pirot screw 2, substantially as nercin set forth for the purpose specified.
2. The feod mut D , provided with a tlaring mouth, in combination with tho stop screw 1 , mandrcl $A$, and the cutter shaft B, constructed substantially as and used for the purpose set forth.

83,649.-William Rayhill, Pana, IH.-Corn Planter--January 21, 1868.-The sced slides ave connected to a slide bar which is reciprocated transversely by levers, operated by cams, upon a wheel upon the axle. The rear end of the hopper frame is supported on an adjustable bar, and may be raised or depressed by treadles.

Claim.-The bars D D, whecl C, with its cams, slide F , and seed slides G G of the hoppers, arranged and used with the frames A $A^{\prime}$, standard J, bar $K$, and lever I, substantially as and for the purposo set fortll.
73,650.-Elias Rhoades, Sr., Clyde, Ohio.Horse Hay Fork.-January 21, 1868. -The rod to whose lower end the projecting points are pivoted is retained in its lower position by a spring bolt which is drawn out by the tripping cord to release the hay. Claim. -The cross-piece or head $H$, in combination with the bolt or slide I, lever J, spring K, rod D, and shaft A, all constructed, combined, and arranged to operate in the manner set forth.

73,651.-William A. Robinson, Grand Rapids, Mieh.-Hame Fastener.-January 21, 1868.-Oue of the bars is hang to caeh hame. The loop takes over the shoulder of the upper bar and the ratehet of the lower. The spring retains the loop in position on any slacking of the strain upon the hames.

Claim.-The combination of the grooved and ratchet bars $A$ and $F$ with the spring $d$ and loose loop $\mathbf{E}$, said loose loop operating in connection with the shoulders $b$ and $C$, substantially as and for the purposes set forth.
\%3,652.-S. J. Rockwood, Elsah, Tll.-Oandlesticit or Holder.-January 21, 1868.-The socket is tapering, to suit varionss sized candles.

Claim.-The conical or tapering-shaped socket or tube D, for holding a candle, substantially as and for the purpose described.

93,653.-Samuel Roebuck and John Roebuck, New York, N. Y.-Pulley and Block.-January 21, 1868. -The cord runs frecly in the central groove, but is clamped against the other roller by being made to take cither of the spiral side grooves.

Claim. The block A, when combined with the rollers C and B , of which the latter is prorided with concentric and eecentric grooves, substantially as and for the purpose herein shown and described.

73,654.-P. H. Roots and F. M. Roots, Connersville, Ind. - Rotary Blower.-Jantary 21, 1868. The formation is similar to that of a two-headed rotary engine, although wood may be substituted for metal in some of the parts. The paeking strips are metallic ribs, either cast with the easo or radially adjustable therein.

Claim.-1. The packing strips $g$ g, arranged substantially as hercin shown and described, upon the interior surface of the case of a rotary blower, pump, or enginc, to render the same tight.
2. The abutments AB or $\mathrm{A}^{\prime} \mathrm{B}^{\prime}$, in combination with an enclosing case, rendcred tight by means of packing strips, substantially as and for the purpose set forth.
'93,655.-ABBOTT Q. Ross, Cleves, Ohio--Safety Pocket.-January 21, 1868. - The clamp is attached by studs to the sides of the garment, and the toothed jaws are drawn together upon the edge of the pocket.

Claim.-The within-described pocket safe, composed of the arms $\Delta \Lambda$, provided with the slide $C$, lock-catch $d$, tceth $e e$, and blade $f$, the whole combined and arranged as herein set forth.
23.656.-T. F. Rowland, Greenpoint, N. Y.-Sub-Aqueous Tube-January 21, 1868. -The outer casing of cement in form of blocks is attached by bolts, whose forked ends are riveted to rings of angle iron surrounding the metallic part of the tube. The blocks are comected together by tongues and grooves.
Claim. - The application to the exterior of a subaqueous iron tube of blocks composed of cement, tile, or other suitable material, secured to the tube by tongucs and grooves and bolts, in the manner substantially as lerein shown and described.

73,65\%. - Elias Siopbelle, Ashland, Ohio.Lifting Jack.-January 21, 1868.
Claim.-The standard A, provided with a tenon $a$, and piroted at $A^{\prime}$ to the lever $B$, the rack C passing through a slot in the lever, and piroted at $b$ to the standard, when arranged and combined as herein described for the purpose set forth.

193,658.-Franz G. Siemers, Winona, Minn.-Ice-Cream Freezer.-January 21, 1868.

Claim.-1. An ice-cream freezer, provided with vertically-moving concave scrapers, arranged to operate substantially as described and for the purpose set forth.
2. The combination of the rotating case $B$ and ver-tically-moving concave scrapers L, When constructed and arranged to operate substantially as deseribed.
3. The rotating case B, provided with the socket O and the locking stud $d$, constructed and arranged to operate as set forth.
73,659.-IsAac J. Siler, Arcanum, Ohio-Churn.-January 21, 1868.-The spiral-armed dashers rotate in opposite direetions within the oblong creambox.

Claim.-The spiral arms F, and their arrangement with reference to the two shafts C C, forming a churndasher, substantially as and for the purpose specificd.
\%:660.-Darivs Skidiore, Seneea Falls, N. Y. - Billiard-Table Cloth. - January 21, 1868.

Claim.-A new manufacture of billiard-table cloth, consisting of cotton, linen, or other cloth, coated on the surtace in the manncr of preparing oil-cloth, but with dead colors, substantially as and for the purpose deseribed.
'g3,661.-John Sowle, Boston, Mass.-Hinge.January $21,1868$.
Claim.-Slitting or dividing the pin or spindle $a$, made of temphred steel or other metal, so that it will produee the required degree of friction within the hinge, substantiaily as and for the purpose set forth.
73,662.-Menhy Speeler, Trenton, N. J.-Fire Grate.-Jamary 21, 1868; antedated December 21, 1867. -The stean pipe passes longitudinally through the grate bar and throws jets of steam tiom its upper surface.

Claim.-The within-deseribed grate bar A, provided with the tube B, bent as described, the upper portion of said bar and tube being perforated as specified, and used substantially as and for the purposes sct forth.
73,683.-Charles F. Spencer, Rochestcr, N. Y.-Lamp-JTanuary 21, 1868.

Claim.-1. So arranging and combining the parts of the burncr that the chimney is located below the level of the spur-wheel shaft, and in elose contact with the lamp body, and made to inclose the said shaft, as lierein set forth.
2. The combination, with the chimmer, of any suitable gear that will impart motion to the wick by simply turning the chimner, as herein set forth.
3. The arrangement of the revolving eap C , serv-
ing both as the support for the chimner and as the gear for actuating the wiek, as herein set forth.

73,664.-Stephen Sroor, Phelps, N. X.-Lamp. January 21, 1868.-The reflector plate is placed above the cone and attached thereto. It has an aperture for the passage of smoke and serves to reflect the light downward.

Claim.-A shade E , within the chimney A , arranged and operating substantially as and for the purposes herein set forth.

93,665.-TVillam Stevexson, Alleghany City, Pa.- P'uddling Furnaee-FFanuary 21, 1868.- Au additional chamber is furnished which is heated by the caloric current from the pudding furnace, and in Thich the pig-iron is heated.

Claim. - In combination with a puddling furnace, the heater $G$, arranged substantially as and for the purposes described.
g3,666.-H. H. Storis, New Tork, N. Y.Locking linoob Latch.-January 21, 1868.- Then the lateh enters the recess in the door jamb, and the locking bolt is forced back by contact with the jamb, the locking bar engages a stud and loeks the latel until raised by a key.

Claim. -The combination of the locking bar $b$, pivoted to the latel bolt, With the bolt F and latch bolt B, substantially as shown and deseribed.
g3,667.-TENJAMin F. Stover, Ladoga, Ind.Washing Drochine.-Jauuary 21, 18cis.-The roller is attached by connecting arms to uprights, and runs ofer the clothes upon the curved bottom of the suds box.

Claim.-The arms I and $J$ and rods $a$ and $b$, and uprights K , combined, substantially as shown, with the roller $\mathbb{H}$ and bottom surfaces $F$ and $G$, all as set forth.
23,668.-Evocil Swan, Lewistown, Pa.- Wheel Tightener.-January 21,1868 .-The tire has a groove around its innce side which receires the projections on the serew caps at the end of the spokes, and the tire is held upon the wheel by this means.

Claim.-The combination of the cireumferential groored tire 8 with the serews C D and spoke, constructed as described, for the purposes set forth.

73, 669.-J. F. Tapley, Springfield, Mass.Iruling Machine.-January 21, 1868.-Adjustable cam stops are arranged on the drum cylinder Thieh acts in connection with the rulers, and a gato which regulates the fecding of stock to the rulers.

Claim.-The combination, with the drum B, of two sets of adjustable cams $e c$, \&c., one set at one end of the drum operating the pen board or bar, and the other set the stop gate, substantially as shown.

73, 670.-Wilitam J. Tate, New Haven, Conn. - Adjustable spirit Level.-January 21, 1868.

Claim.-1. The adjustable spirit level, consisting of the box B, provided with the perforated projections $a$, througle which the screw bolts $b$, surrounded by the springs $d$, pass, and the adjusting nuts $e$ working in the reeesses of the case $A$, as herein described, for the purpose specificd.
z. The combination of the adjusting nuts $c$ and springs $d$ with the perforated flanges a of the box $D$, and the screve bolts $b$, as herein described, for the purpose specified.
: 7 , Gg 1.-Zalmon Taylor, New York, N. Y.Draver Truss.-January 21, 1868.-The garment has a metallic strap which gives bearing to the pad.

Cluim.-The strap C , or its equivalent, (Then the pad is arranged therein, substantially as and for the purpose set forth,) whether the samo is clastic or nou-clastic.

73,672.-Wildiam G. Thomas, Centralia, Pa.Gauge Cock. for Boiler.-January 21,1868 .--The valve stern is thrust in by the serew bolt.

Claim.-The combination of the screw E with the ralves $D$ and $H$ and parts $B$ and $C$, substantially as shown and described.

73, 673 .-Ira F. Thompson, Providence, R. I.Knife Cleaner.-January 21, 1868. -The box has sinall openings to admit the knives between the adjustable, ribbed, rubber plates.

Claim.-1. The kuife cleaner, formed of the rubbers $f$, introduced with the box $a$, and provided with the pins or screws $g$, as and for the purposes set forth.
2. The clastic septum $e$, fitted as specified, in combination with the said rubbers $f$, bos $a$, and pins or screws $g$, as and for the purposes specificd.

93, 674.-Theodore R. Timby, Saratoga, N. X. - P'aper Cutter.-January 21, 1868.-The angular knife is retained inside its cylindrical easo by a spring, and is projected through the periphery by a thumb knob which projects through the curved slat in one side of the case.

Claim.-1. The paper cuttor, so constructed that When the kaife is thrnst out its cutting edge will form an acute angle with the edge of the case.
2. The slot F , adapted and employed to sraide the paper to the edge of the linife, substantially as set forth.

73,675.-Joun Tipton, Malaga, Ohio.-Hoof Expander--Jannary 21, 1868.-The scriated ends of the arms are placed between the heels of the shoo and forced apart by the screw.

Claim.-The instrument above deseribed, when constructed substantially as and for the purpose specifica.

7:3,696.-Menky Tunner, New York, N. Y.Feeding A pparatus for Flocking Alachine.-Janary 21,1868 . The box has radial agitators on a vertical, rotating shaft. The endless apron passes upono side and has cups carrying up the matcrial and convoying it to the hopper of the tearing cslinder. The material is forecd down upon the tearing eylinder by reciprocal plungers.
Clainz.-1. The automatic feeding apparatus for flocking machines, consisting of the box A, provided with stirrers or agitators $m$, in combination with the apron E , when the same is provided with cups $f$ f and in combination with the plungers o and is and hopper $F$, all mado and operating substantially as herein shown and described.

2 . The pluagers $J$ and $K$, when made of different lengths, and when attached to cranks that project from the rock-shaft at different angles, substantiully as and for the purpose hercin shown and described.
r3,67\%.-GEORGE TWIGG, Birmingham, Eng. land.-Corkscrev.-January 21, 1868. - The handle is secured to the top of the main screw when inserting the spiral into the cork, and is turned down, parallel with the serew, while resting upon the bottle top to draw the cork. The barrel is bisected at bottom and the sections drawn inward by the slide ring, and has an India-rubber bearing on the bottle neek.

Claim.-1. The handle $e$, in combination with the shank $a$, strivel $f$, and nut $d$, as shown in Fig. 1, substantinlly as described, for the purpose specificd.
2. The handle $e$, in combination with the set serew $i$ and groove $k$, as sllown in Fig. (i, substantially as described, for the purpose specified.
3. The handle $e^{\prime}$, in combination with the serew $a$, pin $l$, and clutch-picee $m$, as shown in Fig. 8, substantially as described, for the purpose specificd.
4. The rubber ring or band $v^{\prime}$, Fig. 3 , in combination with any bell or barrel b, Fig. 1, substantially as shown and described, and for the purposes set lurth.
5. The split barrel $w$, Fig. 14, in combination with the ring or ferrule $r$, substantially as shown and described, and for the purposes set forth.

93,698.-THomas Walsifand Augustin Walsif, New York, N. Y.-Bueket for Dredring Machines.January 21, 1868.-The semi-eylindrical dredger is bisected and the sections separated when lowered down upon the mud. In raising, the toggle lerers drawr the sections together.

Claim.-The arrangement of the jointed levers $e$, shatt $b$, guide rods $h$, shaft $d$, chain $e$, and buekets $a a^{\prime}$, when the shaft $d$ is adapted to be drawn down to the shaft $b$ by the chain $e$, for opening the linckets, the guide rods $h$ passing through the shaft $d$, as herein shown and described.
\%3,679.-JOHN E. WATKiNs, Smithfield, Ky.Reilroad Rail Clamp or Othair.-January ¿1, 1868.

Claim.-1. The combination of the flanged clamp C, brace key $K$, and tiphtening key $\mathrm{F}^{\mathbf{N}}$, when seeured in position upon the lails by means of the spilies passing through the flange $C^{1}$, the key $K$ and the base plate (2 upon the outside of the rail, and by the wedge-shaped spikes $A$, passing through the flamee $C^{3}$, key $F$, and base plate $C^{2}$ upon the inside of the rail, as herein shown and deseribed for the purpose speeified.
2. The combination of the flanged or dovetailed clanp $C$, brace key $K$, tightening key $F$, and wedgeshaped spikes A, with each other, substantially as herein shown and deseribed, and for the purpose set forth.
 -Fastening Metallic Collars to Bottles.-January 21, 1868.

Glaim.-1. Fastening the collars to the noeks of bottles by spiming or expanding the metal beneath the projeeting lips or flanges of bottles when the neeks are not grooved. or by spiming the same into a groove or grooves in the neck, substantially as deseribed.
2. Preveuting the metallic collars of bottles from turning round by forming one or more flat sides on the lips or flanges, and fitting the collirs thereto, substantially as deseribed.
g3,681.-Williane Weiler, Waslington, N. J. - Car Coupling.-Janiary 21, 1868. -The lever supportiug the link is held by a catch upon a pin that is thrust baekward by the approaching bumper, and allows the link to fall upou the hook.

Claim. - The eatel $f$ and lerer $h$, arranged on one of the bumpers of a railmay car, for supporting and releasing the link, substantially as set forth.
\%3, 682. -JAMEs H. White, San Francisco, Cal.Flydrocarbon Burner.-January 21, 1868.

Claim.-1. The combined use of the products of decomposed steam and wet or ordinary stean, each being introduced separately, and in such proportions as may be required, into a gas holder or mixer, for the more perfect combustion of the rapor of hydroearbon oils, substantially as deseribed.
2. The superheating and decomposing apparatus, consisting of the cylinders $J J^{\prime}$ aud $I$, and the gas or supply tribe within the mixer or holder D, sulbstantially as described.
3. The horizontal cyliuders or mixers D D, having openings or burners eatirely around their cireumfercnec, on the under side as well as the others, which canses them to be more effectually heated, and also provents their filling or being clogged by a resichnum.
4. The combination and arrangement of the interior perforated tubes or pipes $F, g$, and $d$, with the exterior cylinders or mixers D ' D , substantially in the inamer and for the purposes set forth.
5. In combination with the above-claimed apparatus the perforated air tube $L$, for supplyiug hot air to render the combustion of the vapor and gases issuing fiom the mixers more perfect.

98, 683.-Paul Tilliams, Winona, Mass.-Cotton Press.-January 21,1868 . -The lever is connected to the follower at one end, and has a cylindrical nut at the other which rocks in bearings at the other cud of the lever, and is engaged by a screw which is stepped in the frame.

Claim.-1. Combining the lever beam A with the serew II, follower $J$, and thrust beam M, to form a cotton press, substantially as shown and deseribed.
2. The partially revolving tap I, combined with its lecess $m$ and the serew $H$ and lever beam $A$ of a cottou press, substantially as shown and described, and for the purpose speeified.
 Wagon for Unloading Coal.-Januny 21, 186s.-The cart has a jointed chute attached to its rear part throngh which the coal may be delivered to the hole leaching to the collar.
Olaim.-1. The attachment of a funnel-shaped or incline mouth $\bar{D}$, of any material, to the rear on side
of a cart or wagon, as hercin deseribed, and for the purpose set forth.
2. The valve or gate E at the end of the mouth D , or in the ehute or tube $G$, when combined, as herein deseribed, and for the purpose set forth.
3. The hinged or sliding ehutes or tubes $I$, when attaehed to an open mouth, or to the end or side of a cart or wagon, for the purpose herein set forth.
\%3.685.-Alexander Winght, Allegheny City, Pa.-P'low.-January 21, 1868.-The mold board and share of the hillside plow turn over above, and are secured by a sliding lod in reael of the operator.

Claim.-A plow construeted, arranged, and operating substantially as herein deseribed, and for the purpose set forth.

73, 686.-GEORGE S. Zeigenfuss, Dóylestomn, Pa.-Wagon Clip.-Jaunary 21, 1868 ; antedated January I6, 1868.- The thill irons are engaged by hooks at the ends of tho clips, and retained therein by hookheaded bolts.

Claim.-The segmental head $d$, having a serew $e$, Whiel passes diagonally through the eurved projection a on the end of the thill iron $A$, for the parpose of seeuring the looped thill iron $\mathbb{L}$, all constructed and used as specified.

193,68\%.-EstEs Ambott, Willoughby, Ohio.Construction of Milk Cans.-January 28 , I868. The eylindrical part and the bottom and top are caell made of one picce of metal. An anmular space is left between the down-eurred edge of the bottom and the side, which is filled with solder. The cam is strengthened at its bottom, top, and mid-height hy metallic bands, which are soldered in place by immersing that portion of the cam in melted solder and eausing it to rotate.

C'laim. - A new and improved milk can, as deseribed, construeted in the mamer substantially as herein set forth.
rg,688.-Hiram Arnold, Gowanda, N. Y.Well Tube.-January 28, 1868. -The ond of the point is eonical and its shoulder ribbed to enable the turn. ing of the outer tube upon the inner one, to which the point is secured. The water apertures in the inner tube are inclined slots.

Claim.- 'The combination of the interposed shoulder $f$ of the driving point $C$, and the interposed section of tubing $i$, with the extermal tube $\mathbb{I I}^{\prime} H^{\prime}$ and internal tube A, said interposed portions being of a different material, for the purpose of relieving the parts iu contact from the injurious effect of the concission in driving, construeted and arranged substantially as set forth.
\%3,699.-HAYDEN M. Baker, Rochestor, N. Y., assignor to himself and H. M. Freveri, Springfeld, Miss.-Mrnufacture of Soda and Sulphuric Acid.January 28, 1868.- "Salt cake" is decomposed with silicic acid and charcoal, at an clevated temperatmre and within close vessels, forming silicate of soda, and liberating sulphurous acid. The resulting silicate of soda, while in solution with water and at a boiling temperature, is decomposed by eanstic lime.

Claim.-1. The reeovery of sulphurie aeid from salt eake by the use of silicic acid, with or without chareoal, in the manner herein deseribed, or any other process substantially the same.
2. The decomposition of the silieate of soda with quieklime, in the manner herein describal, or any other mamer substantially the same, and which produees the same intended results.

78,690.-TE. U. BENEDICT, Chicago, M1.-Car Spring.-Jannary 28,1868 . Each end of the spring has two bearings at different distances from its midlength, and the ear has a eentral and tro side bearings, which operate as stated, to graduate the tension of the spring to the load.

Claim.-7. A spring, so applied betreen bearings that the weight of a light load is sustained about millway of the length of the spring, and the weight of a heary load is sustained near the ends of the spring, the manner of application being also such that the resisting power of the spring is proportionately inereased aceording to the inerease of the

Weight to be sustained, all substantially as herein doscribed.
2. The upper bearing, block or blocks, so eonstructed and applied upon a sprine, that the weight or a light load is sustaiued at the middle of the leugth of the spring, and the weight of a heavier load transferred uearer the cuds of tho spring, substantially as described.

73,691.-D. K. Bostrell, Columbus, Ohio.Fruit Drying Apparatus.-Jannmy 28, 1868.-The sides are eonnected by sirders whose doretailed tenous enter suitable mortises in the said sides, which thus give cach other mutual support. The doors are hinged to the sides, and the back fits between them, and is held by the top.

Claim.-1. The herein deseribed dryer, when constructed in sections so that it can be taken apart and put together, in the manner and for the purpose substantially as set forth.
2. The top $B^{\prime}$, when constructer so as to form an air chamber $\Pi$, provided with ventilations $I$, dampers $\mathrm{F}^{\prime}$, in combination with the walls of the dryer, for the purpose and iu the mamer substantially as described.
3. The flue $L$, jacket $I$ ', as arranged, in eombination with the chamber $H$, in the manuer as and for the purpose set forth.

73, 632.-Trederic BuckNam, Portland, Me.Reversible Frying Rack-Tanuary 28, 1868; antedated Jaunary 11, 1868. -The article to be cooked is inclosed in a wire frame which turns in a bail. The frame is plaed in a ressel coutaining the heated medium, (as fat or water,) and may be iurerted therein.

Claim.-The reversible frying rack, substantially as hereiu set forth and described.

83,693.-G. W. Cilley and G. H. Spallding, Norwich, Comn, assignors to The American Molded Collar Company.- Machine for Molding Paner Collars.-January 28, 1808. -The collar is inclused between the two curved plates which are hinged together, and forced inward upon the collar by eams.

Claim.-1. The two flexible clamping plates or formers A B, in combination with eccentrics $h$ and handles $i$, for closmg and bending the same, substantially as and for the purpose specified.
2. The cams or cecentries $h$, laudles $i$, hinge straps $f$, and bars $g$. in combination with the clamping plates A B, springs m, and supporting piecc $n$, substantially as and for the pnrpose specified.

173,691.-G. F. J. Colburn, Nemark, N. J.Composition of JLatter:-Jannary 28,1868 . - Asbestos is mixed with shellac to increase its strength when used as au adhesive.

Claim.-1. Doing away with the frangibility of gom shellac by means of asbestos, as specificel.
2. Increasing the streugtl and tenaeity of shellae, in the manner described.
3. Rendering the shellac less liable to the action of heat by the incorporation with it of asbestos, in the manner specified.
4. The compound, substautially as and for the purpose named.

73,695.-JomN Collins, Jr., aud N. R. Nickson, Richmond, Ind., assignors to N. R. Nixon, Thomas NiCkson, and Allex T. lienaEtt.-Rag Cutting Machine-January 28, 1868.-The cntters are attached to a hub rotating bencath the table, and traverse a slot in the table top, A guard protects the operator, and has a portion remored to allow introduction of rig's.

Claim.-The combination of the knives $n n n$, arranged upou the shatt $c$, with the guard plate $A$, all construeted and operating substantially as and for the purposes described.
re3,6518.-Emm Connery, Washington, D. C.Sewing Alachine.-January 28, 1868.-The lengtl of the looper is increased in the direction of its axis, and a projection made upon it. The auxiliary looper displaces the thread on the former looper in such mannes that the ueedle in desecnding will not enter the loop of its own thread, but will enter the ex-
teuded loop of the anxiliary reciprocating looper; forming the double-thead stiteh.

Claim.-1. The combination with the revolving looper, constrmeted as described, of an auxiliary looper, under the arrangement described, whereby a Wileox and Gibbs machine, without changing its functions as a single-thread machine, may be used as a double-thread machine, substantially in the mauner and for the purposes deseribed.
2. Operatiug the reciprocell auxiliary looper, when combined with a rotary looper, constructed as above described, by means of a circular eceentric, substantially as and for the purposes set forth.
3. The eombination of the driving-mechanism of the reciprocal looper with the driving-mechanism of the rotary looper, by means of a reciprocating lever, receiviug its movement by means of an obliche pin on the connecting-rod of the eccentrie of the main shat.
4. In combination with the lever $N$, for driving the reciprocating looper, of the conplings and mcoupling deviee, substantially as aud for tho purposes described.

73, 6937.-Thomas Crane, Fort Atkinson, Wis.-Fnitting Machine.-January $28,1868$.

Claim.-1. The mechanisu, sulnstantially as described, for allowing the cam plate, by whieh tho needles are moved, to liave an oscillating motion, substantially as described.
2. Mechanism, substantially as described, for the adjustmeut of the needles in front of the cam plate 11, when it is desired to throw some or all of the needles ont of action, sulstantially as described.
3. The attachment of the arm J, or its equiralent, direetly to an oseillating eam plate II, which is provided with a pivot $f$, about which it moves, snbstantially as described.
4. The combination of an adjustable work holder D , and an adjustable jack, substantially as deseribed.
5. The spool or yaru holder 1 , with the tube I, or the equiralent thereof, coustructed to operate substantially as clescribed.
6. The bow spring $G$, applied to the reciprocating perforated arm ('2 in snch manner as to lift the Farn between the two passages $c$ cl, ou its wray from tho spool to the work, said spring being so constructed as to keep an even tension upon the jarn, with little or no firiction, substantially as deseribed.
7. A setting up derice. $S t$, constructed with its hooks $t$, all arranged in the direction of the length of the plate S, as shown and described.
73.698.-Wildiam G. Creanime, Brooklyn, N. Y.-Signal Rope Guide.-Jmuary 28, 1868.-The uprights are spread at the upper end so ats to form a gnide for the entering rope, and one of them has a gravitating lateh which prevents the escape of the rope.

Claim.-The application to the roofs of railroal cars of a pulley guide for the sigualing rope, substantialls as described, aud for the purposes mentioned.

73,699.-Tiladneus Donely and J. T. CressLEli, Southampton, Pa.-Adjustable shovel I'lore.January 28, 1868.-The plow beams are so comected to hand levers that they may be moved transversely or vertically, and raised from the ground either simultancously or independenty

Claim.-1. 'The eombination of lerer L with subordinate lerers $l l$, and their attachunents. pawls and springs, when operating upon the sleeves is s, substantially as describerl.
2. The combination of lever $L$ with sleeves $S$ S and shaft $s^{1}$, to more laterally, substantially as deseribed.
3. The arrangement of lever's ' $\mathrm{I}^{2}$ ' $\mathrm{T}^{1}$, and $t$, in connection with the tongue, substantially as leseribed. 4. The use of a central plow, IT, detachably arrauged, in comnction with the side plows, substautially as deseribed.
5. The combination of lever I and its attachments, forming a combined lever, with rertical and horizontal motions, coincident when necessary and convenient, together with the arljustablo derices $1^{2} I^{\prime}$, and $t$, all operating together, substantially aud for the purposes specilied.

73, 700.-Martin Henry Dooly, Atlanta, Ga.Railway świtch.-January $28,180 \%$ - Tha pitmen
at both ends of the switel are comnected to cranks on a longitudinal roek bar beside the track, and are operated simultancously by a hand lever.

Claim.-The elongated erank shaft D, conneeting with the sliding bars J and C by the pitmen e and K, in combination with the rails $\Lambda^{\prime}, \Lambda^{\prime}, \Lambda^{\prime \prime}$, and $B^{\prime}$, and the target-signals, whereby the switch rails and signals are slifted simultancously, and the ordinary "frogs" dispensed with, substantially as specified.
g3,701.-Ezra Philo Doty and Ellis Doty, Janesville, Wis., assignors to themselves and WriLIAM M. Dory, New York, N. Y. - Washing Hachine.-January 28, 1868.
Claim.-1. The segmental arm for carrying the Washboard, the eenter of the curve of said arin being the pirot or axis upon which it oseillates, substantially as and for the purposes herein shown and described.
2. The combination with the segmental arm, of a padial arm, which, while uniting the segmental arm with its pivotal point, eonstitutes a socket for the lever handle, substantially as and for the purposes sei forth.
3. Forming the bowed or segmental arm, which carries the washboard of angle iron, so as to reduce the size of the opening in the tab, through which the said arm plays, withont detraeting from the strength of the arm itself. substantially as shown and set forth.
4. The combination, with the wash tub, of a hinged cover and spring, or its meehanieal equivalent, applied to the cover-hinge in the manner deseribed, so that the eover may be readily adjusted to or removed bodily from the tub, substantially as and for the purposes shown and set forth.
5. The eombination with the legs, when united with the wash tub by a tongue-and-grooved joint, as deseribed, of the braces or handles, extended between the legs, and attached to each, in the manner and for the purposes shown and sct forth.

73,702.-Tmothy Drake, Hartford, Conn.Adjustable Hoe.-January 28, 1868. -The blade is attached to a shank whose head turns in a socket at the end of the handle. The head has a semmental raek engaged by a rack upon a gib which is seeured by a key or taper screm. The blade may be set to any angle in relation to the handle.

Claim.-The mode of construetion and arrangement of the blade $x$, shank $b$, shank and head $c d^{\prime}$, gib $e$, fastening screw $f$, substantially as described.
F3,703.-R. G. Elder, New Tork, N. Y.Baking Pan.-January 28, 1868. - The openings betwcen the supporting sections, and the perforations in the bottom are to allow a circulation of lieated air beneath the lower erust.
Claim.-A baking dish, provided with a seefional or broken rim, $b$, under, and loles, $a$, in its bottom, substantially as and for the purposes described.
g4,704.-Charles H. Embree, West Dresden, N. Y.-Gate.-January 28, 1868. -One of the rails of the gate slides on a sheave in the swivel hanger bloek. The gate is moved endways into balanee, and is then swung open. The swivel stem is adjustable in its soeket to give means for vertical adjustment of the gate.

Claim.-The arrangement and use of the adjustable extension stem $g$ and the inclined slots $l l$ with the swiveled suspension loop C , operating in the manner and for the purpose berein set forth.

93,705. - Lewis Emmons, Hamilton, Ohio. Grate of Cooking stove.-January 28,1868 . -The supplate of tary grate is supported un end plates whose edges rest upon the bottom and baek of the main fireplace. The grate has perforated baek and bottom plates, and a deflector projecting nearly vertically from the latter.

Claim.-The clevated removable fireplace for cooking stoves, eonstrueted and used in the manner substantially as and for the purpose described.
73,706. - Joinn A. Evaris. TVest Meriden, Conn., assignor to Bradley and Mubbard, samo place.--JFatch Safe.-January 28, 1868.-The front, ineluding the bottom, is east with lugs upon it, and the baek plate is cast upon the same.

Claim.-The mateh safe herein described, consist ing of the front and back, construeted from castmetal, and the two parts united in the manner doscribed, as a new article of manufacture.
(93,70\%.-A. Fanizow, Carrolltorm, Ill.-Gang Plow.-Sanuary 28, 1868. - The plow beams are verttcally adjustable by levers both at the fore and rear ends.

Clain.-1. The combination and arrangement of the lever $\mathbb{C}$, link $c$, and traction connections $b b^{1}$, herein shown and deseribed.
2. The lever $\mathrm{C}^{1}$, arm $\mathrm{C}^{2}$, sector $\mathrm{C}^{3}$, rack $\mathrm{C}^{4}$, and plow beam $B$, when combined and operated substantially in the manner and for the purpose herein shown and described.

73,703.-J. Melledge Flagi, Providence, R. I.-Stamp ALoistener.-January 28, 1868.
claim. - The combination of the clastie reservoir $a$, the perforated eup or top $b$, the absorbent material $d$, and the wire-gauze support, substantially as and for the purpose specified.
173,709.-Edwin W. Frexch, South Scituate, Mass.-Sewing Machine:-January 28, 1868.-The object is to serv tubular work, its hydraulic hose. The looper is contained in a tube, and is reciproeated by a bar in such a manner that one or more rows of stiches may be sewn in the hose.
Claim.-1. The combination, wití a tube, a looper, and a folding meehanism, of a sewing and feedngg mechanism, substantially sueh as described, so that the material being operated upon may bo fed and served successively forward and backrvard, and around the tube, so as to commert the edges of the material, and the ends of portions of the same, all in one eontinuous operation, substantially as deseribed.
2. The feed formed of the parts 06 and $p$, in conneetion with the presser-bar, and operated through a system of levers by the action of the needle-bar, as set forth.
3. The eombination with a presser-bar of a pawl and ratchet, substantially as and for the purpose set forth.
gis, 710 .-Joun A. Frey, Washington, D. C.-Lamp.-January 28, 1868.

Claim.-1. The water chamber making a part of the burner, when provided with an oil-feading duct, and a water-feeding duct, with the wiek tube passing through the same, and nearly or entirely surrounded by water, arranged and combined, substantially as described.
2. The deflection in the top of the eone $g$, as and for the purpose set forth.
gis, \%1.-Wrlson Garrison and Charles I. Stevens, Syracuse, N. Y.-Halter--January 28, 1868. - The eonneetions and buckle attahments are made by iron plates, whieh are riveted to the leather. Claim.-1. The metallie eye H, constructed by two hooked plates being elamped upon each other, and upon their strap, substantially in the manner and for the purpose set forth.
2. The method of securing the opposite parts of the metallie connections to each other, and to their straps, namely, one plate provided with pins or projeetions $h^{\prime}$, and the opposite plate with corresponding loles $h$, in eonnection with a binding screw or rivet $J$, as and for the purpose set forth.
3. The transverse rib $j$, with corresponding recess in the opposite plate, at the junction of the plates, as herein shown, and for the purpose deseribed.
4. The eombination of buckle $\mathrm{P}^{1}$ with the double securing plate $M m$, as herein shown, and for the purpose described.
5. The eross-bar $r$, substantially as and for the purpose set forth.
6. In eonnection with the eross-bar and tongue $r$ R, the shoulder $s$, to improve the downward-bearing surface of the tongue, substantially in the manner described.
g: ${ }^{2}$, 18.-Robert Grant, Brooklyn, N. Y.Apparatus for Charging Water with Carbonic Acid. - Ianuary 28, 1868; antedated Jaunary 17, 1868.The portable eylinder is filled with gas under a pres.
sure of from 450 to 600 pounds to the inch. Tho cylinder is eomected to the regulator; the gas is turned on with the pressure regulated to 90 pounds. The water tank is then filled with water; the gas is then turned on the water, the fans being revolved to assist the absorption. The rater is drawn througll the mixiug coil and is intimately mixed with the gas by the injector.

Claim.-1. The cylinder A, regulator C , injector P , water tank B , and regnrgitating valres $\approx$ and 3 , arranged and operated as described, and showu in the drarviugs, or otherwise modified, for the purpose set forth.
2. The continumas automatic process of compressing carbonic acid or other gases in water by the meaus substantially as described, und for the purposes above set fortll.

193, 713.-Theodore Guyol, Now Orleans, La. - NEtallic Tie for Cotton Bales.-Jannary $28,1868$.

Claim.-In connection with a eopper or other suitable wire, for encircliug and fastening bales of cotton or other baled material, a metallie saddle $\Lambda$, with its brace $c$, constructed and operating to hold the two ends of the wires, substantially as herein described and represented.
\%3, 71 1.-Josern Hadfiek v, New York, N. Y.Machime for Cutting Soap. -January 28, 1868. -The slab of soap is placed on the slotted table, and is carried bencath the printing cylinder and to the wire cutters, by which it is couverted into printed bars. The printing eylinder is dampened from a roller covered with saturated flamel. The racks actunting the table are connected therewith by a spring catch, which is automatically frecd by a cam on reaching the end of the stroke.

Claim.-1. The combination and artangement of the morable table C , the follower D , and the racks E E, which are attached, as specified, to tho follower, substantially as described.
2. The arrangement and combination of the lateh K, attached to the table C, with the cam J, for the purpose of detaching the table from the follower, substantially as described.
3. Making the follower D separate and detachable from the rest of the machine, and attachiug it thereto by means of removable pins $n$, substantially as described, for the purpose of being able to change the follower at pleasure.
4. The arrangement and combination, with the printing roller $M$, of the bars $G 1 I$, and the gear wheels $F, F^{1}, F^{2}$, and $I$, substantially as and tor the purpose described.
5. The moistening roller Q, arranged and combined with the priuting yoller M, substantially as aud for the purpose described.
6. The cutting fiame $R$, made substantially as described, with the truss $V$, and struining serews $X \times$ Y, for tightening the wire $z$.
7. Making the several cutters of the cutting framo of a single strand of wire, substantially as described.
8. The transverse cutting wire $f$, combincd and amanged substantially as described, with the sliding rods $c$, the slotted tubes $d$, the springs $c$, and the shat B, whereby the soap is divided transrersely during the return morement of the table.

198,715.-Gustavus P. Harding, Chiswiek, Eng-land.-Apparatus for Draving Tapered Tubes.January 28, 1868; patented iu England September 14, 1865.-The faces of the series of "wordles" form a circular die, whose diameter is increased or diminished by the morement of the "wordles" npou their pivots. This movement is effected by a rack and geariug operated by the longitudiual morement of the dies.
Claim.-The combined arrangenent herein described, with reference to figures 1 to 8 of the drawings, consisting of the parts $h h i j j^{1} j^{2}$, with suitable gearing for giving motion thereto, when a tube ar rod is being drawn by hydrostatie or other power, substantially as above described.
\%3,716.-J. Moore Inendricks.-Philadelphia, Pa.-Rice IUulling Machine.-Jannary 28, 1868.The rotating stone has radial arms which act on the cuticle in comection with the wire gauzo surfaco of
the inclosing cylindrical case. From the stone tho grain passes to the mortar, and is beaten by tho ribbed pestle. From the mortar it passes to a lorizontal cylindrical chanber having wire gauze at the sides, and containing a rotating evlinder with corrugated curved arms. From the latter the rice passes to the polishing cylinder.

Claim.-1. The cylinder $o$, in combination with its shaft and cormgated curved arms $q$, for chafing the cuticle, and removing the samo from the lice, substantially as set forth.
2. The combination of the mortar and pestle $k l$, the cylinder $o$, (with its shaft $p$, and corrugated arms q.) aud tho polishiug cylinder $u$, with its covered drum, all coustructed and arranged iu the manaer and for the purposo substantially as set forth.
 Y.-Stone Drilling Machine.-Jnnuary 28, 1868.On rotation of the wheels, the pitmen counceted thereto aet alteruately on the eross head by means of the pawls. When the cross hoad with the drill rod is sufficiently raised, the pawl is tripped by the bevelled plate, and the rod descends by force of the spring, atded by gravity. The drill receives partial rotation at each stroke by a ratehet wheel upon tho drill rod above the cross head, and operated by a pawl.

Claim.-1. The arrangemeut of the follow blocks E and their lifting pawls e, with the eross head If and its lugs $a$, and the plates o, for the purpose of lifting and discharging said eross head, as is herein set forth.
2. In combination with the cross head II and rod I, thus operated, ratchet wheel K, lever J, and slotted guide $L$, all constructed as described, for tho purposes set forth.
3. In combination with the follow bloeks, pawls, and cross liead, carrying the drill rod, the arrangement of the pitmen $F F^{\prime}$ and wheels $G G$, all constructed and operating substantially as described.
g3, 9 1S.-Orlando M. Higgins, Lotrell, Mass., assignor to himself and Freeman Higgins, Manchester, N. H.-Stove I'ipe Coupling.-January 28 , 1868.-An adjustable, endless, metallic band is arranged between oblong heads, which have inwardly projecting flanges, forming bearings for the edges of the band. Each side of the band has a tubular projection for application of a stove pipe. The olject is to make commection betweeu portions of a stove chimuey which are out of line with each other.

Claim.-1. The entless metal hand a aud coupling tubes $A$, combined with the heads $b$, for the purpose, and substantially as described.
2. The heads $b$, constrmeted as described, whereby the endless metal baud may be adjusted, substantially as set forth.
3. The partitiou E and screws $g$, combined with the heads $b$ and endless band $a$, as and for tho purpose set forth.
4. The dampers F , combincd with the partition E , heads $b$, and endless band $a$, in the manuer and for the priposo substantially as described.
5. In combination with the head $b$, the slide $k$ and holes $h$, for the purposo and substantially as deseribed.
6. The perforated movable disk or stand $m$, applied to the top of the case or heater, as aud for the purpose described.
7. The combination of all the correspourlent parts specified, arranged for action and effect substantiully as described, and for the purposes specificd.
 - Producing a Vibrating Swell in Organs.-January 28, 1868. -The fan is divided into sections, the Fanes of the adjacent sections standing reetaugularly to each other.

Claim-Tho construction of a fan in sections, substautially as described, for tho purposes herein set forth.
-3,720.-Martin V. B. Howe, Gardner, Mass., assignor to himself and Lievi Heyvood, same place. -Wood Bending Machine.-Tanuary 28, 1868.-Tho coupling links have each two disk-like heads connected by a neek. Tho heads enter segmental eavities in the link blocks of the bendiug chain.

Claim.-The coupling links a, or their cquivalents, for counecting the ends of the links A. of a chain for bending timber, eonstructed to operate substantially as and for the purpose set forth.

193,9121.-Martin V. B. Howe, Gardner, Mass., assignor to Heywood Brothers \& Co., same place. -Tilting Chair Seat.-January 28, 1868. -The seat is counected by springs to the cross bar at top of the rear legs, and when tilted baekward comes in contact with the spring top, which is comeeted to the cross bar and the top round of the front legs.

Claim.-1. Connecting the seat of a chair to the rear posts E F, or their eross bar D, by means of springs $b$, substantially as and for the purpose set forth.
2. The stop $e$, in combination with the above, substantially as and for the purpose specified.
3. The springs $b$, construeted, applied, and operating substantially as and for the purpose set forth.
g\%, g22.-A. G. Hunter, Flint, Wales.- MLanufacture of Soda and Potash.-Jannary 28, 1868.Common salt is eonverted into silicate and earbonate of sodit and eaustic soda, and ehloride of potassium into silicate and earbonate of potash, and caustic potash, with the produetion of muriatie aeid from the chlorides. The chloride is subjected to heat to volatilize it, and the ehloride rapor acts on highly heated siliea in presenee of aqueous vapor, whereby silicate of soda or potash and muriatie acid are produecd. The silieate of soda or potash is rendered solubie by fusion with earbonate of soda or potash respectively. The soluble silicate is dissolved in water and conserted into the eorresponding earbonate by treatment with carbonic acid, or in to corresponding alkali by treatmentrith eanstie lime, baryta, or magnesia.
Claim.-The proeess substantially as herein deseribed of decomposing ehloride of sodium and ehloride of potassium, for the purpose of converting them into silieated, carbonated, or canstic aikali.
73. \%23.-Seth T. Hutchins, North Anson, Me., assignor to Horace A. Lathror, Sharon, Mass.assignor to He Shave-January 28, 18.38. The gange plate is adjusted by the abutments at its culs, and is piroted at one end so as to be thrown back when sharpening the euttcr.

Claim.-1. The eombination of the separate abutments D E, applied to the stock A, so as to be adjustable, in mainer as deseribed, with the gauge C hinged to one of sueh abutments, and being separate from the other, and to operate with respeet to it, substantially as explained.
2. The applieation of the grauge to its adjusting derices, so as to be removable from them or either of them, and the knife, when the means of the adjustment of the gauge is held stationary relatively to the stoek, as deseribed.

73,724.-W. L. Mmlay, Philadelphia, Pa.-Closing Fruit Jars.-January 28, 1868.
Claim. -1 . The rectangular recess or earity E. in the neck of the jar, with its inelined and eorrugated side $F$, retaining the bail and tightening it by sliding the bail over the eorrugations, as shown and described.
2. The combined arrangement and eonstruction of the jar A, eover B, hail or loop C, with its springs D, plain ronnd reeess $G$, rectangular and inclined reeess E, eorrugations $F$, substantially as and for the purposes specified.

193,925.-Asa A. Jenvings, Webster, N. Y.Dumping Cart.-January 28, 1868. -The wagon box is divided transversely, so that the portion orer eaeh asle may be tilted br itself to drum the loal.

Ctaim. In eombination with the piroted sections BB , the rigid sides $f f$ of the body A , and the transrerse and lougitudintil braces $x x$ and $y y^{\prime}$, counceting the same with the bolsters, substantially as and for the purposes set forth.

19:3,726.-Joun C. Jourson, Philadelphia, Pa.Sode Fountcin.-Jannary 28,1868 . -The fountain is eonstructed of one piece of metal, with a sufficient oblong opening in the bottom to give access for lining. with incorrodible enamel. An oblong head is
inserted through and brought to corer the opening in similar manner to the hand-hole head of a steam generator. A eeess is had through a pipe screwing into the top of the ressel.

Claim.-A soda-water fountain, whieh is construeted with a eontracted perforated bottom, and is flanged foot pieee B, and prorided with a removable bottom C, fitted within said fountain, upon a seat which surrounds an oblong opening $c$, and held in plaee by means of a screw $b$, and external cap or bar D, substantially as described.

73, 7ag.-Moses A. Jominson, Lowell, Mass.Felted Fabric--January 28, 1868.-The bat is formed as stated to give greater strength and elasticity by running the fibres in various directions.

Claim.-The mannfaeture of felt eloth, by forming the bat, and as it is fed to the felter, of a series of side drawings or rovings, laid together lengthwise or erosswise, or lengthwise and erossitise both, and run in from spools, creels, or otherwise, substantially as herein described and represented.
g9, ${ }^{\text {g2S.-Charles Kane, Pittsburg, Pa.-Dies }}$ for Heading Bolts.-January 28, 1868 ; antedated January 16, 1868.-The faees of the ledges are inelined toward the axis of the bolt as they extend from the round part.
Claim.-The inelining of the plane of the ledges in the dircetion of the griping dies, and from the axis of the bolt, in eombination with pressing surfaces parallel to the axis of the bolt, as specified.

73, 729.-Charles II. Kimball, Quiney, Mass. -Casket for Preservation of Corpses.-January 28, 1868. - The eoffin has an upper and lower eompartment. The lower has a raek to sustain the body, and has eommunieation with the upper one to allow the deseent of cool air therefrom. The upper eompartment has a metallie floor, and a drain pipe, and contains ice.
Claim.-1. The iee ehamber or casing $\alpha$, in eombination with the compartments $A$ and $B$, as and for the purpose set forth.
2. The ice ehamber $a$, in combination with the eompartment A and air spaces $s$, as and for the purpose specified.
3. The easing or opening $b$, in eombination with the ice chamber $a$, as and for the purpose set forth.

78,930.-Henry Lake, San Franeiseo, Cal.Japan Paste Blacking.-January 28, 1868.-Composed of irory black, 14 pounds ; molasses, 8 pounds; alum, $\frac{1}{4}$ porind; indigo, $\frac{1}{4}$ pound; soda, $\frac{2}{4}$ pound; water, $7 \frac{1}{2}$ pounds; rinegar, 8 pounds; sulpharie aeid, 5 ponnds; and solar oil, 4 pounds.
Claim. -The making of a superior artiele that I eall the Japan Paste Blaeking, of the commodities speeified, and substantially as set forth.
g3,731.-Sterhen M. Livingston, Claverack, N. X.-Hay Raker and Louder.-January 28, 1808; antedated Jannary 17, 1868. -The side levers of the rake irame are piroted near their midlength to the elerator frame, and eords attached to their ends pass to a windiass at the fore end of the wagon. The rake is raised from the gromen by winding up the cords. On release of the cords the rake is depressed by the springs, which bear against the lower sides of the levers.

Claim.-1. The combination, substantially as deseribed, of the rake, the balanee levers, the rope and windlass, whereby the rake ean be controlled from the front of the wagon, as set forth.
2 . The eombination, as deseribed, of the rake arms or balance lerers, mounted on the detaehable frame, with the pressure springs mounted on the main frame.
78.732.--Janes A. Loomis and Aronzo Joinson, Springfield, Mass., assignors by mesne assignments to Challes Gifford, of Gardner, Me--Calculating Mrachine.-January 28, 1868.-A Alanged disk is fixed to the handle and has a central arbor upon it, upon which tarn two disks. The fised plate is marked aromad its flange from 1 to 100, and the upper disk is similarly marked near to its periphery. The two moring disks turn together, exeept that for each circle
the lower one drops behind one figure, thereby reaistering 100 , seen by referrines to the dial plate. The units are counted by a pointer which turms on the arbor, and which fits into holes in the dial plate, carrying the same around as far as needed. The pointer mores a small disk cach time it is mored, to indicute the number of pieces measured.

Claim.-1. The plates $\mathrm{A}, \mathrm{D}$, and E , when connected by tho pins $b$ and $c$, respectircly, and when operated by means of the pointer H, all mado sul)stantially as herein shown and described.
2. The plates $\mathbf{A}, \mathrm{D}$, and E , and poiuter H , in combination With the pawl $j$, plate ( $r$, and rutchet disk I, (or I and $J$, all made and operating substantially as herein shown and described.
3. The device for counting the hundreds, consisting of a combination of the spring If with the lug o on spring $n$, and with the diskis $\AA$ D E and pin $m$, all made and operating substautially as herein shown and described.

73,73.- Wheaton Luther, Niagara Falls, N. Y.-Bleaching oloth, Yarn, de.-Jauuary 28 , 1868.-The matcrial is boiled in lime water, rinsed, immersed in dilute sulphuric acid, and after the liquid has permeated the fabric it is immediately immersed in the bleaching liquid; after this it is arrain, without rinsing, immersed in the dilute acid and then rinsed.

Claim.-1. By the use of the chemicals herein mentioned, or by those which produce equiralent results, the process substantially as herein described.
2. Tmmersing the article in the bleaching mixture While it is saturated with the acid.
73.'934.-F. W. MaEs, Iserlohn, Prussia.-Buckle.-Jannary 28, 18tis.-The tongues are upon the ends of the loop, and pass through the jonrmal spindle. The spindle turns in sockets formed in the ends of the bow.

Claim.-A buckle composed of a separate axle $b$, perforated to admit the tines $d d$, and provided with journals at its ends which fit into boxes e $e$, formed by the ends of the bow $a$, as set forth.

7:3,7.3.5.-HENRY S. MLagraie, Hoboken, N.J.Button Fastening.-January 28, 1868.

Claim.-An improved button fastener, mado in substantially the form and manner herein showu and described, as a new artiele of manufacturc.
g3,738.-Thomas H. McCulloch, Monmouth, Hl., assignor by mesme assignments to the Hart Grain Separator Compavi--Grain Separator.Jawuary 28,1868 . -The cylinders have carities on their faces which admit a grain of wheat, but are too short to admit an oat, so that the wheat is carried over to the receptaclo, but the oats are brushed back and carried out at the proper outlet.

Claim.-1. The employment of one or more cylinders, with cellnlar convex surfaces, armanged and operating substantially as and for the purposes specified.
2. In combination with said cylinders the employment of a brush or brushes, arrauged and operating as and for the purposes specified and shown.
res, 737 - IV. L. McDowell, Philadelphia, Pa. -Ash-pit Cover for Stoves.-January 28, 1868; antedated January 14, 1868. - The cover has a register and turns on hinges at its lower corners. It is retained by grarity in either its open or closed position.

Claim.-The gravitating plate E and the sloping side plates $B]^{\prime}$, in combination with the hearth plate A and the front plate C of a stove, substantially as and for the purpose set forth and described.
(93, \%38.-R. M. McGrath, Lafayette, Ind.Thimble Skein.-January 28,1868 .- The ends of the spindle and box are strengthened by bands of wrought iron.

Claim.- - s a new article of manufacture, the thimble skein, of cast-iron, with wrought-iron bands or supports, as hercin set torth.

78, 739.-Henry Meigs, Jr., Bergen Point, N. J. -Priming Metallic Cartridges.-January 28, 1868.-

The radially-slotted, perforated iron disk has a fulminate ehamber on its meler side. The outer edges of the disk are thinned down and compressed to permit it to drop into the shell, and it is then expanded hy pressure so as to fit closely in the flange of the shell.

Claim.-1. The thin-edged, ladially-slotted, cen-trally-perforated iron-disk anvil, constructed as described.
2. Tho combination, as described, of the flango shell, the radially-slotted, centrally-perforated, thinedged iron-disk anvil, and the central fulminate chamber, all constructed and arranged as described for joint operation.

19:3,710.-Menry Mellish, Walpole, N. H.Machine for Making Wonden Borols.-Jimmary ¿®, 1868. -The solid cylindrical blank is clutehed by the rear end in the lathe, and its forward end turns in the cylindrical rest, which is adjustable longitudinally, und gires fulcrum bearing to the levcr carrying the curved cutting tool. The blank is rotated, and the bowl cut by sweeping the lever around a curve of $90^{\circ}$. The necessarily increased thickness of the hottom gires opportunity to remove a planoconrex disk to form a flattened bottom.

Claim.-1. 'Ilse hollow cylinder E , when constructed with the cutter guide H , or its equiralent, substantially in the manner and for the purpose abore duscriber.
2. The concaro-convex outter $G$, when arranced in combination with the cylinder $E$ to swing in a circle corresponding to its curve, substautially in the manner and for the purpose above described.
3. The cutter $l$, when constructed and arranged to operate with the cutter $G$ and lever $F$, or its equiralent, substantially as aud for the purpose above specificd.
73.741.-GEORGE METCALF, Leland, Ill-Brick Machine.-Tanuary 28, 1803.-'The mold is carried in a horizontal, longitudinally-reciprocating bur, which lies beneath the pus mill, and extends through the vertical, reciproeating frame carrying the cover auct press block. The corer is moved above the mold by a button on the forward morement of the mold bas, and the levers which are piroted to the rerticallyreeiprocating frame enfage the cover and pressblock to compress the brick. After the pressure the button is freed from its holding plate and releases the corer, which is left hy the sliding bar, and the lerer frame is still further raised by another lever to eject the brick.

Claim.- The vertically-oscillating frame H , with its lerer's $A, J 3$, and $C$, the mold corer E , press block D , and mold bar M, with button and slide $\mathrm{F}^{\text {and }} u$, all combined and arranged to operatc substantially as and for the purposes set forth.

73, 742.-L. H. Miller, Baltimorc, Md.-Permutation Lock.-January 28, 1868.- A pair of notehod wheels is momeded on the spindle and derives a common rotation therefiom. The wheels are so connected as to have a limited independent rotation. During the continned rotation of these wheels the hinged arm of the lock bolt rides on their peripheries; bit if the spindle is slightly reversed when in certain position the said arm engages the notches in the whecls and enables the throwing of the bolt.
Claim.-1. A permutation lock, so constructed as to bring the spindle or arbor which operates it on the ontside of the loek proper, substantially as set torth.
2. The two wheels $\mathrm{F}^{\prime} \mathrm{G}$, capable of limited independent motion, in combination with a suitable cateh, adapted to engago with the said wheels $F^{\prime} G$, when they are properly adjusted, and at other timen riding on the unbroken periphery of the two wheels, substantially as explained.
3. The flaring or muderecut rim $m^{2}$ of the rotary tumblers, to adapt them tor ready removal by hand, substantially as explained.
4. The combination of the notches $\mathrm{m}^{3}$, ladial holes $m^{4}$, and pin Q q, when constructed, arranged, and cmployed substantially as and for the purposes specified.

1g.3, 4:3.-Myron II. Montoe, Rochester, N.Y.Potato Masher.-January 28, 1868.-The lower.1ace
of the masher consists of a coil, and it is attached to the handle by ribs.

Claim.-Ithe combination of the coil a, stays or braces $\dot{b} b b b b$, and handle $c$, all in the manner and for the purpose herein set forth and described.

793, 244.-Augustus W. Newell, Bradford, Pa. -Spring Bed Bottom.-January 28, 1868.-The ends of the longitudinal spring slats are curved down and attached to the cross-bars, into whose ends the casters are inserted. The hoad and foot rails aro sc. cured to the slats.

Claim.-The combination of the braces E G, the boards $\vec{F} H$, with the springs $A$, the cross-bars $C$, the casters $D$, and the webbing $I$, when constructed and operating substantially as and for the purposes described.
g3, $45 .-$ AbRARAM G. NEWKIRK, Warren, Pa. -Lamp Chimney Cleaner.-January 28, 1868.- A wire is bent shortly at midlength and a scetion of a handle attached to each end. A wash cloth is secured in the bend, and the bisections of the handle secured together by dowel pins.

Claim-The rod or wire B B, constructed and bent in the form substantially as shown, and arranged in the manner and for the purpose specified.
\%3, \%66.-Henry E. Newton, Manchester, N. H. -Blaching Brush. - January 28, 1868.
Claim.-1. The combination of the angularly-surfaced block $c$, the angular handle $f$, and the back $e$, all in one piece, eomnected to block $a$, substantially as set forth.
3. The combination of the block $c$, handle $f$, axd back $e$, in one piece, substantially as described.
 Raker and Loader. January 28, 1868.

Claim.-1. A combined hay rake and hay wagon, in which the rake is made tho wagon bed, whereby tho separate uses and purposes of a hay rake and hay wagon can bo accomplished by one and the same machine, using the same for either purpose at will, and by which hay and grain can be raked and loaded at tho same time without any intermediate appliance other than the rake itself, substantially as set forth and described.
2. The dovice of a rake, which for purposes of transpertation may be raised to form a part of the bed of a Wagon for currying the hay gathered thercon, substantially as and for the purposes set forth and described.
3. The combination of the mloading ropo II and gathering rako $A$, of their equiralents, substantially as and for the purposes set forth and doscribed.
4. A rake having four or more ground or carrying wheels, so that it may be used both for raking and arrying the hay when raked.
5. A coupling device for connecting the rear and forward parts of the machinc, substantially as described.
6. The combination of the rake $A$, hoisting lover N , and hinged clapper $\mathbb{K}$, or their equivalents, substantially as and for the purposes set forth.
\%. The teeth extending in rear of their supporting axle, so that the rake and its load may be balanced upon said axle or nearly so, substantially as and for the purposes set forth.

73, ${ }^{1948 .-W . ~ T . ~ N i c h o c s, ~ R u t l a n d, ~ V t .-H a y ~}$ Stacker. January 28, 1868. -Two frames have a common brace in position of a hypothenuse. The rectangular corners aro hinged to base pieces set at a distance apart and the load being attached to the depressed end of the brace piece is raised by draw. ing down the upper end of the said piceo.

Claim.-A hoisting machine for unloading hay or other purposes, composed of a lever beam $B$ attached to four or inore legs $A$, revolving upon fulcra $\Pi H$, operated by rope C , or their equivalcnt, substantially as set forth and described.

173,749.-A. M. Ords, New York, N. Y.-Fiolding Basket.-January 28, 1868. The bottom is bisected and folds up against the sides, which are flattened together diagonally. The sections of the bottom are suffeiently wide to form mutual support when their free edges fall together.

Claim.-1. As an improrement in the art of constructing baskets, boxes, or erates, forming the sides of a serics of slats or bors, united at the corners by means of a wire or rod passing through them, and pivoting the same together, so as to permit the article to be folded, substantially as described.
2. The folding bottom, when constructed and arranged to operate substantially as set forth.
193.750.-GARRET J. OLENDORF and ALBERT O. Panshall, Middlefield, N. Y.-Poling Hops.-Jnnuary 28, 1868. -The top or each pole has connection by a cold to the lower ends of poles upon opposite sides of it.

Claim.-The herein described combination and arrangement of the poles $A$, cords $B$, and rings $C$, as and for the purpose set forth.

73, 'g 5 - -GEORGE T. PALMER, Brooklyn, N. I. -Filter.-January 28, 1868 ; antedated January 16, 1868. -The filtering material is contained in perforated receptacles which are remorable from the case. The case has several scctions, and the supply and exit pipe may be connected with either of them by valres so that all may be used or auy one shut off to allow renewal of the filtering material.

Claim.-1. The combination and arrangemerst of the filters $B B^{\prime} B^{\prime \prime}$, water channels $H$ and $\alpha$, ralves $i i^{\prime} i^{\prime \prime}$ and $b b^{\prime} b^{\prime \prime}$, and stop-cocks $k k^{\prime} k^{\prime \prime}$ and $l$, in manner substantially as shown and for the purpose set forth.
2. The removable filter $B$, having an inside water chamber $g$, provided with a neek or pipe $o$, all con. structed substantially as shown.
3. The ribs $f$ and $s$ on the inside of the perforated plates $c c$, arranged in relation to each other, substantially as set forth and for the purpose specified.
4. The arrangement and combination of the coarso wirc supporting screen $D$ with the perforated plates $c c$, fine wirc confining screen E , and filtering medium $F$, as and for the purpose shown and described.
5. A filter containing chest having casing A A, partitions $A^{\prime} A^{\prime \prime}$, water channels $H$ and $a$, valres $b b^{\prime} b^{\prime \prime}$ and $i i^{\prime} i^{\prime \prime}$, and cocks $k k^{\prime} k^{\prime \prime}$, arranged substantially in the manuer shown.

73, 752 .-William B. Pation, Harrisburg, Pa., assignor to himself, Theopirlus Weaver, and IsAac Lcoyd, same place.-Railway Switch.-January 28, 1868. - The wing of the key is slotted to receive the shank of the key bolt, which is drawn back by turning the key. The koy is then inserted further and is turned to unlock the switch bolt. The key cannot be Withdrawn until the switch is mored so as to complete the main track, when it is turned backward, and the switch bolt again springs uprrard and locks the switch.

Claim.-1. The arrangement of a lock shield and key, in combination with the shifting mechanism of a railroad switch, so that the key can only be withdrawn from the lock when the switch has been returned to the main track, and been locked in that position, substantially as set forth.
2. The guard L, in combination with the key 2, and a lock, attached to the shifting mechanism of a railroad stritch, substantially in the manner and for tho purpose set forth.

73, $758 .-H E N R Y$ WARD POOLE, South Danrers, Mass.-Enharmonic Fey Board for Organs, de.January 28, 1868.-The object is to enable the player to execute the melodies and harmonies in perfect tune, or without temperament, and without the use of pedals or the usual mechanism.
Claim.-1. The four broad white keys, and the three elerated black keys, in each octare and in cach signature, arranged in the positions and relations substantially as described and shomn.
d. The arrangement of keys divided into the five series of key notes, thirds, perfect serenths, dominant thirds, and dominant sevenths, each series being uniform in shape, color, and size, but different from the other series, substantially as described and figured.
3. The pedal key board, containing the three rows of pedals for the three series of sounds, key notes, thirds, and sercnths, aranged in a series of fifths, substantially as shown and described.

73, 754.-GEORGE PURPLE, Wellington, Ohio.Neck Yoke Slide.-Jinuary 28, 1868 ; antedated January 16, 1868. The slide is placed on the breast strap and preseres it firom the wear of the neek yoke ring. Side elaws prevent aceidental disengagement of tho ring.

Claim.-A slide, constructed in tho manner as describer, as a new article of manufacture, for the purpose set forth.

73,755.-Barvey Rear, Toronto, Canada.Spring Bed Bottom.-Tmuary 28, 1868.-The spiral springs are attached to the slats by metallic soekets. The side pieces are detachable, and the longitudinal slat commections are flexible, to permit the rolling up of the mattress.

Claim.-The combination of the springs E , sockets F, and webs C, C, supported by a fiame having detarehable side picees $A$, substantially as and for the purposes set forth.
23.754.—Joun Reynolds, San Franeiseo, Cal.Preparation of Dye.—Tnnuary 28, 1868. - Tellow prussiate of potash is dissolved in hot water, to form a solution of a gravity of $20^{\circ} \mathrm{B}$. A stream of chlo. rine gas is passed through the solution in suffieient quantity to prevent precipitation.

Claim.-A new artiele of manufacture in a preparation for dyes of the materials specified, and substantially as described.

73, $75 \%$ - Samuel Rue, jr., Chester County, assiguor to himself, Samuel McCambridge, and Enward G. Mahtin, Philadelphia, Pa.-Lnjector for Steam Generutor.-Jannary 28, 1868.-'lhe water nozale is on a piece sliding in stuffing boxes, so as to render that nozzle adjustablo in relation to the stean nozzle.

Claim.-The construetion and arrangement of the receiving ehamber A with its nozzle B, the waterrecerviner ehamber C , and adjustable plug E , substantially as hercinbefore deseribed.
73.758.-JoHN W. Russell and Davin Joline, Tottenville, N. Y.-Anchor.-January 28, 1868.-The shank is domble. The heads are piroted. On the outer sides of the arms at the base of the blades are spurs, to assist in turning the lower arm from the shank.

Claim.-The connbination of the donbleand piroted flukes with the donble shanks of the anchor, when construeted substantially in the manner and for the purpose as herein deseribed and shown.

73, 759.-T. S. Scranton, Madison, Comn.Garge for Sewing IIfachine.-J2nuary 28, 1868. -The obliquely-ribbed gruide is set upon the work so as to hate equal pressure on the whole surfece, and may bo detachod from the gauge, and the latter nsed singly.

Claim. -The arm C, combined with the clastic guide D, the said guide being attached to the arm C, and the said arm made elastie at or near its connection with the grange by the reduetion of the said arm, substantially as herein set forth.
78.\%60.-TOHN C. SHAW, Manaynk, Pa.-Condensing Carding Machine. January 28, 1868.-The slotted plate is auljustable in respect to the end of the rubber rollex, and has bearing against the same, to prevent lost invtion in the reciprocation of the said roller.

Claim.-In combination with the collar D of the roll C and bracket $A$, the slotted plate 13 , and set screw E, substantially as and for the purpose set forth.

73, 761.-A. Sheldon, Greenwich Station, Ohio. - Fence.-January 28,1868. Whe rear end of the gate rests on bars comnecting two heel posts. In opening, the gate is slipped backward on the bars, and when at a biance is swung open.

Claim.-The bar $a^{\prime}$, providod with rounded corners, so that the gate on being opened will casily vibrate, as indicated by the dotted lines $d$, thereby allowing it to pass readily over obstructions, in eombination with the rails $A$, cross bars $B$, in the manner and for the purpose specified.

73, 9 62.-ANTONO F. SMITI, EIlsworth, Me.Stove Drum.-January 28, 1868. -Tho smoke passes
beneath tho edge of the defleeting plate, up inside the frustum, and is discharged into the inclosing ease from which it issues throngln a side opening. Opposite the exit is a chamber having a register and conneeted by pipes wath the discharge opening at the mouth.
Claim.-1. The arrangement as rell as the combination of the hollow frustum B with the deflector D, and the box A provided with induction and ednetion passares or conduits $b \mathrm{E}$, arxauged in it as specified.
2. The arrangement as well as the combination of the anxiliary air elamber F and its air register or ralre, and opening or openings with the box $A$, the frustum $B$, or the said frustum and its deflector $D$, the whole being substantially as specified.
73.763.-William Smitil and Emery M. Pike, MeDonough, N. Y.-Carriage Ton.—January 28 , 1868 . - The nmbrella is seeured to the seat in such marnner as to admit of an inelination in any direction or uf remoral.

Claim.-1. The construction of the slecre e, tho brace stay $d$ and $o$, when mado and used as and in the manner deseribed.
2. The sway piece $g$, when mado and used as and for the parpose described.
3. 'The arrangement of the sway piece $g$, and the brace stay and segment $o$ and $d$, in combination with the sleeve $c$ and spring $b$, for tilting and holding the top in any desired position.

73, 764 .-Joseph Steger, New York, N. K.Car Starting Apparatus.-Janmary 28, 1868.-The traction bar is allower somo longitudinal movement, and is secured to a chain winding upon a drum. The end of tho dram has an eocentrie wrist pin carrying a draw pawl ongaging a ratehet wheel upon the fore axle.

Claim.-Tho springs $e c$, in combination with the traction bar II, rope or chain $a$, lever pawl I, drum G, and ratehet wheel D, all constructed and onerating substantially as and for the purpose set forth.

73, $965 .-J$. F. Walter, Jr., Now York, N. Y.Metallie Lathing.-Janmary 23, 1868.-The sheet metal is punched with slots whose burrs are turnerl out to hold the plaster.

Claim.-1. Sheot-metal lathing, formed with ol Iong apertures $A \mathrm{~A}, \mathrm{~B} B$, the same being punched in the metal, so as to produco the projectins lips un burrs of a, at the edges thereof, substantially as herein specified.
2. The overlapping or "break-joint" arrangement of the alternate rows of apertures $A$ and $B$ b, substantially as and for the purposo hereiu set forth.

73, 9 6G.-George C. Westover, Padueah, Ky. - Combined Churn and Ice Cream Freezer.-Jamary 28, 1808. -The eream is placed in the inner erlinder, and the ice in tho annular space botween the eylinder*.

Claim.-The revolving inside eylinder II, pivot J, beaters K K, and wiro wing I, when arrangel', combined, and operated as heroin deseribed, und for the purposes sot forth.

73,76\%.-JOFN H. Yocum, AshIand, Pa-Grate. -January 28, 1868.

Claim.-1. The provision, in a grate, of one or moro openings $E$, to pernit tho removal of slige, clinkers, stones, and other substances too large to bo raked through the intersticos of the grate bans, substantially as deseribed.
2. The bars or shiclds $F$, in combination with the enlargements or extensions $G$, to form shiolds to tho openings E , substantially as and for the purpose sot forth.
78.768.- II. R. Allex, Charleston, Ill.-Appa ratus for Straightening Olub Fect and Crooked Legs. - January 28, 1868. - The jointed frame is attached by straps, and has pads and adjustable spring bars by which the abnormal stato of the Lower member is corrected.

Claim.-1. The employment of a jointed frame, substantially as showu at A B D C D', and straps E F G, in combination with any eonstant spring tension applied to tho said frame lor the purposo of
straightening it when on tho limb, and thereby overeoming any anchvlotic rigidity of the knee or angle joints of the said limb, all as set forth.
2. The vertically movable foot plate $J$, substantially as sliown and deseribed, in combination with its proper spring attachment, as described, or other equivalcut device, and frane plates $C$, all as and for the purposes set forth.
3. The latorally moving foot plate $I$, in combination with the bearing plates $L$ and $O$, and lateral spring attachment, all substantially as shown and deseribed, and for the purposes set forth.
4. The loek S , substantially as shown and described, or other equivalent doviee, in combination with the frames A and C, substantially as and for the purpose shown and doscribed.
5. 'Ihe spring' attachment, eonsisting of the hooked wire $f^{\prime}$, shoulder lugs $h^{\prime}$, springs $g^{\prime}$, and bur' $i$, eonstructed and operated substantially as shown and described, in combination with the foot plato $J$ and frame plato $C$, for the purpose of removing anchrlosis, all as set forth.
6. The foot strap $G$, or other equivalent deviee, in combination with the movable foot plates $J$ and I of an apparatus for straightening feet or lower limbs, all substantially as shown and described, and for the parpose set forth.
7. The elastic strap $H$, or other equivalent device, mpplied, substantially as shown and deseribed, to the frame plate A of an apparatus for removing anchy. losis, all as and for the purpose set forth.
8. The motallie strap $P$, or other equivalent deviee, in combination with the strap $G$ and movable footplates $J$ and I, substantially as and for the purpose shown and deseribed.
vog, 9 g. -Nathan E. Badgley, New York, N. Y.-Broom.-January 28, 1868.

Claim.-The combination of the scalloped-edged cap D, its neek E. tho tying of broom corn in one place, and securing the same with cord $C$ to the square end of handlo B, all as and for tho purpose htrein described.

173,970.-A. Militon Blake, Canton, Ohio.Spring Bed Bottom.-January 28, 1868.-The slats are comected by transverse canvas straps beneath them, and are supported on springs whose upper ends surround the cylindrical blocks beneath certain of the slats.

Claim. - The arrangement and combination of the slats $F$ G, straps D D, bungs II $I$, and springs A $A$, when said slats $F G$ are so arranged as that each altornate one is supported by a spring A, and the others by the straps D D, substantially in the manner and for the purpose herein specified.
g3,9\%1.-EliJan Borton, Morris, Ill.-Operating Pumps.-January 28, 1868.-The segmental raeks apon the pivoted bloeks and lever, operato tho pump rod by oseillation of the le rer.

Claim.-The eccentric segment F, supported at $b$ upon the bed piece $\mathbf{B}$, the eccentric semicircular gears upon tho lever D' sliding vertically in the slot $\overparen{i}$, the upper cccentrie segment sliding vertically in the slotted frame $B^{\prime}$, and piroted to the arm $G$ carrying the pump rod C , all eonstructed and arlenged to operate as herein shown and described.

73, \%\%2.-Charles Bradford and Wesley Brainfolid, Crown Point Centre, N. Y.- Rein Holder.-January 28, 1868. -The bar is elamped to the plow beam, or other implement, or to the rehicle, and serves to support the lines which are passed through the terret eyers.

Claim.-The bar A, having the worm a at its lower axtremity, eombination with the ojes $b$ and clamp C , in manuer substantially as above set forth and described.
93.978.-Libertine Bullard, Marlboro, Mass. -S'hoe-January 28, 1868.-The vamp is cut so as to place the side seam vertieal, and in position similar to that of a boot. The vamp may be cut so as to run one seam to the center of the heel and dispense with one "quarter."

Claim. -The combination of the parts $A$ or $A^{\prime}, B$ and C , constitutiag, respeetively, the ramp, quarter,
and counter of a shoo, when tho said parts are cut in the form and secured together in the manner shown and described.
73.7. 1.-T. H. Bunnmll, Now York, N. X. Telegraph Repeater.-January 28, 1868.

Claim.-1. The employment of two governor magnets, placed in the samo loeal circuit as the respective local sounders in a telegraphic repeater, when the said governor magnets are there placed for the purpose of making the repeater self-breaking and controlling its operation, substantially as herein shown and deseribed.
2. A governor magnet, wound with wire of suel relative size and resistance to that upon the loeal magnet, as that when both are included in the local eircuit, the governor magnet shall be eharged while the local magnet is not.
3. The combination of fine wire governor magnets as herein described, with the regular loeal batteries and sounder magnets of a repeater, as and for the purpose set forth.
ys.gy5.-J. CALDWELL, Chillicotho,Ohio.-Vege table Cutter.-January 28, 1868. -The sliding box containing the material has notches to permit its passage ovor the vertieal scoring knives, whieh act on tho said material previonsly to the horizontal knife.

Claim.-1. The rear extension B , in eombination with the platform A and horizontal knife D, substantially as herein set forth and described.
2. The box E, provided with the groores $e$ in the bottoms of its walls, substantially as lerein shown and described.
rys, gig.-TAMES CAMPBELL, Peoria, H1.-Ventilating Millstones.-January 28, 1868.-The hoods are set with their mouths forward to force air down the pipes within the stone, causing it to eirculate between the grinding surfaces.

Claim.-The hoods $g g$, and the pipes e e, passing through tho eap-picco $\mathcal{B}^{\prime}$, the ehannels $e^{\prime} e^{\prime}$ in the rumner $B$, the washer $c$, the flange $h$, and the vent holes $m m$ in the curb $D$, all arranged and operating as and for the purpose herein described.
gis.ggg. JOHN S. CAMPBELL, Nerrton, N. J.-Check-Rein Mook.-January 28, 1868.-A tongue is hinged to tho post top and may be swung back against the point of the check hook to prevent the escape of the rein.

Claim.-The hinged tongue B , in combination with the plate $b$, for attachment to the eheek-rein hook, substantially as set forth.
-3, 'gys.-S.P. Campbell, Quincy, Mass.-Button for Carriage Curtains.-January 28, 1868.-The button stem passes through two plates which are secured to the carriage and kept asunder by eylindrical bloeks traversed by the attaching screws and supporting the spring which rests against the rectangular part of the stem and prevents its turning aceidentally.

Claim.-The button B, provided with a stem, part of which is rectangular, in combination with a pressure spring $S$, the whole construeted and operating substantially as and for the purpose set forth.
 Cane IMill.-January 28, 1868.-The eane is rolled between one upper and two lower rollers, forming two points of pressure, tho first being somewhat lighter and serving to extract pure juice withont complotely mashing tho stalk; and the last pressure cxtraeting the remaindcr. The juice from the separate pressures is received in different sections of the trough.

Claim. - The combination and arrangement of the compartments $c c^{\prime}$, partition D , and curved perforated plate I , substantially as and for the purpose speeified.

173, 980 .-Edmin Chapman and C. T. Allaire.Roebester, Minn.-Steam Generator.-January 28 , 1868.

Claim.-The steam generator, construeted as reseribed, consisting of the conical furnace D , having
the air tube $F$, and supporting the conical combustion chamber $\mathbf{E}$, the points of their connection form ing shoulders, connected by the diving flues J with tho casing I3, inclosing the water space, and placed concentrically within tho outer casing A, tho spaco between said casings forming the ascending flue $H$, all arranged and operating as herein shorm and lleseribed.

73,881.-12. A. Criesebrougit, New York, N. I., assimior to William H. Chesebiough, same place.-Heating Railroad Cars.-January 28, 1868.A stean pipo passes from the locomotire throngh the whole length of the train, and may branch so as to pass both insido and outside the car, or may be inclosed by a jacket therein. The heat imparted is regulated by eocks. The comnections between the cars are of rubler.

Claim.-1. The arrangement, in a railroad car, of steam pijes a $b$, in combination with registers $g h$, or equiralents, whercby the heat can either be thrown into or to the outside of the car without interrupting the action of tho steam in the succeeding car or cars, substantially as set forth.
2. The arrangement, with a raihoad car, of inside and outside steam pipes, when constructed and applied substantially as described in Fig. 3, for heating purposes.
 Head Rest for Scats.-January 28, 1868.-The support of the head rest slides in curved guides so as to eause the forward morement of the rest when it is raised for use. The sicle projections of the support engage the ratehets when the rest is forced backward, but by drawing the rest forward the projecfinns may be freed from the ratchets and adjustment allowed.

Claim. - The head rest $C$, when made adjustable by means of a ratchet $r r$, substantially as and for the purpose specified.

73, 738.-Towland Cromelien, Washington, D. C.-Paddle Wheel.-January 28, 1868.-The outer gear ring earries the paddles, and is conuected to a sleeve on the paddle wheel shaft. The inmer wheel is fixed to the said shaft and communicates motion to the scries of pinions having larger spur wheels on the sime shatt, engaging tho outer gear ring to which the paddles are attached.

Claim.-The combination of paddles or buckets with amular-toothed wheels, operated substantially as described, for the purpose specified.

73,78是.-Cinirles Dicdricis, Philadelphia, Pa., assignor to James S. Mason \& Co.-Punching and Raising Dishs from Metal.-January 28 , 1868.-The disk is punched out and antomatically carried to the raising die, by which the calge is turned up, after which the disk is discharged from the press. Tho punch and dio act simultancously, but on difeerent blanks, and aro operated by connection to an eccentric on tho main shaft.

Olaim.- The combination of the punch $G$, stann) $J$, feed board $K$, consisting of tho parts $l, m, n, n^{\prime}$, and carrier N, sliding bencath the punch in tho channel II $s$, and advancing but one disk directly to the stamp beforo another is cut, substantially as described.

73,785.-William Ebermard, Akron, Ohio, assignor to himself and A. P. Baldwin, samo place.Washing Machine.-January 28, 1868.-The framo is attached to a common wash tub, and has a lowor, circumferentially-grooved wooden roller, having slow rotation by a screw sear, and an npper roller covered with rubber, or a hard cord, and having rociprocation to and from tho other roller, and freo rotation therowith. The clothes are passed between the rollers.

Claim.-1. The washing machine constructed as described, and consisting of tho rollers IB C, framo $d$, shaft $b$, vibrating frames $g g$, pitman $h$, crankshaft $k$, shaft $c$, crank $m$, worm $d$, pinion $c$, Hy and gear whoels, lever $p$, and rod $n$, all arranged and operating as described, and for the purposo specified.
9. In combination with the vibrating frames $g$
and roller C , the lever $p$ and rod $n$, substantially as and for the purpose set forth.
3. In combination with roller $B$, the guards $q$, substantially as set forth.
y.3.786.-L. IF. G. Eifinandt, London, England, assignor to Gioorge 13. Upton, David D). Stackrole, and Samble II. Gookin.-Gunpowder.-Jannary 28, 1868.-Improvement on his patent of Juno 19, 1866. Composed of chlorato of potash, 1 ; nitrate of potash, 4 ; mineral coal, 5 parts by lutk; or, chlorate of potash, 1 ; mitrato of potash, ${ }^{2}$; and coal, 3 parts. Tho ingredients aro finely pulver. ized.

Claim.-The powder herein described, consisting of the ingredients mamed, prepared and mixed as described.
 Newton, Lowell, Mass.-Artificial Leg.-Jamuary 28, 1868. - The adjustable side bars are jointed it the knee, and the anklo block is pivoted to their lower ends. These bar's give smpport to tho bands to which the sockets are secured. The extensor tendon of the knee joint connects the lower thigh band to a spring coiled on a barrel having adjustment by a ratchet wheel and pawl. A sinilarly arrauger spring is connected by the flexor tendon of tho ankle to the fore end of the ankle hlock. The rear end of tho anklo block is comected by an adjustable jointed bar to tho back bar of the leg, and forms a stop to tho ankle joint.

Claim.-1. The self-adjusting sockets $c$ and $c^{\prime}$, for the purposes substantially as described mold set fortll.
2. Tho extensions $i$ i and $j j$, applied to the upper and lower sockets $b b^{\prime}$ and $c c^{\prime}$, for the purpose of adjusting tho same in position, as describod and fully set forth.
3. An artificial leg, provided with straight side heams $a$ a, bands $b b^{\prime}, c c^{\prime}$, and $d$, when arranged as herein described, and for the purpose set forth.
4. The double stop $h h$, in combination with the straight side beams a a for the purposes as described and set forth.
5. Tho arrangement and combination of the thumb-wheel $o^{\prime}$, ratehet o, pawl $p$, and frame $m \mathrm{~m}$, for tho purpose substantially as described.
6. The combination of tho anfle-seat $q$, pirots u u and $2 v, b$ lock $v$, and adjustable hecl-cord $t$, when arlanged to operate substantially as described and set forth.
\%3,78S.-E. Emanit, Franklin Grove, Ill.-IIarvester.-Jannary 28, 1868.-The pitman lies behind tho cutter bar, is hinged to the outer culd of the latter, and has ratchet teeth to seatter the grass.

Claim. - The combination of the fingers and cutter bar with tho notched pitman, when tho later is pivoted to tho outer end of the cutter bar, for the purposo of scattering tho cut grass, as herein shown and described.
g3, 9 89.-Daniel Fisiler and William CumMnNG, Oil City, Ia.-Car Replacer-Jamary 28, 1868.- Tho inclines are so piroted to the clampl blocks as to allow lateral or vertical adjustment in their free ends. Tho said blocks are placed beneath the rails and clamped to then by screws innpinging against the web.

Claim.-1. The universally-pivotod reversible inclines C D, constructed and adapted to operato sulbstantially as and for the purpose deseribed.
2. The pivot $c^{4}$, in combination with tho reversible guido $c^{1}$, inclino C , and bearing E , substantially as sot forth.
3. Tho combination of the dog If $f f^{1} f^{2}$, bearing E , and inelino C , substantially as described.
4. 'the combination of the dog I $i i^{1} i^{2}$, bearing $G$, clamp $H$, and inclino D, substantially as and for the purpose specifiod.
5. Tho adjustablo suppor't $d^{2}$, substantially as and for the purpose set forth.
(73, 790.-Meniry G. Fisk and T. J. Flaga, New York, N. Y.-Neck Tie.-Jamary 28, 1868.-The band incloses an olastic ring, through which the scarf is drawn and is retained by the grip.

Claim.-As a now artiele of manufactmre, a scarf, eonstrueted as doseribed, consisting of the cylindrieal knot $A$, to which tho searf $B$ and apron $C$ aro attached, said knot provided with an elastic poeket, which expands to permit the searf 13 to pass throngh, and contraets to liold it iu plaeo, as herein shown and deseribed.
reb, gi91.-Adodison C. Fletcirer, New York, N. Y.-Bale Fastener.-January 28, 1868; antedated January 16, 1868.-The ends of the hoop are passed beneati the ends of the plate and upward through the eentral slot, and are then turned down on the plate and seeured by the pins which aro passed beneath the arehos.

Claim.-A bale fastener, composed of a plate $A$, provided with an opening $a$, and a slot or slots $b$, one or both of the latter having arehes $c$ at their sides, for use in eonnection with a pin or nail, or pins or nails D, to sceure the bent or doubled end or ends of the baling hoops or wires, substantially as speeified.
g3, 9 192.-Emanuel Fonney, Fishersville, Pa.-Harrow.-January 28, 1868.- A set of harrows is pivoted to the main frame, the said harrows turning on arbors whieh are inclined from the rertieal so as to eanse rotation of the harrows as the frame is drawu forward.

Claim.-1. The eombination, with the main frame of the harrow, of two or more sets or pairs of revolving frames or arms for earrying the tecth, tilted or set at augles to the main frame, in the manuer deseribed, and arranged to gear or mesh with eaeh other, substantially as herein showu, aud for the purposes set forth.
2. The combination with the larrow frame of the reversible drag bar and eye bolt, or equivalent means for holding the said bar in position, under the arrangement and for operation as herein shown and specified.
*3, \%93.-T. J. Frazier, St. Paul, Minu.-Heating Stove. January 28, 1868. -The ealorie eurreut passes over the bulkhead or bridge to the rear chamber, and then along the horizoutal side flues to the front flnes, whieh diseharge into the arehed flue on which the stove pipe is set. The bridge eoutains an opeu-bottomed earity.

Claim. - The eombination of the flues D, up-take E , and balkhead 13 , substantially as deseribed, or their respeetire equivalents, with a stove, as herein set forth.
 Packing T'obacco.-Jannary 28, 1868.-The npper end of the bag is folded in, and seenred by a string attached to the edge, so as to form a pocket receptaele for the nser.

Claim.-A bag for packing tobaeco, when folded as described, and seeured by means of a eord passing round its eentre, substantially in the manner set forth.

193,795.-E. J. Gerdom and C. W. Schindlen, Albany, N. Y.-Oil Cup for Lubricating Shafts.January 28,1868 . -The eylindrieal stom of the oil eup is inelincd from the horizontal so as to eause the rotation of the shaft within the stem.

Claim.-In eombination with an oil-eup $\Delta$, a shaft S , construeted of tubes, communieating with the journal $J$, and rotated by the motion of the jourual, substantially as and for the purpose deseribed.
73, '996.-Edwaird F. Gilbent, Lyons, N. Y.Screen Attachment for Wash Stands.-January 28, 1868. -The edges of the eentral part of the serew slide in grooves in eleats behind the stand. The wings when turned out rest on the eleats and sustain che serew.

Claim.-1. The combination of an adjustable sereen, eovered with oilcloth or eqnivalent, with a washstand, so arranged that it may be mised or lowered at will, and hidden from vew when not in nse, substantially as herein set fortl.
2. The eombination of tho wings $\mathrm{C} C$ with the adjustable eenter $B$, so arranged as to expnnd and retain the sereen elerated, or to fold to be depressed from sioht, substantially as herein set forth.
g3, \%97.-JTAMES GildBent, Wyalusing, Wis.Corn Planter.-January 28, 1868.
Claim.-1. Connecting the plow standards S to the frame A, by meaus of the rollers U, substautially as as herein shown and deseribed, aud for the purpose set forth.
2. 'The combination of the levers $V$ and connecting rods or chains $W$, with the plow standards $S$ and frame A. for raising, lowering, and snpportiug said standards, substantially as hereiu shown and deseribed.
3. The eombiuatiou of the weighted elbow lever $O$ and shaft $M$, having arms or stirrers $N$ attnehed to it, with the seed box $G$, and with the projections $R$ formed upon or attached to the dropping eylinder $H$, substantially as lerein shown and deseribed, and for the purpose set forth.
4. The eombination of the harrows $Y$ with the plow-standards S and frame A, substantially as hercin shown and described, and for the purpose set forth.
5. Applyiug the draught below the horizontal plane of the frame A, snbstantially as herein shown and described, and for the purjoso set forth.

73, $1938 .-J o E L$ Gleason, Whitestone, N. Y.Construction of Soldering Iron.-Jannary 28, 1868.

Claim.-Constructing a soldering tool formed of the copper point $A$, serewed into a cast-iron base $B$, and provided with a wrought-iron handle C , as and for the purpose herein described.
-73, \%99.-F. C. Gridley, Hudson, Wis.-Bed Bottom.-Jauuary 28, 1868. - The ends of the slats rest upon bars, whieh are supported by elastie loops passing around them and arouud other bars attached to the rails.
Claim. -The arrangement of the bars $b$ and $G$, elastic straps $g g$, and slats $D \mathrm{D}$, in the construetion of a bed bottom, when such bottom is made in sections, and adjustable iu the manner shown and deseribed.
ry:3,890.-JOHN W.Gniswold, Philadelphia, Pa. Grate for Stoves and Furnaccs.-January 28,1868 . The bottom of the eylindrical grate is eonvex on the upper side, and has a gear engaged by a bevel wheel npon a winch shaft. The grate is turned by the winch or tilted by another shaft.

Claim. -The eonieal rotating grate B, in combination with the eylinder A, both provided with teeth $i$ $i$ at the base, constrneted, arranged, and operating substantially as and for the purpose herein deseribed
gis,801.-ROBERT Hale, Chieago, Ml.-Baby Holdcr.-January 28, 1868.

Claim.-An improved suspended baby holder, formed by the eombination of the two larger hoops or rings $A$, the two smaller lioops or rings $C$, the cloth or equivalent eorerings $B$ and $n$, the three or more supporting straps or cords E, and the slide or buekle H, with eaeh other, substantially as hereiu shown and deseribed, and for the purpose set forth.
g3,802.-Rober't Hale, Chieago, Ill.-Couch as Cradle.-January 28, 1868. -The jointed frame is sus pended on an adjnstable cord, and has a cloth bottom stretehed thereon to support the bedding.

Claim. - An improred portable suspended eoneh or eradle formed by the eombination of the jointed frame A, removable cover or bottom F , straps or eords B, and adjustable eord or strap D, and slide or buckle E , with each other, substantially as herein shown and deseribed, and for the purpose set forth.

73,803.-THOMAS MaNCOCK and JOHN H. LeaMAN, Riehmoud, Va.-Machinc for Clcaning Grain. -January 28, 1868.-The faees of the eylinders have eavities whiel carry up the small seeds and eonvey them to the spouts within tho eylinders. The seraping bars prevent the passago of the wheat.
Claim.-1. The eombination of the hollow rollors or eylinders $B$ and $C$, having small holes or earities formed through or partly through their walls, with each other, and with the frame in which they work, substantially as horein shown and deseribed, and for the purpose set forth.
2. The combination of the bars $I$ and spouts $F$ with the intorior of the hollow eylinders $\bar{B}$ and $C$, substantially as herein shown and deseribed, and for the purpose set forth.
3. The combination of the guard plates or bar $G$ with the exterior of the eylinders B and C, substantially as herein shown and doscribod, and for tho purpose set forth.
4. Forming shallow srooves II around tho lower ends of the cylinders 15 aud $C$, for the eseape of the fine seed, substantially as heroin shown and deseribed.

173, 504 . James Hatton, Now York, N. I.- Hetallic Mandle.-January 28, 1868.-Tho haudlo ennsists of two metallic sides, Which aro connected by the serew fermulo and a transvorso setew. The shank socket eontains leather paeking, which is held in placo by an enlargement within the socket.

Claim.-Coustructing the handles for files, serewdrivers, and for other purposes, of metal, with elastie packing, substantially in the manner leerein shown and described.
73. 505.-John T. Herndon, Baneroft, Mo.-Cultivator.-January 28, 1868.-Tho plow beams have vertical movenent, and the inuer plows transverso movoment, by stiriup treadles commected by levers and chains to the regulating meehanism.

Claim.-1. The combination and arrangement of the beams E J, connected by chains $U$ to pulleys $V$, on the shaft $W$, substantially as and tor the purposo set fortl.
2. The connecting of the inner boams $J J$ by the bar $h$, and the attaching of the uprights $g$ gon said beanls to the arms $Q$, by the bar's $N$, arms $O$, and shafts $P$, for the purpose of giving a lateral movement to the shares or shorels L, substantially as and for the purpose speeitied.

73,806.-I. I. A. Merver, Cleveland, Ohio.Skating Rink.-January 28,1868 . - The foundation of the platform around tho water has dooks which allow access to the air when desired.

Otaim.-A skating rink, provided with a cold air trunk D , cxtending partially or ontirely around its foundation or lower part, and provided with doors $b b^{\prime}$, at its inner and outer sides, for tho admission of external air, in connection with the openings a in the roof of the rink, all coustrueted and arianged substantially in the mamer as and for the purposes set forth.
g3,80\%.-Amariair M. Mills, Mockanum, Conn. -Lawn Movoer.-Jamary 28,1898 . Tho straight entter bar acts in connection with tho spiral rotating cutter. A roller follows.

Claim.-1. The balaneed frame on the roller E, provided with the fixed cntter bar D , in combination with the bail-shaped rod Q , to which tho handle S is secured, all constructed and arranged substantially as and for the purpose set forth.
2. The horizontal cutter M, having the spiral flanges $c$ c, whon adjustably luug in the slot ted upright O upon the covered shoe N , and in front of the cutter D , all constructed as described, for tho purpose specifich.
3. The combination of the frame, roller, cutting device, and the handle attachment, all constructed and arranged to operate in tho manner substantially as and for the purposo set forth.

3,808.-Leonard L. Hodges, Boston, Mass.Picture Frame Supporter.-January 28. 1868. -The suspension hook eugages one of a series of slots in a plate fixed to exch side of the frame, being ehanged from one to another to adjust the inclination of the frame.

Claim.-The eombination of the eatehes and catch racks with the suspension cord and picture frame, the whole being substantially as clescribed.
n:3,303.-S. Grant Hoyt, New York, N. Y.Tce Pick.-Janmary 28, 1868.-The ends are intended for lividing into large blocks, or for breaking into small pieces for use.

Claim.-Au ice pick, consisting of a liandle $A$, having a many-pointed piek $B$ at one end, and a
single-pointed picle $C$ at the other end, substantially as and for the purpose heroin shown and deseribed.

73, 810.-Jomin S. Insieeep, West Middleburg, Ohio.-S'ugar Mold.-January 28, 1868.-The box is made from a single sheet, whose cormers are eut out, and the sides and ends being turned up vertically, their tops are turmed out horizontally to rest upou a wooden frame.

Claim-A sheet-metal box B , having its rertieal corners loose or detaclied, in combination with a frame, $A$, into which it fits, and within whieh it is supported by its lorizontill edges or flanges, substantially ats described, aud for the purposes set forth.

73,811.-CnAs. R. Jenkins, Philadelphin, Pa.Curtain Fixture.-January 28, 1868.- One of the journal eaps is seeured to the roller by an intervening cylindrical piece of soft rubber, so as to force the cap outward and sustain the shade by frietion.

Claim.-Interposing between pulley-cap and roller a tube of India rubber, vielding laterally and vertically as and for the pmrpose deseribed, and serving itself as a pulley for the eord.
73.S12.-REUBEN Johnson, Danbury, Conn.Felted Mat Body.-January 28, 1868. - The fur and wool are mixed by means of the air, and collected on a porous former from whose inside the air is exhausted. The wool is earded and then the fibers eut sloort before mixing with the fur.

Clam.-The admixture of wool and fur fibers, the former being out into shoit lengths to equalize the relative reight of fibers, substantially as and for the purpose deseribed.
g:3,813.-George B. Kirk, Newark, N.J.-Pipe and Bolt Cutter.-January 28, 1868.-The jaw is aljustable by a nut and screw ou its shank, and the cutter is also adjustable. The device operates by revolving it around the pipe.

Claim.-1. 'The cutting tool d, consisting of a fixed steel eutter, pointed substantially as shown and deseribed, in combination with the. sereen shank $l$, stoek A, and adjustable claw B, all constructed and operating as and for the purpose set forth.
2. The flange $i$ and pin $g$, substantially as shown and described, or other equivalent deviee, when in combination with the lrolder $C r$, stoek $A$, and eutting tool $d$, for the purpose set forth.
3. The slot $n$, substantially as shown and described, in combination with the eutting tool $d$ and stock $\Lambda_{\text {。 }}$ all as set íorth.

73,514.-PHLANDER P. LaNE and Joserli T. Bonler, Cincinnati, Ohio.-Saving Machine.-Jannary 28, 1868. - The regular feeding morement of the saw carriage is assured by reiglits taken up by a counter-balance cord as the oseillating trame departs fiom a vertical position. The same object is accomplished by a counter-balance upon the oseillating frame below its axis, or by springs against whiel the earriage impinges.
Claim.-In a cross-cut sawing machine, the eombination of a reciproeating saw carriage with a graduated counter-balance. constructed and operating substantially as described.
g4,815.-Jonn F. Laillace, Mamburg, Conn.Bearing for Shafts.-January 28, 1868.-The disk is secured to the rertical shaft, and rests on anti-ficiction balls, whiel are leld in plaee by the perforated cireular plate which turns frecly in the groove in the inner side of the down-turued circumferential flange of the disk.
Claim.-1. The perforated plato E, carrying the balls D , when such plate is arranged to turn loosely in the groove, constructed as described, in the flanges a of the disk, as herein set forth, for the purposo specified.
2. Tho disk B, constructed as deseribed, bearing. tho perforated plato E , held in placo by the ring $b$ and pins $c$, in combination with the balls $D$, shaft $A$. and stationary plate C, as and for the purposo speei fied.
g3,816.-W. H. Laubach, Philadelphia, Pa.Gas Engine.-January 28, 1868. -The iutlammablo
gas is admitted to the cylinder, and when the piston has moved some distance the inlet valve closes, and an apcrture in a small pipe which is supplied with gas by a flexible pipe, cuters the cylinder through a stuffing box in the head. The gas having been ignited in passing a gas burner just outside the cylinder head, explodes the gas within the cylinder, the explosion extinguishing the flame.

Claim.-The combination and arangement of the devices, as herom set forth, whereby the igniting flame is cansed to pass directly through the inflammable gas, inside of the eyliuder, substantially as herein set forth and deseribed.
7.3,817.-William Law, Birmingham, England. -Hook and Eye.-Jannary 28,1868 . - The cnds of the eje open to pass orer the contracted portion of the tongue, the flexible sides drawing them inward bencath it.

Claim.-The hook and cye, the latter constructed of a bar bent at right angles to the plane, and divided in the middle at $m n$, for engaging with tho bent sides of the tongme $l$, which fits in the angular part $O$ of the eyc, the sides $p$ and $q$ of the latter springing open to admit of the attachment, and closing upon the narrow part of the tongue $l$, as herein shown and described.
\% 3, 818. -Richand Leach, Linwood Station, Pa. -Pieker for Looms.-January 28, 1868. - The pad is formed of several strips of sole leather secured together and placed edgerays to the picker staff, and secured thereto by a leather band.

Claim. - The combination of the pad $B$, band $C$, staple clasp $b$, and screw $c$, with the staff $A$, all construeted, arranged, and operating as described.

M8,819.-DANIEL LOMBALD, Boston, Mass.Hachine for Hulling Coffee.-January 28, 1868. -The husk is removed from the coffee while passing between the serrated blocks of the cndless belt, and the serrated lower sturface of the yielding plate.
Claim.-1. The combination of the endless band $d$, composed of serrated metal plates, with the serrated plate $e$, provided with the sides $e^{\prime}$, substantially as and for the purpose set forth.
2. The combination of the endless band $d$, the supporting frame $h i$, and the elastic bearings $r^{\prime}$ as described.

193,320.-C. O. Luce, Brandon, Vt.-Horse Rake. -January 28, 1868.-The rake is laised by the scgmental rack at the end of a lever which engares a similar rack on the rake head. The clearer bar is connected by spring rods to the frame, and slides over the teeth as they are raiscd.

Claim.-The oscillating axle D , comnected with the thills by the straps $a$, segment rack $C$ on the lever $b$, foot board $B$, segment rack $c^{\prime}$, and curred teeth $e$, in combination with the clearer bar E , extending across the teeth $e$, and supported by the curved bars $s$ from the foot board B , as herein described, for the purpose specified.
'g3,821.-H. W. Libbex, Cleveland, Ohio.-Suspending Cariage Bodies.-Jannary 28, 1868.-The body is suspended on arms on each side, which depend from C-springs secured to the axle, and rise to the height of the earriage top.

Claim.-The special arrancement of the bars D D, with their springs $d$ d and the rods E E , in combination with the ruuning part of the carriage, provided with slicling exteusion bar $I$, substantially in the manner shown, as and for the purpose set forth.
\% 3, g2: -Jonn Marcimank, Lansingburg, N. Y., assignor to WILLIAM H. Son, same place.-Far-cet.-January 28, 1868. -The inclines bear against the guide, and insure special tightness when the gato is fully opened or elosed.

Claim.-1. The ariangement of the graide braco C in relation to the gate B and the body A , substan tially as and for the purpose herein set fortli.
2. The inclincd plane $b$, provided unon the gate, and arranged in relation with the body A and the guide braoe $C$, substantially as and for tho purpose specified.
3. The inclined plane $e$, arranged upon the gate,
and in relation with the body $A$ and guide braoe $C_{5}$ substantially as and for the purpose speenficd.
4. The stud $a^{*}$, arranged upon the gate, and in relation with the guide brace, substantially as and for the purpose specified.
ryp. $828 .-J$-TInn Mays and E. W. Bliss, Brooklyn, N. Y.-Die P'ress.-January 28, 1868.-The sliding head has $V$-bearing ribs which rest in grooves in the brass gibs slipped into the solid boxes.
daim.-The solid boxes E E, the sliding head D, with $V$ bearings, and the adjustable gibs $a$ a all constructel and arranged with the lever, substantinlly as and for the purpose hercin described.
vog, 894.-John B. Mignaulif, Boston, Mass., assignor to himself and Alfred B. Hall, same place.-File Cutting Machine. Jannary 28, 1868.The cutter is loosely pivoted to a spring arm, and so pressed as to throw its outcr odgo down upon the blank, while its inner cdge is slightly raised above it. The latter is subsequently brought down by the increased leverage of the spring arm, whercby the chisel adjusts itself to the surface of the blank before being struck by the hammer.

Claim.-1. A cutter X, piroted loosely to a spring arm $W$, in combination with a spring $Y$, substantially as and for the purpose set forth.
2. The combination of the adjustable block $Z$, cutter $X$, and bed $I$, substantially as and for the purpose set forth.
3. The lever 27 with its slotted arm 29 , in combiation with the adjustable screw 31, or its equivalent, substantially as and for the purpose described.
gib, 825.-FREEMAN F. MYRICK, Dublin, N. H.Thread and Fam Holder.-January 28, 1868. -The spindle is passed through the ball and supported in the bail.

Claim. -The combination of the frame $\Lambda$ with the spindlo $\dot{B}$, substantially in the manner as and for the purpose set forth.
(93, 826 -FREDERICK Nisimitz, Brooklyn, N. Y.-Harvester.-Tanuary 28, 1868.-The platform is curved concentrically with the reel shaft, so that a rake attached to one of the arms of the reel will sweep the grain into the dumping box, which is tilted diagonally to deposit the gavel out of the track of the hor'ses in the next round.

Olaim.-1. A dumping box tilting diagonally on a rolling fulcrum, substantially in the manner and for the purpase described.
2. The combination of a concave platform with a diagonally tilting dumping box, substantially as described.
3. The combination of a recl rake, a concare platform, and a diagonally tilting dumping box, substantially as describcu.
4. The combination of a reel rake with a dumping box, tilting diagonally to the reel shaft, substantially as deseribed.
5 . The combination, with the tilting dumping box, of the tilting lever, operated either by the hand or foot of the driver, or by both combined, substantially as described.
6. The combination of the projecting supporting arm K with the tilting platform or dumping box, rolling fulcrum, and retaining guide, substantially as described.
7. The adjustable supporting arm K, constructed and arraged as described.
\%eg8\%.-Frederick Nishwitz, Brooklyn, N. Y.-Harvester.-January 28, 1868.-The variation from the preceding (No. 73,826 ) is explained by the claim.

Claim.-The combination, in the manner describod, of the concave platform, the reel rake, the reel supports, and the tilting dumping box, in an independent framo, so that they can be bodily attached to or removed from the machine.
g:3,828.-H. L. OGDEN, Atkinson, M11.-Try Square-January 28, 1868.-The square adjusts itsclf to the object and indicates the inclination of tho planes upon a scalc.

Claim.-A try square constructed as described,
and consisting of the blade B, provided with a slot $a$ and piroted Within a slot in the handle C, spring F , and stop pin $b$, the square being provided with a graduated seale, all arranged and operating as set forth.

73,829.-Joserf B. Oker, Tudianapolis, Ind.Spring Door Holder.-Jannary 28, 1868.- The spring is attached to a base plate sceured to the floor and the bottom of the door is received in the coneave bend of the spring to keep it opon.

Claim.-A derice for holding a door in any desired position, when constrneted with the base A, and standard B made in one pieee, with the spring C held in position by the key D, substantially as described and set forth.

93,830. - Waiter Payton, Lendon, England. Lathe for Turning Irregular Curved Forms.-January 28,1868 . -In eutting two series of vanes to work together, the axes with their vanes are affixed to separate mandrels, and subjected to the aetion of cutters earried by the traveling table; and they are so arranged that one eutter may commence to cut across the surface of one vane of an axis at its smaller diameter and progressively outward. The other eutter aets to ent aeross the ranc of the other axis commencing at the larger diameter and progressing to the smaller.
Clain.-1. The combination and arraugement of deviees hercin set forth, for enttiug or planing enrved forms, when operating in manner substantially as described.
2. The axes F F and $\mathrm{L}^{2} \mathrm{~L}^{2}$, when operated by rack and pinion $L \mathrm{~L}$ and elieks $\mathrm{L}^{6} \mathrm{~L}^{8}$, so as to give the desired progressire motions to the work to be cut or planed, or to retain such work stationary during the return motion of the cutters, in manner substantially as deseribed.
3. The arrangement of the entters, so as to admit of their several adjustments and correet aetion in manner substantially as deseribed.
4. The method of imparting motion to the support $\mathrm{N}^{1}$ of the cutting tool or tools, by an adjustable arm, $J^{9}$, and parts aeting therewith, in manner substantially as deseribed.
g3,831.-Oliver E. Pillard, New Britain, Conn, assignor to Frederic II. Nortry, same place. -Permutation Lock--January 28, 1868.-The tumblers are set and the bolt retracted by rotation of the spindle; but communieation is cut off between the knob and tumblers when the bolt is retracted, to prevent displacement of the tumblers. A ring is suspended from the dog, and the linb of the spindle can be drawn into the ring, thereby preventing the spindle being drawn back to aet on the bolt until the proper arrangement of the tumblers allows the dog to drop. On retraction of the bolt a plate thercon prevents the hub being pushed into eontaet with the tumblers. A spiral range of holes aronnd the spindle allows the knob to be so placed as to accommodate it to any thickness of door.

Claim.-1. The ring or blocking-picee 0 , suspended from the $\operatorname{dog} i$, in combination with the hub $g$ and arm 2 on the spindle $d$, as and for the purposes set forth.
2. The plate or lip 9 , in combination with the hnb $g$, ring $o$, and bolt $h$, as and for the purposes set forth.
3. The combination of the ring 0 , $\operatorname{dog} i$, bolt $h$, hab $g$, lip 9 , and circular tumblers $k k$, as and for the purposes set forth.
4. The combination of the bolt $h$ and hub $g$ with the plate or flange 9, that is notehed, to allow the hub $g$ to be moved to connect with the tumblers when the bolt is projected, but prevents the tumblers boing acted on when the bolt is retraeted, substantially as set forth.
73.832.-Auguste Poirel, New York, N. Y., assignor to himself and Pierre bernard, same place. -Boiler Scraper.-January 28, 1868. -The metallic disks are strung upon the serew bolt with supporting sleeves between, and are secured by a nut.

Claim.-1. The construetion of the metallie serap. ing disks, of unequal diameters, arranged upon the same rod, whereby eaeh disk will perform a por.
tion of the work without permitting the front disk alone to scrape the tube, as hercin shown and deseribed.
2. The construetion of the metallic disks, with perforations, to give them elasticity, whereby ob structions in the tube will not prevent the operation of the seraper, as herein shown and deseribed.
g3,833.-Liman B. Prindie, Litehfield, Comm-- Lifting Jack.-January 28, 1868. -The fulernm pin of the lever rests in rounded noteles in the standard and is held down by an extension pawl which is piroted to the standard and engages a ratehet on the upper side of the lever.
Claim.-The extension pawl C D, as construeted, in combination with the ratehet or notehed lever B, and the single mortisod and notehed standard A, whereby the fulerum of the lever may be placed in any position for the heiglit of the artiele to be raised, as herein set forth.

93,834.-Sanuel C. Pruden, Harmony, Ohio.-Burner.-Tanuary 28, 1868. The wiek tube has a perforated bottom and contains alnm.
Claim.-A burner, made substantially as and for the purpose deseribed.

4, 835.-J. S. Reid, Orange, Ind.-Single Har-ness.-January 28, 1868. - The harness is attached to the thills by studs beneath them, and before and behind the thill loops.
Claim.-The straps C C ${ }^{\prime}$, when combined with the baek strap B and shaft A, sulstantially as abore set forth and deseribed.

93,836.-A. II. Rennie, Pinghampton, N. Y.-Scissors.-Jannary 28, 1868.-The rear ends of the blades are supported on a roller, which has an inside gear tmrning a pinion. To a wrist pin on the pinion, the upper and moving blade is conneeted and is driven thereby as the shears rest upon the roller, and are mored forward by the hand.

Claim. - The combination of the blades A B, handle C, arms $a$, wheel $b$, erauli $c$, and pinion $d$, substantially as deseribed, for the purpose specified.

73,3:37.-Whllam Richardson and Louis Ber Mülcier, Baltimore, Md.-Bending Machine.-January 28, 1868. - The side bearings of the central roller are conneeted at the top by a hinged link, and one of them hinged so that the roller may be removed to allow the introdnetion of the tire.

Claim. -The combination of the roller R with the jointed firame which supports it, coustrueted substantially as described.
g3,3:38. -Louis Edouard Rifot, Paris, France, assignor to Jaceues Gaillafidon, San Franciseo, Cal.-I'reating Ores of Gold and Silver.-January 28 , 1868. - Improvement on his patent of May 31, 1864. The roasting is effected by steam at a high temperature, which is injected upon ore while at a red heat, the ore being scparated firom the ealoric enrrent by cast-irou plates.

Clain.-1. The roasting of silver and gold ore by superheated steam in the manncr as herein desoribed, that is, by separating the ore from the flames by the interposition of east-iron plates, and by snperheating the steam in the furnaee itself, substantially as shown and set forth.
2. The reverberatiag furnace, substantially as herein deseribed, when provided with steam pipes on or about the fire bridge for discharging steam upon the sole, whether such firmaee be arranged for burning regetable or mincial fuel, as set forth.
3. The arrangement, herein shown and described, of a double furinaee, or of a single furnace with two fire ehanbers, together with the use of east-iron plates at the level of the fire bridge, to separate the flames from the ore, snbstantially as set forth.
4. The arrangement of the furuace hereiu shown and deseribel, in which superheated steam is made to impinge upon the ore, when separated from the flames of the fire chamber.
5. The methol of amalgamating the loasted ore, mithout the adoption of any re-agents, in apparatus of ordinary or suitable construction, substantinlly as herein shown and set forth.
y3,839-Louis Edouard livot, Paris, France, assignor, to Jacques Gaillardon, San Franciseo, Cal.-Apparatus for A malgamating Gold and Silver Ores. Tanuary 28, 1868.-The ore is placed in an annular bed, upon whieh the vertical grinding wheels revolve. The main shaft may stand in a central aperture of the bed and reccive motion from a horicontal shaft beneath. The pulverized ore, mixed with water, is loosened up by rakes, and seraped from the sides to the wheel tracks by knives. The wheels follow different tracks.

Claim.- The herein deseribed method of and apparatus for amalganating anriferous and argentiferous ores.

193,840.-Louis Edouard Rivot, Paris, Trance, assiguor to Jaceues Gaillandon, San Franciseo, Cal.-Treating Ores with Superheated Steam. -Jannary 28, 1868.-Improvement on his patent of May 31, 1864. -The ore is placed in a horizontal rotating eylinder. Superheated steam is received through a central pipe at one end of the cylinder, and the products pass off through a pipe at the other end into the chimney. The cylinder rotates in a furnace. The caloric eurrent first superheats the steam, and after heating the eylinder', passes off by the chimney.

Claim.-The herein described method of and apparatus for roasting argentiferous and auriferous ores, that is to say, the employment, in connection with superheated steam, of a rotary roasting cylinder, substantially in the manner shown and specified.
g3,841.-George Ruppel, Harlem, N. Y.Trunk Lock. January 28, 1868.-A rTheaded pin turns in the plate attached to the lid, and the head passes through the slot of a cireular plate attached to the front of the trunk. A eireular lock plate is placed orer the aforesaid circular plate, and in turning earries with it the 'r-head. The spring bolts prevent the lock being returned until they are pushed into the requisite distance by the key.

Claim. - The manner herein shown and deseribed of attaching the eup $B$ to the plate $A$, and to the two parts of the trunk or bag, by means of sliding bolts D D, and central headed stem C, all made and operating substantially as herein shown and described.

73,842.-Sidney B. Sill, Three Rivers, Mich.Heat Radiator:-January 28, 1868.-A disk damper is seated in a diaphragm stretehing nearly across the drum, and then turned upward. An elliptic pipo slides in the stove pipe abore the drum, aud may be brought in contact with the upwardly projecting part of the diaphragm.

Claim.-1. The adjustable ehamber B, when furnished with valve $G$, vertical plate $n$, and horizontal plate $S$, in combination with flue $D$, the whole construeted and operating as set forth.
2. The four radiating chambers, arranged in the manner and for the purpose specified.

F3,843.-James Simpson, St. Louis, Mo-Brick Machine.-January 28, 1868.-The clay descends through an adjustable throat at the bottom of the hopper, and is carried forward by a plunger to near proximity to another plunger, and pressed between the two. The brick is then carried to the discharging apertme, and is carried off by the receiving plate at the end of the pivoted arm.

Claim.-1. The combination of the pivoted arm P , having receiving plate $r$, bar S , and rod $t$, with the eross head $h$, compressers F G, and opening $m$ in the bottom plate $i$, as herein describect, for the purpose specified.
2. The plate $n$ and serew $o$, in combination with the hopper $J$ and compressors $F G$, as hercin deseribed, for the purpose specified.

73,844.-TOHN A. SNYDER, Georgetown, Pa.Machine for Mortising Fence Posts and Sharpening Fence Rails.-Jannary 28, 1868. -Tho posts are sawed with a circular saw, are then bored and mortised, and the rails sawn and pointed by the tools, Which are mounted on an adjustable sliding carriage.

Claim.-1. The rail carriage, consisting of the adjustable bar $D$, mounted on the upright reciprocating carriage $C$, and provided reith the swiveling
clamp standard $\mathrm{D}^{1}$, the whole construetcd and operating in the manner and for the purpose set forth.
2. The reciprocating rail carriages $I$ and $K$, adapted to be moved in paths at right angles to cach other, in combination with the toothed racks and pinions for operating said earriages, the whole arranged and operating as cleseribed.
g3,845.-BENJAMIN L. SoUTIIACK, New York, N. Y.-Reclining Chair.-Jauuary 28, 1868.

Claim.-A reclining chair, constructed as deseribed, and consisting of the fixed seat $A$, linged back $C$, and leg piece $E D$, hinged rack bar $F G$, pawl H, lever I, legs $a$, arms $B$, and hinges $a^{\prime} b c c$, all arranged and operating as deseribed, and for the purpose specified.

193,846.-Charles F. Spencer, Rochester, N. Y.-Iruit Jar.-January 28, 1868.-The lid has as loop on each side whieh engages a ratchet on the side of the neck.

Claim.-The combination of the hinged loops $f$ of cover $B$ with the notched lugs $g$ of jar $A$, for the purpose of adapting to different thicknesses of the packing rings, and to different inclinations of their seats, the whole arranged as described, and operating in the manner and for the purpose set forth.
g3,84\%.-Laroy S. Starnett, Newburyport, Mass.-Shoe.-January 28, 1868. -Metallic lace hooks are riveted to the shoe.

Claim.-As an article of mannfacture the fastening $a a^{\prime}$, when constructed and applied to a boot or shoe, as and for the purpose specifiod.
-3,848. - William Strevelu, Jersey City, N.J., and G. B. Kerper and S. B. Wells, New York' N. Y.-Leather Belting.-January 28, 1868.

Claim.-1. A leather belt produced by combining with a "side" a split, whether such split is from the same or a different "side," and whether it be continnous or in detached picces, as described.
2. A leather belt produced by combining with the inner or flesh surface of a leather side, a split from the corresponding or the flesh surface of another side, as deseribed.
g3,849.-George Stricker, Catawissa, Pa.-Vehicle.-January 28, 1868. -The reaches consist of upeurved springs to which the body is attached.
Claim.- The arrangement of the supplemental spring $D$ and the side sprivgs $C$, the spring $D$ having its ends attached underneath the axles, and the springs Chaving their rear ends attached at or above the upper side of the rear axle, and their forward ex. tremities to the cross-bar $b$, substantially as and for the purpose specified.
73,850.-J. M. Tanner, Albert Lea, Minn.Water Wheel.-Jannary 28, 1868. -The inlet and outflow of the water are on opposite sides of the ease, and the buckets are placed across a segmental wator course on one side of the wheel, being netuated by the anti-friction rollers at the ends of the pivoted arms to which they are secured.

Claim.-1. The combination of the centrallypiroted arm $D$, movable buckets $B$, and body $A$, all arranged and operating as herein described for the purpose specified.
2. The thin curved buekets $B$, attached to the ends of arms D, piroted in recesses in the heads of the wheel $A$, and operated and guided by wrist or guide pins $G$, or by friction wheels or rollars $I$, pivoted thereto, said pins or rollers working in eccentrie grooves in the easing $H$ of the wheel, snbstantially as herein shown and described and for the parpose set forth.
\%8,551.-Bradley Treanwell, Reading, Conu. -Insect Guard for Morses.-Jammary 28, 1868. -The under part of the jaw is protected from flies by the Tire ganze stretehed from the throat strap to the bit rincs.
Claim. -Tho insect guard C for horses, in combination with tho bridle or halter, substantially as and for the purpose herein shown and deseribed.

73,852.-Clemens Unverzagt, Terre Haute, Ind.-Hand Loom.-January 28, 1868.-The heddle
frames arr operated by segment-cnded arms which are adiust tble upon a rectangulur shaft, so as to alter the combination. The shaft is intermittines y operatad by a ratchet bar whieh engages the low, ked projections at the salient angles of the polysuml plate wheel upon the shaft. The feather is unon a pin turning in a socket at the midtength of a bar at the lower side of the batten. The said bar is reciprocated by the movement of the feather in the guide grooves of the plate as tae batten is swung backward und formard, innd causes the throw of the shuttles by operating on the piclier staffs through the trigoer bars.

Claim.-1. The combination of the groored plate A, batten $\mathrm{F}^{\prime}$, feather $a b c$, and traverse bar $\mathrm{F}^{\prime}$, when arrunged and aeting substantially as and for the purpose herein deseribed.
2. 'Tle trigerers $\mathrm{K} \mathrm{K}^{\prime}$, as set forth, in combination with the traverse bar Fi/ and its pins e $e e^{\prime}$.
3. The combination of the traverse bar $\mathrm{F}^{\prime}$, feather a $b e$, and the grooved plate $A$, construeted and operating as lierein fully set forth.
4. The ratchet-bar $A^{\prime}$, with its head $m$ and lower inelined surface $x$, in combination with the inelined bracket $B$ and notched revolving plate wheel $b$, as and for the purposes set forth.
5. The combination of the shaft D , wheels $\mathrm{C} \mathrm{C}^{\prime}$, pitmen $\mathrm{E} \mathrm{E}^{\prime}$, batten F , traverse bar $\mathrm{F}^{\prime}$, feather a $b c^{\prime}$, and grooved plate A, all as construeted and arranged as is herein substantially set forth.
6. The combination of the sliding ratchet-bar A!, constructed as (lescribed, with the strap) C, cord D, or their equivalents, when operated by the batten $F$, for the purposes set forth.
7. 'The arrangement and combination of devices hercin set forth, by which the picker staffs are set and sprung alternately simultancously by the backward motion of the batten.
8. The combination of the picker staffs $L$ L, triggers $\mathrm{K} \mathrm{K}^{\prime}$, and traverse-bar $\mathrm{F}^{\prime}$, when arranged and construeted as is lierein set forth.

73,553.-GLorge Webr, Lewiston, Mo.-Bridle Bit.-January 28, 1868.
Claim.-My improved bit, as made, with each of its head-stall hangers $C$, and its martingale or curbrein, litching arm $g$, in one piece, to revolve on the cross-bar $a$, provided with rein rings or eyes $b b$, as specified.

33,854.-B. Weibich and H. H. Silartle, Middlebury, Ind.-Tube Well.-Jannary 28, 1868.-The pipe has perforations which are covered more or less perfeetly by the coiled wire.

Claim.-The perforated well tube, provided with a serew thread a around it to receive different sized coiled wires, whereby the openingrs between the eoils of said wires are rerulated, adapting the tube for use in fine sand or coase gravel, as herein shown and described.

78,855.-J. H. WheELER, Addison, Vt.-MLatch Box.-January 28,1868 . -The side of the box is held down to bring the matches to that side, and one mateh is separated from the rest by a pin which is projected theroin. Whon the matel is separated the slide is moved and the end of the match thrust through the aperture against the slide, which is drawn sideways to imnite the match.

Claim.-The combination with the box A of the sliding cap $J$, slides a g. separator $f$ c $c^{\prime}$, and slide lock o, all construeted, arranged, and operating. substantially as set forth, and for the purpose specified.

193,856.-Eli Wimte and Wilatai Shilvock. New York, N. Y.-Mung.-January 28, 1868.-The bushing is formed of slicet metal, and has a nearly cvlindrical portion and a flange, whieh lave points entering the wood.
Claim.-A bushing for the bung holes of barrels, \&e., constructed with the body B , dlange C , and prongs D , substantially as described.

73,85\%-JoMn C. Williams, Newton, N. J.-Coffin.-J anuary 28, 1868.
Olaim.-As an improved article of manufacture, a coflin, constructed as described, the bottom A provided with a rebate $a$, fitting into the grooves near
the lower ridges of the sides $B$, the bottom and sides secured togetlier by means of the head and foot hoards C D, grooved mpon their i mer sides near their ends $b$, and fitting orer the rebates $c$ apon the ends of tlie sides IS, and the lower edges of the said head and foot boards rebated to fit over the ends of the bottom A, preventing its longitudinal displacenent, as lierein shown and deseribed.
73.a.5.-T. I. Wilson and et. R. Hamorth, Yowa Falls, Iowa.-Ditching Plow.-January 28 , 1868. -The plow is adjusted in depth by side beams which carry adjustable hinged beams witl lollers jourualed to their ends. 'The sides of the ditch are cut by adjustable entters, and a contral entter runs before the colter attached to the moldboard. The plow rests on a sole plate. The earth is raised by the inelines at each side of the moldboard and moved to a distance from the diteln by the side boards.

Claim.-1. The beams R R, the gange beams $N \mathrm{~N}$, and wheels C , when combined and constrieted as set forth.
2. The levers MI ME, constructed and operating in the manner specified.
3. The moldborrds $d$, the supplemental moldboards $\mathrm{F}_{\mathrm{s}}$, in combination with lever $P$, the whole construeted and operating sulustantially as set forth.
4. The wheel U, in combination with colter T and shorel $e$, when arranged and operating substantially as deseribed.

73,55.-Mexiry Wurtz, New York, N. Y.Manufacture of Refined Grahamite.-January 28, 1868.-The "grahamite" is dissolved and, after purifying, the solvent is eraporated.

Ciaim.-The new ehemieal preparation or article of manufacture speeified and described above, called by me parified or refined grulramite, and obtained by the actiou of solsents upon the mineral grahamite, substantially as above set fortli.

73,860.-HENRy Wuntz, New Fork, N. Y.Preparation of Grahamite.-January 28, 1868.-The "grahamite" is dissolred in chloroform, coal tar benzole, or graliamite benzole. It is then purified and the solvent evaporated.

Claim.-1. The separation foom any impurities with which it may naturally necm commingled of the mineral substance ealled by me grahamite by the use of a liquid medium or menstruum, substantially as above set forth.
2. 'The separation of gralramite into two distinct substances by the aetion of solrent media or menstr'ua, substautially as above set fortll.

73,861.-HeNily Wultz, New York, N. Y.Preparation from Grahamite called Irisine.-Tanuary 28,1868 . -Composed of the residue after the removal of that portion of "grahumite" dissolved by petroleun or similar solvent.

Claim.-'The chemical preparation or artiele of manuticture specified and deseribed above, called by me beta resinoid of grahamite, or irisine, and consisting of the residue left undissolved in the extrac tion from grahamite of the viscosine, whether the said irisine be refined by solution in one of its solrents aud evaporation or not, all substantially as set forth.

73,862.-MENRy Wurtz, New York, N. I.Preparation from Grahamite callca Tiscosine.January 28, 1868.

Claim.-The elremical preparation or article of manuficture specified and described above, called by me alpha resinoid of grahamite, or viscosine, and obtainced by the action of solvents nuon the mineral grahamite, substantially as set forth.

73, $863 .-E D W i n$ F. AndRews, Glaskow, Mo.Brich Mischine.-Janvary 28, 1868. -The clay is forced downward by rollers at the bottom of the pug. mill, and enters an aperture passing vertieally through the first plunger. On the forward movement of this plunger the clay drops out of the aperture, and is pressed by the second planger into the mold. The mold frame is then raised, and the first plunger in its forward movement earries a fresh supply of elay from the hopper, and simultaneously ejects
the brick from the mold, depositing it upon the brick board.

Claim.--1. The vertical mold frame K, constructed and operating substantially as and for the purposes specified.
2. The combination of the plunger II' with the mold frame K, when constructed and operating substantially as set forth.
3. In combination with the cams C and frames D , the adjustable bars $E \mathrm{E}^{\prime}$ and flanges $b$, for assisting the operatiou of the plungers to carry the clay, substantially as set forth.
4. The firame A, with rollers F F , sceured upon shafts $m m$, above the throat $G$, frames $D$, operating plungers H $I$, receptacle $V$, knife $l$, platiorm $J$, with board I, and firane K, all constructed, arranced, and operating with their respective parts, as and for the purposes herein fully described.

73, 8 39. - Janes Averill, Champlaiu, and Elisila S. Fitch, Mooers, N. Y.-Draught Equalizer. -Jannary 28, 1868.-The double tree lias a segmental projection which bears against an anti-friction roller. An clongated guide staple runs backward to and slicles on the hammer bolt.

Claim.-1. The combiuatiou of a curved segment $b^{\prime}$, With the central part of the forward side of the equalizer I3, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the fretion roller or whecl IF and piroting pin $G$ with the tongue $A$, and with the curved segment $b^{\prime}$, to sustain the draught, substantially as herein shown and described.
3. The combination of the strap $H$, or its equivalent, with the pin $G$, roller $F$, equalizer $B$, and tongtue A, substantially as herein shown and described, and for the purpose set forth.
4. The combination of the long staple E with the equalizer $B$ and hanmer pin $C$, substantialiy as herein shown and described, aud for the purpose set forth.
5. Attaching the equalizer $B$ to the tongue $A$, substantially in tho manner herein shown and described, so that the said equalizer may be readily detached from the said tongue.
ry3,965.-TAMES C. AYER and Edward HaEFfkly, Lowell, Mass.-Composition for Coloring Hair.-January 28, 1868.

Claim. - The combination of the tartro-plumbite of soda or potash, the oxalo-plumbite of soda or potash, and the formio-plumbite of soda or potash, cither or all of them, with glycerinc, spirits, and water, in the proportions aboro specificd, or in any other proportions, for the purpose specified.

73,864.-Join Bachelder, Norwich, Comm. Guide for Carding Engines.-January 28, 1868. The bars have clliptical perforations for passage of the slivers, aud are adjustable by screws at their ends.

Claim.-1. The combination of two or more adjustable guide bars, constrnetod substantially as described and for the purpose set forth.
2. The arrangement of the screws $h$ and $i$ with the bolt $g$, for the purpose specified.
r3,86最:-Allen J. Beacti and Alexander II. Beach, Linden, Mich.-Axle Gauge.-Jannary 28 , 1868. - The concave end of the sliding gange is piaced on one spindle, and the other spindle set by the adjustable bars.

Claim.-The horizontal bar $A$, in combination with the sliding gange 13 , the angle bar C , provicled with knuckle joints D D, the adjustable bars E E , provided with other joints $F \mathrm{~F}$, the gauge bars $\mathrm{G} G$, working in the slots II $I$, and the set-screws I I, when coustructed and arranged substantially as aud for the purpose described.
73.368.-FRANK BEAN, Boston, Mass., assignor to himself and E. E. Bean and Levi H. Straw.-Electric Gas-lighting Apparatus.-Janmary 28, 1868.An elcetro-magnet and armature are connceted with each bnrner, and are made to operate a ratchet wheel to turn the gas on or off. Each magnetic coil is surrounded by a secondary coil, in which, by the action of the primary coils, a spark-prodncing enrrent is induced, so that by connecting one secondary coil with the burner, and the other secondary coil with an in-
sulated point of platinum which is brought close to the tip of the burner, sparlis are produced to light the gas. Claim.-1. In combination with the ratelet and its crank, the spring connecting the crank to the valve-rod, substantially as shown and clescribed.
2. The combination and arrangement of the valre, the valve chamber, and the inlet and outlet for the sas, when the valve is so arranged that it shuts off communication between the valye chamber and the valve rod tube when connection is open hetween the supply pipe and the burner, and shuts off communication between the supply aud burner pipes when the gas is not burning.
'g:869.-William M. Blume, New York, N. Y. -Mcasuring Receiver for Stills.-January 28, 1868.A portion of the receiver is separated by curved vertical plates, and within this portion the bar is placed which supports a vertical serics of transparent cups to indicate the highest point reached by the liquor. The cups are observed through glass, which is sccured in the side of the receiver. A perforated false top bencath the locking lid prevents the abstraction of any liquor except through the proper pipe, which passes through the false top and whose upper end is covered by the lid, when closed.
Claim.-1. The rod H, provided with the cups II, whereby the height of the liquid is automatically recorded, as set forth.
2. The arrangement of the perforated plates $D G$ and $\mathrm{G}^{1}$, whereby the liquor is caused to cnter the measuring compartment $b$ steadily, as described.
3. The perforated false covel E, when arranged below the real cover of a receiver, suhstantially as and for the purpose herein shown and described.
4. The arrangement and combination with cach other, of the vessel $A$, plates $D G G{ }^{1}$, covers $B$ and E , rod H , and cups I , all made and operating substantially as and for the purpose herein shown and described.

H3,870.-A. W. Browne, Brooklyn, N. Y.-Lamp.-January 28, 1868. -The wick tube is bent from a central position to accommodate the shaft of the lifting wheel which passes diametrically through the burner, and is rotatod by a spur wheel on its end Which engages a series of apertures in the perforated, rotating bottom piece of the burner.

Claim.-1. The inclining tube T , in combination with the central shaft F , wheel W , and rotating bottom piece, arranged in the manner and for the purposo snbstantially as described.
2. In combination with the inclining tube T , the central opeuing through the tnbe $B$, for the purpose of facilitating the filling of the lamp.

7:3,8\%1.-Francis M. Bugbee, Kingsville, Ohio. -Button.-January 28, 1868.-The lowcr button is placed longitudinally with the flattened shank and passed throngh the button hole. The outer button is then turned, which brings the lower button parallel with it, aud encages the sicles of the bntton hole.

Claim.-A sleeve button, the onter button a of which is constructed with a notched recess, and with a shank $c$, to which is attached a disk $g$, carrying a spring $e$, said head being placed within the recess in the button $\alpha$, and the latter is connected with the lower button $b$ by a stem $c$, passing through the shank, and rigidly connecting the two buttons, the parts being arranged substantially as described.

73, 87æ.-S. G. Cabell, Quiucy, Ill-Preventing Incrustation of Steam Boilers.—January 28, 1868.The electro-magnet has a number of points within a chamber connected to the steam chamber by a pipe having a stop cock, by which the action is regulated. The helix of the magnet is commected to the poles of the electric battery.

Claim.-1. The multiplied or compound electromagnet $L$, constructed substantially as described, and arranged in combination with the chamber C , poiuts G , and battery O, essentially as deseribed.
2. The application of the electro-magnet within a steam boiler or chamber comected therewith, to prevent incrustation, substantially as specified.

73,87B.-W. B. Cargili, New Haren, Conn., assignor to himself and I. STROUSE \& CO., same place. -

Fastening for Corsets.-January 28, 1868.-The hook and eje are each formed in one picee with their clasp, and the front end of the clasps is secured to tho spring by the flaps cut iu forming the hook and eje.

Claim.-The within described corset fastening, consisting of the hook and eye, formed as shown, and secured to the steels without rireting, as horein set forth.

73, 87 - Cinarles I. Carpeater, Louisville $K_{r}$-Reducing Lead Ores.-January 28, 1868.-The air passes into a cluet trarersing the furnace bridge, and is carried by the steam jets and the draught through side duets into the space above the ore.

Claim.-1. The introduction of atmospheric air and steam, together or separately, directly into the space marked B, in a reverberatory furnnee, so that they may pass directly between the flame aud the ores of lead upon the hearth.
2. Introduciug air and steam through the fire bridge, so that they may be intensely heated before acting on sail ores, as herein described, or any other method substantially the sume.

73,895. - William Clark, Valatic, N. Y.Check and Harnsss Kein.-Jamury $28,1868$.

Claim.-The check rein, fistened at one end to the main or driving rein, and extending throngh a rumner on the billet for the throat lateh; thence downward and through the bit rings or a pulley connected to said ring; and thence npward to the mpper rumer, where its other end is fastened, snbstantially as deseribed.

73,876.-Elisha Crane, Ellihart City, Ill.Device for Scarifying the Soil preparatory to Plow-ing.-Janmary 28, 1868.- A sories of cutting disks are piroted in standards attached to the inclined bars of a fiame which is reatically adjuatable upon rollers.

Olaim.-1. Arranging in a suitable framo a series or grang of cutting blades or disks, when the same are so adjusted as to cut the soil in parallel channels, substantially as described and for the purpose specifiel.
2. The lever $H$ and curved arm $I$, in combination with the windlass frame, when the same are arranged substantially as cleseribed and for the purpose speeified.

73,877.-TAMEs F. Chanston, Springfield, Mass. -Priming Metallic Cartridges. Jamary 28, 1868. - A recess is formed in the back end of the cartridere shell, and a central perioration communieates with the inside. The fulminate is placed in the recess and covered by a disk, which is secured by foreing the rim of the back plate over its edge.

Claim. - The manner of fastening in the fulminate in a metallic cartridge shell, by means of the cover $b$, attached upon the outside of the shell, substantially as described.

73, 5\% .-TJoseri Dick, Jr., Canton, Ohio, assignor to himself and Eugene Gren, Rochester, N. Y.-Harvester Take.-January 28, 1868.-The rotation of the crank inparts an oscillatory morement to the rake carrier. When discharging the grain the movement of the sector arm is arrested by the stop before the extent of throw of the crank is reached. 'The tubular rako carrier travels ores the sector plate, thereby causing the segment pinion to traverise the rack and to roll the rake arm nutil it is thrown up, when its further movement is arrested by a stop at the time the crank reaches the exteat of its throw. The lateh is brought into position to engage the sector arm and prevent the further relative change of the arms until the movement of the sector is arrested by the appropriate stop, when the lever acts to release the lateli, and the continued movement of the rake arm causes the rake to roll forward mnder the reel, and down mpon the platform, in position for the effoctive stroke.

Claim.-l. The gear plate or casting, made in one piece, with bearings for the erank wheel and vibrating rake shaft or support, and provided with standards $a$, and adjustable stops, substantially as described.
2. The arrangement of the crank wheel which
drives the rake relative to the shaft or support of the rake, substantially as deseribed.
3. The arrangement of the crank wheel in the de seribed relation to the uprights or arms in which its driving slaft is mounted, as described.
4. The horizontal shaft, through which motion is imparted to the vibrating rake and rake gearing, mounted in uprights on the gear plate, or its equivalent, and over the crank wheel, snbstantially as deseribed.
5. The vibrating rake carrier and seetor arms, combined and operating snbstantially as deseribed.
6. The vibrating rake arm, in combination with its tubular carrying arm, substantially as described.
7. The vibrating sector arm, in combination with a toothed segment, or its equivalent, on the rake arm, operating* substantially as deseribed.
8. A latch connected to the vibrating rake arm, and operating in connection with the vibrating sec tor arm to hold the rake in its elerated positiou, sulsstantially as described.
9. The arrangement of the lever $l$ relative to the vibrating arms, and lake lateh for releasiug the same, as set forth.
10. The lateh lever, operated to release the latel by means of a cam or projection on the crank wheel, as set forth.
11. The employment of a yielding or spring stop for liniting the upward throw of the rake.
12. The arrangement of the spring stop or its equir alent upon the vibrating rake arm, substantially as described.
13. The adjustable dore-tail lug, through which the pitman is connected with the vibrating rake carrier substantially as described.

193,979.-Hextry Disstox, Philadelphia, Pa.Setting Savos.-January 28, 1868.-The swage block with its adjusting block are clamped within the interdental recess, and the point of the tooth which enters the dovetail dio carity is upset by blows of the hammer upon the block, which eanses its outer side to turn toward the tooth.

Claim. - . The tapering block $A$, with one or more angular recesses, in combination with the tapering plate $B$, the block and plate being adjusted longitudinnlly, and being otherwise constructed substantially in the mauner and for the purpose herein set forth.
2. The combination of the said block and plate with the adjustable rods D D, for the purpose speeified.

93, 850. - Tiomas S. Disston, Philadelphia, Pa, assignor to Heniry Disston, same place.-Saro Gumming Jíachine. January 28, 1848.-The sliding cutter frame is moved by ar serew rod, and is grided by curved bars so as to leave the back of the tooth of the proper sliape to form the eutting elge of the tooth, as the diameter of the saw is reduced by sliarpening.

Olaim.-1. The frame $A$, with its curred guides $b$ and $b^{\prime}$, in combination with the adjustable fiame 13 and its cutter $\mathrm{F}^{\prime}$, sliding on the said guides and carrJine a cutter F .
2. The adjustable guide bar $G$, combined with the frame of the machine, substantially as and for the purpose specified.
3. The jam nnt or nuts $d$, in combination with the screw C, tor adjusting the frame $B$, substantially as described.
4. The recesses $t$ t on the guides $b^{\prime}$ of the frame $A$, construeted as described, when the suid recesses are arranged in respeet to the sliding frame $B$, for the admission of the latter to and its withdrawal from the said frame $A$, as set forth.
gis,881. -Stepnex W. Downex, Piedmont, W. Va.-Address Oase for Railroad Cars.-January 28,1868 . - A slato tablet is secured in a metallic frame attached to the car. The namo aud address of consignce is placed upon the tablet, and crased after delivory.

Claim.-1. A tablet case for railroad cars, constructed substantially as herein shown and deseribed. 2. The slate $C$ and the hinged top $D$, having a glass E, when the wholo is construeted and arranged substautially as described.

79,882.-E. A. Ellswohti, Washington. D. C., assignor to himself and Lysander Hill, Alexandria, Va.-Man-ifacture of Mortar and Cement; and Material theretor--January $28,1868$.
Claim.-1. The use of vegetable fiber in eombination with plasterers' mortar and cement, substantially as and for the purpose speeified.
2. Mortar or cement, when prepared with vegetable fiber, substantially as and for the purpose specitied.
3. As an article of manufacture, vegetable fiber, when redueed to fine filaments, and eut into short lengths, as a substitute for plasterers' hair, substan$t^{\text {ially }}$ as deseribed.
g3, 88:3.-Eberhard Faber, New York, N. Y. -Lead Pencil.-January 28, 1868.-The peucil is dipped in japan varnish and withdrawn endways, so as to leave a drop at one end. The peneil is then baked and redipped at the end a suffieient number of times to leave a rounded end of the japan adheriug to it.
Claim.-A peneil, provided with a rounded convex head, formed by dipping said peneil in a suitable compound, substantially as herein set forth.
g3,884.-Caleb Foster, Wappinger's Falls, N. Y., assignor to Eltas Brown. same plaee.Comb.—January 28, 1868.-The comb, after finishing in other respeets, is enameled to prevent oxidation.
Claim.-An enameled steel comb, the teeth of which are punched out of a single stcel plate, and finished, substantially as herein described.

93,885.-David C. Frazeur, Sidonsburg, Pa.Sleigh and Sled.-Jamary 28, 1868.-The wheels and runners are supported on piroted frames, and by the movement of a hand lever cither may be let down to sustain the sleigh.

Claim.-1. The combination and arrangement of the wheeks D D and runners C C, substantially as and for the purposes specified.
2. The combination of the lever G, shaft F, pitmen H H , and eross hars E E , with the pivoted runners C C, bearing the wheels D D, substantially in the manner and for the purposes set forth.
g3,S86.-J. C. Gaston, Cincinnati, Ohio. -Stove.-January 28, 1868.-The caloric eurrent is defleeted by domed plates, caeh alternate one having an aperture in the apex, and all having passages around their sides. The side passages of the centrally perforated defleetors are gorerned by an annular register damper.

Claim.-A store provided with the domes B and C , and the dampers E , all construeted aud arranged substantially as set forth.
g3,88\%.-Nelson W. Green, Cortland Village, N. Y.-Connecting Stove Pipes.-January 28, 1868.The sections of pipe are connected by a short, openjointed scetion, which springs outward to make a tight joint. A cireumferential riage is struek outward at the midlength of the conneeting seetion, forming an abutment, and leaving a groove on the inner side which may contain a spring rod.

Claim.-1. The open spring or elastic sleere B, when the same is construeted substautially as deseribed, and for the purpose speeified.
2. The wire spring C , when the same is eonstructed so as to be applied substantially as deseribed and for the purpose specified.
3. The open spring or elastie sleeve B and the wire spring C , when the same are combined so as to operate substantially as deseribed and for the purpose specified.

73,888. - Henry Hammond, Hartford, Comi. Die for Forming Slots in Screws.-January 28, 1868. -The serew is placed in the countersuuk lower die, and the slot is formed by the rib of an upper dic whieln is brought down upon the head. The ends of the rib enter a slot in the face of the lower die.
Claim.-1. The combiuation of the devices A $e \mathrm{~B} f$, When construeted and arranged to be used in conjunction, substantially as specificd.
2. The combiuation of the dewices $A$ e B, construeted and operating substantially as herein set forth.

93,889.-David Harger, Des Moines, Iowa.Car Coupling.-January 28, 1868.-Oue draw head has an arrow-head coupling bar which enters between the two lateh bars of the other head; the kateh bars are pressed together by springs. The eoupling bar is released by a turn of $90^{\circ}$, which is effeeted by a lever that enters a noteh when coupled and prevents the aceidental turring of the said bar.

Claim.-The revolving coupling bar G, when constructed and arranged as herein specified, iu combination with the lever $H$, keeper $I$, and spring jaws A A, as aud for the purposes herein described.

73,890.-Jesse Havens, Auburn, N. Y.-Wood Saw Frame.-January 28, 1868.-The braee is forked, one portion beiug turued upward and traversed by the set bolt, whieh also passes through the upper end of the end bar.

Claim.-1. A saw frame, in whieh a bifureated wooden brace, $\mathrm{C} \mathrm{C}^{\prime}$, coustrueted in one picee, as deseribed, is used, in combination with the end pieees, substantially as deseribed.
2. The piece D, construeted with a neek and head $\mathrm{D}^{3}$, aud used in combiuation with the frame pieces $\mathrm{A}, \mathrm{B}$, and C , with which it is united, substantially in the manner and for the purpose set forth.
g3,891.-Christofer Hefft, Tazewell County, Ill.-Cultivator.-January 28,1868 .-The rear standards are rigidly attached to the beams, but the inner, forward standards have movement on the beams by means of the handles.

Claim.-1. The combination and arrangement of the diagonal frame A and eross bar C, piroted to the main frame, and laving the standards $h$ aud $u$ attached thereto, as shown, with the levers $c$, all as shown and deseribed.
2. In eombination with the above, the detachable handle F and the lever H , arranged to operate as and for the purposes set forth.

73,892.-Lysander and Adelaide R. Hill Alexandria, Va.-Cradle.-January 28, 1868.-The axles have rockers and wheels, and may be turned $180^{\circ}$ to reverse the action from that of a wheel carriage to that of a eradle, or vice versa. The axles are held to their adjustment by a pivoted bar which enters slots in the said axles.
Claim.-1. A cradle, so eonstrueted and operating that it vibrates longitudinally, the body of the eradle always keeping a horizontal position, substantially as and for the purpose set forth.
2. In comnection with a cradle, operating as above described, the axles G G, arranged transversely under the body of the eradle, and having rockers B B B attached to their extremities, and operating in the manner and for the purposes substantially as speeified.
3. The combination of the cradle body A with the roekers B B and wheels C C, when the parts are so eonstrueted and connceted that the device may be adjusted to serve cither as a eradle or a wagon, substantially in the manner described.
73,893.-G. G. Hickman, Coatesville, Pa., assignor to himself and GEORGE WINDLE, same place. -Shutter Fastening. Jannary 28, 1868. -The shutters are held at the desired degree of openness by the flexible latch secured by an adjustable pin.
Claim.-1. The elastic strap or connection C, substantially as and for the purpose explained.
2. The combination of the elastie strap C, stud D, and button or latel E , arranged and operating substantially as deseribed.
3. In combination with the subject of the preeeding clause, the rings $\mathrm{F}^{\mathrm{F}} \mathrm{F}^{\prime}$, applied in the manner and for the purpose set forth.
93,894.-Uriah Hummer, White Oak, Pa.Manure Drag--Jannary 28, 1868.-The head is adjustable so that the tines shall penetrate deeper or shallower aeeording to cireumstances. When the head is inverted it rests on bent runners.
Claim. -The arrangement of my drag arm $G$ with its hook $g$, in eombination with the two cross pieees $J$ I, hook and link $j R$, and connecting rorl $O$, with tho lever $P$, notehed pawl $T$, and spring $S$, substantially in the manner and for the purpose specified.

93,895.-Benjamin Illingworth, Freeport, Ill., assignor to Andrew J. Brubaker and ALbert BLiss, Ji.-Churn.-January 28, 1868. -The dasher rod is tubular and has a remorable downwardly opening ralve at top. Tho dasher top has two eoncentrie annular depressions from which holes pass vertieally through the dasher. The periphery of the dasher has an ogee bevel on the under side.

Claim. - The dasher A, as constructed. used with the staff B, made hollow and provided with the plug D and nipple C, substantially as and for the purpose set forth.

73,896.-James D. Irvin, Corydon, and B. I. SEw ARD, Bloomington, Ind.-Alarm for Grist AFills. -January 28,1868 . -Tho arm is so adjusted on tho wheel that it will press on the trigger when the flour of the grist has passed through the bolt and the alarm is sounded to give notieo when to change the bags.

Claim.-1. The movable standards or frames 13, tho wheels $\dot{C}$, provided with the adjustablo arms D and stops $t$, substantially as and for tho purposes specified.
2. The triggers E, provided with tho stops $r$, tho springs $p$, acting upon the wheels C , for the purposes set forth.
3. The combination of the running gear with the wheels C, provided with the adjustable arms D and slanks $x$ of hammers $h$, furnished with points $i i i$, the whole forming a double alarm for mills, substantially as herein described.
r3,897-Albert Isejsee, Indianapolis, Iud. Burglar Alarm Lock.-January 28, 1868.-The retraction of the bolt has the effect of raising a tumbler which is then thrown backward by a spiral spring, the arm attached to it passes through the ease and trips the alarm mechanism.

Claim.-1. The sliding tumbler D and arm I, arranged to operate iu combination with the bolt 13 , substantially iu tho manner and for the purpose set forth.
2. The set $P$, in combination with the trigger $O$, substantially as and for the purpose set forth.
73,893.-EDhuvid M. Ivexs, New Orleans, La.Centrifugal I'ump.-January 28, 1818.-Tho pump and suction pipe, when dry, are charged by a steam injector through the medium of a separate pipe communicating with the supply pipe, both above and below the cheek valve, which is placed at the top of the vertieal portion of the suction pipe and near the level of the rotating punp shaft. The supplementary pipe is supplied with stop cocks to regulate its communications with the suction pipe.
Olaim.-1. The arrangement of the valve $G$, relatively to the pump B , suction pipe F , and braneh pipes $d d^{\prime}$, and their conncetion $e$, suhstantially as shown and deseribed for the purpose set forth.
2. The arrangement of the branch pipes $d d^{\prime}$, and their comnection $e$, relatively to the valve G, essentially as and for the purpose set forth.

73,899.-Abiezer Jameson, Trenton, N. J.Roofing Material.-January 28, 1868.
Claim.-A roofing material, consisting of a sheet of felt, in whieh is embedded a textilo fabric or fibrons strands, substantially as deseribed.

73,900.-Janes D. Jenkivs, Charlestown, Mass. - Carburreted Air Lamp.-January 28, 1868.-CClock work in the lamp base drives a fan blower to foree the air through the saturated material.
Claim.-As a new article of manufacture, a lamp in whieh the vapor for hurning is produced hy sending a current of air through a saturated packing, said current being impelled by a fan blower, substantially as and for the purpose set fortl.
93,001.-John Johnson, Barrington, N. Y.Sharpening Horseshoe Calks.-January 28, 1863.The frame is clamped to the horseshoe and tho calks slarpened by the rotary eutter earried on an adjustable sliding frame.

Ciaim.-1. The elamp bar $\Lambda$, or its equivalent, adapted to be secured to the shoe, substantially as and for the purpose set forth.
2. The adjustable swinging arm provided with the
rotary file $G$, in eombination with the clamp bar, ol its equivalent, substantially as deseribed.
3. The rotating eireular file, arranged on a rertical or nearly rertienl shaft, and operating substantially as and for the purpose described.
4. The removahle sleeved cap or plate $J$, for holding the shaft and cireular file in place, as deseribed.
5. The standard F and set serew $f$, in comhination with the doretail slide C , for holding said slide in place on the clamp bar, as described.

9:3,902.-John B. Johnson, Laurel, 1nd.-Car Coupling.-January 28, 1868.-The entering link raises the spring and the counterbalance lever thereby allowing the pin to fall.
Claim.-1. The combination of the spring 13, pin D, lever E , and wheel F , and ehains $\mathrm{E}^{\prime}$ and $\mathrm{C}^{\prime}$, with the pin and link of a railroad car, substantially as set forth.
2. Suspending the eoupling pin C from a wheel, on the opposite side of which is a lever suspended, so as to more than counterbalance the weight of the pin, when said lever is so supported that, by the entranee of the link into the draw head, the pin, released from the weight of the lever, will fall by its own gravity, substantially as set forth.

93,003.-Phineas Jones, Newark, N. J.-Clip and Fervule for Joints on Felloes.-January 28, 1868. - The elip has a ferrule for the ends of the felloes, a rib entering longitudinal slots in the same, and a shicld supporting the rib and extending along the inner diameter of the rim. The ends of the shield are perforated to receive the tire holts.

Claim.-The conbined clip $a$ and ferrule $b$, with the rib $c$, made substantially as speeified and shown.

93,904.-A. S. Kendall, Guilforl, Me.-Horsc Rake.-January 23,1868 . -The hay is collected by the teeth and deposited in a reeeptacle behind. The tceth hare sliding points which ride upon and aro thrust forward by bowed spring rods beneath them, and when the point strikes an obstacle it slides backward and the spring by its increased curvature raises the point.

Claim.-1. The rake teeth, in combination with the seeondary tecth $Q$ and spring $R$, substantially as deseribed and for the purpose set forth.
2. The rake tecth $P$ and sceondary tecth Q in combination with the hay gatherer M N O, operating as set forth, for hauling tho liay into the receptacle, substantially as deseribed.
73,005.-A. II. Knapr, Newton Center, Mrass.Spring for Bed Bottoms, Chairs, de.-January 28, 1868.

Claim.-The wire springs $b b$, constructed by bending the same into a succession of loops, as shown in the accompanying clrawings, to be usol iu constructing the bottoms of beds, chairs, settees, sofas, and lounges.

93,906.-Ernest J. Knowlton, An3 Arbor, Mich.-Bath Tub.-January 28, 1868.-Tho jointed framo supports a tub formed of impervious cloth.

Claim.- The portable firame A, construeted of a series of hinged sections, as specified, and provided with a flexible bath apparatus, in the manner and operating sabstantially as set forth.

73,90\%.-Samuel Malls, Cincinnati, Ohio-Urinal.-January 28,1868 . -The urinal is intended for erection in alleys of cities. The odges of the doors shut together and allow room inside them for the oceupant. When the place is unoccupied the door's shut past eaclo other, taking but little space and indicating unoceupancy.

Claim.-A urinal or nocessary, having two or more doors, $\mathrm{F}^{1}$, so construeted as to stay each other in tho partially open position and to close automatically when liberated, suhstantially as and for the purposes set forth.

73,908.-W. W. Martiv, Allogheny City, Pa.-Spike.-January 28, 1868.-The spike has a series of inelined projoctions which act as barbs to bold the spike in the sleoper and enable its extraction by rotation.

Coim-A now article of mannfacture, viz: a spike, construeted and operating substantially as herein deseribed and for the purpose set forth.
g3,909. - Miles Mayall, Roxbury, Mass.Machine for Oiling Wool.-January 28, 1868. The oil from the reservoirs flows into the perforated pipe and drops into the inner side of the gauzo cylinder. The wool is carried beneath the eylinder by the endless apron, and the oil is pressed into the wool by the cylinder.

Claim.-1. The combination of the elevated reservoir, conneeting cube, and hollow perforated shaft, substantially as and for the purpose set forth.
2. The combination of the elevated reservoir, the conneeting tube, hollow perforated shaft, and revolv. ing perforated cylinder, from which the oil is applict to the wool, substantially as described.
3. In combination with the tube for supplying the oil from the reservoir, an oscillating perforated hollow shaft $i$, from whiel the oil will be made to flow, on starting the earding machine, and be eut off on stopping the same, by means of conneeting mechanism aeting upon the arm or wheels $g$, substantially as deseribed.
4. Regulating and indicating the supply of oil to the evlinder $m$ by means of the valves $o o$ and $h h$, indieator $q q$, and dial plate $r r$, substantially as set forth.
5. In combination with a perforated cylinder $m$, the brushes $y$ and $z$ for cleansing the apcrtures, arranged substantially as set forth.
6. The eombination of the endless apron and cylinder $m$, when the frame supporting the latter is constructed with the pipes $d d$, resting upon standards $c$ to permit the cylinder to rise and fall, substantially as set forth.
7. The combination and arrangement of the perforated eylinder and perforated shaft $i$, as and for the purpose set forth.

³.910.-JoIN MCCune, Auburn, Ind.-Spinning MLachine.-Tanuary 28, 1868.-The spindles carry a bobbin on caeh end.' The motive shafts of the spindles and earriage are conneeted by a cross belt, which is tightened or loosened to cause simultancous or allow independent aetion in the shafts. The jarn passes over a wire resting upon a spiral spring surronnding a rod slotted to receive the wire. By the movement of the wire the tension upon the yarn is indicated. The faller wires are operated by a treadle.

Claim.-l. The double horizontal spindles $Q$, constructed substantially in the manner set forth.
2. The treadle, the yarn guides, the tension regut lator, the spindles, and the carriers, eonstrueted and arrared substantially as set forth.
3. The eombination of the pulleys C and D , connected by a cross belt, and the pawl $T$, for regnlating the tension of the belt when the shaft of the elevating pulley is attaehed to the frame by adjnstable bearings, snbstantially as set forth.
m3,91_.-T. W. Meaker, Chiengo, Ill.-Apparatus for Counting Money. Jannary 28, 1868.

Claim.-1. A series of tubes, of varying diameters, to suit different sized coins, and provided with graduations corresponding with the varying thickness of different coins, and numbers to indieate the amount contained in cach tube.
2. A eoin assorter, consisting of an inclincd may for the eoin to pass down, with openings corresponding in size with the various sized coins, said openings being arranged with the smallest at the upper end of the inclined way, and inercasing in size in regular order toward the lower end, with partitious or gruides to direet the rarious coins to their respeetive reeeptacles, substantially as described.
3. The yicldiag bed $m$, pivoted at one end, in combination with the stationary support $a$, arranged as and for the purposes set forth.
g3,912.-R. S. Merrill and Willam CarleTon, Boston, Mass.-Lam.p.January 28, 1868.

Claim. -In a lamp burner in which the cone and chimney holder are connected with a sleeve fitting the wick tube, the arrangement of the parts, substantially in the manner herein described, so that the
removable parts of the burner, when taken from the wiek tube, may be deposited in an upright position, and supported upon a broad base, as and for the purposes set forth.
\%3,913.-Mason M. Miles, Aurora, Tll.-Tapor Inhaler.-January 28, 1868.-Air is forced throurh the tube into the liquid by contraction of the bulb, and is ejected from the nozzle, whose pipe communieates with the space above the liquid.

Claim. - The eombination of the tubes C D with the vessel $A$ and bulb $B$, the varions parts being constructed substantially as and for the purposes specified.
ra3, 914.-C. Moul, Hanover, Pa.-Harvester.January 28, 1868.-The shaft has rectangular tubular sections, whieh slide together teleseopieally.

Claim.-A shaft for conneeting the driving power of a harvestcr with a rake or reel or other devico applied upon a hinged finger beam or platform, and to be driven, when sueh shaft is construeted of three or more than two longitudinally-adjustable teleseopic seetions, and such sections fitted together by tongues and grooves, and shoulders and stops, all substantially as and for the purpose described.

73,915.-JACOB Neal, Orleans, Iowa.-Bee-hive.-January 28, 1868. The hive has two similar sections, whieh may be disconnected by a sliding perforated plate. The hive may be elosed when desired by perforated plates, which are ordinarily supported by hooks. The moth-trap slides are in both bottom side corners of eaeh section, and have metallic serapers, whieh elean the bottoms of their containing eavities when they are drawn out to destroy the moths, eggs, and worms.

Claim.-1. Providing the moth slides $G$ Gr with metal scrapers $t t$, when used in the boxes $B \mathrm{~B}$, in the manner and for the purposes specified.
2. The boxes BB, communieating as deseribed, moth slides $G G$, having scrapers $t t$, blocks $H H_{\text {, }}$ with their small eavities, perforated slides F F, and buttons $E$, the whole being constructed, arranged, and used in the manner and for the purposes set forth.

93,916.-J. B. Newbrough and E. Fagan, New York, N. Y.-Manufacture of Articles of Rubber, Gutta Percha, ac.-January 28, 1868.-The gum after molding is immersed in bromine or a mixture of chloroform, 1 part, and bromine 9 parts, and then exposed to the air to harden.
Claim.-The manufacture of artieles of utility or ornament, by subjceting rubber, gutta•pereha, or similar gum, cither before or after it is formed of the desired shape, to the action of bromine, substantially as described.
3.31\%. J. B. Newbrougir and E. TAGAN, New York, N. Y.-Material Produced, by Treating Caoutchouc and other Gums.-January 28, 1868:The sulphur is boiled in turpentine or equivalent oil and then allowed to settle and the remaining oil poured off. Iodine is treated in the same manner as the sulphur, with sulphuric aeid added to prevent formation of an explosive. Equal quantities of the prepared sulphmr and iodinc are melted together, and the eomposition after cooling and hardening is ineorporated with caontchouc. After molding, the objects are plaeed in an oven and the temperature raised to $350^{\circ}$ Fahr. in fifteen minutes; this heat is sustained for five minutes, and then the oven is cooled to $250^{\circ}$ and retained at this heat for an hour.

Claim.-The within deseribed new manufacture or substance, consisting of caoutehonc or cquivalent gnm ineorporated with iodine and snlphur, (after treating the said iodine and sulphur substantially as speeified,) and subjected to heat.

23,915.-George E. Newell, Pawtneket, R. I.-Dumping Cart.-January 28, 1868.-The rack is pivoted to the frame, and the spur wheel shafts journaled in the side picees attaelied to the frout of the cart. The rack is kept in contact with the wheel by the anti-frietion roller journaled in the side picces. The wheels are actuated by a winch.

Claim.-1. The combination and arrangement of
the hinged rack $C$, the train of gear-wheels $l l m n o$, and the pressure-roller $f$, with the body of a dumping cart, substantially as described, for tho purposes specifled.
2. Combining with the hinged rack C a pressure roller, for the purpose of keeping the teeth of the raek in engagement with the tecth of its operating pimon at all positions of the cart-body, substantially as deseribed.

78,919.-Jerrmilii T. Newton, Boston, Mass. -Composition for the Soles of Boots and Shoes.January 28, 1868.

Claim.-A mixture composed of eaoutehoue ar mbber, gutta-pereha, or an equiralent gum, mixed with pulverized quartz, sand, felt, or their equivaleuts, and applied too or for the soles of boots and sloes, for the purpose of preventing slipping, substautially in the manner and for the purpose abore set forth.

73, 980.-John Noblit, Philadolphia, Pa.-Hair Cloth. -Jannary 28, 1868. - The moring jaws of the nippers are raised by eams to allow the iutroduction of the hairs, and are opened by eams at different times to drop the hairs at different positions in the shed.

Claim.-1. Two or more nippers or hair earriers in a loom for weaving later eloth, which are operated so as to elose mpon tro or more hairs simnltaneonsly, and then to drop the liairs singly and at different points in the shod or warp, substantially as deseribed.
2. A fabric, each lay of the woof of whieh is eomposed of two or more hairs laid together, substautially as cleseribed.

7\%, 9 Bi .-Luman P. Nohtor, Benning'ton, Vt.Apparatus for Cloaning Clay.-Jannary 28, 1868.The ground elay is put into a press box and foreed br a plunger through the sieve stretehed aeross the bottom of the box. The plunger rod screws into a sleeve, earrying a bevel wheel ongagiug a wheel upon the motive shaft, whieh is elutehed to rotate in cither direction. A tappet eam upon the plinger shaft reverses the elateh when the phager is sufticiently depressed.

Claim.-1. The serew shaft E, in combination with tho stopping and leversing eams $N$, and the pins $P$, on the le7er II $L$, substantially as nud for the pirpose set forth.
2. The sieve $W$, tho pressing plate $D$, in eombination with the stopping and reversing eams $N$, and their adjumets, arranged and operated substantially as and for the purpose set forth.

73,98:-Warren C. Philbrick. Lynm, Mass.Composition for Hindling Fires.—Janary 28, 1868. -Composed of chareoal, pulverized eoal, rosin, coal tor, and sawdust. It is molded while hot into berel-edged perforated bloeks.

Claim.-1. The uso of the several ingredients hereinbefore mentioned, in eombination, for the purpose of kindling hard-coal fires, substantially as above set forth.
2. In a particular manner the pressing of the material, while hot, into bloeks or eakes, as stated, haring the berelled edges $C \mathrm{C}$, and espeoially the the openings or dranglt-lioles a a a, for produeing strong and ready combustion.

- \%3,923.-Thomis J. Pimlips, Washington, D. C.-Tool for Opming Barrels.-January 28, 1868.The piroted hook takes beneath a hoop, and the fulerum being plaeed upon the head the hoop is removed by depression of the lever.

Claim.-As a new implement for removing hoops from barrels, \&e., the herein-leseribed head A, provided with the liammer C, or its eqnivalent, a suitable handle, and the hook D, all construeted and operating snbstantially as deseribed.

78,924.- Rufus S. Pickett, New Haven, Conn.-India-rubber Sole.-Jumuary 28, 1868.-The odge of the sole is rondered suffieiently hard to enable it to be seenred to the boot by stitehing or pegring.

Olaim.-The rubber sole deseribod, the edge of which is formod of a liarder eompound than the body
of the sole, and the whole formed and finished by the proeess of ruleanization, and so as to be attached to the boot or shoe in the manner set forth.
g8,923. - Charles C. Plaisted, Hartford, Conn. - Window Screen. - Jannary 28, 1868. -The sercen is attaehed to one sash or firme, and is coited aromed a roller in the other. 'The sereen is drawn out by opening the sash, and is taken np by the roller on elosing the sash. The sides of the sereen are seeured to the window frame by pins or by the clamp bar.

Claim.-1. The combination of the sereen and pins $b$, in the manner and for the purpose herein set forth.
2. The combination of the sereen and elamp on clamp bar E , in the manner and for the purpose herein set forth.

73,926.-Geolage A. Pridinam, Newark, N. J.Spool Stand.-Jannary 28, 1868.-The base has a central post and a series of vertieal spindles whieh traverse the open-sided box. The spools are plaeed in the box before it is put npon the base, and they then turn mpon the spindles.

Cloim.- The box $A$, in combination with tho bar $B$, witl $i^{\text {tos }}$ arms $\mathrm{C} \mathrm{C}^{\prime} \mathrm{C}^{\prime}$, and used as and for the purpose set forth.
g3,9:27.-David If. Randall, Chicopeo, Mass.Mctallic Band for Trimming Car Seats.-January 28, 186i8. The trimming band is rolled between forming rolls, and the edges turned downward so that they will be imbedded in the cloth.

Claim.-A metallie band having the projections a $a^{\prime}$ formed thereon, substantially as and for the purpose set forth.
ry,928. - Calil Recirt, New York, N. Y. Machine for Threading Sheet-Metal P'ipe.-January 28, 1868.-Sheet-metal pipe is passed between the two rotating eireumferentially ribbed eylinders, the ribs of the eylinders meshing together. As the eylinders rotate they impress the thread upon the pipe.

Claim.-1. The eombination of the eam roller $f$ or its equivalent, with the movable or sliding strip $h$, or its equivalent, when arranged as speeified, and nsed for the purpose set forth.
2. The combination of the gauge plate II with the eylinders $A$ and $B$, substantially as set forth.
3. The combination of the elutel O and set serew with rest I, all constrneted as deseribed, when used for the purpose set forth.
73.029.-Canl Recht, New York, N. X.-Sheet Metal I'ipe.-Jannary 28, 1868.

Claim.-l. Cutting sheet metal into rhomboids a $l$ a $m$, for the purpose of making an orerlap, $z$, equal to the piteh of a thread, whieh, after rolling said rhomboidal sliects into pipes, I turn on the ends of said pipe, substantially as herein speeified.
2. Naking sheet-metal piping, the ends of whieh are paraliel to the thread which is turned thereon, substantially as herein speoifiod.

73,930.-George Renfass, Philadelphia, Pa. assignor to the American Bu'ton Hole, Over seaming, and Sewing-Macimine Co. of Pa.- Braid Making Mlachine.-January 28, 1868.-The thread from the bobbin passes twioe through the plate pro jeeting upward from the horizontal plate. The thread then passes throngh the eye in the lever, in the form of a loop; aromid the shank of the needle, below the lateh of the same, and beneath the spring plates. When the motive shaft is rotated the eam rets to give the neodie its vertieal roeiproeation, and the lever its oscillation.
Claim.-1. The eombination of the plato B, lere $G$, rod D , and its needle $d$, the whole being constructed, arranged, and operated substantially as and for the purpose deseribed.
2. Tlie eombination of the above and the spring plate $o$, for the purpose set forth.

73,931.-Henderson Ross, Pittsburg, Pa. Puddling Furnace.-Jannary 28, 1868.-The furnace has a dotached motallic clamp having a water cham
ber. It has also a metallie throat and chimney; both are partially inclosed by water chambers.

Claim.-1. A water clamp for furnaces, constructed, arranged, and operating substantially as herein described aud for the purpose set fortll.
2. Surrouuding the neck or throat with water, sabstautially as herein described and for the purpose sct forth.

73,932.-Jesse B. Rumsey, Port Huron, Mieh. -Churn.-Jaunary 28, 1868. -The cream is allored to fall slowly thrugh the slot upon the two dashers. The lower dasher has pivoted wings which fold to the shaft when turnug in one dreetion, but stand radially when turning in the other direction.
Olaim.-1. The vessel or hopper C, provided with a loug slot in its bottom, and with a slide or cover, D , to close this slot for regulating and controlling the supply of milk to the churn below, substantially as set forth.
2. The shaft E, provided with wings, and situated beneath the vessel or hopper C, as and for the purpose specitied.
3, The wings or paddles G G, made in a curved form, and arranged upon the shaft $F$, near the bottom of the churn, with holes made diagonally through them, aud with journals on cach cnid, so that they will fold up on the shaft, substantially as set forth.
4. The collars P , for the ends of the shaft F , said collars being provided with arms, in which are holes to reccive the journals of the wings $G G$, as aud for the purpose set forth.

93,933.-Miram Sloor, Mount Healthy, Ohio, assiguor to himself and Jeptha Garrard, Cincinnati, Ohio.-Hill Side Plow.-January 28, 1868. -The front and rear ends of the plow are uniform as far as consistent with being right and left hand respectively. The plow is reversed by turuing the beam around on the standard to which it is connected by a D-formed guide frame. The plow is locked in either position by the dogs, which are simultaneonsly operated by a hand lever.
Claim.-A revcrsible hill-side plow, characterized by two plows proper, secured back to back, and provided with a beam capable of being swung and locked in diametrically oppositc directions, dogs I J, abutment bar H , sheths $\mathrm{E} \mathrm{E}^{\prime}$, lever M , and rack N , or their cquiraleuts.

73,934.-Absalom G. Smith, Jersey City, N. J. -Lantern.-Jauuary 28, 1868.
Claim.-1. An in wardly projecting flange around the base or top of a lantern glass, substantially as and for the purpose set forth.
2. A shoulder or depressiou in the side of the lantern glass, in combinatiou with a spring or antomatic catch, to lock and retain the globe withiu the guard frame, substantially as set forth.
3. Holding a movable lamp or oil pot down in its proper place upon the base plate $f$, by means of the burner shaft.
4. Securing the bottom $B$ and the guard frame A to each other, by passing the burner shaft $F$ through botll of the bands $a$ and $h$, and at opposite sides of the lautern, substantially as set forth.
5. In combination with the burner shaft F , extending through both sides of the bands $a$ and $h$, and securing the bottom B and guard frame $A$ together, a spring catch $H$, substautially as aud for the purpose set forth.
6. In combination with the burner shaft $F$ and slot $q$, or its equivalent, the notch $r$, substantially as and for the purpose set forth.
7. Holding a burner down in ifs proper place by means of the burner shaft, secured, to both sides of the band $h$, substantially as set forth.
8. Projectine the lower end of the lantern glass C downward within the band $h$, substantially as and for the purpose set forth.
9. The combination of the burner shaft F , secured at each end to the band $h$, with the top of the lamp pot $G$, in such a manner that tho said burner shaft shall, when in position, be slightly bent or sprung so as to produce a pressure npon the burner E and lamp $G$ sufficient to retain them respectively in their places, substantially as herein specified.
10. Fastening a movable lamp pot, which rests on
the bottom of the lautern without any part cxtending throngh the same, down in its place, by mans of a fastcniug bearing noon its top, as set forth.
11. A seat $p$, formed in the base plate $f$, to retain the movable lamp pot in a central position, substantially as set forth.
'g:3,935.-James W. Smin and Johi P. Shith, Elder's IRidge, Pa.-Car Uoupling-JJunary 28, 1868. -The foot rod is connected to the coupling pin by a chain. The chain works in ann anti-firiction roller. When the foot rod is depressed the pin is elevatod to admit the liuk. After depression the foot rod is raised by a spring. The draw head is attached to the car by beveled plates; a portion of tho draw head being beveled so as to work freely in the plates.

Claim. -The spring $c$, in combination with the lever and foot rod $a$, upright $a^{3}$, and chain $a^{1}$, and coupling piu $b$, when the same are so arranged as to operate substantially as describod, and for the purpose set forth.

73,936.-D. E. Somes, Washington, D. C.Apparatus for Ifaking Ice and for Cooling Air and Liquids.-January $\approx 8$, 1868.-The vacuum pipercontains metallic cases communicating by doors with the outside, and air is drawn from the racuun chamber by air pumps, and forced into the compression pipe communicating with a chamber counected by atomizers with the vacuum pipe.

Clain.-1. The bed frame, as and for the purpose set forth.
2. Atomizing liquids, substantially as shown in Fig. 2.
3. Connecting cars or boats, and other vessels, as and for the purpose set forthi.
4. Cooling cars, for the transportation of meats and other food, substantially as set forth.
5. Cooling and ventilating passenger cars, substautially as set forth.
6. Cooling ships, boats, and other ressels, as described.
7. Cooling corn, wheat, and other kinds of grain, in canal-boats and other ressels, substantially as set forth.
8. Cooling grain in grauaries and other buildings, substantially as set forth.
9. Using ice and other cooliug or freezing substauces, in combiuntiou with a machine or machinery for producing cold, and as an alternative or reinforeement of cold, when such nachine or machiuery shall from any cause cease to operate, for the purposes herein set forth.
10. Makiug ice and freezing cream, as hereiu described.
11. Cooling liquids and condensing steam, gases, or vapor, substantially as set forth.
12. Purifying air and cooling it, substantially as and for the purposes set forth.
13. Cooling or freezing meats, fish, fruits, and other kinds of food, substantially as described.
14. Cooling or firceziug meats, regetables, or other food, by means of machinery, in combination with chemical agents.
15. Cooling cars, by means of a machiue or machiuery.
16. A car, having in it or connected with it a machine or inachinery for cooling or freezing, as au article of manufacture.
17. The apparatus herein described, or its equivalent, as an article of manufacture.
18. Canal-boats and otlher vessels, with lining and tubes. substantially as described, iu combinatiou with the apparatus herein described.
19. Flexible nir tubes, for connecting cars or boats aud other vessels.
20. Camal-boats, with tubes for conducting cooled air, and means for ventilating, and the apparatns. or an equivalent, for cooling or freezing, substantially as described.
\%9,98\%-- O. I. Strdman, Ravenna, Ohio. -Watch.- Janary 28,1868 - A ring is sprung on, reaching from the top to the bottom plate aud acts to keep dust from the works.

Clain.-The band or ring C, bereled or mado thin near its upper cdge, with its lower edge resting
upon the caso framo B, said ring being made narrower than the movement, and just wide enough to cover the space betreen the plates $a$ and $b$, substantially as and for the purpose set fortl.

73,938.-Lewis Straus, Louisville, Ky--Apparatus for Cleaning Privies.-January 28, 1868.The cxcrement is drawn upward by a cylindrical pump haring slide ralres und piston similarly to a stean engine, and the excrement is forced into a receiver having an air escape tube communicating with a chareoal stove to deodorize the air.
Claim.-1. The combination of the reservoir or receiving tank $A$ and deodorizer B with a forcing engine, substantially as and for the purposes described.
2. The sliding valves $l$ of the engine, constructed with cutting edges, substantially in the manner and for the purposes described.
3. An apparatus for emptying priry ranlts, constructed and operating substantially as described.
r3,939.—Jонг M. Thompson, Saltillorille, Ind. -Medical Compound.-Jamary 28, 1868.-For treatment of cholera, composed of blackberry root, ragweed leares, white oak bark, water to form decoction. To this add gam kino, gum gniacum, capsicum, acetate of lead, opium, prepared chalk, tamin, clores, cmnamon, and alcohol.

Claim.-The within-described mixture, componnded as and for the purpose set forth.

93,940.-Alban N. Towne, Chicago, Ill.-Car Replacer.-January 28,1868.-The npper end of each bar is piroted to a clamp plate whose down-curred ends embrace the rail and are secured thereto by a wedge biting against the web and the lower side of the flange of the rail. The lower ends of the bars have dogs engaging the slecpers, and the bars are made of unequal length so that the inst wheel upon the track will guide the one succeeding it.

Claim.-An apparatus for replacing cars upon the track, formed by a combiation of the clamp E and bars D, the former to be attached adjustably to the rail by kers J, and the latter made of unequal lengths, and terminating with dog H, for attaching adjustably to the track, substantially as set forth.

73,941.-Jerome B. Withey, Lexington, MFich. -Running Gear for Carriages.-January 28, 1868.The hubs are attached to sliort arbors whieh turn in bearings upon the light frame made of bent stuff.

Claim.-The combination and arrangement of a running gear for carriages, as hereinbefore described, when constructed with the wrought spindle or journal shaft $A$, the hub $B$, a collar and wut $C$, boxes $D$, bars E, F, G, H, I. and K, reach J, plate L, dog M, and draught rods N , when put together and operating substantially as and for the purposes set forth.
g9,943.-F. C. Adams and J. Peckover, Cinemmati, Ohio.-Cooking Stove.-February 4, 1868.The object is to cause more perfect combustion of the gases arising from the fire.

Claim.-1. The horizontal concentrating plate A, stationary or movable, and with or without fuel doors, substantially as and for the purposes described.
2. The flap or guard plate B , whether stationary or movalle, substantially as and for the purposes described.
3. The spaces between the fire back and sides and the front oven and side plates, in combination with the plate A, substantially as described.
4. The chamber above the top oren plate and below the top the formed by plates $C$ and $\mathrm{C}^{\prime}$, substantially as and for the purpose described.
5. The hollow or clouble fire back Q, substantially as described.
6. The air chamber under the grate and ash pot formed by the false bottom I, substantially as described.
7. The chamber between the front nven plate and fire baek, in combination with the open grate frame and plate A.
8. The hollow side plates S S', snbstantially as describod.
9. The register $R$, in combination with the fire back and front oven plate, substantially us described.
10. The register N , in combination with the open grate frame, substantially as deseribed.
11. The sliding lid $A$ a in combination with a cooking stove, snbstautially as described.
12. The rolling heartl plate $\mathrm{D} d$, operating sulbstantially as described.
13. Thic hearth plates E $e$, sliding laterally under the boftom plate, substantially as described.

133,943.-Edwin Allen, Norwich, Conn., assignor to Allen Manufacturing Comidany.-Printing Press.-February 4, 1868.-The racks are adjustable in dircetion of their length by set serews. These racks are made straight, or nearly so, and the segmental racks engaging there with are cursed sufficiently to bring the pitch lines in coincidence.

Claim. - The rotary press herein described, having one of its driving wheels $\mathrm{F}^{1}$ provided with one or more adjustable segments or racks $\mathrm{I}^{2}$, substantially as and for the purpose set forth.

73,944.-Sabluel S. Barnaby, Macoln, Ga.-Tise.-February 4, 1868 ; antedated November 23 , 1867.-The sliding bar has inclined notches receiving pins by which the bar is raised when moved endways. The bar carries the pawl upward with it and frees the ratchet bar, which is in one piece with the moving jaw ; the said jaw can then be freely moved. When the article is inserted betreen the jaws they are forced together by the eccentric cam, which bears against an unti-friction roller on the fixed jaw, and moves the sleeve to which the parll is pivoted.
C'laim.-1. The combination of the sliding bar II, ratchet jaw shank or bar E , and pawl M, when arranged together substantially in the manner and so as to operate as and for the purpose described.
2. The combination with the eccentric $V$ and sliding sleere $S$ of the pawl M, arranged together and connected with the jaw shank or bar E, substantially as and for the purpose set forth.
3. An improved vise, constructed and arranged in its several parts substantially as described, and so as to be operated as specified.

73,945.-F. M. Barrier, Stevenson, Ala.-Cul-tivator.-Felruary 4, 1868.

Claim.-The construction, arrangement, and combination of the central beam $A$ with its shorel or plow, the side beams $\mathrm{C} \mathrm{C}^{\prime}$, with their shovels or plows, the U or areh-shaped brackets E E, and braces a $a$, all as and for the purpose described.
g3,946.-Janes Barwick, North Woolwich, England.-Inkstancl.-Februiluy 4, 1868.

Claim.-1. The combination with an ink reservoir and cup of a valve for holding and discharging the ink whieh the cup may contain, said ralre being arranged within the reservoir so as to close against the bottom or under side of the cup, substantially as herein shown and described.
2. The combination with the ink reservoir, dipping cup, and valve, arranged as above deseribed, of a Valve rod passing centrally or axially through the said cup, substantially as and for the purposes set forth.
3. The combination with the ink reservoir, cup, and valve, of a hollow, valre-operating stem, extenting from within, and near the bottom of the reserroir, up through and abore the bottom of the ink cap, substantially as and for the purposes shown and described.
4. 'The combination with the ink reservoir, dipping cup, and valve, of a rubber sleere or other deviee for holding the valve against its seat with a yielding pressure, substautially in the manner herein shown and specified.
5. In an inkstand, organized substantially as herein shorm and described, providing the valve stem, when hollow, with dischargo openings within the capacity of the ink cup and above the intended level of the ink held in the same, substantially as and for the purposes shown and specitied.
6. The combination with the closed ink reservoir, the clastic bulb, or oquivalent devico for compressing the air within the same, and the iuk cup, of a tube or condnit opening from the reservoir into the cup at a point above the bottom of the latter, and a valve for holding and discharging the ink eoatained within
the eup, substantially as and for the purposes shown and specified.

73,947.-Jules Bouniol, Philadelphia, Pa.Drawing Olamp.-February 4, 1868. The end of the bar is held between two grooved cam rollers, the dranght upon the bar increasing the pressure of the cams.

Claim.-The wire and tube-drawing deviee, consisting of the frame $\triangle B$, with rollers C D, which have cams or jarrs $g h$, cog whecls II I, double joint or hinge $\mathbf{E} \mathbf{F}$, and hook $G$, substantially as and for the purposes deseribed.
m3,948.-EDwin Brown, Roxbury, and Edwin W. Brown, Boston, Mass., assegnors to Edwin W. Brown, Boston, Mass. - Photographic Printing Ap-paratus.-February 4, 1868; antedated January 24, 1868. -The sketching frame is connected to clock mechanism by which it is moved across the picture.
Claim.-1. So connecting a frame, snitable for sketching photographing prints, to and with any proper operating meehanism, that such framo will be moved orer and across the picture as it is being printed, substantially as and for the purpose described.
2. The rod F, carrying the sketching frame and guide M , or their respeetive eqnivalents, in combination with each other, and when so arranged together and with reference to the operating mechanism as to impart to the frame the morement requisite for sketehing, substantially as deseribed.

73,949.-William Brown, Duneannon, Pa.State Room for Railroad Cars.-February 4, 1868.The rooms open into a side passage, and the doors of the rooms, when swngg open $90^{\circ}$, cross the passage, cutting off aecess to the room, and giving space for disrobing.

Olaim.-The combination of the hinged doors $c$ with the passage may or entry $C$, so that the latter may be inclosed, and made to form a portion of the state rooms, when desired, substantially as deseribed.
g:3,950.—John A. Campbeld, South Boston, Mass., assignor to himself and David Shari, same place.-Car Brake.-February 4, 1868. - The portions of the transom bolt traversing the brake bars have screw threads of different pitch, so that the rotation of the bolt will cause the bars to approach, or beeome more widely separated.

Claim.-1. The combination as well as the arrangement of the two screws ef of the transom bolt C with snch bolt, the bars $a c$, and the two series of brakes, applied to such bars and the wheels, or to the same and the platform A, substantially as describod.
2. In combination therewith, the hand wheel shaft $m$, its gear $l$, and chain or belt $k$, and the gear $i$ on the transom bolt C , the whole being arranged substantially in manner and so as to operate as described.
g3,951.-James L. Cathcart, Gcorgetown, D. C.-Steering Apparatus.-February 4, 1863.-The propeller screw is gimbal jointed to its motive shaft, and journaled in a frame which is connected by gearing to, and turns with, the rudder.

Claim.-The jointed propeller, so arranged in conncction with the rudder as to be capable of latcral motion for steering purposes, in unison with the rudder, by power transmitted through the latter, and of being disconnected therefrom and secured in its normal position, substantially as herein described.
g 4,952.-Abner Ciafman, Delta, N. Y.-Horse Rake.-February 4, 1868.-The grain head is placed in a vertical position over the tumbling bar of the main rake, and serves to hold the hay or grain colleeted by the latter.

Claim.-A grain head, applied to the arms of a revolving horse rake, marked $B$, in the manner and for the purpose heroin set forth.
g3,953.-G. F. J. Colburn, Newark, N. J.Case for Tooth Paste.-February 4, 1868.-The tooth paste is contained in a compressible foil case, similarly to some pigments, and is forced out of the mouth by compression of the case. The whole may be inelosed in a leather cover.

Claim.-The ease D, to be used in combination with the tube $B$, and with or withont the sack $A$, and the application of the whole as and for the purpose specified.

193,954. John Coulter, Sr., Xenia, Ohio.Lifting Jack.-February 4, 1868 ; antedated January 31, 1868. -The windlass is conn ected by cords to the horizontal bar, and by raising the latter, forees upward the vertical lifting bars to which the said bar is seeured.

Claim.-The combination and arrangement of the standards C C, horizontal sliding bar B, vertical bars d $d$, windlass $E$, with its toothed wheels $F \mathbf{F}$, and ratchet lever $G$, toothed wheel I and pawl $H$, construeted substantially as shown and described.
(93,955.-E. Cross, Southbridge, Mass.—Shuttle for Looms.-February 4, 1868. -The "shield" is a ferrule, whose inside diameter decreases toward the point so as to compress the wood upon the shank of the tip, Which is forced into position simultaneously with it.
Claim. -The combination, with the tip and wood of the shattle, of an interposed shield, C, arranged, with relation to the tip and the sluttle wood, substantially as and for the purposos set forth.

73,956.-Samuei Darling, Bangor, Me.-Pen Wiper.-February 4, 1868. -The Wiper turns on an inclined axis so that one side will be immersed in the water. All extension at one end holds a dipping cup, and at the other side is a wiping band coiled upon rollers.
olaim.-1. A pen-cleaning apparatus so constructed as that the pen may be first dipped in water, and then be cleaned against a brush hung free to revolve, substantially as set forth.
2. The combination, with a water cup or vessel, of a circular brush, free to revolve therein, as and for the purpose described.
3. The combination, with such a cup, of a revolvable brush, set at an angle with the cup, substantially as and for purpose described.
4. The removable cover, haring secured thereon one of the bearings or centers for the brush.
5. The combination, with a per washer, of a wiping reel, as and for the purposes described.
6. A pen cleaner having a brush, circular or otherWise, to be used wet or dry, in combination with a wiper, made of wash leather, cloth, or their cquivalents, for the purpose herein set forth.

93,95\%.-Samuel Darling, Bangor, Me-Gas Heater.-February 4, 1868.-The flame is flattened by side plates attached to the burner, to increase its heat by a concentration which more perfectly consumcs the carbon.
Claim.-The combination, with the tube of a "gas heatcr," of flame-confining guides, substantially as described.
'73,958.-J. L. Dickinsor, Dubuque, Iowa.Safety Harness Hook.-Fcbruary 4, 1868.-The point of the trace hook passes throngh a slot in the plate, and is secured by a spring latch to which a cord is connected, by which it is drawn back to release the trace.
Claim.-A safety harness hook, for liberating horses from carriages, constructed and operating substantially as herein shown and described.

78,959.-J. Hall Dow and Daniel J. Riter, Chicago, Mll-Railway Frog-Febrnary 4, 1868.The frog is made reversible, so that when the wings and point are worn away on one side the other may be presented.

Olaim.-1. The chair C, constrncted substantially as and for the purpose specificel.
2. The point $g$, having its upper and lower edges beveled, in combination with the chair C , construeted substantially as and for the purposes specified.
3. The wings $e f$, when provided with two beveled edges, in combination with the point $g$ and chair C, all constructed and arranged substantially as and for the purposes specified.

73,960.-CHRISTOPHER A. Erskine, Palermo Center, Me.-Egg Preserving Frame.-February 4, 1868. -The horizontal side ties of the frame aet as sides to the trajs; the trays haring ledges at the ends by which they are sceured to the frame. The objeet is to inerease the space by doing away with the tray sides.

Claim.-The said egg-supporting frame substantially as deseribed, as made not only with its trays, prorided with ledges at their ends, and withont any at their sides, bnt as having the tie bars arranged with respeet to sueh trays in manner and so as to operate as and for the purposes as set forth.

93,961.-William H. Evans and William H. Wainwrigitt, Indianapolis, Ind.-Straw Cutter.February 4, 1868. - The feed rollers are operated by an ececutric rod upon the entter shaft. 'The eutter bar is adjusted to or from spiral eutters by turning its attaching bolts, whose shanks are plaeed eceentrieally upon their cireular heads

Claim.-1. The combination of the eceentrie shaft I, pawls L and M, ratehet wheels $\mathbf{O}$ and $O^{\prime}$, rollers D and $\mathrm{D}^{\prime}$, and the adjustable cecentric R , constructed and arranged substantially as set forth.
2. The eombination of the boxes I and $\mathrm{B}^{1}$, and plates $\mathrm{B}^{2}$, constructed as deseribed.
3. In combination with the boxes $\mathrm{B} \mathrm{B}^{1}$, and knife E, the cutting har C. adjustably attached by eceentric bolts, substantially as deseribed.

73,962.-Alfred Fellows, Thomas B. HarRison, and Hugir Dyer, Maquoketa, Iowa.-Loom. Indicator.-Febrmary 4, 1868.-The steps on the registering paml operate in combination with those of the ehanging pass in such manner, that when the latter engages the unit clisk, the register pawl releases the same, and when it engages both the "unit" and "ten" disks, the register pawl releases both, and so on throughout the series of disks, the registering pawl entering and lolding the disks after each change.

Claim.-1. The eylinder C , pin D , shaft B , and spur E , construeted, arranged, and operating as and for the purpose deseribed.
2. The combination of the berel wheels G and F, arbor II, the ratehets $O$ and $N$, with their hollow arbors, dial $K$, and hands $P$ and $L$, irrauged and operating as deseribed.
3. 'The combiuation of the rod $Z$, lever A', spring' $\mathrm{B}^{\prime \prime}$, lever $W$, parl $Y$, and ratehet wheel $O$, arranged and operating as cleseribed.
4. The shaft $\mathrm{E}^{\prime \prime}$, button $\mathrm{F}^{\prime \prime}$, and pinion $\mathrm{D}^{\prime \prime}$, arranged and operating as above deseribed.
5. Operating the lerer W by meaus of a flexible cord attiched to the lay or batten of the loom, as described.
6. The measuring device, construeted as described, in combination with the clamp and serew I'". $^{\prime \prime}$.
7. The combination of the wheel $G$, pin $I$, lever S, spring U, pawl $T$, and ratehet wheel $\mathcal{N}$, arranged aud operating as deseribed.
ry, 3f3. - Walter H. Forbush, Buffalo, N. V.Numbering Nachine.-Februany 4, 1868.-The instrument is attwehed to the breast beam, and the surface of the eylinder, whieh is studded with pins, engages the passinge eloth and indieates the length Woven. The eylinder is conneeted to the train of register wheels for this purpose.

Claim.--1. A registcring parl G, striking radially, or nearly so, into the external registering notehes $D$ of the disks, after each morement thereof, thereby bringing said disks into strict alignment.
2. The system of steps, $g^{3}$, on the registering pawl G, working in eombimation with the steps of the changing parr E, snbstantially as set forth.
3. The mechanism, consisting of the cam I, arm $H$, and fixed plate $J^{2}$ or the equivalent thercof, for giviug the in, down, ont, and up morement to the ehauging pawl E, as and for the purpose set forth.

73,964.-JJoins Forinien, Fairport, N. Y.-Car Coupling.-February 4, 1868.-The coupling pin is supported by a sliding bar, whieh is held in its forward position by a rubber spring. The ontering ink thrusts back the bar and allows the pin to drop.

Claim. - The combination of the spring E with
the inelosing slide D and ease $f$, arranged in such a manner that the spring acts by the tension of its main body and compression of its parts $k k$ simulta neously to resist the thrust of the coupling link, substantially as set forth.

73,965.-Grorge A. Frear, Chicago, IllManufacture of Avtificial Stone, Stucco, Cement, dec. - February 4, 1868.

Claim.- The use of an aqueous solution of shellac in the produetion of artifieial stoues, cements, stueco, \&e., for useful and omamental purposes.

73,966.-Russel Frisibie, Cromwell, Conn., assignor to J. and E. Stevens \& Co., same place.-Toy Gun.-February 4, 1868.-The soeket shatft is surrounded by a spiral spring which throws the soeket formard when freed by the trigger. The pebble is cjected by centrifugal foree.

Claim.-The spring E, with the eluteh hub D, rod F, pebble socket $J$, trigger $B$, substantially as and for the purpose described.

78,96\%.-Williar T. Firy, New York, N. Y. assignor to George H. Jones and Heniz C. BeeLIN, same place.-Wetting or Wiping Instrument for Slates, dec.-February 4, 1868; antedated January 23, 1868.

Claim.-A ressel A, having openings in the end, through which pass fibrous strands $d$, in combina tion with a spouge $E$, with whieh the said strands are in contact, the whole being arranged substantially as specified.

93,968.-Willian T. Fri, New York, N. Y. assignor to George II. Jones and Henry C. Berlin, same place.- Wetting or Wiping Instrument for Slates, de.-February 4, 1868; antedated Jauuary 24, 1868.

Claim.-1. An instrument consisting of a easing for containing water, one end of the easiug being provided with a sponge or its equivalent commonieatiug with the water, and the other end with a sponge to whieh the water cannot gain aceess, the whole being coustructed substantially as and for the purpose herein set forth.
2. 'The enlargements $c$ c at opposite ends of the ease, for the purpose specified.

193,969.-S. P. Gilbert, Racine, Wis.-Pump Piston. - February 4, 1868. - The two rings are brouglit together in tho upward stroke, the one forming a ralve for the ports through the other. In the downward stroke the rings are separated.

Claim.-The ring I, holding the packing E aud forming a valve for the ports D , all substantially as and for the purpose set forth.

73,970.-Tilomas Goodrum, Proridence, R. I. assiguor to Williaa E. Greev and Cilarles W. H DAY, same place. - Apparatus for Turning the Leares of Music. - February 4, 1868. -The fingers are placed heneath the leares and are swung aromed, one at it time, by the ratchet plate. 'The arm bearing the ratehet plate is attached to a spindle, which is aetuated in its effective stroke by a treadle, aud tmrmed back by a spring.g.

Claim.- The ratchet plate F, hinged to and operated by the spindle $C$ and lever $I$, in combiuation with the fingers, for turning orer the leares of musio books, substantially as shown and described.

78, ory - - W. T. Marmar, New York, N. Y.-Horseshoe.-February 4, 1868. - 'The hook of the ealk plate engages the immer edge of the shoe, and the dexible metallie straps attached to the plate engage a leather strap passiug' around the hoot, and kept down at the heel by a loop which may be attached to the snow plate.

Claim--The steel toe ealk or sharp, attachable to any smooth horseshoe by means of a elip, flexible metal straps; also an iron or other metal snow plate, attachable to the shoe by means of the clip and hole and leather loop and strap, as represented in the plan hereunto amexed.

193,9ga. - Marinin Hayden. Detroit, Mieh. Secding Cultivator.-February 4: 1868.- The draw
bars of the plows are hinged at their fore ends to the cross bars, and are adjasted vertically by a hand lever operating throngh springs. The plows are adjusted laterally by nuts upon a serew rod, which is moved endways by the treadle lever to cause the lateral morement of the plows.

Claim.-1. The springs $L$, when arranged and operating substantially as and for the purposes set forth.
2. The arrangement of the treadle or vibrating lever $W$, the arm $V$, and rod $X$, provided with the adjustable serews and nuts, the pins $Y$, and the ears $Z$, for the purpose deseribed.
3. The covering shovels G , prorided with a proper spring, when operating substantially as and for the purposes specified.
4. The combination and arrangement of a seeding cultivator, combining the above recited parts, with the frame $A$, the wheels $B$, the bars of the frame $C$, the bar behind the rear bar C, the hollow standards E, hung upon the bars D, the shovels $F$ and covering shovels $G$, the hinged joints $H$, the braces $I$, clasps $J$, the adjusting slotted plates and bolts $K$, the slotted projections $M$, the bolts $P$, the lever $Q$, the arm $R$, the quadrant $S$, the pitman arm $T$, the rocking bar U, the vibrating lever or treadle W, with its attachments, the gear wheel 2 , the pinions 3 and 4 , the lever 5 , and the shaft 6 , whem constructed and operating substantially as herein set forth.

7\%, 3\%3.- Martin Heyden, Detroit, Mich. Secding Machine.-February 4, 1868.-The size of the seed cavities is determined by the gauge prongs Which slicle in them. The prongs are adjusted by connection to a plate, whose rack engages the segment rack on a lever which is fised to desired adjustment by a pin entering one of a series of holes in a segmental bar attached to the hopper.

Claim.-1. The construction of a seeding maehine, provided with the shaft $\mathcal{B}$, the grooved cylinder $E$, the collar $P$, provided with the gange prongs $F$ and the sleeve $D$, when construeted and operating substantially as hercinbefore described.
2. The quadrant $H$, the lerer $I$, the segment rack $J$, and the plate $L$, when attacherl and operating substantially as and for the purposes set forth.
3. The combination of all the foregoing deseribed parts, in conjunction with the hopper or seed box $A$, when constructed and operating substantially as and for the purposes specifiel.
g3,974.-George E. Hayes, Buffalo, N. Y., assignor to Buffalo Dental Manufacturing ComPANY, same place.-Dentist's F'lask.-February 4, 1868.-The interior of the flask has a cavity in cominunication with the mold, from which rubber is foreed by the piston to insmre the thorough filling of the mold.

Olaim.-1. The process, substantially as herein described, of filling vuleanizing flasks, or the molds contained therein, by constructing the flask with a side opening $a$, and forming a cavity $b$ in the mold by a plunger $\mathbf{E}$, combined or conneeted in a direet manner with said flask, and after having first packed the mold proper, also the cavity $b$ communieating therewith, with rubber, and closing the flask, projeeting the plunger through the cavity in the flask to press upon the rubber, substantially as specified.
2. The molds C and D, provided with an enlarged carity $b$, in commnnication with a side opening $a$, marle in the flask for reception of a portion of the requisite amount of rubber necessary to fill the mold essentially as herein set forth.
3. The combination with a vulcanizing flask, haring a side opening $a$ in it, of a phonger $E$, for operation therem, substantially as specified.

73, $975 .-$ Henry Heatr, New York, N. Y., assigmor to Henry G. Fish, Thomas R. Clark, and Thomas J. Flagg, same place.-Drawers.-February 4, 1868.

Claim.-1. The combination of the pointed waistband of the drawers with a full leg, having triangular portions removed from its upper end, so as to obtain the requisite fullness at the hips and waist rithout the necessity of gathers.
2. The combination of the ankle-band of the drawers with a full leg, having a triangular portion
removed from its lower end, so that the requisite fullness of the leg is secured mithout a surplus of material in the vicinity of the ankle.
3. The combination of the pointod waistband of the drawers, ankle band, and full leg, having triangular portions removed at both encls, substantially as set forth.
73.976.-M. I. M. Hussey, New York, N. Y.Postal Scale.-February 4, 1868. - The rate of postage for different countries is indicated upon the dial in concentric rings.

Claim.-1. The revolsing dial $i$, upon which areinseribed mail rontes and postal rates, substantially as described and for the purposes specified.
2. The combination of the revolving dial $i$, upon which are inseribed postal rates and mail routes, witl the spring or other equivalent weighing balance, substantially as and for the purpose described.
3. The combination of the dial $i$, or a segment thereof, with the adjustable inclicator $o$, when construeted substantially as deseribed.
4. The vertical indicator, when used in conneetion with a revolving dial, or a segment thereof, for the purposes specified.
5. The vertical indieator, in conneetion with a spiral spring balance, for the purposes specified.

73, $37 \%$--Jorn Jacobs, Oncida, Ill-Collar Block.-February 4, 1868; antedated January 24, 1868. -The block is simultaneously expanded laterally and longitudinally by means of a serew which engages the frame to which its upper end is attached, and which has a spur-wheel engaging a pinion on the right and left screw rod, conneeted by inclined links to the side blocks of the former. The cord passing arouncl the collar bottom is dramn un by a windlass. The pair of pincers for engaging the collar top is tightencd by toggle levers connecting its long arms, and is held by a pawl.

Claim.-1. The use of the right and left serem. shaft K, provided with the nuts oo and arms or rods $J J$, for expanding or contracting the parts B B, substantially as herein set forth.
2. The arrangement of the shaft H, pinions or gear Whecls I and $T$, and shaft $K$, for expanding and contracting the former, and at the same time moving the platform C, substantially as specified.
3. The arrangement of the pinecrs $E$ npon the platform C , and with the arms $e e$, links $m^{\prime} m$, and the lerer $d$, as and for the purpose set forth.

73,978.-Martin V. Jennings, Centralia, Mo. - Washing Machine.-Febraary 4, 1868.-Around the inside of the suds box is a series of vertieallyribbed wash boards. The dasher has outwardly and downwardly projecting pins, and has oseillation from a segmental-rached lever engaging a cromn wheel on the shait.

Claim.-The combination, in a washing machine, of the corrugrated wash-boards $e e^{\prime} e^{\prime \prime}$, \&c., with an adjustable dasher $w$, when the sume are arranged, constructed, and operated substantially as shown and specified.
$193,979 .-N A T H A N$ S. Johnson, Maquoketa, Iotra. - Corn Cultivator.-Febrinry 4. 1868; antedated February 1, 1868.-The axle bars are attached by stantlard to an elerated cross bar, the construction admitting the eultivation of corn taller than the axle. The plow beams are pivoted to standards depending from the tongue frame, and are vertically adjustable hy bars conneeting their rear ends to the upper cross bar.

Claim.-1. The combination of the tro asle bars B B and the four upright standards $A$ A A and cross beam $S$ and bolts $E$.
2. The combination of the seat board and seat lever I with the levers L L, shovel beams D D, and the movable pirot or standard C , substantially as and for the purpose herein specifici.

73,980.-William H. Jubb, Norwalk, Conn.Compound for Destroying Burrs in Wool.-February 4, 1868. -The first composition has sulphuric aeid, 100 lbs .; and saltpeter, 21 bs. , dissolved in sufficient water. After immersion in the above the wool is immersed in the following: sal ammoniac, 4 lbs.:
soda ash, 30 lbs.; Whalc-oil soap, 10 lbs., and lime, 5 lbs., dissolved in sufficient water.

Claim. -The use and combination of the ingredients, as herein deseribed, for destroying the burrs in wool and bleaching the wool, substantially as and for the purpose set forth.
r3,951.-E. M. Kellogg, Mukwonago, Wis.Flour Bolt.-February 4, 18ci8. - The forward edge of cach strip of eloth is atrached to tho outer side of the rib and its rear edge to the inner side of the rib following. The inelined plates are to prevent the aulherence of the flour to the arms.

Claim.-1. Attaching the bolting cloth, one edge to the outside and the other to the inside of the ribs of cach square of a bolting reel, as described.
2. Inelines H, in combination with arms E and ribs F of a bolting reel, substentially as aud for the purposes described.

73,982.-Daniel Lampson, Lyons, Towa. Washing Machine.-February 4, 1868. -The eylinder contains hot water and has open ribs; it is rolled orer the riblbed bottom.

Clain.-1. The hollow eylinder B, eneased with ends and slats, as abore set forth.
2. The combination and arrangement of the hollow cylinder 3 , the slats $d$, the corrugated trongh bottom, When constructed, arranged, and operating substantially as and for the purposes set forth.

93,983.-John Lave, Chieago, Ill.-Forming Plow Lays.-The blank is rolled with a longitudinal contral depression.

Claim.-The method herein described of making plow lays-that is to say, by first reducing by means of rolls, a slab of steel along its center tion end to end to the shape deseribed, then slitting said slab along the line of its greatest depression, and afterward cutting the same crosswise in suitable lengths for plow lays, as set forth.

93,954.-Shanuel D. Lecompte, Learenworth County, Kansas.-Car Coupling.-February 4, 1868. -The entering link forees backward the spring lever whieh supports the coupling pin.

Claim.-The combination of the piroted swinging bar $d$ and the spring $e$, hinged at $f$, in connection with the doable-slotted boltholder $B$ and shankheaded bolt $O$, when eonstructed and arranged substantially as and for the purpose described.

73,955.-George Lewis, Westfield, Ohin.Wood Turning Lathe. - Febrnary 4, 1898.-The rotary cutter head is upon a cross piece whieh is ribrated by connection with a pattern to form the spole. The cutter is foreed from the blank by positive aetion, and is drawn thereto by weighted levers.

Claim. - The combination of the reciprocating ribrating carriage R, cutter licad $\mathrm{W}^{\prime}$, cross piece U, standards X C. spring $A^{\prime}$, adjustable arms $\mathrm{I}^{\prime} \mathrm{y}^{\prime}$, lever F , and weights $Z \mathrm{E}$, all construeted, combined, and arranged in relation to the pattern $Q$ and spoke $P$, and oprating in the manner and for the purpose substantially as set forth.

73,086.-Charles S. Mfromert, Plymouth, Mieh.-Carpet sitretcher.-February 4, 1868.

Claim.-1. The rack I and hooked sliding pawl J, in commection with levers C and $A$, when construeted and operating substantially as and for the purposes set forth.
2. The combination of the above-named parts with? the erotchet lerer A, provided with the transverse bar B , the levers C and D , provided with transterse bars $E$ and $F$ and tectin, as hereinbefore deseribed, and the adjusting pins $G$ and $H$, when arranged substantially as and for the pmrposes herein described.

73,987.-Geonge B. Melcher, Salem, Mass., assignor througli mesne assignments to John KinsMan, same place. - Window Blind Fastening. February 4, 1868. - The button lias a double inelined fiace and a trunsverse notech whieh cugages a stud or staple on the windorv sill or wall, aeeording as to its position, open or shat. The button is attached by a single screw traversing' a slot and allowing the sliding movement.

Claim.-The aforesaid rotary slide button as made with a slot B , projection $g$, noteh $d$, and conver faoo e e, substantially as deseribed.

73,988.-James W. Milioy, Galreston, Ind.Corn and Cotton Cultivator.-February 4, 1868.The onter shares are attached to bars whieh are pivoted to the fore end of the beam and commected by toggle lerers to a notehed hand lever by which they are transversely adjustod.
cilaim.-The movable arms D D, toggle.jointed lever E , beam C, notehed lever F , rod G , key g, circular firame A, and self-adjusting hoe shovels B B B B B , the whole as constructed and arranged, substantially in the manner and for the purpose as herein set forth.

73,989.-OnL B. Moone, Walled Lake, Mieh. -Fruit Picker.-February 4, 1868.
Claim.-1. The form of the instrument.
2. The applieation of the loops $A$ and $\dot{B}$.

73,990.-M. S. Morgan, Clintonville, Ill., assignor to limself and George C. Coffer, same place.-Stove Drum.-February 4, 1868.-The outer side of the annular, air-heating clamber is cleansed from soot by serapers projecting radially inward from the rotatable cylindrieal portion of the drum.

Claim.-Rotatilir case $A$, in combination with soot bor L, scrapers If and $H^{\prime \prime}$, substantially as and for the purpose deseribed.

73,991.-L. Montier, Nem Iork, N. X.—Artificial Leather.-February 4, 1868.-Sharings of leather from tanning and eurrying are steeped in a mixture eontaining glue, 1 ; rice flom, 20 , and rye Hour, 40 parts. In lialf an hour it is removed and pressed betreen layers of flamnel. The flannel is then removed and the leather dried at a temperature of $320^{\circ}$ Fahr. It is then rolled. For waterproofing it is immersed in tar and essence of turpentine, eqnal parts, witl caoutehouc 5 per cent. dissolred therein. When completely dried it is coated on both sides with copal varmish and dusted with plumbago. After this it is rolled.

Claim.-1. The process, herein shown and deseribed, of combining the refuse shavings of leather to make artitieial leather.
2. Watcr-proof artifieial leather when made and coated, substantially in the manner and with the ingredients herein deseribed and set forth
$73.099^{2}-$ Calitn H. PaLNe, Providence, R. I., assignor to himself and George S. Thompson, same place.-Carriage Jack. - February 4, 1868. -The hand lever is piroted to the lifting bar and fulerumed at the lop of a rertieal lever pivoted to the base. The lever's form a togrele, and when the bar is raised their comecting joint rests against tho standard and is sustinned thereby.

Claim.-The arrangement and combination of the lever I) and toggle E , with slide bar C and the base board $B$, applied to the standard $A$, snbstantially as specified.
2. The pin $g$ as made with the brans or arm $m$ extended from it as set forth.
73.003.-Joun Pender, Worcester, Mass.-LetOff and Take-Up for Looms. - February 4, 1868. The movement of the levers operating the let-off and take-up mechanism is regulated by the distance of their motive parls from their fulcra. This position of the pawls is adjusted by the arms of a rock shatt, one of the said arms resting agrinst the yarn or eloth upon the roller, and the other bencath the saicl parvl.

Claim.-In eombination with the yarn and eloth beams, or either of them, and with the meehanism by which the intermittent rotative morement of the Yarn or cloth beam is dircetly produeed, the lever or levers $i$, pawl or pawls $u$, and arm or arms $v x$, arranged to operate substantially as set forth.

23,944.- Harvey Pielis and Alvah Phelps, Albany, N. Y.-Apparatus for Separating Soap Bars.-Febrmary 4, 1868.-Improvement on their patent of October $\stackrel{2}{2}$, ]866. The carriage supporting the drying rack is actuated by a pawl, whose move-
ment is greater than that of the pawl operating the feed mechanism of the soap, so that a space is left between the bars of soap.

Claim.-The application to soap-cutting apparatus of a carriage E, having an accelerated motion with relation to the slab feed D , for the purpose set forth.

93,995.-Albert C. Pierson, Raliway, N. J.Calculating Machine.-Fcbruary 4, 1868.-The days of the mouth are upon cudless belts or metallie straps, which are stretched upon pulleys at top and bottom of the frame, and may be turned to compute from. The principal amount is indicated in a horizontal row at top of the table, and also on the horizontal slide. The latter is moved vertically to assist in carrying the eye across the rows of figures denoting the interest, when the upper edge of the slide is used. When using the lower side the same is brought to the day of the month, or the number indicating the time, and the vertical slides which work in the main slide are raised to reveal the amount of interest.

Claim.-1. In ambination with the tadle N , or its cquivalent, having the interest or other calcalations for given amounts entered as represented, the parallel bar B, with or rithout the adjustable movable picces $c$, or their equiraleuts, adapted to operate in connection with the numbers in the table N , or its equivalent, substantially in the manner and for the purpose herein set forth.
2. In combiuation with the above, carrying, on the parallel bar $B$, the line of figures or other marks $P$, indicating the amounts for which the interest or other calculations is to be computed at the several points, substantially in the manner aud so as to realize the advantages herein set forth.
3. In combination with the column of days, the belts or moving columns G and $H$, carrying the dates in a reverse order, so as to allow the length of time to be aseertained from a given day, reckoning either forward or backward, substantially as and for the purpose herciu set forth.
4. The belts or sliding columns G and H , having the dates in reverse order, as shown, in combination with the interest table $n$, as and for the purpose herein specified.
-3.995 -Joserf F. Pond, Cleveland, Ohio.Washing Machine.-Fcbruary 4, 1868.-The endless apron has metallic plates attached to its edges, to prevent the same from turning over. The apron is stretched upon adjustable rollers, and revolres beneath a fluted motive roller, which is depressed by springs and turned by a winch.

Claim.-1. The application of friction gnide-pieees $i$, attached to the cdge of the endless apron or belt, to prevent the apron firom turning under or over and getting out of place, as and for the purpose specified.
2. The adjustable slides $b b$, attached to the upricht pieces B B by meara of bolts or screws, as and for the purpose specified.
\%8,95\%-_TAMES PoTTER Portland, Mc.-Tsed Bottom.-February 4, 1868.-The slats have joints formed by spiral springs. The end springs are dou-- ble, having a central part entering a groove in the rail, and the arms are turned into two spiral springs and bont at the ends to engage the slats. The side rails are jointed at mid-length, the hinges being beneath, so that the rectangular ends abutting together form mutual support.

Claim.-1. The spring, as shown at $b$, in connection with the recesses $m^{\prime} m^{\prime}$ in the slat $b^{\prime}$, as and for the purposes set forth.
2. The spriug joints $\alpha$ in the slat $B$, as aud for the described purposes.
3. In combination with a bed slat, removable by means of the spring $b$, the arrangement of pivots $t$ and hinges $s$, as and for the purposes described.
'3,998.-William W. PotTs, Bridgeport, Pa.Trime Kiln.-Fcbruary 4, 1868.-Blasts of air are forced through the burnt and cooling lime, and mingle with the caloric currents from the furnaces. The furnaccs are placed around the kiln, and blasts of air forced through the fnel and through the top of the firc space.
Claim.-1. Arching over the upper end of the kiln A B, substantially as described, and cororing the
feed-hole $a^{\prime}$, left thereby, by means of a remorable cover, $a^{\prime \prime}$ provided with the small vent-hole $a^{\prime \prime \prime}$, substantially as and for the purpose described and set torth.
2. The combination of the furnaces $C$ and the channels $D$ aud $E$, when the same are constructed and arrauged in the relation to each other and to the kiln A B, as described and set forth, for the purposes specified.
3. Forcing the currents of air up through the lower part of the kiln, and onward therein, by means of the chamel $F$, substantially as and for the purposes described.
\%3,999.-LL. C. PRindle, Chicago, Ill.-Door Spring.-February 4, 1868.-A steel strip is cut in such form that when its central part is made into a coiled spring its cuds will stand side by side. The ends are attached respectively to the edge of the door and to the frame.

Olaim.-A door aud gate spring cut in the form shown, and coiled so as to hare projectious $F$ and $G$, in combination with plates $\mathrm{E} H$, substautially as and for the purposes hereiu specificd.

4, 0900.-Loomis E. Ransom, Trenton, Mich.Brick Machine.-February 4, 1868.-Improvement on his patent of March 21, 1855 . The tempered clay is spread upon the gromad in even, longitadinallyextended cakes preparatory to being cut into bricks.
claim.-The construction of the apparatus, as hereinbefore described, combining the frame $A$, the rollers $B$ and $C$, the crank $D$, the gear's $E$ and $F$, the sides or shields $G$, the sloping shelf $H$, the scraper I, the wheels $J$, and the knite $K$, with the stand $L$, all arranged and operating substantially as and for the purposes herein described.

的4,001.-JOHN T. RICH, Philadelphia, Pa.Generating Gases, and in the Application of the same.-Felruary 4, 1868; antedated January 23, 1868. - The hydrocarbon liquid follows a spiral course orer the conical bottom of the retort, and the gas is carried to the annular, frusto-conical nozzle, where it mingles with a jet of steam and air drawn in thereby. The vapors are passed through water to take up the moisture and nitric aeid, and form a permanent gas not subject to condensation.
Claim.-1. The process of generating and procuring the partial decomposition of atmospheric air by the action of wet steam in contact with metallie or other hard substances, for the purpose set forth.
2. The process, substantially as described, of saturating atmospherie air, and the subsequent application of the same to the purposes of chemical distillation, or, mixed with carbon or liydrocarbon vapors, to heating or illuminating purposes.
3. The process of generating and preserving oxygen gas by the action upon a current of atmospheric air or electricity erolicd by a jet of wet steam, and the subsequent separation of the steam and nitric acid from the oxygen thus set fice, substantially as set forth.
4. The mode of manufacturing illuminating and heating gases by mingling hydrocarbon gases or rapor with orygen gases, generated substantially in the manner set forth.
5. The mode of manufacturing mingled oxygea gases for use in the desulphurization of ores, \&c., substantially as set forth.
g告,002.-L. I. Rinehart and P. Phillips, Eransburg, Olio.-Device to Prevent Irogs from Ioot-ing.-February 4, 1868. -The arms ombrace the snout and the strap encircles it. Ihe roller prevents rooting. The spring pin impinges against the snozt, when a pressure is crerted upon the spring.

Claim.-The strip A, with arms $a \alpha^{l}$, belt B , spring $C$, pin $c^{\prime}$, arms $d$, and roller $D$, when combincd and arranged substantially as deseribed.
ge, 0 ,013.-Duncan Robertson, Detroit, Mieh.Center Board for Vessels. - February 4, 1868 ; antedated December 12, 186\%.-The center board is jourualed in eyc-bolts, which are attached to chains traversing the tubular stanchions. The brace chains traverse similar tubes. The board may be unshipped by letting all the chains run ont.

Claim.-The combination and arrangement of the iron ecnter board $A$, the journals $C C$, the eye-bolts a $a$, the ropes or chains D D H H, the hollow stanehions E E I I, and the stops G G, arranged substantially as descrijued for the purposo designed.

24,004.-Luman Rogers, Pittsburg, Pa.-Cultivator T'eeth. - February 4, 1868; antedated Janmary 23, 1868. -The bolt has a doretail head fitting a suitable transverse noteh in the rib.

Claim.-1. The rib $b$ on the back of eultivator tecth or of blades for shovel plons, for the purpose of adding strength to the blade, or for forming a means of attaching it to its standard or frame.
2. Attaehing eultivator teeth or blades of shorel plows hy means of a bolt inserted into a rib or projection on the back of the tooth, which fits into a reeess or groove in the standard or frame, substantially as and for the purposes deseribed.
940005.-Annmew Runstetler and Albert Winderck, Peoria. Ill.-Cotton Plow and Cultivator. - Februar'y 4, 1868. - The fore ends of the side plow beams are connected by universal joints to the frame to which the tongue is attached. The side beams are eonnceted together and to a ecutrial remorable beam by transverse bars whieh allow laterul adjustment.

Claim.-The construetion, combination, and arrangement of the frame picees $\triangle B C$. the iron gatuge picees D E F, hook and rine, and remorable shorel MI, as attiehed to the beam. or piece 13 , all as shown and for the purposes described.

74,006.-ANDREW RUNSTETLER and Albert Windeck, Peoria, Ill.-Cotton Scraper and Cutter. -Febrinary 4, 1868. -The plows are upon piroted standards, whose tops are connected to a hand lever and are oscillated thereby. The plows are followed by two adjustable revolring choppers.

Claim.-1. The mode, substantially as set forth, of adjusting the serapers $c c$, by means of eurved irons $h \dot{h}$ connceted with the regulator $I$.
2. The eombination of a driver's seat, the levers M and $L$ for eontrolling the action of the revolving hoes II H, and the regulator I for controlling the serapers, substantially as set forth.
\% 4,00\%.-Benjamin Rutter and Hixson Hunt, New Lexington, Ohio.-Treadle for Propelling Sew. ing Machines.-February 4, 1868 .-One treadle oseillates freely on the roek shaft, and the treadles are extended backward and conneeted by rods to the ends of a lever fulerumed at its mid-length to a bar depending from the table.

Claim.-The construction of the top of a seming machine stand, with a fulerum $G$ and balance lever F , in combination with the treadles $A$ and $C$, bar $B$, crank D, and rods E E, substantially in the manner and for the purpose as herein set forth.

74,005.-Cyrus Sanbori, Chitelester, N. H.Safety Pocket.-February 4, 1868. - The immer eateh is sceured within the outer one by a turning eateh.

Claim.-Improved sufety pocket, consisting of the ease A sceured to the apparel, into which the ease C is arranged to slide and fasten, substantially as berein set forth.

74,009.-TAmes D. Sarver, Columbia, Tenn,Carriage Spring.-February 4, 1868. - The body rests on rubber bloeks, eontained betwcen curved disks seemed to the ends of the wooden springs.

Claim. - The eombination of the steel springs D , rubber springs $E$, and curred plates $\mathbb{C}$, (having flanges or ears formed upon their side edges, ) with each other, and with the springs and body of the rehicle, substantially as herein shown and deseribed, and for the purpose set forth.

74,010.-Tames D. Saryen, Columbia, Tenn.Carriage Spring.-February 4, 1868.-A bloek of rubber partially inclosed by a metallie ease is interposed between the end of the $X$-shaped rooden spring and the earriage body.

Claim.-The eombination of the metallie plate or cap $B$, having flanges $b^{\prime}$ upon its sides and outer end, and the rubber spring or anuular block C , with the
end of the wooden spring A, substantially as herein shown and deseribed and for the purpose set forth.

74,011.-James D. Sarven, Columbia, Tenn.Elastic Bearing for Body-Supporting Irons for Car-riages.-February 4, 1868.-The box is sceured to the bar. The iron is interposed between two bloeks of rubber and has side eavities whieh reeeive projections on the box and prevent the withdrawal of the iron.

Claim.-The method of fastening the iron head D in the box $B$, as above deseribed, by means of vertieal grooves $e e$ in the side of the head, in conncction with vertieal projections in the box, or by means of a vertieal bolt $G$ passing through the eenter of the box, substantially as and for the purpose specified.

7,012.-James D. Sarven, Columbia, Tenn.Elastic Bearing for the Body Supporting Irons for Carriages.-February 4, 1868. -The body loop has a grooved laterally-extended head, whieh is received within a box attached to the spring bar, and has bearing on an upper and lower block of rubber.

Claim.-1. The supporting iron D, having the neek d ind the head $\mathrm{D}^{\prime}$, as and for the purpose specified. 2. The eombination of the springs $A$ A, one or botl, eushions I F, and eross bars B, substantially as and for the purpose deseribed.
3. The eombination and arrangement of the box $\mathbf{E}$ with the inelosed cushions I E , substantially as and for the purpose speciticd.

24,013.-Levi Scofield, Farmington, Wis.Shuttle for Looms.-February 4, 1868.-An orifiee is made through the shuttle in line mith the Jarn eye, and another through the bottom at the same distance from the end. The yarn may be foreed through the eye by a pin having a noteh or ere at the end.
Claim.-Construeting a shnttle for wearing eloth, with the orifiees $d$ and $e$, substantially as and for the purpose deseribed.

7 1,014.-HEnRy M. Shute, Waukegan, Ill., assignor to Geolige W. Emerson. - Book Binding. February 4, 1868. -The wires are laid in the grooves between the lids and back, and are held by flat wires traversing the book.

Claim.-The wire C, figs. 1, 2, and 3, in combination with the flattened $\begin{gathered}\text { ires } e, ~ l i g s . ~ \\ 1\end{gathered}$ and 2 , one or more, or their equivalent, substantially and for the purpose set forth.
g4,015.-JOHN W. SMIH and JAMEs D. SMITH, Washington, D. U.-Letter Box.-February 4, 1868. -The raising of the semi-cylindrical cover turns the eylindrieal trough so as to expose its opening for reeeption of the letter. When the lid is elosed down the spring rotates the eylinder suffieiently to discharge the letter into the receptacle.

Claim.-The arrangement of the eylinder C , coiled spring $D$, pulley $E$, chain $F$, and eover $G$, with the trough $B$, when construeted on the top of the lid or cover A, substantially in the manner and for the purposo as herein set forth.

74,016.-John W.Thompson, Greenfield, Mass., assignor to Elviea A. Tiompson, same place.-Harvester.-February 4, 1868.-The frame is metallic and seeured to a tubular sleeve on the axle. On one end of the sleere are threads cut on the outside; these mesh with threads eut on the inside of the shipper sleeve, whieh is turned by a hand wheel. This sleeve also turns on the axle, but is confined by a shoulder attached to the axle by a set mut and preventing lateral play. The frame is moved laterally by this derice to conncet or disconncet the entter bar firon its motive wheels.
Claim.-1. The eombination of the shipper, consisting of the slecve $G$, haring the hand wheel $d$, and threads upon it, with the frame A A, arranged so as to slide upon the earriage axle, substantially in the manner and for the purpose shown.
2. The pawl having the cup $q$, with spring $u$ and nut $t$, arranged and construeted substantially as shown.
3. The eatter bar frame $\mathbf{E}$, consisting of the picces $f$ and $g$, with cross strips $1,2,3, \& 0$., formed ass shown.
4. The arrangement of the gear wheels $a$ and $J$ upon the bar C , so that the pressure mpon the latter is equalized, substantially as shown.
5. The peenliarly shaped entters, having the projeetions $k k k, \& e .$, in combination with tho cutter bar, consisting of the two plates $P$ and $R$, and adjusted by the luts $m m$, \&e., substantially as and for the purpose deseribed.

7,017.-Asahel Tond, Jr., Pultneyville, N.Y., assignor to himself, A. F. SuEldon, Joun S. Todd, T. S. Ledyard, and L. S. Cuyber.-Construction of Fences.-Febrnary 4, 1868. -The wires are attaehed to the posts by brackets having an under recessed piece and an attaching picee whieh enters the reeess, bending the wires into the same. Brace wires are carried downward from the posts and attached to the palings. The wires are clasped by open links between the palings.

Claim.-1. The herein deseribed method of attaehing and detaching the pickets from the wires by means of the clasp K, fig. 7 , or their substantial equivalents, in the manner' specified.
2. The clasp $\bar{K}$ or L, or equivalent, in eombination with the riees $\mathrm{C}^{\prime}$, posts A , piekets N , and brace wire M.
3. The metallic bracket D , cap E , in combination with the posts $A$, wires $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, brace wire M , and pickets $N$.
4. The brace wire M, in combination with the posts A, wires C C', braeket D, cap E, and clasp K.
5. The temporary post $A^{\prime}$, in combination with the wires $C C^{\prime}$, brace wire $M$, braeket $D$, eap $E$, clasp $K$, substantially as and for the purposes set forth.

4, 418.-AsaHmLTODD, Jr., Pultneyville, N.Y., assignor to himself, A. F. Sheldon, J. S. Todd, T. S. Ledyard, and L. S. Cuyler.- Construction of Fences.-February 4, 1868.-The lever has a hinged block at each end, which is interposed between the wires to make the half twist in the same and allow the introdnction of a paling.

Claim.-1. The jointed donble-aeting lever D.
2. The detachable indexes K and $\mathrm{H}^{\prime}$, in combination with the double-aeting lever $D$ and guide I.
3. The detachable gnide I, in combination with the lever D and indexes K and $\mathbb{H} \mathbb{H}^{\prime}$, substantially and for the purposes set forth.

74,019.-Alexander C. Twining, New Haven, Conn-Caster.-February 4, 1868; antedated January 8, 1868. -The eateh engages the ammlar groove at the lower end of the socket and prevents aceidental dismemberment.

Claim.-The spring eatch attached to the earriage, as deseribed, in combination with the groove or slot aronnd the interior of the socket, all substantially as deseribed and for the purposes set forth.
g 4,020.-William Westlake, Brooklyn, N. Y. -Lantern Globe.-February 4, 1868.-A portion of the globe is stained.

Claim.-A lantern globe, made of or finished into a single picee, having one portion colored and a part clear, substantially as specified.

174,021.-David M. Weston, Boston, Mass.Machinc for Separating Liquids from Paints and other Solid Substances.-February 4, 1868.-The npper edge has an inturned flange, and a radial plate extends from the flange to the bottom, leaving a space between the plate and the side. The eseape for the liquid is through small apertures in the hub.

Claim.-1. The revolving cylinder $F$, withont openings or perforations in the circumference, substantially as deseribed.
2. The cylinder F, in combination with the passages or outlets, or their equivalents, at $A$, in the hub and bottom, substantially as deseribed.
3. The breakwater E , or its equivalent, in combination with the cylinder ${ }^{\prime}$ ', substantially as deseribed.

74,022.-James E. Wheat, Rochester, N. Y.Letter Game. February 4, 186s.-The pins are lettered and set in two concentric circles around a central pin. The game is plafed with ball and mallet.

Claim.-The applieation of letters or fignres to a series of stakes or pins, to he arranged sabstantially as herein shown and deseribed, for the purpose of constitnting a parlor or yard play or game, as sot forth.
\% $4,018.3$ - JOHN R. Whittemore, Chieopee Falls, Mass.-Horsc Rakc.-Tebruary 4, 1868.-The rake is raised by comnection to a two-armed lever, one arm forming a hand lever and the other giving adjustable attachment for a treadle.

Claim.-The deviee for operating the teeth of the rake, consisting of the donble armed lever E , finlerumed at L, and commected to the arm $K$ by means of the link $I$, hinged at its elbow at $H$, the parts being arranged substantially as herein shown, and for the purposes set forth.

64,024-Pililander Wonsey, Ogden, N. Y.Combincd Plow and Hariov.-Febrnary 4, 1868.The seraper and rotary harrow are comeeted to a bar pivoted to the land-side handle and sliding in guides upon the other handle.
Claim. - The combination of the hamow, seraper, and plow, and the manner in which they are attached and detached.
git, 02es.-LivUs Kale, Jr., Shelburne Falls, Mass.-Visc.-February 4, 1868.-A spring is interposed between the serew head and the jaw so that the objeet may be held by the pressure of the spring or by the positive foree of the serew.

Claim. - The eombination of a spring with the jaws, nent, and serew of a vise, substantially in the manner and operating as specified.
\%, 4, 026.-Albert A. Young, Boston, Mass., assignor to himself and George T. Dalton, same place.-Brush Stock and Handle.-Tcbruary 4, 1868; antedated January 16, 1868.-The handle is attaehed to a hinged plate which is piroted to a frame seeured to the brush back. The handle may be tmrned around in a plane parallel to the brush back, or may be raised into a rectangular position thereto.

Claim.-1. The combination and arrangement of the eirenlar plate $D$ with the plate of the handle E , whereby the handle is placed at lrght angles, and also diagonally to the body of the brush, snbstantially in the manner and for the purpose above set forth.
2. The combination and arrangement of the hinge F with its swivelling abutment $b$, the turning serew $c$, and the spring bolt $G$. whereby the haudle is raised and sceured perpendieular to the body of the brush, substantially in the manner and for the purpose above set forth.
3. The combination and arrangement of the brush handle 1 witl the other parts of the brush, whereby the handle may be used in a diagonal, reversible, and perpendieular position, and also at right angles with respect to the body of the brnsl, substantially in the manner and for the pmpose above set forth.

74, 027.-Albent A. Young, Boston, Mass., assignor to himself and GEORGE T. DALTON, same place.-Brush Stock and Handlc.-February 4, 1868; antedated Jamuary 16, 1868.-The handle traverses a soeket at cach end of the head, and may be cxtended in cither direction.
Claim.- The eombination and arrangement of the body of the brush with respeet to the eap $B$, the handle $C$, the serers $D$, the groore $a$, and the pin $b$, whereby the handle C may be extended at cither end of the brush, the sereral parts being construeted and arranged with respeet to each other, substantially in the manner and for the purpose set forth.

74,028.-JaMEs U. ADAMS, Richfield, Mich.Boiler Tube Ferrule. - February 4, 1868. -The ferrule has an inside and outside serew thread, the former of which engages a thread npon the tnbo end, and the latter a thread on the side of the hole in the thbe plate.

Claim.-The combination of the ferrule $c$ with the tube $\Delta$ and plate $a$, substantially as herein described.

74,029.-Augustus H. Ahliorn, Lawrencerille, Pa.-Securing Box Metal in Carriagc Hubs.February 4, 1868.- A box whose bore is eonsiderably

Larger than the axle is immersed in dilute sulphuric neid, and then tinned; after which "Babbitt metal" is cast orer a mandrel within the box.
Claim.-Tinning the interior of carriage boxes prior to lining them with a metallic alloy, so that said metallic alloy will adhere to the box and become part of the same, substantially as herein described and for the purpose set forth.
g4,030.-John Anmstrong, St. Louis, Mo.Tricl Machine.-Febrnary 4, 1868.-Steam is introduced into the hollow spaces of the mold, and into the hollow heads of the plungers. The clay is also heated by a diselarge of steam into the hopper. The clay is fed by the plunger in the hopper down into the space between the tiro horizontally reciproeating plungers. The brick, after pressure between the plungers, is carried by simultancons movement of the latter to the table, which is elevated to receire it, and from the table the brick is thrnst on to the offbearing belt.

Claim.-1. The hopper $R^{\prime \prime}$, in combination with the plunger S , for feeding the machine, when constructel and arranged to operate substantially as herein described and set forth.
2. Proriding the plangers HI and dic box J with hollow chambers, so that the brick or other materials that are being molded may be surrounded on all sides with heated surfaces, substantially as shown and described.
3. The follower $\mathrm{N}^{\prime}$, in combination with the ver-tically-moving table $N$, for delivering the briek on to the discharging currier belt $Q$. when construeted and arranged to operate substantially as hercin clescribed and set forth.
4. Imparting to the discharging carrice belt $Q$ an intermittent motion, by the noms substantially as herein described.
5. The plingers $H$ and $I$, provided with the projections $G G^{\prime}$ and $F F^{\prime}$, in combination with the cams $d c$ and the cams $a b c$, for imparting to them a reciprocating longitndinal motion, when constructed and arranged to operate substantially as herein deseribed.
6. The shaft O, prorided with the spiral spring $0^{\prime}$ in combination with the lever $p$ and hook $q$, when constructed and arranged to operate snbstantially as described.
g4,031.-H. B. Arvoldt and John Grmme, St. Lonis, Mo.-Cultivator.-February 4, 1868.-The handles are piroted to the beam, and slide on a segmental bar upon the rear end of the beam. An adjustable additional draw bar is prorided for deep plowing.
Claim.-1. The wreed cutter C, when combined with a cultivator A B, as and for the propose herein shown and deseribed.
2. The morable arm $\mathrm{A}^{1}$, when combined with the plow beam $A$, as described, and for the purpose set forth.
3. The plow handles $A^{3}$, and the curred rack $A^{4}$, for the purposes herein set fortl and described.
g4,032.-Isalah B, Artiur, Sidonsbnrg, Pa.Corn P'low and Cultivator.-February 4, 1868.-The central handle is fixed, but the other handle is hinged at the fore end and attached to one of two side posts, to allow the operator to walk mpon either side. The cross-bars have slots traversed by bolts passing through the beams, by which the beams may be a.djusted and secured firmly by engaging corrugations on the bars and beams.

Claim.-1. The combination of the fixed central handle $E$ with the shifting adjustable handle $\mathrm{E}^{\prime}$, when used in a corn plow and cultirator, substantially as and for the purpose specificd.
2. The wire guard C , when constructed in the form shown, hinged at its rear end, and allowed to rise and fall at its forward end, and, when held in position by rods $c^{\prime} c^{\prime}$ at its formard end, preventing the two guards firom changing their parallel position to each other, substantially in the manner and for the purposes set forth.
3. The corrngated plates $e$ e, when nsed in combination with the side beams $A^{2} A^{3}$, haring corrugated cnds, substantially as and for the purposes indicatcd.

94,033.- Llbert Assman, Rahway, N.J.-I.amp Lighter--February 4, 1868.-The case has bayonet connection with the staff to which the lamp is attached, and may have a glass top.

Claim.-The pole A, light B, and tube C, when arranged as deseribed, in combination with the wrenches or brackets $f$, all made and operating substantially as and for the purpose herein sharn and described.

74,034.-Jearum Atinins, Mokena, Mll.-Gite. Febriary 4, 1868. - The gate slides between the sides of the post, and is guided by its top bar, whichprojects though a mortise in an additional post, sumning ujon a roller therein. The gate is guided adso by the brace bars whose position is shown in the illustration.
Claim.-A gate, constructed as described, having the piroted braees R S, post A, and guide bars D G. and post E , all arranged and operating as specified.

74,035.-Ezra Babcock, Seott, N. X.-Combined Herrow and stone Remover.-February 4, 1868. -The stones are picked hip by the bent teeth 20 the adjust able rotating eylinder, and are dropped into the receptacle carried at the rear end of the machine.

Claim.-1. The cylinder E, prorided with rows at hooked teeth, and arranged with the bed-pieces $C$ as and for the purpose set forth.
2. 'The combination of the cylinder E with $\dagger^{\prime}$ body $\Lambda$, said body being provided with a mor bottom, and the rack L , as and for the purpose fied.
3. The windlass $D$, when arranged with $t$ A and crlinder E, as and for the phrpose set
g.4,036.-S. O. Bartow, Bethel, Com vester.-Fehruary 4, 1868.-The cutter bar is eated by a lever oscillated by a stud or ant roller at its npper end, which traverses a can in the periphery of a rotating wheel.

Claim.-1. The constrnction and arrange the pendent bar $k$, pivoted arm $i$, finger-bar $[$, $\mathrm{A}^{\prime}$, right-angular lever M, and chain $l$, all 01 as clescribed, for the purpose specified.
2. The arrar gement of the gear wheel $F$ n] shaft of the wheels B, sliding pinion G, upos IH, bearing the cam wheel I, lever J haring erum in the pendant $f$, upon the side of the sh pitman $\mathrm{A}^{\prime}$, finger bar $L$, pivoted arm $i$, pende $k$, right-angular lever $M$, and chain $l$, all ope as herein shown and described.

74,03\%.-Lewis Behymer, Indianapolis, Railway Joint.-February 4, 1868. -The end rail is formed into a rertically-edged wedge, enters the carity in the end of the conpling The parts are secured together by a horizontal rerse bolt which passes through a longitudn. clongated hole in the rail.

Claim. The coupling $A$, with re-entrant angu excarations D and swells F, which fit and embrac the wedge-formed ends and the hollow of the rail, the same being secured by bolts I, which traverse sail coupling and the slots $H$ in the rails, substantially as set forth.

194,035.-G. W. Bell, Rising Sun, Ind.-Sawing Machine.-Februm'y 4, 1808. -The saw is attached to the pendulum frame, which is reciprocated by an eccentric. The pendulous firane is snspended on a frame supported on wheels.

Claim.-1. The construetion and arrangement of the eccentric wheel $F$, balance wheel $G$, pendulum framo N, supporting frame I, jointed dog L, shaft D, and brace or connecting bars $K$ and $M$, as hercin deseribed for the purpose specified.
2. The sliding bearings S , constructed as deseribed, fitting upon the square shaft D , and turning frecly in the box apon the upright T, said box adjusted upon the upright by means of the sliding sleeve and set screw, as herein shown and described.
3. The combination of one or more adjnstable supports 'T with the sliding bearings $S$ and shaft $D$, constructed and operating substantially as herein showu and described and for the purpose specified.
74.033.-E. H. Bellows, Worcester, Mass.Steam Enqine.- February 4, 1868. -The valve rods are operated by eccentric cams on a rotating tnbular shaft. The cam operating the steam valves is connected to a rod sliding in the tubular shaft by the action 0 the governor. The face of this cam and its cecentricity are increased downward, so that by the dornward morement of the cam the cut-off will take pace earlier, and the valve be opened to a less extent.

Cloim.-1. The arrangement of the valve rods D Dand E E , in the chamber M , and in relatiou to eacl other, substantially as and for the purposes set forsh.
$\therefore$ The eombination, with the valve rods D D and $E \mathbb{E}$ of the shaft $H$, spindle $I$, and cams $G$ and $L$, sibstantially as and for the purposes set forth.

74,040.-James W. Bemis, Fall River, Mass.Lifting Jack.-February 4, 1868.
Claim.-1. The arrangement, as described, of the levers L , and L L, L L, together with the standard A B, A B.
8. The combination of the levers $L$, and $L \mathrm{~L}, \mathrm{~L} \mathrm{~L}$, together with their supporting firame. by which the power to raise the axle is obtained, substantially as described and set forth as above.
(94,041.-B. D. Bingham, Boston, Mass.-Watch. -Fcbruary 4, 1868. -The ring is introduced between
plates and secnred by spurs made upon its inner One spnr may have a flat surface to project the back plate on one side, while the other has tly inclined upper surface, which slips under $k$ plate and holds the ring down, but yields as is pressed npward and allows its removal.
-1. In combiuation with peripheral ring̣s ies, spurs or projections for holding them in bstantially as described.
sing such rings of a width equal to or but exceeding the space between the inner sur-
the two main plates of a watch, and so as over the larger portion of the thickness of the ite, for the reason set forth.
32. - C. D. Blakeslee, Grand Rapids, assignor to himself and Elias Skinner, same - Cireular Sawing Mlachine. - Febrnary 4,
m.-The saw hood constructed as described, fing of the adjustable curred gnards C, the 1 hood D , secured to the guard C by the bolt $d$ otch $c$, and the notehed rertical guard F , adnpon the hood by the set screw $f$ and slotted as herein deseribed, for the purpose specified.
43.-E. F. Brundage, Virginia City, Nev., a to himself, William T. Eaves, and Wil-A'Aves.-Safety Hook.-February 4, 1868.-The ad portion of the hook is held by the sliding colwhen closed.
ylaim.-The collar C, fitted on the swivel stem B, ad provided with notches or recesses $i k$ in its under side, in combination with the lingod part $c$ of the hook, and the projection $j$ on the npper part $b$ thereof, all arranged substantially as and for the purpose set forth.

74,044.-John Burnham, La Salle, Ill., assignor to himself and David L. Hougir, same place.-Cul-tivator.-February 4, 1868.

Claim.-1. In combination with the elerated axletree $\mathrm{A}^{2}$, honuds B , pivoted dranght pole C , and lerer $\mathrm{C}^{\prime}$, having a movable fulcrum, the piroted beam D having the plow beams secured to its cxtremities, or to pendants applied thereto, said beam being connected by means of a chain to the draught pole, substantially as described.
2. In combiuation with a pivoted beam D , arranged and operated as described, and provided with pendants mpon its cuds, the plates $d^{\prime} d^{\prime}$ having the plow beams attached to them, substantially as deseribed.
3. The flexible draught connection $h$, secured to swinging pendants $G G$ at its ends, and passed around the axle-treo $\mathrm{A}^{2}$ longitudinally, snbstautially as described.
4. The removable driver's seat $\Pi$, applicd to the earriage, and supported thereon, substautially as de-
seribed, in combination with levers $P$, suspension chains $j$, beams E, and pivoted eross beam D, substantially as described.
5. The attachment of the plow blades or shorels $J$ to their standards, by means of loops $m$ and clamping eye or hooked bolts $n$, substantially as deseribed.

54,045.-James Cilambers, Boston, Mass.Steam Heatiny Apparatus.-Febrnary 4, 1868; intedated January 31, 1868. -The caloric current from the lamp bmruer ascends a coiled pipe within tho boiler. The boiler has a safety-valve, whose levor is commected to a damper at the top of the coiled flue, and to a weighted lever operating the stop-cock oft the gas pipe. When the valve is raised the 民lne is closed and the gas shut off.

Claim. -1. The combination of the boiler A, the gas burner D , its conduit $f$, and coek $g$, the safety. valve 13 , the lever a thereof, the chain $i$, and the arm $h$, and its weight 0 , or their eqnivalents.
2. The combination of the same and the coil C , and the damper $d$, and its bent arm $e$, and the chain $p$, connecting such arm with the safety-valve lever.
3. The combination of the circulation or induction and eduction pipes $b c$, with the boiler, the gas conduit and buruer, the safety-valve, the lerer chain, and weighted arm, connecting the safety-valve and gascock key, as set forth.
4. The combination of the gas burner and its condnit with an extensiou $q$ of the conduit beyond the burner, and with a screw cap or thimble $m^{i}$ serewed mpou such extension, as set forth, such being to enable atmospheric air to be supplied to the gas conduit, as circumstauces may require, when snch gas conduit and its burner are combiued with a boiler, as set forth.

34,046.-William T. Chamberlain, Norwich, Conn., assiguor to himself and Charles W. Cramberlain, Boston, Muss_-Steam Engine.-February 4, 1868. -The cuds of the cylinder are open, and it has a central partition, having a packing box traversed by the piston rod. A piston on each side of the partition acts alternately by pressure of steam and the air; the steam exhaustingiuto a condeuser.

Claim.-1. The improved engine, as described, viz, as made with the cylinder $A$, the partition $B$, the two pistons D E , the rod C , the induction ports $e f$, and ednction ports $g h$, arranged in manuer snbstantially as specified.
2. The combination of the movable partition B , its packing aud clamp screws, or the equiralents of the latter, with the cyliuder A, provided with iudnetion and cduction ports, and two pistons D E, arranged so as to operate as described.

74, 1047.-.S. W. Clank, Prairie dn Chirn, Wis. assignor to himself, N. A. Wright, and W. A. TERnY, same place.-Hand Spinning Wheel.-February 4, 1868.-The head post is hinged at its lower end so as to admit of longitudinal oscillation. The head is drawn backward by a cord attached to a treadle, and is drawn forward by a weighted arm.

Claim.-The cnrred rod $r$, with the adjnstable weight $r^{\prime}$, attached to the radial arm $D$, the segmental groove $m$, cord $m^{\prime}$, pulley $i$, and treadle $q$, in combination with the spiuuing wheel C , and the spindle $d$, placed on the upper end of the arm $D$, the whole beiug arranged and operated substantially as and for the purpose herein desci ibed.
(74,048.-Willtam W. Clark, New York, N. Y. -Brush.-February 4, 1868.-The interliner is a band of metal iuserted concentrically within the handle and wrapping. The object is to iucrease the pliability of the brash.

Claim.-A brush, as a new article of mannfacture, When constructed as described, with an interliner $a$, as and for the pnrpose specified.

74,049.-Michael Henry Collins, Chelsea, Mass.-Lamp.-February 4, 1868.

Claim. -The combination of the auxiliary supporter $S$ or its equivalent with the chimney rest and the chimney-holding friction conc or air deflector, arranged as described, and so connected as to be capable of being slipped together, and with the chimney, on and off the wick tube, and away from the
supporter, for the purpose of enabling aecess to be had to the wiek for trimming' it, as oceasion may require.

74,050.-James Cook, West Groton, Mass.Tobacco Pipe.-February 4, 1868.-The inner cylindrieal bowl is screwed into the outer bowl, and the smoke is drawn into a ehamber surrounding the former, passing through holes in the lower part of the side of the inner borml.

Claim.-The chamber D, formed aromd the sides of the bowl C by susperding the latter in the serew cap of the bowl $A$, as and for the pmope speciiied.

74,051.-N. E. Cornwall, New Fork, N. I.Heating Furnace.-February 4, 1868.--The caloric current passes up lunate flues to an mpper drmm, tirow whieh it passes to the ehimney. The air eireulates in contaet with the heated surfaces, and passes from the inelosing ease into pipes leading to different apartinents in the building. Dampers are placed at the bases of the lunate flues, by which they may be partially or wholly obstructed.
claime- - 1 . The radiator, consisting of the base a, witl pipes cccc, and the chamber $b$, or ehambers $b$ and $d$, substantially as deseribed and for the purposes set forth.
2. The ereseent check damper and the erescent close damper, constructed substantially as deseribed, and arranged so as to operate in the manner and for the purposes showu.
3. The tire pot, constrmeted in two parts, with a self-adjusting grate in each part, and a movable partition, substantially as deseribed, and so arranged With separate radiatore in separate compartments of the hot-air chamber of a furnace, and separate systems of hot-air pipes and distributing registers, as to convey all the heat from both parts of the fire pot to one system of registers, or to distribute the heat from one part of the fire pot to every system of registers at pleasure.
\%4,05z.-E. Hall Covel, New York, N. Y., assignor to Home Manufacturng Co., same place. -Washing Machine.-February 4, 1868.- A miterpinion at the head of the turning, ribbed sleeve is engaged by a similar wheel rotated by a winch, and whose shatt is journaled on the hinged lid. The sleeve turns on a central stud, and is removable therefrom.

Claim.-1. The annular bands $b$ and $c$, with or without the ears $\alpha^{1}$ and $b^{\prime}$, so construeted and arranged as not only to hold torether the upper and lower ends of the staves, but also to cover a greater or less portion of the upper and lower smfaces of such ends, subatantially as herein set forth.
2. The detachable piu or stud $a^{2}$ in combination with the tubular sleeve $g$, carrying the radial fins or ribs, and the eircumferential groove $f^{\prime}$ of the standard $c$, substantially as and for the purpose speeified.
3. The oree-shaped fins $i$, on the disk $h$, arranged to rotate within the tub $A$, substantially as and for the purpose specified.
4. The eombination of the spring eateh $k^{*}$ and spurs $k^{\prime}$, with the piroted bar $k$, earrying the erank-shatt $n^{\prime}$ and bereled pinions $m n$, substantially as and for the pmrpose specified.
5. The elutch $m^{\prime \prime} a^{*}$, arranged to conncet the sleeve $g$ with the gearing upon the bar $k$, substantially as herein set forth.
6. The washing machine, construeted and operating substantially as herein shown and deseribed.
\% 4 , 05.3.-Giles Cramton, Marshall, Mieh.Threc Horse Equalizer.-Febrnary 4, 1868.-The sin-gle-tree of the middle horse is attached to one ond of a chain passing aronnd a pulley, and the double-tree is attached to the other end of the said ehain. The chain is coiled around portions of the pulley of different diameters, so that the power exerted through the double-tree may be balanced by half tho amount exerted through the single-tree.

Claim.-The arrangement and eombination of tho pulley $D$, coupling fongue B , pin $\mathrm{I}^{\prime}$, hollow disk easing $A$, and hitehing chain or chains $G$, with the whiffle-tree E and double-tree F , of a three-horse team, substautially as and for the purpose herein described.

194,054.-Georae W. D. Culp, East Enterprise, Ind.-Hay Press.-February 4, 1868.-The press stands vertically. The beater is so arranged tlat its motion can be reversed or stopped while the motion of the horses contimes. The feed door is antomatieally closed while the beator is ascending, and is opened as soon as it is down. The motive shaft conrects by a eluteh with the enpstan operating tho toggle levers whieh raise the lower follower.

Claim.-1. The shaft C , when provided with a loose gear wheel $g$, and with a sliding clutel $k$, in combination with the eapstan $G$, all marle and operating so that the shaft ean be lerolved with or without the eapstan, as may be desired.
2. The disk $d$ on the shaft C , for operating the benter, in combinatiou with the capstan $G$ and eogs $g, h$, and $i$, for operating the follower, all made is set forth.
3. The eateh $m$ on the sweep $k$, in comlination With the arm $L$ on the capstan $G$, all made and operating substatially*as herein shown and descıibed.
4. The device for automatically opening the feed door M by the downward motion of the beater, consisting of the ellow $P$, eateles $O$, and weight $r$, all made and operating substantially as herein shown and deseribed.
5. The device for automatically elosing the feed door by the upward motion of the beater, consisting of the lever $N$, weighted cord $g$, and catches $O$, all made and operating substantially as herein shown and deseribed.

74,05.5.-Ezra N. Curtice, Spring Water, N.Y. - Hay Loader.-Webruary 4, 1868. -The hay is raised by a rope passing orer a cranc. and is eoilcd npon drums, whiel are turned by the action of the hind wheels upon the frietion pulleys.

Claim. - The construetion and arrangement of the sliafts $b b$, having drmms $h$, and hung to the piroted pendant $a$, and provided with the flanged elastic friction rollers $c e$, operating against the hiud wagon whecels $B$, hy means of the curved rods $d$ and lever $c$, as herein described for the purpose specified.

74,056.-Abbot R. Davis, Cambridge, Mass. Treating Food for Covering Walls, \&c.-February 4, 1868. - Improvement upon his patent of November 26, 1867 .

Claim. - The emplorment of glyeerine for saturat ing thin sheets or lamince of wood, to bo used as a wall covering or for other purposes, substantially as described.

74,057.-IsaAC Dr Haven, Allegheny City, Pa.-Lid for Tea Kettles.- Febrnary 4, 1868. -The lid is hinged to a plate turning on the rear handle lug.

Claim.-A lid provided with a hinged joint and piroted to the body of a tea kettle or other ressel, substantially as herein deseribed and for the purpose set forth.
74.0.5.-Louis Ienozier, New York, N. Y. assignor to himself and George Schafrer, same place.-Vclocipcdc.-F bruary 4, 1868.-The driving Wheels are snpported on sectional axles formed into componnd eranks, aeted on by treadles. One wheel may be turned more than the other, to assist in turn ing the earriage. One shatt may be rotated to take the other over its dend eenters.

Claim.-1. Providing a veloeipede with a rear axle, whieh consists of two seetions C C', eneh turn ing independent of the other, substantially as and for the pmrpose herein shown and deseribed.
2. Providing the bearings for the axles $\mathrm{C} \mathrm{C}^{\prime}$ and F , or either, direetly in the springs B and K , sub stantially as and for the purpose herein shown and deseribed.
3. The erank axles $\mathrm{C} \mathrm{C}^{\prime}$ and wheels D , when arranged as deseribed, in combination with the springs 13 , in which the bearings for the said axles are provided.
4. The ahove, in eombination with the front axle $F$, wheels $I$, and king bolt $H$, having a crank, all made and operating substantially as and for the purpose herein shown and described.
(94, 05\%,-Josebil Bragg Dunn, Petersburg, Va. - Cotton Bale Tie.-F'ebruary 4, 18668.

Claim.-The improved bale tie $\Lambda$, formed with a slot 13 at one end, and a lateral slit or open slot at the other end, said open slit or slot having a shoulder $a^{1}$, at its outer end, and having its inner side struck or bent downward, forming a curved lip $a^{2}$, substantially as herein shown and described, and for the purpose set forth.
94,0f0.-D. Elliot and E. Seely, New York, N. Y.-W Wsher for Lock Nuts.-February 4, 1868.The washer has a rectangularly projecting flange which engages a ratchet tooth in the nut to prevent the latter beeoming loose.

Claim.-The washer C, constructed as described, provided with the concentric pawl D, ent from it, and adapted to fit into the ratchet teeth $f$, formed in the chamber of the nut E , to prevent the said nut from turning off the bolt B , as herein shown and described.

74,061.-John Eldis, White Plains, N. Y.Boiler for Heating Water.- February 4, 1868.- The heads have a central apertnre. Through the front aperture the fuel is fed, and the caloric current has escape through the other. The front head has a horizontal diaphragm, forcing the water from its lower part to take the whole circuit of the pipes in reaching its npper part, with which the steam pipe communicates.
Claim.-The boiler for heating water, consisting of the two hollow heads connected by the tubes, and haring no metallic sides or walls, the girate bars being also tubular, said heads subdivided into compartinents, so that the water shall circnlate frecly through the boiler, as herein described, for the purpoie specificd.
ghation-J. W. Emerson, Rochester, Minn.Machine for Boring Wagon Hubs.-Febrnary 4, 1868.-The cutter is adjusted upon the large shaft by means of the small shaft, which is either turned by a winch or automatically, in the latter case to cut the socket of a gradually decreasing diameter toward the point of the hab.
Claim. The small shaft L , in combination with the shaft $J$, handle $j$, gear wheel $S$, circular plate $K$, stop T, gear wheels $\mathrm{N}^{\circ} \mathrm{O}$, and cutter R , snbstantially as described, for the purpose specified.

94,063.-J. J. Enslet, New Xork, N. Y., assignor to Thonas D. Lemyard, Toronto, Canada. - Manufacture of Illuminating Gas.-Febrnury 4, 1868; antedated January $27,1868$.

Claim.-Making a componnd gas by the mixture, with common coal gas, of gas made from bones or other animal matter, and from wood or equiralent vegretable matter, either separately or combined, for the purposes herein specified.

194,064.-Henry A. Fstes, Jersey City, N. J., assignor to himself and GEORGE SMTII, same place, -Horse Hay Fork. - February 4, 1868 ; antedated January 31, 1868. - The stock ends in a bisected cone, which is opened ont by the toggle levers to engage the hay.
Claim.-1. The toggle bars and central operating rod, in combination with the tubular stock and the two laterally moving lifting spurs, substantially as and for the purpose herein set forth.
2. The arrangement of the guards $e$ with reference to the lever $B$, and the upper end of the tubular stoek A, substantially as and for the purpose herein set forth.
3. The laterally moving spurs E , toggle bars D , and central rod $c$, arranged in relation with the tubnlar stock $A$, lever $B$, and guard $e$, substantially as and for the purpose herein sot forth.
(34,065.-William Faulkner, Vevay, Ind.-Apiary.-February 4, 1868 . - The pit is formad to allow space for the sunk hatchway through which air passes to the register in the hive floor. The cnps in whieh the legs stand contain viscid matter to arrest the passage of insects. The walls are double and the intermural spaee filled in with some snbstanee, as gardust, containing fixed air, which serves as a heat insulator.

Claim.- - The provision in an apiary, of the suuk hatchway G, pit A, and fiue $N$, together with suitable registers, or their cquivalents, substantially as and for the purpose set forth.
2. In combination with the elements of clain first, the insnlating walls $K$ and eeilings $L$, as and for the pnrpose explaincd.
3. An apiary supported on posts, which rest in cups D, in conncetion with a pit or depression in the ground, and a hatehway, as represented.

74,066. - Louis Auguste Favre, Genera, Switzerland.-Soling Shoes.-February 4, 1868.The onter sole, or "half sole," has projecting screw heads which enter circular apertures in the plate, and by drawing the said sole in the direction of its plane the shanks of the screws enter slots extending from the said apertures; after attachment the sole may be prevented from side morement by a single serew.

Claim.-The metallic plate $d$, rigidly secured to the inner sole $b$, and provided with slots $f$ : adapted to receive and retain projections $g$, on the onter sole $c$, 8 and for the purpose set forth.

74,06\%-E. Ferguson, Nembern, N. C., assignor to Isaac II. Ferguson and Mitchell, AlLEN \& Co. same place.-Injector for Steam Gen-erators.-Febrnary 4, 1868. - The fire is raked ont, and when the steam pressure is reduced to twenty-five pounds the contents of the steam generator is blown ont. The supply pipe is then opened and the boiler filled, owing to the prartial racuum therein.
Claim. - The arrangement of the supply-pipe B cock $D$, and pipe $C$, with the boiler $A$, whereby, with a vacnnm in the boiler, and consequent atmospheric pressure, the water is injected to the boiler, substantially as herein shown and described.
g 4,063.-Valentine Fiscier, New Tork, N. Y.-Machine for Forming Sheet Metal Molding.February 4, 1868.-The dies are remorable. The head bar of the moving die is connected by a series of toggle levers and a longitudinally sliding bar to the firame. The pressnre is brought upon the head by the rotation of a nut upon the sliding bar, which movement tends to draw the toggle levers into a vertical position.

Claim.-1. The machine having the ronnded and square dies, arranged as described, wheroby all kinds of smooth moldings can be formed, as herein shown and set forth.
2. The standard D, when provided witi one concave side, as shown.
3. So arranging the dies E and F that the latter can be placed npon the former without any other fastening, as described.
4. Arranging the female die G above the male die E or F , for the parpose of keeping the female die clear, as set forth.
5. The derice for operating the movable dic, said device consisting of the togglo-levers $J$ L, in combination with the pendent bar'H aud central bar K , so that by moving the latter horizontally the die will be mored up and down, as set forth.
6. The manner berein shown and described of operating the bar K by means of the screw N and the nut-pinion 0 , all made as set forth.
7. A machine for forming shect-metal molding When the same are made and operating substantiall: as herein shown and described.
g4,069.-Theodore A. Fisher and Animerson F. Fisher, Beardstone, Ill. Thunel Excavator.February 4, 1868. The tnnnel is constructed in an., nular sections which are added within the "coffer." The sections have an inturned flange at each edge by whiel they are secnred together, having an interposed gasket. The coffer is attached to a carriage within the tunnel, and gives support to the ribbed excarator disk, whieh is rotated to make way for it as it slides npon the completed part of the tunncl.
Claim. - The sliding coffer A, the excarating disk D, and the supporting car E , combined with the cast-iron tubing $C$, united in sections within the coffor, constructed and operating substantially as and for the purpose herein deseribed.
g4.070.-Adnison C. Fletcher, New York, N. Y.- Cotton Bale Tiu.-February 4, 1868 ; antedated Jannery $23,1868$.

Claim. - The plate A, having an aperture ced, lateral side openings $f f^{\prime}$, opening $g$, and lip $h_{\text {, for }}$ operation in connection with a rope or equivalent material, substantially as set forth.
\%4,071.-Minvil M. Follett, Upton, Westboro, Mass.-Eoot Attachment to Carriages.-Febrnar'y 4, 1868. -The boot, when out of use, is coiled on spring rollers in a case beneath the floor.
Claim.-1. A boot attachment to cerriages, composed of the roller's C, F, and D, and the spring S and strap $a$, Whereby i boot for carriages is wound up by the force of a spring S substantially as shown athd deseribed, and for the purposes set forth.
2. The cheek $a^{2}$, or its eqniralent, in combination with the boot $B$ and spring $a^{1}$ and pin $a^{3}$, substantially as shown and deseribed, and for the purposes set forth.

74, nรa.-Tames D. Franklin, Attleboro, Mass., assignor to Ina Ficiakds \& Co., same place.-Securing ILooks and Eyes to Cards.-Febrnary 4,1868. -The eres traverse the card perpendienlarly and serve to sceure the hooks thereto.

Claim.-Hooks and ejes sccured to eards be passing the eves through the eard so as to project on both sides thereof, and fastening the hooks to their cuds and bodies, on one or both sides of the card, substantially as set fortl.

74,073.-Olaey Fry, Jr., Allany, Oregon.Seeding JIachine.-Febrnary 4, 1868.
Claim.-1. The combination of the gear wheel N , attached to the drive wheel A, pinion whecl M, shaft L, crank or crank wheel K, connecting rod J, and lever I, with eael other and with the seed box E and adjnstable sliding bar $F$, said seed box and sliding bar being constructed and arranged substantially in the manuer herein shown and deseribed.
2. The combination and arrangement of the sliding bar P , connecting rod R , and lever S , with each other and with the shaft $L$, substantially as herecin shown and deseribed, for the purpose of throwing the puion wheel MI into and out of gear with the gear wheel N .
3. The combination of the posts T', cross bars U, longitudinal bar V , beam W , plonghi standards X , bar 1 , and draught bars or rods $~ Z$, , with each other and with the frame D and tonguc C , said parts being construeted and arranged substantially as herein shown and deseribed, and for the purpose set fortl.
4. The combination of the keeper $\mathrm{C}^{\prime}$, lever $\Lambda^{\prime}$, spring $\mathrm{E}^{\prime}$, and notehed standard $\mathrm{F}^{\prime \prime}$, with each other and with the longitudinal bar $V$, substantially as herein shown and deseribed, and for the purpose set forth.
g4,074.-Alfren A. Fuselier, Algicrs, La.Ditching Machine.-Febrnary 4, 186is.-The rectangular diteh is exeavated by buekets upon endless guar atch is excavated oy buck The sides are sloped by rotary eutters following, and the loose dirt may be remored by an additional series of elevating buekets.
Claim. -The exearators D, formed as described, in combination with the drums $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, the chute E , and the rotary cutter $F$, and the board $c$, all eonstrueted, arranged, and operating as and for the purpose set forth.

34,0\%5.-J. B. Gardiner, Springfield, Mass.team Pump.-February 4, 1868.-Simultancously with the ordinary letting on of steam to the end of the motive piston, to move it and the slide valve, the latter is placed in sueh position that the steam upon the opposite end of the motive piston shall exhaust and leave the valve free to move.
Claim.-1. The arrangement of ports $g g^{\prime}$ on each end of the valve, and communieating with the exhanst, for the purpose of assisting in the movement of the valre, sulstantially as set forth.
$\therefore$. The arrangement of the stean ehamber H and exhaust chamber' J upon the two sides of the steam chest, substantially as set forth.
3. The arrangement of the screws $00^{\prime}$, wherewith
to adjust the amount of steam let on and off the valve as deseribed.
4. The stuffing-box, constructed of the followers $P$ $P^{\prime}$, and nnt S , in combination with the piston A anc plunger B, substantially as deseribed.
5. In combination with the central acting valve, ralve rod C , and steam piston, arranged and operating as described, the plunger $B$ of a single acting pamp.
74,076.-Hexry Gariettr, Richmond, Mo.Butter Worker.-F'ebruary 4, 1868.
Claim.-1. The curved or semicireular bntter pan $B$, in eombination with the pressure roller frame $D$, provided with rollers haring fluted or smooth peripheries, all arranged snbstantially as and for the purpose set forth.
2. The eap or hood C, provided with the strainer $d$, and plaed or formed at one end of the butter pan B, snbstantially as and for the purpose specified.

74,0\%\%.-Wismington L. Gilior, Philadelphia, Pa.-Weather Strip.-Febrnary 4, 1868.

Claim.-1. The insertion of a flat elastic strip into a molding, suel as abore deseribed, in an inclined position to its surface, as herein set forth.
2. Affixing said elastie mediun into the groove in the rigid molding by means of water-proof cement, as and for the purposes speeified.

24,078.-H. A. Goodrich and Josteril Amos, Joliet, Ill.-Manufacture of Clay Pipes.-Felsruary 4, 1868. -The pipe is received and remored in a trough haring an inner metallie surface and supported on the carriage.
Claim.-The combination of the stationary mouth picee $L$, the trough $B$, and earriage $G$, all arranged to operate as shown and deseribed.

94,079.-Epirami R. Gieen and Henry D. PHuLI's, Jr., Trenton, N. J.-Brick Machine.February 4, 1868.
Claim.-l. Operating the molds R , that is to say, fecding the empty ones underncath the press boxes C , and shoving the filled ones out from moderneath the same by means of the sliles $P$, having weights $V$ attuelied, and conneeted to the cranks $\mathrm{N}^{\circ}$ of the shafts M by means of the crank pins $j$ and slotted arms O , all arranged substantially as shown and deseribed.
2 . The bars U , for diseharging the bricks from the molds, operated by the levers $T$ and wipers ss, from the shafts MI, all arranged substantially as and for the prurpose set forth.
3. The application of a press bor C to cach side of the box $A$ of the innd mill, in combination with the four shafts II, operated from the mud mill shaft $B$, and the eams $h$ for operating the plunger's $F$, all arranged substantially as shown and deseribed.

74,050.-A. W. Hall, East Lebanon, N. H.Friction Clutch. -February 4, 1868.-The ratehet eluteh is splined to the shaft aud the frietion elutech is upon a slecre splined upon the other cluteh. The cluteles are operated hy separate levers.
Claim. -The two-part cluteh E and E , substantially as and for the purpose deseribed.

24,081.-Griffin B. Malsted, New York, N. Y.-Constructing Molasses Cups of Sheet MetalFebruary 4, 1868.

Claim.-A molusses cup constructed of two equal vertical parts, A 4 , swaged or struck up in proper form, and conneeted together by solder, sabstantially as herciu shomn and described.
g 4,0sz.-John IR. Haxd, College Corncr, Ohio, assignor to himself and Johnson Onh, same place.-Cultivator.-February 4, 1868. The Tore cud of the beam laps over the rear end of the trngue, and is pivoted thereto. The rear end of the tongue earries a rectanyular strap-ring in which the beand has vertical adjustment by a serew. The standards are scenred to cross hirs, the lower pair of whieh are alljnstable in a frume at the rear end of the beam. The standards are adjustable laterally npon the bars.
Claim.-1. The draught pole M, eapable of artjnstment apon the beam $\Lambda$, by means of the cleris $O$ and serew P.
2. In combination with the clements of claim first, the shares $G G^{\prime} K K^{\prime}$ and handles $R R^{\prime}$, adjustable in the manner set forth.
g 4,083.-David Firger, Des Moines, Iowa, assignor to himself, D. H. Young and A. S. Vorise,Composition for loofing.-February 4, 1868. -Composed of coal tar, 3 ; sand, 3 ; quicklime, 3 ; sulphate Jf zine, 1-90th, and sulphur, 1-90th part.

Claim.-A roofing composition, composed of unpoiled coal tar, sand, quicklime, sulphate of zine, and flour of sulphur, all combined and used substantially as and for the pu'poses set forth.

194,084.-William Harsen, Greenpoint, N. Y. -Steam Pump. - February 4, 1868.-The rocking. way shaft has a lengthened bearing within a sleeve forming a lateral projection from the ram at its junction with the piston rod. The way shaft has an arm which serves by direct connection to a crank to rotate the main shaft to which is hung the ecoentric operating the slide valve. The action of the ralve and the position of the steam ports are oblique.

Claim.-1. The arrangement and combination of ram and piston with the lateral socket $\Pi$, the roek-ing- way shaft I, arm J, crank K, and shaft L, substantially as shown and deseribed.
2. The arrangement and combination of the lateral shaft L, the eccentric $N$, the oblique ports $d d$ and $e$, relatively to the axial line of the steam cylinder, and the sliding valve 0 , substantially as set forth.

㫨,085--B. G. H. Hathawar, Roek Stream, N. Y.-Harvester.-Fcbruary 4,1868.-Improvement on patent of G. M. and B. G. II. Hatharray, May 28 , 1867.-The planet wheels are tarned by the inside gear of the rotating plate, and communicate motion to a spur wheel cast npon the shaft of the berel wheel, which turns on the axle within the casc and engages a bevel wheel on the pitman crank shaft. The driving wheel is connected to the cutting meehanism by parrls, so that a backward rotation of the driving wheel is not communicated to the said mechanism, and the connection admits of being thrown out to stop the motion of the said mechanism when moving fortward.

Claim.-1. The planet wheels H, when attached to the inner face of a revolving plate F , so adjnstably conneeted with the driving wheel, that it may be caused to revolve on the axle, or remain stationary, substantially as set forth.
2. The mode of throwing the driving mechanism out of or in gear, by the pawl or pawls $G$, attached to the driving wheel, notched recess $\mathrm{G}^{1}$, collar $\mathrm{G}^{3}$, lever $\mathrm{G}^{5}$, and rod $\mathrm{G}^{6}$, acting cither by means of the yoke $G^{4}$, or its equivalent, substantially as described.
3. The combination of the bent axle B , bar O , lever $P$, rod $P^{1}$, and wheel $A^{\prime}$, for regulating the height of the cutter bar MI, substantially in the manner set forth,
4. The mode of suspending the rear of the detachable platform Q , by means of the stirrup R , attached to the adjnstable bar $O$, snbstantially as set forth.
5. The arrangement of the bent axle $\mathrm{B}^{\prime} \mathrm{B}^{\prime}$, driving wheel $A$, and wheel $A^{\prime}$, attriched to an adjustable bar 0 , substantially as described.
g4,086.-Asa S. Haven, Barre, Mass.-Deviee for Preventing Cows and Calves from Sueking the Teats, and for Leading Cattle.-February 4, 1868.The adjustable stops are inserted in the nostrils, and the bow lies in front of the mouth.
claim.-1. The frame $\alpha$, in combination with the adjnstable stops or retaining pieces $b e$, substantially as and for the purpose set forth.
2. The eye $g$, in combination with the frame $a$, substantially as and for the purpose described.

94,08\%--John S. Henry and Abraham H. Reist, Manheim, Pa.-Bolt and Rivet Cutter.-February 4, 1868 .
Claim.-The combination and arrangement of the jaw's D E, unobstructed on one side, when said jarr D is connected with piece C, with its fixed loop L, and pivot connection to $H$, and the jarr or cutter E , with its shoulder $e$, is on the end of the prolonged handle or lever B , combined and operating in the manner and for the purpose specified.

194,088.-Poirter Mili, Millport, N. Y.-Churn -February 4, 1868.-The spiral spring beneath the dasher assists in raising the same.

Claim.-In combination with the dasher B, a spiral spring C placed below the same, and arranged to operate substantially as and for the purpose set. forth.

74,089.-William J. Hoffany, Croton Falls, N. Y., assignor to George V. Mormana.- Water Whecl.-February 4, 1868. -The water is received at one point of the periphery and in a tangential direction, impinging directly upon the radial ends of the buckets. The buckets are vertical, and for the most of their length have a trangential direction. The water is discharged upward and downward throngh convolute chates.

Claim.-The tangential buckets A*, constructed with radial or nearly radial end portions $b$, and arranged with reference to the inclined passages e near the periphery of the wheel, substantially as and for the purpose specified.
(74,090.-EDWard Howard, Boston, Mass.-Stem-winding Watch.-February 4, 1868.-A doublecontrate wheel is splined upon the stem, and is engaged with a train of gears to either wind the watch or set the hands. The barrel is fitted into an opening in the dial plate, and is supported thercin by a toothed flange resting on, and attached to the dial plate, so as to allow the winding of the barrel. A spring parrl prevents the barrel from turning in a contrar'y direction when the watch is rumning down.

Claim.-1, Applying the Trinding mechanism directly to the barrel which contains the spring, in the manner and for the parpose substantially as described.
2. The sliding plate $i$, in combination with the spor Wheel $g$ and batton or washer $h$, as and for the purpose sct forth.
3. In combination with the arbor or key $l$, provided with a movable double crown-wheel $m$, the spur wheel $g$, sliding plate $i$, and button $h$, as specificd.
4. The barrel $c$, constructed as described, and arranged within an opening in the plate $\alpha$, in combination with the main wheel $w$, spring $v$, and pawl $e$, substantially as and for the purpose specified.
5. The spring barrel, formed with the plate $c$, the rim or annnlar projection $a^{\prime}$, and the toothed flange $c^{\prime}$, as and for the purpose set forth.

94,091.-F. A. Hoyr, Hanover, Wis.-Flour Safe and Sifter.- Febrnary 4, 1868.-One end of the sicve is supported by the crank by which it receires motion, and the other is supported on links. The flour falls into the drawer. The pic board slides into the case beneath the drawer bottom.
Claim.-The flour sifter and safe, constrncted as describet, and consisting of the box B , haring door $i$, molding board $l$, drawer $g$, sifter A $a$, crank shaft $d$ S , metallie slotted straps $b$, side pieces $e$, wheels $m n$, handle $h$. and connection $e$, all arrangcd and operating as set forth.
g4,032.-N. G. Hughes, Waynesburg, Pa.Corn Planter.-February 4, 1868 ; antedated January 27,1868 . -The seed hopper is fixed to the rear of the standard, and the seed slide is operated by levers actuated by the operator.

Clatim.-1. The combination of the tubes $G$ and II with the seed bor E and spout or tube F , substmtially as herein shown and described, and for the purpose set forth.
2. The combination of the connecting rod I, spring $J$, crank shaft K , connecting rod L , and lever or trigger M, with each other, with the interior tube $H$ and plow handle C, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the hand cover or guard N with the plow handle $C$, substantially as herein shown and described, and for the purpose set forth.
g 4,093 - Thomas H. Humpirexs, Trenton, N J.-Vise,-February 4, 1868.-The inner bearing of the screw npon its socket is by a thimble, which has a thread engaging that upon the screrr. The thimble is held by a set screw, and furnishes means to compensate for wear.

Claim.-1. The combination of the dovetail formed slide or sword A, nut E, and adjustable thimble D, as arranged, shown, and described.
2. In combination with serew C , the adjustable thimble $D$, operating as herein deseribed.

74,094.-Cyrus D. Huxt, Fair Haven, Mass. Nail Plate Fecder. - February 4, 1868. - The nippe rod and nail plate pass throngh a erlinder, and are reversed by an oseillating motion given to the eylinder by a pin working in a right and left spiral slot in the said cylinder. The feediug takes plaee simultaneously by the rods, levers, springs, and elasps apon the nipper rod.
Claim. - The method of feeding the nail plate by means of the hinged rest B, feed rest E, feed rod II, the springs $\mathrm{G} g$, the lever F , the eatches $f f$, and the nipper rod I , construeted and operating substantially as deseribed.

74,095.-E. J. Huxt, Coneord, N. H.-Mrachine for Cutting Cards.-February 4, 1868. -Each cutter is attaehed to an adjustable section, and laps at one end past the knife with whieh it corners. The seetious hare studs entering spiral slots in the eireular plate, and are set out or in by rotary morement of the latter. The spriug arm, carrying the cutter, aets by a pawl, ratehet, and spur gearing to rotate the eutting table, thus changing the surface beneath the cutters.
Claim.-1. The rotary eutter board B , in combination with the gear wheels C D, the ratchet wheel $m$, and the cutter arm E , constructed and operating substantially as and for the purpose herein deseribed.
2. The adjustable sections $e$ e, with the knires $p$, aud the circular slotted plate $\Pi$, in the cutter box $F$, constructed and operating substantially as and for the purpose speeified.

74,096.-Isalac B. Jones, Xenia, Ohio-Saroing Jlachine.-February 4, 1868.-The dog lever is held down by a parrl and ratehet, aud engages the log by a dog aud spriug.
claim.-The combination of the lever $\mathrm{C}^{2}$, dog $\mathrm{F}^{2}$, spring $\mathrm{E}^{2}$, and ratchet bar $\mathrm{H}^{1}$, all construeted as described for the purpose specified.

74,03\%.-De Lancy Kennedy, New York, N. Y., assignor to Hexiry J. Krwiedy, same phace.Chain Sare.-February 4, 1868.-Each link las a eurred rccess into which the hooked end of a contiguons liuk engages. The guide plate braces the teeth to their Work.

Clatim.-1. The manner, substantially as herein described, of eonnceting the sereral scetions to constitute an endless-chain saw, as and for the purpose described.
2. In combination with the ehain saw, the guide plate, made no thicker than the siaw, and placed behind the back edge thereof, substantially as aud for the purpose speeified.
g4,03s.-Henry H. Kirk, Springfield, Tenn.-Distillery.-February 4, 1868.-Steam is introduced into the lower chamber of the ressel eontaining the beer. The vapor from the lower chamber passes up a pipe into an upper chamber coutaining beer, and descends to nearly the bottom of the latter, through the annular spuce between the said pipe and a cup-iormed pipe which is inverted orer it. Above this upper chamber is a mash tub. The rapor from the upper chamber passes to the flake stand and the coindensed spirit flows to the first doubler and is again eondensed. This process is carried on through the whole apparatus. A means of testing under loek is furnished.

Clatim.-1. The eombination of the chambers $B$ H and flake stand F , first doubler K and second doubler 0 , with their respectire flake stands and recieving tubs, ail construeted by a series of closed pipes, for the manufacture, by a continuous process, offt rehle-distilled spurits, substantially in the manner set forth.
2. The arrangernent of a pipe $R$, for drawing the low wines from the second doubler $N$ to the ehamber L for redistillation, substantially as deseribed.
3. The arrangement of the pipe S, for drawing the
low wines from the first doubler K to the chamber B for redistillation, substantially as described.
4. The eoaling erlinder Q, constructed with the diapluragms $q$ and $q^{6}$, in combination with the rerolving plates $q^{1}$ and $q^{3}$, and partition $q^{2}$, substantially as and for the purpose set forth.
5. In combination with a coaling apparatus, substantially as deseribed, the flap valve $q^{5}$, as and for the purpose set forth.
6. The arrangement of the testing pipes $G$, substantially as deseribed.
(94.099.-Wilifam A. Lawton, New York, N. Y.-Gas Toreh.-February 4, 1868.-A gradual supply of air to the upper end of the reservoir passes througli a separate pipe, and a portion of the pipe through whieh the liquid flows to the lamp.

Claim.-1. A gas torel, for all the purposes for whieh gas toreles ure used, enmposed of the tube $A$, aud supply tube D, and air tube E, and an enlarged wiek tube F, substantially as shown and deseribed, and for the purposes set forth.
2. The air tube E , im eombination with the tube A and the tube D, substantially as shown and described, and for the purposes set forth.

94,100.-Enwarn C. Lewis, Auburn, N. Y.Scat Clasp or Fastener.-Felruary 4, 1868.-The clasp takes beneath a rail of the body, and is adjustably sererred into one end of a lever piroted to a plate attached to the seat. This lever is operated by a eam lever to secure the fastening.
Claim.-The clasp D, lerers B and C, construeted and nrranged substantially as and for the purpose set forth.

74,101.-R. F. Livermore, Starksboro, Vt.Sap Spout.-February 4. 1868.-The spout is attached by the screw to the tapped hole, discharging iuto the recess in the iuner end of the spile.

Claim.-As a new article of manufacture, a castmetal sap spout constructed as described, consisting of the spout A, haring the head D perforated at $h$, and provided upon its end with the coucare surface, in the center of which the screw $S$ is securcal, the exterior surface of said head beveled at $a$ to form the edge $a^{\prime}$, and haring npon its npper side the projection E , as herein shown and described.
ght,102.-T. B. Luzier and George A. Hass, Philadelphia, Pa.-Ladder.-February 4, 1868.-The hooks upon the uain seetion of the ladder engage the steps unon the other section, and hold it in position as a long or a step ladder. A button beneath the upper step of the maiu section engages a step of the other seetion to secure it within the hooks.
Claim.-Hooks e $e^{t}$ and $i$, and a turn buckle $e$, or its equivalent, eounected to one seetion of a ladder, and arranged for the reception and retention of the rungs of another section, substantially as aud for the purpose specified.
94,10:3.-T. R. Lyons, Montrose, Pa.-Horse Hay Fork-February 4, 1808. -The two side bars of the stock give cover to a central bar eonnceted to and operating the engagiug tiues.
Claim.-In combination with the shank A and oscillating tines B , the rod C and lever D , when said rod is cut a 1 way at $C^{1}$, so that when the tines are extended the point of attachment of the lerer aud rod shall be belind the pirot of the lever, so that the weight of the load shall act to hold back the lever with a foree proportioned to the weight of the load, substantially as set forth.
84,104.-James Mans, Olena, Ill.-Corn Har-vester.-February 4, 1868.-The horse walks between two rows. The ears are strippod from the stalks by the rakes, and earried by the cudless ribbed belts to the recoptacle.

Claion. - The combination of the gatherers F and elerators $H$, constructed and operated substantially as deseribed, with the frame A and box K , sitid box being made substantially in the shape and manner herein shown and described.
-94,105. -Joel Manchester, New York, N. Y -Animal Trap.-February 4, 1868.-The bait arm
has a projection engaging a projection upon the crank. The movement of the bait frees the spring erank, which then makes one rotation, earrying down the lever, whose end carries a serrated plate, and which first transfixes and then easts away the animal. The trap is reset by the aforesaid projeetions coming iuto re-engagement.

Claim.-1. The arm or lever F , eonstructed snbstantially in the shape and manner herein shown and described, in combination with the toothed plate H, crank lever $E$, and spring $C$, substantially as and for the purpose set forth.
2. The pivoted bait hook bar or plate I, eonstrueted substantially as herein shown and deseribed, in eombination witl the crank lever E , as and for the purposes set forth.

74,106.-Linus S. Mason, Middlefield Center, N. Y.-Horse Hay Fork.-February 4, 1868.

Claim.-1. The tines E E, which projeet from one or more of the sides of the shank of a harpoon hay fork above the ordinary harpoons $\mathbb{C}$, and whieh ean be drawn in and out at will, substantially as herein shown and described.
2. A harpoon hay fork, when provided with tines E E on the sides of its shank, and with pointed side guards F F, all made and operating substantially as herein shown and deseribed.

74, 10\%.-William May, Binghamton, N. Y.Hand Truck.-February 4, 1863.-The wuck has pointed hooks whieh engage the side of the ease or bale, and sliding hooks whieh engage its top.

Claim.-1. Providing a hand trick with a hook C, which slides on the ceuter brace of the truek, substantially as herein shown and deseribed.
2. The arrangement aud combination with eaeh other, ou a hand truck of the hook C, sliding on the center braee, and of the hooks D D, fixed to the lower part of the truek, substantially as herein shown and deseribed, all made and operating as set forth.
3. The hinged plate or bar E , in combination with the hooks $\mathrm{D} D$, substantially as herein shown and deseribed.
\% 4, $108 .-J A C O B C . M C C A R T Y$, Griafton, W. Va., assigion to William E. Porter, same plaee.-Railway Switch.-February 4, 1868. - The rails on both sides of the switch are moved simultanconsly; the conneeting rods being attaehed to the opposite ends of a balanee beam to insnre equal movement. The movement is made through a chain eoiled upon a shaft turned by a hand wheel.

Olaim.-1. The hinged ehair D, when construeted in the manner and insed for the purpose speeified.
2. The combiuation of the movable rails $A A^{1} B$ $B^{\prime}$ with the fixed rail $A^{2}$, eonnecting rods $R R^{\prime}$, pitmen P P', balanee beam $T$, ehains $S$, or their equiralents, and shaft $W$, or its equivalent, substantially as and for the purpose speeified.

4, 109.-John K. McDonald, Newark, N. J.-Eyeglass.-February 4, 1868.-The bows are drawn toward the nose by a ling of rubber placed upon the hinged bridge.

Claim.-The nose piece below the extensions $B$, when formed of soft rnbber tubing upou the spring wire, fitted in notehes in the rims, as herein shown and deseribed.

194,110.—H. G. McGonegal, New York, N. Y. -Pavement.-Febrnary 4, 1868. - The periorations are vertieal and contain sand. The object is to roughen the parement by nneven Trear'.

Claim.-cthe bloeks 1 A, when provided with perforations $\mathbb{C}$ C, iuto or throngh the same, substantially as and for the purpose herein shown and deseribed.
g4,111.—JOHN McKibben, Lima, Ohio.—Snap Hook.-Febrnary 4, 1868.

Claim.-1. The snap hook, eonstrueted as deseribed, having the spring $B$ reversed in position, with its outer end riveted within the bow of the hook A, and its fiee end passing back withiu the jaws C, undermeath the lip I) of the piroted jaws $C$, as herein set forth tor the pmrpose specified.
2. In eombination with the abore the rein loop F , haring formed upon it at right angles the loop G, for
the gag runner, substantially as herein showia and described.
y 4,112.-William McLucas, Reinersville, Ohio. -Corn Planter.-Tebruary 4, 1868.-The hopper has a lower ehamber whieh holds enough seed tor one hill. The seed lever is operated by tappets on the periphery of the wheel and aets to elose the way into the seed ehamber when it opens the exit therefrom to deposit the seed.

Claim.-1. The combination of a lever B with its valves $b b^{1}$, operated by a wheel E, with seed hopper A and D, all substantially as deseribed.
2. In combination with the foregoing, the plow shares G G, and harrow roller $g$, substantially as and for the purpose speeified.
(74,113.-James Monach, Philadelphia, Pa., assignor to himself, Jerfrey Hart, and Robert Thore, Conshohocken, Pa.-I'reating Jute Fiber.February 5, 1868.-The jute is boiled for two hours in a solution of caustic alkali, of a gravity of $60^{\circ}$ Traddell. After washing it is stceped a short time in a weak solution of sulphurie aeid to neutralize the alkali, and is then washed aud dried. It is intended as a substitute for wool.

Claim.-Jute fibers treated with caustic allali, of the strength of abont $60^{\circ}$, substantially as deseribed and for the purpose set forth.

74, 114.-JaMEs H. Monce, Hopkinsville, Ohio. - Working Churns. - February 4, 1868. -The verge of the elock work is eonueeted to the vertieal ehurn dasher.

Claim.-The arrangement and combination of the regulating and adjustable arm $n$ and dasher adjnstable lever 0 , when conneeted with and operated by the verge $b$, as hereiu deseribed and for the purposes set forth.
74,115.-F. D. Moore, Edray, W. Va.-Hand Spinniny Machine.-Febrnary 4, 186z. -The stationary end of the roll is held in the left hand, while the operator sits and turns the main wheel by the right hand. The roping is dramen out by the morement of the earriage, whieh is governed by the treadle.

Claim.-1. The combination of the pulleys $g g^{\prime}$, the rod $n$, the slide $m$, with the upright $m^{2}$, the lever $l$, and the treadle $E$, arranged and operatiog substantially as and for the purposes herein described.
2. The slide bar $v^{4}$, operated by the lerer $l$. in eombination with the slotted swing bar $z$ and the spling hook $v^{2}$, arranged and operating as and for the purpases set forth.
3. The ratehet wheel $u^{3}$ and spring dow $v^{2}$, eombined with the pnlley $g^{\prime}$, and operating substantially as and for the purpose speeifich.
4. The combination of the horizontal slidinyr bar $v^{4}$. the slotted swing bar $z$, the fortieal slide $v^{3}$, and the ehcek pulley $x$, arranged and operating substautially as and for the purposes herein described.
5. The square toothed ratehet wheel $u$, the dog $u^{1}$, the slide bar $v$, the dor $w^{1}$, the slide bar $v^{1}$, the spring hook $v^{2}$, and the slide bar $v^{4}$, combined and operating substantially as and for the purposes set forth.
6. The eheek pulley $x$, the slide $v^{3}$, the spring $a$, and the slotted bar $z$, or its equivalent, eombined and operated as and for the pnrpose speeified.
-1, 116.-GEORGE M. Moreis and Jons McCreary, Cohoes, N.Y.-Lubricator for Loose Pulleys. - February 4, 1868.

Claim.-The bushing B within the hub of the loose pulley, constructed as deseribed, having the ehamber a aronnd its periphery, commmieating with the shaft by means of the opening $e$, the ends $b$ of said bushing fitting snugly within the hub, and provided with the eoneentrie groove $c$, communieating with the shaft and ehamber a by means of the opening $d$, whereby a eonstant eireulation of lubrienting matter is obtained within and around the bushing, as herein shown and described.

74,11\%.-William F. Morton, New Haven, Conn.-Carriage Wheel.-February 4, 1868.-The two collars with conneeting ribs are cast in one piece and slirunk upou the hub.

Claim.-The hub cast in one piece with the collars A A and connecting bars $a$ a when constructed in the shape and proportions as described.

19,115.-Lycurgus H. Moseley, Franklin, Tenn.-Ointment.-February 4, 1868.-For treatment of piles. Composed of stramonium, 4 oz ; rock plant, 16 oz ; tan bark, 16 oz ; dog-wood root bark, 16 oz ; earth worms, 16 oz ; sweet oil, 2 oz ; venice turpentinc, $\frac{1}{2}$ gallon; liuseed oil, 1 gallon, and neat's foot oil, 1 quart.

Claim.-The ointment compounded substantially as and for the purpose abore deseribad.

74,119.-Florent Muller, Hartford, Conu.-Breech-Loadiny Fire-Arm.-February 4, 1868.-At the rear eud of the breceh block is an upward projection, which is slotted to receive the end of the loek ing slide. The slide is operated by a lever to which it is connected by a liuk plate.

Claim.-The combination with the hinged breceh block $\mathbf{E}$ of the locking slide $G$ and lever $J$, applied and operating substautially as and for the purpose set forth.

74,120.-Joinn J. Narlon, Brighton, Mieh.Portable Hay and Grain Roof.-February 4, 1868.The sides of the roof are hinged together to increase its portability. The ends of the roof are supported by cords passing orer sheares at the top of the posts.

Claim.-The ropes G, posts D, shafts H, and crauks J, when used in connection with the roof $A$, substantially as herein shown and deseribed aud for the purpose set forth.
94.121.-William H. Nichols, East Hampton, Conn.-Self-Sealing Pamphlet Cover.-February 4, 1868.-One edge of the cover is extended to form a flap which is attached by mucilage to the other side,

Claim.- A self-sealing, catalogue, pamphlet, magazine, \&c., substantially in the mauner and for the purpose set forth.

74, 122.-Jomn K. Norton, Flushing, Ohio.Bridle Bit.-February 4, 1868. -The bars are pivoted together near their midlength, each of them being. connected to the side strap at one end and to the rein at the other.

Claim.-The combination of the bar A with the ring D and branch E , and the bar B with the ring $\mathrm{F}^{\mathrm{F}}$ and branch $G$, when constructed as herein deseribed, as a new article of manufacture.
\%1,123.—James Willard Patterson, Cincinnati, Olio, assignor to Sarah Elden Patterson, sane place.-Culinary Vessel.-February 4, 1868.The food is inclosed in steam tight ressels within perforated ressels which stand in a column within a steam ressel. A coil of pipe is attaehed to the boiler bottom in such a mauner as to leave one end of the pipe submerged in the water to supply the coil; the other end passes to the surface of the water and conducts the steam generated in that part of the coil below the bottom to the chamber in the boller above the water.

Claim.-1. The suspending of a series of cooking ressels, haring imperforated bottoms and sides, and provided with close covers in an upright colum or series in snch a manner as to form stean chambers above, below, and around each, as and for the purposes sulbstantially set forth.
2. The steam or water eoil K , provided with shield $P$ and cap $S$, when used in connection with the boiler E. in the manner and for the purposes set forth.
3. In cach of a series of cooking vessels, arranged substantially as shown, and used in comnection with the boiler, the chamber formed between the close sides of the inmer and outcr cylinder.
4. The combination of the series of cooking ressels N, M, \&c., with the boiler E, the whole made substantially as described, and so as to operate in the manner set forth.
ra, 124.-Ezekiel Piillifis and Henry C. PhilLris, Blackstone, Mass., assignor's to themselves and Daniel 13. PoND.-Picker Staff Check for Looms. -February 4, 1868. -The picker staffs in their back movement strike against the ends of the lerers which
are connected by rods to the pendent arm of the friction cylinder. The firiction eylinder turns beneath a cap whose pressure upou the cylinder is caused by adjustable spriugs.

Claim.-1. The friction apparatus, substantially as described, that is, as composed of the levers IB B, the friction cylinder and its bearing and eap, and the connection of such eylinder and levers, as specified.
2. The combination of the friction apparatus, substautially as described, or its equiralent, with the lay and its pickers or picker staves, the wholo being arranged and so as to operate as and for the purposo as explained.

74,125.-Willian Pickens, Chicago, Ill.-Bolt Feeder and Cooler.-Februury 4, 1868.-The meal is subjected in the eylindrical case to the action of the radial arms of the rotating shaft. 'This shaft bears the sancer-shaped disk which stops the lower end of the eylinder. The lower scetion of the eylinder slides on the upper and regulates the size of the ammular exit opening leading to the rentilating case contaiu ing the fon. From this case it passes to the chute.

Claim.-The spindle G with saucer F , breakers H H, and fins K K secured to it, aud constructed as described, in combination with conreying case N and rentilating case I, both constructed as described, the whole arranged and operating substan. tially as ind in the manuer herein set forth and for the purpose specified.

194,126.-Dennis Pierce, Warerly, Iowa.-Pattern for Draughting Sleigh Bodies.-Fcbruary 4, 1868. -Tho curved bars are bent upon the patteru and marked.

Claim.-A pattern board A with eleration B, constructed and adapted for laying off work for sleighs, substantially as described.
74.127.- Antriony Pirz and Manuel Priz, East New York, N. Y.-Station Indicator. -February 4, 1868.-The apron exhibiting the name of the station is operated by clock work set in motion by the driver at each corner. The mechasism is arranged to turn the apron in either direction.

Claim.-1. The application of a clock mechanism With a spring or weights as a motor applied to the belt of a street or station indicator for railroad cans in such a manner as to move the belt when the same is liberated, substatially as shown and deseribed.
2. The adjustable plate $J$ with the gearing K L, in combiuation with the grearing E D and the drmm $\mathrm{C}^{\mathrm{C}}$, all arranged substantially as shown and deseribed, for the purpose of reversing the inovement of the belt I when necessary, as set fortll.
3. The rod $P$ with the notched disk $O$, in combination with the belt F , gearing II N , and the drums $\mathrm{C} \mathrm{C} \mathrm{C}^{\prime} \mathrm{G}^{\prime}$, all urranged to operato substantially as and for the purpose herein shown and described.
4. The brake arms Q Q attached to the slide rod P , and arranged in such relation with the drums $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$ to operate in the manner substantially as and for the purpose set forth.

74, 128.-Warren Portioock, Pleasant Grove, and John If. Smiti, Ioolesborough, Iowa.-Floor Clamp.-February 4, 1868, - The metallie side shanlis, upon the wooden lever, are adjustable to suit the thickness of the joist, and have spring dogs which engase the sides of the joist, and are disengaged by compression upon the upper ends of the small levers. The knee joint of the back brace opens suftieiently to be self-sustaining.

Claim.-1. I'he back brace C, provided with a kneo or stub joint, constructed substantially in the manuer and for the purpose as set forth.
2. The small levers D D, constructed and operating together substantially in the manner as above shown and specified.

74, 129.-Jonn W. Post, Castile, N. Y.-Skate. -Febrnary 4, 1868. -The side clamps have ratchet hooks to engage the sole, and are drawn in by the inclines beneath the skate. The ineline plate is drawn backward by the bell-erank lever and forces a stud into the front of the heel.

Claim.-1. Adjnsting the clamps G by means of the serrated bar $\mathbf{F}$, provided with a slot $i$, iu combi-
nation with the serrated forward end of the bar E , both held in position by a serew $h$, substantially as deseribed.
2. The deviec for fastening the skate to the boot, consisting of the L-shaped spring lever e, riveted to bar E , with serrated and slotted rear ond, and ridges $l$, fitting into slots $m$ on the elamps G, substantially as deseribed.
(4, 180.-Moses Powe, Belvidere, N. J.-Oarricage Braee.-February 4, 1868.-The sheath laps around the joint and braces the same against sicle or direet strain.

Claim.-The sheath E, covering three sides of the joint of a brace for vehiele hoods or tops, and attached to one of the braces, all substantially as shown and described, and for the purposes speeified.
g4, 131.-JORAM Priest, Detroit, Miehigan.Dumping Wagon.-February 4, 1868.

Claim.-1. Hanging the box J upon the longitudinal bars $E$, by a proper fulcrum between the front and hind wheels, so that the box will till or dump between the hind wheels.
2. The crank axle $F$, when operating for the purposes hercin deseribed.
3. The semi-rotating bar I and bearings H, when construeted and operating substantially as and for the pmrposes set forth.
4. The combination of the above parts with the axle $A$, the wheels $B$ and $G$, the cirele $C$, the bolster $D$, the wagon box $J$, the transverse bar $K$, the rings L, and the cateh M, or their equivalents, when eonstrueted and operating as and for the purposes herein set forth.

多 4 , 132. -Iva Pricilard, Terre Haute, Ind., assignor to himself and Joseph Raibici, Baltimore, Md.-Gas Machine.-February 4, 1868.-The air is foreed from its ehamber by allowing the inflow of water into the lower eompartment, the two chambers having communieation together through an outside vertieal pipe. When the water fows out the air is drawn in again. The air is, by this means, driven through the earburetter and into the gas holder.

Claim.-1. The combination of the air ehamber $a^{1}$ and water ehamber $a$ with the earburetting vessel $B$ and the recciving ressel C , in the manner and for the purpose set forth.
2. The applieation of a eolumn of water to a earburetting maehine, for the purpose of eondensing air and foreing it throngh the carburetting fluid, substantially as shown and deseribed.

74, 133.-H. F. Purmort, Saginaw City, Mich. -Connecting Pump Rods.-Tebrnary 4, 1868; antedated January 29, 1868. -The contiguous ends of the scetions of the pipe are slotted longitudinally, to axtmit wedge-formed shanks. The shanks have erossheads, which enter side cavities of the slots. The end of the section is then covered by a sleeve, learing a portion of the shank exposed, whieh is attaehed by serewing into or over the end of the shank pieee of the contignous seetion.

Claim.-Joining the sections of a pump or other rod together by means of the joint, construeted and applied substantially as and for the purpose deseribed.

194, 13 4.-Silas S. Putnam, Dorehester, Mass.-Self-Lubricating Axle for Carriages.-Febrnary 4, 1868.-The spindle has an axial ehamber, eontaining oil-saturated, fibrous material, and communieating with the box by radial slots. The outer end of the chamber is eovered by a serew eap, whieh also acts as the keeper nut. The month of the oil hole is in the top of the axle, inside the bntt collar, and communieates with the inner end of the ehamber. The butt collar has an annular ehamber; stufferl with satmrated fibrous material.

Claim.-1. A chamber $b$ within the end of the axle, paeked with fibrous or porous material, for reeeiving and retaining a supply of lubrieating substance, Which passes through openings to the bearing surfaee of the axle, substantially as described.
2. Providing the collar $H$ with $n$ ehamber $e$, for containing paeking saturated with lubrieating substance, substantially as and for the purpose set forth.

24,135.-SILAS S. PUTN゙AM, Dorehester, Mass. - Ourtain Fixture.- February 4, 1868.-The eoiled spring surrounds a rod, whieh is prevented from turning in its outer bearing. but on which the wooden roller turns. 'The wooden roller incloses the spring and the greater part of the rod, and serves to wind up the eurtain when the spring brake is drawn down.

Claim.-1. The wooden roll I, having a ehamber formed within its end, in combination with the device placed therein for raising the eurtain, substantially as set forth.
2. In combination with the above, a spring, or brake, $i$, operating substantially as set forth.
3. The braeket C , with its lip, or projeetion, $l$, in eombination with the flattened end 5 of the spindle, substantially as and for the purpose deseribed.

74, 1 : 9 (-Oliver E. Rani)all, Lewiston, Me. Horse Rake.-Fehmary 4, 1868.-Improvement on his patent of May 23, 1865. Eaeh tooth has a spring rod passing through a bar attaehed by rods to the lifting bar.

Claim.-1. The springs L, applied to the tooth bars $G$ and to the bar $K$, sulstantially in the manner as and for the purpose set forth.
2. The bar I, placed underneath the tooth-bars $G$, and commected to the oblique bars $J J$, which are secured to the rod or shaft $F$, when said bar I has the perforated bar K conneeted to it for the upper ends of the springs $L$ to pass through, substantially in the manner as and for the purpose set forth.

19, 137.-E. F. Richman, Museatine, Iowa.Woven Fabrie.-February 4, 1868; antedated August $5,1867$.

Claim.-1. The method, herein deseribed, of weaving fabries having two or more thieknesses of separately-interloeked weft-threads, whereby the upper or lower surfaces are made substantially alike, and so that the fabrie presents no right or wrong sides, substantially as above shown.
2. A woven fabrie, substantially as deseribed, eonsisting of two or more layers of separately interloeked weft threads, the threads of one layer of wett always lying opposite the spaees between the weft threads of the layer above or below it, and with all the warp threads passing from surface to surface, and binding the whole together, as abore shown.
\%4, 188.-John C. Rickerd, Lewisville, Ind.-Cultivator.-February 4, 1868. -The beams are gimbal jointed to bars depending from a eross bar attaehed to the tongue. The seat is hinged to the depending bars, and may be thrown upward and forward when not nsed.

Claim.-1. The double hinge, eonsisting of the serew bolt $f$, bases $g$, flanges $h k l$, lips $i j$, and pins $m$, to hinge the eultivator beams to the main frame, all constructed and arranged substantially as deseribed.
2. The hinged seat I, supported by means of enrred rods, and provided with foot rests $p$, substantially as and for the purposes set forth.
3. The combination of the frame $\mathbf{A}$, hooks $n$, rods $a^{2}$, and foot rests $p$, substantially as and for the pur poses set forth.
\%4, 18\%. - E. S. Ritchie, Brookline, Mass. Holtz Electrical Machine. -February 4, 1868.

Claim.-1. The combination and arrangement of the supporting plate C, of glass or other equivalent material, with the sereral seetors, and the combs arranged together and rith the rotary eleetrizing disk, substantially as specified.
2. The applieation of the plate C, not only to the several seetors and eombs, for giving smpport to them in their proper relations with one another and the rotary disk, but as a snpport for one of the bearings of the shaft of the rotary disk, the whole being snbstantially as hereinbefore explained.

4, 140.- Abram A. Rheutan, Woreester, Mass.-Envelope IIachine.-February 4, 1868.-The table has two piles of blanks; it is so arranged that one pile ean be plaeed in position while the other is being removed by the gumming and lifting bar. The table has sexi-rotation by a lever whieh enters
a noteh when the table is in proper position. A spring lever or gravitating ball has bearing on one edge of the pile to prerent the remoral of more than one blank at a time. From the lifting bar the blanks are carried to the folder. The flaps have adjustable bearings. The beaded portions are made eccentric so that the folding of the edges sliall be gradual, and to allow free remoral of the en relope with the falling table. The bearing pieees are adjustable vertically by temper screws.

Claim.-1. The rotary table B , having one or more receptacles for blanks, substantially as and for the purposes set forth.
2. The lever $F$, arranged for operation substantialle as and for the purposes set forth.
3. The use and employment, in an envelope machine, of a weight separator, for preventing the lifting of more than one blank at a time, substantially as set forth.
4. The combination with the base of the folding flaps of central bearings, substantially as and for the purposes set forth.
5. The combination with the folding flaps I, J, K, and $L$, of the bearing pieces $7,8,9$, and 10, substantially as and for the purposes set forth.
6. The combination and arrangement with the standards 33 of the projeetions 4 4, for the purposes stated.
7. Making the beaded portions 14 of the folding flaps eccentric, substantially as and for the purposes set forth.
8. The combination, with the flap $I$, with an adjustable or spring face, substantially as and for the purposes set forth.
9. The combination with one or more of the bearing pieces of adjusting screws 16, for the purposes set forth

74,141.-Marvin S. Roberts, Racine, Wis.Peat C'rib.-February 4, 1868. -The wedge boards trarerse the erib longitudinally, and are withdrawn after the crib is filled. The object is to admit cireu lation of air.

Claim.-The portable peat erib, constructed of light scantling and boards, substantially as and in the mamer herein described, and combined with blocks P P and wedge board or boards F, constructed and operating substantially as herein shown and described, and for the purposes set forth.
g is, 142. GEORGE M. Robinson, New Wilming'ton, Pa. - Apparatus for Operating Horse Hay Foiks.-Tebruary 4, 1868.-The ascending ball upon the fork raises the piroted eatch and allows the car riage to pass up the inclined bar. On the return the cam lerer, which had supported the fork, strikes the abutment and releases the same.

Claim.-1. The carriage D, upon the inclined bar C, haring the piroted catch I, upon the lower side of trhich the projection $i$ is formed, and also prorided with the cam lerer $\mathcal{J}$, in combination with the bars $\mathrm{E} \mathrm{I}^{\prime} f^{\prime}$, pulley $d^{2}$, and ball K , as herein deseribed, for the purpose specified.
2. The eombination of the ball K and hoisting rope $G$ with the cateh I, haring projections $i$, the cam lerer $J$, the pulley $d^{2}$, and carriage $D$, as lierein shown and described.
3. The earriage D, operated by the single hoisting and forls rope, when the loaded fork reaches its hishest eleration in relation to the carriage, before the latter is permitted to move upon the inelined bar, and when the act of raising the loaded fork disengages the catehes of the carriage from their fastening's, as herein shown and described.
g 1, 14B. - N. W. Robrison, Moriah, N. Y.Hold Jack Hook. - February 4, 1868.-The hook curres around the bottom end of the post, which prevents the escape of the hold back straps.

Claim.-The jost $\bar{F}$, in combination with the hook $B$, substantially as and for the purpose deseribed.

24, 144. - EdWald 1. Rock, Ludlow, Vt. Globe Steam Valve.-February 4, 1868.-The segmental riag valve is expanded against the seats by the wedge which is connected to the stem, and acts upon the edges of the valve.

Claim.-1. The combination of the wedge $m$,
shell A, and Falve G, substantially as herein shown and described.
2. The combination of the ring $G$ and the wedge $m$, substantially as herein set forth.
$74,145 .-T E R E M A I I E$ Rohrer, Rohrersville, Md.-Spout Bracket.-February 4, 1868.-The eave trough lies in a recess at the top of the bracket, and its outer edge is secured by the metallic clasp.

Claim. - The spout-supporting bracket A, constructed as represented, in combination with the elasp C, substantially as described, for the purpose specified.

74,146.-John B. Root, New York, N. Y.Steam Generator.-February 4, 1868.- Each pipe of the vertical series is commected to the pipe above and below it by U bends. The separate series are connected together by transrerse pipes. The upper transrerse pipes are connected by pipes to the longitudinal eylindrical steam chamber.

Claim.-1. In combination with the water tubes A A, the return pipes or bends C C, arransed to connect each tube with one above and below it, substantially as specified.
2. The bend $c$, for establishing the conncetion with the water tubes, by free or socket joints, when furnished with packing, and held to their places by independent outside clamps, stud bolts, and nuts, or their equivalents, essentially as shown and for the purpose described.
3. The cross pipes $\mathrm{E} \mathrm{E}^{\prime}$ and $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$, or either of them, connected with the tubes $\mathbf{A}$ A at their ends by means of independent pipes or bends, $\mathrm{C}^{1}$ or $\mathrm{C}^{2}$, essentially as shown and described.
g 4, 14. - Tiomas Rosbrugif, Bellefontaine, Ohio.-Medical Compound.-February 4, 1868.-For treatment of ferers: It is composed of a decoction of the root of the blueberry.

Claim. -The medicine prepared from the root of the cohush or blueberry, substantially in the mamer herein specified.
(7, 148. - Cilatres Rowland, Quincy, Ill., assignor to himself and Joserif G. Rowlavid, same place.-Continuous Leather Peg Strip.-February 4, 1868.-The leather strip is used as it substitute for the ordinary wooden strip in pegging machines. The Width of the strip is equal to the length of the pegs required, and the sides are bereled along one edge. It is made sufficiently rigid by being saturated with a solution of gum or glue.

Claim.-The leather strip for pegs, prepared substantially as deseribed, as a new article of manufac. ture.
(29, 149.-Jalvis Royal, Rochelle, Ml.-Drying and Ventilating Apparatus.-Februnry 4, 1863 . The porous tubes are laid in the hin in an inclined or vertical position and communicate rith the outer air. Each tube has a flaring moutl which receires the tapered end of a pipe comecting.

Claim.-The tubes $\Lambda$, arranged within a bin or other place in which grain or other substance is to be dried, when such tubes are composed of earther or other equivalent porous material that will absorl the moisture from the substance being dried, as herein set forth for the purpose speeified.
(4. 1 50.-HENRY D. Rumsey, Homer, N. Y. Adjustable IIead for Barrels and Pirkins.- February 4, 1868.-The chine has wedge-formed projections whiel engage eleats upon the edge of the head. The eleats are passed bettreen the projeetions and seeured bencath them by partial lotation of the head.

Claim. - The application of the flamge to adjustable covers, and the slot to the inside of burels. casks, or firkins, for the purpose of the more readily opening and closing the same effectually without starting or unhooping them, as herein set forth tind described.

7月, 151.-Hugh M. Sanderison, Noble, Ill.Eye Medicine.-February 4, 1868.-A deeoction of mandrake root, 1 lb . ; black root, $\frac{1}{2} \mathrm{lb}$. ; plantain leares, $4 \mathrm{lb} . ;$ is taken internally. The oye wash has
lunar caustic， 12 grains，and rain water， 4 oz ．The forehead salve has solid extract of belladonna，mer－ curial ointment，and flad extract of hyoscyamus in equal quantitics．The eyelid salve has barli ef bitter－ sweet root，stramonium leaves，cicuta leaves，and night－shade root in equal quantities．Stecp in spirits， add two parts of lard，and evaporate．To this oint－ ment， 1 oz．，add solid extract of hyoseyamus， $1 \frac{1}{2} \mathrm{oz}$ ； fluid extract taraxacum，$\frac{1}{2}$ oz．，and opinm 11 oz ．

Claim．－The medicines or compositions numbered 1， 2,3 ，and 4 ，composed of the ingredients and in the proportions substantially as herein deseribed and specified．
\％ 4 ， 152. －AUGUst Schausten，Michigan City， Ind．－Revolving Cannon．－February 4，1868．－The cartridge chambers are in an annlar block，and are brought in line with the barrel，where they are locked by a spring bolt．The annulus turns in a transverse cavity made in the barrel．

Claim．－1．A cannon consisting of the barrel $A$ ， having the annular block or ring $B$ ，with the chambers $\mathbb{C}$ formed thercin，arranged to rotate through an opening in the barrel，as described．
2．The combination of the lever $l$ ，locking－bolt E ， firing－pin 0 ，and handle $h$ ，arrangod to operate sub－ stantially as set forth．
．g 1， $1 . \mathrm{BB}_{3}-\mathrm{DAVID}$ A．SCOTT and J．E．BuRDGE， Cincinnati，Ohio．－Spring Bed Bottom．－February 4， 1868 ．－The cnds of the spring are turned down－ ward and enter the cross rail．The slat rests in a lownmardly bent portion of the spring and is re－ tained by a transverse rod．

Olaim．－The prolongation，in the arms E，in the same direction as the arms $b$ ，of the helicoidal spring or coils $a$ ，when constructed and securcd to the cross rail $\Lambda$ ，substantially as herein described，as and for the purpose specified．
 Apparaters for Playing Parlor Base Ball－Fobru－ ary 4， 1808 ；antedrted J anuary 23， 1868.

Claim．－－1．The partially revolving bat E，ar－ ranged as represented，moving close to the upper surface of the board $A$ ，and operated at the will of the player，so as to allow the striking of the ball in the sereral different positions，and with the several different effects，according to the skill of the player， substantially as herein set forth．
2．The spring $G$ ，in combination with the partially revolring bat $E$ ，upon a parlor base ball board，and adapted to move the bat as the operating cord II is released，substantially as herein set forth．
3．The automatic pitcher B，mounted on a parlor base ball board，and adapted to project the ball at sercral angles approximating to the right dircetion， at the will and according to the skill of the player， substantially as herein specified．
4．The descending motion，in combination with the formard motion of the pitcher，by which the pitch－ ing device is carried so low，at the termination of ats motion，as to be out of the way of the returning ball．
5．The semi－rims $I^{\prime}$ ，arranged relatirely to the carities $I$ ，or the corresponding marked spaces in which the ball is to be stopped in passing，substan－ tially as and for the purpose herein set forth．

6．The swiveling case $L$ and its attachments， mounted on a parlor base ball board，and adapted to operate relatively thereto，substantially as herein specifica．
g4， $155 .-S A M U E L$ J．SEELY，New Kork，assignor to J．M．Bnown，Brooklyn，N．Y．－Folding Mictal shutters．－Februar＇y 4，1868．－The leares are curred transversely，and are folded in a zigzag position when retracted．

Claim．－Forming sheet－metal shutters of leares， bent in a curved form，transversely，and united sub－ stantially as and for the purpose set forth．
gh， 1 第雨．－TAMES M．SEYMOUR，Newark，N．J．－ Socke Trench．Frebruary 4，1868．The socket pioce has a dovetail rib which fits a suitablo groore in the head and is retained by the ring．The object is to have the socket changeable to suit circumstances．

Claim．－1．The handle A，with its broad bottom， made substantially as shown．

2．The shifting soeket wrench，as a new article of manufacture．
g1， 15 ．－G．W．Shemman and C．L．Sherman Seymour，Conn．－Flour Scoop and Sifter．－Febrr－ ary 4， 1868.

Claim．－The combination of the scoop A，having beads a，handle C，saddle D，standard E，crank－shat F ，arms G G＇，paddles $H$ ，sifter $B$ ，and $\operatorname{lip} \mathrm{I}$ ，sub－ stantially as deseribed for the purpose specified．
v／賭，158．－JACOB A．Sherman，Netr York，N． Y．－Truss．－February 4， 1868 ；antedated January 24，1868．－A compound curved pad－spling is applied to a bar extending across the person，and carrying a second spring that acts in unison，and is adjusted in pressure by a movable finger．The arrangement causes an inward and upward pressure．

Olaim．－1．The curved spring d，carrying the hernial pad，in combination with the bar a and spring $f$ ，substantially as and for the purposes set forth．

2．The slicling finger $h$ ，fitted and acting substan－ tially as specified．
g4， $159 .-$ R．K．Slaughter and J．O，Hundt， New York，N．Y．－Machine for Embossing Window Shades．－February 4， 1868.

Claim．－1．The carriage $G$ ，when provided with an clastic cover $g$ ，which acts as a counter－dic for embossing window shades，placed mpon the carriage substantially as and for the purpose herein shown and described．

2．Providing the carriage G with adjustable bars， $h \tilde{h}$ ，which serve to hold the shade smoothly upon the carriage，and to guide the embossing rollers $F$ E，substantially as herein shown and described．
3．The nut C，when arranged adjustable on the bar B，in which it is held，substantially as set forth，so that the screw D may be moved laterally，as and for the purpose herein shown and described．
4．The fiame $e f$ ，when arranged between the uprights of the press，substantially as described，so as to steady the printing dic or roller in every posi－ tion，and during np and domn as well as lateral motion of the same，substantially as set forth．
5．The press，eonsisting of an adjustable serew and dic frame，in combination with the morable carriage G，having an clastic cover，and adjustable guide bar＇s $h$ ，all made and operating substantially as and for the purpose herein shomm and described．

盟，160．－下．Snitm，Alexandersrille，Ohio．－ Carpet Holder．－February 4，1868．－The carpet is held by cecentric cams whose bearings are secured to the base boards．
Claim．－A carpet holder，composed of a washer $C$ ，and eccentric plate $\Lambda$ ，said plate A rotating in a chamber in a washer C ，sceured to any mop board， substantially as shown and described，and for the purposes set forth．
get 1 曾道－TOFN SNYDER，Hart＇s Tills，Tnd．－ Grinding Dill．－February 4，1868．－The balance－ rynd rests upon a ball which is supported on the driving bar．
Claim．－The combination and arraugement of the drive bar K，ball or globe M，and supporting bar $N$ ， with each other，with the upper end of the spindle E ，and with the upper stone or rumer L ，substantially as herein shown aud deseribed，and for the purpose set forth．
 Bed lottom．－February 4， 1868.

Claim．－The springs C C，constructed as de－ scribed，consisting of the wires coiled into spirals $e e$ at their ends，said spirals fitting upon loops，secured to the slats $b c$ ，the centers of said wires bent to form loops or yokes $d$ ，connected by the tube m，all ar． ranged as described for the purpose specitied．

最 163 ．－Trshers 4 ．Spofford and Itattheiv G．Rafrington，Columbus，Ohio．－Portable Pistol Gallery．－Eebruary 4，1868．－The fexible shields are raised to catch balls discharged from toy guns．

Claim．－1．Providing the platform A with two flexible folding shields C C on both ends，substan－
tially as and for the purpose herein shown and described.
2. The platform $A$, when provided with a flexible folding shield, C , on each end, in combination with the pertorated target D, all mado and operating substantially as and for the purpose herein shown and described.
gh 1, 164.-Fisher 1 . Spjfford and Matthew G. Ratrington, Columbins, Ohio.-Adjustable Ball Holder for Games.-February 4, 1868.-The mouth of the bace is stretched orer a hoop attached to a rotatable lead on a vertically adjustable staff; the bag serres to receive the ball from a toy gun or pistol.
Claim.-The revolving platform $\Lambda$, when provided with a ledge $b$, and bow $c$, in combination with the bar D, brace $d$, and standard B C, all made and operating substantially as and for the purposes herein shown and describod.
 La.-IFachine for Exterminating the Cotton Worm, de.-February 4, 1868.-The series of steam jets seatter the oil which drips from nozzles immediately over the jets.
Claim. - The portable steam generator or boiler F, or its equiralent, in combination with the pipes MI and K, when these pipes are provided with the jets or nipples $a$, and are otherwise constructed as herein described, and the former is used as a steam and the latter as an oil distribntor, the whole being arranged substantially as and for the purpose set forth.
g4, 166.-H. A. Stewart, Minneapolis, Mimn. Portable Fence.-Febrmary 4, 1868. Whe pickets are attached by staples to the tarred ropes. The latter are secured to pins traversing the posts. Each panel is supported at midlength by a triangular frame to whose lower bar it is conneeted by a look.
Claim.-1. The combination of the supports B, constrineted as described, with the sections of fence, as and for the purpose herein set forth.
2. In combination with the pivoted supports, constrneted as deseribed, the section of the fence consisting of the piekets D, upon the tarred ropes C, as herein shown and described.

4, 16\%.-Paschal Stoxe, Charlestorm, assignor to Joserir Teazie and Augustus L. Dole, Boston, Mass.-Box Opener.-February 4, 1868.-The ran slides on the liandle and by impinging against a shoulder forees the clatr into an aperture to open the same.
Claim.-A box opencr, substantially as described, viz, as construeted with a claw at one end of its stock or shank, and a hammer liead at the other end thereof, and with a ram to slide on the shank or stock in manner and against a shoulder thercof, so as to operate the claw, as specified.
ga, 168.-John B. Stonmr, New York, N. Y., assignor to himself, L. Mexdelson, and T. CromeneLix, same place.-Life I'reserving Apparatus.-Tebruary 4, 1868.-The India-rubber snit has openings for the head and hands only, clastic bands rendering the two latter water tight. A corle jacket is worm around the chest. The slaek of the upper opening is secured bencath the elin. Folding paddles are fixed to the hands and weights to the feet.

Claim.-1. The chin motector C, constructed and applied as herein shown and deseribed.
. The combination of the open clastic band D, formed of tiro clastic tubes eonnected longitudinally by an clastic membrane, the outer clastic tube B , auxiliary band E , and the upper part of the snit A , as herein described, for the pmrpose specified.

F4, 169.-Jomn B. Stoner, New York, N. Y., assignor to himself, L. Mendelson, and Ti. Cronfmerin, same place.-Ballasting Vessels.-February 4, 1868. -The metallic block may be let down to give a pmrelase in ballasting the ressel or may be drawn up into the rceess.
Claim.-The temporary ballast, when consisting of the weight F , secured to the lower ends of the rods I I, and adapted to fit into the metallie socket G, in the keel of the vessel. and operated from the deck, the
rods I I working in the vertical tube S of the socket $G$, as herein set forth for the purpose specificd.

74,170.-Thomas T. Strone, Mortonville, Pa. -Calculating and Registering Machine.-Febrnary 4, 1868.-A spmer upon one wheel meshes into a pinion, which in turn meshes into a cog-wheel and carries the latter around one cog for a completed rotation of the first whecl. The result for hundreds or dollars is read off throngh a slot in a disk superposed on the fonrth disk; the mits are read off the first or third disk opposite the indicator upon the second disk. The calculating power may be increased by increasing the number of disks.

Claim.-1. The combination of disks $\Lambda, B, C, D, E$, and F , or their respectire equivalents, numbered and arranged as herein specified, or in any equivalent manner, all substantially as herein set forth and describer.
2. The spur $b^{\prime}$, in combination with the pinion $G$ and tonthed disk $D$, or their respective equivalents, substantially as shown and described.
74.171.-Samurl Thoason, Oscoola, Wis.Broadcast Sacding Machine.-February 4, 1868. -The seed flows from the bottom hopper into a side chamber from which it is carricd by the earities of the seed roller which forms the front side of the said chamber. The roller rotates in the same direction as the wheels and carries the grain over and drops it on the inelined scattering board.
Claim. -The rotating seed-discharging cylinder F , in combination with the sech box or hopper E, haring an opening, a, at its lower part, the hottom plate $b$, and the scattering board $G$, all arranged to operate substantially as and for the purpose hercin set forth.
m 1 , $17 æ$.-Chester 13. Turner, Grand Rapids, Mich.-Rotary Steam Engine.-February 4, 1868.The steam is reccived throngh the piston hub and is discharged throngh the eylinder side. The stean aets on the hinged pistons and tends to pack their convex sides against the cylinder.
Claim. -The piston B, provided rith the partitions $J$ and chambers $i$, and arranged to operate in connection with the iuduction port $g$ and valves D and $\mathrm{D}^{\prime}$, as horein described and represented.
gis, 1 g3.-S. E. Tuttle, Genoa, Nerail $.-A p-$ paratus for Raising Hecuy Weights.- Felvraary 4, 1868. - The blocks are piroted to the slide and swing inward scrially for the engagement within the spiral groore of the anti-friction rollers tmping on arbors seeured to their sides. The blocks are held outrrard by the inelined fiange nutil the rollers have passed the conter of the cam wheel.
Claim.-1. An inproved machine formed by the combination of the shaft $B$, the wheel E having a spiral groore, $e^{1}$, formed in its face, the blocks II, haring friction-wheels I attached to them, and the slide F , or equiralent, with each other and with the guides $G$ and frame $\Lambda$, substantially as herein slown and described, and for the purpose set forth.
2. The combination of the flanges $J$ and $h^{\prime}$ with the gnide G and blocks II, substantially as hercin shown and deseribed and for the parpose set forth.
g/1, 194.-R. L. VANCE, St. Louis, Mo.- Vinegar Still.-February 4, 1868.-The still is divided by a horizontal diaphragm into two chambers; in the upper one the mash is warmed and in the lower one distilled by a coil of steam pipe. The rapor in passing to the condenser is mingled with a small quantity of vinegar which flows into the steam pipe.

Claion.-1. The tank A, when divided into two eclls a ai and combined with the distilling apparatus e E E ${ }^{\prime}$, as deseribed and for the purpose set forth.
2. The combination of the apparitus A E E with the derices $\mathrm{F} \mathrm{F}^{1} \mathrm{~F}^{2}$, substantially as described and shown.
g4, 1 g5.-P. FI. Vander TVeyde, Philadelphia, Pa.-Preparing Aerated Liquids.-Febrnary 4, 1868; antedatcd January 27, 1868.

Claim.-1. The deseribed manner of dissolving the earbonie acid gas in water by means of coil, gas jet, and reservoir, with stop cocks, regulator, and safety
val:c, this solution being made at the place and time it is to be used as a beverage.
2. Mixing carbonic acid water with the reqnired quantities of concentrated solutions of the salts contained in diverse mineral waters, or the concentrated aleoholic extracts of beer, cider, wine, \&c., and thus by only supplying one single fountain with so called soda water, or cren with pure water, to draw from it, at will, any desired mineral water, beer, champagne, cider, or wine, and, in gencral, any beverage containing carbonic acid, always fresh and cool and equally effervescent.
194,176.-R. C. Vernol, New York, N. X.Walking Vehiele.-Fcbruary 4, 1868.-The legs arc operated by cranks turning on eeeentrics by which they are raised during their forward movement and depressed during their effective stroke.

Claim.-The legs C D of a walking vehicle when they are connected with the eccentric shafts E E, and with the crank shaft $B$, in such a manner as to receive up and down as well as oscillating motion, snbstantially as and for the purpose herein shown and described.
g4, 1 g'g.-George S. Walker, Etie, Pr.-Step and Extension Ladder.-Febrnary 4, 1868.-The upper section, when it is used as a long ladder, is raised by a cord passing around pnlleys and drawn by a windlass, turning in bearings upon the lower section.

Claim.-1. In a combined extension and step ladder, the hooks $i$ and arm $n$, in combination with lad ders A B, cord $b$, pulley $m$, and crank shaft $a d$, all constructed, arranged, and operating substantially as described and for the purpose specified.
2. In combination with the above, the hook $h$ and guides $c$, snbstantially as described.
3. The combined extension and step-ladder, constructed snbstantially as described, and consisting of the sections $\triangle \mathrm{B}$, hooks $i$, arm $n$, guides $c$, pulley $m$, cord $b$, and crank shaft $a d$, all arranged and operating snbstantially as set forth.

94,198.-Anson L. Warburton and Henry Bendir, Fort Wayne, Ind.-Metallie Seroll Ends for Spring Bars for Carriages.-February 4, 1868. -The scroll ends consist of a hollow metallic case, which covers the end of the wooden bar.

Claim.-The metallic scroll ends for spring bars and head blocks for earriages, \&c., as an article of mannfactnre, the same being constructed and used in the manner and for the purpose snbstantially as specified.
g4, 耳79.-C. M. H. Warken, Brooklyn, N. T.Pen Holder.-February 4, 1868.-The pen, with its holder, slides on the outside of the extcnsion handle.

Claim.-A pen holder, provided with a sliding handle A and barrel B, and with a sliding nosing C, all combined and arranged substantially as and for the purpose herein set forth.
M4, 180.-GEORGE M. Wells, London, England, assignor to Mroses D. Wells, Chicago, Ill.-Last.February 4, 1868.

Claim. -The last, as made with the horn F to projeet from its instep part $B$, and be conneeted therewith as specificd.

G4,181.-George MI. Wells, London, England, assignor to Moses D. Wells, Chicago, Ml.-Last.Febrnary 4, 1868. -The upper portion of the last has a curred doretail tenon, sliding in a suitable groore in the main portion. The portions are seenred together by a vertical, tapered key.

Claim-1. The improved last, as made, with its two sections or parts connected by dovetails, and haring a slot, opening, or hole made and arranged in each, as explained, for reception of a leg or standard, as described.
2. The combination of the key or standard with the two last scetions, connected by dovetails, and haring slots or key holes or passages arranged in them, as set forth.

194,182.-C. II. Weston, Lowell, Mass.-Bench Hook for Carpenters' Benches.-Februar's 4, 18c8.-

The weight of the elamping bar is supported by a spiral spring. The bar is clamped to any elevation by the slotted case, which is pressed to contact therewith by the eam bolt, which is turned by a key, its head being reached from the bench top.
Claim. -The bolt II, with its cam projection, when used with the slotted ease G for elamping bar D, the several parts being constructed and operating substantially as specified.
g4,183.-Charles White, Bladensburg, Md. Plow.-February 4, 1868. -The beam is pivoted to the post and adjustable at the rear end. The draw bar slides beside the beam, and its rear end engages a spring within a cylinder.
Claim.-1. The angle iron I, in combination with the slotted transverse bar J and the rear end of the plow beam, for effecting the double adjustment of the latter, in the manner described.
2. The pirotal support $G$ of the plow beam $E$, in combination with the perforated horizontal flange or lug $a$ on the mold board, as described.
3. The plow beam, provided with tubular or semicylindrical ribs or corrugations, substantially as described.
4. The yielding tension or draught rod, passing centrally through, or having an eqnivalent arrangement relative to, the beam, as described.
5. The yielding dranght rod, in combination with the spring, operating as described.
6. The drnm or socket, formed in or attached to the beam, in combination with the spring and draught rod, as described.
74,184.-S. B. Whitney, Coxsackie, N. Y.Sustaining Device for Draught Poles for Carriages. -February 4, 1868.-The tongue is snpported by a spring bearing, beneath the axletrce and tongue, and supported by a loop on the pirot bolt of the tongue.
Claim.-The loop or hook $i$ hanging from the bolt $e$ and snstaining the spring $\mathbf{F}$, in combination with the tongue $d$ and jaws $c$, as and for the purposes set forth.
74, 185.-Alfred WOODHam, New York, N. Y. -Skate Fastening.-February 4, 1868.

Claim.-1. The heel clamps to the skates when constructed as described, to grasp the heel both upon its sides and edge, nuder the shank, as herein shown and described.
2. In combination with the above, the piroted slotted clamps C, when prorided upon this inner ends with the swiveled right-angnlar nuts $I$, receiring the screw bolt H , whereby the said clamps are permitted to adjust themselves to the sole of the boot or shoe, by combined lateral and longitudinal morements, as herein shown and described.

G4,186.-C. F. WOODRUFF, Newbern, 'Tenni-Water Elevator.-February 4, 1868. - The chitch shaft has a crosshead whose arms traverse slots in the main shaft and engage projections on the drum to cause its rotation. When the clntelh shaft is drawn outward the drum has a revolution on the main shaft.

Claim.-The shaft $b$, working in the axle B, having the bar D atits extromity, working through the slot $b^{\prime \prime}$, clutching the drum C by the stops $d$, in manner substantially as abore set forth and decribed.

煦4,18\%.-RuFUs Wright, Brooklyn, N. Y:Cherry Stoner.-February 4, 1868. - The cherries descend the cylindrical tube from the hopper and are carried beneath the needles whieh descending, eject the stoucs. The fleshy portion is carried rip on the needles and antomatically taken therefrom.

Clatim.-1. The reciprocating rod H, armed with the needle $c$, prorided with notches or barks, in comnection with the bed Q; having the recess or carity $g$ made in it, and the hole $f$ extending entirely through it, with the arm S working underneath the hole f in the bed, all arranged substantially as and for the purpose set forth.
2. The vibrating bar U, provided with the plates $u u$, in combination with tho reciprocating rod II, armed with the needles $c$, and the bed Q provided

With the hole $f$, all arranged substantially in the mauner as aud for the purpose specified.
3. The ribrating bottom $L$, in connection with the tube K , the former being provided with the curved projection $\mathbf{N}$, and arranged to operate in connection with the bed $Q$ and guard $R$, all arranged to operato substantially as and for the purpose set forth.
4. The eam $G$, prorided with the rim $e$ and piu $j$, and connected with, or arranged to operate, the rod H , bottom L , strike or $\operatorname{arm} \mathrm{S}$, and the bar U , for the purpose specified.

74,18s.-Henry Wurtz, New Tork, N. J.Compounding Printers' Ink from Grahamite.February 4, 1868.-Improvement ou pateut No. 67,697. The ink may be componuded as follows: crude " grahamite" oil, 5 oz.; lamp-blaek, 4 oz.; solid " viscosine," 7 oz .
Claim.-The use, as an ingredient in priuting inks, of the resinous constitueut of the gralamite of West Virginia, ealled by me, "riseosine."

94,159.-Edxund A. Harvey, Wilmington, Del.-Carriage Shaft and Pole Coupling.-February 4, 1868. The pintle bolt of the thill iron enters the hooked end of the clip bar, and is retained by the L-cuded bolt whose nut has a washer of rubber.
Clain.-1. The eleris $A$, with pin or bolt C, with or without either permanent or detachable safety lips $G$, in combinatiou with hook box $B$, substantially as deseribed.
2. The hook box B , in combination with key bolt D , , ith spring or elastic wasleer E , for the purposes named.
\% 4, 190. James Arkell, Canajoharie, N. X., assignor to himself, BENJAMIN Smitir, and ADAM Smit, same place.-Machine for Making Paper Tubes, cec.-February 11, 1868.-The bags are made from a continuous strip whose sides are curved over and pasted to form a flattened tube which is afterward cut into lengths. The bottoms are seeured at a subsecpuent operation.
Claim.-1. The notelied and laterally-adjustable paste wheel F , in combination with the elastic corering $b$, on the roller D , arranged to operate for pasting one edge of the paper, substantially as shown and described.
2. The curred former I, arranged in relation with the upper tension roller E , for the purpose of admitting of the folding and pasting of the paper in flat-tube form, as set forth.
3. The extension rods $J$, applied to the former $I$, and frame $A$, for the purpose of adjusting the former I, substantially as set forth.
4. The pressure rollers $h$, applied to adjustable bars K K, and arranged relatively with the former $\Psi$, to hold up the edges of the paper sheet preparatory to the turning over or folding of the same, as shown and described.
5. The adjustable blades L L, arranged and applied substantially as shown aud deseribed, in combination with the former I.
6. The adjustable blades $n$, fitted in swivel braekets $m$, in adjustable arms O , on upright shafts $\mathrm{N} N$, grubstantially in the manner as and for the purpose spccified.
7. The securing of the shafts N , and consequently the brackct arms 0 , in proper position, by means of the levcrs P aud raeks 0 , arranged substantially as set forth.
8. The two eylinders Q Q', provided, one, Q, with the grooves $r^{\prime} r^{-1} r^{\prime \prime}, s s$, and the cutters $t$, and the other, $Q^{\prime}$, with the bar's $u u^{\prime} u^{\prime \prime}$, substantially as and for the purpose specified.
9. The stationary or fixed eutter R , in combination with the cutter: R'attached to the vibrating plate S , substantially as and for the purpose set forth.
10. The loop or guide $\bar{Y}$ attaehed to the piroted bars $a^{\prime} a^{\prime}$, which are connected to the plate S , and arranged to operate in the manuer as and for the purpose specified.
g4, 191.-J. J. Barnes, Monticello, Ind.-Finger Bar for Harvesters.- February 11, 1868. - The finger bar is supported on a series of anti-friction rollers interposed between the guards.

Claim. - The series of loose frietion rollers 2 , in combiuation with the guards 1, rod 4, and finger bar $A$, arranged and operating substantially as and for the purposes set forth.

94,192.-Robert Bates, Cohasset, Mass., assignor to himself and William Hall, Brookline, Mass.- Window Sash Fastener.-February 11, 1868. -The lower side of the barrel of the latch has bearing upon the fillet at the base of the standard. The latel has a spiral spring, tending to hold it in line With the sash bar to which it is attached. The housing has a spring eatch whieh engages the lateh When it is swoug around against the projection, and the sashes are fastened.
Claim.-1. The combination and arrangement of the standard D , the fillet $d$, and barrel $\mathrm{C}^{\prime}$, made substantially as described, and for the purpose set forth.
2. The housing K , east with the projcetion M, substantially as deseribed, and for the purpose set forth.
\% $4.193 .-G o t t l i e b$ Beurer, Brooklyn, N. Y., assignor to himself and F. Znmermax.-Bedstead.February 11, 1868.-The head and foot boards are hinged at the mid-length, and the sides are divided at mid-lengtly and linged to the corner posts. When set up, the sides are connected by the dovetailed eross bar.

Claim.-Construeting the sides A A, with the posts C CCC aud legs D D D D, and made in halves, as shown, and provided with the cross bar II, combining said halres, in combination with the end picees 13 B , constructed in the manner substantially as herein shown, and for the purpose deseribed.

74,194.-Mathias Bösuevz, Chili, Ill.-Har-row.-Fcbruary 11, 1868. -The harrow is supported on rertienlly adjustable wheels.

Claim.- 1 . The bars $c, d$, and $y$, the lever $J$, the upright $K$, all constructed aud arranged as deseribed, and combined with the firame $A$, substantially as speeified and for the purpose set forth.
2 . The bars $c, d$, aud $y$, the lever $J$, the upright K , combined and arranged as deseribed, in combination with the rod $y^{\prime \prime}$ aud wheel R , substantially as deseribed and for the purpose set forth.
3. The rods T, in combination with uprights E , combined, arranged, and attached as deseribed, and for the purpose set forth.
4. The cutters F F F F F, attrehed as deseribed, and for the purpose set forth.

74,195.-Morgan W. Brown, West Farms, N. Y.-Preparing Paper for Wrapping Tobaceo, Snuff, Soap, and other Articles.- Febrnary 11, 1868 ; antedated Juuuary 27, 1868.-Glyecrine is reduced by mixture with water to 220 gravity, and mixed with 10 per cent. of pearlash in a weak solution. The paper is saturated with the mixture.

Claim.-A composition of matter, as herein substantially set fortly and specificd, and its uses and application to the preparation and treatment of paper, eloth, and regetable fibrous substances, for the uses and purposes herein specified and set forth.

74,196.-Calvin Carpenter, Jr., Astoria, N.Y., assignor to H. H. Wolcort. - Mydrocarbon Burner. -February 11, 1868.-The blast of air is forecd through the water and the oil whieh floats thereon, aud abstraets the lighter part of the oil for present combustiou, leaving the lubrieating oil to be drawn off.

Claim.-1. The within described process of burning crude petroleum and separating from it the heavy parts fit for lubricating oil by passing currents of air up through the body of the petroleum to be burned, said petroleum being made to float on water, sabstantially as and for the purposes set forth.
2. The arrangement of one or more cisterns 13, surrounded by a water jacket C, and provided with air bomets $b$ below, and with pipes $c$, to draw off the heary oil, substantially as hercin described.
3. The arrangement and combination of the slide $i$ Tith the eistern or cisterns B , in the burner A , substantially as and for the purpose set forth.
4. The arrangement of a rose $j$ over each of the cisterns B , in combination with the air bounets $b$ below, substantially as and for the purpose deseribed.
5. The cscape apertures $g$ in the water jacket $C$, surrounding the cistern or cisterns $B$, substantially as and for the purpose set forth.

94, 197.-James 'I'. Carson, Greenboro, N. C.Belt Puneh.-February 11, 1868; antcdated January 6, 1868.

Claim.-The combination belt punch, construeted as described, consisting of the arrl A, having the handle B split to receive the knife blade E , the adjustable liammer $D$, carrying the punch $C$, with its cars $b$ fitting orer said liandle, and pivoted thereto, the spring $f$ secured at $d$ in the handle $B$, and operating the knifo blade and punch, substantially as lierein set forth, for the purpose spceified.

184, $135^{3}-$ E. M. Chumaid, Pittston, Pa.- Wagon Brake.-Fcbruary 11, 1868. -The brake lever is connected by a link to a pair of brake blocks suspended from bell-crank levers upon a shaft turning in eyes upon the npper brake bar. The friction of the first mentioned brakes aets to rock the bell-crank shaft and put the additional brakes in operation. A spring frees the brakes when the lever is relaxed.

Claim.-1.-The arrangement of the roller R with the arms $n$ and $h$, and the brake bar $F$, when constructed in the manner substantially as and for the purposes herein specified.
2. The slide $m$, eonstrueted as described, and nsed with the brake bar $E$, in the manner substantially as and for the purposes set forth.

4, 199.-SETH E. Clapr, Cambridge, assignor to himself and Cirarles I. Ridgway, Boston, Mass. -Corkserew.-February 11, 1868.-The shank of the corkscrew is jointed, and has a slecve which slides over the joint and keeps the shank rigid while the screw is being inscrede. When the screw is entered the slceve is slipped from the joint and the stud upon it used as a fulcrum against the bottle neck, while the shank is used as a lever to cxtraet the cork.

Claim.-The sleeve $E$ and stud $F$, or their mechanieal equivalent, in combination with the jointed corkserew 13 C , substantially as deseribed and for the purpose set forth.
 Meal Chest.-Fcbruary 11, 1868.-The box has compartments for meal and flour. The sliding lid within the box protects one compartment while aecess is had to the other.

Claim.-The rectangular box $A$, Trith partition $b$ and sliding cover $c l$, by means of grooves $e e$, drawers $e e$, and inelined lid $f$, all constructed and used substantially as and for the purposes set forth.

4,201.-E. Hall Covel, New York, N. X.Clothes Wringer.-Fcbruary 11, 1868.-The box of the upper roller is depressed by the rubber ball, which is adjustable by hearl serews.

Claim.-1. The ehamber in the upper part of the frame for holding the ball, in combination with the cup $h$ above the ball, for the purposes herein recited.
2. The ball $f$, made of rubber or some elastie material for forming a spring bearing for the rollers, substantially as deseribed.
3. The double inclined box $g$, for the adjustment of the rollers, in combination with the ball $f$, as and for the purpose speeified.

19,202.-Daniel Crowley, Philadelphia, Pa., assignor to himself and J. Staneey Bruner.Cleaner for Drawing Rollers.-February 11, 1868.The cleaning rollcrs are covered with sheepskin, dyed with the wool on, and placed wool side out.

Claim. - The eombination of cleaners B B , construeted as described, with the rollers A A, substantially as and for the purpose herein speeified.
\%4,203.-W. P. W. Dana, Newport, R. I.-Line Fostener.-Fchruary 11, 1868.

Claim.-1. A line fastener, in which the griping hook, or its equivalent, is combined with a vibratory arm, to Thieh it is pivoted or hinged, substantially as deseribed, so that the strain of the tightened rope whieh passes under the hook shall foree together the sad hook and vibratory arm, and cause the rope to be griped and held betwoen them, as set forth.
2. In combination witl an arm or bar eapable of a vibratory motion, as set forth, the double hook or griper, with or without the spring by which said hook is held in position, substantially as herein shomn and deseribed.
3. The line fastener herein deseribed, in combination with a pullcy and pulley block, under the arrangement and for operation as set forth.
g4,204--Clamence Delafield, Factoryville, N.Y.-Water Gauge.-February 11, 1868.-The inner end of the tube, which is screwed into the boiler front, has a socket valve scat, and the float rod a scgmental valve to work therein. The valve and seat hare steam duets, which are brought into conjunction when the mater has sumk to too low a lerel, and the steam passes through the tubulare end of the rod which communicates with the whistle. The end of the rod is also conneeted to the index finger over the dial plate.
claim.-1. The use of a funnel-shaped tube, fitted with a valve, and combined with the boiler shell. substantially as described, by which the escape of the steam around the valve stem is stopped, and the motion of the float and dial point provided for'.
2. The whistle $a$, in combination with the ralve stem, when said valve stem is made with a holc through the same, leading from and matching with a hole in the valve seat, and discharging in the whistle, substantially as describcd, by which the escape of steam is regulated, and made to sound an alarm at a certain stage of the mater.

复,205.-Charles A. F. Dietz, New York, N. Y. -Medical Compound.-Tebruary 11, 1868. - For treatment of consumption, erushed water cresses, 1 lb . California minc, $4 \mathrm{lbs} .$, are tightly eorked and heated in an oven for four hours. Crushed horseradish, 1 lb. , and wine, 10 llbs ., are treated in the same manner. After cooling and filtcring they are mixed in the following proportions: Water-cress cxtract, 2 parts, and horseradish extract, 1 part.

Claim.-A medical compound, made as herein described.
g4,20G。-HENRy Disston, Philadelphia, PaMachine for Grinding the Rolls of Rolling LIElls.February 11, 1868.-The grinding frame is elamped to the uprights of the roll frame, and the rollers are ground while rotating upon their journals.

Claim.-1. A plate E, secured to the frame of a rolling mill, and laving a guide for receiving a traversing slide, which carries a grindstone, or the grinding whecl, to which a rotary motion is imparted, all substantially as and for the purpose herein sct forth.
2. The plate E, in combination with the within deseribed devices, or equivalent deviees, whereby it ean be made to assume different curves, as and for the purpose specified.
gy, 20\%.-D. P. Dobbins and John S. Richatids, Erie, Pa., and James Sangster, Buffalo, N. Y.Briek Mlachine.-February 11, 1868. -The motire conneetions of the pistons are sceured to the eranks of the main shaft by straps, which are made adjustable by the arrangement of the keys so as to allow lost motion between the shaft and conncetions to regulate the size of the molds. In order to prevent the lost motion from being taken up by the baekward motion of the molds, whieh might draw the pistons baekward by frietion, a pin is inserted in one of a series of holes in the guides to limit the motion of the pistons. The lifters are upon the ends of horizontal levers, whose other ends are depressed by eams upon the main shaft. The lifters have downward extensions connceted to radius rods by which they are kept vertieal. The faces of the followers arc detaehable.

Claim.-1. The combination and arrangement of the mechanism for regulating the size of the mold While open, eonsisting of the adjustable strap S , keys $W, X$, and $Y$, for holding said strap in position, substantially as hercin deseribed.
2. The frietion rollers $P$, when in combination with and conneeted dircetly to the sliding molds $O$, as and for the purposes deseribed.
3. The stationary perforated platen or platens E,
in combination with the friction rollers $O$, the sliding molds U, and cam No. 2, substantially as and for the purposes herein described.
4. The combination and arrangement of the rods or arms $D^{\prime}$ and $C^{\prime}$, for the purpose of keeping the lifters $\Lambda^{\prime}$ in a rertical position, and to prevent the parts from being clogged up while working, substantially as described.
5. The arrangement of the cams $1,2,3$, and 4 , on the whecls $J$, so as to produce from one set of wheels and one set of cams on each whecl, the alternate reciprocating motions of the sliding molds at oppo site ends of the machine, substantially as herein deseribed.
6. The pin Z, or its equiralent, substantially as herein described.
7. 'The arrangement of the frame N , for supporting the upper gearing, and affording a shichd to the whecls J, substantially as herein described.
g4,208.-RUFUs Dutron, New York, N. Y.-Harrester-February 11, 1868.

Claim.-1. Making the foot board and tool box of harresters of a single metallic picce, when such foot board, at the same time, forms a support for the seat spring and seat, substantially as and for the purposes set forth.
2. Supporting the seat, by means of a main spring $Z^{\prime \prime \prime}$. in combination with a spring brace $Z^{\prime}$, arrangect, with respect to each other, substantially as described, both being rigidly attached to the frame or foot board, and at their other ends to the seat, and having a short intermediate spring $Z^{\prime \prime}$ between them at their upper euds, and fiee at its lower end, substantially as and for the purposes set forth.
3. Extending back and upward the rear part of the foot board, to form a support or brace for the main seat spring, substantially as described.
4. Fastening the foot board and seat spriness by one and the same clasp or fastening. passing around the axle or asle sleeve of the machine, substantially as set forth.

74,203.-Rufus Dutton, New York, N. Y.-Harvester.-February 11, 1 S68.

Claim.-1. In a harresting machine, having the four sides of the frame constructed of scparate parts and rigidly fastened together, making one side of such frame cncase and protect all the turning shafts of the machine, and another side encase the axle, for the purposes set forth.
2. In a harresting machinc, laring a rectangular frame, its screral sides being separate pieces and rigidly connected together, making one of the sides of such frame of two or more pieces, so that they Will not only constitute one of the sides of the frame, but will also encase and protect the secondary gearing ind pinion and shaft, substantially as and for the purposes set forth.
3. In a harvesting machine, having a rectangular or four-sided frame, its tour sides rigidly firstened togetder, making the end of the frame which is suppoited by the axle of the machine hollow, and passing the axle through it, substantially as and for the purposes set forth.
4. In a two-mhecled harresting machine, having a hinged finger bar and a loose pole, and having the pole hineed to the frame, so that the center or axis upon which the pole turns shall be the same with that upon which the frame tirns, attaching the draught to the front end of sucli frame, and supporting the whiffletree or erener from the pole or shafts by a sliding or yiclding support, substantially as and for the purposes set forth.
5. Constructing the crank whecl fender so that it will be not only a guard for the crank wheel, but will also support and keep the end of the conneeting rod on the crank pin, substantially as and for the purpases set forth.
6. Forming the crank fender in two parts, which are hinged to and upon each other, substantially as and for the purposes set forth.
7. The metallic picec $y$, for attaching to and supporting the evener from the pole, haring flanges on its sides, or their equiralents, and open at the forward end, so that the evener can be conmected or disconnected without the nse of any bolt or pin.
8. In a machine, having tro driving or supportiug

Whecls, and haring a loose pole, supporting the raker's stand by the pole and behind and below the axletrec, substantially as and for the purpose set forth.
9. The arrancement and uso of the adjusting serem, passing through the shifter lerer, or equivalent support, and operating upon the end of the berelwheel shaft, substantially as and for the purposes set forth.

74,210.-Rufus Dutron, New Tork, N. Y. Harvester. February 11, 1868.

Claim.-1. In combination with a lerer for raising the finger bar, when such lever is forked, or in two parts, at its lower cnd, so that it will have two points or smfaces to act upon the shoe, the double sheave $V^{1}$ attached to the frame of the machine, substantially as and for the purposes set forth.
2. The use and application of the double sheare $\nabla^{1}$, in combination with a lerer for raising the finger bar, operating substantially as aud for the purposes set forth.
3. In combination with a device for rolling or turning the points of the fingers, so attachinm to the machine the hook that holds up the finger bar when folded, that such hook shall reccire the same motion, when the points of the fingers are raised or lowered, as is communicated to the shoc, for the purpose set forth.
4. In combination $w$ ith the hool that holds the finger bar when folded, when such hook is so attached to the machine that it mores with the shoe, when the finger bir is turned, the application of a spring for holding such hook to the shoe, sulstantially as and for the purposes set forth.

- 1,211 . -RUFUS Dutton, Brooklrn, N. Y. Cutting Apparatus for IIarvesters. - February 11 1868. -The middle of the eutter bar is raised to allow the attachment of the cutters without countersinking the rifet holes, and to decrease the friction of the bar as well as add to its rigidity.

Claim.-1. A knife bar, having both its front and baek edges depressed, so as to form, when combined with the knires or cutters, recesses or openings between the edges of the knife bar and the knives, and having its central part recessed or raised longitudinally from the under side, the whole constructed substantially as and for the purposes set forth.
2. The application and use of the plate D , arranged and held as described, for holding down the front edge of the knife bar; substantially as and for the purposes set forth.
3. In combination with such plate D, for holdines down the front edge of the knife bar, tho button E , arranged as described, for holding down the back cdge of such bar.
 Cutting Apparatus for Ilarvesters.- February 11, 1868.- Both ends of the leger plate enter recesses in the finger, and the ends are secured in the recesses by the oneration of securing the fingers to the bar.

Claim.-1. Fastening or securing the leger plate between the finger and finger bar, substantially as described, without tho nse of a separate rivet, or its equivalent, to firsten such leger plate when the finger bar is raised or turned up on its front edge to a level with the upper surfitce of the leger plate, and so as to form the guard or cross-bar for the support of the linives.
2. Constructing the leger plato so that a part thereof may pass between the finger and finger bar, to hold such plate in position upon the finger, and a part thereof may pass orer the knife bar, to act us a button to hold down the front side of smeh bar', and kecp the kinives mpon the leger plate, substantially as and for the purpose set forth.
3. In eombination with a leger plate, constructed as described in the last claim, recessing the frout edge of the finger bar to receive the projecting part of the leger plate, substantially as and for the purposes set forth.
g $4,213 .-R u f u s$ Dutton, Now York, N. Y.Cutting Apparatus for Harvesters.-Februnry 11, 1868

Claim.-1. Constructing the finger bar of harvest-
ers by eurring and raising the front edge above the upper surface of the bar, sufficiently to give room for the knife bar, when placed on the under side of the cutters, and allow open space between such knife bar and top of the finger bar, for the cscape of dirt, grass, \&c., substantially as described.
2. Making the upper edge of the finger bar, when constructed as deseribed in the last claim, form a continuous guard bar in front of the knife bar, substantially as and for the purposes set forth.
3. In combination with a finger bur constructed as described, the use of a button, for holding the knife bar in position, constructed, substantinlly as described, of soft or flexible metal, with a steel or hardened surface, against which the knife bar acts, for the purposes set forth.

74,214.-William Fosket, Meriden, Conn., assiguor to Meriden Cuthery Company.-Apparatus for Grinding Cutlery.-Fcbruary 11, 1868. Improvement on his patent of December 26, 1865.The upper face of the plate is straight, and the matrix has the nccessary curvature.

Claim.-Construeting the matrix in machines for grinding cutlery substantially in the manner described, so that a single and direct movement only is required for the matrix to prosent the blade to the griuding apparatus.

94,915.-Nicolas Gonner and Herman Bader, Cape Girardeau, Mo.-Cistern Filter.-Fcbruary 11, 1868.-The water passes through the filtering material down one side of the vertical axial division, and, after passing beneath it, rises upon the other side.

Claim.-1. A filter, consisting of the parts A, B, $\mathrm{C}, \mathrm{D}, \mathrm{E}, \mathrm{F}, \mathrm{G}$, and $a$, substantially as described.
2. In combination with the above, the valve $I I$, fauect I, and stoppers $J$, substantially as herein described.

74,216.-Stinson Hagaman, Wiessport, Pa.Machine for Beveling Edges of Slates.-February 11, 1868; antedated January 27, 1868.-The bevel-edged cutter wheels are in one planc, and their peripheries come nearly in contact. The slates are passed between guides.

Claim.-1. The bereled grinding wheels, arranged and operating substantially as and for the purpose described.
2. In combination with the beveled grinding Wheels, the gaide timbers $\mathrm{E} \mathrm{E}^{\prime}$, arranged substantially as and for the purpose described.
3. In combination, the drum B , the belts D and $\mathrm{D}^{\prime}$, the beveled wheels C and $\mathrm{C}^{\prime}$, and the guide timbers E and $\mathrm{E}^{\prime}$, all arranged and operating substantially as deseribed.
g4,217.-Alexander Hamar, New Tork, N. T. -Smelting and Desulphurizing Iron Ore.-February 11, 1868. - Steam is driven through a chamber filled with iron filings, 2 parts; and charcoal, 1 part. From this deoxygenating chamber the steam passes through a coiled pipe within a chamber, which, like the first, is heated by the waste caloric current from the furnace. The resulting hydrogen is mingled with the hot air blast in the tuyeres.
Claim.-1. The method, herein deseribed, of desulphurizing both the ore and the fuel in a blast furnace by the introduction of nearly pure hydrogen, in combination with the blast, as set forth.
2. The method, herein described, of desulphurizing both the coal and the iron in a puddling furnace by means of separate jets of hydrogen, as set forth.

94,218.-David A. Harris, Ithaca, N. Y.-Wood-Planing Machine.-February 11, 1868.-The mandrel carries a right and lett-handed head, and is vertically adjusted by a cam, operated by a treadle, to bring cither cutter into position. The cam shaft has comnection with the shifter, to cause the proper rotation to the head brought into position.

Claim.-1. The arrangement and construction of the treadle $N$, slotted lever M , and can K on the shaft L, slide or frame H, and mandrel in the slide or frame, so that the treadle raises and lets fall the tools on the mandrel, substantially as and for the purposes set forth.
2. The arrangementand construetion of the treadle N , lever M, shatt L, cam K, slide H and its mandrel, in connection with the slotted lever R , rod S , angle T , slide U , pulleys W X Y , and two belts, changeable by the guides $V$ thereon, for reversing the direction of the revolution of the mandrel and tools, and bringing into action cither set of tools at pleasure, substantially as and for the purposes set forth.
3. The arrangement of the treadle, treadle lever, and cam, mandrel, tools, slide, guide rod, and belts, in connection with the fixing rod $P$, that the changeable belts can be run and not the mandrel, or the maudrel and tools, uniformly and constantly, for any given time, substantially as set forth.

94,219.-Charles F. Hartwig, West Haven, Conn., assignor to himself and George R. Kelsey, same place.-Hose Coupling.-February 11, 1868.The screw ring has an internal groove, which reecives the segmental projections upon the other part of the coupling. The said projections are passed through the notches in the inturned flange of the screw ring, and engaged by a turn. A packing ring is interposed betreen the parts.

Claim. - The arrangement of the ring G, provided with its flange $H$, upon the part $A$, in combination with the ring E , constructed so as to operate substantially as set forth.

94,220.-William Harvey, Albany, N. Y.-Padlock.-February 11, 1868; antedated September 12, 1867.-The shackle is engaged by two spring bolts. The operation of withdrawing one bolt holds back the other bolt till the first is released, when, in the further action of the key, the scoond bolt is withdrawn, and the shackle springs open.
Claim.-The combination of the piroted tumblers or bolts C D with the spring $l$, constructed, arranged, and operating substantially as deseribed.

74,221. - Westel E. Hawkins, Walingford, Comn, assignor to Simpsos, Hall, Miller \& Co., same place.-Butter Dish.-February 11, 1868.-The bcarings have projections which enter notches in the trunnions, and prevent rotation of the latter with the eover.
Claim. - The arrangement of the projection $d$ upon the bearings, combined with the groove $f$ in the knob around the trunnion, so as to operate in the manner substantially as described.

94,222.-William H. Hawley, Utica, N. Y.Whiffetree Hook:-February 11, 1868.-The point of the latch is raised for the passage of the trace, and settles by gravity, to prevent accidental disengagement.
Claim.-The whiffletree look, composed of the thimble A, hook B, and latch or stop C, constructed and operating in combination substantially as doscribed, and for the uses and purposes mentioned.
'94,223.-Tilliam H. Hawley, Utica, N. J.Whifletree Hook.-February 11, 1868. -The hook turns upon the end of the singletree, and when projecting backward there is space for the introduction of the trace, which is not found when the hook extends forward.

Claim. -The whiffetree hook, constructed of the thimble A , with the curred end D and E in combination of the ring B and hook C , all construeted and arrauged substantially as described, and for the uses and purposes mentioned.

74,224.-George Hergeshemer, Philaderphta, Pa., assignor to himself and Cornelius V. Foet, same place.-Brush Bridle.-February 11, 1868.The "bridle" is of rubber, and the flange and suction cup are for collection of paint, running toward the handle when the end of the brush is elevated, as in painting a cciling.

Claim.-The arrangement of brush bridle B with the suction cup S C and flange F L, constructed and operating in the manner and for the purpose as herein set forth and described.
74,225.-Eugerius A. Hildreth, Wheeling, W. Va.-Composition of Matter for Forming Ornaments, dec.-February 11, 1868.

Claim.-1. The method herein deseribed of molding sawdust or pulverized wood into shapes and forms that will become hard and strong: that is to say, by mixing the said sawdust or pulverized wood witl ia solution of silieate of soda or potassa into a plastic mass, and then molding the same, substantially as deseribed.
2. The method of immersing or saturating objects molded from sawdust or pulverized wood and silieate of soda or potassa, as abore deseribed, in a solution of the chloride of magnesium, barium, caleium, ammonium, zine, iron, lead, or copper, or equivalent decomposing salt, while in a soft or plastie state, substantially as and for the purpose set forth.
3. As a new article of manufacture, arehiteetural ornaments, and other similar hard substances, composed of sawdust or pulverized wood, cemented together by silicates and molded into forms, substantially as herein deseribed.

74,226.-Harvey Hull, West Exeter, N. Y. Hay Loader.-February 11, 1868.-The ends of the wagon lave hinged boards which are let down to form a track for the horses in drawing hay upon the wagon by means of a rope.
Claim.-A hay-loading wagon, so construeted that the draught horses may travel orer the same, and draw it from either end, substantially as deseribed.
(4,2æ\%.-Sewell E. Jewett, Haverhill, Mass. -Operating Window Shutter.-February 11, 1868.The vibrating pin is eceentrie with the central line of oscillation, so that by the outward and inward morements of the sliding eam-rod the blind is opened or closed.
Claim.-1. The peculiar construction of eam C, especially with reference to the projecting point J, as shown in Fig. 2, when applied to and used for the purpose of opening and elosing a window blind.
2. In combination with said eam C, knob K, interior and exterior eseuteheons E and $\mathrm{E}^{\prime}$, slotted connecting bar B , vibrating pin P , and lever plate L , all operating as specified, and for the purpose as set forth.

194,228.-J. Louis Kastendike, Albany, N. Y. Cooking Stove.-February 11, 1868.-An ail space around the fire pot has communieation through passages abore the oren with a chamber at the rear of the stove, from which it has exit through registers.
Claim.-1. The combination of the hot-air chamber B , hot-air flues $\mathrm{I} i$ i $\mathrm{J} m$, and ralve $l n$, with the smoke flues, substantially as set forth.
2. The axis P , provided with the triangular plates or "rakers" $q q$, in eombination with the divided frame $\mathrm{N} N$, arm $y$, and lever $z$, arranged and operating substantially in the manner and for the purpose specified.
74,229. - Williay and John Keats, Leek-England.-Manufaeture of Boots and Shoes-Feb, ruary 11, 1868 ; patented in England April 14, 1863. -The edge of the upper is attached by through stitehes to the insole and a welt. The outer sole may be attached after turning, or turning may be dispensed rith.

Claim. - The construction of boots, shoes, or other corcrings for the feet with an insole, a welt, and an upper, first stitched together and afterward stitehed 0 otherrise connceted to a bottom or onter sole, substantially as deseribed, and illustrated in the drawings.

74,230.-Ferdinand King, Riehmond, Va., assignor to himself and C. W. Neudecker.-Gas Generator. - February 11, 1868. - The tar passes througl the water which is contained in the washing ressel above the retort, and whiel forms a hydraulie stopper to the retort. The steam is generated in pipes orer the retort and passes into the latter. The retort is leated to redness and contains coke.

Claim.-l. The method, herein described, of proGueing carburetted hydrogen gas, by introducing dissolved tar, or its equiralent, and steam, into a redhot gas-generating retort, substantially as set forth.
e. The improved gas generator, herein described, oonstrueted and operating substantially as set forth.
3. In un apparatus for generating gas from dissolved tar or other liquid hydrocarbon, in a heated
retort, a jet of steam introduced into said retort, to aet ehemieally in modifying the gas generated as deseribed, and mechanieally to force the gas from the retort, as set forth.
4. In combination with the retort A and a tar reservoir, the two vessels D and E , and the pipe C , constructed and arranged substantially as deseribed, for introdueing the dissolved tar into the retort.

74,231.-James S, Lawson, Disco, Mich.Hand Corn Planter.-February 11, 1868.-The corn is eontained in the tubular staff, and a suffieient quantity passes into the seed chamber when the seed slides are at rest, and is discharged by depression of the lever, which eloses the passage through the upper slide and opens that of the lower one.

Claim.-A eombination of all the prineipal parts above deseribed, essentialiy and for the purposes set forth, constituting an entire machine.
74.232.-Josfri S. Leminan, Mount Joy, Pan-Bag-holding Apparatus.-February 11, 1868.-The jaws are held in place by the clamping rod, which enters a socket in one jaw block, and a serew-threaded lole in the other. The angular bar is placed in the slots of the jaws, and engaged by slipping cndways. It is held in position by the spring.

Claim. -The construction of the flanged or slotted jaws B B , clamping rod D , and spring E , with the angular frame C , in combination with the truek frame A, all arranged and operating as and for the purpose herein deseribed.

94,233.-David Manuel, Boston, Mass., assignor to himself and Willaird Manuel, same place. -IIathine for Making Wire Springs.-February 11, 1868.-The joint of the wire is confined in the biseeted tnbular soeket, and commeneing at the point, the wire is wound upon the conoidal, grooved former.

Claim.-The couplings IB and C, with the thimble D , in combination with frame A , as and for the purposes specified.

94,234.-Samuel Mardex, Newton, Mass.Obtaining Motion by Means of Friction.-Tebruary 11, 1868. -The lever oscillates on the axis of the frietion wheel and is connceted to the treadle at one end, and at the other end has a frietion pawl which aets on the inside of the rim of the wheel to cause its rotation.
Claim.-The wheel A, with its rim a, in combina tion with the lever $\mathbf{D}$ and its pawl $i$, substantially as deseribed.

94,235.-Samuel Mardex, Newton, MassCar Brake.-February 11, 1868.-The wedge brakes are inserted between the inelined abutments and the wheels. The eam blocks bear against the flange of the same.

Claim. -1. The stationary abutment $a$, with its spline $f$, in combination with the wedge brake $c$, with its groore e, substantially as described.
2. The levers C C, in combination with the brake wedge $e$, substantially as deseribed.
3. The wedge brako $e$, with its projection or eam brake d, for the purpose of operating on the periphery of the flange, as well as on the tread of the wheel.
4. The wedge brake e, construeted, arranged, and operated substantially as deseribed.
94,236.-George R. Marvin, Keokuk, IownIee Cutter.-February 11, 1868 ; antedated January 30, 1868.

Claim.-The improved ice cutter, formed of a box A A $\mathbf{A}^{\prime}$, and the eutter $B$, with teeth $F$, and a hand lever C , in combination with the toothed ice cutter B and stop bars G G, substantially as and for the purpose set forth.

94,23\%-JJonn A. Mason, Keokuk, Iown,Fastening Teeth.-February 11, 1868. The metallio fastenings are inserted into the teeth in planes at right angles to the width thereof; and the fastenings projeeting from the teeth are inserted into tho plate at right angles to those in the tooth.
Claim.-The construetion of fastenings for artificial teeth, substantially in the manner and for the purposes described.

94, ヨ38.-W. W. Mathews, Yates City, IllGaing Plow.--Tebruary 11, 1868.-The racks inside the clevises of the plow beams engage spur whecls on the daruw shaft. The draw shaft has an additional spur wheel, which is detained by a sliding stop when the beams are raised. The stop is retracted by a treadle. The beams are raised by conncetion with a hand lever.

Claim. - 1 . The braees $a$ a draught bars $b b$, standards $c c$, construeted and in combination substantially as shown, for the uses and purposes herein set forth.
2. The method of raising, lowering, and securing the front end of plow beam by means of the levers $e$ and K, pin $r$, elevises $h h$, dranght bar $i$, cog-wheels $m$ and $n n$, with their friction rollers, flanges, the loek $o$, crank lever $p$, and treadle $q$, or by any means substantially the same, all in combination and as shown, for the nses and purposes herein set forth.
g. 4.239 - - Norman Milington, Shaftsbury, Vt. - Machine for Graduating Rulcs.-Tebruary 11, 1868. - Improvement on the patent of Millington \& George, August 8, 1854.
claim.-1. The changeable ratehet K, arranged and operating substantially as and for the purpose herein set forth.
2. The gauge wheel M , arranged and operating relatirely to the earriage $\mathbf{C}$ and its conncetions, substantially as and for the purpose herein specified.
3. The count wheel N , having ehangeable pins, combined and arranged to operate relatively to the gauge wheel $M$, the graver earriage C , and to the operating pawl P , all substantially as and for the purpose herein specificd.
4. The spring $O$, arranged and operating relatively to the count wheel N , the gange wheel M, and to the carriage $C$, or equivalent part, and the motion of which is controlled by the gauge wheel, all substantially as and for the purpose herein specified.
5. The pin $d$ on the eccentrie strap D , sliding in the hinged arm $\mathrm{C}^{1}$ of the graver carriage C , in combination with the gauging means M, or its equiralent, adapted to allow the carriage to retreat different distances, all substantially as herein set forth.
6. The levers S, mounted and arranged as represented, adapted to support cach other by direet contact both at the front and rear, and allowing the tool holders $T$ to be adjnsted laterally thereon, substantially as herein specified.
7. The spring X, pin $x$, and hollow adjusting serew Y, or its equivalent, arranged and operating relatively to the lever S , and its conncetions turning on the cylindrieal rod $s$, snbstantially in the manner and for the purpose herein set forth.
8. Lifting and holding the rule in the path of the gravers by means of the short-armed rock shaft $\mathrm{R}^{3}$ $\mathrm{R}^{4} \mathrm{R}^{5}$, and its connections, constructed, arranged, and operating as and for the purpose herein set forth.
9. The wedge-headed bolt W, operating as represented, relatively to the triangnlar graver $V$, and with the tool holder $T$, and its connections, meinted and arranged in the machine, snbstantially as and for the purpose herein specified.
'g4,240.-Josepit H. Moore and Josspil E. Gary, Chicago, M1.-Car Brake.-Feb: Gary 11, 1 wi. 8 . -The brakes are applied by the mindil? of a cha: 1 upon a shaft haring a frietion wheel e.icaged by $a$ friction wheen upon the axle, and so connected that the pressure of the brake inereases the pressure of the friction whecls together.

Claim.-1. The combination of the chain $I$, whesi $E$, and shaft $H$, with the jointed arms $u 0$, and with an arm or arms J, all operating snbstantially in the manner and for the purposes specified.
2. The combination of the eord $N$ with the rock shaft $K$, with its arms L and $b$, and the arms $J$, operating snbstantially in the manner and for the purposes specified.
3. The combination of the cord $N^{\prime}$ and prop $C$ with the cord N and arm L, operating substantially in the manner and for the purposes specified.
g1,241.-Albert W. Noble, Kalamazoo, Mich. -Spring Punch.-February 11, 1868 .-The pmelhes stand in a tangential dircetion upon the hub, so that the rear end is fully exposed for escape of the wad.

Olaim.-The form and construction of the rerolving head, and punches attached, as herein described, in combination with the spring side bars for holding and mounting the same, substantially as heroin set forth.
\%4,242.-Cmarles Payne, Brandon, Vt., and Benvet Vandecar, Waterford, N. Y. - Cotton Pickcr.-February 11, 1868.-The fiber is blown from the plant into the netting bag by movable nozzles on flexible air pipes.

Claim.-1. Removing eotton from the bolls by blowing it off array from the air pipes, in contradistinction to drawing it into the air pipes by suction, substantially as shown.
2. The combination of a fan, or its equivalent, with clastic or flexible pipes or tubes E , and a sliding frame F , to raise or lower their nozzles, substantially as and for the purpose described.
3. The combination of the rotating spindles $J$ in the sliding frame $F$ rrith the nozzles of the pipes E , substantially as deseribed.
4. The extension $A^{\prime}$ of the frame of the machine, in combination with the sliding frame $F$ and the bay N , substantially as deseribed.
5. The combination, with the air pipes E, of the bag N , which receires the cotton blown off the stalks of the plants, snbstantially as described.
g4, 243.-Martin W. Pond, Jr., and Alexander T. Ballantine, Titusville, Pa.-Wedge BucklenFebruary 11. 1868. -The tension upon the trace draws the tongue plate beneath the cam plate, and serves to hold them both in position to secure the trace.

Claim.-A new artiele of manufacture, a medge buckle, consisting substantially of the body $a$, wedge plate $b$, eccentric clamp $c$, and cross-bar $d$, or its equivalent, when said elamp $c$ is so arranged as to compress and guide the wedge plate when closed, and release it when opened, and the tredge plate $b$ so arranged as to move in a conrerging line with relation to the body $a$, and to close upon and tighten its hold on the trace or strap as the draught is increased, substantially in the manner and for the purposes set forth.
'g4,244.-Robert Porter, Philadelphia, PaVent for Sheet-metal Cans.-February 11, 1868.The screw plug is inserted at the side of the top opposite to the main nozzle, and is slotted at thi inner end, so as to admit the air when partly withdramn.
Claim.-A sheet-metal can provided with an attached rent plag C , having stays $c^{\prime} c^{\prime}$, fixed to its lower end, so as to prevent the said plug from being detached or cntirely withdramn from its cylindrical tube $b^{\prime}$, and at the same time allow of its being clovated sufficiently therein to rent the can, as ocoasion may require, as described and set forth.
g4,245.-Thomas Pratt, Valparaiso, Ind.-Wiench.-February 11, 1.868 ; antedated February 5, 1868.-The moring jaw is on a bar sliding in a transverse mortise of the fixed jawr slank.
Ciaim.-A wrench, in which the jarr $\mathbf{A}$ is formed by a solid extension of the handle, and the morable jatw $B$ is connected theremith by the stem C passing through a mortise at the base of the jart $A$, being tetained in place by the pressure of the cecentris eam lerer and spring $D$ upon the side thereof, substantially as set forth.

煦4,246.-Charles Quartley, Baltimore, Md. Cigar.-Febrnary 11, 1868. -The end of the cigar is tipped with fulminate, which cnables it to light by friction.

Claim.-As a nerr article of manu facture, the cigar or cigarette, haring the ends coated with the composition herein described, and providing it with a fulminating compound, as and for the purpose set forth.

194, 24\%-C.E. Rrchardson, Cambridge, Mass.Prcscrving and Packing Meat.-Febrnary 11, 1808.The meat killed in warm weather is frozen throughout and then placed in the pickle.
Claim.-The within described process of preserving animal matter, under high temperatures, from putrefaction.
7.248.-Daniel T. Robinson, Boston, Mass.Inplement for Cutting Tobacco and other substances. -Februar' 11, 1868.-The knife has a draw cut, being pivoted to the side arm of the lever at one end, and dirocted by the inclined slot at the other.

Claim.-The above described implement for cutting tobacco, consisting of the block or bed A, post $a$, lever $b$, and knife $d$, the knife being constrneted with the slot $e$, and provided with the roller $f$, or its equivalent, for actuating its movements, and supported within the guide $i$, the whole being construeted and operating substantially as herein shown and described.

19,243.-S. B. Rowler, Philadclphia, Pa.-Cap for Preserve Jars.-Fcbruary 11, 1868. - The top of the corer is corrugated, and the outer boaring portion is plain.

Claim. - A cap for preserve jars, consisting of a thin metal plate, formed and corrugated as specified.
g4, ®JO.-Jomn Sloar, Philadelphia, Pa., assignor to himself, JoHn II. Jones, and John Given, same place.-Stiffening Articles of Wearing 1 pparel. - February 11, 1868.-Tho stiffening is formed of connected rubber strips.

Claim. - The stiffener $a b c$ and $a^{\prime} b^{\prime} c^{\prime} d^{\prime} e^{\prime}$, made out of India-rubber, gutta-percha, or auy equivalent clastic substance, constructed or molded in one piece, in the manner and for the purpose abore set forth and deseribed.
ry 4,251.-GEOLGE R. and Cilarles M. SNEATH, Wilmington, Del-Tilting Wagon.- February 11, 1868. -The lind axle is bent dommard angularly, to allow space for the body to tilt. The hind end of the box is supported on lerers, the central one of Which is pivoted to the box bottom, and the onter ends of the side levers rest on the sill.

Claim.-1. The pirots a a in combination with the sills $B 13$ and bent axle D D D, constructed as described for the purpose set forth.
2. The lever I, arranged and constructed as described for the object already specified.

4,252.-Cilester Stone, Ravonna, Ohio.Fruit Frame-Febrnary 11, 1868. - Tho double $\lambda$-frame is piroted so as to fold together, and has braces to hold it crect when in use.

Claim.-The braces C D, iu combination with the standards $A$ and slats $B$, when arranged and piroted together as lescribed, substantially as and for the purpose set forth.

194,253. - James Sutherlañ, Morris, Ill. Wagon for Loading Logs, Stone, and Hay.-Fcbrıary 11, 1868. -The lever crane has means of vertieal adjustment, and has grappling irons to engage the stones to be loaded.

Clcom. -The construction and arrangement of the stationary groored upright B sliding elongated ratchet C , lever E , and pawls $b$ and D , swinging lever $G$, and grappling iron $H$, in combination with a wagon, substantiolly in the manmer and for the purpose as herein set forth.

7, 254.-Join Taggairt, Roxbury, Mass., assigmor to himself and Daniel C. Holier, Dorchester, Mass'- Water Meter.-Fchruary 11, 1868.-The wheel has a series of radial floats, the sectoral spaces between which communieate serially with the induction and eduction pipes. The air chamber communicates with the spaces when any part of them is abore the horizontal diameter of the ease, so as to allow the Trater to run in or out aecording to their respective positions.

Claim.- I. The improred meter, consisting of the case, with its induction and cduction passages, and the wheel, arranged as specified, and the air chamber or ressel to open into the case, as set forth.
2. The arrangement of tho air chamber or vessel between the wheel case and the case of the registering mechanism.
3. The combination for aetuating each of the ratchets, the same consisting not only of a cam or stud applied to a rotary shaft or to a latchet, but of a lever formed with an inflexile arm, and the other a flexile or bowed spring, to operate as set forth.
4. The combination and arrangement of the stellated indicator F with the case C , and the series of ratchets or rotary measuring whecls, arranged within the ease, and provided rith mechanism for operatiny them, substantially as deseribed.

94,255.-DaNIEL E. TEAL, Normieh, N. X:Car for Tiransportiug and Drying Peat.-February 11, 1868.-A scries of drying racks are so arranged that a single set of wheels can be used for conveying them, one at a time.

Claim.-The carriage, consisting of the car construeterl as described, provided with wheels attached thereto by means of the hooks $h$, so formed as to cmbrace and support the cross pieces $a$, arranged substantially in the manner set forth and describerl.

4,256.-Allen C. Thomas, Camp Charlotte, Ohio.-Animal Trap.-February 11, 1868.-The trap door consists of two longitulinal angle pieces which open at the middle when the bait hook is drawn forward. The animal falls upon an open grate and resets the trap. The trap may be placed over- a barrel containing water.
Claim. -The combination of pitfall $A$ and wicker $E$, and spring $C$, in the manner and for the purpose substantially set forth.
74.25\%.-AbNER THOMAS, Ulysses, N. Y.-Packing E'ggs, ec.-February 11, 1868.

Claim.-1. The arrangement of coils of wire; so made as to embrace cach eag separately, and tho fixing the coils of wire, at close intervals to each other, to shelres or partitions, so as rirtually to be as deseribed.
2. The combination with the said coils of wire and shelyes or partitions, of eloth, felt, or other padding, on the sides of the shelves next the mouths of the coils of Trire, as described.
3. The combination of the bor or case A, the shelves $C$, the coils $H$, the padding $E$, and cover $B$, as described.

多 $4,258 .-J O H N$ S. Tilton, Philactelphia, Pa.Sleeve for Brushes.- Fcbruary 11, 1868.

Claim.-A slecre, consisting of a tube or strip of canvis, or equivalent material, having at its lomer edge an annular metal spring $n$, as and for the purpose described.
g-4,259.-Join Tinglex, Philadelphin, Pa.-Ice Cream Freezer.-February 11, 1868.-The onter ressel containing the iee, and an inner ressel containing the crean, as well as the dasher within the latter, are turned in one direction, while the dasher is at the same time rotated within the ressel.

Claim.-1. The ressel E , its dasher spindle $G$ and wheel $m$, in combination with the outer revolring ressel $C$ and the stationary disk or wheel $B$, the whole being constructed and arranged for joint wotion, substantially as and for the purpose herein set forth.
2. The within-deseribed dasher', composed of arms $p$ and $p^{\prime}$, adapted to the spindle Gr and clastic scrapers $s$ on spindles hung to the said arms, all substantially as and for the purpose herein set forth.

4,360.-TOSEPI A. Veazie, Boston, MassRemoving Ink and Colors from Printed Paper.February 11, 1868. To potash, 12 los., in a boilimes solntion, is added tallow, 14 lbs . After boiling 3 hours, soft water, 25 gralls., is gradually added, and the mass stirred until cool. The paper is boiled in Water, and to cach 100 gallons of Trater 5 gallons of the soap is added, and the whole stirred to reduce it to a pulp. The ink rises to tho top, and is allowed to flow off. 'I'le dirty water is then drawn off from the bottom, and fresh water let in to wash the material.

Claim.-The within-described saponaceous composition for remoring ink or colors from printed paper, and dirt from rags, \&c., without injury to the pulp, so that the same can be used repeatedly for the manufacturo of white paper, substantially as doscribed.
 Hand Card.-February 11, 1868.-The handlo has
two dovetailed tongues entering suitable grooves in the upper and under side of the "back."

Claim. - The eombination, with the back A of the handle $\mathcal{B}$, in the peeuliar manner above described, and as shown in the accompanying drawings, for the purposes stated.

4,262.-Otis I. Weed, Charlestown, Mass.Bedstead Slat.-February 11, 1868.

Claim.-The combination of the spring B, of flat tempered steel, with the slat $\mathbf{A}$, when the spring is construeted with a double curvature, the center rest ing against the slat, as shown, and arranged so as to operate substantially as and for the purpose deseribed.

194,263.-N.J. and J. P. Wemmer, Philadelphia, Pa.-Branding Instrument.-February 11, 1868.The object is held in an adjustable follower, and is brought in contaet with the die, which is heated by a gas stove beneath.

Claim.-1. An adjnstable holder, construeted for the reecption and retention of a plate or other object to be branded, in combination with a stationary branding iron, heated by the apparatus described, or its equivalent, all substantially as set forth.
2. The adjustable guides L L , in eombination with the plate $K$, substantially as and for the purpose specified.

74,264.-Charles Zaiser, Newark, N. J.-Animal Trap.-Febrnary 11, 1868.-The npper end of the bait hook rests on one end of a lever whose other end supports the door of the trap. The lever is fulcrumed on a curved spring.

Claim.-1. The elastic or yielding fulcrum D, in combination with the setting rod or detent C , substantially as described.
2. The arrangement of the setting rod C loosely irt the staple E , and also in the hole F of door B , substantially as described.
(74,265.-William H. Abel, Greenville, R. I.Converting Motion.-Febrnary 11, 1868.-The derice is to convert rotary motion into reciprocating rectilinear or currilincar motion.

Claim.-1. The cylinder A, constructed substantially as shown and described, viz, with annular grooves $m$ and $n$, and provided with slides $e$, shipper B , and pin $c$, or a tumbling lever $y$, or the equivalent thereof, said cylinder or pulley being applied to a central shaft W, and arranged for operation substantially as and for the purpose or purposes set forth.
2. The eord or ehain $a$, applied to the slides $e$ and pulley $b$, in the manner and for the purpose snbstantially as specified.
3. The oscillating lever C, constructed as shown and described, and arranged for operation substantially in the manner and for the purposes set forth.
4. The supporting plate I and stud $h$, made adjustafle by means of the slot K and nut $g$, as and for the purpose substantially as specified.
5. The adjustable stops $S$, secured to the plate $I$, as and for the purpose specified.
6. The eombination of the cylinder A with the stides $e$ and shipper B, and the cord or chain $a$, pulley $b$, oseillating lever C, plate I, stud $h$, and stops S , all arranged snbstantially as and for the purpose set forth.
g4,266.-William H. Abel, Greenville, R. T.Fnitting Machine.-Febrnary 11, 1868.-The slide bar is mored longitndinally with the friction thread carrier orer and in contaet with the top ends of the jacks; the said ends fit into straight and angular grooves in the nuder side of the slide bar. The angnlar grooves aet to earry the horizontal levers and the selvedge hooks out to near the end of the feeding arm, when the selvedge hook at each side holds the yarn montil the first needle passes under the thread, to hook on, draw back, and form a loop. The clamp and vertical needles are relatively adjusted by a set screw.

Claim.-l. The employment of the stationary bar $g$, in the manner and for the purpose set forth.
Q. Liberating and depressing the comb bars, and replaeing the same by means of the rod $h$ and the spring $i$, substantially as and for the purpose specified.
3. Combining the needles $f$ and the selvedge hooks with the jacks $c$, in the manner and for the purpose specified.
4. The eombination of the cam $\mathbf{E}$, roller stud $n$, rocking levers $G$, pivoted shaft S , elamp T, arm 8, screw 9, with the vertical needles, all arranged to operate snbstantially as and for the purpose set forth.
5. The combination of all the parts, arranged to operate substantially as and for the purpose set forth.

94,26\%--J. A. Alley, Clifty, Ind.-Combined Plow and Rollers.-February 11, 1868.-The rollers are sufficiently separated to run on the sides of a single row of plants and are followed by the plows and the guard plate. The tongue is hinged to the frame to allow the plows and rollers to accommodate themselves to the inequalities of the ground.
Claim.-1. The eombination and arrangement of the short rollers C, frame A, rigid plow standards I, and piroted plow standards J, witl each other, substantially as herein shown and described and for the purpose set forth.
2. Operating the pivoted plow standards $J$ to gaide the plows, by means of a lever O, piroted to the npper end of one of the said standards, and to a support P, attaehed to the frame A, substantially as herein shown and deseribed.

194,268.-A. Q. Allis, Dayton, Ohio.-Sulky Plow.-February 11, 1868. The plow is snspended upon the serrated link, and has lateral adjustment thereon. The link is attaehed to a lever which is sustained by the comnection of a lateh lerer upon it, With a ratchet upon the segmental guide bars.
Claim.-1. The serrated link B, or its equivalent, for the purposes and substantially as herein described.
2. The lever and bar D, or its cquiralent, used for the purpose substantially as herein set forth.
3. The combination and arrangement of the gnide bars F and the catch and lever $G$, for the purpose and substantially as herein set forth.
4. The combination of the several parts, for the purpose and substantially as herein set forth.

194,269.- V. D. Anderson, Milton, Wis. Steam Generator.-February 11, 1868.-The reserroir is an annular tank immediately over the flue space, and has a water pipe leading from near its bottom into the boiler. A steam pipe extends from the water level in the boiler into the steam space in the apper part of the reserroir, so that when the water falls beneath the proper level in the boiler steam escapes into the reservoir and allows flow of water therefrom. A float in the reservoir is attaehed to the stem of a safety valve, and permits the escape of steam when the water is nearly exhausted.
Claim.-The combination and arrangement of the fire box B, having donble walls $a$, grate G, and appertures $d$, with the water jaeket $J$, automatic feeder D Nom, reservoir C, alarm EPr, pipes L $p$, water gange $S$, and easing $\Lambda$, all construeted and operating substantially as and for the purpose set forth.

74,2\%0.-Henry Aiden, Cincinnati, OhioHot Air Furnace.-February 11, 1868.-The pier is frusto-conical and confines the lower portion of the fire space to an annular form. The annular deflecting plate extends around the air heating space immediately above the inlet pipes, and serves to deflect the air toward the heating plate.

Claim.-1. The provision in an air-heating furnace of the annular fire chamber F , constructed as described, and provided with fucl-feeding passages L L', substantially as set forth.
2. The ash pit B, with sloping sides and contral treneh, formed and arranged as described.
3. The arrangement of the air-lieating furnace A B CD E, fire chamber F , and imperforate central pier K , for the purpose explained.
4. In combination with the foregoing, the anntlar deflecting plate $\mathrm{H}^{\prime}$ with the air inlet H and hot-air chamber $G$, as and for the purpose set forth.
5. The doors N N, formed and arranged as shomn, in eombination with the grate D and imperforate picr K, annnlar fire ehamber $F$, and dranglit tubes Q, as set forth.

74,271.-Alonzo C. Arnold and Ebenezer Blackman, Norwalk, Conn.-Lamp.-February 11, 1868.

Claim.-The glass chimney A , formed as herein described, in combination with the arrangements of the rertical springs $D$, flat perforated base $G$, and cone 13 , in the manner substantially as and for the purpose herein set forth.

94,29\%.-Jearum Atkins, Mrokena, M1.-Harvester Cutter.-February 11, 1868. -The back is bent orer and the two sides brought near together and parallel, forming a recess into which the backs of the cutters are inscrted. The cutters are made in seetions, and the portion entering the bar is dore-tniled and held in position by wedge-formed piecos which are riveted in place, or a redge mar be inserted between the sections and rireted behind the bar, or each alternate section may be made wedge-formed, and a portion cxtenang through the bar be bent or riveted.
Olaim.-1. The $\cup$-shaped metal back or knife bar A, in combination with and for the purpose of holding acjustable or removable cutters for harvesters, as described.
2. The mode of constructing cutter blades in alternate sections, E and G , dore-tailed in the manmer described, so that the section $G$ acts as a key to hold the adjoining sections E and F, substantially as described and set forth.
3. In combination with a $\cup$-slaped knife bar, the modes described for fastening the sections by the hook $h$, either with or without a pin and screw, substantially as deseribed and set fortl.
g4,293.-Dinsmore Austin, Underhill, Vt., assimnor to himself and Homer Rawson. - Whiffe-tree-Febrnary 11, 1868. -The pin is driven outward by the spiral spring to engage the trace, and the latter is held upon the pin by the flange upon the end of the spring bar. The pin may be retracted by a cord to releasc the trace.
Claim.-1. The movable pin $a$, in combination with the spiral spring $c$, when used as and for the purpose specified.
2. The spring C , provided with a flange $i$ and shoulder $x$, in combination with the spiral spring $c$, when used as and for the purpose set forth.
g4,294- Dinsmone Austin, Underhill, Vt.Whifletree Tug.-February 11, 1868.-The tug engages over a straight pin projecting from the end of the singletree, and is retained thereon by the forks of the spring lever. The levers may be operated by a cord to throw off the traces.

Claim.-1. The lerer B piroted to an arm D, attached to the end of a swingletree, and provided with two prongs or hooks $b b$, constructed substantially as and for the purposes specified.
2. The combination of the two-pronged lever $B$ with the hollow arm D , the spring $f$, and swingletree $A$, when used as and for the purpose set forth.
g4, 3. $9 .-$ Dinsmore Austin, Underhill, assignor to himself and Honer Rawson, Chittenden, Vt. --Shaft Corpling.-February 11, 1868. -One arm of the forked bar traverses the jaws of the clip and the secket of the thill iron, and is held in position by a spiral spring surrounding the other arm.

Claim. - The forked bar C, in combination with the spiral spring $f$ and clip B , construeted substantially as and used for the purpose specified.
matage-Charles R. Bacon and George D. Clank, Tiemark, N. J.-Blacling Box Holder.February 11, 1868.-The box is held between the adjustable, and the two fixed lugs and the set screw upon the frame.

Claim.-A holder for blacking boxes, consisting of the frame K , lags I, clamp or slide C, and serow M, when constructed substantially as herein set forth.

74,29\%-John Bailide, Salem, Ohio.-Saw Mill. -February 11, 1868.-Planc irons are fitted to the inner sides of the upwardly extending ends of the bifurcated pitman and serve to plane the board, which is fed by vertical rollers to the splitting saw.

Claim. -1. The plane irons K, bifurcated pitman D , as arranged, in combination with the beam C , in the manner and for the purpose substantially as set forth.
2. The saw M , as arranged in combimation with the beam $C$, and radial arm $J$, in the manner and for the purpose set forth.
3. The arrangement and combination of the adjnstable feed roller P , link V , pinions J. ' T , and stationary roller $\mathrm{P}^{\prime}$, constructed and operating in the manner substantially as set forth.

74,278.-John Baker, Philadelphia, Pa.-Ifo. chine for Cutting Ice.-February 11, 1868.

Claim.-1. A traction engine carrying and operating saws for cutting ice, substantially as described.
2. So arranging the saws E , in connection with the ice cutting machine, that they may be adjusted vertically for cutting to a greater or less depth, as may be desired, substantially as set forth.
3. The swivelled lever jack a located under the body of the machine in such a position and manner that the machine may be raised and turned thercon, substautially as set forth.

74,279.-Stephen Barnes, New Haven, Conn., assignor to himself, W. S. SANFord, and Joins Gardner, same place.-Handle for Pocket Cutlery. - February 11, 1868. -The handle composition is molded upon the side plate when in a plastic state, and is secured to the dove-tail blocks upon the said plate, or upon the tubes which are used as a substitute. The rirets pass through the blocks or tubes as the case may be.

Claim.-The arrangement of the tubes $b$ or blocks $a$, upon the plate $A$, so as to reccive the rivets which secure the blades and the two sides of the handle together, substantially as and for the purpose herein set forth.
2. The introduction of a strengthening wire $d$, within the composition of the hande, in the manner doscribed.
(74,280.-Philip G. Beckley, Newark, N. J., assignor to Frederick Stevens, same place.-Skate. -February 11, 1868. - The bell crank clamp levers are operated by the nuts upon the right and left hand serem rod.

Claim.-The clamp levers G G and H H , in combination with the nuts I I, and the right and left serew shaft C, construeted and operating as and for the purpose set forth.
g4,381.-Spti L. Beckwith, San Francisco, Cal.-Apparatus for Washing Gold Ore.-February 11, 1868. - The washer pan is hung over the receiter upon the same vertieal crank shanks, which reccive simultaneous motion from a common shaft.

Olaim.-1. The device for imparting to the pans E F G the peculiar swinging motion used for scparating. metals when only mechanically mixer, by hanging them to rotating upright crank shafts, in manner substantially as and for the purposes abore set fortll and described.
2. The pan E, provided with a double bottom, Whereof the upper one is arehed and perforated, and the lower funnel-shaped, in manner substantially as above set forth and described.
3. The pan F divided into chambers, substantially as above deseribed, the walls whereof are crowned by the overhanging ridges $b$, in manner substantially as above set forth and described.
'g 4, 282.-Charles H. Beeman, $2 d$, North Fairfax, Vt.-Potato Baker.-February 11, 1868.-The skeleton frame allows the direet radiation of heat upon the surface of the potatocs.
Claim.- As a new article of manufaeture, a potato baker, constructed as deseribed, consisting of the upper and lotererims $13 B^{\prime}$, conneeted by inclined stands C, the longitudinal grate bars A, surromded by the rim $\mathrm{B}^{\prime}$, all arranged and operating as described. for the purpose specified.

194,2833.-Jacob Behel, Rockford, Ill.-Door Lock.-February 11, 1868. - The bolt is operated from either side of a central longitudinal guard plate which carries the pirot studs of the key. The tumblers
may be coupled so as to move together by raising the lover which traverses a longitudinal passage in the bolt; in this ease the bolt may be locked or unlocked from either side. When the lever is depressed the tumblers are discomnected, and the bolt can only be unlocked from the side upon which it was seeured.

Claim.-1. The applieation of tumblers to the bolt of a lock in such mannor that while the bolt can be operated from both sides of the lock ease, this bolt can only bo unlocked from that side of the case from which it ras locked, substantially as deseribed.
2. Providing a look with tumblers and an exposed latch lever, so arranged that the bolt can be locked and unlocked from both sides of the lock case, and, when desired, so adjusted that it ean be loeked from either side of the case, but unlocked only from that side of the ease from which it was locked, substantially as deseribed.
3. The twin tumblers D D, applicd to a bolt C, in combination with a latching device, which is so arranged that the tumblers can be connceted together or disconnected from cach other, at pleasure, substantially as describod.
4. The key guard G , with its key studs $i$, arranged centrally with respect to the boit C and its twin tumblers D D, in conjunction with a derice which Will admit of said tumblers being connceted together or disconnceted, at pleasure, substantially as described.
5. The combination of the spring $B^{1}$, lever $B^{2}$, and hutb J, with the reversible latch IB, construeted and arranged substantially as described.
'94,288.-JUlius Bein and William Ulricm, Newark, N. J.-Children's Carriage.-February 11, 1868.-Whe seat and top can be changed from end to end.

Claim.-1. In the children's carriage, the reversible sat and top, constructed substantially as herein specified.
2. Pivoting the top E of a children's carriage to bars F $F$, which are pivoted to the sides of the carriage body, substantially as herein shown and deseribed.
3. Providing the L-shaped seat D of a ehildren's carriage with pins $c c$, which fit into grooves $d$ in the sides of the carriage body, substantially as described, so that the seat can be easily reversed, as set forth.
g4, ZSJ.-William Bellamy, Newark, N. J.Construction of Ice Pitcher.-Febrnary 11, 1868.The edge of the inner bottom is turned up into a vertical flange, which is soldered to the side; a hoop is then placed over the edge and soldered. The edpe of the hoop enters an annular groove in an additional bottom, whose edge is turned down, to line and strengthen the base.
Claim.-1. The fitting and securing of the bottom $a$ to the inner case B by a vertical llange $\delta$, fitted within the lower end of the case and secured thereto by solder, in conncetion with the hoop cfitted on the exterior of the lower end of the case and soldered thereto, substantially as and for the purpose specified.
2. The two bases C D fitted one within the other, with a space between their upper parts, in combination with the bottom $a$ of the inner case $B$, resting an C, substantially as and for the purpose set forth.
3. The combination of the external and internal cases A B with bases $f \mathrm{C} \mathrm{D}$ and the bottom $a$ of the internal case $B$, and the hoop $c$ around the lower part of the internal case 13 , all construeted and arranged substantially in the manner as and for the purpose specified.
g4,28Go-Ernest W. I. Bellander, Jersey City, N. J.-Forming Block for Muffs.- February 11, 1868. -The cnd blocks are made in sections and expanded by frusto-cylindrical nuts apon an axial right and left serew. The ends of the block are connected by dotrel pins sliding longitudinally in the sections. When the radial expansion has taken place, nuts are removed from the ends of the axial serew, and a further rotation of the serew eauses longitudinal expansion.

Clcim.-An expansible muff former, consisting of a series oí blocks, arranged as describect, and operated by the lef't and right-hand screw and nuts so as to expand both lougitudinally and radially, or cither way alone, at will, as set forth.
\%/8,28\%-L. G. Binkly, Fairview, Ohio.—Whif. fetree.-February 11, 1868.

Claim.-A whiffletree, constructed of a single bar a, sliding forward and backward in a socket or coupling $G$, and operating against a spring $B$ arranged in front of it, substantially as and for the purpose set forth.

194,288.-GEORGE Birtwistle and Ronert Bietwistle, Fall River, Mass.-Grease or Sizing.-February 11, 1868.-Composed of water, 18 qts.; Thite soap, 58 oz . and soda-ash solution, at $18^{\circ} \mathrm{T} ., 5 \mathrm{pts}$. Boil 30 minutes.

Claim.-1. The eombination of soap and soda ash in the proportions above deseribed, for the purposes named.
2. The use of soap alone, as an agent, when applicd to any stareh or sizing, for the purposes above described.
\% 4 ,289.-Lyman R. Blake, Boston, Mass. Sewing Miachine. February 11, 1868; antedated Deecmber 1, 1867. The leather is fed along a cylinder surrounded by a guide slecve, and is subjected to the action of thanecdles and loopers to form the through stitches in the hose.

Olaim.-In combination with the loop meehanism, containing the work-supporting arm and the feed and stitch-forming mochanism, the guide sleove $h$, arranged and operating substantially as set forth.

24,290-JOHN G. BORDEN, Brewstcr Station, N. X.-Mrachine for Soldering Tin Cans.-Fcbruary 11, 1868. -The bottom of the cam is turned within the solder bath by the rotation of the shaft to which it is engaged.
Claim.-1. The plate A, provided with two recesses or reservoirs $a$ and $b$ for holding the solder and block C, respectively, substantially as herein shown and described.
2. The block C, when made to fit the recess $b$ in the plate $A$ and when provided with a recess or cavity $d$ to receive the edge of the can to be soldered, substantially as herein shown and described.
3. The arrangement of the recesses $c$ and $e$ wheroby the cavity $d$ in the block $C$ is connected with the solder reservoir $a$, substantially as herein shown and described.

「9,291-D. K. Boswell, Columbus, Ohio.-Range.-February 11, 1868. - The fire space and oven are divided at their middles by vertical partitions, to cnable the use of but half the stove.
Claim.-The herein-deseribed stove, either bricked up in a chimney or standing out in a room, provided with a portable or movable oven $G$, Trater lining $F$, and division plates H I, all arranged in the manner as and for the purpose substantially as set forth.
(74, 2 22. - E. C. Bracket, Dedham, Mass., assignor to himself and Meney C. Genitsen, same place.-Toy.-February 11, 1868.-The figure is suspended upon the end oi a spring wire, Those movements are impelled by a spring arm actuated by a rotating prismatic roller.

Olaim.-1. The combination for effecting the motions of the automaton or dancer, the same consisting of the spring, the lever, and the prism, arranged together and with the dancer in manner and to operate as described.
2. In combination with the spring, the lever, and the prism, arranged together, and with the autonaton as explained, one or more wires or springs, I I, and a sonorous helix, If, arranged vithin the box, and so as to be operated by the prism, in manner and under circumstances as specificu.

笑4,293.-T. Stanley Bradley. New Haten, Conn.-Bed Bottom.-February 11, 1898. -The bars are eonnceted together by cords, and to the frame by spiral springs at the ends. A central transverse bar is woven through the cords, and its ends conneeted by spiral springs to the side rails.

Claim.-The combination of the spiral springs with the two bars $L$ and II and the cord IS, when the whole is constructed and fitted for use, substantially as herein described and set forth.

74,294.-Francis H. Brown, Stamford, Conn. -Neck Tie Holder.-February 11, 1868.-The ends of the wire hook spring apart orer the button thread.

Claim.- As a new article of manufacture, a gentleman's neek tio holder, A, coustructed substantially as cteseribed, and so arrunged that it can be attached to the neck band or collar of the shirt, either by means of a button secured to the hook itself, or forming the hook without a button, and attaching it to is stud or button affixed to the collar or neck band of the shirt or to the remorable collar, as herein shown and deseribed.
'94, 295.-Isanc W. Brown, New Haten, assignor to himself and George D. Nettleton, Fair Haren, Conn.-Motive Power.-Februar' 11, 1868.The rubber belt aets in nlace of a weight or metallic spriner to actuate the machinery:

Claim.-The elastic band $H$, in combination with the gearing, substantially as herein described, for the purpose specified.

7 9 :293.-George W. Browne, Brooklyn, N. Y.-Liov Lock.-February 11, 1868.-Improvement on his patent of April 30, 1867. When the thole pin is in working position the extended part of the eccentric takes uncler the fixed plato and prevents the thole pin with the hinged boss plate from being turned orer upon the hinge.
Claim.-The plate C and ecceutric D, when combined and operated in the manner and for the purpose described.
g 4,29\%.-Nelson W. Bunnett, South Madley, Mass.-Pattern Square.-February 11, 1868.-The rectangular pieces aro conuected torether lyy cross bars, which have rectangular lips at their ends, sliding in longitudinal slots in the arms of the rectangular pieces. The bars are all slotted longitudinally through the greater part of their length to allow of adjustment, and are marked off to a scale. The pieces are attrehed together by set screws, which slide in the slots.

Claim.-'the pieces $A$ and $B$, forming right angles, iu combination with the pieces $a, b, c$, and $d$, placed at right ancles with $\Lambda$ and B , and adjustable relatirely with each other in slots, in suel manuer that mortises or tenons may be marked at one adjustment of the tool upon tro sides of a right-ingled timber, substantially as cleseribed.
(7,295.-EDTVALD 3I. BUTZ, Allegheny City, Pa.-Com Planter.-February 11, 1868.-The seed slide is operated by a lever aetuated by studs upon a wheel havinge scieral concentric rings of cogerearing, either of which may be arranged to engrge a motire berel wheul, tunned by gearing conncetion with a spur wheel on one of the hubs.

Clam.-The combination of the wheels $\mathrm{C}, \mathrm{D}, e$, and $f$, when used in comnection with the lever $h$, spring $i$, and slide $J$, the whole being construeted, arranged, eombined, and operating as herein described, aud for the purpose set fortl.

74,293.- AbNER Canprele, Frederick, Md., assignor to himself and JaMEs Whiterille, samo place.-System of Indexing for Records.- February 11, 1868. -The primary alphabetical arrangement is according to the surnames, and those embraced in one letter are subdirided aecording to Christian names. Down each are arranged twouty-six rertieal spaces, cach designated loy a letter, in whieh spaces are written that page of tho index book on Which is found the subdivision whoso surnames correspond to the marginal letter of the key, and whose Clmistian mames cor'respond to the designating letter of the rertical column.

Claim.-The combination of the key, eonstrueted as described, with the index, arranged as speeified, for the purpose abore set forth.
ges, 300.-Thomas A. Campbelel, New York, N. Y.- Machine for Oiling Tool.-Fehrnary 11, 1868. Improvement on lis patent of January 2, 1866. The cylinder rotates in a vessel containing oil, and carries the same to the rotating brush, which strikes the adjustable plate and scatters the oil upon the wool passing beneath.

Claim.-The adjustablo plate $P$ and rotary brush $B$, in eonbination with each other and with the Iollow eylinder F , operating substantially as clescribed and for the purposes set forth.

74,301.-C. E. Candee, Jersoy City, N. J.Paper Clip.-February 11, 1868. -Intended for use as a shawl pin and for attachment of the railroad eheck to the dress.

Claim. - The point $G$ and the spring $B$, in combination with tho pin F substantially as described.
gise09. Joinn M. Canterbury, Mexico, MLo.Field MLerker.-February 11, 1868.

Claim.-Tho cast-metal wheel B, having a sharp bevelled perimeter, witl square shonldi's upon each side, when adjusted upon the spindle a, by means of the set serew $b$ passing throurh the lub of said whecl, as herein shown and described.
\%1,303.-Thomas W. Canmicmael, Indianapolis, Ind.- Automatic Fan, Table Caster, and Lamtp S'tand.-Fobruary 11, 1868.-Tho fan arms are upon a stem rotated by a spring, aud a train of cors gearing within the spherical case.

Claim.-The within-deseribod device for operating the fans N antomatically, in combination with the cruet stand $W$ and candle staud $X$, all arranged and operating substantially as set forth.
g4, 3 (1. - Alfned Castelaiv, Chester, IlhSteak Crusher.-February 11, 1868.-The instrument is clamped to the table and the steak passed between the rollers.

Claim.-Tho steak crusher, constructed as described, consisting of the smooth upper roller $F$ and lower cornugated ioller D , operated by the wearing $f$ in the frame, the end pieces $C$ of which framo dro secured tomether by the plate 7 , whose center projects downward to form a seraper for tho upper rolle. F , as herein shown and described.
g4,305.-Jefferson Cilase, Orange, MassLock for Barrel Moops.-Hebruary 11, 1868.-The ends of tho loop aro passed from the outside throush tho slots of tho plate.

Claim.-The elasp or plato $\Lambda$, haring the slots a $b$, formed as herein described, and operating to hold the overlapping ends of the baud or hoop, substantially in the manner herein shorm and set forth.

174,306.-D. Charles Cifipron, Highland, Ml.Corn Sheller. Febrnary 11, 1s6z. -The corn firom the shelling wheel drops upon tho grated eradile from whence the cobs are discharged, and the corn passes over a sereen and is discharged.

Claim.-1. Tho shickls $O$ and 1 ', set in the fiamo A, in mamer and for tho purposes snbstantiatly as herein slown and described.
2. The cradle B, having the longitudinal Dars $b$ and sieve I), and suspended in the frame 1 , all as set forth, and operating substantially in mammer as and for the purpuses described.
 Raker and Loader.-Tebruary 11, 1868.-Tho hay is taken from the rake by the madially toothed eriinder and deposited upon the toothed devator'. 'The upper toothed cylinder removes the hay from tho cluvator and deposits it upon the load.

Claim.-l. The hay loading apparatus, consisting of the betts F provided with tho teeth a, and the eylinders B and C prorided with the armíb and d, all monnted in a suitable framo, and arranged to operate substantially as deseribed.
2. In eombination with the eylinders 13 C and belts F , all provided with the amms, as ahove doscribed, tho spring teeth, arranged as set forth.

易4,308.-Elisila T. Colibuina, Boston, MIass.Ohild's T'oy.-February 11, 1868. -The figure turns apon a weighted fixame whose grooved roller tracks on the ling and commmicates rotation to the figure through two star wheels.

Claim.- A figure applied to a ring or hoop, and so constructed that while it will maintain a vertical position thercon, it shall be allowed to more about
upon said ring, and at the same time rotate, sub. stantially as described.

94,309. - W. S. Colwell, Pittsburg, Pa. Mrachine for Dressing Staves.-February 11, 1868.When the ram has reached the extent of its forward movement, the side arm strikes the lever and releases the spring latch, thereby allowing the plum. mer block to descend, and to disconnect the motive spur wheel from the ram rack. When the ram is relieved from the action of tho whecl it is drawn baekward by a weighted cord. The spring fced rollers are set laterally by a winch screw. The knives are inclined by a rack lever which engages a segmental rack upon the back part of the head.

Claim. - 1 . The arrangement of the arm $u$, lever $n$, spring $s$, lever $\mathrm{Cl}^{1}$, provided with the arm $\mathrm{D}^{1}$ and rod $f^{1}$, plumber bloek P , wheel $\mathrm{A}^{3}$, feed ram $\mathrm{A}^{1}$, and weight $w$, constructed, arranged, combined, and operating as herein described, and for the purpose set forth.
2. The plumber hlock $P$, provided with the universal or socket joint X ${ }^{1}$, said plumber block being used in connection with shaft $i$, wheel $\mathrm{A}^{3}$, and the rack $A^{2}$ of the feed ram $A^{1}$, as herein deseribed and for the purpose set forth.
3. Providing the feed ram $\mathrm{A}^{1}$ and wings 4 , which are opened or spread out by rollers 18, and contracted by the slites $\mathrm{B}^{2}$, as herein described and set forth.
4. Piroting the dressing head of a stave machine on a line with the vertical plane of the cutting edges of the knives, the whole being. constructed, arranged, and operating as herein deseribed and for the purpase set forth.
74,810.-Edward M. Comery, Hudson, Mass.-Cast-Off for Sewing Machines.- February 11, 1868.Intended specially for a wax thread sewing machine.

Claim.-The pivoted collar $a$ cmbracing the ncedle, in combination with the nose $c$ and arm $d$, whereby the thread is prevented from passing down between said nose aud the needle, as hercin shown and deseribed.
24,3II.-Samuel F. Conant and Horace A. Manler, Gzowhegan, Me.-Photographie Printing Frame.-Febrnary 11, 1868. The paper and negative are placed upon the block and clamped thereto by the transverse bars depressed with the spring loops.
Claim.-The block A in combination with the two clamps $\mathbb{B}$ B, all coustructed and arranged substantially in the manuer as and for the purpose herein sct forth.
\% 1,316 -John B. Connell, N. Y.-Metallie Column.-February 11, 1868.-The attachments are all made to the iuncr portion of the column, which has rertical radial ribs nearly contacting with the ornamontal surrounding shell.
Claim. -The construction and arrangement with eash other of the interior flanged supporting portion $a$ and the exterior protecting and ormamental casing $b$, substantially in the manner hercin set forth.
 sieve.-February 11, 1868. The sieve box is sup. ported on shackies, and receives endwiso vibration from handles upon it. The vibration is assisted by standing springs which pass upward between lugs on the side of the box.
Claim,-1. A grain sieve, consisting of the combination of the adjustable sieves F G II with the boards I and J, all made and operating substantially as hercin shown and described.
2. The above in combination with the slide IT, marle as set forth.
3. The arrangement of the arms $B$, springs $\mathrm{E} E$, and lugs a a for connecting the box A, containing the sieves, with the pedestal C, so that a shaking motion can be easily impartod to the box A by hand or otherwise, as set forth.

29/4, B14.-Isaac E. Cratc, Camden, Ohio-Mranufacture of Shect Tron.-February 11, 1863; antedated Januar'y 30, 1868.

Claim.-Softening of iron intended to be rolled into sheets, by the alloying of tin therewith.

94,315.-John S. Crane, Lake Village, N. H. -Button Hole Cutter-February 11, 1868.-The cdges of the two cutters are in the are of a eircle; the moving cutter being pivoted at the conter of the circle. The moving cutter is adjustable to regulato the length of hole eut. The cutting is done by rocking the instrument upon its edge.

Olaim.-The combination of eutters C and $\mathrm{C}^{\prime}$, constructed and operating substantially in the manner and for the purpose set forth.
94,316.-D. K. Croffur, Birmingham, Conn.Horse Yoke.-February 11, 1868. - The hames are in form of a solid ring piroted at top and bottom to the yoke frame, the upper pirot having side motion in a slot in the frame.

Claim.-1. A solid or continuous hame, constructed so as to slip on over the collar, substantially as and for the purpose specified.
2. The combination of the yoke E with bows C , provided with the slots F , substantially as and for the purpose set forth.

14,31\%-David Daniels, Fitehburg, Mass.Compound for Destroying Insects in Trees.- February 11, 1868.-Composcd of fish oil, 1 quart, and sulphur, 1 pound.
Claim. -The compounding of the fish oil and sulphur substantially as set forth, and the application of the same to the trunks and other parts of fruit and ornamental trees.
g4,318.-Isaac N. Deal, Brooklyn, N. Y.Clothes Drier.-February 11, 1868.-The upper and lower series of arms are connected to the opposite sides of vertical pieces.

Claim.- A clothes drier, constructed as described, and consisting of the central upright A, supports B, arms $a$, and binges or pivots $a^{1}$, when the arms $a$ are pivoted to opposite sides of the supports $B$, and when the hinges $a^{1}$, counccting each of the said arms $a$ to the central post $A$, are not in the same vertical line as described, and for the purpose specified.
g4,319.-Henry De Bus and George Johnson, Cinciunati, Ohio.-Machine for Crozing BarrelsFebruary 11, 1868.-The stave is clamped upon the adjustabie bench, and submitted to the action of the rotary cuttcr, which is carried upon a rertically sliding plate. This plate slicles on a horizontally sliding plate. The cuttor head is restricted to a curved feed course by connection of its journal plate to an oscillating rod.
Claim.-1. The cutter head D, arranged in relation to the adjustable bench $A$, raised and lowered by the slide $b$, as herein described, for the purpose speeified. 2. The compound rertical slide E and horizontal slide F, the comnecting rod $n$, the swivels $p p^{\prime}$, in which the rod works, and the adjustable slide $H$ in the standard C, combined, arranged, and operating substantially as and for the purpose described.
29320.-DAVID Dick and Oliver W. Preston, Jr., Corning, N. X.-Plaster and Seed Sower.-February 11, 1868; antedated Fobruary 8, 1868. -The ends of the agitator project from the hopper, and have pendent pins whicli come in contact with the cam surfaces of the driving wheels, and cause the endways reciprocation of the bar. The exit apertures are opencd or closed by a pinion, which is operated by a lever and engages a rack upon the slide. The secd or fertilizer is distributed from, the trough by the spiral brushes on a rotary shaft.

Claim.-1. The shaking bar $b$, when proviled with pins $e e$ and stirrers $i i$, in combination with cam wheels $\mathcal{B} B$, as and for the purpose set forth.
2. The slide D, provided with rack $g$, in combination with shaft $d$ and pinion $a$, substantially in the manner and for the purpose specified.
3. The peculiar gear arrangement, in combination with shaft $m$, provided with brushes, shatt $d$, pinion $a$, and slide D, substantially in the manner and for the purposes doscribed.

94,321。-Joserii W. Douglas, Middletorvn, Ct., assignor to W. and B. DoUGLas, same plaee-Pump.-February 11, 1868.-The pump rod passes through a stuffing box at the top of the air chamber.

The air chamber has a serew-threaded hole near to the top, snrrounded by a concentrie series of smaller holes. A plug serews into the central hole, and its shoukter eloses the outcr series of holes, when the device is used as a foroe pump.

Claim.-The combination of the pump $A$, air chamber C , serew pin $I$, thimble $I$, revolving stand $D$, and thbular screw $b$, all arranged as deseribed, for the purpose specified.

74,322.-Steplien W. Downey, Pichmont, W. Va.-Trunk Latel.-Febrnary 11, 1868.-The tablet is in an iron frame, and has a lid havines a glass proteeted by metallie rods. One edge of the lide enters a cavity in the trunk when the lid is opened, and this carity is corered by a spring.

Claim.-1. Inserting in the body of a trunk, box, or ean, a tablet case, when the same is provided with a slate, aud the whole is constrncted and arranged sulostantially as deseribed.
2. The spring $H$, in combination with a tablet casc, when the same is constrneted and anomged substantially as deseribed.
3. The combination of the tablet ease and slate, when the former is provided with a sliding top, and the whole is coustructed and arranged smbstantially as cleseribed.
(7),323.-MARY A. DuFFy, New York, N. Y.Mrarking Gauge for Sewing Machine.-February 11, 1868. - Improvemeut on her patent of November 27 , 1866.-The tuck is not turned, and its line is creased by an independent spring pieee, operated by the presser-foot.

Claim. -1. The combination of tneking plate $A$, marking lever $F$, presser-foot $P$, and tueking gauge D, operating together substantially as and for the pmrposes described.
2. The combination of plate holder $B$, tucking plate $A$, inarking lever $F$ : presser-foot $P$, and tueking gauge $D$, operating togetlier substantially as and for the purposes explained.
3. The combination of making spring lever $F$ With tueking plate $A$, when the two are construeted, arranged with, and operated by the presser-foot, substantially as described.

19,324.-A. R. DYETT, New York, N. Y.-Window Sash Stop.-Fcbruary 11, 1868. -The tro bolts arc connected by torgle levers, disposed on the lower bar of the sash. The bolts engrge racks on the window frame, and are held in position by the spring wedges which fit into the augle formed by the conncetion of the togegle levers to each other. To shoot back the bolt, the spriug is compressed, when other springs actiog on the outsicle of each arm of the toggle lerers press them together, disengaging the bolts from the rack.

Claim.-1. The bolts $\mathrm{C} \mathrm{C}^{\prime}$, in eombination with the toggle levers' $\mathrm{D} \mathrm{D}^{\prime}$, substantially as and for the purposes specifica.
2. The said toggle levers, in combination with the wedges E E , or their cquivalents, substantially as and for the purposes above described.
3. 'He said togele levers, in combination with the springs $J J^{\prime}$, snbstantially as lescribed.

4,38.5.-GEORGE W. Endy, Waterford, N. Y.Railway Car.-February 11, 1868. -The additional wheel is to present aceident, by taking the place of a broken onc, until the cars can be stopped.

Claim. -The construetion and arrangement of the extra wheel C , in conuection with the car truek, in sueh a manner as to admit of its being used as a smpport and brake, and also as a rerolving wheel, in the wanncr and for the pnripose herein deseribed.
 Planter.-February 11, 1868.-The seed slides are reciprocated by connection with a rock shaft aetuated by an arm, which is raised by a double eam on the axle. The axle is rotated by clutch connection with the whecls.

Claim. - The arrangement of shaft B. clntches D D, and cams I I, with the levers for operating the elutehes, with the shaft Gr, arms H H, block H ${ }^{\prime}$, and arms I, L, which operate the seed slides, as and for the purpose set forth.

多4,327.-William P. Eveimon, Leavenworth, Ind.-Plow.-February 11,1868 .-The plow is tubular and elongated in the direction of its course. The plow passes through the soil, allowing the same to full into position behind it. The subsoil is raised through the tube and falls on the seattering plate surrounding its npper edge.

Claim.-1. The hollow plowshare adapted to exearate, elerate, and seatter the snbsoil rithout material disturbance of the snrface, substantially as set forth.
2. The prorision, upon the ontside of a tubular plow $A$, of the deflceting plate or gund E , for the purpose explained.
3. The provision of the adjustable seoop or exea. rator C, at the rear lower portion of the thbular share $A$, for the objeet stated.
7. 1 ,BZS.-Joel Fales. Walpole, Mass.-Machine for Sewing Carpet Lining.-February 11, 1868.-Improvement on the patent of Jons K. Harrbington, A pril 1, 1856.-Frou the smoothing plate the fabric passes throngh a series of sewing machines, by whieh it is quilted previously to passing between the measming rolls.

Claim.-1. The combination of the gnide rolls B $B^{2}$, smoothing plate $H$, a sowing mechanism, and feed solls $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, all arranged and operating substautially as set forth.
2. The arrangement of the spriug $u$, acljusting serew $m$, and fecd roller $\mathrm{D}^{\prime}$, as heroin deseribed, for the purpose specified.
3. In combination with a earpet lining machine, construeted as described, the sewing device, smoothing plate H , wheels E F , hammer $u$, spring $u$, and set-screw $m$, all arranged and operating as deseribed, for the purpose speeified.

71,329.-Wesley Fentmone, Philadelphia, Pa. -Dust Cups for Watches.-Febrnary 11, 1868. -The top of the clust eup consists of an adjnstable serew ring, whose reduced part enters the cap which fits down snugly on the shonlder of the ring.

Claim.-1. A ring E, rendered adjustable on the ring $D$ of the plate $A$, in respect to the eap $B$ of a watch, substantially as and for the purpose herein set forth.
2. The ring E , rednced in dimmeter, so as to penetrate and fit snugly in the opening of the eap B, and laving a shondder for the said eap to bear against, all as set forth.
74,330.-Felix A. Finn, Salt Point, N. K.Threshing Machine.-February 11, 1868.-The glain passes beneath jointed beaters npon rotating oylinders.

Claim.-1. The inclined bottom a, in eombination with one or more eylinders B, movided with jointed flails, all arranged snbstantially as and for the purpose specified.
2. The fereen D, operated by the crank pnlley $G$ and connecting rod F , from one of the threshiug cylinder's, substautially as and for the purpose set forth.
\%4,331.-Isanc Fiske, Worcester, Mass.-Cor. nets, de. February 11, 1868. -Improvement on his patent of October 30,1866 . The ralves are so arlinged in relation to the duets that both iu the opon and valve tones a continued unobstructed passage is allowed to the air. 'the construction admits of the ehanging from one to another key in such manner that the same quality of tone may be prodneed in cither key, and withont increasing the nnmber of turns in the wind passages.

Claim.-1. So construeting and arrauging the passages through the valves $g$, and the scetions of pipe connected therewith, that a continnous unitorm passage is secmred through the ripes and valres for both the open and ralre tones, said valre and pipe passages being not only ursiform in diameter, but fres from angles, substantially as shown and described.
2. In combination with the main pipes $r s$, the ralve eylinder $q$, having the tro pipes $t u$ branching therefrom, and having its valve so arranged that connection may he made througl either of suid branches, thercby cuabling the key of the instrument
upon said ring, and at the same time rotate, substantially as described.
94.309. - W. S. Colwell, Pittsburg, Pa. Mackine for Dressing Staves.-February 11, 1868.When the ram has reached the extent of its forward movement, the side arm strikes the lever and releases the spring latch, thereby allowing the plummer ilock to descend, and to disconnect the motive spur wheel from the ram rack. When the ram is relicued from the action of the wheel it is drawn backward by a weighted cord. The spring feed rollers are set laterally by a wineh screw. The knives are inclined by a rack lever which engages a segmental rack upon the back part of the head.

Claim. -1 . The arrangement of the arm $u$, lever $n$, spring $s$, lever $\mathrm{C}^{1}$, provided with the arm $\mathrm{D}^{1}$ and rod $f^{1}$, plumber block P , wheel $\mathrm{A}^{3}$, feed ran $\mathrm{A}^{1}$, and weight $w$, constructed, arranged, cornbined, and operating as herein described, and for the purpose set forth.
2. The plumber block $P$, provided with the universal or socket joint $X^{1}$, said plumber block being used in comnection with shaft $i$, wheel $\mathrm{A}^{3}$, and the rack $A^{2}$ of the feed ram $A^{1}$, as herein described and for the purpose set forth.
3. Providing the feed ram $\Lambda^{1}$ and wings 4 , which are opened or spread out by rollcrs 18, and contracted by the slides $\mathrm{B}^{2}$, as hercin described and set forth.
4. Pivoting the dressing head of a stave machine on a line with the vertical plane of the cutting edges of the knives, the whole being constructed, arranged, and operating as herein deseribed and for the purpase set forth.
74,310.-EDWard M. Comery, Hudson, Mass.-Oast-Off for Sewing Mrachines.- February 11, 1868.Intendel specially for a wax thread sewing machine.

Claim. - The pivoted collar a embracing the ncedle, in combination with the nose $c$ and arm $d$, whereby the thread is prevented from passing down between said nose and the needle, as hercin shown and described.
g 4, 3 I 1. -Samuel F. Conant and Horace A. MaNLEr, Ghowhegan, Me.-Photographic Printing Frame.-February 11, 1868. The paper and negative are placed upon the block and clamped thereto by the transverse bars depressed with the spring loops.
Claim. - The block A in combination with the two clamps $B \operatorname{B}$, all constructed and arranged substantially in the manner as and for the purpose herein set forth.
\%4,316.-John B. Cornell, N. Y.-Metallie Column.-February 11, 1868. -The attachments are all made to the inner portion of the column, which has rertieal radial ribs nearly contacting with the ornamental surrounding shell.
Claim.-The construction and arrangement with each other of the interior flanged supporting portion $a$ and the exterior protecting and ornamental casing $b$, substantially in the manner hercin set forth.
g4, $313_{0}$-JJCOB Corson, Clinton, N. J.-Grain Sipve.-February 11, 1868. The sieve box is supported on shacklos, and recoives endwise vibration from handles upon it. The vibration is assisted by standing springs which pass upward betwecn lags on the side of the box.
Claim.-1. A srain sicre, consisting of the combination of the adjustable sicves F G II with the boards $I$ and $J$, all made and operating substantially as herein shown and describct.
2. The above in combination with the slide M , made as set forth.
3. The arrangcment of tho arms $B$, springs $E E$, and lags a a for connecting the box A, containing the sicves, with the pelestal C, so that a shaking motion carl be easily imparted to the box A by hand or otherwise, as set forth.

Ig 4, 314.-Isaac E. Cratg, Camden, Ohio--Manufaeture of Sheet Tron.-February 11, 1868; antedated Januar'y 30, 1868.

Claim-SSoftening of iron intended to be rolled iuto sheets, by the alloying of tiu therewith.
g4,315.-John S. Crane, Lake Village, N. H. -Button Hole Cutter-February 11, 1868. -The edges of the two cutters are in the are of a circle; the moving cutter being piroted at the center of the circle. The moving cutter is adjustable to regulate the length of hole cut. The cutting is done by rocking the instrument upon its cdge.
Claim.-The combination of cutters $C$ and $C^{\prime}$, constructed and operating substantially in the manner and for the purpose set forth.

94,316.-D. K. Croffut, Birmingham, Conn.Horse Yoke.-February 11, 1868.-Tho hames are in form of a solid ring piroted at top and bottom to the yoke frame, the upper pivot having side motion in a slot in the frame.

Claim.-1. A solid or continuous hame, constructed so as to slip on over the collar, substantially as and for the purpose specified.
2. The combination of the yoke E with bows C , provided with the slots F, substantially as and for the purpose set forth.
 Compound for Destroying Inseets in Trees.-Fcbraary 11, 1868.-Composed of fish oil, 1 quart, and sulphur, 1 pound.
Olaim.-The compounding of the fish oil and sulphur substantially as set forth, and the application of the same to the trunks and other parts of fruit and ornamental trees.
194,318.-IsaAC N. Deal, Brooklyn, N. X.Clothes Drier.-February 11, 1868.-The upper and lower series of arms are connected to the opposite sides of vertical pieces.
Claim.-A clothes drier, constructed as described, and consisting of the central upright $A$, supports $B$, arms $a$, and hinges or pivots $a^{1}$, when the arms $a$ are pivoted to opposite sides of the supports $B$, and when the hinges $a^{1}$, connecting each of the said arms $a$ to the central post $A$, are not in the same vertical line as described, and for the purpose specified.

194,319.-Henry De Bus and Georae Johison, Cinciunati, Ohio.-Machine for Crozing Barrels.February 11, 1868.-The stave is clamped upon the adjustable bench, and submitted to the action of the rotary cutter, which is carricd upon a rertically sliding platc. This plate slides on a horizontally sliding plate. Thic cutter head is restricted to a curred fced course by conncction of its journal plate to an oscillating rod.
Claim.-1. The cutter head D, arranged in relation to the adjustable bench A, raised and lowered by the slide $b$, as herein described, for the purpose specified. 2. The compound rertical slide E and horizontal slide $F$, the connecting rod $n$, the swivels $p p^{\prime}$, in which the rol works, and the adjustable slide $H$ in the standard C , combined, arranged, and operating substantially as and for the purpose described.

194,320.-DAVid Dick and Oliver W. Preston, Jr., Corning, N. Y.-Plaster and Seed Sower.-February 11, 1868; antelated February 8, 1868.-Tlre ends of the agitator project from the hopper, and have pendent pins whicl come in contact with the cam surfaces of the driving wheels, and cause the endways reciprocation of the bar. The exit apertures are opencd or closed by a pinion, which is operated by a lerer and engages a rack upon the slide. The seed or fertilizer is distributed from, the trough by the spiral brushes on a rotary shaft.

Claim.-1. The shaking bar $b$, when provided with pins $e e$ and stirrers $i i i$, in combination with cam wheels B B, as and for the purpose set forth.
2. The slide $D$, provided with rack $g$, in combinotion with shaft $d$ and pinion $\alpha$, substantially in the manner and for the purpose specified.
3. The peculiar gear arrangement, in combination with shaft $m$, provided with brushes, shaft $d$, pinion $a$, and slide D, substantially in the manner aud for the purposes described.

194,BZ1。-Joserir W. Douglas, Middletorm, Ct., assignor to W. and D. Douglas, same place-Pump.-Fcbrnary 11, 1868. The pump rod passes through a stufing box at the top of the air chamber.

The air chamber lias a serefr-threaded hole near to the top, surrounded by a coneentrie series of smaller holes. A plug serew's in to the central hole, and its shoulder eloses the outer series of holes, when the deriee is used as a foroe pump.

Claim.-The combination of the pump A, air chamber C, serew pin II, thinble I, rerolving stand D. and tubular serew $b$, all arranged as deseribed, for the purpose specified.

74, B2R.-STEPIEN W. Downey, Piedmont, W. Va.-Trunk Laleel.-February 11, 1868. -The tablet is in an iron frame, and has a lid haring a glass protected by metallic rods. One edge of the lid enters a earity in the trunk when the lid is opened, and this earity is corered by a spring.

Claim.-1. Inserting in the hody of a trunk, box, or ean, a tablet ease, when the same is provided with a slate, and the whole is construeted and arranged substantially as deseribed.
2. The spring If, in combination with a tablet ease, when the same is constructed and arranged substantially as described.
3. The combination of the tablet case and slate, When the former is prorided with a sliding top, and the whole is construeted aud arranged substantially as deseribed.

4, 3:3B.-Mary A. Duffy, New York, N. Y.Maiking Gauge for Sewing Machine.-February 11, 1868.- Improvement ou her patent of November 27 , 1866.-The tuch is not turned, and its line is ereased by an independent spring piece, operated by the presser-foot.

Claim.-1. The combination of theking plate A, marking lerer $F$, presser-foot $P$, and tueking gange D, operating together substantially as and for the purposes deseribed.
2. The combination of plate holder $B$, tueking plate $A$, maxking lever $F$ : presser-foot $P$, and tueking gauge D, operating together substantially as and for the purposes explained.
3. The combination of marking spring lever F with tueking plate $A$, when the tro are construeted, arranged with, and operated by the presser-foot, substantially as deseribed.
4.324.-A. R. Diett, Nerr York, N. Y.- Tindow Sash Stop.-February 11, 1868.-The tro bolts are conneeted by tomgle lerers, disposed on the lower bar of the sash. The bolts engage racks on the window frame, and are held in position by the spring wedges which fit into the augle formed by the connection of the toggle levers to each other. 'Io shoot back the bolt, the spring is eompressed, when other springs aetiug on the outside of each arm of the toggle levers press them together, disengaging the bolts from the raek.

Claim.-1. The bolts $\mathrm{C} \mathrm{C}^{\prime}$, in combination $\pi$ rith the toggle lever's $\mathrm{D} \mathrm{D}^{\prime}$, substantially as and for the purposes specified.
2. The said toggle levers, in combination with the wedges E E, or their equivalents, substantially as and for the purposes above described.
3. 'The said toggle levers, in combination with the springs $J J^{\prime}$, substantially as deseribed.

74,325.-GEORGE W. EnDY, Waterford, N. Y.Railway Car.- February 11, 1868.-The additional Wheel is to prerent aceident, by taking the place of a broken one, until the cars can bo stopped.

Claim.-The construction and arrangement of the extra wheel $C$, in conncetion with the car truek, in such a manner as to admit of its being used as a support and brake, and also as a rerolving wheel, in the manner and for the purpose herein deseribed.

74,BPG.-PimliP EmDMANN, Pekin, Ill-Corn Planter.-February 11, 1868.-The seed slides are reciprocated by conncetion with a roek shaft actuated by an arm, which is raised by a double eam on the axle. The axle is rotated by cluteh conneetion with the wheels.

Claim. - The arrangement of shaft B, cluteles D D, and eams I I, with the levers for operating the clutches, with the shait $G$, arms H II, block $\mathrm{H}^{\prime}$, and arms L L, which operate the seed slides, as and for the purpose set forth.
\% 4,327 - Wimbinm P. Eveninon, Leavenworth, Incl.-Plow.-Tebruary 11, 1898.-The plow is tubular and elongated in the direetion of its course. The plow passes through the soil, allowing the same to fall into position behind it. The subsoil is raised throngh the tube and falls on the seattering plate surrounding its mpper edge.

Claim.-1. The hollow plowshade adapted to excavate, elevate, and seatter the subsoil without material disturbance of the surface, snbstantially as set forth.
2. The provision, npon the outside of a tubular plow $A$, of the deflecting plato or guard $E$, for the purpose explained.
3. The prorision of the adjustable seoop or exearator $C$, at the rear lower portion of the tubulan shire A, for the objeet stated.
 for Sewing Carpet Lining. -February 11, 1868.-Improvensent on the patent of John Li. Mamanioton, April 1, 1856.-From the smoothing plate the fabrie passes throngll a series of sewing miehines, by which it is quilted previously to passing between the measuring rolls.

Claim.-1. The combination of the guide rolls $B$ $B^{2}$, smoothing plate $H$, a sewing mechanism, and feed rolls $C C^{\prime}$, all arranged and operating substantially as set forth.
2. The arrangement of the spring $u$, adjusting serew $m$, and feed roller $\mathrm{D}^{\prime}$, as herein deseribed, for the purpose specified.
3. In combination with a carpet lining machine, construeted as deseribed, the sewing derice, snoothing plate $H$, wheels $E \mathrm{~F}$, lammer $d$, spring $u$, and set-screw $m$, all arranged and operating as deseribed, for the purpose speeified.

171,329.-Wescex Fenimone, Pliladelphia, Pa. -Dust C'ups for Watches.-F'bruary 11, 1868. - The top of the dust enp consists of an adjustable serew ring, whose recheed part enters the cap which fits down snugly on the shoulder of the ring.

Claim.-1. A ring E , rendered adjnstable on the ring $D$ of the plate $A$, in respect to the cap $B$ of a watel, substantially as and for the purpose herein set forth.
2. The ring E, redueed in diameter, so as to penetrate and fit snugly in the opening of the cap $B$, and having a shoulder for the said eap to bear against, all as set forth.

74,330.-FELIX A. FINN, Salt Point, N. Y.Threshing Machine.-February 11, 1868.-The grain passes beneath jointed beaters mpon rotating oylinders.

Claim.-1. The inelined bottom a, in eombination with one or more eylinders $B$, provided with jointed flails, all arranged snbstantially as and for the purpose specified.
2. The sereen D, operated by the erank pulley $G$ and connecting rod F , from one of the threshing eylinder's, substantially as and tor the purposo set forth.

祭 4,33 .-Isaac Tiske, Worecster, Mass.--Cornets, dec.-February 11, 1868. - Improrement on his patent of Oetober 30,1866 . The valves are so arl'inged in relatiou to the duets that both in the open and valve tones a contimed mobstructed passage is allowed to the air. The construetion admits of the ehanging from one to another key in such manner that the same quality of tone may be produced in either key, and without increasiug the number of turns in the wind passages.

Claim.-1. So constructing and arranging the passages through the valves $g$, and the sections of pipe counceted therewith, that a coutinuous uniform passage is secured throngh the ripes and valves for both the open and valve tones, suid ralve and pipe passages being not only urjiform in diameter, but free from angles, substantially as shown and deseribed.
2. In combination with the main pipes $r s$ the valve eylinder $q$, haring the trro pipes $t u$ branching therefiom, and having its ralve so arranged that connection may be made throngh either of suid branches, thereby enabling the key of tho instrument
to be changed without increasing the crooks or de－ tracting from the tone of the instrument．

学4，B2．Moone R．Fletcher，Cambridgeport， Mass．－Separating Fibers from Wood and other Sub－ stances．－Tebruiry 11， 1868 ；antedated February 5， 1868．－Unslaked lime， 10 lbs．，is reduced to the con－ sisteney of milk and mixed with water， 8,000 galls； this is placed in a tank with fibrous matter， 1 ton， and the temperature raised by steam pipes to $135^{\circ}$ Fahrenheit．In about 30 minutes the leat is raised to $195^{\circ}$ ，and eontinued until the water is sufficiently treated，when it is wasbed With witer at $1.25^{\circ}$ and disintegrated mechanically．It is then ready for pulping．

Claim．－1．The process above descrined for pre－ paring the fiber of wook，or that of any regetable fibrons substance，for the manufacture of paper，or any textile laaterial，substantially as specificul．

2．Subjecting the fibers of wood，or other fibrons Tegetable substanees，to the action of a very weak solution of alkali，or lime and water，as specified．
3．Subjecting the fibers of rrood，or other fibrons regetable matter，when mixed with a weak solution of nlkali，or lime and water，to a degree of heat not above the boiling point or below $33^{5}$ Fahrenheit，as specified．

4．Subjecting the fibers of mood，or other rege－ table fibrous substamees，after the same have been subjected to the action of a weak solution of alkali， or lime and water，at a low tomperature，until the albuminous，resinous，or nitrogenous matter has been softened，to the action of a high degree of heat and steam pressure，as and tor the purpose speeified．
5．Bleaching vegetable fibrous substances by sub－ jeeting the same to the aetion of a solution of soda jecting and chloride of lime，in the manner substantially as abore described．
g4， 3 B．－Moore R．Fretcher，Cambridge， Mass．－Planing Machine．－February 11， 1868 ．－The fiace of the eylinder has a series of cutters，and those adjacent eut the slaving at an equal but opposite in－ clination to the grain of the wood．

Claim．－Arranging on a revolviag cylinder，and on an undeviating line around the surface of said cylinder，one or more series of inclined eutters，so that the cutting edges of said eutters in ench series will，as said eylinder revolres，pass throngh the same space，and stand alternately in opposite directions from each other，but each of them at the same angle from a line parallel with the axis of said cylinder， in the manner substantially as deseribed，for the pur－ pose herein specified．
 Cotton Seed and Corn Plantcr．－February 11， 1868. －The seed is stirred by the eurved arms，and drops through the aperture in the striking plate into the cavities of the rotary，distributing disk．The thills are adjustable in inelimation，and the plow frame is vertically atjustable on the main frame．
Claimb－1．The diaphragm D and the bar $G$ ，when made and applied as and for the purpose set forth．

2．The opener $X$ ，when applied to the seraper I ， and used substantially as set forth．
3．The extension of the iron of the scraner $R$ ，by the ends of the roller $T$ ，as and for the purpose set forth．
4．The construction and arrangement of the par－ allel dranght bars $N$ ：and $N^{\prime}$ ，the bar $O$ ，and npright $\mathbf{P}$ ，when theld and used substantially as specified．
5．The distributer Thand ommular rim $L$ ，when ap－ plied and used in combination with the spindle F and diaphragma $D$ ，substantially as set forth．
g 4,3 B．－MERWIN FOWLER，Woleottville，Conn． －Die for Otosing Buckles．－Feßruary 11，1868．－The closing together of the three partis is aeeomplished by a single movement of the peculiarly shaped dies． Claim．－The Ties，eonstricterlas herein described， for closing a three part buekle，in the mamer as set forth．
 ratus for Gitting and Pasting Photographs．L Hebru－ axy 11， 1868.

Claim．－1．The box E ，back springss F ，movable
platform Ir，and pasting frame，combined and oper－ ating substantinlly as and for the purpose deseribed．
2．The reciprocating card holders or catches o $o^{\prime}$ ， slider $J J^{\prime}$ ，and spring＇s $I I^{\prime}$ ，in combination with the piatiorm IT，operating with the board $v$ and its strips $w$ ，and the box F and springs F ，sulbstantially as and for the purpose described．

3．The board $v$ and morable strip $w$ ，for the pur－ pose deseribed，substantially as speeifica．

4．The arrangement of the slides in three or more divisions so as to hold three or more sets of cards and pietures，substantially in the manner represented and described．

5 ．The pulleys $t$ ，belt $u$ ，treadle $t^{\prime}$ ，block $u u^{\prime}$ ，and Weight $u^{\prime \prime \prime}$ ，combined and opersting as deseribed，and adapted for the purpose specified．

6．The pin and cutting board，eonstrueted of the removable guide board C，firme B，removable block D ，and pins $b$ ，substantially as described，for the pur－ pose sperified．

荈，3B7．－EUGENE GALLAGHER，Brooklyn，N．Y． －Transmitting MKotion．－Webruary 11，1868．－A spi－ ral，similar to the elearing serew of an auger，is acted on by the anti－friction rollers on both sides thereof， so that the rotary motion of the wheel earrying the rollers is communicated to the spiral．

Claim．－The wheel，furnished with radial frietion rollers，in combination with the serew or spiral shaft A，substantially as and for the purpose specificd．
g 4, OBe Ditching Machine．－February 11，1868．－The earth is exeavated by the sharp rims of the main wheel and the spades．The latter are comected to an ec－ centrie wheel which canses their extension when en－ tering and carrying up the dirt，and their retraction when the dirt is being seraped from the groore at the periphery of the main mheel．The dirt is re－ moved from the groove and deposited on one sito when it has reaelied the fore end of the maenine．
Claim．－1．The wheol A，with its periphery $R$ ， Fig．1，pierced for spades $S$ S，\＆e．，and worhing on fixed axle $c$ ．and the whoel or disk $B$ ，with its center to the one side of the eenter of wheel $A$ ，the differ－ enee equal to the greatest projection of the spades S S，\＆e．，working on same shatt or axle，with curred crank，substantially as and for the purposes set forth．
2．The movable spades $S \mathbb{S}$ ，\＆e．，arms $n$ n $n$ ，\＆e．， comnceted with disk or wheel B，Fig．I，in sueh a manner that as the two wheels A ank 13 rotate in the same direction，on a fixed axis on different cen－ ter＇s，the spades S S，\＆e．，reeede trom the front wheel A，and projeet from lottom，top，and rear of said whed，sabstantially as and for the purposes set forth．

3．The wheels $H^{\prime}$ ，in eombination with a diteh－ ing machine，combined and arranged as herein de－ scribed．

4．The arrangement of the frame 101112 ，with cross beam 10．sliding in groores 13 13，in frame $Z$ W．$V$ ，supported by axle 2 and wheels $I I^{\prime}$ ，giving a sliding motion to a machine，up or down，and vice versa，to frame $Z \mathrm{~W} \mathrm{~V}$ ，substantially as and for the purposes set forth．

5．The hinged and adjustable guide $\mathrm{K} \mathrm{K}^{\prime}$ ，Fig． 1 ， in combination with the wheel $A$ ．

6．The movable and V－shaped cutter F，Fig．1， when combined with a ditehing machine，construeted and arranged as herein deseribed．

鹏4，389．TOHN F．GAUWEILER，and JOST STEN－ GEL，Croton，Mich．－Fire 1 larm．－February 11， 1868. －The tripping spring lerers are comneeted by cords or soldered wires to the different apartments．When the cord is burut or the solder melted in cither apart－ ment，the corresponding．spring lever flies out and trips the alarm throngh the medium of the loop． The tank is suspended by eords，and is rotated so as to twist the cords，and is then retained by another cord whieh burns off and allows the tank to rotate and seatter the water．

Claim．－1．The indieators $b b$ ，numbered or let－ tered，and operating substantially in the manner set forth．

2．In combination therewith loop $e$ ，as and for the purpose deseribed．
3．The employment of spring lerer $h$ ，in combina－ tion with loop e，substantially as specified．
4. The tank E, Then suspended and operated substantially as described.

24,340.-Joun M. Gilbert, Troj, N. Y.—Stuffiing for Matresses, Sofas, and Seats.-Fcbruary 11, 1868.-The mattress is stuffed with rubber balls.

Claim.-Stuffing mattresses, cushions, and seats of all lescriptions, with hollow elastie blocks or globmes B B, substantially as herein shown and de. scribed.
g4,341.-William Gilbert, Catskill, N. Y.Machine for Cutting Turf or Sods.-Februar? 11, 1868. - The horizontal cutter passes beneath the sod, which is divided into ribbons by laterally acljustable Yertieal kuives, which are supported on à transrerse bar.

Claim.-The knife C and shaft D , with its rollers and linife $e$, used with the firame $A$, substantially as and for the purpose set forth.

- 4,34P.-Arvano B. Gramam. Waukegan, Il. -Harvester. February 11, 1868.-The finger beam is connected to the gearing carriage by a vibratable link, extending crossways of the line of chaurnt, by a draught rod extending parallel with the line of draught, and by two swivel joints for the link and rod, respectircly, so that the tiuger bean may dise or fall and have forward and backirard movenient independently of the carriage.

Claim.-1. The combination, as set forth, in a harrester, of the fincer beam With the gearing carriage, br means of the vibratable link, the draught rod, and swivel joints M and $M 1$, so that the finger beam may both rise and fall at either end ead rock formard and backward.
2. The combination, as set forth, in a harvester, of the finger beam, gearing carriage, vibratable link, dramght rod, swivel joints, aud arm by which the roeking of the finger beam is'eontrolled.
3. The combination, as set forth, in a harrester, of the gearing earriage, rocking finger beam, vibuatable link, reciprocating cutter, crank shaft on the gearing frame, eonnceting rol, (connceting said erank shaft with the cutter on the rocking finger 4 beam, , men swivel joint at the entter.
4. The combination, in a harvester, of the gearing carriage, finger beam, vibratable link, grain Theel, and lifting connection for the grain end of the finger bean, sinbstantially as set forth.
5. The combination, as set forth, in a harvester, of the gearing carriage, finger beam, vibratable link, grain wheel, lifting conncetion, and lifting connections for the inner or stnbble end of the finger beam, so that each end of the finger beam may be raised or lowered relatively to the gearing carriage.
6. The combination of the reel arranged to move With the finger beam, the rearing carriage, ladius bar, and two guide-belt pulleys for the driving and slack nembers of the reel belt, one of said ruide pulleys being arranged upon the gearing carriage and the other upon the radius bar, substantially as set forth.
7. 'he combination, as set forth, of the finger beanl, gearing carriage. swivel joint M between the finger beams and gearing carliage, raking platform, and hinge connections between the finger beam and raking platform.
8. The combination of the raking platform, finger beam, hinge comnections, gearing carriage, uprioht stay and link, substantially as sei fortli.
9. The combination, as set forth, ot the finger beam with the grain wheel and platform, through the intervention of a hinge connection.
10. The combination of the movable member of the clatel for throwing the cutter erank out of or into gear with a cluteh lever, composed of two parts connected by notcies, substantially as set forth.
 Roofing Composition- F February 11, 1868.-Composed of coal tar, 40 galls. ; pulrelized slate, 30 galls. ; palverized clay, 10 galls; boiled rice, It liss. glue, 11 b . ; terra de siema, 1 lb . ; and linseed orl, 1 lb .

Claim.-A composition for covering roofs, composed of the within doseribed ingredients, substantially in ti manner specified.

74,314.-THOMAS GrEEN and Jacob Sommer, Metamora, Ill.-Cultivator.-February 11, 18fi:. The cnds of the singletree are connected by chains to the sides of the cultirator, and will assist in turn ing the latter.

Claim.-The combination of the adjustable piroted draught rod C and adjustable dranght ciatins E with the singletree D and with the nlow iveains A, pivoted to each other at their forwaid ends, suidstantially as lierein shown and described, and for the purpose set forth.
y 1,315 .-James Gresinam, Manchester, England, assiguor to InA Dmock, Florenee, Dass. Injector for Boilers.-Februars 11. 1868; patented in England A pril 13, 1866. -The end of the spindle projects through the steam nozzle into the water space, and has a valve seated? at the rear end of the stean hozzle picce. The valve of the main trater exit moves a short distance 11 a cylindrical space commected with its seat. A conical valve slites upoll this valre stem in such a mamer tlat it is only closed when the main valre is open, and is not forced open until the main valve has nearly reatched its seat. The conical valye allows passage of to water to a small side opening.
claim.-1. The combination of the steam lam $a$, carring the steam nozzle $b$, with a contral spindle d, whereby the steam and Water can be adjusted by turning the ono handle $d^{4}$, substantially as shown and deseribed.
2 . The arrangement of the ralye $d^{\circ}$ on the stem $d$, in combination with the seat within the steam ram a, substantially as described.
3. The ralre $f$ moring in a cylinder $f^{2}$, for' a portion of its trarel, in combination with the ralve $g$ and spindle $f^{1}$, arranged and operating substanītially as set forth.

74,346.—James Greshan, Manchester. England, assignor to IRA DMOCK, Florence, Mass. Injector for Boilers.-February 11, 1868; patented in England April 13, 1866.-The cone picce is arljusted longitudinally between the steam nozzle and stop valro by connection with the forked arm of a rock sliaft, operated by a lever. A sliding spring stop on the lerer engages one of the curved serits of motches, to fix the cone piece to proper aclinstment.
Claim.-The arrangement of the rock shaft on and forked leper $g^{2}$, with relation to the cone pieee e el and case cl, all constmeted and operating esschtially as shown and described, for the purpose set forth.
g4,31\%.-Edwin Giriswoli, Jonl B. Craimir, and William Blay. Melena, Montana Ter.-Equalizing Doubletree. - February 11, 1868. -The traces are attached to straps which run on rollers secured to the donbletree. The ends of the latter are jointerl, so as to achmit of tmening backward, but not forward, of a position in line witli the central part.

Claim.-1. An improred doubletree, the end parts al ol which are hinged or jointed to the eentral part $a^{2}$, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the strap or straps $E$ and pulleys $($ ' with the draught bar or doubletree substantially as herein shown and deseribed, and for the purpose set forth.
3. The combination of the rigid or flexible straps II with the end parts of a jointed doubletree and with the straps E , substantially as herein shown and described, and for the purposo set forth.
y, 348.-M. W. GUNN, La Salle, Ill-Harrow. -February 11, 1868. -The draw bar is attached to the eross-bars, and has handles similar to those of a plow. The rails of the harrow are adjustable on the cross-bars.
Clatm.-1. The combination of the adjustable cross-hars C , rocking cross-bar E , adjustable erossbar I), pin J, and hook I, with the piroted lever $G$ and side bars A B, as herein described, for the yurpose specified.
2. Acljustably seeuring or clamping the formard teeth of the side bars $A$ and $B$ in the slotted forward ends of said side bars, substantially as herein shown and deseribed, and for the purpose set forth.

94,349.-Tames F. J. Gunning, New York, N. Y.-Clasp for Hoop Skirt.-February 11, 1868.

Claim.-A fastening for tho ends of skitt hoops, eonsisting of a slip clasp composed of two sockets $\mathrm{C} D$, secured on the ends of the hoops, and provided respectively with a $\operatorname{lip} a$, and a knob or projection $b$, all eonstructed and arranged substantially in the mamer is herein shown and deseribed.

94,350.-Benjamin T. Hardesty, Sunderlandville, Ma.-Tobacco Hill Preparer.-February 11, 1868. -The plows throw the soil inward, which is then redueed by the harrow and smoothed by the roller. The latter is connected to the cross-bar by links, and to the handles by links and chains.

Claim. - The eombination of the plow, rake, and roller, and the manner in which the roller is attached.

94,351.-George Marsin and 'S. M. KirkpatRICK, Kirkville, Iowa.-Hand Loom.-February 11, 1868. - A pinion on the cloth roller gears into another on the shaft of the ratehet whecl. As the cloth is Woven the feed hand attached to the lever, which is moved backward and forward by the eonnecting rod fastened to the crank arm, acts on the ratchet wheel. Oscillation is given to the crank arm by a spring. As the double wheel rotates the spring is raised, which pushes forward the fced arm and mores the cloth roller. When the pin passes from under the spring the latter flies back, thus retracting the feed hand.

Claim.-1. The combination and arrangement of the harness frames II, attached to guide rods $\mathrm{H}^{1}$, the treadles F , eams G , wheel $\mathrm{G}^{\prime}$, notched bar E , oscillating arm C , rod B , and lathe A , substantially as described.
2. The take-up meehanism, eonsisting of the theel $\mathrm{G}^{\prime}$, and parts $\mathrm{K}^{2}, \mathrm{~K}^{6}, \mathrm{~K}^{5}, \mathrm{~K}^{4}, \mathrm{~K}^{3}$, and $\mathrm{K}^{2}$, arranged substantially as described.
3. The combination of the reciprocating bar D , wheel $L$, shaft $L^{\prime}$, arms $M$ and $N$, and picker staff O , substantially as described.
4. The arrangement of the yarn roller I , having a pulley on its end, and the cord $I^{1}$, one end being fastened to the frame and the other to the lever $\mathrm{I}^{2}$, adjustably held in position by the rack $I^{3}$, for the purnose of regulating the tension of the yarn roller, substantially as described.

74,352.-Isaac W. Mart and Omer Norton, New Britain, Conn.-Carpet Fastener.-February 11, 1868. The carpet is engraged upon the eurved elaw of the nail piece, and thi end of the other picee brought over to proteet it.

Olaim.-The eombination of the devices A and B for the purpose of a earpet fastener, substantially as herein speeified.
 Bed Bottom.-February 11, 1868. -The elastie straps are passed around pins in the plates attached to the rails, and the ends embraced by elips passing around the slats.
Olaim.-The combination of the clasps F, straps D , and netal plates C , all eonstrueted and arranged substantially as and for the purpose set forth.
74,354.-EDward Hatch, Charlestomn, Mass. -Clasp for Belt.-Fcbruary 11, 1868.-The inner plate has two longitudinal slots, with ratchet tecth on one sidc. The spring catches of the outer plate engage the rateliet, and may be slipped over them to tighten the waist belt. To loosen the belt the to tighten thrust inward by thumb knobs.

Claim. - Improred belt clasp, composed of the plate A, (formed with the slots $a$, $a^{\prime}$, and the teeth or serrations $e e$, \&e.,) and plate or part $B$, (provided with the chamber $f$, the spring eatches $g g^{\prime}$, and the stud $i i$, , the said parts being arranged, eonstructed, and applied together in manner as set forth, and so as to operate as explained.
g4,355-Edward Hatch, Charlestown, Mass. Collar and Bosom Combined.-February 11, 1868.
Claim.-The combined collar and bosom, cut or stamped from a single sheet of suitable material, the staid bosom being made whole, and the collar being
formed and conneeted therewith, substantially as herein set forth.

94,356.-Thomas C. Hendry, Union Point, Ga.-Combined Square and Gauge.-February 11, 1868.- The sliding plates are attached together by a temper serew to regralate the frietion. The slide is removable through an enlargement at the end of the slot.

Claim. -The eombination of gauge points $i$ and $i$ with an arm of a common square, by means of a slot $d$, and plates $a$, or other equivalent device, substantially as shown and described, and for the purpose specified.
g1,35\% - Curran W. Menkle, Washington Court House, Ohio-Corn Planter.-Tebruary 11. 1868. -The distributing wheel is oscillated by a lever operated by a thumb.
Claim.-1. The metallic box C and bottom c for the hopper, fitted in the beam $A$, the box and bottom being both cast in one picee, and all arranged to operate in the manner substantially as and for the purpose set forth.
2. The distributing wheel D , provided with the seed cell $g$, and slot or opening $h$, all arranged to operate substantially in the manner as and for the purpose set forth.
3. The eut-off brush $d$, applied or seeured within the metal bottom $e$, to operate in the manner substantially as and for the purpose specified.
\% 4,358. - Tyson Himmelberger, Heidelberg Townsliip, Pa.-Horse Rake.-February 11, 1868.An arm upon the rake head has connection by a rod to wrist pin upon a pinion turned by a wheel, which is actuated by a lever.
Claim.-The arrangement of the rake head $A$ with the axle B , connecting rod M , wheel J and its pinion, and the wheel I with its handle, the whole operating as and for the purpose herein set forth.
g4,359. - Robert Hitchcock, Springfield, Mass., assignor to himself, Genige C. Fisik, and Levi O. Hanson, same place.-Link Joint for Car Seat.-February 11, 1868.-The seat is adjustable in inelination.
Claim.-A link joint for ear seats in Which the end of the link $B$ is pinned in a socket $G$, the latter having its top and bottom edges tapered each way from a central point in line with the pin E , substantially as is herein shown and deseribed.
g 4,360.-John S. Hoar, West Acton, Mass., assignor to himself, Nathayiel E. Cutler, and Cilarles Hasfívgs, same plaee.-Ohuck for Planing Machinc.-February 11, 1868.-The object is clamped to the upper plate Thich is hinged to the plate beneatl it. The latter has rotary adjustment on the base plate. The upper elamp plate admits of revolution to the extent of $180^{\circ}$.

Olaim.-1. The eombnation of the ledges $m$ and screws $n n$ of the plate $B$ with sueh plate and the plate A, applied together by means and so as to render one plate capable of being revolved on and clamped to the other, substantially as specified.
2. The combination as well as the arrangement of the adjustable eecentrie D (or its equiralent) and the auxiliary clamp plate C, (baving ledges and scretrs as set forth, ) with the plates B and A, arranged and applied together, and provided with clamp screws, substantially as hereinbefore explained.
3. The combination of the ledges $m m$ and their screws with the clamp plate $B$, the plate $A$, the sceentric D, and the auxiliary clamp plate C, the whole being arranged and applied together in manner and so as to operate substantially as hereinbefore deseribed.
g4,361. -Henry Abraham Holderman, North Manehester, Ind. - Fruit Mill and Press.- February 11, 1868. -The fruit is placed in the hopper of the remorable cap and is ground by the rotating eylinder. The fruit falls into the inner of two concentrie cylinders, and the juice is pressed by the plunger through the perforations of the said eylinder into the annular space between the cylinder, from whence it diseharges tbrough a spout.

Claim.-The two cylinders D E, fitted one within the other, and the inner cylinder E , perforated as shown in conncetion with the cap $G$, grating cylinder $\mathrm{G}^{x}$, and the strainer $I$, all arranged to operate in the manner substantially as and for the purpose set forth.

74,362.-Tsainif Honeywele, Toledo, Iowa.Bee Hive. - February 11,1809.-The two scetions have a double grate between them, making a partial separation, which is rendered complete by a metallic plate which is thrust between the grates.

C'laim. - The combination of the boxes A, metallic partition $B$, caps $C$, cover $I$, and honey board $D$, respectirely, eonstructed and arianged for use substantially as set forth.

- $4,363 .-E l i J a I t$ Honton, Okee, Wis-Wagon Spring.-Februry 11, 1868.-The spring bars are on each side of the bolsters, and are commected by iron straps. The bars rest upon blocks of rubber.

Claim.-1. The stirrup C, constructed and applied substantially as shown and deseribed for the purposes set forth.
2. In combination with the stirrup $C$, the rubber spring D , the cross-bars E , the ties $a$, and the cups $b$, arranged substantially as shown and deseribed, for the purposes specitical.
g4,364.-Micilael Housman and Simeon HousMAs, Huntington, Ind.-Corn sheller.-February 11 , 1868. -The jaws hare spiral ribs on the inner surface which serve to shell the corn. The jaws are forced together by spiral springs.

Claim.-The shichls A A, in combination with the jatrs B B and the claws D D, constructed and operating substantially as and for the purpose herein deseribed.
g 4,365.-Georae S. Hull, Washington, Towa. -Iruit Ïill.-February 11, 1868. -The concave may be of cast iron and slighty serrated. The cylinder is adjustable to and fiom the concave, its journal arms admitting of the necessary movement. It is secured in position by set serews.

Claim. - The combination and arrangement of the coneave plate B , the eylinder A , and the adjustable stirrup e, substantially as and for the purposes described and set forth.
 Viil, Poughkeepsic, N. Y., assignors to themsel yes and E. Wright Vail, New York, N. Y.-Iubricating Compound.-February 11, 1898.-Composed of petroleun tar. 10 lbs.; paraffine, 2 lbs.; white elay, 1 ib., and plumbaro, 2 oz .

Claim.-1. The use of white clay with oily matter or materials, to form a lubricating compound, substantially as specifierl.
2. The combination with white clay, to prodnce a lubricating compound of petroleum tar, parafline, and plumbago, essentially as lerein set forth.

74,367.-AsA IUURD, Yonkers, N. Y.-Buclile. -February 11, 1868. - The adjustable end of the strap is held between the spring dog and serrated roller.

Claim.-1. The combination of the springe c: with the exteusion $c^{\prime}$ of the clamping tongue D , substantially as and for the purpose specificel.
2. The frame $\Lambda$, eonstrueted with its end $\alpha^{\prime}$ tarned at right angles to its flat portion a, slotted as shown at $a^{\prime \prime} b^{\prime}$, and provided with arms $b$, sulostantially as and for the purpose specifica.
g 1,363.-H. JACKSON, New York, N. Y.-Game. -February 11, 1808.

Claim.-A game consisting of a box divided into compartments, representing the different departments of the government, in commection with counters $B$, and a pack of cards composed of two kinds, one kiad being simply numbered, and the other numbered and named, as designated, in accordance with the compartments in the box, all arranged or devised substantially as herein shown and described.

84,369.-JAMES A. JACKSON, Macon, Mich.Bee Mive.-February 11, 1868.-The supplemental
tops are fitted inside the honcy bores for attaclement of the comb, and to be remored therewith.

Claim. - The supplemental tops $j$ fitted in the spare honey boxes, substantially in the manner as aud for the purpose set forth.

74,370.-Milton C. Jeffers, New Fork, N. F. - Cmmbined Fodder Cutter and Corn Muskiny Ma-chine.-February 11, 1868.-The corm stalks puss between the rollers, and the ears being nipped off by the spiral linives of the lower roller, fall throtgh the slide aperture upon the inclined rollers which remore the husks.

Claim.-1. The eylinder of knives $C$, mounted so as to be reversible, in combination with the ruller B , sliding board $G$, gearing I, and husking rollers II IH, as set forth, so that the husking mechanism is disconnected by reversing the eylinder C, and thes hopper covered by the board G when the machine is used as a fodder entter, as specified.
2. The springs $K$ applied to the cap J, in combination with the inelined husking rollers II and pins $b$, to facilitate the separation of the hushes from the car, as set fortli.
74,371.-C. S. Jewmell, Black's Mill, N. J.Weeding Implement.-February 11, 1868.

Claim.-As a new article of manufacture. a meoding implement, constructed as described, ind consisting of a plate $A$, one cud, $B 3$, of which is curved and flattencl, and the opposite extremity U forming a ehisel, provision being made for the attachment of a strap, D, all as set forth.

74,372.-JoIIN Jones, Newark, N.J.-Smoothing Lron.-February 11, 1868.-The sides of the haudle are jointed together, and their out-turned lower ends are held in the mortises by right and left hand serew bolts, which are pivoted to the upper encls of the said sides, and apon which the liandle is serewed.

Claim.-1. One or more serews, in combination with a landle and movable handle trame, as deseribed in this specification, or its equivalent, for the purpose specified.
a. The smoothing iron with mortises, or its equiralent, in combination with a movable handle, when operated on by one or more serews, as described, and for the purpose specified.

4, 3\%B.-Pinneas Jones, Newark, N. J.-Rein Holder.-February 11, 1808.
(Claim.-The adjustable rein holder or elamp A B $C$, adapted to gripe the rein with a lever pressure, when drawn by the hand of the drirer, sulstatutially as and for the purposes set forth.

7, 374.-Thomas J. Jones, Scranton, Pa.Puddling Furnace.-February 11, 1868.-The arehed roof of the furmaee, iron chamber, and neck is formed of a course of brick with troughs above in which water eirculates.

Claim.- The combination of the brick and bosh, as herein described, and used with a furnace, substantially as and for the purposes specified.

74,875.-Albert Kazenarayer and Louis Valois, Newark, N. J.-Burglar Alarm.-February 11, 1868. -The device is attached to the door frame with its tripping lerer in position to be swangaround by the opening door. When the lever is mored from beneath the spring bolt the latter explodes the torpedo in the box bencath.

Claim.- The combination of the box $L$ with its hinged cover K, and the lever II with bolt a and spring, all as and for the purposo specified.
 Apparatus for lioring Links.-Februury 11. 1868. The device is for boring a number of links of a pre. eisely similar length, and has a stud fitting the firist reamed hole, the pin of the reamer being slightly tapered and entering a steel-bushed socket in the plate.

Claim. The plate A bearing a standard stud D, and provided with an arljustable end rest $B$, or its equivalent, and hole $n$, all substantially as shown and deseribed and for the purpose specified.
 Machine for Forming Eyes on Metal Rods．－Febru－ ary 11，1868．－The frume has a clamping reeess for the rod，whose end is bent aromud the stud by the flanve roller upn the lever．

UGition．－1．＇the lerer $L$ and stud $E$ ，or their equivalents，substantially as shown and deseribed，in combination with the plates A．$B \mathrm{C}$ ，or the in equiva－ lonts，and the adjustable guide plate D，or its equiv－ alcut，all construeted，arranged，and operating sub－ stantially as and for the purpose set forth．

玉．Tho levor M，eollar $h$ ，flamyed roller N ，and the stad E，or other equivalent deviee，substantially as shown and deseribed，innd for the purpose specified．

3．The subject－matter of the tirst claim，in combi－ nation with the eatch $l$ ，or its equivalent，substan－ tially as shown and deseribed，and for the purpose set forth．

4．The improred bending apparatus herein de－ scribed，operating in the mamer and for the purpose substantially as set forth．
 Y．－Preserving Bait for Fishing．－February 11， 1863．－The bait is plaeed in it metallie case sur－ rounded on its bottom and sides by a chamber to contain the freezing mixture，and this ehamber is －survounded by double walls．

Claim．－A bait preserver，made and operating substantially as herein shown and described．
 Fence．－February 11，1868．－The＂thorns＂are placed upon the wires and compressed laterally upon them to tighten them．

Oirim．－1．The thorus E，produced by dies or othervise，in the form substantially as represented， and adapted to be secured in place upon a wire by compression laterally both of the thorn and wire，as and tor the purposes herein set forth．
2．The thorns $E$ and wire $D$ ，eombined in the manmer represented，and adapted for use in a fenec， as herein set forth．
3．The within－deseribed fence，formed by the com－ biastion of the thorny parts D and L with suitable posts C ，and with the addition of the large rope $G$ adapted for joint operatiou，as and for the purposes hervin suecified．

7， 380 ．－Heniex Krllam，New Haven，Conn．－ Cross Strap for Carriages．－February 11，1868．The cross straps are made of rubber，so as to act when the carriage is loaded．
Claim．－Constructing the eross straps for earriages wholly or in part of rubber or other elastie material， substantially as and for the purpose deseribed．

第，381．－Whllam A．L．Kirk，Hamilton，Ohio． －Workmen＇s Time Register．－February 11，1868．－ The eylinder is fixed on a vertical spindle attached to a coiled spring which grives it motion When fice to more，and has a eatch lever connected with a elock movement that trips the lever from time to time as desired，to allow the time box to revolve a eertain space to ehange the eompartments for reception of ehecks of the workmen as they commence or quit work，which is registered by series of fignres on the eircumferenee．

Claim．－1．The eylinder A，dividerl into two sets of time compartments，eircumferentially and seg－ mentally，as deseribed，rotated by the spring $e$ from time to time，and provided with a eatch lerer eon－ neeted with a elock morement，and working in a ratehet，as and for the purposes specified．
2．＇The combination of the eylinder＇A，marked with sets of figures corresponding to the hours and to the time compartments within the eylinder，as desernbed，and the movable eovers $h k$ ，provided with stop springs $s$ and port holes $m m$ ，for indieating the tinie of a workman＇s eommencing＇aud quitting work， as herein shown and set forth．
ge，382．－WILLIAM KNOCI，Alleglieny City，Pa． －Axle for Vehicles．－February 11，1868．－The obli－ quity or＂gather＂is given to the spindle by a coni－ eal case whieh is placed upon the end of the square and straight axle，the chamber beneath the ease boing filled with saturated fibrous material from

Which the oil passes through holes in the lower side of the case．

Claim．－The tapering spindle 13 ，constructed as deseribed，fitting eceentrieally upon the square shank of the axle，the hole in the front end of said spindle being in its center，and the lole in the inmer ennd placed near the lower edge，in sueh a manner that the under side of the axle lies parallel with the lower perforated side of the spindle，and an inelined labri cating chamber formed ahove the axle，as herein described for the purpose specified．
g4，iss－Memann Konller and Wilmely Uncke，Camp Point，Ill．－Mand Seed Planter．－ February 11，1868．－The approach of the handle levers opens the shorels and oscillates the seed plate．

Claim．－1．The oscillating disk E ，when provided with two or more holes $g h$ ，of different diameters and when adjustable on the plate 13 ，having the drop lole a so that uny desired hole of the disk may be employed for measuring and conreying the charge of g＇rain to the drop hole，substantially is and for the purpose herein shown and described．
2．The oscillating disk E ，when provided with two or＇more holes $g h$ ，of different diameters，in combina tion with the shaft $C$ and cianks $c c$ ，hooked rods $f$ ， and oscillating levers D D，all made and operating snbstantially as and for the purpose herein shown and described，and in combination with the shorels $G G$, made as set forth．
geta84．—George Lane，New York，N．Y．－ Door IIinge．－Irebruary 11，18：8．－The hinges have bearings on side knuekles，from which weighted chains pass orer sheares in the firming．

Olaim．－1．The knuekles $\mathrm{C}^{1} \mathrm{C}^{\prime}$ and groores D D＇， When arranged on the door and its firane，substan－ tially as clescribed，so as to allow the same to be swung open to botli sites，as set forth．
2．The abore，in combination with the weight or Weights $\mathrm{F} \mathrm{T}^{\prime}$ ，or their equivalents，made and operat－ ing substantially as and for the pmrpose herein shown and described．
g4，835．－CHARLES H．LAvis，Philadelphia，Pa． assignor to Phuli Farder，same place．－Tube Hole Cutter：－February 11，1808．－The head of the stock has adjustable tools and a spring center whiel re－ treats as the annular groore is deepened．

Claim．－The tool，as a whole，when its several parts are eombined，construeted，and arranged as set forth．

学， 3866 ．－SAMUEL Lloyd，Washington，D．C．－ Heating and Ventilating Mailroad Cars．－February 11，1868．－The air is heated in the hood of the loco motive，or in a fire－proof ear at the head of the train， and is eonveyed through the pipes to the ears in the rear．The couplings between the ear＇s are flexible． Air for ventilation is condueted through the same or a similar pipe．

Claim．－ 1 ．The valve $x$ ，in combination with the heating pipe $b$ and the rentilating pipe $c$ ，in the man－ ner set forth．
2．Heating and rentilating a train of ears by means of a fire－proof lieating car，eontaining furnaces，cal orie engine，blower agitator，receiver，and pipes， arranged and operating substantially as and for the purpose herein set forth．

3．A flexible eonneeting pipe forming a continued hot－air flue between ears，aud attrehed to the heating or rentilating pipes，by means of a serew eap at one end and a sliding tube at the other，in manner and for the purpose set forth．
gi，39\％．－Horace Lord，Hartford，Commectiout． －Breech－loading Fire－arm．－February 11， 1868.

Olaim．－1．The employment，in combination with an altered gun barrel（having its rear portion eut ont to aceommodate a movable breech block）of a reinforce or strengthening band，or external tube， substantially in the manner and for the purpose de－ seribed．

2．So arranging the reinforce as to protect the ex－ traetor＇and loek down the forward end of the breceh piece，as speeified．
3．Forming the reinforce with projecting cars for a leat sight，substautially as described．
74.333.-Rnbert O. Lowry, Saratoga Springs, N. Y.-Spring Bed Bottom.-February 11, 1848. Claim.-A bed bottom, consisting of a series of independent slats D, suspended on the stiff springs B at the head and the weaker springs C at the bottom, substantially as shown and deseribed,
g4,389.-Jomi D. Lyxde, Philadelphia, Pa,Trater Indicator for TBilois.-February 11, 1808-The float is within a chamber, communieating with the water spaee at the lower water lerel, and communieating with the whistle through the port of an inwardly-opening spring ralve, When the water falls bencath the lowest allowed level the forward point of the float lever tips the ralre and admits stean to the whistle. A spring try-eock communicates with the chamber beneath the whistle, and the inner ond of its stem impinges when thrust in against the outer cad of the imer valve stem, and allows the passago of steam or water into the said chamber, at the same time shutting off the steam whistle and opening the exit.

Claim. -The arrangement of the lever $G$, valve stem F , spring II , valve M, pipe N , with reference to the flont $B$, whistlo $L$, and ease $A$, whereby to somnd an alarm when the water is too low in the boiler, and to ascertain the condition of the water at other times, substantially as set forth.
-9 4,390.-Juin Maclure, Newark, N. J.-Manufacturing Harness Pads.- February 11, 1868.-The lower leather is placed in the reesssed die and the hair placed in it. The pad plate is then placed on top, then the biuding leather. The grooved plate is plaeed on top of the latter. The treade jaw is next brought down and held by the ratchet. The grooved plate guides the kife in trimming the leather.
Claim. - 1 . The rerolring table A, with the adjustable shaft $B$ and the projecting, jaw $3^{\prime}$, substantially as and for the purposes herein shown and deseribed.
2. The thin middle picee of leather $c^{\prime}$, in eombination with the pad plate $F$ and leather $a^{\prime}$, substantially as and for the purposes deseribed.
3: 'The former C with the groove $h$, whereby I am able to stuft the pad by pressure and eut the leather evenly for binding, substantially as speeifiod and showh.
4. Stuffing pads by pressure, whereby I am enabled to obtain an eren surface and uniform density in the pad, substantially as deseribed.
5. In combination with the groored former Cr , the tool $J$, substantially as and for the purposes wat forth.
6. Lining the dies E, either in whole or in part, with India-rnbber, substantially as deseribed.

24,391.-Thomas J. Magruder, Marion, Ohio. - Marness Trimming.-February 11, 1868. -The terrets and cheek hook are upon frames, which itre adjustable upon straps of the larness and secured by serews, whieh engage the frames and straps.

Claim.-1. The rein hook B, Fig. 3, in combination with the ecnter barr, burr plate $1^{\prime}$, and screw $a^{\frac{1}{2}}$, tion with the ecnter bar, burr pate shand sciend described, and for the purposes set forth.
2. The loop, center bar, burr plate $B^{\prime}$, in combination with the eenter bar $a$, substantially as shomm and deseribed, and for the purposes set forth.
3. The rein hook B, Fig. 6, in combination with the projection $c$ and center ber $a$, substantially as shown and described, and for the purposes set forth.
4. The rein hook B, Fig. 9, in combination with the loop $e$ and cross bar a and shoulder $s$, substantially as shown and deseribed, and for the purposes set forth.
5. The eenter-bar, burr plate d', Fig. 1, in eombination with the terret D, substantially as shown and described, and for the purposes set forth.
g4, B32.-Georan Mallory, Bridgeport, Conn. -Hat.-February 11. 1868.

Clatim.-The combination of the brim of a hat with a drooping hoon, so that the brim is cansed to droop at the fiont whid the rear, and to rise at the sides, substantially as set forth.
'r4, 393.-W. S. Mallory, Bataria, N. Y.-Railroad Ravil Coupling.-February 11, 1868.-The spliee
picees are formed of woon, and are reversible. The said picees are attached to the ties by serew bolts, by wut bolts, or by slotted bolts, which extend through the spliee pieces and tios, respeetively, and are comected hy a tapering kef traversing the slots.
Claim.-1. The arrangement and eombination of the kers $k$, slofted bolts $h$ and $m$, and splice picces $d$, in their relation to the rails of a railroad, in the manner and for the purposes lecrein deseriber.
2. The combination of the central spliee piece $b$ with its plate $n$, in combination with the rails $a$ a, the same being held in place and position by means of serews $g$ and liers and bolts, in the maner and for the purposes herein deseribed.
g4,394.-E. J. Manville, Waterbure, assignor to limself and E. M. JUDD, Woleottville, Conn.Machine for Maling Sevoing-machine Needles.- February 11, 1868.-The blank is grasped by one of the sericis of jaws and presented propressively to a cutter, a grooving tool, a similar tool to groove the opposite side, a punch, and a polishing wheel. The jars are upon sliding stoeks, which are mored radially by a eam groove, to eause the necessary rotation in the presentation of the blank to the tools.

Claim.-1. The sliding stocks $s$, having a hole corresponding to the size of the needle blank, with an adjustable cutter outsile said stock, in combination with the recolring spindles $g$, arranged as shown, and mored progressivelr, so as to present the nealle blanks suecessively to the operation of said cutter While the blank is being revolred, as set forth.
2. The spindle $g$, rim 11, wheel $p$, and sliding berel gears 0 , in combination with the springs 8 and groored eam 7, (or equiralent meehanism for moving the gears $o$, all arranged in suel a manner that the needle blank Will be revolred while being turned, aind will he held in a fixed position while being grooved and punehed, substantially as set forth.
3. The holding jarsi $i$ and heads $n$ upon the spindles $g$, in eombination with the sliding blank supplier $q$, substantially as and for the purposes set forth.
4, The general arrangement and combination of the hlank-smpplying slite $q$, the spindles $g$, the jaws $i$, the thrning meelianism, the grooring and pruehing devices, and the means for revolring and for holding the spindles during the respective operations, sinbstantially as set forth.
g4,395.-Louis II. Marbura, Baltimore, MId., assignor to hiniself and C. L. Mariung, sirme place. -Paching Tobacco.- Februar 11, 1868. -The elastic band may surround the bag or aet as a sphincter upon the mouth.

Claim.- The method of paeking tobace, above described, consisting of the cirenlar elastie band $\mathrm{B}_{1}$ attached to a bag. A, in the manner shown, and opcrating to elose it automatically, substimially as and for the purposes specified.
 Dasher.-February 11, 1868.-Conical blocks are snspended by cords from rectangular teeth at the lower side of the radial horizontal arms of the vertical rotating shaft.
Claim.-A rotury ehurn dasher, eonstrueted with the shatit $A$, arms $\mathbb{C}$, teeth $D$, and blocks E , attached thereto by cords $\mathrm{E}^{\prime}$, said parts being artanged to operate substantially as clescribed.
74,39\%--Cinarides Mantin, Chancery Lane, England.-Reduction of Refractory Iron Ore-February 11, 1868.-Additional tuyeres are placed in an obliqne position horizontally ind in relation to the sides of the hearth, so as to force air into the molten metal and enuse revolntion in thes same.
olaim. -The methods of reducing refraetory iron ores, and of construeting furnaces for sneh operattions, as substantially hercinbefore deseribed and set forth, or any mere modifications thereof.
194,398.-Whlian J. Malitin, Catawissa, Pa.Attochment for Plows. - February 11, 1868. - The adjustable inelined bar is for the thuring down of weeds, so that they may be perfeetly eovered by the furrow slice.

Claim.-1. The sweep or bar C, attached to the
beam A，and arranged in relation with the mold－ board $D$ ，substantially as and for the purpose speei－ fied．

2．The adjusting limks $c d$ ，and tightening bolt $f$ ， in combination with the sweop or bar $C$ and the beam A，substantially as and for the purpose spe－ cifierl．

3．The chain or brace D，arranged in rolation with the sweep or bar $C$ ，and the beam $A$ ，substantially as and for the purpose speeified．

学，399•－G．M．McMafan，Mount Sterling，Ky． －Window and Door Blind and Awning．－Fcbruary 11，1868．－The metallic blind is hinged at top，and is drawn upsward by cords to form an awning．Rods hinged to its outer edge are let down to form sup－ ports．

Claim．－1．The metallic awning herein deseribed， composed of the strips A A，provided with overlap－ ping flanges and grooves $a a^{\prime}$ ，and linged to the building，so as to be eapable of being lowered and fastened down，so as to form a metallic shittter or blind，or the protection of the doors or windows of the building，substantially as described．

2．In combination with the foregoing，the eateles or locks $m m$ ，cords I I，roller D ，and crumk E ，sub－ stantially as and for the purpose specified．
by， 400 ．－John H．Mears，Oshkosh，Wis．－Mop Fringer．－February 11，1868．－The pressure roller＇s are journaled upon the hinged standards and upon the hinged arms respeetively，and are brought together upon the mop by the spring treadle．

Claim．－1．The hinging of the reetangular stand－ ards $B \mathrm{~B}$ to the horizontal frame $\mathrm{A} A$ ，the hooks $s s$ ， the hinged arms C C ，and the detachable connection at $d^{\prime \prime}$ ，when arranged substantially as described for the purposes set forth．

2．The hinged arms $C$ C ，the spring lever $D$ ，and the bail $g$ ，when arranged relatively to each other and to the rollers E E，standards B B frame A A，and treadle F ，as and for the purposes set forth．
gis，401．－David Morris，Bartlett，Ohio．－Im－ plement for Extracting Nails．－February 11，1868．－ One of the pinching jaws is attached to the fulerum bloek and the other to the lever that is piroted there－ to，so that pressure upon the lever tightens the jaws upon the nail．

Claim．－The implement herein desoribed，con－ sisting of the jaws $J J^{\prime}$ ，handle A $B$ ，jaws $c$ c ，claws $e e$ ，and the head II，provided with face $f$ ，the Thole construeted and arranged as described，as an artiele of manufacture．
g4， 1 OS．—CyRus B．Morse，Rhinebock，N．Y．－ Bobbin for Spinning．－February 11， 1868.

Claim．－Packing bobbins by boring holes throngh them obliquely to the line of their axis，in such a manner that the holos shall intersect the plane of a transverse section of a bobbin at points equidistant from its center，and inserting therein twine，rubber， or other equivalent packing，substantially as and for the purposes herein shown and described．

64，40：B．William Mullally，Boston，Mass．－ Tamp．－February 11，1868．－The chimney supporter has a circular series of thin springs，which serve by their outward pressure to engage the chimney．

Claim．－1．The chimnoy expansive and elastie base supporter，constructed substantially in manner and so as to operate substantially as described．
2．The combination as well as the arrangement，as explained，of the chimmey expansive and elastic base support and its air passages with the foraminous or perforated burner body and wick tube．
3．The combination as well as the arrangement of the chimney expansivo and elastic base supportcr with the cone or ail deflector，the wick tube，and the perforated or foraminous burner body，arranged as represented．

194，104．John S．Mulixn，Port Monmouth，N．J． －Steam Generator．－February 11，1868．－The tube sheet and tubes are inclined．The caloric emrent， aiter reaching the rear ehamber，follows a down－ wardly－curved course，and part of it is conducted back to the furnace．This current is assisted by a
funnel at the locomotive front，which draws air into a flue connecting with the return flue inentioned．

Claim．－1．The inelined fire tubes $B$ and inelined tube sheets $a$ a，in combination with a steam boiler． substantially as shown and described．
2．The extension of the smoke stack or elimey of a steam boiler near the bottom of the smoke chamber， substantially as shown and described．

3．The double deflector F ，whereby the sparks are oondncted into the channel II，substantially as de－ scribed．

24．405．－Tosepm II．Mullin，Sehcllsburg，Pa．－ Horse Hay Fork．－February 11，1868．－Toggle levers Within the stem are thrust ontward to engage the hay by drawing up the inner stem．The latter is kept up by a catch upon a spring lever．The lever is dramn out by a cord to release the stem．

Claim．－The combination，substantially as de－ seribed，of the shank，the loop E ，the slotted sliding bar，and the spring latch，for the purposes set forth．
\％4，106．－David Munson，Indianapolis，Ind．－ Lightning Rocl．－Fcbruary 11，1868．－The corruga－ tions are so sharp that the inner corners hold moisture by capillary attraction．The sections are slottod close to the ends to admit the traverse of the bind－ ing strap by which they are connected．

Claim．－1．The lightning conductor，made of sheet copper，tinned on one surface，and formed in flutes or folds，substantially as and for the purpose set forth．
2．Fastening the sections A torether＇，by means of the strap 1 ，in the manner substantially as set forth．
ge， $40 \%$－Frederick Myers，Newr York，N．Y． －Machine for Bundling IIndling Wood．－Fehruary 11，1868．－A charge of the pieces of kindling falls fiom the chute into one of a series of boxes unon an end－ less belt，and is carried over the clamps，into which it is dropped by the openiag of the bottom．The elamps are then closed by cams and the wire passed around within a groove in the clamps．The wire is then automatically cot and twisted．

Claim．－1．The groored semicircular clamps $G G^{\prime}$ ， constructed as described，pisoted together and to the standards $g^{\prime \prime}$ at $u$ ，and provided witly projections $g$ ， piroted lifter $n^{\prime}$ ，spring ${ }^{c} c$ ，and points $b^{\prime \prime}$ ，．all operating as described，for the purpose specifiod．
2．The grooved semieireular clamps $G \mathrm{G}^{\prime}$ ，in com－ bination with the spring eams $\mathrm{E} \mathrm{E}^{\prime}$ ，substantially as described，for the purpose specified．

3．The boxes $\mathbf{D}$ ，upon the endless belts $B$ ，con－ strueted as described，having the hinged bottoms $d^{\prime}$ ， operated by the catch $a^{\prime \prime}$ and arm $b$ ，to permit tho fagots to fall beneath the jars $G G^{\prime}$ ，constructed and operating，substantially as described，for the purpose specified．

4．The guide $c$ ，haring the angular slot $e^{\prime}$ ．in com－ bination with the chute $\mathrm{E}^{\prime \prime \prime}$ ，siiding bottoms $e^{\prime \prime} e^{\prime \prime \prime}$ ， angular slotted plate $j$ ，and spring 0 ，substantially as described，for the purpose specified．

5．The combination of the rollers $h \hbar$ ．hollow shaft $p$ ，bevelod gears $O X$ ，bercl gears $O^{\prime} W$ ，the lattor upon shaft $w$ ，slotted spindle $m$ ，shaft $t$ ，segmontal gear wheel $S$ ，and the wire cutter if，substantially as deseribed，for the purpose specificd．

6．The plunging disk $i^{\prime}$ ，supported centrally upon the arm $V^{\prime \prime \prime}$ by means of the right－angular arm $V^{\prime \prime} \nabla$ ，and operated through the plate $i$ by means of the pivoted spring lever $V^{\prime}$ and arm $\Omega$ upon shaft $F$ ， constructed to operate as hercin described，for the purpose specified．
7．The spring door $i^{\prime \prime \prime}$ ，hinged to the vertical plate $i^{\prime \prime}$ ，and operated by means of the fagots passing be－ tween the clamps $G G^{\prime}$ ，under＂the impulse of the plunger $i^{\prime}$ ，substantially as herein shown and de－ scribed．
8．The lifting lever $n$＇，for．lifting the serered end of the fagot wire $n$ ，substantially as shown and de－ scribed．
9．The spring $M^{\prime \prime \prime \prime}$ ，for closing the bottom $d^{\prime}$ of the fagot boxos，substantially as shown and deseribed．

24，备的．－W．T．Nichols，Rutland，Vt．－Porta－ ble Railway Elevator．－February 11，1868．－The firame of the conveyer is made in jointed seetions，to admit of use upon strfaces of varying inclination．

Olaim．－3．The construction of the sections G of
the frame or gang plank with railway traeks, and With bereled and hinged or jointed ends, as and for the purposes set forth.
2. The construetion of the endless chain $a$, of metallie plates, with dianges bent at right angles to the пpper surface upon which the platform F is fastened, when said links are connected by transyerse bolts, whieh bolts earry wheels upon the outside of the flanges, and wear into the driving Theel, as shown ank deseribed.
3. A portable railway clerator, construeted in seetions as deseribed, earrying an endless platform, when the same may be hinged or jointed torether, and each scetion operated at in different inelination or plane, or separated, so as to carry a section of said endless platfor'm independently.
4. The arrangement of separated seetions of the elevator, by means of their driving-band wheels C C, pullers D D, and rope E , so as to operate at an angle with each other, as shown and described, and for the purposes set forth.

94, 109.-TACOB Nacier, La Crosse, Wis., assignor to himself and A. Revagli and J. Ulrich, same plaee--Meat Cutter.-February 11, 1868.

Claim.-1. An automatic machine for cutting or chopping, composed of a block K, moring backward and formard under the reciprocating kinves I, in combination with the guard oand paris $n$ and wheels $a^{2}$, by means of whicli the notion of the same is rerersed, substantially as shown and deseribed, and for the purposes set forth.
2. The parrls $n$, in combination with the cross head H and wheels $a^{2}$ and shaft $L$ and pinion $e^{2}$ and rack $e$ and block K, substantially as shown and described, and for the purposes set fortli.
3. The lever' $s$, in combination with the guard $o$ and starts $e^{1}$, substantially as shown and deseribed, and for the purposes set forth.
4. The plates $J$, in combination with the uprights B and knives I, substantially as shown and described, and for the purposes set forth.
5. The pawls $n$, in combination with the reversible guard o and wheels $a^{2}$, substantially as shown and deseribed, and for the purposes set forth.
(7,410.-TV. H. Nobles, St. Paul, Minn., and M. V. Nobles, Elmira, N. X.-Steam Generator.February 11, 1868 .-The smoke from the flues passes into a chamber, where it is subjected to a jet of water, and biown by a rotary fan wheel down an inclined pipe to the space beneath the furnaee ; from thence the rapors and gases pass to the fire, and the ashes are diselarged through a waste pipe. The heated blast flues and eliamber have a water jaeket to keep them cool. The ash pit contains water to extinguish the ashes before their entrance into the waste pipe.

Claim.-1. The combination of the fan wheel ease $K$ and the water chamber L, as herein deseribed and set forth.
2. The combination of the water ehamber E and wheel $G$, as herein described and set forth.
3. The arrangement of the imner and outer eases $K$ and $L$, wheel $G$, diseharge opening $H$, flue $F$, and chamber' D, wherehy to eonduet the heat and smoke from the fireplace and back in one continuous rotating course, substantially as herein set forth.

94,411.-Omar P. Norris, Fostoria, OhioCombined Sheep Rack and shetter:- February 11, 1868.-Tho shed is made in sections to admit of removal on a wagon, and is placed on rumers for morement in the field. The feed troughs are opened on the ontside for introduction of hay, which is accessible through racks on the inside.
Claim.-1. The herein deseribed sheep shed, wheu constructed iu scetions, so that it may be taken apart, in the manner as and for the purpose set forth.
2. The arrangement of the racks C and troughs D , in combination with the shed $A$, for the purpose and in the manner substantially as set forth.
(24,412.-W. A. C. OAKs, Reading, Pa., assignor to Manbstere, Brothers \& Co., same place.-Window shade Fixture,-February 11, 1868. - The lip at the lower end of the sliding-hook bar takes beneath
the zigzag spring in the case. The hook serves to hold the shade cord.

Claim. -The combination of the recessed guide plate $A$, the zigzag spring $c$, and the slide $B$, substantially as and for the purpose specified.
g4,413.-Chables H. Palaier, New York, N. Y., assignor to limaelf, Newton Palmer, and Joserf Hervrich, same place- - Ianging Tíndow Sash.-February 11, 1868. -The sashes are piroted to the sliding bars, so that the sash ean be turned into a horizontal position.
Claim.-The combination and arrangement of the flanged sashes $B$, the disks, packings $l ~ b$, flanged sliding bars C , weather strips and pirots $\alpha$, all construeted and operating as deseribed, for the purpose specified.

94,414.-Tohn Palamer, Meehaniesburg, Pa.Buggy Top Roller.-February 11, 1868.-'I'le shank of the top prop is covered by an India-rubber eylinder for the bows to rest on, and has a strap to hold them firmly.

Claim. - The combination of a gum clastie cylinder $\Lambda$, and its strap and buckle B and C , with the serew bolt F and top bows D of a falling top louggy, as herein described and for the purposes set forth.
74.415.-Toslail M. Patton, Tipton, Iowa.-Bee-IIve.-Februar'y 11, 1868.-The double walls are grooved into the cormer posts, and contain some thermal non-eonductor between them.
claim.-The corner posts $b$, when grooved their entire length upon tro sides, to receive the walls $c$ $c^{\prime}$, with a space a between then, the outer wall $c$ having an external corering $d$ secured to it, as herein shown and described.
g4,416. - Oliver Pearl, Lamtrence, Mass.Spinning Throstle.-February 11, 1868.-The weight abore and below the whinl is balaneed hy extending the tubular bearing below the whinl, whieh is sustained in a tube set in the top rail, with bearings abore and below, to prevent ribration and consequent irregular wear.
Claim.-An inverted flicr, provided with a ring, a whinl, and an clongated tubular extension, substantially as deseribed, combined with the spindle and the elongated tubular bearing, as shown and for the purpose set forth.
g 1,41\%.-GEorge Perry, Gcorgetown, Conn.Cultivating Grape Vines.- February 11, 1868.-The vines are planted to a eircle of stakes twelve feet in diameter, and contain twelre strkes. Each rine, the second season, is laid down in a layer to an adjoining stake in the same direction, and this is continued year after year. In four years the original root is dug up, and this proeess is continued jear by year, always removing the roots which have bcen four jears set.
Claim.-The herein described mode or systom of eultirating vines and removing the ollest roots, so as to preserve a vigorous and healthy growth, with new roots, for an indefinite period of time.
194,418.-O. E. Pickett, North Auburn, and R. S. Luce, Larstrille Center, Pia-Fire and Burglar Alarm.-February 11, 1と68.-The hammer and other mechanism is tripped by breaking the conncetion cither by foreible entrance or by fire; the alarm is thereby sounded and eandlo ignited.
Claim.- 1 . The set $h$, the lever trigger $g$, and the trip rod $e$, eombined .ith the eseapenient $e$, the hammer $d$, the bell $B$, the wheel $b$, and the spring $a$, when arranged and operating as and for the purpose deseribed.
2. In combination with the alarm derice, the pawl $m$, the igniting plate C , tho spring $s$, and the mateh holder $n$, provided with the spring $p$, arranged and operating as and for the purpose set forth.
g4,419.-O. Poole, Detroit, Mieh.-Culinary Boiler.-February 11, 1868.-The steamers are supported within the boiler upon their fianges, and separated when desired by the removable transverso partition. The drip from the larger stemer or basket drips into a trough, fiom which it is con-
ducted through a pipo having a fancet outside the boiler．

Claim．－In combination with the boiler A，per－ forated baskets $D, E$ ，and $F$ ，and removable parfi－ tions C and G ，the spont H ，construeted and arranged substantially as herein deseribed and for the pur－ pose set forth．

留4．4．20．－T．N．Porter and P．P．Roberts， Morrisville，Vt．－Potato Washer．－February 11， 1808．－The rotnry frame lias a eircular series of round posts connecting the two horizontal disks． The lower disk is perfor ated．

Claim．－The vertieal potato washer E rotating in a pail with flauges 13 ，on the inside，when con－ structed and combined as herein deseribed and for the purposes set forth．
 －February 11， 1868.

Claim．－1．The heel fastening，eonsisting of the lever，piveted on a sleeve $d$ ，and made arljustable by means of the set serew $\mathbf{F}$ ，substantially as de－ scribed．

2．The pivoted lever $G$ ，having a scrrated rear face，and scemred to the foot plate $H$ ，substantially as set forth．

3．The deviee for adjusting the pivoted lever $G^{\prime}$ ， consisting of the sleeve $d$ ，moved by the set screw F ， provided with a shoulder $f$ ，which has its beurings in the cross－slot of the slot $e$ ，in the bracket E ，sub－ stantially as described．

4．The elamps L，provided with spurs $k$ ，in combi－ nation with the partily serrated slots $K$ ，substantially as and for the purposes described．

5 ．The $V$－shaped cut $i$ in the standard $C$ ，and the correspondingly shaped bracket I，substantially as and for the purposes set forth．
－4，422．－Hiram W．Raxsom，Lawrenecburg， Ind．－Fifth Wheel for Garriages．－February 11， 1868. －The lower bearing of the lower scgmental bar is against a sliding block kept in contact with the said bar by a rubber spring block．

Claim．－The block H，whieh forms a bearing for the fifth wheel F ，and which is provided with a wing on each side，whereby the rubber $D$ is held in the safety guard $G$ ，as and for the purposes set forth．
ge，428．－Bentamin W．Remington，Providence， R．I．－Curry－Comb．－Febrnary 11，1808．－The dirt falls through the slots of the plate stretehed beneath the teeth，and is preventad from returning by the angnlar plate fastened beneath each slot．

Claim．－1．The plate A，as applied to a curry－ comb，and forming a clirt reccirer，substantially as deseribed，and for the purpose set forth．

2．The plate B ，in comection with A ，for prevent－ ing the dirt from faling baek，after passing through the slot into the receiver，all substantially as de－ scribed and for the purpose specified．

74，49，－Charles L．Rice，Dummore，Pa．－ Spring for Vehicles．－Fcbruary 11， 1868.

Claim．－The combination of the side springs E， whose lower ends are hinged at a to each side of the reach，and whose upper curved ends are hinged to the sides of the wagon body，and the spring F ， whose inner cad is secmred to reach between the springes E ，and whose forward end passes through the springs $D$ ，and is bent over and hinged to the forward edge of the upper part of said spring，all arranged and operating as described，to prevent the longitudinal and lateral movements of the body，as herein set forth．

桨4，425．－Jomn Richardson，New York，N．Y．－ Machine for Bundling Kindling Wood．－February 11，1868．－The kindling is earried into the receiver by the endless belts．Spring plates in the latter give Way as the wood enters．When the recciver is full， the plunger forces the eontents into the sharp edged bundling tube．When the plunger is retracted，the sliding section still eovers the feed opening for a limited time．

Claim．－1．The carricr belt $A$ ，in combination with the belt $B$ ，mounted in the hinged or piroted frame，when arranged to operate substantially as
deseribed，for the purpose of feeding the wood to the reeciver E ，as set forth．

2．The plates $1,2,3$ ，so arranged within the re－ eciver E，to reecive the wood，said plates being ar－ l＇inged to yield as the wood is fod in，substantially as described．
3．The sliding section or slide $a$ ，arranged to close the aperture through which the wood is fed into the receiver E ，and antomatieally to open the same，as the plunger is drawn back，when construeted sub－ stantially as herein shown and described．
（y，4286－ISAac C．Ricimmoni，West Meriden， Conn．，assignor to H．C．Hull，same place．－Snap Hook．－February 11，1868．－Eaeh of the two parts forms a perfect hook，and their ends are halved to－ gether to form a loop．They are pirotcd together， open laterally，and are pressed together by a spiral spring．
Olaim．－The combination of the two parts A and $B$ ，piroted and joined together in the manuer de－ scribed，and so as to open by turning one part from the other to the right or leit，as the case may be，as set forth and specified．

多4，Agy，Josepir Rider，Newark，Ohio，as－ signor to himscll and E．Remington and Sons，Mion， N．Y．－Snap Ring for Fire－arms．－February 11， 1868．－The ring is open，and its ends are inscrted in the soekets，after which a pin is inserted，whieh traverses the socket between the ends and prevents side morement of the ring．

Claim．－Uniting a swivel bow to the guard strap or band，by means of the lug and pin，substantially as described．
 to himself and E．Remingron and Sons，Ilion，N．Y． －Brech－lodding Fire－arm．－Fchruary 11，1868．－ The dog is piroted to a projection upon the hammer． A projection on the dog takes agninst a shonder on the loeking brace of the breech block when the ham－ mer is drawn back，and causes the retraction of the brace；the breeeh bloek is then thrown back by the spring and throws ont the shell．The brecch bloek， also，strikes the dog and releases the brace there－ from．When the breech block is elosed up to the barrel，the brace is thrown into engagement with it， ready for discharging．

Claim．－1．In combination with the spring $f$ ，the groove and abutment 5 across the eroove，so that， when the breech block is replaced after having been taken sut of the arm，said spring will find its place in conncetion with the breceh block，and go into action with it，without any care or attention on the part of the user，substantially as described．
2．Hanging the hammer on the two centers $h$ and $i$ ，so that it ean more at times on one and at fimes on the other，as and for the purpose described．

3．The arranging of the pirot $i$ in a line in rear of a vertieal line drawn through the pirot bolt $h$ ，so that the hammer can canse the brace to follow it in moving it back without being rigidly connceted to it，substantially as described．
4．In combination with the hammer and the brace， the dog $n$ ，connected and acting therewith，substan－ tially in the manner described．
5．The button $t$ ，made and operating in connection With the pivot－bolt heads，as and for the purpose de－ scribed．

194，429．－Geronimo Rivera，Cambridgeport， Mass．－Pine Apple Beer．－February 11，1868．－ Crushed pine－apple， 11 b ．，is plaeed in water， 2 galls．； When the pine－apple rises to the surface，the liquid is strained and bottled，with the addition of sugar，2 lbs．
Claim．－The beverage，made and preparcd cssen－ tially as above deseribed，and which I torm Pine－ Apple Bcer．
\％4，4830．－Leander Rodney，New York，N．Y．－ Cement Roofing．－February 11，1868；antedated Jan－ uary 31， 1868.

Claim．－1．The application of strips of wood，or other suitable material，placed edgeways，on the rafters or other support on whiel the roof rests； these strips（of any desired thickness）being properly secured and fastened together，and this foundation
scres as a body on which to apply rrater-proof cement, or other suitable material, substantially as and for the purpose herein specified.
2. The application of cement, or other suitable material, to two or more sheets of paper, or other suitable material, to be used in connection with the fonndation, as above described, or any other suitable foundation, or separately, substantially as and for the purpose herein specifica.
oy, 431.-Cmarles Rogers, Alleghany City, Pa. -Pump.-February 11, 1868.-The cup valves are altermately mored to and from each other by the compound levers, the upper valve sliding upon the rod of the lower one.

Cluim.-The levers A A, pivoted to a brake $S$ of a hand pump, said leter's being supported at their ontside ends, each by a vibrating link $L$, the $w$ liole being combined and arranged to operate, with respeet to the pump box and its attacliments, substantially as described.
\% 4.43\%.-Clark Root and Bishor Bennett, De Ruyter, N. Y.-Sawing Bachine. Tebruary 11, 1868. -The pitman connects the saw to a wrist pin on the balance wheel, which is rotated by gearing connected to is vertically oseillated lever.

Clam.-The three-armed lerer B, swinging fulcrum $f$, and driving devices $K l$ I $i \mathrm{H}$, all constructed and armanged as herein described and for the purpose set forth.
74.433.—J. P. Scott and S. H. La Rue, Lewisburs, Pa.-School Desk aind Scat.-February 11, 1868.

Claim.-1. The combination of the groored support A, slotted muides $B$, desk $C$, linged leg G, brace $J$, rertically sliding support K, seat L, brace II, and crank $N$, all constructed and arranged as deseribed, for the purpose specilied.
2. The jointed seat brace MI N, formed by the combination of the piroted har II and piroted bar or crank $N$, in combination witl the seat L, and seat uprights $K$, substantially as herein shown and described, and for the purpose set forth.
3. The pivoted and sliding self-locking jointed brace $J$, in combination with the leaf $G$ and bookbox C , substantially as herein shown and doscribed, and for the pmrpose set forth.
rat 4, 434.-Anson Searls, New York, N. Y.Pivoted Stump Joint.-I ebrnary 11, 1868.-The pivot is trarersed axially by the securing rivet, and, is spread out into the countersiuk of the socket.

Claim.-An improred stump joint, substantially as described, and for the purposes set forth.
7. 4, 4.5.-Clark A. Shelton, New Haren, Comn.-Whip Tip.-Februnry 11, 1808.-The serew socket fastens the tip to the hanclle by the thread upon its immer side.

Claim.- A whip tip provided with a socket $B$, so as to be attached to the stock proper, in the manner herein set forth.

74, $1: 36$.-Tacob Silberman and Gustav Unger, New York, N. Y., assignors to themselves ant Jacors HenNEMANA, same place.-Ncel-Tic.-Febrnary 11, 1868.

Olaim.-A neck-tic formed in one piece by wearing, with the end portions diverging from and wider than the middle portion of the article, as set forth.
(4,43g.-Amos B. Simonds, Youngstomn, Ohio. -Hand Turning Tool. - Febrnary 11, 1868.- The head of the serew bolt is shaperl to engage the commtersunk hole in the tool, which hole has a side cavity to receive the projection on the bolt.

Claim.-Tire serew bolt C, provided with a projection $a$, in combination with the socket B, collar $F$, conter E, and a handle A, all constructed, arranged, and operatine substantially as described and for the purpose specified.

74, 4:38.-Ezeiriel Smith, West Milton, N. K.Potato Digger.-February 11, 1868. - The potatoes and earth drop from the scoop upon the endless platform, through whose meshes the earth falls. 'Lhe
potatoes are thrown upon the rerolving riddle to complete the sepration.

Claim.-The retolving riddle $r$, in combination with the endless platform $l$ and scoop $f$, the whole constructed and operating as and for the purposes specified.
\%1, $139 .-$ H. C. SimTH, D. A. Kelly, and J. E. Munvocir, Jr., Clarksville, Ohio.-Cloth Rack.February 11, 1868. -The rack supports rolls of cloth, and may be revolred upon its central arbor and its casters.

Claim.-The eloth rack, constructed of frame posts A and horns $e$, in combination with the spincles a, caster's $b$, and step $m$, all substantially as shown and described, and for the purposes set forth.
g 4, $10 .-J o h n$ B. Sumeri, Pittston, Pa.-Automatic Cut-off Gas Burner.-Webruar $11,1868 .-$ The gras passes beneath a valye, whose stem is connected to a leyer, whose other end is secured to a bar lying aeross the path of the flame. When the fame is blown out the bar contracts and closes the walre. The aperture of the ralve is regulated by a temper screw:

Claim.-1. The rod $f$, so arranged as to automatically cut off the flow of gas, substantially in the maniner herein set forth.
2. In combination with the abore, lerer $K$, substantially as and for the purpose set forth.
3. Stem $d$, in combination with lever $K$, substantially in the mammer specified.
4. Pipe A, provided with bull B, or any equivalent revice, in combination with stem $d$, lever $K$, and rod $f$, substantially as and for the purpose described.
(8.4,14.-Joserir SNyDER, Rock Lick, W. Va.-Cultivator.-Fcbrwary 11, 1868.

Claim. - The cultivator; construeted with the curved main beam a and cmired supplemental beam $B$, sharres $c a$, handles $C$, and braces $f$, $g$, and $m$, the whole arranged substantially as and for the purpose specificel.
gh, 42.-TOSEPI H. SPRINGER, Philadelphia, Pa. -Tigh and Low Water Alarm for Steam Generators. -February 11, 1868.-The varying weights are balanced against each other on a lever, and when tho larger weight sinks to indicate an improper stage, this lever impinges against another lever and raises the safety ralve. The safety valve is in a closed chamber, whicli has ontlet through a steam whistlo. When the weights are immersed in a common fluid the larger one draws dorm its end of the lever and sonnds the alarm. When the larger is in the water and the smiller in steam the weirlits are balanced.

Claim. - 1. The employment of two nnequal weights, suspended by cords or lods, of unequal lengths, to a lever, with its fulcrum at its center, arranced inside of a eylinder attached to the ontside of a steam boiler, said weights being subject to the action of high and low water, substantially as and for the purpose set forth.
2. In combination with the aboro, the levers $g g^{\prime}$, arranged within a cylinder outside of the boiler, substantially as and for tho purpose specificd.
3. Arranging the safety ralve within the hollow cap D, substantially as and for the purpose specified. 4. The glass gange $G$, when used in combination with cylinder A and weights B B , substantially as set forth.

朐, 44:3.-Orsemus M. Stillanan, Westerly, R. I.-Gig for Oloth.- February 11, 1868. -The cloth is bronght in contact mith the eloth-raising cylinder in four distinct places. 'Iwo of the rollers are journaled in raek plates, which are raised simultaneonsly to hold the cloth clear of the cylinder when desired. The con'se of the cloth may then be reversed.

Claion.-1. The combination and arrangement of the eross bands o $o^{\prime}$, reverse driving pulleys $p p^{1}$, counter pulleys $p^{2} p^{3}$, adjusting board $w$, shaft $q$, tubular shaft $s$, bevel wheels $t t^{\prime} r$, as herein described, for the purpose specified.
2. Tlio arrangement of the eylinder $A$, rollers $c$, racks $i$, pinions $j$, shaft $z$, worm wheels $x$, rollers $m n$ $n^{\prime}$, reversible eloth beans $b b^{1}$, and gear wheels $d d^{1}$ $d^{2} d^{3}$, as herein described, for the purpose specified.

94,441.-ANDREW J. STover, Sandyville, Iowa - Stove-flue Supporter.-Tebruary 11, 1868. -The plate is bolted to the joists and the thimble is made in metallic biscetions. The edge of the thimble hole in the plate is scrrated, to check conduction of heat Claim.-The plate $A$, the segments $b b$, the bolts $d$, and washer plates $g$, the whole combined and operating as and for the purpose herein described.

94,445. - Henty Strickler, Carlisle, Pa. Hoisting Drum.-February 11, 1868.-The drum is elutched to the shaft in such manner that it can bo freed to allow the rope to run down when the hay has reached its destination.

Claim. - The combination of the vertical shaft $\Lambda$ the loose drum D working thereon, the parl a, and brake $g$, both pivoted to lever within guide $k$, the swcep bar $C$, and the cord $B$, all arranged snbstanially as shown and described, and for the purpose specified.

64, 446. William II. Sutherland, Scten Mile, Ohio.-Sash Stop.-February 11, 1868.-The side of the sash has a rack, and the frame a sliding stop, which is operated by the knob.
Claim.-1. The arrangement of the rack $l l$, in Fig. 2, with inclined cogs, in connection with an inclined tongue $z$, in Fig. 3.
2. The combination and arrangement of the locker, as sech at Fig. 3, viz: the cccentric P P , with its pin $v$, its arm $x$, its square mortise $s, s$, and its groove for the reception of band $j$, the band $j$, with its slot $u v$, and combination of said band with plate $w$; the tongne $z$, and its combination with arm $x$ and plate $w$, through mortise $y$.
3. The pecnliar arrangement of the four-square scetion $r$ of shaft 00 , in conncetion with its circular ends, as seen at Fig. 3.

74,447.-Jerome B. Sweetland, Pontiac, Mich. -Corn Marvester. - Febrnary 11, 1868.-The tops of the stalks are drawn backwired by the reel, and at their lower ends they are drawn against the knife by the curved, serrated end of the lever, whose rear end is piroted to a wrist pin on a rotating wheel. The stalks fall on the inclined shield and slide over the rack to the concave tiltiug bed, from whence they are depositcd beneath the machine at the will of the operator.

Claim.-1. The lever J, constructed as described, and used in combination with the inclined platform and the wheel I, and having a sickle knife upon its lotrer end, substantially as represented.
2. The hook M, in combination with lerer J and knife L , as and for the purpose set forth.
3. The concare bed S , piroted in the frame, and used with the shichd $I K$ and rack $T$, as and for the purpose set forth.
4. The ruck $T$, when used as and for the purpose specifice.
rot $4,48.4$ JoIn F. Thomas, Adamstown, Md. Ifachine for Distributing Guano, de.-February 11, 1868. The agitators are fixed to a bar having cud reciproeation in the seet box by means of a lever operated by a eam upon the axle. This bar is connected to the sliding bottom. The bottom has upcurred side flanges, which are slotted in the direction of their length for the passage of the guano. The slots are kept clear by traversing pins which are fixed to the seed box.

Claim.-l. The agitating apparatus above described, consisting of pole F , pins $f f f^{\prime} f^{\prime}$, and movable bottom $\mathrm{F}^{\prime}$ substantially as described.
2. The combination of the agitating apparatus with the rod $k$, lever K , arm L , arm or lever M , and cam wheel C, snbstantially as herein set forth.
3. The combination of the arm L with the rod N , ccentric shaft $O$, and rod $P$, substantially as hercin shown and described.

74, 44.-Jonn L. Thomas, Newburg, Ohio.Belt Coupling.-Febriary 11, 1868.-The frames arc clamped upon the belt as a substitute for lacing.

Claim.-The belt coupling. constructed as described, consisting of the rectangular metal band $a$, formed in one piece, having beveled ends, the plate $b$, provided with the projecting ends $c$, working apon
the beveled ends within the band $a$, and operated by the set serews $d$, as hercin described for the purpose specified.

19,450.-Bjarne Thompson, Chicago, Ill.-Sleigh.-February 11, 1868. -The body is connected to the benches by springs, and its connection to the monners allows vertical movement.

Claim.-Connectiug the body of the sleigh with the firont, or runners, by means of the slots $a$ and irons d, constructed and operating substantrally as specificd.

18,451.-T. S. Thompson, Sycamore, Il.-Ani mal Trap.-February 11, 1868.-The mate is attached to a vertical pivot shaft, around which a weighted cord is coiled, The tilting platform is between the gate and the wire side and has a latch which its tilting removes from the gate and allows the gate to turn $90^{\circ}$, closing the entrance behind the rat. When the rat steps off the platform into the trap the gate assumes its first position by a further tirn of $90^{\circ}$.

Claim.-An animal trap, with a sinking platform IT and revolving gate $c$, scenred by latches $J a$, constructed and operating as described.

- 4, 452.-JAMES S. Thompson, Lyndon, Vt. $-A p$ paratus for Boiling Sap and Other Liquids.-Feb. ruary 11, 1868. - The pan has a U-shaped flue through which the ealoric current may be forced; a damper directing the course of the current therethrough.

Claim.- The arrangement of the chambers B C and opening $O$ in the furnace $A$ and flue $F$, the tube E, short pipes G, pan P , passage $a$, and rightt-angular damper D, as herein described, for the purpose specifica.

学4,453.-William W. Timmons, Rahway, N. J., assignor to Almeth White, same place.-Soda Water Bottle. - February 11, 1868.-The acidulous liquid is contained in an annular chamber around the stopper, and when the stopper is removed the liquids mingle on issning.

Claim.-1. A separate chamber D, attached to and forming part of a bottle, or similar vessel for containing bercrage fluids, substantially as shorrn and described, for the purpose of causing the contents of the said chamber to commingle with the outflowing contents of the bottle, all as set fortli.
2. A screw cap $a$, or its equivalent, substantially as shown, and when used for closing a chamber $D$, and attached to a bererage bottle, all as set forth.
3. The flange $i$, or its equivalent, snbstantially as shown and described, and for the purpose specified, in combination with the chamber D and stopper B , all as set forth.

74,454.—JOHN Tremper, Wilminmton, Del.Steam Governor.-Fcbruary 11, 1868. -The centrifugal morement of the balls is checked, and consequently the stem elevated, by spiral springs, on the radial arms upon which the balls slide. A spiral spring surrounding the upper part of the stem acts to the same cnd.

Claim.-1. The combination of one or more sliding thimbles or sleeves $K$ with the radial or guidmg arms E, springs $J$, and balls $F$, substantially as and for the purpose specified.
2. The arrangement of the springs $J$ within the balls $F$, and their extcnsions $c$, encircling the radial or guiding arms E , essentially as shown and described.
3. The auxiliary remorable springs $I$, for operation in combination with the balls $F$ and springes $J$, whereby the velocity may be inereased or decreased at pleasure, smbstantially as specified.

易1,455.-JoIn C. ThulmNGER, Ostrego, Oreg. - Water Wheel. February 11, 1868.-The water is received betreen the guides at the periphery of the wheel, and has contral discharge in opposite dircctions. The wheel shaft is horizontal.

Claim.-1. The buckets abore described, each having the bridge $O$ and the curres $L O N$ and $L$ N, when constrncted and applied to a water wheel, substantially in the manner and for the purpose set forth.
2. The hoop and hub $\mathrm{K}_{\mathrm{v}}$ in combination with the
water wheel $A$, substantially as and for the purpose set forth.
3. The combination of the gates C C , the guide plates D D, the levers $G$ G, the ring F, provided with bases $\mathrm{F}^{\prime \prime}$, when the several parts are constructed and arranged in the manner and for the purposes specified.
4. The combination of the wheel, gates C C, guide plates D D, levers G G, and cases E E, all constructed substantially as and for the purposes indieated.
74.456.-P. B. Viele, Rochester, N. Y.-Fruit Basket.-February 11, 1868. -The sides are made of two pieces laid flat together at their mid-length, and their split ends turned up and attached to a top hoop.

Claim.-1. In combination with the eross pieces A $A^{\prime}$, provided with the slitted strips $a$ a as above de. seribed, the eneireling band $d$, to which the said strips ite seemed by eyeleting or sewing, the whole arranged as herein specified.
2. Retaining the packed baskets one within another, for storage and transportation, by means of the eyelets, or equivalent openings $c$, in the bottom of the baskets, and the cord $f$, passing through said openings, the whole as hereinabove set forth.

94,45\%. - Artiulu Wadswortir, Newark, N.J., assignor to himself and Robert Scheli, New York, N. Y.-Tateh.-February 11, 1868.-One or both ends of the barrel are so applied as to bind the barrel around the outside. The body is so applied to the head of the barrel, through which the spring aets, that in ease the spring breaks it will reliere itself upon the body and preent destruction of the mechanism.

Claim.-1. A main-spring barrel, for watel and other time morements, in which the body is confined upon the outsile by either one or both of its heads, substantially as and for the purpose deseribed.
2. In combination with the abore a main-spring barrel, when the body and toothed head, with the latter confining the former upon its outside, are so scemred together that the former can turn in the latter upon the breakage of the spring, substantially and for the purpose specified.

74,458.-Natilantel Wales, Boston, Mass.Decoy Bird.-February 11, 1868. -The hinged wings are raised by a spring end depressed by a cord.

Claim.-A decoy laving wings hinged thereto, arranged to be operated by minipulation of a sportsman, substantially as and for the purpose deseribed.

94,459.—Josiail Webb, Spartansburg, Pa.Washing Machine.-February 11, 1868. - The rubber blocks are reeiprocated by comection to levers which are oscillated by a compound crank.

Claim.-1. The emmbination of the crank shaft I, pitmen II II, levers F F, and corrugated blocks E E, when used in connection with a box A, having a corrurated bottom D , in the manner and for the purpose specified.
2. The combination of the step keys $L$ L, with the forked posts $K K K$, supporting the roid $G$, and rendering the rubbing bloeks E E adjustable in height, substantially as and for the purpose specified.
3. The combination of the linged blocks E E with the hooks $m m$ and lever's F F, Dy which the bloeks E E can be lifted out of the way when necessary, substantially in the manuer deseribed.
4. The arm Mr, for the purpose of holding the clothes in place while the rubbing blocks are passing over them, snbstantially as described.
g4,460.-Tonatian C. Wel.sch, Edgerton, Ohio. -Knitting Mrachine.-February 11, 1868.-As the sliding frame is thrown forward the lower rack strikes one of the stops, and in moving operates the upper rack, so that it will engage the can that moves the needles into their places. As the needles on each side work alternately it is neeessary that only one of the racks should strike against the stops, and that on alternate sides. The ends of the stops are made to move by turning the wheel so that while one is raised and does not interfere with the raek on the same side, the other is just in position to engage the rack on the opposite side.

Claim.-1. The ratehet wheel S, the racks T and

U, arranged on the sliding frame $C$, in combination with the eeeentrie stops for chauging the needle-opcratine cams, as set forth.
2. The arrangement of the crank D , with its shaft wheels K, L, and M, and ccecntric stops N N, all constructed and operating in the manner and for the purpose set forth.
3. The combination and arrangement of the bed B. frame C, erank D, with its slaft, whecls, and eams $N$ N , rateliet $S$, racks 'T and U, lateh openers $J J$ dog I, and rarn supporter II, all constructed and operating as and for the purpose specified.

94,461.- Trilliair Winarton. Jro, Philadelphia Pa.-Railway Frog.-February 11, 1868.-Improve ment on his patent of July 18, 1865. The recess for the reecption of the rail is made suficiently wide to allow the easy remoral of the latter after withdrawal of the bolts by which it is attached to the side of the reeess. The rails of the side track are raised so that the flange of the wheel runs on the upper surface of the frog.

Claim.-The frog D, having a shoulder ngainst Which the side of the main rail bears, and to which it is eoufined by bolts e, or their equivalents, substantially as and for the purpose deseribed.
g4,46:.-Benjamin F. Wheeler, Calais, Vt.Wagon 13rake.-February 11, 1808. The forward pressure of the hind wheel in descending a hill brings them in contact with the brakes. A spring paril engages a ratehet wheel upon a hind whed hub to prevent retrograde movement when aseending a hill.
Claim.-1. The morable handle of the brake, in combination with the slotted eentral reach metal loop and strap $13 b$, forward slotted rocker and the king bolt, and slotted rocker plate, substantially as described, for the purpose specified.
2. In combination with the abore, the sliding key C e C, sulsstantially as describod, for the purposo specified.
3. In combination with a wagon brake, the rag whed D, dog E, and coiled spring F , substantially as deseribed, for the purpose specified.
94,463.-Cyrexus Wheeler, Jr., Auhmm, N X.-I'itman Connection for IIarvesters.-February 11, 1868.
Clain.-In combination with a crank or pitmanhead that can turn on or around the pitman, a wrist box that turns in said head by mans of its curved surfaces $c$ e moving against the concave bearings in the plates $b e$, substantially as and for the purpose herein described.

94,464.-William N. Wimteley, Springficld, Ohio.-Harvester Rake.-February 11, 1868.-Tho rake driving mechanism is chiedy on the opposite side of the machine to the eutter, so as to diminish side draught. The rake and its mechanism may be removel by the extraction of two serews.
Claim.-1. Tho rake head R, provided with the arm S, curred as deseribed, and mounted in bearings on the swinging block $Q$, and the pivot post F , all coustrueted and combined as sot forth and described.
2. The combination of the rocking rake head $R$, swinging bloek Q, moving upon the pirat (r, gearing I Y, shatting $W^{\prime}$, and pullers $V$ and $U$, all arranged on a two whecled jointed har machine, so as to move in unison with tho cutter bar and platform, as set forth.
3. The combination, in a single-jointed harresting machine, of the cutting apparatus, the reciprocating sweep rake K , and the overhung horizontal reel $r$, when said rake and reel are both momited upou the inner shoe of sairl cutting apparatns, ans construeted and operated in the mamer shown and described.
4. The rake head $R$, with the arm S , curved in the form shown and described, in combination with the stud 0 on the gear wheel $I$, and block ? provided with the slot P, to give a vilrating motion to said block $Q$ and rake $I$, as set forth and described.
5. The tumbling shaft W', in combination with the vibrating coupling arm $e$, as and for the purpose set forth.
6. The swinging block $Q$, constructed with hori-
zontal bearings for the rake $R$, a slot $P$, for the actuating stud 0 , and pivoted upon a vertieal axis $G$, all as set forth and deseribed.
7. The arraugement of the arm S, arm L, bloek Q, and guide frame $J$, all construeted as described, and for the purpose set forth.
8. The coupling arm $e$, mounted upon the outer exd of the main axle by means of the gimbal ring $y$, and attaehed to the rear of the main firme by means of the arm $f$, as and for the purpose set forthe.
9. The combination and arrancement of the plate E, pivot post F , gear wheel I , bloek Q , guide frame $J$, and pinion $\bar{Y}$, when constructed as and for the purpose set forth.
10. The arrangement of the driving pulley $v$, the reel palley $n$, and tightening or guide pulley $u$, so that the reel belt will forme a triangle in passing around said pulleys, as and for the purpose set forth.

194,465.-Willtam N. Wirteley and Jerome Fassler, Springfield, Ohio--Harvester Rake.-February 11,1868
Claim.-1. The pivoted brace $d$, one of its ends moving on a center, which is coincident with the axis of the main pinion shaft, and its other end moving on the axis of the main driving wheel, as and for the purpose set forth.
2. In combination with the guide frame $X$, the gaide switeh $a^{\prime}$, constructed to open automatically when released from its stop $c^{\prime}$, and to be elosed again by the passage of the traveler on the rake or reel arn next succeceling, substantially as and for the purpose described.
3. In combination with the guide switch $a^{\prime}$, pin $h^{\prime}$ and the stop lateh $e$, construeted and operated substantially as described.
4. In combination with the guide switeh $a^{\prime}$ and stop latel $e^{\prime}$, the spiral spring $d^{\prime}$, arranged as shown and described, so that the same spring acts against both the switel $a^{\prime}$ and lateh $e^{\prime}$, as set forth.
5. The rake heal $o$, constructed so that tho upper ends of the shanks of the teeth are exposed, and provided with the curved rim or flange $\delta$, as and for the purpose described.
6. The adjustable guard $w$, placed upon the rake head, substantially as shown and for the purpose set forth.
7. The guard $y$, placed upon the finger bar, substantially as and for the purpose set forth. in combination with the forked pitman $p$, provided with eonical or conoidal journals, as described, the spiral spring $e^{\prime \prime}$, for the purpose set forth.
8. The seat slide S, constructed with the offset, so that the seat may be placed over the eenter of the platform, or may be placed at one side of the same to counterbalance the weight of the rake, as set forth and described.

74, 466.-William E. Whiting, Providence, R I.-Gauge for Augers.-- February 11, 1868.--The trbe is made in adjustable telescopie sections, and is clamped by set screws to the anger.

Claim.-The tubes A and C , in combination with the ring $D$ and fknge $E$, when constructed and arranged substantially as set forth and for the purpose specified.

74,46\%-C. B. Williams, Bourbon, Ind. -Ohurn.-February 11, 1868.-The angular dashers are attached to the ends of radial arms, and are slightly inclined from the rertical. The anjustable wings are radial on the shaft.

Claim.-The shaft $G$, with its angular dashers I $I$ and wings in $\Pi$, adjustable upon the shaft for gathering the butter, when used within the box $F$ as eonstrueted and sccured, and operating in the manner and for the purposes set forth.
\%4, 468.-J. A. Wiliinars and TV. W. Williams, Mattoon, H 1. -Self Acting Wagon Brake.-Febrtury 11, 1868. The brake is apon the arm of a rock ban journaled to the rear holster in such a position that the friction of the wheel tends to increase the pressure. This bar has an arm eonnected to the singletrees in suel manner that a draught poon them will release the brake; the spring aets to press the brake upon the wheel.

Claim.-The combination of the brake bar $b$, the
spring $g$, the connceting rod, and chains, and the singletrees $p$, construeted, arranged, and operating as a self-aeting wagou brake, substantially as hercin described.
64,469. - Thomas Whiliams and Joseph J. Yates, New York, N. Y.-Steam IIeater for Brewers and others.- February 11, 1868; antedated January 31, 1868. -The pipe mouths have outwardly opening valves which are opened by the pressure of steam, and allow the latter to pass into the mash, but close by means of the spring when the pressure is removed and prevent the entrance of the mash into the pipes.

Claim.-1. The heati•g apparatus, consisting of the main pipe $B$ and branch pipes $C$, which are provided with self-elosing valres E , substantially as and for the purpose herein shown and deseribed.
2. The valve E , when constructed as herein shown and described, so that by lengthening or shortening the stem the amount of stean discharged during a given time may be inereased or diminished at will.
3. Providing the steam pipos in a heating apparatus with self-closing valves, sthbstantially as and for the purpose herein shown and describet.
4. The annual horizontal flange 7 , when arranged around the lower part of the conical valve 1), substantially as herein shown and described.
g, 4\%0.-M. V. B. Williamson, Jamesport, N. Y.-Draught Equalizer for Doubletrees.-Febrrary 11, 1868. -The outer trace of each horse is attached to a look on the end of the doubletree, and the inner traees to the opposite ends of a chain runming through a pulley block pivoted to the hammer bolt.
Claim.-1. Hanging the pulley B forward of the doubletree, substantially as and for the purpose set forth.
2. So eonstrueting and attrehing the arms or clevis $b$ as to allow them and the pulley $B$ to have free lateral ribratory motion from the bolt $a$ as a eenter, substantially as hercinabovo specified.
94.4.7.-M. V. B. Wrlliamson, Jamesport, N. Y.-Doubletree.-February 11, 1868.-The outcr traee of each horse is attached to an end of the doubletree, and the inner trace to the center bar, Which is piroted at its midlength to a cleris on the hammer bolt.
Claim.-1. The combination with a doubletree A of a short singletree or center bar B, capable of swinging on its eentre, and attached to the doubletree by means of a clevis, or its equivalent, substantially as and for the purpose set forth.
2. The combination of the doubletree A with the singletree $B$, substantially as set forth.

194, 1\% - Horace Wood, Lererett, Mass. Staging Frame.-Februnry 11, 1868.-The carriages are mounted on wheels and raised or lowered by windlasses apon them, around which are coiled fixed ropes lying over the eomb of the roof.
Claim.-1. A staging frame composed of a series of frames $A$, connected by planks or slats $d$, and provided with windlasses $B$ and cords or chains $e$, all arranged substantially in the manner as and for the purpose set forth.
2. The windlasses D applied to two or more frames A, operated by the serew and worm wheel gear. and prorided with iopes F , which pass through pullers $k$, attached to fixed ropes $l$, sulbstantially as and for the purpose specified.

異, 4\%3.-James W. Wood, Lowville, N. Y.Roofing Shoc.-February 11, 1868.-The plates are punched and attached, burr outward, upon the shoe to procent slipping.

Claim. -The combination of the perforated plates A D E, when made in separate pieces, and secured to the sole of the boot or shoe, in the manner and by the means herein deseribed.
94,094. -William B. Foung, Chicago, Mi.-Plow.-February 11, 1868.- The triss romeds and tie rods are inelined in relation to each other to render the handles rigid.

Claim.-1. The combination of the round $b$ and rod $d$, with or without either or all the rounds $a$ and
$c$ and rod $e$, substantially as described and for the purpose set forth.
2. The combination of rounds $a, b$, and $c$, and rods $d, e$, and $f$ with the handles and beam of a plow, substantially as described and for the purpose set forth.
74.4\%5.- Andrew Ralston, West Middletown, Pa.-Portable Animal Tether.-Tebruary 11. 1868.The tether eord is attiched to the halter at one end, and to a weight at the other; it is mun through a swircl block supported by a journal bar stretehed between the tops of the posts.

Olaim.-1. A portable stock-feeding, hitehing frame, eonsisting of upricht posts $A A^{\prime}$, momed upon earringes and prorided with a hitehing rope or chain E, and also with means for kerping this rope or ehain under proper tension, substantially as deseribed.
2. In eombination with uprichts $\mathrm{A} \mathrm{A}^{\prime}$, and hitehing rope or ehain $E$, a swircl frame $G$, and a loaded tether $h i$, substantially as deseribed.
 cator for Axles and Hode of Attaehing it to Axles. -Fehruary 18, 1868. -The out-tmmed flange of the box and the eollar upon the axle are engaged by the jaws whose pinfle is scemed to a elip on the axle. The upper jaw has an oil eup.

Claim.-1. The tro jams E E, fitted or seeured to the axle, as shown, in combination with the eollar C at the inner end of the arm $B$, and the flange a at the inner end of the box $D$, all being eonstrueted and arranged substantially in the manner as and for the purpose set forth.
2. The paeking $i$ and the oil eup F , in combination with the jaws E E, the collar C on the axle, and the flange a on the box $D$, all arranged substantially as and ior the purpose specified.
3. The button, eonsisting of metal plate $d$, rod $e$, piroted in lng $f$ and the nut $g$. when used in eombination mith the jaws E E, and all arranged snbstantially in the manner as and for the purpose set forth.
g. 4 ggo -Thomas P. Akers. New York, N. Y. - High and Lowo Water Alarm for Steam Genera-tors-February 18, 1868.

Claim.-1. The employment of two meights. of greater specifie gravity than water, insite the boiler, said weights being arranged so as to be subject to the aetion of higll and low water within the boiler, substantially as deseribed.
2. A combined high and low water indieator which is eontrolled by weights, of greater specific grarity than water, applied npon the unequal arms of a lerer, which is lung within the boiler in sneh a manner that, while the weight upon the longer arm sliall so far preponderate as to open a valve at certain points of cither high or low water, such preponderance will be counteracted by the water when at any intermediate point, substantially as deseribed.
3. The eombination of the stcam whistle F , alarm ralve $d$, vibuating lever $\left(x\right.$, and weights $J J^{\prime}$, of greater specifie grarity than water, arranged within a boiler, substantially is and for the purpose deseribed.
4. The eombination of the slide sten $b$, valve rod D with its ralve, and the projection $i$ of the lever $G$, substantially as and for the purpose deseribed.
5. The combination of the slide step block $b$, ralye rod $D$, and the adjnstable deriee at the top of said lool, substantially as and for the purpose deseribed.
6. The devices L ' I , or their equivalents, eonstructed substantially as deseribed, in combination with the safety-valve and the steam whistle, for the purpose set forth.
 Muzzle Loculing Ordnance.-February 18, 1868; antedated Felnrnary 0,1868 . The "caliber diminisher" is inserted into the nauzzle of the gron after loading, and is held in position by eateh arms whieh turn on the trumnions, and engage a flange on the outer end of the diminisher.

Olaim.-The apparatus termed a ealiber diminisher, for the purpose of diminishing the caliber of smooth-bore or rifled guns after they have been loaded, thins preventing any windage of the ball and erpable of being withdrawn after firing for a fresh load, and of reinsertion, \&e., as heretofore deseribed.

74, 4 99.-Horace B. Ames, Great Barrington Mass., assignor to John S. Stone, Honsatonic, Mass.-Spring Oup Toy.-February 18, 1868.-The eup eonsists of thee or more spring arms.

Olaim.-The toy ball and elastie spring eup, formed as specified, as a new artiele of manufacture.

74,180.-Horatio Anverson, Chieago, Ill., assigmor to himself and G. W. Cusimng, same plaoe. -Safety Talve.-Febrnary 18, 1858.-The apper seetion of the ease containing the spring safety-valre is irremovable without the ralve, thereby preventing any tampering with the same. The lever is eonneeted to the ralre stem so us to cmable the raising of the latter, but not to interfere with the upmard morement of the stem when raised hy steam. The cap top has perforations to allow the eseape of steam, and a horizontal plate beneath prerents a rod reaching the ralve through the perforations.

Claim.-1. The ease U H, arranged with holes o $x, \operatorname{lngs} B B$, dome $L$, flange $K$, and stop $f$, substantiakly as and for the purpose herein deseribed.
2.'The holes $o$, in eombination with the plate $M$, substantially as and for the purpose set forth.
3. The combination of lerer $t$, pirot top $E \mathrm{~F}$, and stop $f$, substantially as set forth.
4. The combination of the nuts $G \mathcal{J}$, spinalle $P$, Talre $R$, and spring $S$, as and for the purpose set forth.
(4,481.-P. W. Armstrong, Logan, Ohio.Tinners Die.-Februry 18, 1868.-The plate is bent by the rollers and its edge turned by the dies, and prepared for wiring by the folder.

Claim.-1. Aclustable anmnlar dies $F$ and $G$, in combination with the fixed dies $D$ and E of a timmer's swaging maehine, substantially as and for the purpose herein sct forth.
2. A folding deviee H , in eombination witl the dies $F$ and $G$, and constructed and operating substantially in the manner and for the purpose herein set forth.

74,482.-BENJAMIN ATKINSON, Darenport. Iowa. -Pessary.-Febrnary 18, 1868.-The arms are eonnected to a nut traversed by the screw stem, and are dramn forward after insertion to expand the leares. The leaves are drawn inward by the rubber strips.

Olaim.- A pessary eonsisting of the hinged leares $g$, arms $e$, with the stem $e$ attached to the leaves $g$ by the rubber strip $l$, and operated by the serew stem $b$, all constructed and ar'inged substantially as deseribed.
g4,453.-Joserin Barker, Amboy, Ill., assimnor to himself and Alonzo Kinton, same place.-Separator Sieve.-February 18, 1868.-The two sieves are unitel in one frame.

Claim.-A double siere, for separating secds, of coarser and finer nettine, having the sides of the same so shaped as to incline the sieve to the sloe, in fanning mills, said sides being provited with the strips a, or their equivalent, substantially as shown and deseribed and ior the purposes set forth.

194, 454.-Cancelled.
\%4,48.-JoIn W. Barton, Clifton Splings, N. Y.-Churn Dasher.-February 18, 1868. -The dashers reciprocate alternately, being guided by the staples which slide ou rods attached to the central posit.

Claim.-The arrangement as a whole of the jointed eross piece $B$, standard $A$, ways $c$ c open and closed dasher wings E G, rods D D, and lever C, the several parts being so combined as to form one connected Working apparatus, as and for the purpose hercin set fortli.

194, 486.-MERRICK Batchelder, Reading Mass.

- Head Block for Scuo Mills.-February 18, 1868. One of the does is hooked into a fixed ring, and the other into a rimg attached to a sliding plate which is mored by the wedge at one end and acts to tighten the dogs.

Claim.-l. Seenring the inner end of one of the dogs D to a movable bloek E , as and for the purpose set forth.
2. The wedge $\bar{H}$ in combination with the block E and its dog D, operating substantially as and for the purpose described.
ig $4,48 \%$--Daviel S. Bear, Toledo, Iowa.-Bee Hive.-February 18, 1868. -The hive is made in bisections, so that each section of a full hive may be matched with a counterpart section of an empty hive for artificial swarming.

Claim.-1. The open bottomed boxes B B, constructed as described, having their inner and upper sides formed of slats $c c$, said boxes fitting over the double inclinel bottom $\Lambda$, and adapted to be removed separately from opposite sides of the live, as herein described for the purpose specified.
2. The boxes $\bar{B} B$, constructed and operating as described, in combination with the donble inclined bottom A, slotted honey board E, cap C, and surplus honey boxes $D$, when the sides of said boxes $B$ B are adapted to fit over the edges of the inclined bottom upon the projecting slecpers $b$, as herein described for the purpose specified.
g4,483.-Asa. M. Beard, Hillsboro, N. II.-Gearing.-February 18, 1868.-One portion of the divided gear wheel acts by positive pressure to drive the mechanism, and the other portion acts by the spring in a contrary direction, to keep the driving teeth in contact and prevent back lash.
Claim.-For the purpose specified in the construction and arrangement of a pair of meshing gears, diriding one gear in a plane square to its axis, and fixing one part on its shaft while the other part is attached to said shaft by a spring, which operates to turn said part or its shaft with reference to each other.
y 4,489. -Jason A. Bidwell, Tast Boston, Mass.-Wood Screw.-Tebruary 18, 1868.-The core tapers throughout its length, and the thread only at its point.
claim.-As a new improved article of manufacture, a wood screw, having its core tapering from its shank to its entcring point, and provided with a thread of uniform diameter, as herein described.

74,490.-JASON A. Bidwell, East Boston, Mass. -Screw Driver and Boring Tool.-February 18, 1868. - The quadrangular, tapered bit carries an adjustable countersinking tonl, and cnters the socket of the screw head to act-as a driver.

Claim.-1. The construction of a screw driver which is alapted for driving perforated head screws, with cutting edges formed on a pyramidal point, in combination with scores or grooves e for conducting out of the hole the chips or dust while in the act of boring, substantially as described.
2. As a new and improved article of manufacture, a tool having a rectangular tapering point $c$, a rectangular stridipht shank $a$, and an adjustable countersink $b$; said tool being adapted to serve the threefold purpose of a screw driver, a boring tool, and a countersink, as herein set forth.

64,491. -Micilael Biglity and Daniel W. BexNETT, Wilkesbarre, Pi.-Wagon Jack.-February 18, 1868.-The lever has two flattened surfaces, upon which the block rests when in its elevated and depressel positions, respectively.

Claim.-The entire form of the "ragon jack," and more particularly the faced lifting block or follower, marked D, and lever C, as constructed and operating, substantially as described.
g4, 192.-T. M. Bradley, Chestnut Level, Pa. -Sewing Machine. - February 18, 1868. -The pins upon the whecl on the main shaft act respectively upon the curved bar' operating the upright lever and the plate operating the needle bar. As the spring hammer strikes the seat of the inclined spring lever the point of the same is pressed against the semicylindrical shuttle holder, and throws the lower part forward, to move the lower and pointed end of the shuttle formard until the lorp of the thread has passed over the point of tho shuttle, which is accomplished while the needle is stationary and just before it moves upward. The needle thread passing ofore it moves uphrard. arond the top of the shattle is interlocked with the shuttle thread.

Claim.-1. The arrangement and combination of the upright lever D with its curved arm C, the plate II, the needle bar $J$, and the wheel $A$, as herein deseribed, and for the purposes set forth.
2. The movable hammer $W$, inclined lever $Z$, and pivoted shuttle box $a$, as combined and operated by the upright lever D, as herein described, and for the purposes set forth.
g 4 , 493.-Clarence Brosius, Hancock, Mid.Skid for Elevating and Lowering Barrels, dic.- February 18, 1868.-The slide has rollers which sustain it upon the skid. The object is retained in position ly the stay pins. The slide is operated by a cord passing around pulleys journaled to the skid and slide.

Claim.-The skid, slide, and stays, as described and set forth.

74,494.-Sanford S. Burr, Detham, Mass.Folding Bedstead.-February 18, 1868.
Claim. - The combination, with the upright case or false cabinet, of a folding bedstead, hinged to the rear of the same, and constructed as herein described, so that when folled up its headboard shall constitute the cap or cornice of the cabinet, substantially in the manner shown and set forth.
M4,195.-Jorin Bussey, Cincinnati, Ohio, as. signor to himself and John F. Gunkel, same place. -Corkscrew.-February 18, 1868.-The screw shank being exposed, the point of the corkscrew is inserted into the cork by depression of the haville, the entrance of the shank into the nut in the cylindrical part of the handle causing the rotation of the corkscrew. When the screw is inserted the pin on the spring lever encages the screw shank, and the cork is withdrarru as by an ordinary instrument.

Claim. -The arrangement of the lever K , catch $G$, aud spiral spring $\mathcal{J}$ within the handle E, for the purpose of cletaining and releasing the spiral shank B of the corkscrew A, and enabling the salicl catch to be actuated by the thumb of the hand by which the instrument is worked, substantially as described and represented.

74,496.-W. P. Byler, Leavenworth, Kan.Combined Corn Planter, Soveer, Revolving Harrow, and Cultivator.-February 18, 1868.-The rims of the rotating harrows are made in sections, and the arms are slotted, so as to admit of extension to increase the diameter of the harrows. The harrows have rertical shafts, to which are splined bevel wheels, engaged by similar wheels upon the axles. The shafts are swiveled at their upper ends, and may be raised clear of the ground by levers. The berel wheels upon the rertical shafts may be lowered, to disengage them from their driving wheels.

Claim.-1. The revolving harrows E, made adjustable, so as to be contracted and expanded, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the harrows E , vertical shafts F , berel-gear wheels D and I, axles B and wheels A . with each other, substantially as herein shown and described, and for the purpose set forth.
3. The combination and arrangement of the vertical shaft F , slide bar L, chain P , puller Q , lever parrl O , curved rack N , and slide or guide bars M , with each other, substantially as herein shown and described, and for the purpose set forth.
4. The combination of the adjustable support J and spring catch $K$ with the vertical shaft $F$, bevelgear wheol I, and frame C, substantially as herein shown and described, and for the purpose set forth.
5. The combination and arrangement of the slide S , le erer T , spring X , connecting rod U , and bent or foot lever $V$, with each other and with the seed box R and frame C, substantially as herein shown and described, and for the purpose set forth.
6. The combination of the bent lever II' and curred rack $\mathrm{I}^{\prime}$ with the slotted end of the piroted tonguc $\mathrm{G}^{\prime}$ and with the frame C, substantially as herein shown and described, and for the purpose set forth.

4,40\%.-B. J. Cairp, Marion, Ohio.-Scroll Saw. -Febmary 18, 1868.-The guicle bar has horizontal,
arms, serring to hold down the stuff, and the spring attached thereto has bearing against the saw back.

Claim. - The up-and-down adjustable guide bar G, earrying the bent spring $H$, construeted and arranged to operate as herein set forth.

74,49S.-DANiel Tr. Carpenter, Mecfor, and Hirair L. Slagilt, Lodi, N. Y.-Churn.-Febiuary 18. 1868.-The ehurn rests in the swinging frame, the uprights of which are slotted for traverse of the axial pin, and hare seginental bars bearing upon the dasher erank shaft, and causing its reciprocating rotation.

Claim.-1. The stationary frame $A$, the swing. ing frame composed of the parts $\mathrm{C}, \mathrm{E}, \mathrm{J}$, and D , arranged substantially as deseribed, for the purpose set forth.
2. The fulerum pin $i$, slot $k$, conneeting rod $I$, shaft H, with the friction rolls $f$, in combination with the swinging frame, the whole arranged and operating substantially as and for the purposes deseribed.
74.499.-Josrril II. Chanwick, Wheaton, Ill.Carriage Spring Brace.-Febrmary 18, 1868.-One end of each brace is commected to the sill and the top of the spring respectively, and the other and lower cuds are conneeted together and to a link rod pivoted to the bottom of the spring. The object is to retain the spring in a rertical position.

Claim.-The combination and arrangement of the spring. $A$, the sill $C$, or its equivalent, the braces $c d$, and jointed arm $f$, in the manner and for the purposes set forth and shown.

74,500.-TAylor Cilamberlin and T. Elifuod Garrett', Philadelphin, Pa.-P'ump.-F'ebrnary 18, 1868.-The hollow sector-formed piston has valres on its radial sides, and oscillates on a shaft whieh is tubnlar at one end and admits water. The water is forced ont through valre ports leading into a discharging chamber.

Claim.-l. The hollow shaft and piston C D, ar ranged and operating substantially as shown and cleseribed.
2. The eombination of the hollow pisfon and shaft $\mathrm{C} D$, the discharge chamber I , and the crlinder $\Lambda$, substantially as and for the purposes specified.
74.501.-J. Heahy Champln, Essex, Comn. Spike.-February 18, 1868.-Inclined notches are cut in the corncrs of the spike, making barbs, to prevent retraction.

Claim.-The spike $A$, construeted with slots or notches $c_{r}$ a a a, cut into the body of the same at its sereral angles, substantially as described, and as and for the purposes set forth.
ge 4,50 - - Alvin 13. Clark and Cimaries Davis, Rielmmond, Ind. - Washing Machine.-Fehriary 18, 1868.-The mashboard is secured in the suds box in a position slighty inelined from the horizontal. The roller is reciprocated upon the said board by connection to a firme operated by a erank. 'Ihe pawls prerent the rotation of the roller while passing in one direction, and thus eause the feed of the elothes.

Ciaim.-1. In combination with washboard C, (or other suitable surface, the roller a, rotating and sliding at each altermate stroke, substantially as described and for the purpose set forth.

2 The combination of the reciprocating rods $d$ and $d$, hangers $b$ and $b^{\prime}$, springs $V$ and $V$, ratehets $e$, and pawls I, with roller a and board C, all operating substantially as described and for the purpose set forth
\%4,503.-N. E. Clark, Low Moor', Towa.-Wellboring A pparctus.--Hebrnary 18, 1868.-The stem is hollow, to allow the passage of air to occupy the space beneath the auger when it is being raised from the well.

Claim.-The combination of the hollow perforated stem $F$ and a detachable point $G$, with the extensible rod or stem $J$, anger E , valves H , aud shell or easing I, all constructed and arranged to operate in the manner and for the purpose set forth.

74,504.-Milton B. Cochran, Davenport, Iowa. -School Desk and Seat.-Febrnary 18, 1868.-The
chairs are placed in the posifion desired and a continuous desk built to them.

Claim. - The continuous desk board $b$, provided with the rail $g$, and shelres or pockets $f$, in combi nation with chairs a and iron braces $e e^{\prime} e^{\prime \prime}$, when constructed and arranged for use, as herein deseribed and for the purpose set forth.

- 4,505.-JOnN 'I'. COE, Chambersburg, Pa., nssignor to himself and Enward F. Coe, same place. -Churn.-February 18, 1868.-The upper ends of the dasher shafts are supported when the corer is off by bands which are hinged to one side, and hooked into an ere on the other side of the cream box.

Claim.-1. A elunrn dasher, consisting of two wings set at any desired angle with caeln other, said wings being made with sides inelined in opposite directions, as and for the pripose set forth.
2. 'The dasher' $b$, in combination with the band $c$, hook $l^{\prime}$, and staple e, substantially as deseribed.

74,506.-Jolln Collins, Jr., Detroit, Mieli. Machine for Cutting Rags.-February 18, 1868.-The volute-formed entter is covered hy the flexible guard, and the rigs fed thereto betweer the uptnrned end of the guard and the feed roller beneath. The feed roller has rotation by a frietion puller upon its sliaft, whiel receires rotation from the reduced portion of the cutter shaft.

Claim.-l. The spring guard I, feed roller H , and entter $\mathbf{E}$, combined and onerating together substantially as described and for the purpose set forth.
2. The combination of the cutter E , sprine guard I, and feed roller $H$, with the table $A$, the driving wheel B, shaft C, pulley D, and wheel $G$, all constrmeted and operating substantially as and for the purpose described.

71,50\%-L. O. Corfis, New York, N. Y.-Cors Inilking Miachinery.-Februarr 18, 1868.-Improrement on the patent of L. O. Colvin, May 2is, 1867 . The neck of the cow is brought between the gates and the milker applied. The vertical reciprocation of the milker is eaused by a cord which is attached to a lever actuated by the pumprod, and the metallic tube connceting the milker with the pump has rinbber sections allowing the flexion of the tube in movements of the milker.

Claim.-l. So operating the "miller" that the same may have a rertical or "bmang" movement, substantially as and for the purpose specified.
2. The minlley $n$ and cord $k$, in combination with the tube F of the milker and the bent lerer I, substant inlly as and for the purpose specified.
3. The bent lever I, in eombination with the pump D , operating the milker, substantially as and for the purpose specified.
4. The gates or stanchions $B$, so constructed and operating as to secure the cow while being milked, and to admit of her passage between them when liberated, substantially as set fortlo.
5. An escape valre, arranged in relation with the pump D and the tube F of the milker, substantially as and for the purpose specified.
6. The unircrsal joint $h$, arranged in combination with the milker and the tube F thereof, substantially as and for the purpose specified.

74,50S.-Janes M. Corns, Black Roek, N. Y.Curtain Fixture.-Felsuary 18, 1868.-The carrugated disk of the roller rests mpon a similarly corrugated disk, which is uldusted by a spiral spring and nut, to canse the requisite amount of friction between the radially ribbed surfaces. The frietion acts to sustain the shade, aud yet allows the rotation of the roller by the cord.

Claim. -The radially corrngated disk $g$, in combinatlon with the similaly corrngated bearing $f$, spiral spring $h$, nut $i$, aud roller $B$, arranged and operating substantially in the manner and for the purpose set forth.

74,509.-Cliarles S. Crane, Selma, Ala.-Card Safe.-Fobruary 18, 1868. The Tront of the picture frame is made to open and disclose a chamber furnished with clips to hold the cards.

Claim. - The album or card case, witl an exterior as a pieture frame having an interior reeeptacle, the
ing valve whieh is foreed to the rear end of its case by the draught, substantially as herein shown and deseribed.
2. The hub $b$ of the sliding valve, when coustrineted as deseribed, so that both a sliding and an oscillating motion can be imparted to the valve, as set forth.
3. Providing the caso or shell $A$, in which the sliding valvo $\mathbb{D}$ moves, with elastic abutments $\mathrm{F} F$, which are so arranged that the valve, when striking agrainst one of the abutments, will be brought into an inclined position, substantially as and for the purpose herein shown and deseribed.
4. The shell and ease $A$, when provided with elastic abutments FF , in combination with the sliding oscillating valre D , and with the ehanmel B , all made so that the lower edge of the valve does not come in contact with the bottom of the shell, and all operating substantially in the manner hercin shown and deseribed.

旫, 535.—J. BuRT HoLmes, Cineinnati, Ohio. Canopy for Tent and Bed Netting.-February 18, 1868.-The stretehers are arranged somewhat like the primary ribs of an umbrella, and the apex may be drawn upward so as to elevate and draw in the canopy.

Claim.-1. The canopy A, in combination with stretehers If and streteher support E , when the same are construeted and operate substantially in the manner as and for the purpose herein set forth and deseribed.
2. The eaps $\mathrm{C} \mathrm{C}^{\prime}$, pulley bolt $b$, and nut and eye D, when arranged substantially as speeified, and for the purpose set forth.
3. The stretcher support E and stretehers H , construeted as herein shown and speeified, and for the purpose set forth.
g4,536.-Marcus L. Horton, Woreester, Mass. - Furnace.-February 18, 1868.-The fireplace may be tnrmed on its tubular trunnions which communicate between the tubular grate bars and the air spaces around the fire space and ash pit.

Claim.-1. The combinatiou as well as the arrangement of the air chambers D C, and the grate made hollow, and with hollow journals to open into such chambers respectively, as set forth.
2. The arrangement of horizontal and vertical pipes or conduits of the fire-proof lining of the fireplace, such pipes being arranged wathin such lining and made to communieate with each other and the freplace, and with the exterual atmosphere, so that air may flow into and thronsl the pipes and lining: and be discharged into the fireplace, as speeified.
3. The combination of the system of pipes and air passages in the fire-proof lining with the air chamber C, partially surrounding the ash chamber and grate, and made with a perforated top, as set forth.
4. The arrangement of the hollow grate and its hollow journals, the induction and cduction air ehamber's D C, the fire-proof lining, and a system of pipes or air comdnits arranged in such lining, and made to commnnieate with the ehamber $C$ and the fireplace, substantially as specified.
ry, $58 \%$ - Wilmam M. Horton, Chelsea, Mass., assignor to himself and Nathan P. Brown, same place.-Lamp Shade.-Fcbruary 18, 18*8; antedated December 27, 1867. -The hook takes over the top of a glass chimney, and the fork rests against the side of the same. The soeket is intended to apply to a gas burner.

Claim.-1. The lamp shade snpporter and adjuster, consisting of the friction arm $C$, the bars $B$ and $D$, arranged and applied together and to the shade, as set forth.
2. The combination and arrangement of the fork E . with the arms $\mathrm{C} B \mathrm{D}$, arranged and applied together, and to the shade A, substantially as hereinbefore explained.
g, 538.-David J. Howenstine, Marshallville, Ohio, assiguor to itimself and Patenson V. WIL-KINs.-Horse Hay Fork.-February 18, 1868.-The ratehet sleeve to which the outer spiral fork is attrehed, tnrns upon the stem which earries the other fork. The tines of the two forks wind in contrary
dircetions, and may be inserted in or released from the load when the ratchet is released from the eatch.

Claim.-The spiral tines 1 and 2, attached to rerolving shaft $A$, in combination with the spiral tines 3 and 4, attached to the sleeve B , in combination with the lateh E and rope F , when arranged and operating substantially as herein deseribed.
(74.539.-N. W. Hubbard, New York, N. Y. Horse Shoe.-February 18, 1868. - The calks are dovetailed in the plates whiel are attached to the shoe by serews.

Claim.-1. The removable toe ealls E for horse shoes, substantially as shown and deseribed, in combination with the toe plate $G$, clamp serew $a$, or its equivalent, all as and for the purpose set forth.
2. The heel ealks for horseshoes, substantially as shown and deseribed, in eombination with the plates, as shown at $B$ or $C$, and serews $b$ or $d$, all as and for the purpose set forth.
'94,540.-Joserh Huber, Buffalo, N. Y.-Con struction of Tan Vats.-February 18, 1868.

Claim.-A tan vat, constructed of strips of board or plank laid up with coal tar and felt packing between the strips, and nailed together, in the manner and for the purpose substantially as deseribed.

学, 54 - - Eugene Humphrey, Boston, Mass.-Saw.-Febrnary 18, 1868. -Improvement on patent of Joseph W. Strange, August 13, 1867. The slide has grooves to receive the beveled edges of the recesses in the saw and tooth plates, and is held in a position engaging with both recesses by a noteh in the slide, or in the side of the recess in the tooth plate. When removing the tooth, the noteh is disengared by a blow upon the back of the tooth, and the slide is then driven wholly into the recess of the tooth plate, admitting the forward turning and remoral of the tooth.

Claim.-The fastening of a morable or insertable and self-adjusting saw tooth in its recess in the saw plate by means of a slide operating in combination with a recess extending into the plate and tooth, substantially as deseribed, when said slide or reeess, or both, are cut away or varied in width, for the purpose described.
\% 4, Se-JOHN IngRRSOLL, Cleveland, OhioLamp. - February 18, 1868 . -The wiek is contained in a rertical tube which communicates at bottom with the space between it and an inelosing tnbe, the latter space communieating at its upper end with. the globe. A small pipe allows the escape of gas from the upper part of the globe to the flame.

Claim.-Extending the tube $\mathbb{E}$ from the top of the lamp down into the hollow stem or shank $D$, and so arranged, in relation to each other and the globe of the lamp, as to form a passage for the oil between the said tube and shank in filling and in burning, substantially as set forth.
 Press for Packing Fruit.-February 18, 1868.- The barrel is placed upon the wheel platform and the head pressed down by the lerer cam.

Claim.-The combination and arrangement of the eam-shaped projection E with lever F, roek shat't D, ratehet wheel $G$, pawl $H$, posts $C$ C floor $A$, inclined plane B, axle I, and wheels J $J$, when operating as and for the purpose herein set forth.

74, 544.-T.J.Jones, Rochester, Mieh., assignor to himself and Lorenzo D. Gilletit - Neck Fohe. -February 18, 1868. -The breast rings slide on tho bar, being conneeted by rods to opposite sides of an adjustable wheel at tue midlength of the bar:

Claim.-1. The eirele E and the bars D D and F, when arranged substantially as and for the purposo set forth.
2. The hinge bolt $G$, when construeted and operating substantially as deseribed.
3. The combination of the above named parts with the bar A, the rings B B, II, I I, aud $J J$, the guards $\mathrm{C} C$, all arranged and operating snbstantially as and for the purposes specified.
\%4,545.-RUFUS JOSLIN, Pawtueket, R. I.Picker for Looms.-February 18, 1868.-The pieker is made of plates of leather, and may be turned on the attaehing serew to reverse the ends.

Claim.-The combination of the pieker staff, serew C, and reversible pieker, eonstrueted and arranged substantially as and for the purposes speeified.
ga,546. - Samuel Klen, Last Bridgewater, Mass. - Butter Worker. - February 18. 1868. - The round shatt of the oseillating worker forms a tight joint with the upper flaps of the sliding doors. These flaps are eonneeted to the pieces beneath them by elastie strips, whieli serve to draw in the flaps against the shaft.

Claim.-1. The padde or butter worker H K, when working in the manner substantially as deseribed, and for the purpose set forth.
2. Combining the pieces $\mathrm{D}^{\prime} \mathrm{D}^{\prime \prime \prime}$ with the picees D $\mathrm{D}^{\prime}$, by the elastic strips $\mathrm{P} \mathrm{P}^{\prime}$, substantially as deseribed, and for the purpose set fortil.
\% $1.54 \%$-Join Kelly, San Franciseo, Cal.Construction of Sea Walls.-February 18, 1868.Metallic strips are interposed between the stories in the outer course of masonry.

Claim.-The strips of metal or lead A C , when plaeed between the joints of blocks of masonry, substantially as and for the purpose herein speeified.
g 4,543 . -Join Kerns, Louisville, Ohio, assignor to himself, D. M. Sluss, and D. M. SLussere, same plaee. - Extension Ladder. - February 18, 1868. The upper section has rollers at its upper end, which gan up the building when that section is raised by the rope passing throngh a pulley block attaehed to the upper end of the lower section. The upper section is sustained by spring pawls on a shatt journaled in the lower soction and relieved by a cord.

Claim.-The combination of the pawls I I, parrl axle $I$, arm M , and eord N , when used in conneetion with the ratchets $L \mathrm{~L}$ in the part B , whieh hare irons, Q Q. inserted therein, and when the ladder A has the slots S S, all arranged in the manner and for the purposes speeified.

74,549.-JACOB KING, Indianapolis, Ind., assignor to himself, James Hamilton, and B. StokeLY, same place.-Ditching Machine.-February 18, 1868. -The earth is raised by the plow and discharged onto the elevating endless apron which runs between the inclined way bourds. The depth of the furrow is adjustable by rack and pinion.

Claim.-1. The combination of the side cutters C C with the may boards S S, when the former are constructed with circular recesses to receive the correspondingly rounded formard extremities of the way boards, so as to form a hinge joint, substantially as and for the purpose speeified.
2. The roke $Y$, arranged to slide upon the frame A, aud adapted to change its position in conformity with the adjustment of the cutter beam $N$, as and for the purpose specified.
ny 4,550 . Thomas, ROBERT, and SAMUEL Knowles, Jersey City, N.J.-Marvester Cutter-February 18, 1868 .- Fixed knives are attached to the finger bir, and the eutter knires oscillate above them.

Claim.-The fixed knives C, attached to the finger bar by means of the comnecting bar $c$ and supporting blocks $b^{\prime}$, substantially as shown and described.
g4,55 --Cmarles F. Kramen, Mondovia, Wis. -Settee, Bed, and Table.-February 18, 1868.-The settee back may be bronght up on the arms and opened out to form a table, or may be turned back to form a bed.

Claim. - The construction and arrangement of the settee, bed, and table, when combined and adjusted by the pivoted side levers K K , and side eatches G and $L$, as herein deseribed, and for the pnrposes set forth.
74.552.-IsRaEl LaNCASTER, Baltimore, Mcl-Harvester.-February 18, 1868. -The cutter is reeiproeated by anti-friction rollers whieh run on an annulur eam flange on a rertically plaeed wheel. The lange has outer and inner coneavities, the eoneavity
of one side standing opposite to the projeetion of the other. The eutter' is thrown out of gear by moving the rollers from the eam. The bloek which carries the rollers is slotted to reeeive a gnide spring by which undue elevation or depression is prevented.

Claim.-l. Plaeing the fulerum of the reciproeating lever H $d$, whiel is between the points at whieh the power and resistance are applied to the said lever, upon one side of a rertical line drawn through the driving wheel center, and the knife bar upon the other side.
2. The fulermm plate $g$, eoustructed and operated as lescribed and for the purpose mentioned.
3. The lever II $d$ and frietion rollers $c c$, aeting in combination with the cam flauge $b b$
4. The combined spring and bearing $T$, eonstrneted and operating as deseribed and for the purpose mentioned.

74,553.-Mantin and Stepien C. Leonalid, Oberlin, Ohio.-A nimal Tether. -Febrnary 18.1868.The points are masked by the spring shield until the animal presses against the fenee, when the points are exposed and pieree the skin.

Claim.-1. An animal tether, eomposed of the yoke $A$, and cross strip $C$, and prieking points $e^{\prime}$, and shield $D$, and springs a and $a^{\prime}$, substantially as shown and deseribed, and for the purposes set forth.
2. The pin $B$, in eombination with the key $d$, and the spring $d^{\prime}$, substantially as shown and deseribed, and for the pirposes set forth.
3. The cross strip $C$ and points $e^{\prime}$ in combination with the yoke A and the perforated sliding shield D, substantially as shown and cleseribed, and for the purposes set forth.
4. The shield D, in combination with the springs $a$ and $a^{\prime}$, and with the yolie A, substantially as shown and deseribed, and for the purposes set forth.
ge, 4 馬.—Eldas Levee, West Point, Towa.Sulky Plow.-February 18, 1868.-The plow is raised by a chain winding over a seetoral block. The fore end of the beam is raised by an adjustable link eonnected to a bell crank lerer, which is operated by a hand lerer.

Claim.-1. The eombination of the sliding guard or guide bars $J$ and $K$ with the plow beam $A$ and With tho tongue $F$ or frame of the sulky, substantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the adjustable bar $R$, adjustable bent lever $S$, and bar or handle $U$ with cael other, and with the plow beam $A$ and support $T$, attached to the tongue $F$ or frame of the sulky, substantially as and for the purpose set forth.
3. The combination of the crank journal $g^{1}$, slotted support $g^{2}$, wheel 1 , and axle, substantially as described and for the purpose specified.
 ark, N. J.-Safety Attachment for Umbrcllas.February 18, 1868.-The rummer has a series of loek rings which prevont it from moving on the stiek to open the umbrella, exeept when the rings are set to the proper combination.

Claim.-1. The notehed rings $c$ and jackets $f$, in eombination with the stops $e$ and runner $B$ of an umbrella, substantially as and for the purpose described.
2. The sealloped edges and ridges $g$ in combination with the jaekets $f$, rings $c$, and runners B , eonstrueted and operating substantially as and for the purpose set forth.
ry, 556.-TE. W. Lockwood and B. T. FredERICK, Marshalltown, Lowa.-Cast Iron Sleigh ILun-ner.-February 18, 1868.

Claim.-1. The U-shaped metallie knees B, prorided upon their upper curved sides with the slotted horizontal supports $c$, the runners $D$, haring the shonlder $g$ for the reeeption of the end of the rave, all cast in one pieeo, substantially as described, for the purpose specified.
2. The metallic knees D , when mate V -shaped in their transverso section, and churved vertically, to form a brace for the runners $D$ and supports $c$, substantially as deseribed, for the purpose speeified.
\%4,55\%.-Lucius M. LgLL and James T. Starr, Walnut Grove, Ill.-Breech Loading Ordnanee.February 18, 1868 ; antedated February 6, 1868.The breech block turns on trunnions, and is retained by a lever, to whieh it is conneeted by a chain which serves to draw the bloek baekward to receive the eharge. The lever is held by a bar which is inserted behind it.

Claim.-The breech bloek or cylinder B, construeted as herein deseribed, and used in combination with a cannon provided with lever D, chain C, and bar E, when eonstructed in the manner substantially as and for the purposers specified.

- 4,556. - Williai J. Lyman, East Hampton, Mass.- Portable Chamber Closet.-February 18, 1868. The seat has a funnel which enters the urinal, and serves to prevent eseape of effluvia. The said vessel rests upon a platform sustained upon elastic cords.

Claim.-A portable chamber-eloset, eonstrueted with the spring platform and fumel, substantially as and for the purpose described.
(g4,559.-Horace B. Marsilall, Waldoboro, Me., assignor to himself and Samuel R. Bridgham, Hebron, Mc.-Brake for Vehicles.-February 18, 1868. - The shatt to which the brake arms are piroted is moved longitudinally by connection to a bell-erank lever, one arm of which is within the veliele.

Claim.-1. A brake attachment for four-wheeled vehicles, eomposed of the shaft D, levers B, brakes $a$, and conneeting rod $E$, and lever' $F$, substantially as shown and described, and for the purposes set forth.
2. The sliding main shaft D, in combination with the bent levers $B$, and brake blocks $a$, and eonnecting rod E , and lever or crank F , or its equivalent, substantially as shown and deseribed, and for the purposes set forth.
74,560.-Thomas F. Maury, Washington, D. C. -Tooth Brush.-February 18, 1868. -The ends of the bristles have a rounded taper communieated by grinding.
Claim.-A tooth brush, in which the ends of the bristles of whieh the brush is composed are ground or smoothed and polished, substantially in the manner and for the purposes herein deseribed.

94,561,-Charles D. McAuler, Carthage, Ohio, assignor to himself and George W. Kaylor, same plaee.-Edge Plane.-February 18, 1868; antedated February 10, 1868. -The cutter has a guard plate, and a rib which runs around the eavity be$t$ ween the upper and sole.

Claim.-1. The concare cutting blade C, tho edge being beveled or sharpeaed on the outside, and haring the returned face $b$ slotted for the purpose of securing it in auy desirable position to the stoek $B$, substantially in the manner herein shown.
2. The adjustable gauge 1 , provided with the slot $c$ and guard $d^{\prime}$, when seeurci to the stock $B$ or its equivalent, for the purpose set forth.
3. The stock 33 , having the guard $d$ and groove $c$, in combination with the aljustable gauge D , euttingblade C , and set serews $e^{\prime}$ and $\alpha$, when the same arc construeted and arranged in the manner and for the purpose herein described and set forth.

94,562.-Louis P. McCarty, San Franciseo, Cal.-Newspaper File.-February 18, 1868.-The two rods spring apart, but are retained by a hook.

Claim.-A newspaper file, constructed substantially as and for the purpose herein deseribed.
g4,563.-S. T. McDougall, Brooklyn, N. Y.-Lamp.-Februnry 18, 1868.-The wick is within an annular space iu the tube, when a cylindrical wiek is used; but the space nay be so divided by the introduction of plates as to reccive a series of flat wieks. The wick tube is conneeted to a central, vertical serew rod reaching to the base, and by whose rotation the wick is vertically adjusted. The chimney is made in sections, which slide together in manner of a telescope.

Claim.-1. So constructing a wick tube that either round or flat wick can be employed, substantially in the manner as deseribed.
2. The construction and operation of a telescopic chimney, substantially as and for the purposes speeified.
3. Suspending the button to defleet the flamo within the chimney, for the purposos fully deseribed.
194,564.-S. T. McDougall, Brooklyn, N. Y.Quartz Crusher.-February 18, 1868.-Tho pounders are attached to one end of the levers, and the followers to the other ends of the same. The followers operate to stir the ore and present it to the pounders. The levers are operated by revolving eam arms.

Claim.-Combining, coustrueting, and operating the pounders and followers, substantially as shown, for tho purposes indicated.
94,565.-Edwin McKenzie, Watertown, N. Y. -Horse Hay Fork.-February 18, 1868 .-The sliding rod has eavities which reecive the pin on a spring lever, which is retracted by a cord to relzase the load. Claim.-The loeking deviee, construeted as described, consisting of the bent lever L , pivoted to the sleeve S , and provided with the projection $h$, fitting through the strip B, into the sliding wod A, and held in place by the spring K, its upper end $l$, slotteder the passage of the rod $A^{\prime}$ and side strips B , as herein shown and deseribed.

盟A,566.-JAMES MCKittrice, Brooklyn, N. Y. -Paint and Varnish Brush.-February 18, 1868; antedated February 5, 1868. -The portion of the handle covered by the brush has radial ribs upon it.

Claim. - The tapering handle $A$ oif the paint brush, when made round at its lower end, and provided with two inelined pieecs B B upon opposite sides, all construeted as deseribed for the purpose speeified.

煦4,56\%.-Stewart McMillan, Fleteher, Ohio. -Fanning Mill.-February 18, 1868. -The grain falls from the hopper onto the upper shoe, and is subjeeted to the action of the air thercon, and while falling to the inelined sereens beneath, from whence it is diseharged.

Claim.-1. The inelined shoe E, having the sereens suspended from the eross-frame A by means of the pivoted bars $h$, and oscillated longitudinally from the crank $\delta$ of the fan-shaft $b$ by means of the short piroted bar $g$, eross-bar $e$, and counecting rod $d$, all construeted as deseribed for the purpose spefied.
2. The construction and arrangement of the crossframe A , hopper C , oscillating pendent shoe E , boxes $J \mathrm{~J}, \operatorname{drum} \mathrm{~B}$, fan D , pivoted lever $e$, conneeting rods $g d$, and crank $s$, as herein deseribed for the purpose specified.

- 9 4,568.-Ellis R. Meerer, Elizabeth, N. J.-Implement.-February 18, 1868. The claw hammer has a sliding jaw similar to that of a monkey wrench.

Claim.-1. The pendent extension D of the elaw C of the hammer, in connection with the sliding jaw H, all constructed and arranged substantially in the manner as and for the purpose set forth.
2. The detachable extension F , with the guide rod $G$ attached, and its upper end fitted in the pendent extension $D$, in conneetion with the sliding jaw H and the screw I , all arranged substantially in the manner as and for the purpose specified.
g4,569.-Join A. Merriman, Chicago, Ill.Corn Sheller.-February 18, 1868.-The shclled corn and cobs drop into the annular spaee, where they are carried around by the conveyor ; the cobs to the disehargo ehute, and the coru to drop through the holes into the annular trough beneath, whence it is carried around to the spout and subjected to the aetion of the fans.

Claim.-1. The shelling wheel H, provided with one or morc channcls $d$, having elastic or yielding bottoms, in combination with a shelling cono K , arranged and operating substantially in the manner and for the purposes set forth.
2. In combination with a eorn-shelling wheel and cone, an annular cob receiver I, and cob eonveyor $h$, arranged and operating substantially in the manner and for the purposes describod.
3. In combination with the shelling devices and
eob receiver as abore described, an annular corn receirer L. and corn eonreyor, $i$, arranged so as to operate sinstantially as speeified.
4. In cumbination with a shelling wheel II, cob receiver $I$, and corn receiver $L$, the arrangement of fan wings $j$, operating as and for the purposes shown and set forth.
g4,590.-S. A. Millant, Clarrille, N. Y.-Process of Rolling Hocs.-February 18, 1868.-The blank is rolled into form by passage through a series of irregular rollers. The blank is passed in trausverse and longitudinal directions.

Claim.-Forming the bead and blade portions of a hoe, by rolling the stock out between rotary dies, in the manner substantially as deseribed, that is to say, by rolling the stoek alteruately from near the eenter toward eaeh edge, so as to "spread" the blank, and then alternately lengthwise in one direction to form the ear's, and lengthwise in the other dircetion to draw or plait out the blade toward its edge.

74,591.-Moses Romul Mollecr, Chieago, Ill.-Hay Press.-Febrnary 18, 1868.-The Lottom is hinged at one side, and supported on adjustable blocks so that it may be allowed to fall fightly, taking its pressure from the doors, when the holding bars of the latter are being removel. The sides of the press are sprung out by toggle levers to loosen the bale for remoral.

Claim.-1. The combination of the rextical box A, provided with doors IS 13 , opening upward, the movable bottom C , follower D , cords K , rollers R , ratehets and pawls II I, all arranged and operating as and for the purposes specified.
2. In combination with a hay press haring Fielding sides, as deseribed, the rod in and lever 1 , arranged and operating substantially in the manner and for the purposes set forth.

14,5\%æ.-GEORGE R. Moore, Lyons, IowaMachine for Corrugating Sheet Metal.-February 18, 1868. The bearing standard of the upper, eorrugating roller is arched, so as to admit the eylinder whiel is to be corrugated over the lower eorrurating roller and its bearing arm. The eylinder lies on supporting rollers, and is corrugated by revolution between the eorrugating rollers. The upper one of the latter is depressed by a wimeh serew. The portion of the mechanism inelosed within the eylinder is supported at one end, and the middle, by hinged supports, so conuected by rods that the depression of one insures the elevation of the other.
Claim. -1 . The combination of base plate B , standard $A$, arms $E$ and $F$, and arehed brace $S$, eonstrmeted and arranged substantially as deseribed.
2. The combination of the extension arm $G$ with the arm F' and 'hinged supports C and D, eonstrueted and arranged substantially as deseribed.
3. The eombination of arms $\mathrm{F}^{\prime}$ and G , roller bearings II H, and corrugating rollers I and J, construeted and arranged substantially as deseribed.
4. The combination of the rods M M, gange $L$, lateh nut $O$, and serew nerbor $P$, construeted and arranged substantially as deseribed.
94,5\%3.-II. A. Moore, E. Otis Frink, and S. C. Frink, Indianapolis, Ind.-Box for Street Stop Cocks.-February 18, 1868.-The box gires aceess to the eock. The ligs of the lid take under the inelined flanges, and are secured by a twist.

Claim.-1. A street stop-cock box for gas, water, or other purposes, providel with the flanges $e$ and $f$, and the inelined flanges $h$, substintially as and for the purpose speeificd.
2. The cover, provided with the $\operatorname{lngs} \mathrm{L}$ and $k$, sul)stantially as deseribed and for the purposes set fortl.

74,5\%4.-John Moore, MLadisou, Ind.-Combined Cane Mill and Steam Engine.-February 18, 1868. -The frame of the mill is so eonstrueted as to gire bearings for a steam engine and to allow the removal of the rollers, when the engine may be applied to another purpose.

Claim.-The arrangement of the eylinder of a steam engine and the rollers of a cane mill upon the same frame, substantially as hercin shown and deseribed, for the purpose speeified.

94,595.-Thomas W. Moore, Piehmond, Ind - Bolt Cutter.-February 18, 1868.-The bolt is reecired in an aperture in one jaw and cut by a cutter block seeured to the other.
Claim. -Tho combination of lever A (provided with cutting edge, as set fortl) and lever 13 , (proFided with aperture $b$, when operating substantially as and for the purpose deseribed.

74,576.-Adam Myers, Van Wert,Ohio-Carriage Jack.-February 18, 1868. -The disk head of the lever is eceentrieally pivoted to the upper ends of the lifting and brace bars.

Claim. - The eombination of the adjustable spring catch or shoulder E with the long arm A of the jaek, substantially in the manner herein shown and deseribed, and for the purpose set forth.

74,5\%\% - William Nefe, Center Mall, Pa.-Harvester.-February 18, 1868. - The finger bar is supported upon a rocking slaft, which is eonnected by a erank arm to the arbor of the grain wheel, and at the other end to the middle of a lever', one end of Whieh is supported upon a link, and the other by a flexible conncetion to a hand lever, by whose morement the ends of the bar are simultaneously depressed. The gag bar is attaehed to the uuder side of the main frame, and projects outward and melerneath the drag har, and prevents its dropping below a given line. The drag bur is attached to the gag bar by a eurred pivot, so that the drag bar may roll or rock toward the main frame and back on the gag bar:
Olain.-1. The arrangement of the roeker lever $i$ on the sliaft $f$, and its connection to the main frame by a link $j$, and to the lever D by a flexible comneetion $k$; so that operatiug the lerer 1 will raise and lower the finger bar at both ends simultancously, substantially as deseribed.
2. In eombination with a hinged drag bar I , that ean roll to and from the main frame, the gar har $d$, connceted thereto by the eurred pirat e, as and for the purpose sulbstantially as deseribed.
3. The reel arms, working in the same eireuit, but at different velocities, and independent of each other at different portions thereof, when driven throngli ecentrically-hung cirenlar gears, substantially as described.
g4,5g8.-R. I. Nelson, Mexieo, N. Y.-Device for Changing Feed.-February 18, 1868.-For changing the feed of saw mills, \&e. The intermediate wheel is on a swinging frame, and may conneet wheels of the desired relative diameter.

Claim.-1. So arranging the gear wheels $a b$ on two parallel shafts 1 C , whieh are to be comeeted, for clanging the feed of eertain mechanism, that the line drawn over the faees of the wheels on either shaft will be a eurved line, as set forth.
2. Hinging the swinging frame E , in whieh the shifting gear $d$ is held, so that the shifting gear will first come in gear with the driving shaft and then with the shaft that is to be driven, as set forth.
3. The sliding frame D in which the shaft F that earries the slifting gear $d$ has its bearings, when eonnceted, by means of jointed bars $e$, with the roek shaft $G$, substantially as and for the purpose herein shown and deseribed.
4. The arrangeunent and combination of the shafts B C, carrying the gear wheels $a$ a and $b b$, respeetively, with the wheel $d$ on the shaft F , slidiug frame D , linged frame E , levers $c c$, bars $e e$, and rock shaft $G$, all made and operating substantially as herein shown and deseribed.
g4,579.-Thomas Nevison, Jr., and James NevIsox, Morgan, Ohio.-Carriage Whecl.-February 18, 1868. - The metallie spokes are curved, so as to aet as springs, and each one is attached to the felloes in two places, each spoke being connceted at the felloes to the spokes on each side of it.

Claim.-The herein-leseribed wheel, when the spokes of the same are constructed and secured to cach other aud the felloe or rim, in the manner snbstantially as set fortl.
74,580.-PhiliP A. Newhall, Lym, Mass.-Slide-block Last.-February 18 1868.-The lower
portion of the block has a dovetail form, and slides in a suitable cavity of the last. A tongue on the lower side of the bloek fits a groove in the last.
claim.-In eombination with a slide block, fitted by tongue and groove to slide upon the last, the square face or point $g$, to abut against the shoulder $f$ in the last, to be thereby protected from slipping back, substantially as set forth.

64,581.-Don Carlos Newton, Batavia, Ill.-Wagon-Pole Support.-February 18, 1868.-The king bolt passes throngh the rear end of the lever, and is supported by a chain from the pirot bar of the tongue. The end of the lever is attached to a spring conneeted to the tongue.

Claim.-1. The combination of the steel spring. B with the wooden lever C .
2. The manner of attaching the wooden lever C to the draw bolt E by means of the chain D .
g4,35:.-George and Willian L. Nixam Sandyville, Ohio.-Device to Prevent Hogs from Rooting.-February 18, 1868.-The plate has three projections, one of which lies on the snout and prevents rooting, and the others give bearing to a rod which traverses the upper part of the snout transversely just above the gristle, and forms the attachment.
Claim.-The within deseribed device, consisting of the plate A, arms C C, with holes D D, and wire B , the several parts being arranged and used substantially in the manner and for the purposo herein specified.

- 4,58:3.-Wilitin Ord, Brooklyn, Ohio.-Steam Engine Valve.-February 18, 1868.-The segmental valves are connected by links which enter the slot of the stem. The links have rectangular holes traversed by tapering bars having a wedge between them whieh is strivcled in, and adjusted by a temper screw in the end of the stem to adjust them to their seats. The valve bloeks are also forced to their seats by spiral spriugs.
Claim.-1. The combination of the segments $A$, having chambers $E$, with the slotted stem $B$ and heads $c$, substantially as set forth.

2. In combination with the above, the links $L$, welges $a$, and key D , substa tially as specified.
3. In combination with the above, the scres H and springs S , substantially as described.

24,584.-T. C. Page, Chicopee, Mass.-Fewing Machine.-February 18, 1868; antedated February 7, 1868. -The reciprocating, rotary movement of tho looper, caused by the cam groore on the needle bar, forms a twisted loop stitch; but the common loop stitch may be formed by adjustment of the mechanism.
Claim.-1. A needle bar and needle, having a reciprocating, rotary motion, in combination with a looping derice, working beneath the bed plate of the machine, substantially as described.
2. The combination of the spiral slot $b$ and straight slot $l$, formed in the needle bar $e$, substantially as set forth.

194,585.-Johi Paley and Thomas Rawsthorn, Preston, England.-Mule for Spinning.-February 18, 1868 ; patented in England November 23, 1864.Motion is communicated to the cam shaft by a belt which may be shifted from a fast to a loose pulley on the cam sliaft by a shipper operated by the traveling tirame of thie mule.

Claim.-The combination, with the driving band $b$, of the fast and loose pulleys $d$ of the cam shaft, the connceted levers $e i$, and the block $l$ and weight $m$ of lever $i$, substantially as shown.

94,586.-G. W. Pearson, Billeriea, and D. Coburn, Lowell, Mass.-Machine for Cutting and Scparating Dye Woods.-February 18, 1868.-The blocks are fed endways to tho cutters, and the cuttings drop on shaken sieres. The fine particles drop onto the inclived boards and are conducted to the bolt, from whose lower end the coarser particles are clevated to the higher floor. Thus the chips are separated into three degrees of fineness.

Claim.-1. Tho conducting spout $e^{\prime}$, and aprons $a^{\prime}$
$a^{\prime}$, or their equivalents, in combination with the cylinders $b b$, for the purpose substantially as described.
2. The application of the elevator and reel bolt $2^{\circ}$ in combination with the conducting spout $e^{\prime}$ and aprons $a^{\prime} a^{\prime}$, when arranged to operate substantially as described, and for the purposes fully set forth.
3. The combination and arrangement of the cylinders $b b$ with the cutters $c c$. conducting spout $\ell^{\prime}$ aprons $a^{\prime} a^{\prime}$, reel bolt $r$, cam $u$, block $v$, and elevator, all for the purposes herein described and fully set forth.
'4,587.-Antonio Pelletier, W ashington, D. C.-Composition for Manufacturing Stone and for other Purposes.-February 18, 1868.

Claim.-1. The eompound, eonsisting of vegetable fiber, mineral asbestos, emery powder, soapstone, silicate of soda, (or potassa.) and litharge, substantially as described and set forth.
2. The compound eonsistiug of vegetable fiber, mineral asbestos, cmery, soapstone, silicate of soda, or potash, litharge, when manufactured into stone, (sand being used in addition,) or when coated on wood, cloth, leather, brick, stone, metals, or other solid surfaces, and treated with chloride of zinc, oxide ainc, sal-ammoniac, chloride and sulphate of iron, salts of lead and manganese, sulphate of lime, substantially as described and for the purpose set forth.
3. As a new artiele of manufaeture, the composition, substantially as herein described and for the uses and purposes set forth.

74,588.-Benjamin P. Perfiy, Richmond, Ind.Head Block for Saw Mills.-February 18, 1868. The feed rack is engaged by a spur wheel upon the shaft of the ratchet wheel, which also carries the elliptic by whieh the feed pawls may be raised from the ratchet teeth and permit the rack to be freely moved. The pawls are operated by a lever, and the oscillation of the latter is restrictel by a collet on the shaft which comes in contact with adjustable eccentrics at the ends of its strokes.

Claim.-1. Connecting the pawls P and $\mathrm{P}^{\prime}$ with the sleeve $a$ on the same sidc of the latter, by which a simultaneous action of said pawls is produced, resulting in the alternate operation on the ratchet, substantially as set forth.
2. The collet $H$, having the projection $h$, in combination with the eccentrice $n$ and $n^{\prime}$, for adjusting the feed, substantially as set forth.

94,589.-G. M. Plympton, Neir York, N. Y.Carriage Step.-February 18, 1868.-Bars of rubber are laid on the lower plate, and the upper plate has flaps cut and turned up to secure the said bars.

Claim.-A step for carriages, \&c., formed of the troo plates F and A , in combination with the Indiarubler ribs D , or their equivalents, when the plate A is formed to receive such ribs D , substantially as and for the purpose deseribed.
rg4,500.-Anthony Pohl, Detroit, Mich.-Brick and Mortar Elevator. - February 18, 1868.-The endless chains are carricl orer wheels above and below, and the matcrial carried up on the frames attached to the chains.

Claim. - The cndless chain or belt, carrying pivoted open frames, supporting the removable shouldered boxes $f$, for the purpose substantially as described.

94,501.-Joun Price, New Tork, N. Y. Shackle for Platform Springs of Wagons.-February 18, 1868. -The ends of the springs are connected by a gimbal joint.
Claim.-A shackle for connecting the ends of the parts of plattorm springs, composed of the cross tubes $a b$, and the bolts $c$ cee ali constructed and applied substantially in the manner as and for the purpose herein specified.
94,592.-Homier Rawson, Jericho, Vt, assignor to limself and O. H. Shaw, same place.-Ox Yoke:Feloruary 18, 1868.-The bows pass loosely through the yoke and are leyed to the hinged cap.

Claim.-The adjustable hinge $\mathbb{C}$ on the cap A , and
the movable or adjustablo staple E, in the center of the yoke B , all for the purposo as herein sat forth.
g4,503.-Josepil Reichmany, Dubnque, Iowa. - Valve for Steam Engines.-February 18, 1868.The stean admitted on one side of the valre pistor, and the exhaust on the other side, moves the said piston and valre. When the latter reaeh the desired point steam is admitted on the reverse side, ehecks the motion, and ultimately stops them.
Claim.-1. The steam and exhanst ports, so arranged as to ennse the motion of the ralve piston, or its equiralent, and to eheek and stop saill motion of said piston, or its equiralent, substautially as heroin set forth.
2. The stationary valve plato $h$, construeted as described.
3. The eombination of the valve $d$, piston $f$, eflinder $c$, plate $h$, aud valve $i$, construeted as deseribed, and so arranged as to produce self aeting and self checkiug motion, substantially as aud in the manner herein set furth.
\%1,534.-S. S. Rembert, Memphis, Tenn.-Breceh-Loading Fire-Arm.-Febrnary 18,1868.-The barrels are hinged to the fore end of the stocir and are thrown up at the breceh by the oscillatiou of the trigger guard, which actiou simultaneonsly draws ont the cartridge case through tho medinm of the retractor levers.
Claim.-1. The retraetors O , piroted to the sides of the stoek, and operated by the trigger guard, whereby, as the barrels are raised by pushing forward the trigger guard, the upper ends of the retractors eatch agrainst the nipplo $K$ and withdraw the eartridge, as herem shown aud deseribed.
2. The nipple K, when inserted in the eartridge ease $J$, with its lower end resting upon the serew bloek N , in the under sido of said cartridge, as hereiu shown and described.

3 4,595.-W. Rickard, Chieago, Ill.-Pearl Barley Machine.-February 18, 1868. - The grain is placed in one of tho two hoppers and passes throngh the annular space between the toothed eylinder and the case. The eylinder has horizontal, toothed rings alternating with plain ones. The shell has holes with the burrs inside, and inelined slots whiels incline to the right and left, to operate when the eylinder is turned in cither direetion, aceordiug as the grain is furnished by one or the other hopper. An adjustable fan blast removes the husks from the machine. From the elevator the grain passes over a screcu whieh keeps baek the mhnsked grain, and the same is returned to the alternate hopper.
Claim.-1. The eylinder C, construeted substantially ns herein shown and deseribed, in combination with the perforated casing D and shatt B , as and for the purpose set forth.
2. Forming the long holes or slots in the easing D with their lips inclined to the right and to the left, substantially as herein shown and deseribed, so that the maching may work equally well whether run backward or forward.
3. In eombnation with the cylinder C , ease D , and shatt $B$, as construeted, the fan chamber $G$ and fan H , as set forth, for the purpose speeified.
g7, 596. - Richand N. Roberts, New Britain, Conn., assignor to himselt and Justus M. Alling. - Hitching Post Cap.-February 18, 1868.-The hiteh strap is held bencath a turning eam.

Claim. - An improred artiele of manufacture, viz: a metallie hitehiug post eap, in combination with a cam strap hollecr, coustrueted and arranged snbstantially as described.

Mat,507.-Louts C. Rodier, Springfield, Mass.Steam Globe Valve.-February 18, 1868. -The valvo is evutained in and removable with the plug, so that by taking out the plug the ralve may be repaired or cleaned.

Claim.-The metallic plug, having one or more valre sents therein, and one or more valves attaehed thereto, in combination with the shell or ease A of a glohe valve, the aperture $B$ being construeted therein so as to reeeive said plug, and the whole arranged substantially as herein deseribed and set forth.

74,59S.-George O. Roe, Conantsville, Conn. -Plate Lifter.-February 18, 1868; antedated February $16,1868$.

Claim.-The lifter, composed of the hooked arms $b$, shank $a$, and sliding hook $c$, tho whole arranged and operating substautialiy as and for the purpose specificd.
g4, $599 .-E v a n$ T. Rogers, San Franciseo, Cal. -Boot and Shoe.-February 18, 1868. The leather is marked by the ridges as a guide for the stiteher.

Claim.-Making the ridges on the markers by casting them in one piece with the plate, substantially as described.
\%1,600.-Willian Rose, Lake, Ml.-Harvester. -February 18, 1868. -The eam wheel receires rotation from the axle by a chain, and oscillates an arm conneeted to tho pitman of the cutter bar.

Claim.-The combination of the cam wheel JI, arm $P$, rod $Q$, block $L$, arm M, and are $N$, all construeted, arranged, and operatium in the manner set forth, and for the purposes specified.

74,601.-M. Rothschild, Harrisburg, Pa.-Pliers for Bending Shect Metal.-February 18, 1868.'Lhe instrument is for bending small strips of sheet metal orer the joints of hoop skirts, and it has ono coneare and one corrugrated jaw.

Claim.-The form, construetion, and arrangement of the jaws $A$ and 13 , and their combination with the haudles and spriug, as herein described and for the purpose set torth.

194,602.-Williaj D. Rowlstone, Butternuts, N. Y.-Sieigh Bralic.-February 18, 1868.-The dog brake is piroted to the frame at the upper encl, and is operated by a hand lever eonneeted to it by a link.

Claim.-The above-named sleigh brake, arranged substantially as abore deseribed and tor the purposes hercin mentioned.

74,603.-William Russell, Atlanta, Ga., assignor to himself and George Winship, same place. -Cotton and Hay I'ress.-February 18, 1868.

Claim.-1. Wheu used in a cottou atud hay press, the combination of the stationary vertical serew rocls If $R$ with the movable nut $V$, haviner the trumnions $v v$, and the arms $\Pi \mathrm{H}$, for the purpose of moving the follow bloek up and down, while allowing it to be turned aside from the top of tho press box, all the parts referred to operating substantially in the manner and tor the purposes speeified.
2. The bent arms If H, attached to the follow block and provided writh cars $h h$, which are supported by and pivoted npon a nut or other deviee, workiug up and down by the aetion of serew rods I $R$, substantially as and for the purposo set forth.
3. The gear whed G, provided with the inner rim 00 , and fixed to the mooden beams $d d$, snbstantially as and for the purpose set forth.
4. The combination of the serew rods $\mathrm{R} R$ with a follow bloek fixed to piroted arms, so as to turn back away from the top of the press box when elerated above it, substantially as described.
5. The combination of the press box A with the gear whecls $G g$, serew rods $R \mathrm{~K}$, arms $H \mathrm{H}$, and follow bloek $B$, all the parts being construeted and operating together sulbstantially in the manner and for the purposes speeified.

74,604.-Natoleon Sarony, New York, N. Y. -Photographic Rest.-February 18, 1868.-Improvement on the patent of Oliver Sarony, June 5, 1866. The stand is fixed to the floor or platform, and the rests are extensible and adjustablo thereon.

Claim.-1. The head bloek $d$, construeted in the manner specified, in combination with the stand or column $a$ and rod $b$, as and for the parposes set forth.
2. The rest holder $g$ or $g^{\prime}$, in eombination with the head bloek $d$, rod $b$, column $a$, and rest $h b$, substantially as and for the purposes set forth.
3. The extension eabinet front or panel, in combination with the table $p$, substantially as speeified.
4. Two or more lests, supported from one columa by meaus of the rest holder $g$, substantially as set torth.
5. The enrved arm $n^{\prime}$ and morable table $n$, in com -
bination with the column $a$ and rod $b$, as and for the purposes set forth.
6. Attaching the column a removably to a base $a^{\prime}$ that is permanently attached to the floor, in order that the rest may be a fixture when connected to sueh base, but removable to other bases, for the purposes set forth.

74,605.-Frank Saunders, Aberdeen, Miss.Measuring Faucet.-Fcbruary 18, 1868. -The valve is at the inner end of the faucet, and is closed by the pressure of the liquid. The valve stem has a sleove carrying a spiral propeller occupying the cylindrieal passage in the shauk, and having a spur whecl whose rotation is indieated by a pointer, to denote the quantity which has passed through the faucet.

Claim.-1. The propeller B, sliding rod C, with its plug $D$ and locking slide $I$, in combination with a fancet, substantially as and for the purpose set forth.
2. The combinatiou of the lifter G, loeking slide I, and serew $d$, arranged to operate essentially as specified.
3. The flexible, spiral, or twisted ranes $I^{\prime} \mathrm{B}^{\prime}$, arranged as described, in combination with the mechanism for operating the index or closing devices, substantially as specified.
(94,606.-HENRY K. SChanck, Chicago, Ill.Composition for Roofing.-February 18, 1868; antedated December 27, 1867.-Composed of coal tar, 5 \&alls. ; sulplur, 8 lbs.; plumbago, 6 lbs; litharge, 3 lbs.; India-rubber, 3 lbs. These matters are melted together sufficiently to vuleanize the rubber, and the vessel is placed in a furnaee kettle contaiuing a little boiling water; bluc clay is then added, and a mortar made under lieat. The mortar is applied with a trowel.

Olaim.-1. A composition for roofing and other analogous uses, composed of coal tar, sulphur, plumbago, clay, and litharge, substantially as hereiu specified.
2. In combination with the abore, the employment of the ingredient, India-rnbber, substantially in the manuer and for the purpose set forth.
 Eames, New York, N. Y.-Preserving Dead Bodies. -Febrnary 18, 1868. - The body is kept moist for a ccrtain time with earbolie aeid, or similar antiseptic, either by immersion or other means. The liquid may be injceted into the eavities of the body by the natural passages, and may also be injceted into the blood vessels.

Clain.-1. The process for preserring dead bodies, substantially as described.
2. The use of carbolic acid, and combinations of carbolic aeid with other substances, for the preseryatiou and cmbalming of dead bodics.

91,608.-Charles A. Seely and Charles J. Eames, New York, N. Y.-Disinfecting Compound. -February 18, 1868.-Disinfectants, as carbolic or cresylic acid, are mixed with some substance, stich as sawdust, salt, or charcoal, which will have no chemical effeet on the acid. Sawdust, 10 lbs. , may be mixed with carbolic aeid, 40 oz . The dead oil of coal tar may be mingled with these neutial granulatcd substances, to form a eheap disinfectant.

Olaim.-The disiufecting compound as above described.

74, 609--William Sellers, Pliladelphia, Pa.Lathe for Turning Iron.-February 18, 1868.-The back upright of the fixed head has an opening upward from the spindle bearing, allowing the latter to descend verticaily, and this opening is stopped by a tongued bloek slid in horizontally from the back. The segment nut engaging the feed serew slides horizontally, aud is moved by a serew operated by a hand crank at the frout of the rest. The longitudinal and eross-feed are taken from the same slaft, whieh is clntched by the right or left rotation of a single screw to the gearing operating the said feeds respectively.

Claim.-1. A ttaching the fixed or live head to the shear or bed by bolts passing through and straining upon the flanges on the cross-girtlis in the bed, as described.
2. Forming a hole in the side of the lathe beds, for
the purpose of operating the bolts or other loldingdown apparatus for the live heads, substantially as described.
3. Casting a web across the bottom of lathe beds, betweeu the two girths, under the head, for the purpose of stiffening the bed, when a hole is made in the side, and to form a securc tool receptacle iu the same, substantially as described.
4. Supporting the back jourmal of the spindle in a solid conical bearing, when this bearing is held in position by au oil box, substantially as deseribed.
5. Recciving the cud thrust of the spindle upon collars placed inside of an oil box, at the rear of the back bcaring, when this box is so arranged as to permit the spiudle to pass through it, for the purpose specified.
6. The block $N$, substautially as deseribed, and for the purpose spceified.
7. Placing the lead serer uuder cover, and in a bearing its whole length, substantially as described.
8. Engaging or disengaging the saddle or slide rest with a feed screw, supported as described, by means of a scgment of a nut moving horizoutally, for the purpose specificd.
9. Operating the longitudinal and cross-feed of the lathe by two clutehes on the same shaft, in the manner substantially as and for the purpose specified.
10. Jngaging and disengaging both clutehes by movements of the same haudle in the same dircetion, substantially as deseribed.
g 4, 610.-J. H. SEYMOUR, Hagerstomn, MdSpittoon for Cars.-Februar'y 18, 1868.-Improrement on his patents Nos. 54,613 and 59,280. The spittoon has an outer conical case reaching through the lower bottom. The neek flares slightly downward, to prevent choking.

Olaim.-l. The combination of the conieal shell B with the spittoon $C$ and the bottom $A A^{*}$, substantially as and for the purpose specified.
2. The neck $a$, made with its interior of conical form, and largest at its lower end, arranged at the bottom of the spittoon $C$, and in relation with the valve $b$, substantially as and for the purpose speeificl.
g 9 , 011 . - William Anthony Silaw, New York, N. Y.-DIanufacture of Tin-Lincd Lead Pipc.-February 18, 1868; antcdated February 6, 1868.-The mandrel has limited movement in the ram to allow aljustment to the die aperture, to prevent fracture of the maudrel, and insure concentricity between the iuner and onter surfaces of the pipe.

Olaim.-1. The combinatiou of the mandrel C with the ram $A$, said mandrel beiug rigidly connceted to said ram iu a decp cavity, as showu aud deseribed, so as to give said mandrel eapacity to spring in said cavity, and adjust itself in the center of the die.
2. Conneeting the maudrel to the ram by the interposition of a flexible link, substantially as described.
3. In combination with the ram $A$, the cup $B$, for the purpose of facilitating the conncction between the mandrel and the ram, substantially as described.
g4,612.-William $\Lambda_{\text {ntiiony Shaw, New York, }}$ N. Y.-Manufacture of Tin-Lined Lead Pipe.-February 18, 1868 ; autedated February 6, 1868.

Ciaim.-1. The formation of a metallic pipe, by forcing two or more of the duetile metals together, in the form of tubes, over a mandrel or core, out of two or more cylinders, and throngh, on, or in two or more dies, suhstantially as doscribed.
2. The use of two or more eylinders, two or more rams, and two or more dies, or their equivalents, when combined witl a maudrel or core, substantially as deseribed, for the purpose of making laminated pipe, whether said pipe be made of metal or other material.
3. The manufacture of a metallic pipe, consisting of threo tubes of soft metal, such as a tube of lead pressed between two tubes of tin, by formiug and foreing them together, through three dies, out of three cylinders, over ouc eore or mandrel, in the manner described.
4. In combination with a pipe press, a set of draiving or streteling rollers, for the purpose of drawing or stretching the pipe on the mandrel or core, as it issues from the press, substantially as described.
5. The manufacture of a continnous metal pipe, whether of lead or of composition, from metal disposed in two or more retainuge eylinders, by foreing it out of the same in the form of two or more tubes, over a mandrel or core, and in such proportion that the retaining cylinders shall not both or all bo cxhausted at the same time, so as to avoid the defect in the pipe resulting from the failure of the successive charges to thoroughly weld, as in the ordinary press, substantially as described.
gat, 613.-Willian Anthony Silaw, New York, N. Y.-Manufacture of Tin-Lined Lead'Pipe.-Few. ruary 18, 1868; antedated February 6, 1868. - Improyemeut on his patent, March 10, 1863. To orercome the irregularities incident to the tendency of the metal in proximity to the mandrel to issue at greater speed than that nearer the ciremnference, the central block of metal is made in form of frustums of cones with their smaller ends forward.

Claim.-1. Making the charge of metal in three distinct parts, as described, and uniting them cither before or after they are put in tho eylinder.
2. Making the central ingot or charge of tin, in the form of a double frustum of a cone, or its equivalent, for the purpose of securing a uniform thickness of tin in the lead tube or pipe.
3. Making the intermediate lead or alloy ingot in the form of a frustum of a cone, substantially as described.
4. Making the cavities $D$ in the upper end of the charge, substantially as described, for the purposo specified.

74,614. - TVilliam Anthony Shaw, New York, N. Y.-Making Tapering Tubes.-February 18, 1808 . -The tapering mandrel has movement with the ram, which brings its oularged part gradually forward, to cause increased inside diameter in the pipe.

Claim. - The manufactnre of a pipe, funnel-shaped along its intcrior diameter, and of eqnal diameter externally, by pressing the material of which the pipe is composed out of a retaiuing eylinder, throush a die, orer a taper mandrel, snbstantially as described.
\%4,615.-OTIS SiIEPARD, Alton, Ill.-Hammer. - February 18, 1868.-The wagou hammer has fised side projeetions which combine with projections on a sliding head, to form an adjustable wrench.

Claim.-A hammer, the head of which is mado of two parts $A$ and $C$, conneeted by the handle $M$ and springe $k$, when the several parts are constructed and operate in relation to each other, substantially as shown and specified.

74,616.-Williak Sifields, Philadelphia, Pa.Die for Maling Square-Headed Holts.-February 18, 1868.-The holding dies havo horizontal flanges, which, meeting together, form the lower side of the head eavity. The upper part of the heading die is adranced to form cutters on the top and side, for removal of fins.

Claim. - The combination of the jarss with flanges $A$ and the plunger $B$, eonstructed and arranged and operating snbstantially as and for the purpose hercin deseribed.

194,617.-JaMES A. Sinclatr, Woodsfield, Olio. - Animal Trap.-February 18, 1868.-The rat while attempting to reach the bait is entrapped, and its efforts to cseape result in its being killed and thrown from the trap, and the trap resct.

Claim.-1. The combination of the tramp wheel $J$, shaft L, cog-whocl M, and toothed bar N, having a knife or spear X piroted to its end, and spring O , with cach other, substantially as lerein shown and deseribed, and for the purpose set forth.
2. The combination of the drop gato $K$, bent lever R, and spring $O$ with cach other and with the tramp wheel $J$, substantially as herein shown and deseribed, and for the purpose set forth.
3. The combination of the trap door s, lever $T$, arm U, and bar N with each other, substantially as nerein sliown and deseribed, and for the purpose set forth.
4. The combination of the arm W with the bar $N$, substantially as hercin shown and described, and for the purpose set forth.
5. The combination of the arms $\Lambda^{\prime}$ and guide plates $Z$ with the bar $N$ and the frame of the trap, substantially as herein shown and clesoribed, and for the purpose set forth.
6. The combination of the inclined guide $\mathrm{B}^{\prime}$ and spring $\mathrm{C}^{\prime \prime}$ with the bar N and Prame of the trap, substantially as herein shown and described, and for the purpose set forth.

71,018.-W. Y. Singleton, Springfield, Ill.Beehive. - February 18, 1868.-Tho tol and bottom consist of trays containing ashes, resting on canvas and wire gauze ; the air for ventilatiou passes through the trays in limited quantitics.

Claim.-1. The absorbent bottom C and lid or top D, construeted and applied to the hive substantially in the manner as and for the purpose set fortl.
2. Tho air chamber 13 with the ail passago E attached, substantially as and for the purpose specificd.

74,619.-Reuben T. Sitterly, Callaway County, Mo.-Belting Tobacco.-February 18, 1868.-The lever's have cach two horizontal cutters and an inclined cutter: A ring of bark is removod by a full half revolution of the cutters.

Claim.-The construction and combination of the blades, as herein described.

4, 620.-GEORGE W. SKINNER, Rochford, Ill-Horseshoe.-February 18, 1868.

Claim.-1. Construeting a horseshoe with a beyeled projecting spur a at its front, and the toe calk with a corresponding reeess, to receive the spur $a$, and then securing the toe calli in place by means of the same, together with a serew $b$, as shown and deseribed.
2. The detachable heel ealks, fitted to a recess in the under side of the shoe, aud held in plaec by means of the projcetion $E$ or $E^{\prime}$ and screw $a^{\prime}$, as shown and deseribed.

194,6:21.-1I. K. Sunth, Norwieh, Conn.-Lathe Rest.-February 18, 1868.-Two portions of the nut have a wedge forun and one of them is adjusted by a temper screw to eompensate for lost motiou.

Claim. -The nut $\bar{N}$, made in threc parts, $G$, H, and I, arranged togetler with screirs $L$ and $E$, for operation, substantially as and for the purpose described.
 Y.-Medical Compound.-February 18, 1868.-Liniment for treatment of rheumatism, \&c. Composed of cider vinegar: 1 gall. ; reetate of lead, 4 oz . ; spirits of turpentine, 20 O.; muriatic acid, 2 oz ; snlphuric aeid, 2 oz.

Claim.-A medical eompound, comprising the ingredients about in tho proportions herein set forth.
\%4,62:-JOINJ. SMOKEY, Natchez, Miss.-Har-ness.-February 18, 1868.-The reins pass through the hame rings, martingale, and gag loops, after which each rein divides: one braneh connecting with its fellow upon the other side, through the check hook, and the brancl passing throngh the back band.

Claim.-The driving reins $A$, when arranged and combined with a liarness, substantially as and for the purpose described.

74, 624.—GEORGE A. Sarytue, Reading, Pa.Calculating Scale Bean.-February 18, 1868.-The weight ring slides on the beam, and is numbered from 10 to 100 , indieating the priec. 'The beam is marked in lines divided rertically, to indieate by numbers in proximity to thoso on the weight the value of the article.

Claim.-The arrangement and combination of the slide $B$, clasping around the whole beam, marked and notehed as represented in Fig. 1 and Fig. 2, together with the shape of the slide and the ounee line, marked 16 on slide, showing the firaetional parts of a pound, and an ounce on the beam, and the amount in money.

194, $625 .-J$. Michael Stark, Buffalo, N. Y.Beer Faucet.-Fobruary 18, 1868. - The valre is at the bottom of a eylindrieal piece, and the liquid passes upward and downward in the annular space surrounding the eylinder, the upward current turning
around the unper edge of the eylinder, descending therein, and issuing through a contraeted nozzle at the eylinder-bottom.
Olaim.-The combined cylinder and valve B C , provided with tho feeding and discharge holes $R$ Q, the plunger F G, and ring K , all eonstructed and arranged to operate within the body of the faucet, substantially as described.
(94, (627.-C. E. Steller, Chicago, Ill.-Harrow. -February 18, 1868.- The teeth are made of such size as to turn in the holes, which have a box at top and a metallic plate at the rear side beneath. A metallic cap prevents the introduction of dirt from above.

Claim.-1. The eombination of supports $J$ and teeth H, substantially as and for the purpose herein specified.
2. The eombinatiou of teeth $H$, collars $K$, aud caps I, substantially as and for the purpose set forth.
3. The round teeth H , arranged to operate in enlarged holes $L$, substantially as described.
4. The rod C, secured by staples P P, in coucbination with joint $D$, arranged substantially as and for the purpose set forth.
5. The rods E E in eombination with rod C and joint $D$, arranged to operate as and for the purpose described.

194, 627.-H. A. Stidger, Carrollton, Ohio.-Bec Hive.-February 18, 1868.-The bottom boards are inclined, and slide iuto position. The lower bottom board has a strip of cleth at its lower edge, to prevent the climbiug of the worm. Ventilation is regulated by these sliding bottoms and a register opening in the hive top.

Claim.-1. The eombination of the ventilating openings A E with the sliding bottom board F and hinged eover $h$, substantially as and for the purposes set forth.
2. The movable glass frames D , in combination with the doors $b b$ and sliding bottom board $G$, substantially as aud for the purposes set forth.
3. 'Ihe strip of cloth $g^{2}$ on the under side of the lower end of the bottom board G, in combination with the foot $g^{1}$ of the bee hive, substantially as and for the purposes set forth.

煦, 6æ8. -Mirum Sulzbacmer, New York, N. Y. -Bureau Bedstead.-February 18, 1868.-The lower portiou of the burean is extensible, and drawn out apon rollers to form a bedstead.

Claim.-A bureau bedstead, containing three extension pieces $a b c$, with grooves, dowels, and transverse slats $a^{\prime} b^{\prime} c^{\prime}$; said extension pieees, when pushed in, being inelosed in a ease A, with foldiug and sliding doors $f$, all as shown and described.

194,629.-S. C. TAYLOR, Toledo, Ohio.-Dental Instrument.-February 18, 1868.

Claim. --1. In combiuation with the mallet and the trip motion, a permanent and a hinged lever, so that the user may hold the instrument and operate the mallet at the same time, and by one and the same hand, substantially as described.
2. In combiuatiou with a pivoted lever and toe picee and "erotehet," a rod aud inook, for catehing, drawing down, and releasing said toe pieee, substautially as described.
3. In combination with the mallet and a spring in a plngging instrument, the slidiug dog or cateh and the teeth, for the purpose of eompressing, graduating, or regulating the action of the spring opon the mallet without changing the extent of motion of the lever E , substantially as clescribed.
g4, 680 - WILLIAM H. Thomas, Saeramento, Cal. - Water Heater for Baths, Tubs, asc.-February 18, 1868 . -The furnace stands iu a water tank, and its fire spaee is traversed by a eoil of pipe fed at the lower end from a elosed reservoir, into the upper part of whieh the steam and heated water discharge.

Claim.-A steam coil heating furnace, submerged in water and supplied with air from the top, and provided with a tank $E$, and deflector $h$, all eonstrueted and arranged substantially as herein shown and described.

24,631.-Stillman and Wesley Thorpe, Turner, Me.-Car Coupling.-February 18, 1868.-The weighted bolt holds down the inner end of the link whieh is inserted beneatli it when the cars are to be coupled. The entering link drives back the slide and allows the fall of the eoupling pin.

Claim.-The combination and arrangement of the sliding back $d$, slotted arm $y$, and pin $x$, with the eoupling pin $k$, in conzection with the weighted bolt $g$ aud the link $m$, as and for the purposes set forth.

4,632.-ISAAC P. Tice, New York, N. X.Wind Mill.-February 18, 1898. -Independent wind boards are arranged to reciproeate alternately under the control of shutters which aet automatically to admit the wind to or to shut it off fiom the bourds in succession, so that they will cause the rotation of a eompound crauk shaft to which they are eonnected.

Claim. - The combination with the many-eranked driving shaft $G$, or other suitable driving mechanism, of the reciproeating wiud boards $A$ B C, differently pitched or set for successive action in like directions, intermediately to each other, and conrolled by valves or shutters $d$, substantially as pecified.
ry, 693.-IsaAC P. Tice, New York, N. Y.Milk Rack.-February 18, 1868.

Claim.-The arrangement of the eollars or bearings $b$ and collars $b^{\prime}$ on the stationary shaft $B$, with relation to and in, combination with the revolving shelves or stands C, substantially as shown and deseribed, for the purpose specified.
g4, 634.-Leonard Tilton, Brooklyu, N. Y.Machine for Bundling Kindling Wood.-February 18,1868 . The pieees of wood are taken from the splitting machine by the foed wheel, and a bnnch of the latter presented to the cntting.edged pressure eylinder, and forced through by a plunger. The trimmings of the pressure eylinder are returned automatieally to the feed wheel.

Claim.-1. The feed wheel or rim C, placed between tho plate $A$ and rim $B$, construeted and arranged to operate in the manner substantially as and for the purpose set forth.
2. The bunding tube $J$ and plunger $I$, arranged in relation with the wood receptacle to operate substantially in the manner as and for the purpose specified.
3. The clearer L, arranged in relation with the bundling tube $J$, and operated from the cross heads $F^{\prime} F^{\prime \prime}$, in the manner substantially as aud for the purpose set forth.
4. The combination of the eam $Q$, levers $R T^{\prime}$, slide $S$, with pawl $T$ attached, and the counterpoise $U$, all eonstrueted and arranged to operate the feed wheel, substautially as set forth.
5. The three cross heads $\mathrm{F}^{\prime} \mathrm{F}^{\prime} \mathrm{F}^{\prime \prime}$, arranged, in connection with the hooks K K and pins $e^{\prime}$, to operate and give the proper or desired movements to the bundling tube, plunger, and elearer, substantially as shown aud described.
\% A, 635.-JOSIAII TisDale, South Dedham, Mass. - Peat Machine.-Februar'y 18, 1868. -The peat is eut by the curved blades upon the spiral, and is driven by the latter through the tapering spont.

Claim.-The arrangement as well as the eombination of the curved blades or shares with the screw propeller and its box, the whole being to operate together substautially as hereiubefore explained.

194,636.-A. W. Tond, Chicago, Ill.-Frame for Supporting and Moving Cloth to be Creased.February 18, 1868. -The free end of the eloth whieh hangs over the table is weighted, and the eloth drawn over the rollers and the metallic rib. The cloth is ereased upon the rib by the pressure of the grooped roller.

Claim. - The eombination and arrangement of erank O, ratehet wheel $P$, pawl R, end pieces $B$ B bar D , rollers C and $A$, points $h h$, and feather edge $g$, for supporting and noring the material to be creased, as leseribed.
g4, 63\% -JOHN VANDERCAR, Brooklyn, N. Y., assignor to Thaddeus B. Beecher, New Haven, Comn. - Boot Blacking Apparatus. - February 18, 1868. - The derice is fitted as a foot stool. Its upper part is hinged to the baso, and on being thrown baek discloses the hinged foot rest and the necessary instruments.

Claim.-Connecting the foot rest of a boot-blacking apparatus or deviee to its standard legs or supports by a ball socket joint, substantially as herein specified.

4,63S.-James VaUghn and Johy McGee, Galena, Ill.-Pump.-February 18, 1868.-The cylinders are headless and havo a valred diaphragm at midlength. They slide upon the valved plungers. The stems of the latter are tubular, and fixed to the frame.

Claim.-The arrangement of the morablo cylinders $A$, pivoted at $B$ in the jokes $D$ at each end of the horizontal rocking beam C , and fitting orer the pistons G, immorably fixed in the framing at each end of the cylinders, all construeted as described, wherely the eylinders are operuted by the rocking beam C, and kept in vertical line upon said pistons by the pins B in tho soke D, as herein set forth, for tho purpose speeified.
74.639.-JAMES J. WAGENHORST, Philadelphia, Pa., assignor to himself, C. H. ZiNk, and W. R. Weand, same place.-Till Alarm and Lock.-February 18,1868 - When the till is elosed the outer bolts whiel rest on the tumblers are raised abore the upper surface of the frame, while the central bolts whieh rest upon the other tumblers extend Within the frame and in front of the eross-piece at the rear of the sanne. If, while the parts are in this position, an unauthorized person undertakes to open the till the rear eross-piece is brought in contact with the central bolts, which will prevent its further morement, while the drawer moves forward until the flange is brought against the lug, which prevents further morement of the till. If tire till be now moved baek the alarm is sounded.

Claim.-1. The eombination of the tumblers D and their projections e rith levers E , on each of which are cams $f$ and $f^{\prime}$, all substantially as speeified.
2. The spring slide L, its striker $p$, and adjustable bloek $q$, in eombination with the lug $t$, the sliding frame $G$, its projuetion $s$, and the recess $r$, in the ease A, all snbstantially as and for the purpose specitied. 3. The spring slicle L and its striker $p$, in combination with an alarm bell AL.

19 1, 640.-Charles E.WaHlaren, Knoxville, Ill. _Washing Machine.-February 18, 1868.-The deviee is used trith one hand, and in comneetion with a eommon wash board. The reserroir is filled by the ralre port, and has perforations whieh allow the passage of the water to the clothes beneath.

Claim.-1. The reservoir 13 , in combination with the fluted ribs or rollers $F$ of a washing board or muehine, substantially as herein described.
2. The wheels H H, or their equiralent, in combination with the reservoir B and fluted ribs or rollers I', su'ustantially as herein described.
ig 4,641.-Tiomas Wallworth, New ton Heath, Great Britain.-Computing Apparatus.-February 18, $186^{\circ}$; antedated February 14, 1868.-Tho nninbered disk is between two fixed plates, eaeh of which has a radial slot with numbers on the margin. The faces of the plates aro numbered at the edge. Jhe disk is turned by a pointer, and when the pointer is turned to a multiplicand at the edge of the plate, the product of that with another multiplieand on the edge of the slot is shown upon the disk in conjunction with the latter number.

Claim.-A plate $b$, with an opening $c$, and with graduations at its edges and at the edges of the openingr, in eombinatiou with a graduated revolving disk, laving figures arrauged in radial rows, and with a pointer secured to and turning with the disk, the whole being constrineted, arranged and operating substantially as deseribed.
74,642. - Joseph Walton, Delaran, Wis.Wagon Brake. February 18, 1868.-The brako bar
is remorably attached to the box, and tho hind axle and hounds have longitudinal motion on the reach, to "brako" the wagon when descending a hill, the rear end of the box being sustained by roller's secured to the bolster. When the box is to be dumped, a pin eonnecting tho hounds with the rench is drarrn out, and the fore wheels and box backed sufficiently for this purpose.

Claim-l. The brake $m$, hung to box A by hooks $\nabla$, in combination with reach 13 , substantially as set forth.
$\stackrel{2}{ }$. The combination of guides S S, plate $H$, pin $I$, spring $J$, and rollers, substantially as deseribed.

74,643,-JOSEPII WARIREN, Lodi, Olio.-Corn Sheller.-February 18, 1868. -Tho hopper is mado sufficiently large to readily receire an ear of comn, which is pressed against the shelling wheel by the spriner attached to the angular side.

Claim.-The hopper D, as constructed with octagonal sides $\mathrm{D}^{\prime}$, spring E , in combination with tho case $A$, for the purposo set forth.
74.644.- William G. Watson, Paterson, N.J. -Silk Clecancr-February 18, 1868.-For cleaning silk while being Tround on the bobbin. Tho silk is drawu between tho kuires to shear off the loose fibcrs.

Claim.-1. The horizontal fiano A, provided with a curved guide $A$, post $D$, flange $b$, and stand $a$, all constructerl and arranged substantially as and for the purpose set forth.
2. In combination with tho above, the fixed knife B , and adjustable knife C , when said knives B and C are horizontally arranged and reversible, substantially as and for the purpose set forth.
3. In combination witll the firame $A$ and knifo $C$, the adjusting screws $d d$, substuntially as set forth.
4. The silk cleaner, construeted substantially as described, and consisting of the frame having curred guides $A$, post D, stand $a$, and flango $b$, fixed knife $B$, adjustablo knifo $C$, and serews $d c$, all ar. ranced as set forth.

194,645.-R. A. Websirer, Snndisfield, Mass.Inner Sole.-February 18, 1868.

Claim.-As a nerv artiele of manufacture, an inner sole, composed of two strips of wood A C, secured together by means of the gutta-percha strip 13, heated, and plaeed between them, as herein shown and described for the purpose specified.
g1,616.-Benjamin G. Welcm, Danrille, Pa.Gang Punch.-February 18, 1868. -The deviee is intended especially for punehing and eutting fish plates.

Claim.-The construction and arrangement of tho dies $c^{\prime} c^{\prime}$ of a gang punch, diseonneeted or separated from each other by suitablo spaees $c^{\prime} c^{\prime \prime}$, in their bed plate C D, substantially as described and set fortli, for tho purpose specilied.
g 1 , $647 .-I s a A C$ II. West and Tertius L. Camp, Erans, N. Y.-Culinary Boiler.-February 18, 1868. - Air is admitted into the steam chamber through a grated legister near the bottom. The compartments at the ends are to eontain deeoctions of coffee and tea. The tea and ground eoffoo are contained in remorablo gauze receptacles in their respeetive chambers.

Claim.-1. The employment, in a elosed steamine ehamber, of an air passage near the bottom of said chamber, for admitting air beneath tho body of steam, and a slide or register for gauging the flow of air, the whole arranged as doseribed, and oper. ating in the mamer and for tho purposo set forth.
2. In combination with tho central steaming cliamber A, arranged as aboro deseribed, the inclosed end-receptacles B B, operating in tho manner and for the purpose herein set forth.
74,648.-A. J. White, Ballston Spa, N. Y.Oil Burning Apparatus.-February 18, 1868.-Tho stop-eoek is so arranged, that when the reservoir is in its lower position, it is in commmneation with the supply pipe, and when the reservoir is raised the oil Hows out into the lamp receptaelo.

Claim. -Tho combination of a wiek tubo $a$, and
pipe $b$, with a movable reservoir $e$, attached to a hollow stem cock, the wholo arranged so as to operate substantially as set forth.
(4,649.-Edward P.Wminey, Stamford, Coun. -Carriage Curtain Fastener.-February 18, 1868.

Claim.-A fastener for the aprons and curtains of carriages, composed of tho parts $A$ and $B$, the former provided with the eycs $e e^{\prime}$, and tho latter with the head $d$ and offsot $e$, and both provided with loops $a$, and otherwise constructed and operated substantially as herein specified.

84,650. - A. S. Wimttemone, Willimantic, Conn.-Grain Thresher.-February 18, 1868.-The sheaves are passed over a wire bed, which allows the escape of grain as it is threshod out by tho pivoted flails above.

Claim.-1. The longitudiual wires $a$, forming the bottom of a frame of a threshing machine, when said wires are attached at each end to serews $a^{\prime}$, whereby the tension of the wires may bo regulated, substantially as described.
2. In combination with tho above, the shaft B , bearing arms $e$ and piroted flails $e^{\prime}$, the pullcy C , belt $d$, and drive whecls $D^{1} d^{\prime}$, all constructed, arranged, and operating as sct forth.
3. The threshing machine, constructed as described, and consisting of a frame A, having wire bottom $a$, screws $a^{\prime}$, shaft B, arms $e$, flails $e^{\prime}$, pulley C, drive wheels D $d^{\prime}$, and belt $d$, all arranged and operating as described.
94,651.-Daniel Wiliber, Collins Center, N. Y.-Combined Seed Sower and Field Roller.-February 18, 1868. -The seed slide is reciprocated by a crank upou a shaft, to which is splined a cog wheel engaging a gear upon the roller end.

Claim.-1. The slido C , haring notches or caritics $e^{1} e^{2}$, for the purpose, and substantially as dcscribed.
2. The combination, with the slide $C$, of the shaft D, crank $d^{1}$, pitman $d^{2}$, berel gearing $E \mathrm{~F}$, and field roller A, all arranged and operating in the manner and for the purpose substantially as sct forth.
3. The combiuation of the bevel pinion F, placed loose upon the shaft $D$, the feather $f^{\prime}$, and pin $g$, or its equivalent; all arranged and operating substantially as and for the purpose described.

94,652.-John, Daniel, and Join H. Wilde, Washington, Iowa.-Cornstalk Cutter Preparatory to Plowing-F Fruary 18, 1868. -The rotating cutter cyliuder carries a series of hoes, which cut off the stalks at the surface of the ground.

Claim.-1. The arrangement of the main frame with the cutter cylinder and tongue and the wheel frame, as herein rccited.
2. Combining with the main frame and the wheel frame the treadle frame, as and for the purposes herein set forth.

94,653.-Isaiah M. Willians, Blanchester, Ohio, assignor to himself and Calvin P. Baldwin. -Ditehing Machine.-February 18, 1868. The fore end of the exeavator frame is connected to tho supporting frame by a vertically adjustable clevis, and its central part is supported by a bail perforated at its top for a bolt, which traverses a cross bar on the main frame and receires a winch nut, by whose rotation the depth of ditch is regulated. The excavator has radial, transverse, removable spades, and between the spades are plates of a chain conneeted by links which encirele the spades. The plates form the bottoms of the dirt cavities, and aro separated from the excarator at one part of the revolution to discharge the carth outo a ellute board, from which it may be deposited to tho right or left.

Claim.-1. Tho provision in a ditehing machine of the cndless band H $h$ and drum I, operating substantially as herein described, for emptying the elevating wheel of the excavated carth.
2. Constructing the dirt elevating wheel of a ditehing machine in two sectious $\mathrm{D} \mathrm{D}^{\prime}$, and providing them with radial spades $G$, whoso bases $g$ are doretailed into the rims $\mathrm{EE} \mathrm{E}^{\prime}$ of the whech, and the whole secured together by bolts $e$, substautially as whole secured tog.
3. The screw $\mathrm{N} n$, winch O , nut $o$, stirrups $\mathrm{P} p p$, and yokes $\mathrm{R} \mathrm{N}^{\prime}$, arranged and operating as and for the purpose specificd.
4. In combination with the elerating whecl $\mathrm{D} \mathrm{D}^{\prime}$, constructed as described, the fixed and parallel cutters $\mathrm{C} \mathrm{C}^{\prime}$, as and for tho purposo specified.
5. In combination with the clevating whecl $\mathrm{D}^{\prime}$, cndless band $\mathrm{H} h$, and drum I, tho shovel S , for the object set forth.
6. In combination with the olcrating wheel $\mathrm{D} \mathrm{D}^{\prime}$, endless band $\mathrm{H} h$, and drum I, the slotted standard $J^{\prime} J^{\prime}$, groove $j$, box $i$, and wodge $K$, arranged and operating substantially as and for the object cxplained.
7. In combination with the main framo $A$ and vibratory platform $B$, the perforated clevis $Y$, pin $e$, and plato $A^{\prime}$, for tho object stated.

74,654.-F. Wolf, Philadelphia, Pa.-Apparatus for Vignetting Photographie Negatives.-Fobruary 18, 1868; antedated February 5, 1868.-The edge of the apcrturo is formed of mica. The frame is adjustable in distance from the camera.

Claim.-Tho screen C, prorided with a suitable hole, the edge of which is made of a suitable transparent or semi-transparent material, in combination with supporting arms D, and with n photographic eamora A, substantially as and for the purposo set forth.

94,655.-H. B. Worth, Chicago, Ill., assignor to himsclf, William M. Chapin, and A. L. Creamer. - Ventilator:-February 18, 1868.-The issuing current of air and smoke is deflected outward by the cone, and impiuges upon the obliquely-set plates of the fan cap, eausing it to revolve.

Claim.-1. The combination of the inrerted cone $J$ with the shaft $B$ and revolving fan cap $G$, sulbstantially as hercin shown and describod, and for the purpose set forth.
2. In combination with the above, the propolling faus I, mounted on rods $H$, attached to the rcrolving fan cap $G$ and lub $g^{2}$ on shaft $B$, substantially as and for the purpose set forth.
g4,656.-Jearum Atkins, Mokena, Ill.—Safety Valve.-February 18, 1868.-The lever has bearing upon an angular piu across the head of the ralve stem. The lever is vertically slotted at the fulcrum, and has an upward extension therefrom, whose upper cud has au angular cross bar, having a knife cdge, bearing in a link, whose upper end has a similar bearing. The spring stem has a mortise embracing the curved end of the lever, and an anti-friction roller traversing its upper edge. It is held in position by a spring catch, which e eters one of a series of notehes beneath the lever. The lower end of the spring cylinder has adjustable connection to the rocking bar.

Claim.-1. The construction of the safety-valve lever C , or its equivaleut, with its outer portion curved, and its combination with the mortised spindle $B$, roller $f$, and spring catch $h$, substantially as specified:
2. In combination with a spriug balance $D$, the rocking bar $k$, serew $i$, and nut $m$, as deseribed and set forth.
3. The arrangement of the lever C , bent to form an angle with the link S , standard P , and pius $n, t$, aud u, substantially as dcscribed.
4. The combination of the rolling fulcrum $f$ with the safety-valve lerer C, substantially as shown and deseribcd.

7 4,6.5\%-Joserii II Berrett, New York, N. Y. -Hand Stamp.-February 18, 1868.-The ordinary spring hand stamp has cutters applied, so that the revenue stamp shall have the letters impressed thercon and be simultaneously canceled by cutting.
Claim.-A stamp and canceling device, construeted as deseribed, consisting of the rertical arbor F, bearing the cutters G, working through the tubular arbor $B$ and annular stamp C, whereby the knob $H$ and its eollar upon the arbor $F$ operate the arbor $\mathcal{B}$ and stamp C, as hercin shown and deseribed.
g4,658.-W. J. and Menry L. Biddle, New Madison, Ohio.-Animal Trap.-February 18, 1868.
-The trap has two tilting platforms, either of which is tripped br the rat in drawing upon the bait.

Claim.-The combination of the tilting platform D with the piroted bar $g$, arrauged for holding the bait and latch $e$, fastened to the same, substantially as described, and for the purpose set fortll.

84,659.-Edwn Brockway, Haverstraw, N. Y.-Boiler Feeder.-February 18, 1868.-The water ressels are attached to a tubular rock shaft, and are alternately put in communication with the water tank and the boiler, the filled ressel reting by gravity to raise the empty one and to change the valres.

Claim. -1 . The arrangement of the connecting derices $a, b$, and E , as shown and described.
2. The guard K, as shown and described, on pipe H, to keep scum from entering steam pipe.

74, 660.-.J. H. Brown, Hudson, Wis.-Bed Bot-tom.-February 18, 1868.-The removable pins span across the spaco between the notched bars and sustain the slats through the medium of the rubber loops.

Claim.-The construction of boxes B, of notched bars a $a$, and a removablo cover $b$, in combination with separatcly romovable pins $c$, elastic susponsion loops $g$, and slats $C$, all arrangod substantially as deseribed.
g4,661. - Wilifam Brown, West Cambridge, Mass.--Curtain Fixture.-February 18, 1868; antedated February 6, 1868. -The slade passes through the longitudinal slot in the fixed shell and is coiled around the longitudinally biseeted roller. A spiral spring bears against one of the roller journals, to hold the roller in position.

Claim.-1. The split roller $a$, with or withont a tongue and groore, for seeuring the upper end of the shade, substantially as deseribed, in combination with the ease or shell I), as and for the purpose speeified.
2. The combination of the split roller a, the nuts or disks $c c^{\prime}$, and the brachets B 13' , arrauged and operating substantially as described.
3. The combination of the split roller $a$, the shell D, and the cornice E, constructed, arranged, and operating substantially as described.

74,663.-Harrison T. Buff, Franklin, Ind.Rotary Steam Engine.-Felwuary 18, 1868.-The pistons slide radially in a hnb, and aro thrust outward by spring arms, attached to the main shatt. When the pistons pass the reversing valve block the steam passes throngh them and makes a comuter pressure on their inner sides, to orereme outside pressure of steam which opposes their ontward morement.

Claim.-1. The self-adjusting valves V and $\mathrm{V}^{\prime}$, with their grooves, arranged substantially as herein' set forth.
2. The arrangements of the rotary head, valyes, and springs, as herein set forth.
3. The arrangement of the steam and escape pipes, as herein described.

94,663.-Henry Bullard, Middletorn, Coun -Sirup Pitcher-Febrnary 18, 1868.-Tho eut-off slide has vertieal movement, and is operated by a spring lever. It is intended to prevent drip.

Claint. - The arrangement of the slide or cnt-off $a$ upon the spout B , independent of the cover, and in combination with a lover and spring, as a means of operating the said slide, substantially as herein set forth.

94,664.-Cornelius K. Burkholder, York Springs, Pa.-Fly Net.-Febrnary 18, 1868.-The ribs on cach sile of the middle rib meet in front of the forchead. The thongs are passed vertically from rib to rib, and horizontally along the rib to the next lole; passing outward through the first and iuward through the last hole.

Claim.-The ribs, constrneted and perforated as shown, and laced in the manner and for the purpose set forth.
g4,665.-C. S. Burton, Senoen County, Ohio.-Staging.-February 18, 1868.-Tho staging rises between guide posts, the elerating power being a winch, ropes, and pulleys.

Clam.-The combination of the grooved stand. ards A A, platform K, and bencli M, windlass nnd eords $\mathrm{H}_{\mathrm{H}}$, all coustructed and operating as specified.

74,666.-Sterney Collins, Prestol, Wis.Turning Down aud Burying Stalks, Weeds, di.February 18, 1868. Tho trash is eaught by the arms and raked in so as to be corered by tho furrow slice.

Claimr. -The arus $\mathrm{C}^{\prime} \mathrm{C}^{\prime} \mathrm{C}^{\prime \prime}$ and E aud brace D , attached to the plow beam, sulfstantially, as and for the purpose set forth.

91,667.-Bentamin I). Compton, Dowagiae, Mich.-Water Wheel. - February 18, 1868.- The wheel is immersed in horizontal position in a stream of water. The buckets are raised by tho force of the wator upon one side of the wheel and depressed on the other side.
Claim.-1. The disk A haring a series of triangular or $V$-shaped hinged buekets $D$, and secured to $\Omega$ disk $C$ around $\Omega$ vertical sliaft $B$ by the braces $d$ d, in the manner substantially as and for the purposes specified.
2. In combination with the hinged buekets D and disk $A$, beveled as deseribed, the lateli $f$, constructed as specificd, and used as and for the purposes sot forth.

94,668.-James Conaer, Iichmond, Ind.Wood Bending Machine.-February 18, 1868.-The former is grooved on its convex side, and has a stirrup ombracing the end of tho plow handlo; at the other end of the former is a projection which is engaged by a slip link npon tho handle, when the handle and former are together remored from the maehino.

Claim.-1. Tho former D when provided with stirrup S , and operating substantially as set forth, and for the purpose described.
2. The pivoted head block $G$, arranced and operating substantially as set forth and for the purpose speeified.
g4,669.- HaNNAH CONWAY, Dayton, Ohio.Mospital Bed.-February 18, 1868.- I'ho canvas is stretched on a frame at the ordinary height of a bed, and the mattress is npon a vertically adjustable fiame. The latter framo has rollers uuder which the adjusting straps are passed. The straps are attrelood to the eross bar of the foot posts, and passing beneatli the bed firame aro coiled on a roller jourmated transrersely in the hoad posts. The roller is turned by a wineh and held by a ratehet wheel and pawl. The eanvas has a hole through which a monnd inay bo dressed or other duties attended to when the mattress is lowered. The pillow may be raised on straps emanating from near the middle of the canvas, and coiled around a roller between the lead posts.

Claim.-The combination of the fixed eanvas frame 13 and bed It, operated by the axle $G$ nuderneath frame B , and the morable pillow C with the axle $G^{\prime}$, and the permanent frame under the bed $E$, all as herein set forth.
 C. C. IveBors, Brooklyn, N. Y.-Lamp.-February 18, 1868.-The wiek tubo passes through a ehamber eommunieating through largo apertures with the open air for the purpose of kecping the tube eool.

Claim.-The cooling chamber a, air supply chamber $b$, formed by tho perforated flange $e$, ring $g$, transparent eylinder $h$, and locking eap $i$, all arranged, eoustrueted, and combinod as described.

71,671.-Otis Dein, Riehmond, Va., assignor to Robert W. Young, same plaee.-Inlistand.February 18, 1868. -Tho raising of the lid clevates the dipper to the opening.

Claim.-The rigid arm $\mathrm{D}^{\prime}$ attached to tho dipper C , which is conneeted to the lid by a rod D , so as to operato in the manner and for the purpose set forth.

4, 69\%-Thomas B. DeForest and Thomas S. Gilbent, Birmingham, Conn.-Spring for Hooped Skirts.-February 18, 1868.-One or more wires are inelosed in a broad strip of tapo which is sised and pressed so as give the appearauec ot a broad spring. The springs are attached to the rertical tapes by
rivets traversing the said tapes and the web beside the spring.

Claim.-A skirt hoop formed by inclosing one or more wires within a covering, which not only envelops and protects the wire, but forms an edige A or comncetion $B$, sulsstantially as and for the purpose specified.
g4,673.-Daniel L. Dickson, Durham, Ill.Harrow. - February 18, 1868. -The teeth of the open, rotating cylinder are cleared by a rotating roller which may have teeth for that purpose.

Claim. -The combination of the frame A with cylinder $J$, with teeth $a$ and clearer $K$ in front of said cylinder, the whole arranged and operating as specitiod.
g4,674.-Johi H. Doughty, New York, N. Y. -Blacking Brush.-February 18, 1868.-The daubrr is attached to the haudle frame by a central bolt, and may be turned to briug a fiesh portion into weur. The metallic scraper is attached by the same bolt. The handle frume is cut away so as to form a hold over the main brush.
Claim.-1. The donble hold fasts or handles $a b$, provided with a platiorme $e$, which is held horizontally away firom the handle $b$ by a prolongation of the same, arranged substantially as described.
2. The arrangement of the dauber $f$ and seraper $h$ on the platforin $e$, by means of the bolt $i$ and nut $j$, substantially as and for the purpose described.
-94,675. - Wrlliam J. Emens, Louisville, Ky.Spring Bed Bottom.-February 18, 1868.-The ends of the slats are supported on forked hooks which engage elastic loops on a lower frame.

Claim. -The combination of the forked hook E and the slat $F$, the grm ring 1 , the movable cross piece $A$, aud the parallel strips $B$ and $C$, when constructed, arranged, and operating in the mamer set forth.

94,676.-GEORGE Esterly, Whitewater, Wis. -Harvester.-February 18, 1868. -The long fingers pass over the ordinary tingers, and are incliued down so as to raise lodged grain. The dropping firme is hinged to the side of the platform so as to discharge the grain out of the course of the machine in the next round, and is tripped by the operator.

Claim. -1. The combination of long fingers or teeth $d$, which are not jointed, with a cutting apparatns, consisting of a rolling finger beam, short lingers, and a sickle, and which is adjustabl bodily, so as to raise and lower the leight of cut, and also adjustable in such a manner that the front ends of both sets of fingers can have their angle of presentation to the graul changed and fixed to work at a giveu height, all substantially as described.
2. The application to a hinged platform E , of a dropper, F , which latter is supportod at its rear end, so that it can be tilted backward at pleasure, sub. stautially as deseribed.
3. Connecting the beam $J$ to the main dranght frame A by means of flexible or hinged arms in, or their eqnivalent, in combination with the chaught chain $r$ and forward truck $K$, substantially as and for the purposes deseribed.
4. Tie combination of a hinged, slatted dropper $F$, with a platform E , whether the latter be hinged or fixed rigitly to the finger bar, such dropper being arranged substantially as described.
5. The combiuation of the derices $f f^{\prime}$, or their equivalents, for adjusting the grain end of the finger beam in the path of a rertical circle, with the device $d^{2}$, or its equivalent, for adjusting in like mauner the inner or heel end of the tiager beam, substantially as described.
6. The arrangement of the belt tightener upon the hinged bean $J$, said tightener and said beam operatiug together,' substantially as deseribed.

74,6\%\%-Perry Finley, Memphis, Tenn.Shaft and Pole C'oupling.-F'ebrnary 18, 1868.-The coupliug bolt passes through a rectangular thimble, whinch is retained in a recess of the thill iron by i sliding bolt, which is held in place by a strap passing. through a slot in the end of the bolt and connected to the clip.

Claim.-The eoupling E with the groove L and staples G G G, the square thimble F , the slicle D with the mortise H , the strap I, and buckle M, the fixed bolt, arriuged substantially for the purposes herein set forth.
as 4,698 . Tohn Frank, Webster City, Iowa.-Cultivator.-February 18, 1868.-The standards are vertically adjustable in blocks which have horizontal oscillating adjustment on the beams.
Claim.-1. The adjustable blocks C, constructed and operating substantially as described.
2. The cultivator as it stands, with its rarious parts and devices combined, arranged, and operating substuntially as and for the purposes herein specified.

74,679.-Rychard Gannes and Melchi Scott, Fairfield, Iowa.-Plow Mold Board.-February 18, 1868.-The glass is secured upon the surface of the mold board by the marginal flange and the headed studs.

Claim.-1. The metallic plow mold board A, provided with $V$-shaped groove along the edges, and studs or buttons B B on its concare surface, in combination with glass cast over said surface in its moltin state, substantially as herein set forth and specified.
2. The protuberances or knobs C C, arranged as described, for the purpose of seeuring the mold board to the plow, substantially as set forth, in combiuation with the above deseribed mold bourd.

194,680.-G. W. C. Gamble, Millersbarg, Iowa. - Medical Compound.-February 18, 1868. - For treatment of cancer. Ashes of red oak bark, 20 lbs .; ashes of bitter sweet root, 5 lbs.; green poke root, mashed, 5 lbs. The above is leached and the ley boiled down to a salve.

Claim.-A cure for cancer, composed of the ingredients set forth, when prepared in the manner substantially as described.
\%4.681.-Almeron Graves, Ioscoe, Ml.-Apparatus for Handling Animals in Slaughtering.February 18, 1868. -The rotating frame is supported on a stieidard braced to the base firane by guy rods. The standard supports an adjustable, compoand lever by which the animal may be raised.

Claim.-The application of the lever C D E, the upright $B$, the rerolving apparatns represented by H H H H II H, supportis I I I I I I, and the rerolving eaps $\mathrm{E} E$, in apparatus for handling animals in slaughteriug.
7月, 68. -Z. G. Greenleaf, Bath, Me.-Bait and Vegetable Cutter.-February 18, 18's. - The truncate, conical, rotating cutter has spiral series of knives which overlap the knives projecting inmardly fiom the concare.

Claim. - The combination of the cutting blades provided with serew shanks, with the hollow eylindrical case $B$, and central shaft $D$, arranged as and for the purposes herein deseribed.
\%4,688.-GEORGE W.S. HALL, Baltimore, Md.Exercising Apparatus.-February 18, 1868. -The hand bar is supported on an adjustable cord passiug over a spriug. The frame has two spriug boards near the 11oor:

Claim. - The combined arrangement of the horizontal bar E , adj.jnstable suspension rope F , and spring H, as aud for the purposes set forth.

74,984.-J. P. Mall, Wallingford, Conn.-Razor Strop.-February 18,1868.-The case has a strap and a drawer which may contain a razor.

Claim. - The arrangement of the drawer B , within the case $A$, when the said case $A$ is constrmeted for the reeeption of the strop $\mathbb{C}$, in a case within the principal case A, substantially as herein set forth, as a new articlo of mauifacture.

74, $985 .-\mathrm{B} . \mathrm{G} . \mathrm{H} . \mathrm{Hatilaway}$, Rock Stream, N. Y.-Harvester.-February 18, 1868.-Improvement on lis patent of May 28, 1867. The clutch upon the turning axle, by which motion is communicated to the cutter mochanism, is operated by a roke, whose stem travorses the spherical case, and is attached to
a lerer pivoted to the hub of the case. A bell crank lever, piroted to the said lerer, has a catch arm en gasing the case when the cutter mechanism is in operation. The shoe and tongue are attached to the tubular extension of the case. The shoe rests on a wheel and is hinged to wrists npon the braces. The end of the finger bar is rounded, ind has a noteh to receire the point extending from a spring fistened to the side of the shoe. This point holds the bire in place; bint may be detached by a lerer and cord, When the entter bar may be swung around, in a horizontal plane, against the wheel.

Claim.-1. The arrangement of the sliding clutel Gr , joke $\mathrm{G}^{1}$, leser $\mathrm{G}^{2}$, bell crank $\mathrm{G}^{3}$, stem $\mathrm{G}^{4}$, spring $G^{\frac{1}{0}}$, and spherical case D, substantially as descriled.
2. The combination of a shoe so attached as to oscillate lateralls, and a finger bar so hinged thereto that the shoe remaining stationary, the finger bar may be folded baek in a horizontil plane, to stand parallel with the line of draught, sulustantially as described.
3. The combination of the sloe $O$, hineed fineer bar $N$, spring $P^{\prime}$, or its equivalent, and lerer $Q$, substantially as set forth.
g4,686.-Jacon Heatherincton, Bellair, Ohio. -Extension Coal Chute.-February 18, 1868.-The ehme is connected to the plank and is adjnstable outward and downward therewith. The outer end of the chute is supported by block taekle.

Claim.- The combination of the extension plank or rod $\Pi$, chate $G$, rollers $h h r r$, and extension beam $J$, the whole constructed and operating substantially as and for the purpose specified.

74,687.-Jomy Hiddex, Lamrence, Kan.-Tind Wheel.-February 18, 1868 . -The wheel is horizontal and the wing shafts have chain whechs, by which, in connection with the chain, the wings are turned to cateh the wiud when on one side of the shaft, and to stand "edge on" at the other side.

Claim. - The combination of the adjustable deflector I with the vane F , drum E , wings and spindles I and $a$, wheels $\mathrm{G} \mathrm{G}^{\prime}$, and chains $c$ ind $d$, substantially as described.

74,688.-GEORGE W. Hildretm, Lockport, N. I.-School Desk.-February 18, 1868.-The desk corer has a central, uptrardtropening joint which enables it to be compactly folded to gain access to the receptacle, or to furnish rests of different grades.

Claim.-'The joint $o$, in combination with the ordimary joint $s$, for the purpose of raising the central portion of the desk lid, to form a book rack of the desk top or lid, as herein specificd and shown.

学, 6sb.-EDGAR Mitt, Katonah. N. Y.-Car-riage,-February 18, 1868.-The clamp is secured to the spring bar and has a socket to receive the end of the bodr loop. A conical ferrule fits over the ends of the jointed sides of the clunp and secures them together.

Claim.-1. The clamp C, provided Tith a soclet $a$, in combination with the spring bar $A$ and body loop B , substantially as and for the purpose set forth.
2. The square head $d$, at the end of the body loop, to fit into a corresponding socket in the clamp $\mathbb{C}$, substantially as and for the purpose deseribed.
3. The projections or lips $c$, on the immer surfices of the clamp, to fit into notches $d$ on the spring bar A, substantially as and for the purpose set forth.
$74,640 .-L u t i L E R$ Howe, Alamo, Mich.-Fence for Collecting Rain Water for Stoch:-February 18, 1868. - The cap has inwardly inclined boards and a central metallie gratter which kecps the fonce dry and serves to collect water.
Claim.-The rain collecting boards A and rain gutters B in connection and combination with a farm fence, for collecting and conveying rain water to artificial or natural reservoirs, substantially as and for the parpose herein specifiol.
g4, $691 .-J O H N$ Hugries, Newark, N. J.-Marness Pad,-February 18, 1868. - The iron frame has a rabbet groove to receive a welt of leather to which the bottom and corer are attached. The frame is slotted for trarerse of the terret shanks. The braces
enter carities of the check hook and prevent the loosening of the hook after it is serewed in.

Claim.-1. In combination with the iron frame A the socket for the nut $H$, the strips $B B$, and flexible piece $F$, constructed as herein described, and for the purpose specified.
2. The braces $K$, or their equiralents, for the purpose specified.
3. The linding N. stitched to the bottom C, before it is put to the frame $\Delta$, and the form $P$ in the binding, and the mode of seeming the bottom and form to the theme.
4. The frame 1 , with the slots E E and groores for the strips $B \mathrm{~B}$, and lioles $V$ V, in the mamer and for the purposes specified.
74.692.-E. D. Ives, New Haren, Conn.-Pic ture $k$ nob. - Fehrusry 18, 1868. - A bar of heated glass is wound on the heated rotating serew socket, and then molded into shape by pressire.

Claim.-1. Forming ind attaching knobs of glass or similar material to serews or hails, substantially in the manner herein set forth.
2. The eombination of the threaded nail $B$ and socket $C$, when the said socket has formed thereon a knob or head of glass or similar material, mad When the suid glass or similar material is formed and attached thereon, in the manner and by the moeess herein set forth.

74, (98)3.--JAmes MI. Jat, Canton, Ohio.-Mrachine for C'utting Gluziers' Points.-Felruarr 18, 1868.The metallic sheet is fed to the rotary euttorss and the points cut oft in two or more rows for each rotation of the main shaft.

Claim.-1. The aringement and combination of the rotilly cutters $\mathrm{MI}^{-} \mathrm{N}^{-}$, II $\mathrm{N}^{-}$, on the shufts I) and II, when operating in connection with each other through the gear wheels $\mathrm{F}^{\prime} \mathrm{G}$, for the purpose of eutting slaziers ${ }^{9}$ points, or any brads or natils which may be ent firom slicet metal, substantially in the manner herein speeified.
2. The arrangement and combination of the cam $I$. feed lever U, with pawl V, latehet wheel T , cateh $c$, and feed rollers $P^{\prime}($, when used in combination with the rotary cutters MIN, MI N, substantially in the manner and for the purpose herein specitiod.
\% 9 , 654-GEORGE L. TENCKs, Florence, Mass., assignor to the Flordence Sebrig Machine Co.Seving Mlachine.-February 18, 1868.

Clam.-1. 'The manner of combining and arranging botlı the interlacing hook and shuttle, constructed as deseribed, upon the concave side of the elured needle, so that the loop of the needle thread will bo presented to the hook ennd shattle from the enred side of the neadle, and carried thence directly to the rear of the ueedle and around the sluttle, substantially as shown and described.
2. So combining and arranging the said hook and slinttle, and the ere-pointed noedle, as described, with the independent meclianism set forth for taking up the loop of the neadle thread after it has beern carried tround the shuttle, as deseribed, that the said loop may be taken 11p and the stiteh completed at one and the same crele of operation of the machine, substantially as deseribed.
3. The take-np mechanism, substantially as described, in combination with the sewinn meehanism, constructed and operating substantially as set forth.
4. The circular shuttle, constructed substantinlly as described, with a beveled edge, and in combination therewith a delivery notel and a spring presser, arranged substantially is described, for the purpose of producing the requisite tension of the sluttle thread is it is delivered, substantially as described.
5. Mounting or holding the shuttle upon a stationary pedestal or its equivalent, as described, and controlling the operation of the shuttle by means of a tilting bar or finger, or its equivalent, arranged to operate therewith, substantially is and for the purpose specified.
6. The interlacing hook, in combination with the beveled edged shattle, constructed and operating as described, to catch and carry the loop of needle thread around said shuttle, substantially in the manner described.
7. So combining the recess $c$, in which the needlo
vibrates, and the bridge ring, and the interlacing hook, and shuttle, constructod and arranged substantially as deseribed, that the lower thread of the loop will be canght by the hook and carried in a direet line beneath the shnttle, while the upper threat of said loop is carried against the bercled shuttle edge, and over the shnttle, substantially in the manner and for the purpose speeified.
8. The construction and mode of hanging and adjusting the needle arm and the presser arm by means of the serew stud and screw slcere, in combination, substantially as lescribed.
9. The mode of seenring the necdle $n$, at the cad of the needle arm, by means of the screvr bolt and washer, constructed substantially as deseribed.

74, ©95.-George A. Jones, New York, N. Y.Train for Lamps.-February 18, 1868.-Improvement on the patent of F. B. de Karavenan, February 10, 1863.

Claim.-1. In a train or mechanism designed for use in lamps, the application and use of the open or lantern pinion and its arbor, constrmeted substantially as and for the purposes set forth.
2. In such mechanism the combination of a single thread, flat top, solid cut screw, with a square-toothed wheel, arranged and operating substantially as deseribed.
3. The air tube, construeted from a single pieee of metal, substantially as and for the purposes set forth.
4. In combination with the endless serew $d$, attaching its lower snpport or bridge $c^{\prime}$ to the side plate of the meehanism, snbstantially as and for the purpose set forth.
5. The construction of the jewcl plates, haring a coneave conical jewel seat, and confined to the supporting plates by a single screw, substantially as and for the purposes set forth.
6. A mechanical movement for lamps, its sercral parts eonstrmeted and arranged and operating substantially as clescribed.

前4, 696. -Joer F. Keeler, Pittsburg, Pa.-Platform-Scale.-February 18, 1868.-The platform rests upon diagonal, secondary lerers whose fiee ends are hong to a series of longitndinal levers haviug usual connection to the beam.

Claim.-Constructing long platform seales with a scries of diagonal main or platform levers, when such levers are connceted with a series of fon or more secondary levers, which secondary levers rest nearly or quitc on the same horizontal plane with each other. substantially in the mamer and for the purposes described.

多4,69\%-WILLIAM Kenyon, Jr.; Steubenville, Ohio, assignor to himself and HENRY K. Kenyon.Pipe Iongs.-February 18, 1868.-The jaw is piroted so eccentrieally in relation to the face of the ratchet cam that it is applicable to pipes of widely rarying size.

Claim.-The combination of the bifurcated movable jaw $d$, with the eccentrie cam head $a$, at the end of the handle of a pipe wrench, constructed and arranged substantially as hereinbefore deseribed.
\% ${ }^{6}$ 698.-TOHN D. KinkPatrick, Ulbana, Ohio, assignor to limself and B. A. Rose, same place.Filtcring Burning Fluid.-February 18, 1868.
Claim.-1. Filtcring burning tuids consecutively through separate layers of lime and wood ashos, elm bark, eharcoal, and saud, cach ingrodient being plaecd on flannel, in the bottom of the filtering resssels, substantially as and for the purposes set forth.
2. The filtering apparatus, consisting of the bottom $A$, frame $B$, vessels a $b$ c $d$, with perforated bottoms $a^{\prime} b^{\prime} c^{\prime} d^{\prime}$, and false bottom F , ancl reservoir G , provided with stop-cock $E$, substantially as and for the purposes described.

7/4, G99.-GottLIEB KOENIG and George Otto, Plymoath, Mich.-Potato Digger.-February 1.8, 18(i8.-The potatoes are raised by the rotating double rake and thrown upon the grate.

Claim.-The combination of the traction wheels A A, the gear whecls B B, the pinions C C, the shaft $\mathrm{D}_{\text {; }}$ the crank axle E , the rerolving tectl F F F F F , the rack $G$, the arms $H \mathrm{H}$, the roller $I$, the seat $J$,
the lever K , the eateh L , the spring M , with a snitable fiame, when arrauged substantially as and for the purpose described.
\%4, \%00.-Tsanc Lamplught, Peoria, Ill--Punching Apparatus.-February 18, 1868.-The punch is mored by systems of levers. One of the systems ombraces the other, and enables the application of greater porrer on the punch.

Claim.-The improved punching apparatus, consisting of the several devices, construeterl, combined, and arranged in the manner and for the purposes herein set forth.
(4, 701.-W. W. Tavbach, Philadelphia, Pa., assignor to himself and George H. MLLLEN. Alexandria, Va.-Machine for Grinding Cutters of Mowing Machines, de.-Vebruary 18, 1868.-The cutter bar is clamped to the base plate, being guided to position by the angular projection on the adjustable bed picee, and the grindstone operates on the teeth as they are serially bronght into position. The grindstone fiame has oscillation in a yertical plane, and has longitudinal morement.

Claim.-1. The adjustable bed piece $B$, constructed as described, and applicd to a grinding machine as and for the purpose specified.
2. The bed piece B, provided with slot $m$ and screw $m^{\prime}$, in combination with the clamp $r$ and screws $r^{\prime} r^{\prime}$, as and for the purpose set forth.
3. The post $d$, provided with the slot $k^{\prime}$ and arm $d^{2}$, in combination with the set serews $k$ and $c$, and the rotating shaft $b$, snbstantially as described.
4. The grindstone $i$, in combination with the rotating and sliding shaft $b$, as and for the pmopose deseribed.
5. The adjustable bed piece B, in eombination with the clamp $\gamma$, post $d$, grindstone $i$, and rotating and sliding shaft $b$, as and for the purpose specified.
14, g02.-TAMES B. Lefferson, New Tork, N. Y.-Bung.-Febrnary 18, 1868.-The metallic bung is divided longitudinally, and the turning of one part on the other aets upon the knires to force them into the wood.

Claim.-The shaft B, prorided with cog tecth $e$ e, in combination with the knires D D. provided with reeesses, as described, said knires being arranged to operate between the bung A and ease $a^{\prime}$, as and for the purposes specified.
\%4,903.-C. LENT, W ashington, D. C.-Hay and Cotton Press.-Tebruary 18, 1868.-A belt engrages the groored periphery of the nut which actuates the rertically sliding serew shait attached to the follower.

Clam.-The arrangement of the press box, as construeted with the sha1t $G$, provided mith follow block H and cross head J, nut E, cross tio D, plate $a$, and guide pieces I I, the several parts being connected and used substantially as and for the purpose sct forth.
\% 4.804. -GILBERT M. LETETTE, Indianapolis, Ind.-Combined Clock and Advertiser.-Febrmary 18, 1808.- A series of advertising cards ale eonnected together to form an endless belt which has.intermittent movement behind a transparent pane in the ease, by meehanism connected to that of the clock.

Claim.-1. The disk M and pins N, on the shaft of the escapement whecl of the time-kceping movement, for controlling and regulating the action of the advertising meehanism, substantially as and for the purpose set forth.
2. The parl O, on any suitable part of the adrertising mechanism, in combination with the disk M and pins N , as and for the purpose set forth.
3. 'The rods L, or their' equiralents, attached to the adrertising band $B$, as and for the purpose set forth.
4. The eatch K and flexible arm I, attached to the reciprocating rod F , arranged and operating as and for the purpose set forth.
5. The rods L, in combination rith spring catch $P$ and cateh $K$, arranged and operating substantially as set forth.

74,705.-Tames Macferran, Philadelphia. Pa., assignor to himself and Samuel Macferrant, same
place.-Blacking Case and Closet.-February 18 1868.

Claim.-1. The sectional folding lid C, provided Trith a foot rest, and combined with the stationary part 13 of the cover of the box, substantially in the manmer above described, and for the purpose speeified.
2. The slide D, when combined with the stationary and folding parts B and C of the cover of the box, substantially as and for the purpose set forth.
3. The combination of the hinged part A, containing the boot blaeking apparatus, with the lower part $A^{\prime}$. composing the water closet, funnished with the perforated division F and door J, substantially as deseribed and for the purpose set forth.

74,706.-G. B. Masser, New Tork, N. Y.-Lowwater Detector for Stean Generatorx.-Februry 18 , 1868. - The Trater runs out of the movable ressel when the water in the steam senerator has fellen below the proper level, and the said ressel is then raised by the weighted lever and the whistle ralve opened.

Claim.-1. The morable ressel (r, comnected with a steam boiler, or other ressel in whieh steam is generaterl, and with the oscillating lever or sway bar E, substantially as and for the purposes shown and described.
2. The lever or stray bar E , supported frou a yariable fulernm or center, and comected with and operating upon the ressel $G$, substantially as set forth, for the purposes specified.

78,70\%-Dirm S. McNamali, Troy, N. Y.-Shoe-February 18, 1868.-Elastie strips are inserted back of the lace holes, and in the center of the ramp.

Claim.-A shoe, provided with the elastie strips $d d$ and $c$, as herein specitied and for the purpose set forth.
g4,90s.-J. W. Milror, J. Valghy, and J. Turder, Cralseston, Ind.-Sode Fountain.-Fiebruary 18, 1868. -The pump, eylinder is survomaded by an ammular ice clamber, and that. by a chareoal chamber.

Claim.-The construction and arrangenent of the fountain A, lid G, crlinder C, in combination wilh the pump erlinder D , as arrancel with the valve box $c$ and discliarge tule C and ralres $d d$, sul)stantially in the manner and for the purpose as herein described and shown.

74, g0v.-N. C. Mirchert, Caledonia, Ohio.Bee Hive. - Fobruary 18, 18.6. - The frames are hinged to the back of the hive, and may be raised from the hinges to remore the homer, or turned aside to discover moths. Boside the bee entrance are two entrances to the poth trap beneath, whieh is separated fiom the hive by the gauze bottom of the latter. and commonicates through tubes with a chamber in front, which receives light theough a grauze grating.

Claim. - Hinging the fiames K K to the moth box, and orer the screen I, in suel a manner that the oftal will pass into said box, and the firames may be drawn out of the hire, substantially as and for the purpose set forth.
2. The moth box D, construeted in the mamer described, with three openings, one for bees, and two for millers, when used with the morable comb firames and the hive $\Lambda$, as and for the purpose set forth.
g4, glo.-Josertius Moore. Bushnell, Ill.-Corn Plenter.-February 18, 1868.-Whe seed shatt is op)crated by a hand wincll or by chain connection to the axle. The spout has a vilve plate which cateles the seed and holeds it near the month of the spont ready to be immodiately dropped into the ground when the ralre is retracted by a piu on the sced shaft.

Claim.-1. The arrangement of the shaft $D$ with the seed hoppers $F F$, covers $G G$, ralse $N$, discharge spout $O$. and rumers $P$, constructed and onerating in the manner and for the pripose set forth.
2. The arrangoment of the plate WV , shaft M, wheel L, collar. I, and bevel wheel $\bar{K}$ witha the shaft $D$, as and for the purpose set forth.

74,711.-Whliam H. Moore, Blooming Grore Iud.-Corn Planter.-February 18, 1868.-The seed
is earried from the hoppers ly an endless perforated belt, driven by a pulley upon is shat thaving a pinion which may be shiftel to engage a spur wheel on one of the ground wheel hubs. The seed frame is strapjointed to the axle, and may be raised by a lerer conneeted to it by a chain and held by a ratehet

Claim.-1. The arrangement, ill a corn planter, of the seed-dropping derice, consisting of the elemeats $0,0, P, q q, 1, r$, and S , substantially is and for the purpose set forth
2. The piroted frame II, I I' $\mathrm{I}^{\prime \prime} \mathrm{I}^{\prime \prime \prime}$, $\mathrm{K}^{2} \mathrm{~K}^{\prime} \mathrm{K}^{\prime \prime} \mathrm{K}^{\prime \prime \prime}$ $k$, arranged to be raised from the ground hy memas of chain I, lever 1 , and ratchet 3 , substantially as stated.

 N. I.-Brecch-Loading Fire-Arm.-Febmary 18: 1868. -The breed black enters a recers when the gun is charged, and the pin upon its firmusheck impinges against the back plate of the metallie catiridge. The hammer is wholity inclosed, and its apper end mores in a recess of the breech bloek. The til ing hock has a suring arm at its rear end. Whichints a block at its rear enoraged by the hammer trben cocking, to retract the firing pin fiom the cartridece. and allow the easy throwing out of the block. The brecell block turns on a side hinge.

Claim.-1. The angular point 0 in the interion' of the brecel block. an combination with the hammer $d$, substantially as described.
2. The springe block q, in eombination with the hammer $d$, substantially as deseribed.
3. The hollow curves $m$, berore and belind the angular point 0 , sulsitantialle as deveribect.
4. The hooked ar'm $g$, forming part of the sere, and operated by it, said arm being atranged to work in a recess formed in the receiver $b$. and by means of its hook to engage the loreceli biock on its rear wite, substantially as deseribed.
5. Locking the breech block before firing be the comb ned action of the hammer and the projecter $U$, and ako locking it after firing by the combinedi aretion of the hammer and the straight side of snith block forward of the hollowed part $m$, substantally as describect.
g 4, g 13.-G. R. Nfbinger, Lewishertr, Pa.. กssignor to himself and Wilfans A. Mindetor, sime place.-Clothes Lime Clamp).-Fehmary 18, 1ens.The eord is pinctwed bet treen the wedge-formed biock and the ineline letween the javs.
Claim. - The bloek B, havinge a horizontal groove in its eenter whereby two flamges are formed, wheh hare cach a rertical slot $x$ on their inner sides, when used in combination with the wedqe-shoped block $(:$, provided with trumions e e which work in said slots, as and for the purposes specified.
g4, 9 15.-Thomas Netherwoon and J. P. Baecock. Westerly, R. I.-Spinning Juck-Februry 18, 1868; mintedated Felnruary 7, 18i8. When the cat: riage rims in, the pin strikes the curved arm and throws the belt on the loose pulley, simultameonsly moving the horizontal rod forward. Where it is lala by the lateh and weight. When the carriage runs out, the descent of the rod operated through the kine bourd releases the latel, and the horizontal rod is carried back by the weipht, thereby moving the belt partially onto the working pulley and assisting the winding of the yann.
Clain.-1. The arrangement of the shaft I with pendant arm $f$ and enred cam E, weight $F$, het $g$, and spring rod $i$, for operating the shipper hoand $i$, in the mamer substantially as specifici.
2. The arrangement of the rods $d^{1} d^{2}$, pin $d$, and knce board $B$, on the ear $\Lambda$, in combination with the latelo $\alpha$ and rod $D$, in the manner and for the purposes set forth.
g4, 215.-Walter B. Nores, Dorchester, Mi. IT. -Cluthes Drici-February 18, 1868. -The ents of the ams are held between the two homizontal wheels. pins in the upper wheel entering holes in the ente of the enms. The whenls may be supported by the bracliet plate, or by a standard messinge through the hole in the lotrer wheel and secured by the set serew.
Claim.-1. The wheel A, furnished with slot $c$ and
openinge, in the manner and for the purpose substantiilly as set forth.
2. The wheel A in combination with wheel $g$, when construeted and arrauged substantially as described.
3. The wheels A and $g$, and arms $f f$, in combination with slide $m$, the whole constricted and operating as deseribeci.
-74, 716.-Oliver Pheny and Clark Periry, Ortonrille, Mich.-Gate.-February 18, 1868.—Ench bar is pivoted to the hinge post and to the npright, and the upper bar is extended belind the post and Weighted, so that on the depression of the spring catell the grate is thrown mp. The latel may be depressed by a corl earied along a bar reaching up and down the road. The gate may be closed by a cord runniny over a pulley to its weighted end.

Claim.- The combination of the gate, as constructed, stationary arms C, D, and E, and cords K I, all operating as set forth.

74,'g17.-Erijah S. Pierce, Hartford, Comn. Apparatus for Conveying screw I'tanks.-February 18, 1868.- The swingiug arm forees baek the spring slide from the mouth of the feeding trough, and receires a blank in its slotted end. It carries the blank to the gripping lever, and the blank is held by the toggle formed by the arm and lever while any operation is performed upon it. On the return morement the blantis is engaged by the spring pawl and is thrown off.
off. Claim.-1. The swinging arm B in combination With the griping lever C , when the same are construeted, operated, and governed in the mamer deseribed.
2. The combination of the slide $I$, the arm B and the spring II, or its equivalent, when used in the manner and for the purpose herein specified.
3. The subject matter of the first claim, in combination with the feeding trough $A$, substantially as described.
4 The combination of the feeding trough A, the slide $I$, and the couveying arm $B$, substantially as deseribed.
5. The combination of the feeding trough A , the eonvering arm $B$, the griping lever $\mathbb{C}$, and the parl E , sulustantially as deseribed.
6. The combination of the feeding trough A the slide I, the arm 13 , the lever C, and the pawl E , substantially as described.
gat.gi8. - Isaac Pierson, Hartford, Comn.Window S'ash Fastener.-February 18, 1868.
Claim.-A window fastener, consisting of one picce of metal, of such a form that one part cnters the upper sash and secures the sashes from being slipped past each other, and the other part turns orer to one side and hooks into the lower sash, substantially as described, to prevent the tirst mentioned part from being withdrawn.
 Thonas Roberits, and Louis Luc, Liverpool, Eng-land.-Grain Weighing Machine.-February 18, 18tis.
claim.-1. The construction and use of tivin seales placed side by side, when operated by derices substantially in the manner and for the purpose hereinbetore described and set forth.
2. The combination of the swirelling inelined spout into which the grain or other material to be weighed talls from the store or hopper, and the stationary double spont which guides the grain or material to be weighed into the scales, substantially as shorsn and described.
3. The alternative mode of accomplishing the same purposes by means of the rocking double-throated feed spout, fitted underneatlo a hopper, substantially in the manner and for the purposes hereinbefore set forth.
4. The inverted T-lerer and its balanced catehes on the end of the roeking shaft, Which directs and controls the momentum of the apparatus oriminated by the loaded scales, in the manner and for the purposes hereinbefore described and sct forth.
5. The construction and use of the rocking shaft and its appendages as the means of distributing the
seales, and for the other purposes hereinbefore deseribed and set forth.
6. The construetion and use of the double-action tumbling hammer, for disengaging each seale alternately after it has. received the full lond, and also the pceuliar locking apparatus connected therewith, and the mode of tilting the seales, as hereinbefore deseribed and set forth.
7. The arrangement and combination of the sereral parts, forming. together the double self-acting and self-registering apparatus for weiphing a continuous flow of grain or other material, all as hereinbefore described and set forth.
G4, و20.-E. L. Pratt, Boston, Mass.-Pen.February 18, 1868. - The curved, longitudinally corrugated "and perforated plate has a loop for attachment to an ordinary pen.

Claim.-As a new article of manufacture. a fommtain or rescrroir, designed for nse in combination with a pen, when made with a perforation, $c$, a band, a, and corrugations 123 , all arranged substantially as and for the purpose deseribed.
g4.g21.-B. F. Ream, Ada, Ohio--Shovel Plow and Cultivator.-Februiry 18, 1868.-The side beams are eonnected to the central beam by a transterse bar, and are either or both remorable.

Claim.-The gange beam E , constructed substrntially as deseribed, in combination with the beams A and $a$, guide bar G , shovels or plows $\mathrm{C}^{\prime}$, or any of them, and coulter D, substantially as and for the purposes set forth.
g4,grz.-Ira A. Rrcmards, Brookfield, Mass.Butter Dish.-February 18, 1863.

Claim. - The cap E, hinged at a point, $d$, above the center of the bearing, and said cap protided with a nose $g$, so as to spring down orer the point $f$, and secure the trumrion of the coser in its bearing, substautially as set forth.
 Trunk.-February 18, 1868. -The angle plates are attached to the rertical corners of the lid and body, and bear the loek and hasp. Thicy have also an engaging lug and loop).
Claim.-The angle picces A, provided with the loops $a$, in combination with the angle picces $C$, provided with the lugs $b$, when arranged for operation in connection with a trunk or similar article, substantially as deseribed.

194, g924.-TAMES M. SEMNOUR, Newark, N. J.Spacing and Boring Machine.-February 18, 18 Bes.The pitman rool has eollars, which act on a bell crank, and the oseillation of the bell crank canses the recip. rocation of the pawl slide, moring the earriage a certain distance ench time the borer is raised.
Olaim.-1. The conbination of the bell crank $s$ for moving the slide $x$ and the adjustable stops $n 2$ and $i$, so arrmged that the action of said crank shall move the slide as soon as the hit is raised out of the rood, when operated substantially in the manner set forth.
2. The arrangement of the fence $y$, slicie $x$, and removable not ched stick $p$, and reciprocating pars u, construeted and operated substantialy as and for the purpose set forth.
9, $9 \times 3 .-$ Tralter Sherpmemint. Pittsburg, Pa. - Clamp for Trussing Cylinders of Staves.-February 18, 1868. -The cort piasses beneath rollers in the cross-head, and its cnds are attached to the serew block. The champ is operated br turning the screw:

Claim. - The eross-head A, prorided with rollers $e e$, in combination with screm C , block I , and cord $g$, substantially in the manner herein set forth and described.
gat, gige.-Edwin F. Summañ, Chicopec, Mass. - Corn Sheller.-February 18, 1868.

Olaim.-1. The combination of a shelling erlindier, having ridges placed obliquely, as deseribed, with the adjustable toothed bonnet, the whole arrangel and opcrating substantially as set forth.
$\quad 2$. The fanges $k l$. in combination with the oblique-lr-placed ridges of a corn shelier, substantiall 5 as and for the purpose set forth.
3. Reversing the position of cach alternate lay of ridges on the erlinder of a corn sheller, substantially as and for the purposes set forth.
4. The $V$-shaped ridges, placed on the eylinder of a corn sheller in such a manner that in cach separate lay their $V$-points shall approach the center of the periphery of the cyliuder, while the V-arms diverge from the center in opposite directions, substantially as and for the purposes described.
 Binding Guide for Sewing Mrachines.- February 18, 1868. - The base plate is attached to the table by a set serew, which passes through its slot and those of the jarrs. The edge of the plate is turned upward rectangularly, and has a V-notch, through which passes the end of the upper jaw. The upper jaw lies on the base plate, and is also thrmed up reetansularly, extended forward horizontally, and the side of the extension is turned down rertically, to enter the $V$-notelh of the base plate. The luwer jaw is similar to the upper, with the exception of the horizontal extension and down-tarned lip. The jaws move in unison, to snit varions widths ot hinding, and hare diagomal grooves in the ends, to guide the material.

Claim.-A binding guide, consisting of the pieces A B C and set serew E, all constructed, arranged, and operating as and for the purpose set forth.
74.78.-Oscar C. Squyer, Penn Yan, N. Y.Peneil Sharpener.-February 18, 1868.-The socket has a screw thread at the upper end, and may remain upon the pencil.

Claim.-The serew C , in combination with the pencil sharpencr, substantially as and for the pmrpose set forth.
\% 1,729.-Stephex TY. Standart, Bellerue, Ohio. -Plow.-Fcbrmarr 18, 18(88.-The nditustable moldboard is hinged at the rear end of the fixed mokdboard, and serves to move sidewats the earth timomn up hy the latter. The rear end of the beam is turued dorriward and extended horizontally, forming a foundation for the seat and a land side, to tale the luferal strain. The depth is regulated by a roller upon a vertical, adjustable bar, sitmated behind the share.

Claim.-The arrangement of the land-side bur $D$, movable moldboard E , provided with metal knife at its Lotton, bars F , bir H , and roller, operated by the lever I, the whole combined and used with the plow beam, in the manner and for the purpose set forth.

74,730.-WILLLAM H. Stevenson, Auburn, N. Y.- Machine for Grinding the Cutter of IIarvesting Machines.-February 18, 1868.-The cutter bar is clamped to the oscillating fiame and presented by the movement of the lintter to the grindstone.

Claim.-1. The combination, substantially as lescribed, of the $U$-shaped fiame $A$ and the V-shaped bearings D D ${ }^{\prime}$ with the orindstone, mounted on the orerhanging shaft, for the purposes set forth.
2. The oscillating champing frame or holding rack H, operatinir substantiasy as deseribed.
3. The combination, substantially as deseribed, with the osenllating elamp bar, of the adjustable supports $L$ ? for the purpose set forth.
4. The combination, substantially as deseribed, of a grindstone, mounted on one end of an overhanging slaft, with a rertically, laterally, and longitudinally adjustable swinging clamping bar, for the purposen set forth.
5. The combination, snbstantially as deseribed, of the elamping bur H, adjustable clamps K, liudins bars, and set sereers $l$, for the purpose set forth.
6. The U-shaped frame $A$, constructed is described.
 Y.-Ilachine for Grinding the Cutter of Harvesting Machines.-February 18, 1868.

Claim.-1. The grindstone, construeted as described, with one part of its periphery bereled and the other part parallel to the axis of rotation, and having an ammlar groove in that side next the parallel surface, for the purposes set forth.
2. The combination, substantially as described, of
the beneh $A$, the overhanging detachable frame or bed B, the stone, and the spindle E, for the purposes set forth.
3. The combination, substantially us deseribed. of the stone, the spindle, and the oseillating rack har or clamp frame, whereloy I am enabled to grind the knives with their points down.

74, \%3:-Niciolas Tripr, Niagara Falls. N. Y.-Vibrating Lever Power.- Eehroary 18, 1868.The penkhlums and the mechanism comnected therewith are interposed hetreen the motor and machinery and serve to regulate the speed.

Claim.-The duplieate sets of pendulum levers $C$ C, weighted at $a$, the duplicate fly phates 1 I, nimed With balls $h h$, and connected by arms $i i$ and boxas $l l$ rith the double crank shaft K , the adjustiner ball $s$ and the domble-acting levers I) D, reeniving motion h. $\mathrm{c}_{\mathrm{c}} \mathrm{g}$ segments $b c$, and transmitting motion to the one crank shaft J. the whole eonstructed and arranged as descrihed, and operating in the mamer and for the pmelose herein set forth.

74,\%33.-A. VaN Camp, Washington, I. C.Presering Egas.-Febriary 18, 18tis.-Unslacked lime, $10 \mathrm{ll} \mathrm{s} .$, and salt, 8 ll s., ate mixed with water', 20 gillons. The eges renain in the abore 20 dars. The following ingredients are inixed with a smiall quantity of water' chloride of calcium, $\frac{1}{4} 1 \mathrm{~b}$; phosphoric acid, $\frac{1}{2} \mathrm{lb}$; hleaching powfler, 1 lb.; nitrate of potash, $\frac{1}{2}$ llb.; and added to the licuid containing the eggs. The egegs remain in the latter liquid 30 days.

Claim.-1. The proeess herein deseribed for preserving eggs.
2. The use of chloride of caleimm or its equivalent, for the purpose of preserving cogs.
3. Phosphoric acid as material for preserving eges.
4. The combination of the ingredients horein mentionad for preserving eggs.
© 4,734. - Fraxicis J. Vitfum, Nemburpport, Mass., assimnor to W. N. Ely, Stratford, Comm. Leather S'plitting Machine.-February 18, 18i8.The leather is split by a bond knife, which is first coiled mpon one roller, and after reversing the motion is coiled upon the other.
Claim.-1. The long belt linife, entting either way, substantially as described.
2. The knife coiled on drums, and operating either way, substantially as deseribed.
3. The compoimel roller, with spindle, spiral spring, and scetional rings, substantially as desuribed.
4. The eompound roller' as described, in combination with a rubber roller, substantially as deseribed.
5. 'Tho compomed roller, as described, in combination with a splitting knife, substantially as deseribed.
6. The cam or projection on the back of the knife, substantially as and for the purpose described.
7. Arranging and operating the knite by means substantially as described.
 signor to himself ind Newton Case, same place.Feed Water Meater of Stean Generators.-February 18, 1868.-The stean is exhansted uprrat into tlic reservoir and impinges inginst the deflector phate. Beneath the deflector plate is the perforated pipe throngh which the cold feed water is thrown in fino jets. A float connected with a valve regulates tho How of water throngh the feed pipe. The water is pmoned from the reserroir to the boiler, being taken tionn snfficient clevation to leare the sediment ma¿lisfurbet.

Gaim.-1. The device I $J$, for the purpose of preventing the water in the reservoir from being drawn down to the level of the orifice of the feed pipe, substantially as lierein specified.
2. The combintion of the deviees $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{E}$, $\mathrm{F}, \mathrm{C}, ~ 1 \mathrm{I}, \mathrm{I}$, ant $J$, for the purposes of a heater for stean boilers, substantially ats specified.
3. The combination of the devices $\mathrm{C}, \mathrm{D}, \mathrm{E}$, and F, substantially as herein described.
\%1, \% 36.-EdMund G. Wayman, Louisville, Ky, 4, B6.-EDNEND G. WAMMAN, Lotisvile, K $y$,

Preparing Hemp and Flax Fiber for the MLanufaciure of Dusters, de.-Febrinary 18, 1868. - Wellchaned flax or hemp is eut in lengths of 14 inehes, and is immersed in a solution eomposed of sal soda, $\frac{1}{2} \mathrm{lb} . ;$ 'ard, 1 lb. ; water, 10 gallons, and raised to $110^{\circ}$ Fehli. It is then allowed to dry and then immersed in a solution of alam, 1 lb . ; water; 1 gall. It is then dyerl. One half pound forms an office duster.

Olaim. -The preparation aud applieation of hemp and flax fiber in the prodnetion of a duster, the preparation and manufacture to take place as herein deseribed, or any other substantially the same, and which will produee the intended effect or the same resilts.
g4, 9 g. - Joser Werndi, Stejer, Austria.-Breech-Locading Fire-Arm.-Febran'y 18, 1868.-The breeell bloek turns on a fixed axis, and has a recessed part to allow passage to the eartridge. When the recessed part is tnrned down the breech is elosed. The block is operated by a thamb piece.

Claim.-1. The oscillating cylindrical breech bloek, prorided with a recess or aroove for admitting the eartridge into the chamber of the barrel, and moved forward by an oblique or spiral shoulder on its base pin, when construeted and operating' substantially as deseriber.
2. The combination of the barrel a, the hollon cylinder $b$, the loeking eylindler $c$, the firing pin $f$, the groove $g$, the ejecting lever $h p$, the axis $k$, with its squared end, the spring s, and the sliding breech bloek $l$, with its inclined surface $m$, the whole being coustructed and arranged substantially as described, for the purpose of a breceh-loading fire arm.
\% 4, $93 .-$ Janies T. Whipple, Chicago, Ill.Pump for Deep Wells.-February 18, 1868.-The valres are contained in a eylinder which slides within the pipe. The ring packing is expanded between the two shonlders, which are made to approach by serewing the npper part of the valre eylinder apon itis buse. Claim.-Cylinder B, provided with ralres $e$ and $e^{\prime \prime}$, when so constrmeted as to be eapable of being' adjusted to any giren point within the main pipe, in combination with ring 1 , disk C , and provided with packing $L$, whereby a water-tight joint may be obtained between the eylinder and the sides of the main pipe, substantially as and for the purpose set forth.
my, 留89.-L. W. WoLFe, Jacksonville, Ill. Mortising Jachine.-February 18, 1868.-The mortise frame is connected to the sliding saw frame by a lerer and eonnecting rod, and receires its vertical reciprocation therefrom.

Claim.-The slidings sat frame K, having arms I I, as specified, whereby notion is commmicated to the mortiser N through the connceting rod I and lever $O$, all construeted and operating as speeified.
 Device for Teaching Commercial Transacions. February 18, 1868. - Thic bos has dirisions into whieh the stadent's papers are placed aceording to their proper destimation.
claim.-The drawer or apparatus, substantially such as herein deseribed, for the purpose of teaching and practically illnstrating commereial transactions, as described.
 assignoz to himself and James W. SALTER, same place.-Oolor Printing Press.-February 18, $1868 .-$ Improvement on his patent of June 18, 1867. Segmental plates are substituted for the sectoral plates; the plates being conneeted to and anljustable on longitudinal projections on a central prismatic rolles.

Claim.-1. The adjustable segmental plates $A$, for transferring the ink from the distributing to the type rollers, attached to a center 13 , and used in combination with intermediate adjustable reglets, or their equiralents, substautially in the mannel set forth.
2. The combination of the distributing rollers, the segmental plates $\Delta$, aud the trpe rollers, substantially as set forth.
3. The combination of the rollers $I$ and K and
their adjustable boxes $\mathrm{F}^{2}$, substantially as and for the prupose set forth.
4. So arwanging the rollers $I$ and $K$, and the plates A, that while the rork of distribntion on the rollers goes on continuously, the roller I shall, by the uscillation of its benrings, be brought in contact only with its appropriato set of transferring plates, and be removed while the other sets are passing, substantially as set fortl.
 Horse Blanket.-Februnry 25, 1868.-About number $5 \frac{1}{2}$ single ply is usea for the filling, aud from, " 20 to "22" three-ply for the warps. The yarn is beanned in sets of two or nore distinct warps, and the sereral sets of warp are interwoven into plain eloth by eontinuous shoots of the filling, the loose intertwining of which forms interstitial cells.

Claim.-A horse blanket, mamfactured or made ap of the fabric herein described, as a new article of manufacture.
 volving Hair Brush.-February 25 , 1868.-The frame has a curved portion restiug against the person of the operator, and an elastic loop passing around his neck. The brush is rotated by gearing. It is intendod for barbers' use.

Claim. - The combination of the frame A BD , the eylintrical brush E , and the gearing for operating the same, and the clastic support $J$, arranged and operating substantially as and for the purposes specitied and shown.
 -Rotary Engine. - Tebruary 25, 1868.-The pistons admit of radial morement in the ammus within the rim of the eccentric wheel, and are kent in contact with the coneare smrfnce of the erlinder by springes bencath their inuer ents. The sajd ammulus is concentric with the eylinder, and the pistons slide through radial apertures in the rin of the wined.

Otdim.-The arrancement of the spriness around the wheels D, with the pistons E E and erlinter A, substantially as and for the purposes specitied.
 Shoe Nail.-February 25, 1808.-The heat is made conical, so as to eountersink into the leather.

Claim- - 'The eut shoe nail, with conical head and tapering and parallel sides, as deseribed.
 - Fnob Latch for Doors.-February 25, 1868 ; antedated February 7, 1868.-The spindle passes through the skeleton framo of the spring lateh, and has a sleeve whose segmental projection engages shoulders of the latch, and withdiaws the same on turiaing of the spindle in either direction.

Cirim.- 'The combination and arrangement o! the lateh, having link 13 and amed end $C$, the 1 emovable tumbler $D$, and spring S , when the parts are constructed and operating' substantially as deseribed.
 Ames, Chicago, Ill.-Spring Bed Bottom.- February 25, 1868 . - He spring is so bent as to give it a rect angular wearing upon the upper slat.

Claim.--The comlination of the arms d and e formed mpon the eoil of the spring D, as shown, and a socket $c$, applied or secured to the slat C , in tho manner and for the purposes specified.
 Farm Gate.-February 25, 1868.-The upper bar of the gate runs on rollers, journaled in pendants of an mpper har rmaing on lollers in the skeleton posts through whieh the gate passes. The arrangement allows the gate to slide a distanco equal to its length.

Cltain.-1. The horizontal sliding bar D, when eonstrueted and operating substautially as and for the purpose set forth.
2. The combination of the abore with the rollers between the double posts E and F , the hanger:s BC with their rollers, and the gate A, when arranged, constructed, and operatinge substantially as and for tho purposes described.

94, \%49.-Ela Calley, Franklin, N. H.- $4 t$ taching Eircular Saws to their Mandrels.-February 25,1868 . - The saw has a mut attached thereto whiels screws upon the mandrel.

Claim.-The arrangement of the separato nut C and its confining serews $b b$, shaft $\Lambda$, the male serew $c$, and the shonlder $a$, applied to snch shaft in the mamer and for the purpose substantially as specitied.
 bury, Mass., assignor's to themselyes and s. İ. CinurBUCK, J 1 - - l'iston, - F'chruary $2 \overline{5}, 186 .-$-The ring sections are guided to a radial centritusual comse bor lugs upon each site of the arms, projecting ratlially from the hub. 'The seetions are jointed together so as to admit of expansion by the pressure of the wedere blocks, actuated by the spiral sproings, and sliding in the open-sided radial groores.

Cluim.-1. The peenliar construetion of the ring sections H, substantially as cleseribed and shown.
2. The opern-sided radial groores $f$, $f$, in combinittion with the spring wedge $k$, substintially as described.
3. 'The lugs $u$, in combination with the arms $c$, to support those scetious which work in a rertical or approximately vertical posirion, substautially is described.

- 4,75 . - EDWIN E. CLark, Am Arbor, Mich.Sewing Hachine. Febrnary 25,1868 . - The needle is curved nearly in the inc of a circle, and its point passes within the spiral end of the looper: 'The looper is upon a shaft which has rotary reciprocation by a spur wheal and vertically reciprocating rack. The shat has a screw thread which throns in á screw socket, and gires a longitudinal reciprocation simultanconsly with its oscillatory motion.

Claim-1. The sloted plate ( 1 , constructed substautially as described and for the purpose set forth.
2. 'Lhe needle holder E , construeted substantially as described, in eombination with the slotted graiding. plate C, as and for the purpose set forth.
3. The curved ere-pointed needle F , operating in the are of a cirele, the ecnter of movement of which eorresponds with the plane of the morement of the cloth, iud operated by means substantially as describerl.
4. The looper W, construeted and operated substantially as deseribed.

5 . 'The eombination of looper TV and enreed ejepointed needle F, when constrmeted and operating together as and for the purpose set forth.

74, 752.-Amos Cutter, Chelsea, Mass.-Paint Brush.-February $2 \overline{5}, 1868$. -The socizet for reception of the bristles is biseeted Iongitudinally, its seetions being hinged together at the top). A fiter introdnetion of the bristles the sections are foreed togetler by a slip-1ing; and the conienl-headed bolt is foreed axially throbeg the mass of bristies from the upper end, and the haudle serewed ons.

Claim.-The screw rod $g$, when permanently seeured on the handle, and forced downsardly by the femate serew in the hamde $f$, in comnection with the eylinder $a$, as and for the purposes deseribed.

194,753.-F. A. DeCanl', St. Lonis, Mo.-Corl Stove. February id, 1868 ; intednted Jamary 24 , 1868. - The common ronnd heating stove has a horizontally extended top, and lias defleeting plates mud pot holes. 'The ehimney is in the center of the top plate.

Claim.-1. The annutar cooking top $\mathrm{C}^{1} \mathrm{C}^{2}$, in combinatiou with the store $A$, substaitially as described and set forth.
2. 'The diaphragms B and $\mathrm{C}^{3}$, when combined with the disks $C^{1}$ and $\mathrm{C}^{12}$, substantiully as cleseribed and set forth.

74,751.- Eitas S. Easterbay, Nokomis, Ill. Sully Cultivator.-Jelbruary ${ }_{2}^{5}$, , 8 Sit. The plow fiame has rertical novement in a metallic fiame. whieh slides on a transverse bur athached to the wheel frame. The phows and gitide trome have lateral movement hy the foot levers.

Claim.-1. Extending the plow beams D forward to form the tongue of the machine, substantially as
herein shown and described and for the purpose set forth.
2. 'The iron frames $O$, adjustably secured to each other, and sliding laterally upon a rod or eqnivalent slicle attached to the axle B, in combination with the plow beams D, substantially as herein shown and described and for the purposes set forth.
3. 'The combination of the foot lerers Q with the plow hemms D, and with the slotted irons or frames $O$, shbstantially as herein shown and described and for the purpose set forth.
4. Adinstably securing the plows M to the standards K by means of soctets iv, substantially in the manner lierein shown and described and for the purpose set fortl.
5. The combination of the piroted levers E, chain F, and puller $(\dot{y}$, with the plow beans I and witl the bars $c^{1}$, commecting the forwaid ends of the bars C , substantially as herein shown and described and for the purpose set forth.
 ufacture of Tin-lined Lead I'pe.- February $25,1868$. - A portion of tin is first cat in the bottom of the eliamber. The plamger then descends and the tin is formed into a tube aromid the mandrel. The sheath is then phaed over the tin thbe and the lead is cast outside of it: then the sheath is withelatwon, and power applied to expel the metals throngh the die.

Claim.-1. The die $e^{\prime}$ in a plunger $c$, in combination with a eylinder $a$ and mandrel $d$, in anachine for making tin-lined lead pipo, construeted and operated substantially in the manner and for the purposes hereinbefore set forth.
2. The methot hereinbetore deseribed of eonstrneting a compomme ingot of tin and lead, in the mannfacture of tin-lined lead pipe.
3. The use of a flamge $i$ atfached to the tin part of a compound insot of lead and tin, lor the purposes and in the mannel' substantially as abore set forth.
4. In the protuction of a compound tin and lead ingot by the method hereinbelore deseribed, the nse of a eover $y$ for protecting the tin pipe or tin ingot from the heat of the molten lead, substinifally as mud for the purposes hervinbefore set forth.
 DaNEL IV. Haprehsert, Crlana, Ohio.-Burning Fluid.-Febriary 25, 1868 . Composed of cintoride of sodium, 1 , and eanstic lime, $\underset{\sim}{2}$ parts. Color with iodine, and mix suflement giasoline to distill. J'hen to the distillate, 1 , add grasoline 5 parts.

Claim.-The flnid prepared of the materials and substanees as herein described.
g. \% $5 \%$ - - V. Mill, Limestone, N. T.- Wrork Trimmer for Boots and Shoes.-Febraury is, 1808 ; antedated Februn'y 12, 1868. -The knife is jurevented by the silurd from centting the "upper" when trimming the sole.

C'laim.-1. The guard c, when applied to a work trimmer. in inamere and for the purposes substantially as deseribed.
$\stackrel{2}{\sim}$. The blade B, fitted adjustable into a head a by the shank $b$, as herein set forth, adid for the purposes sul)stantially as deseribed.
\% 4, 75s.-Davo K. Moxsie, Providenee, R. I.Implement. for Making Eyelets. - Fobruary 25, 1863. -Fy a continnons motion of the punchess the cirenlar diskis formed into an erelet; the metal around the central perforation being spread ontward to form the Harins part.

Claim.-1, The movable forming punel, No. 1, constructed with a eylindrical shape or former $e$, it shomkler $i$, a bereled end $a$, mod a center eavity $t$, When combined with mechanism so as to operate substantiatly as deseribed. for the pmpose speeified.
2. 'lhe stationary die, No. 只 construeted with a eirenlar entrance $x$, a cuncal drawing cavity $\&$ a throat $x$, and an expand when combined with mechinisun, so as to operate substantially as and for the purpose specified.
3. The movable entting panch. No.:3, constructed in a tubular form, with a bereled surmeo $y$, and a eoncentric entting dede $c$, when combined with mechanism, sum as herein described, so its to operato substantially as and for the purpose specificd.

4．The method，herein described，of forming an cyelet by first converting a planchet or disk of metal into a tube with a closed end，and then cutting out the closed end，and expanding this severed edge of the tube，to form the flange，by means substantially as described．

5．So combining a drawing punell and an open drawing die，eonstructed subistantially as described， that the planeliet of metal from which the eyclet is to be made will enter in at the front end of the die， and，passiag through，be delivered eompletely formed into an eyelet at the rear end of the clie，substantially as deseribed．

74， 759 ．－Samuel HuFfman，Westficld，Ill－ A nimal Trap．－February 25，1868．－The eylinder lias a gauze－eovered ehamber containing buit，and is contained in one division of the cubical box．The box and eylinder are perforated completely throngh in the direction of the length of the eylinder．The eylinder is hung so that on the entranee of a rat，it rotates sufficiently to close the holes in the end and bring the hole in the side in conjunction with a hole ieading in to the inner chamber．When the rat enters the inner chamber the cylinder rolls back，shutting off communieation．

Claim．－1．The piroted ehamber B，turning on its axis，furnished with two opposite openings $c e$ ，and the lateral opening $D$ ，as and for the purpose speci－ fied，or equiralent．

2．In combination with revolving ehamber $B$ ，the auxiliary balls，as clescribect．
－ 4,760 ．－Barton H．Jenks，Bridesburg，Pa．－ Breech－Loading Fire－Arm．－February 25，1868．－ The breech bloek is slotted longitndinally at its rear end to receise the locking eateh，which has an np－ wardly projecting arm by whieh the bloek is moved． The cartridge extractor is piroted to the breceli block，and has a slide passing into a eavity beneath the barrel．The baekward norement of the breech block forces baek the hammer into eock．

Olaim．－1．Combining a vibrating slotted breech picee $D$ ，a vibrating locking－lateh $E$ ，and a ham－ mer $F$ ，in such manner that these parts are confined between the ehecks I 3 of the frame，and the hanmer is on the outside of the breech picce，substantially as described．
2．Arranging the tumbler $G$ between the ehecks of the vibrating breech picee $D$ ，and affixing the hammer to one end of the tubular bearing of said tumbler，substantially as described．
3．So eombining a vibrating hammer F ，which is arranged outside of a．vibrating brecel piece，and between the frame cheeks $B$ ，that said hammer ean be full coeked or half eocked without moving the breeel piece，substantially as deseribed．
4．Proriding for eocking＇a hammer，which is ar． ranged outside of and piroted to the axis $c$ of a vibrating breceh pieec，in the act of drawing back the latter by means of an extension $b^{\prime}$ ，or its equiva－ lent，substantially as deseribed．
5 ．The relative arrangement of the breech piece D ，locking portion E ，tumbler G ，and trigger $\bar{\Pi}$ ，the same being constructed and operating substantially as set forth．

㫨是，\％6 6 －DANIEL W．JOHNSON，Bloomsburg， Pa．－Whiffatree．－February 25，1868．－The button is held in position to seeure the traces by longitudi－ nally sliding cateh rods，which may be simultaneously retracted by a chain attached to bell－erank levers piroted to their ends．

Glaim．－$\Lambda$ whifletree，haring spring A，slide B， levers H and M ，ehains K ，and button C ，construeted， combined，and arranged substantially as speeitied．
等垂，\％68．—W．W．LeECII，Pittsburg，Pa．，as－ signor to himself and George Coutant，same place． －Animal Trap．－February 25，1868．－The striking bars are held by upward extensions of a bent lever， whose depending arm enters a earity in the trip lever．The trip lever has a spur engaging a spur on the bait lever，so that when the bait plate is de－ pressed，the trap will be sprung；the striking bar pressed，the earied down upon the animal by the spiral springs．

Claim．－The curved or bent and coiled wires $e e^{\prime}$ ，
one or more，single or double，in combination With the baiting and tripping devicos，constructed and arranged substantially as and for the purposes set forth．
g4，g63．－Mary Merrill，Marengo，Ill．－Knife and Fork Scourer．－February 25，1868．－The case has a eap，whieh is remored tor the introduction of water whieh flows through the annular space and the small perforations onto the cork or rubber．

Claim．－The combination of the box A ，the inner casing E ，the sieves B and C ，and the cork or rubber $D$ ，as and for the purposes specified．
 himself and James C．WALTER，Harlem，N．Y．－ Manufacture of Buttons．－February 25,1868 ；ante－ dated February 7，1868．－The eye of the button is seemed in the soeket by cement made of liquid glass and powdered mineral matter．

Claim．－1．The cement，consisting of liquid glass and finely powdered mineral matter，substantially as described，for the purpose speeificd．
2．The plate $B$ ，containing the eement filled into the circular recess in the button $A$ ，and subjected to heat，as herein set forth，for the purpose specified．

74， $6.3 .-\mathrm{M}$ ．Nre and A．J．Kmisely，Chicago， Ill．－Brick Machine．－February 25，1868．－The emp－ ty molds are thrust beneath the plungers by a system of levers operating through a rock shatt，whose arms carry a roller coming in contact with the molds． This movement of the empty molds forees the filled molds out，and should a stone obstruct the more－ ment，the fulerum of the first lerer mores so as to render inoperative the stroke of the crank upon it． The fulerum is held in position by a weight or spring， whieh yiells as stated．The＂valyes＂bencath whieh the filled molds pass are kept dorn by springs，and are raised to allow the passage of smaller stones．

Claim．－1．The eombination of the moralnle ful－ erum F ，connecting levers $\mathrm{E}, \mathrm{M}$ ，and N ，with roll－ ing shaft $P$ ，chain $R$ ，and weight $S$ ，substantially as and for the parpose shown．
2．In combination with the morable fulcrum F ，the conneeting rod G，lerer $H$ ，chain I，weight $y$ ，and rod $j$ ，substantially as and tor the purpose shown．
3．Combining the adjustable piroted sprines $f$ with the hinged valres $g$ ，substantially as and for the purpose herein shown and described．
g4，\％63．－Erasmus Osburn，Rome Center，Mich． －Milk and Provision Rack．－February 25， 1868. The uprights are surrouncled by the reetangular pans，which prevent the ascent of rats and mice，and may eontain some liquid to prevent the passage of inseets．
－Claim．－The construction of a rack，as berein－ before described，with perpendienlar posts A，trans－ rerse bars or feet $B$ ，horizontal hars C ，cap E ，and rectangular pans $F$ ，when arranged and operating substantially as and for the purposes described．

24，76．－GEORGE PAINE，Washington，Ohio．－ Sheep Holder and Fleece Folder Combined．－Febru－ ary 25,1868 ．－The table has vertical adjustinent by the standard．The sides are hinged to fold in the sides of the fleece，whieh is extended upon the table and rolled upon the slitted apron．The free end of the apron is then brought over the fleece and made fast，and the apron tightened by winding upon the roller．The slits in the apron give access for＇apply－ ing the twine ties．

Claim．－The herein described sheep table，con－ sisting of the top $B$ ，sides $C$ ，leaves $D$ ，adjusting standard $F$ ，and box $E$ ，all eonstrueted and arranged to operate in combination with the apron II and roller I，in the manner and for the purpose substan－ tially as set forth．
g4，\％68．－Wilidam M．Palmer，Middlebush， N．J．－Water Elcuator．－February 25，186i8．－The buckets are altemately raised and lowered br the continued revolution of the winch in one dinection．

Claim．－1．Tho ropes F ，eyliuders $G$ ，eollars $\mathrm{G}^{1}$ roller $H^{2}$ ，oseillating levers $H$ ，and lever $I$ ，combined so as to operate substantially as set forth．
2．The bucket $A$ ，swinging on the arm D ，and
proviled with the spring hook K, arranged to operate substantially as set forth.
3. The arrangement of the slides C, arm D, buckets A, bail E, and hook K, substantially as set forth.
4. In combination with the eylinders G and collars $G^{1}$, the oscillating arms $I$, substantially as described.
5. In combination with the ways $\mathrm{B}^{\prime}$ and slide C , the lever I, arranged to operate substantially in the manner and for the purpose set forth.

74, 769.-Isaac Parnee, Vincland, N. J.-Concrete Frick 1Fachine.-Febrnary 25, 1868; antelated February 10, 1868.-The box being filled with the materials for the conerete block, the corer is slipped on, and the box drawn down by the lever, which turns the shaft upon which the press chain is coiled. When the block is ready for removal the box corer is slipped off and the box depressed, leaving the block suspended upon the fixed follower:

Claim.-1. The arrangement of the levers F and $J$, when the same are eounceted with the sliding box D, in the mamer set forth.
2. The sliding box D, in coubination with the uprights B, plate C, pin $U$, lever $F$, chaiu $K$, shaft $T$, and lever $J$, all made aud oporating substantially as and for the purpose herein shown and described.
3. The box D , when prorided with a core E , in combination with the sliding plate $L$, that has grooves $c$, and fits orel strips $f$, as set forth.
4. The hinged platform O, in combination with the box N and box D , all made and operating substantially as and for the purpose described.
5. The springs $d$, when arranged as set forth, for the purpose of keeping the box D up, as set forth.

194,7\%0.-Amos Porter, Charlestown, Mass., assignor to himself and N. S. Parne. same phec.Coal Hod and Screen.-February 25. 1868.-The two perforated sections of the hod may be clamped with their edyes together by the frome, which is placed on standards and rotated by a winch.
Claim:-1. The combined hod or ash pan and sifter, when it is made of two parts so constructed as that one half fits iuto or upon the otler half, and the bored holes of the sifting bottoms are so arranged as not to come onposite to each other when one pan is put into the other, thus fitting the parts to act as a hod or ash pan, all substantially as described.
2. The rotating holder or sifting frame to hold the two parts of the hod sifter togetlier, in combination with the hod sifter, when all are constructed and used substantially as rescribed.
3. The stationary holder or hod frame, when constructed with bails or handes, in combination with the two containing vessels. or pans, when bored in the bottoms, all substantially as clescribed,
4. The general construction and arrangement of the whole derice, when made and used substautially as describer.
gatg g1. - William Read, Jr., Poston, Mass. Cord Retainer for Pictures and Mirrors- Fehruary 25, 1868; antedated October 10, 1867. The notehed end of the flexible plate engages the corl, whielh is passed through the ege to whoso side the phate is attaebed.
Olaim.-The frame $a$, provided with a projecting end or point $c$. in combination with an clastic plate $b$, as and for the purpese speeified.
\%4.gz2.-ALFRED and Whlumam Shenlock, New Tork. N. Y.-Mechanical Donkey.-Frebrury 2.5, ]e6s.-The legs are driven by connetion to eranks actuated by clock work witliin the abdominal eavity, aud a spring is released from a flange upon a wheel at each rotation of the latter. The spring operates to unseat the rider by a pin which passes throngh the donker's back and impinges against the seat of the said rider. The fect of the animal hare ratchet plates insuring the effectiveness of the backWard morement of the legs for propulsion.

Claim.-1. The combination of the cam whed $K$, made as deseribed, with the spring M, having a motched detent plite $N$ attached thereto, for the purposes hereinbefore described.
2. In combination with the reacting spring II nud a walking doukey, the independent or adjustable rirer Q, for the purboses hereinbefore set forth.
3. In combination with the feet of a walking donker, the elart-tecthed shoes $S$, or eluiralent devices therefor, for the purposes hereinbefore set forth.
75.78.3.-W. B. SNow, Chieago, Ill-Sleeping Car Berth.-Februry 2.5,1868. -The connter-balimec cords attached to the fiece side of the berth are connected to spiral springs.

Claim.-The coiled springs I inclosed in boxes between the floors of the ear in combination with pulleys on $n$, cords G , aud berths E , arranged substantially as set forth.
gy, $77 \%-$ A. W. Strautb, Philadelphia, Pa.Portable Grinding Mill.-Fehruary d. 1868.- The frame is made in a single pieco of cast iron to prerent any derangement by rongh handing in trinsportation.

Claim.-Sceuring firmly down torether mon the frame A B , cast in one piece, as shown and deseribed, the detachable enlb $d^{\prime}$, coping man $b^{\prime \prime}$, and hopper stool $J^{1}$, by means of four nutted screw bolts $a^{5}$, $a^{5}$, $a^{5}, a^{5}$, substantially as and for the purpose herein clescribed.

74,785.-C. F. Taylor, Vassalboro, Me.-Culti-vator.-February 25, 18 (iz. -The bur of the A-shiaped flame is connected with the apex by a center pieco and the flaring shovels thrown inwad.

Claim.-The A-shaped cultivator A with its center pieec a and eross-picce $a^{\prime}$, in combination with the teeth $b$, so arranged as to throw the earth inmard, as and for the purpose described.
7.1,976.-J. W. Thorx, Courtland, Ala., as signor to himself and Cilafles W. Jtattuives. Cotton Cleaner. February 25, 1868.-The feeding drum has a scries of eavities formed by longitudinal partitions extendiug tangentially firom the central shaft. The drum has intermitting rotation by which the cavities are brought in commonication with the feed board and by a further rotation with the elean ing chamber.

Claim.-1. Feeding clrum F A, catch lerer L, C T, ratehet $\mathrm{C} R$, and lugg $l g$, the whole combined and construeted and operating in the manner and for the purpose abore set forth and cleseribed
2. Lorer $\mathrm{I}^{\prime}$, catch C K , door D, and weight W, the whole combincd in the mamer and for the purpose above set fortl and clescribed.
3. The eombination of the drum I $\Lambda$, its eatel lever I, C ' I , and ratchet C R , and door D , lever $\mathrm{L}^{\prime}$, and cateh C'K, and weight W, witl a cotton beat ing and cleaning machine, the whole constructed and operaterl in the manner and for the purpose abore set forth and deseribed.
g4, g7\%.-Whlimm II, Watson, New York, N. Y-Machine for Sheeting and Iressing Tobacco.Febrmary 25,1868 . -The tobaceo is earried between the endiess metallic belts and passes between the entter roller and grooved roller. 'The side belts run on hori\%ontal pullers, and serve to limit the side extension of the shert.

Claim.-1. The combination of two or more metallie endless belts, constructed substantially as de scribed, for the purpose specified.
2. The eombination of' the sitle belts with the same for the purpose spercified.
3. Slitting or entring the tobares while nnder pressure, substantially as shown.
4. Adjusting the cylinders D and $\mathrm{D}^{2}$, substantially as shown, for the purposes indieated.
 Meter-Mebruary 25, 1868.-The measuring casks are nomented on the opposite ends of a tilting frame, and each one is commeted by flexihle pipes to the tank and receiser. 'The filling of either cask catses its end of the trame to tilt down, which throws orer the ball and operates the fanerts thronell the lerer aud chain to close communication between the filled cask and the tank, and to open commmieation betrees the latter and the emptr eask, simultaneously changing the communieations trith the receiver.

The number of movements made by the frame is registered.

1. The casks $\mathrm{C} \mathrm{C}^{\prime}$, as arranged in combination with the vibrating box $A$, in the manner and for the purpose substantially as set forth.
2. The fonects D I)' and E E', handles G, and chain $F$ in combination with the casks $\mathrm{C}^{\prime}$. levers H , and box $A$, when arranged and operated in the manner and for the purpose set forth.
3. The supplementary box $\Lambda^{\prime}$, adjusting serews $P$, and ball $B^{\prime}$ in combination with a vibrating box $\Lambda$, for the purpose and in the manner as deseribert.
4. The registering apparatus, eonsisting of the gearing $\mathrm{R}^{\prime}$, dial f. hands $c d$, and lever $Q$, when arranced and operated in combination with the box $A$, in the manner as and for the purpose set forth.
5. The ribrating box $\Lambda$, in combination tritl the ball I and lerers II $1 I^{\prime}$, substantially as and for the purpose set forth.
 - Burglar Alarm.-Febrnary 25. 1868. -The segmental match lighter is upon the head of the kers, and is arranged to light the match and then to present its flattened side to the lamp. The mechanism is tripped by a tipping post, as in his patent of J mene 11 180;. A quiek faze from the mateh fires the pistol.

Claim.-1. The rotary match lighter C applied to a burglar alarm, and operating by a complete rerolntion, substantially in the maner and for the purpose described.
2. The combination of the mateh lighter C with the key E , substantially as and for the propose deseribed.
3. The matel holder $B b$ mounted in the box $A A^{\prime}$, and arranged and operating substantially as deseribed.
4. The combination with the mateh holder B $b$ of the fuze $N$, as and for the purpose set forth.

74,g80. - Abram Westbrook and Steprien O. Doar, Leona, Pa.-Detaehing Oheck Rein.-Fiebruary 25.1868. . The cord is attached to a ring upon the check rein, and by it the said ring may be thrown backrard to release it fiom the check hook

Claim.-1. A cord attached to the cheek rein and extending back and confined in one of the driving reins, substantially for the purpose described.
2. The combination of a check rein with a cord for detaching and attaching the same, substantially as specified

74,981.-Anton Wetzel, Cincinnati, Ohio. Permutation Lock.-Februar'y 25, 1868.-The arbor of the tumblers is at right angles with the knob spinde, and the latter carries a miter wheel engaging a similar wheel on the outer tumbler wheel. The combination is diseovered by the introdnction of a pin into the back plate of the lock when the door is open. The said pin impinges upon the inclined head of a pin and forces it throngh the slots of the tumbler whecls as they are brought into line by tarning the linol. The combination is shown by the position of the inder finger when the pin enters each slot.
Claim. -1. In eombination with the tumbler $D$, the miter whecls $G \mathrm{H}$, by which the gated disks F $\mathrm{F}^{\prime \prime} \mathrm{F}^{\prime \prime} \mathrm{F}^{\prime \prime \prime} \mathrm{F}^{\prime \prime \prime \prime}$ are sitnated and operated at right angles to the operating handle I of the lock, as deseribed and for the purpose specified.
2. The inclined headed bolt K K, pin L, spring O, and disks $\mathrm{P} p p^{\prime}$, arranged and operating in the manner and for the purpose set forth.

194,g3z.-Levt II. Whitnex, Vallejo. Cal-Fire Lighter.-February 25, 1868. The tabular burner is coupled to the oil-containing tube and felt paeking is placed below the wick to prevent unduc flow of oil.
Claim.-As an article of manufucture, a fire lighter, constructel of the parts arranged substantially as deseribed.
g4,783.-Joms N. Wuxderlicir, Philadelphia, Pa.-Traveler's Irunk:-Febrinary 25, 1868.-The legs are foldel beneath the trunk, and when opened out rase the latter so high that its front when let down will answer as a desk.

Claim.-1. The book rack made by the combina-
tion of the horizontal shelves $n n$ and folding legs E , when arranged beneath a traveling trunt, in the manner shown and deseribed.
2. The trunk A B, opening as shown, when so combined with the fording legs E that the corer $a^{4}$ forms a burcau table and the falling front C a miting desk, substantially as shown and described.
3. The combination of the under-mentioned parts When so arranged in a traveling trunk as to form a toilet mirror, $b^{3}$, table $a^{2}$, writing desk C , and book rack $n$, in the manner shown and deseribed.

骂息,g84.-TV. F. Abvott, Marengo, Tll.- Heasuring and Tadlying Attachment to Threshing Ma-ehines.-February 25 , 1868. - The grain from the threshing machine is clevated and dropped into the bifureated pipe which commmieates with the measuring hoppers through flưts having gates to close communication. The grain is allowed to ron into and from each of the hoppers alternately, and the changes are indicated by the pointer upon the double ratehet bar which is aetnated by the pawls upon the sliding bar. The latter has morement each time the exit gates are mored.
Claim.-1. The elevator box $\Lambda$, pulleys F F , belt $m$, and buckets $g$ in combination with the bifureated spont C C ${ }^{\prime}$, doors D D, measuring chambers M, and doors N N, all constructed, arranged, and operating substantially as set forth.
2. The combination of the pivoted doors D, piroted lever $d$, and plate $d^{\prime}$ with the bifureated spout $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$ and measuring chambers $M$, substantially as and for the purposes set forth.
3. The eombination of the sliding bar $a$, piroted pawls $l$, doors N , having projections $i$, clouble ratehet bar $h$, sprmgs $q$, pointer $\delta$, and register $k$, substantially as described and represented.
4. In combination with the above, the liey $w$, sulbstantially as described and for the purpose specified.
5. The doors D, substantially as shown and described, in combination with the bifureated spout C and measuring chambers $M$ for the purpose of altermatcly opening and closing said spout, all as set forth.
6. The projections $i$ in combination with the discharge door $N$ of a grain measuring chamber, snbstantially as shown and for the purposes specifiel.
7. The bar $a$ and its pawls $l$ in combination with the ratehet bar $h$ and projections $i$, or other equiralent derice, substantially as shown and described and for the purpose set forth.
8. The ratchet bar' $h$ in combination with the tally scale of the casc $k$, substantially as shown and deseribed, for the purpose of tallying grain, all as set forth.
*g 4, \%et.-A. Q. Arirs Darton, Ohio-Machine for Boring Post Moles.-February 25, 1868.-The post with the mechanism attached turns on the platform, and is secured by a spring pin which traterses an armextending hackrard from the post and enters the platform. A portion of the auger stem is square, and slides in the linb of its motive berel wheel. The half nut is brought in contaet with the sceewthreaded part of the stem to canse simultancous rectical and rotary movement. The earth is carried into the cylmedrical shell by the anger.

Claim.-1. The half nut $o^{\prime}$ and the method of engaging and detaching the same from the boring bar, substantially as and for the purposes described.
2. The tube E in combination with the anecr D , substantially as described for the purposes set forth.
3. A post hole boring machine so constructed as to string lound on the platform, substantially as and for the purposes deseribed.
v4.986. - EMELME T. ANNIS, Mount Morris, N. Y.-Pillow Support.-February 25, 1868.-The plate is cushioned on the upper side and is adjusted in inclination by the supporting bracket, which has a screw rod passing throngh an eye at the upper edge of the plate and carrying an majasting thmmb nut.

Claim.-The pillow A formed on the plate B. the bracket C , the rod E, and the mat $g$, armaged, combined, and operating substantially as shomn and deseribed for the purposes set forth.
 N. Y., assignor to C. L. Sanford, Gwohge B. Nean,
and Javes Thorer, same place.-Ted Tettle. -Febluary 25. 1808. - The $\operatorname{lng}$ rises from the top of the kettle and has a recess to reeuive the ker. The bale passes through openings in the lugs and key, and the latter keeps the lid from falling down into contaet with the liettle, while it permits a certain range of motion.

Claim.-1. The lier or tredere $B$, in eombination with recess $C$ and bail $D$, and swinging eover of at tea kettle. substantially as shown and deseribed.
2. The lug or eir A of a tea liettle when made with a preess $C$, innd usod substantially as and for the purpose shown and described.
7. 1.9 G8.-MI. A. Avery, Groton, N. I.-I3utt Hinge.-Febrnary 2.5 , 1868.-The hinge is reversible find the plates may be discomeeted by laising the door.

Claim. - The right and left butt hinge, having the serew holes comitersunk upon each side when its leaf $A$ is provided with an opening betreen the socket $a$ and abutment $d$, for the application of the eve e of the leat $B$, as herein shown and deseribed.
 -Belaying Cleat.-Felnurny 25, 1868. The corl is passed around the lorn of the lever and its free end pinched bencath the said lerer, whieh is depressed by the strain of the eorel upon the lorm.

Glaim.-The eleat, eonstrueted as described, consisting of the lever $A$, haring upon its upper side the hook II, "and piroted between the ear's a of the plate $C$, all operating as deseribed. whereby the tension of the rope upon the hook II forees the long arm If upon the rope bencath it in the groove of the plate C, seeurely clamping said rope in position, as herein shomm and deseribed.
\%4, 797.-P. T. Bndewald, Strongssille, Ohin.Washing Machine.-February $25,1868$. -The beaters are attached to levers whieh hare reciprocal oseillation, being eonnectei to the oppositely mrojecting arms of a rock shalt, aetuated by the hand lever. The bottom of the box is inclined downward to the end, agoanst which the beaters operate.

Claim. - The eombination and irrangement of the lever I, shaft $B$, arms $C$, connecting birs $D$, pivoted levers $\mathcal{E}$, arms $G$, and beaters II, constructed iss deseribed, with each other and with the box or tub $A$, substantially as herein shown and deseribed, and for the purpose set forth.
g4, 791 -GUSTAY Bischof, Jr., Smansea, Great Britain, assignor to himself and JOHN I. Kinwell, Georgetomn, D. (.-Preparing Finely-divided Iron, and the Separation of Copper, Silwer, and other Metals from their Golutions.-February 25, 1868.- -1ny of the oxides of iron are pulverized and mixed with pulrerized coal, eoke, charcoal, or other carbonaceons matter in proportion of 100 parts of the former to 20 parts of the latter. The mixtmre is then heated suffieiently to reduce the oxide to a metallie state. The material is then diseharged, through a hole in the furnace floor, into an air-tight receiver, in which it is licpt from contaet with the air until cold. The pulrerized iron thus prepared is used to precipitate eopper from its solution by taking up the acid. The soIntion is then dramm off and fresh eupreons solution added. This is continned until the irom powder is dissolved. The last trace of iron is remored liy adding dilute wash waters from the proeess of lixiviating the copper from ores. If a small excess of eop)per remain, a portion of finely-sifted iron powder may be added to the solution. "The solution shonld be stirred dmrine the process, and this mar be done by eondueting the operation in rotating wooden casks, smpported on gindgeons. The eopper may be melted into ingots, 01 be used in its fincly-divided state, to precepitate silyer fiom its solutions.

Chim.-1. The preparation of finely-divided metallie nom. in the manner and by the process substantiahy as described.
2. The eormbination and surangement of the reeciver $F$ with the furnace, for deosidizing the ore or oxides of iron, and seeuring the product from the oxidizing effects of the atmosphere, as set forth.
3. The precipitation of metallic copper from its
solutions, br the use of finely-divided iron, prepared as deseribeil, and in the manner set fortly.
4. The nse of the finely-divided motallie iron, produced in the manner set forth, for the manuatacturo of steel and for other mannfacturines purposes.
5. The use of finely-divided metallie coppere produeed in the manner set forth, for sepurating silver fiom its solutions.
 for Car Braties.- Febminly 25, 1868. The plate has flanges embracing the brake bar, and sernmentaledered projections at the upper and lower ends of its eoneare fate. 'lhe shoe has sockets, to recoive the Fertical projections of the plate, upon which it is pht with a turn, and is hed in al roltieal position by the flange of the wheel.

Claim.-1. The sloo B, east with sockets $c$. in eombination with the plate $A$, formed with projece tions $\& a$, substantially as deseribed, for the purpose specified.
2. In combination with the abore, the rubher strip C, arranged substantially as and for the purpose set forth.
g 4, 79:3.-d. NT. Browre, Pmolilyn, N. Y.Lamp Burner-Fehrmary 25, 1868 - The two that wicks me pressed between the lifting wheels ink gnided by the conoidal defleetor into the ammlar wick tube, in whiel they form semi-anmnlar sections. The openings, which condnet air thongh the hollow stays, to feed the inside of the flame. ame corered with wire gataze, to prevent the commanie:ation of fire to the gases betreen the jucket and the tube.

Claim.-1. The combination of the tube $B$ and tube or wiek deflector $\mathbb{C}$, comstruneted and arranged as herein deseribed, and adapted for the employment of two flat wieks, whieh are therehy spread and emved, and made to produee a circular flame, substantially as set forth.
2. In combination with the clements coreren by the first clause, the shatits F Fi touthed wheres i, anci disk or operating deviee $\mathrm{F}^{n 2}$, arranged and employed substantially as and for the purposo set forth.
3. The ganze G. in combination with the slotted wiek defleetor or tabe $C$, as and for the purposes set forth.
y 1, 791.-E. W. Bullard, Barre, Mass., assionol
 Rake. Felnuary 25, 1868 .-The vertical pins on the lower side of the clearer bars prevent the hay from aecumulating against the axle, and also from being thrown against the axle when the rake is raised to discharge.

Claim.-1. The eombination, with a rake, whose teeth are capable of beins tilted or cleraterl in order to diseharge the har, of the stationary charers. $\mathrm{F}^{\mathrm{F}}$ and fertieal fingers ( $:$, operatis) in conncction with the rake, substantially in the manner and for tho purposes hercin shown and set forth.
2. Tho eombination, with the axle and the rake teetl and thills. hingred to the axle, as deseribed, of the horizontal fingers ${ }^{\circ} \mathrm{F}$ and short vertieal fingeres $G$, substantially in the mamer and for the purposes sliown ind set fortl.
 Bricusbnre, Ky. - Cattle Pricker. - Februar :25, lefr. - The band is placed upon the fore leg, ibove the knee, and its pendant points priek the animal when it attempts to lie down.

Claim.-1. An apparatus for preventing eattle from lying down or jumpiug, substantially as shown and dencribed.
2. The strap $a$, in combination with the prickinc points $e^{\prime}$, substantially as shown and described, anil for the purposes set forth.
 -February 25, 1868. The dasher hoad is spime in form, and the sides of the cream ressel have spiral ribs. The dasher staff turns in bearings in a firame, Which is clamped by a serew to tho cross-bar of the stand firame.
Claim.-1. The combination of the serew dasher E, constructed as deseribed, with the ehurn 13, haring two or moro inclined ribs or flanges $b$ attached
to its inner surface, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the clamp $H$, constructed substantially as lerein shown and deseribed; that is to say, with jaws $h^{1}$, bearings $h^{2}$, and arm $h^{3}$, with the dasher shaft $F^{F}$ and erank wheel $I$, as and for the purpose set forth.
 February 25,1868 .-The box is made of a thin veneering of wood covered by several thicknesses of paper. The layers are firmly compressed together, being secmred by a solution of glue, white lead, and alum.

Claim.-1. The combination of the outer and intner ease $E$ and $A$, constructed substantially as and for the purpose specified.
2. Connecting the cover and bottom to the rim and sides of a paper box by means of strips of textile substance, 1234 , more or less, substantially as and for the purpose set forth.

24,798.-Albert Comer, Cuyahoma Falls, Ohio.
Clothes Line Holder.-February 25, 1868.-The lime is lield between the serrated roller and segmental cam.

Claim.-The plate $B$, with swinging cam $C$, arranged in such manner as to operate by its owh weight from either side, and flanged serrated roller D, when combined as and for the purpose set forth.

等, "95.-JOHN COMains, Charlestown, Mass.Treating IIncral Phospleates for the dIanufacture of Fertilizers.-February 25, 1868.-The mineral is heated to a red heat and plunged into a solution of common salt.

Claim.-Uniting phosphatic minerals or carths with a solution of common salt, (chloride of sodium, ) and water, while lot, as and for the purpose herein described.

- 40 , 80 - Samuel E. Condon, Williamsburg, N. Y.-Curling Iron.-February 25, 1868. - The heater is held in the cylindrieal case by a spring catch on the latter, which engages a collar on the former.

Claim.-The curling iron $A$, when secured in the metal case $C$ by means of the catch $F$ upon the case, fitting orer the flange $G$ upon the handle $B$, as herein shown and described.
g $4,301 .-$ Samuel E. CONDON, Brooklyn, N. Y.Dust Pan.-Tebruary 25, 1868.-The lip and hinged corer form an incline, up which the dust is swept, to be received in the pan. The lid is held in this position by a catch, till the sweepings are to be discharged.
Claim.-1. The hinged cover D, applied to the dust pan $A$, and arranged in connection with the inclined flange $C$, when a space is left between the linge of the cover and the rear end of the pan $A$, and when combined with the automatic coupling, all eonstructed, arranged, and operating as and for the purpose deseribed.
2. The antomatie or self-acting coupling, composed of the piroted rod $E$, secured to the bottom of the pan with a hook $f$ at one end and a woight $h$ at the opposite end, and the staple $e$ attached to the under side of the lid or cover D, substantially as and for the purpose specified.

194,8012.-W. C. COok, Appleton, Wis.-Running Gear for Wheelad Vehicles.-February 25, 1868. -Both bolsters are pivoted to the axles. The rear hounds of the fore axle are pisoted to the reach and hare a segmental guide bar embraced by a staple at the fore end of the reach.

Claim.-1. The combination of the reach E with the hounds $\mathrm{C} C$ of the front axle $A$, the bearing plates $a$ a at the rear of the hounds, the piroted rear axle $B$, and the scement bar $c$, with the front end of axe 13 , and the segment connected to it by a staple $b$, all arranged substantially in the mamer as and for the purpose set forth.
2. The construction of metal stakes $G$, secured to the bolsters, each by a single bolt $f$, arranged and applied substantially as shown and described.
g4, 803.-WILLiam S. Coorerr, Philadelphia, Pa. -Globe Valve.-February 25, 1868.-The valre is upon the square stem which slides in the central guido piece. The latter has an annular recess receiving a collar upon the stem. The stem has a screwthreaded end entering a socket in the valve piece. A cap is sererred on above the collar.

Claim.-l. The combination of the eentral gruide piece $G$, cap $B$, and body $A$, substantially as herein set forth.
2. The arrangement of the spindle $S$, central guide piece $G$, square shamk $X$ of the valre $V$, with the cap I and borly A, substantially upon the principle as herein set forth.
g4,804.-EDWARD M. D.Avis, Pittsburg, Pa., assighor to limself, J. B. Clark. and J. A. Hunterr, same place.-Securing Labels on Glassware.-February 25,1868 . - The metallic label is placed in the mold and the glass blown against it.
claim.--1. The proeess for countersinking a metallic substance in glassware, in manner and for the purposes substantially as described.
2. The combination of the inetallic substances $B$ and $C$ with the glassware $A$, in manner and for the purposes herein set forth and described.
74,805.-PAUL DenNis, Schuylerville, N. Y., assignor to himself and GEORGE LEGGETTE, same place.-Gate Hinge.-February 25, 1868.-Theswivel piece turns in the bracket and has upward guides for the top bar of the gate. The said bar runs on an anti-fiction roller journaled in the guides.

Claim.-The construction of the gate hinge, consisting of the forked portion $D$, having a soeket in which the pintle $C$ of the bex B fits, said box carrying above the pintle, in the grooved guides $b$, the roller A, as herein described, for the purpose specified.
g4, 806.-Francis E. Droll, St. Charles, Mo.Channeling Tool.-February 25, 1868. -The cutter's are adjustably sceured by thumb screws to a longitudinal and inclined surface, respectively. The spring guide is adjustable by a temper sorev.

Clain.-1. The side bar B, as united with main bar A, for the nse and purpose as specified and herein set forth.
2. Adjusting my smaller knife $D$ to the small or side bar B by means of the screws, independently of any other part of my machine, for the use and purpose as specified and hereinbefore set forth.
3. The spring E, as constructed, so that it may be moved up or down in main bar as a guide, for the use and purpose as specified and herein set forth.
4. The entire combination of the limives, spring, and bars, with the mode of adjusting the knives and spring, for the use and purpose as specified and herein set forth.
学4,817.—S. W. Durman, Ipara, Ill.-Strap Fast. ener:-February 25, 1868.-The strap and its replieatco end are passed through the loops of a plate and the said end is detained by a tongue.

Claim. - The strap tiastener, construeted as deseribed, cousisting of the plate $B$, haring upon one of its sides the loops C D, the latter bearing the tongue E , whose inner end fits within the strap between the loops C D, as herein shown and deseribed.

19,808.-GREEN Fenton, Streetsboro, Olio,Shecp Shearing and Tagging Table.-February 25 , 1868.- The sheep is placed upon the slat-topped table, and its neck is laid over the block, its head being held down by the piroted strap. The legs are passed beneath the hinged rokes. The supplementary top gives means for holding the animal upon its back, between the sides, while tagging.

Ctaim.-1. The bottom C, consisting of the sides D , yokes F , and straps E , as arranged, in combination witl the table 13 and adjnstable neck block $G$, for the purpose set forth.
2. The sliding supplementary top I, sides $J$, pillow $K$, and extension legs A, all constructed and arranged in the mamer and for the purpose specified.
g4, $89 \%$-James H, Flaca, Perkinstille, Vt. Frame for Carriage Tops.-Ecbruary 25, 1868.-The
ends of the middle bow enter soekets in the ends of the seat, and the front and rear bow are jointed to the middle one. The bows are jointed in the middle to oceupy small spaee when put amay.

Claim.-The carriage-top frame, consisting of two or more bows of metal or other suitable material, the side bors being hung on an internal one, and the whole jointed in the middle, in manner and for the purposes substantially as abore set forth and deseribed.
74.310.-Matmas D. Fogel, Alpha, Ohio.Bee Hive.-February 25, 1868.- A wire sereen is plaeed in front of the entrance in cold weather to keep the bees from wandering. On each side of the entrance are blocks beneath rhich the millers pass into a clark chamber which has communication with a light ehamber abore it. The latter may be remored and the millers destroyed. The blocks may be drawn out to clean the dark chamber. The hive top is sloping, and the fonl air escapes through a register beneath its rpper end.

Claim.-The within-deseribed hire, when its sereral parts, exclusive of the trough, are eonstructed, combined, and arranged as set forth.

74,811.-Albert A. Frememan and Shauel Fond, Philadelphia, Pa.-Track C'leaner.-February 25, 1868. -'The brushes are rotated by gearing eonnection to the axles, and are made of pudials of whole rattan inserted in a hub).

Claim.-1. Bed plate B P, bearings 1, 2, 3, 4, 5, 6, 7, 8,9, and 10 , shafts $\mathrm{T}, \mathrm{T}^{\prime \prime}$ ' $\mathrm{I}^{\prime \prime}$, and $\mathrm{T}^{\prime \prime \prime}$, brooms C $B, C^{\prime} B^{\prime}, C B^{\prime \prime}$, and $\mathrm{C} \mathrm{B}^{\prime \prime \prime}$, shafts S and $\mathrm{S}^{\prime}$, beveled wheels $V, V^{\prime}, V^{\prime \prime}$, and $\nabla^{\prime \prime \prime}$, geared irheels $G, G^{\prime}, \mathrm{G}^{\prime \prime}$, and $G^{\prime \prime \prime}$, all constrmeted, combinerl, and operating in the manner and for the purpose abore set forth and described.
2. The combination and arrangement of the screws SC and $\mathrm{S}^{\prime \prime}$ with the car rame, so as to give the proper dip to brooms C B , $\mathrm{C} \mathrm{B}^{\prime}, \mathrm{C} \mathrm{B}^{\prime \prime}$, and $\mathrm{C} \mathrm{E}^{\prime \prime \prime}$, as above set forth and deseribed.
3. A track elcaner, composed of the above-described parts, constructed, arranged, and operating in the manner and for the purpose abore set forth and de scribed.
(4,812.—Tomn C. Fny, Sidner, Ohio.-Bed Bot-tom.-Webraary 25, 1868. -The loops of the rails and slats are connected by flat rubber rings which may be disconnected from the slat loops by passing throurh the opening at the center:

Claim.-1. The loop b b, eonstructed as described, consisting of the wires E E , open at therir outer onds, and applical to the slat D, hy inserting their opposite ends from the under side throngh the holes in the end of the slats, and bendiug them down upon the top of said slats toward each other, where they are again bent and iuserted in the top of the slats, as herein shown and deseribed.
2. The single metaliie strip C, seenred to the end or side rails A by the strip B , and bent to form loops a whose silles pass throngh the strip $B$, and Whose inner ends rest against the immer side of said strip, as herein described for the purpose specified.
3. Having the hoops $b$ open in or near their centre, as and for the purposes set forth.
4. The combination of the loops $a$, strip $B$, loops $b$, with central opening, elastic rings F , as herein described for the purpose specified.
(g4, $81:$ - A vinielv Fulder and Louis P. ReichEnt, Buffalo, N. Y.-Refrigerctor.-February こ.) 1868. - The air is propelled by a rotary fan actuated by clock work, ant passes through the ice ehamber and into the main ohamber. The warm air from the npper part of the main chamber is carried ont throngh the charcoal chamber.

Claim. - The combination of the fam wheel $C$, sliding girate $M$, the tubes $O, P$ and $Q$, and chareoal ehamber $J$, arranged substantially as and for the purposes deseribed.

4,814.-MEmint B. Fuldeli, Sandborn, N. Y. -Inay Raker and Loader. - Febmuary 25, 1868. -Tho machine trails behind the wagon. The drum is rotated by contact with the ground and moves the elevating band.

Claim.-1. Tho driving roller B, provided with rows of enrred tecth $b b$, and intermediate teeth $s$, which rest on the ground and support the roller, in combinatiou with the rako $c c$, or equivalent, and eudless carrier $\mathbb{C}$, operating substantially in tho manner aud for the purpose set forth.
2. The guide blocks i $i$, combined and arranger with the rows of teeth $b b$ and tho slats $g$ of the carrier, for retaining the latter in plaee and present slipping, substantially as specified.
3. The gude board $J$, constrmeted and armanged and operating in the manner and for the purpose specified.

74,815.-A. C. Fuxston, Philadelphia, Pa.-Toy,-February 25, 1868.-Tho glass is electrically excited. agitating the figures beneath it.

Claim.-A toy consisting of a case having a glass top, and containing figures or particles of paper or equivalent material, to which movements may bo imparted, substantially as and for the purpose described.

94,816.-Kingston Goddard, Richmond, N. T . -Thill Coupling.-February . 25, 1868.-The thill iron ends in a coiled spring, whieh is bolted to tho elip.

Claim.-The spring C, scenred at one end to the bottom of tho chip $D$, and extencling around the axle and elip, secured iat its other cond to the thill 13 , forming aspring coupling, as herein deseribed for the purpose specified.
g4,817.-Kingston Godoard, Riehmond, N. Y. -Thill Coupling. - Febirnary 2.5, 1868.-The rear end of the thill iron is formed so as to embrace the bridle bar of the clip, ame can only be remored when the onds of the thills rest upon the cround.

Claim.-The bending or forming of the onter end of the thill iron, substantinliy as shown and described, so as to be capable of being fitted to the under side of the clip, in the mammer as and for the purpose set forth.
 Truss.-February 25, 1868.-The pads are attached to lightsprings which are hinged to adjustable spring bars. The latter are attached to the hinge plite of the two main plates which rest against springes and keep the pads in place during the morements of the body. The girdle straps are attached to the ends of the main plates.

Claim. - The combination and arrangement of the main plates $A$ A, hinged to the centre plate a, tire stiff spuings $c e$, tho slotted aljustable plates B B with cross heads $g a$, the pads $C(B$, and the light springs $h h$, substantially as and for tho purposo describerl.

- $1,819 \cdot-$ James Greenilalari, Womsocket, R.I. - Harness Mechomism for Looms.-February ī, 1868.-The slides :1ro operated by rods connected to arms projecting in opposite directions from arock shat actuated by commection to a erank on the end of the main shaft. The links exteud transrersely and comrect vertical arms of the jacks. Tho links are retuated by the slides through the medium of the hook hars which have one heary end to engago the slido when not depressed at the other end by the radial pins of the eylinder. The hook bars have theirend movement from the slides, and communicate it to the links by a tenom of the latter which enters a vertical mortise in the said bars. The pin cylimler, by which the light eucls of the hook bitrs are depressed, is actuated by a pawl upon a sleere connected hy an arm to one of the adjustable operative rods of the slides. The jacks hive segmental worling fitees, and are united to horizontal levers comneeted to the lower part of tho harness and preservine its tantness

Claim.-1. The links O and hooks İ, constructed as described, when removiably pivoted together by means of the notched pirot and slot $o^{\prime}$, in combination with the slides L M, eylinder $s$, as herein describer for the phrpose specified.
2. The combination and arrangement of the arms F II I, adjnstable commecting roits J K, slidines bars L II, links O, hooks $I$, eylinder $S$, paml V, slotted
arm U, and mper jacks $P$, with each other, substantially as herein shown and described.

194,820.-Silas B. Harmon, Portland, Me. Carriage Thill.-February 25, 1868.-A curved bar is jointed at two points to the ordinary thill iron, so as to strengthen the bent part. A loop at the lower end receives a safety strap to come in operation in case the coupling becomes detached.

Claim.-The thill brace $b$, when applied substantially as and for the purposes set forth.
g4,821.-Daniel Hays and Wilinam Free, San Francisco, Cal. - Fire Eseape Ladder.-Fcbruary 25, 1868. -The ladder turns upon a shaft near its lower end, and is raised by a cord passing beneath a curved plate at its feet. The upper section is raisod by an endess eord revolved by a windlass.

Claim.-The combination and arrangement of the purved and grooved arm $n$ with hinged ladder $c^{\prime}$, winding roller $I$, rope $\Pi^{\prime}$, and platforne $\bar{B}$, substantially in the manner shown and described, for the purposes set forth.
\%4,82\%.-Ricmard H. Hiton, Newbern, N. C., assignor to Mitcheid \& Allen, same placc.-Machine for Cleaning Cotton.-February 25, 1868.-The cotton passes from the gin into a case whose sides are perforated to allow the escape of cust. The cotton is carried from the case by the rollers at its lower end.

Claim.-The S-shaped perforated plate $b$, the perforated plate $d$, the side plates having perforations $a$, drawing rollers E E, and hinged screen D, all constructed and combined to operate as hercin described for the purpose specified.

74,82B.-J. W. Hinman, Berlin, Wis.-Harness Pad Tree.-Febrnary 25, 1868.-Loops unite the side pieces to the middle portion.
Claim.-A harness pad tree, having the two sides comnected with a centre piece by joints or linges, to render them flexible, substantially as and for the purpose herein described.
94,894.-E. W. Hitcirings, Potsiam, N. Y.Grain Regutator.-February 25, 1868.-The grain passes through a vertical rotating cylinder in which is a valve adjusted by the governor to regulate the flow of grain to the speed of the mill stone.

Claim.-1. The combination of the revolving eylinder A and stationary eslinder $B$, governor $D$, cross har $\dot{u}$, spindle $d$, piston E , and collar $q$, substantially as set forth, for the purpose specified.
2. In combination with the above, the distributing plate $J$, side pieces $K$, and screw $S$, said plate being attached to the revolving cylinder A, substantially as shown and deseribed.
3. The hopper M, substantially as shown and described, in combination with the cylinder B, revolving cylinder $\Lambda$, and piston E , all as set forth.
4. The guide H, or the equiralent thercof, substantially as shown and deseribed, in combination with a piston E of a cylindrical grain regulator, all as and for the purpose set forth.
5. The adinstable feed collar $q$, substantially as shown and deseribed, in combination witl the cylinder $B$ and piston $E$, all as and for the purpose set forth.
g4, $825 .-$ Sochates Hubbard, Quincy, Ill.-Toy Gun- February 25, 1868. -The slide is drawn forward by an clastic cord beneath the barrel, and is forced back, when loading, by a ramrod. The forward arm of the trigger has a spring beneath it, and a catch upon its ripper side which engages the slide.

Claim.-1. Construeting the slide D of two heads $h h$, an intermediate slip $i$, and pendent projections of, wherely lightness, with strength and durability, is obtained.
2. The stop $G$, constructed and applied to the gun to retain the missile therein when the barrel is inclined downward, substantially as set forth.
3. The eombination of the clastic cord C , slide D , trigger E , and stop G , all arranged for joint operation, substantially in the manner as and for the purpose specified.

94,826.-Willinit C. Hugires, Scio, Mich.Self Raising Flour.-February 25, 1868. - Ycast eake, 1 lb ., is mixed with wheat, 1 bushel, and ground to flour.

Claim.-The preparation of self raising four in the manner herein deseribed.

91,88\%.-August Humann, New York, N. Y.Button Hole Cutter.-February 25, 1868. -One of the cutter plates is adjustable in direetion nearly perpendicularly to the edge, and the other eutter is adjustable Iongitudinally to regulate the length of hole to be cut.

Claim. -The blade F, having a tooth $e$, formed at the rear end of its cutting edge, wheu said plate is laterally adjustable, in combination with the blade E, provided with a stud $b$, Working in a slot in the shank C, and secured in position by the thumb serew $e$, all constructed, arranged, and operating as and for the purpose herein specitiod.
g 1,828 .-C. A Jefferies and E. F. Olds, Dexter, Mich.-Truss.-Tebruary 25, 1868.-. The pad is attached to the spring, and its central part is mored outward, or retracted, by a screw which is operated from the outsidc.

Claim.-1. The pad A, provided Tith a rigid central projection, as arranged in combination with the springs $F$ and belt $E$, for the purpose and in the manner set forth.
2. The pad H, when construeted with a eentral adjustable projection or core $c$, adjnsting screws I K , when arranged in combination with the cap $\mathcal{J}$, plate $G$, and springs $F$, in the manner as and for the purpose substantially as set forth.
3. A pad, wheu constructed with a central air chamber L , ventilating loles $a$, and plate N , in combination with the screw $O$ and spring $F$, when arranged in the manner as deseribed and shown in Fig. 7.
4. The segment slide $\mathrm{D}^{\prime}$, segmental plates $\mathrm{E}^{\prime}$, and section or cap $\mathrm{C}^{\prime}$, when arranged and piroted to the scetion $\Lambda^{\prime}$, by an adjusting screw $\mathrm{F}^{\prime \prime}$, working in and operating a central core $B^{\prime}$, so that when the pad is turned around from one side to the other, the said central projection or core $B^{\prime}$ ' will alwars occupy the same direction from the centre of the belt, in the manner sabstantially as described and shown in the Figs. 8 and 9.
g4,8æ9.-James Jorey, Westrille, Coun.-Horse-shoe.-February 25, 1868. The ealk has a Z-form and the unused edge projects upward by the inside edge of the shoe.
Claim.- A calk for a horse shoe provided with two edges, and constructed and applied to the shoe in such a mamer that it may be detached and rerersed and either edge adapted for use, as circumstances may require.
g $4,8 \% 0$ - -Mfary Kassing, Newt York, N. Y.Machine for Cutting Vencers.-Febrmary 25, 1868.The reneer is cut transversely by a knife on a reciprocating head. The hlock is fed formard by a screm shaft which carries a serew gear wheel actuated by rotation of the worm shaft.
Claim. - The worm shaft M, worm Thecls N, screws $\mathrm{M}^{\prime}$, and har G , upon the inclined guide $d$, all constructed, arranged, and operating upon the laterally moring table H , as herein described for the purpose specitied.

94,531.- O. A. Kenton, McGregor, Ioma. Wagon Toek.-February 25, 1868.-The inclined fulcrim slot at the lower cnid of the lever canses the elevation of the latter by a backward pressure, and release of the parl from the ratchet.

Claim. -The slotted arm F of the lever L , in combination with the pirot $\alpha^{3}$, patrl $P$, segment R , connecting rod $a$, and piroted brake $C$, as herein described, for the purpose specified.
ga 4,832.-Peter. Kerr, Paisley, Great Britain.Dfachine for Polishing Threall. - Febrary 25, 1868.The hank of thread is stretehed on the tension rollers and polished by the lanteru whecls whose bars are circumferentially grooved. The Dars of one wheel pass between those of the other so as to cause the
thread to lap around a considerable part of the circumference of the bars and increase the friction upon it. The teusion is regnlated by weights.

Claim.-1. The machine for polishing thread, construeted and arrauged substantially as herein described.
Z. The construction and arrangement of the polish ing apparaths herein describod, in which the thread is polished br means of rollers haring grooves or indentations, said rollers working nip arainst the thread, one inside and the other ontside the hank, smbstantially as herein shown and deseribed.
72. 8 Bi3.-Dantel Kindig, Newrille, Pa.-Composition for Cleaning Millstones.- Fehruary 25, 1868. -Used ivith a scrubbing brush, and composed of hot water, 1 gall.; borax, $\ddot{\partial}$ oz: : sal prunclla, 3 balls; sal soda, 1 lb . When grinding garlic wheat the stones are not taken up, but a ball of the sal prunella dropped through the eye twice a day.

Claim.-The aforecring solution, prepared sulbstantially as deseribed for the purpose set forth.

74,834. - Whliam Klema and R. Ditthich, Pittsburg, Pil-Bolt Making Machine.-February 25,1868 . -The mechanism is operated by eceentrics upon the main shaft which thon in rectangular frames. The cecentries impinge at one side against the kers Which slide in from abore, and may bo withdrawn to stop the machine, the cecentrics then being inoperatire.

Claim.-The leys H and I, or their equiralent, arranged in relation to the other parts of the machine, and operated substantially as deseribed, and for the purpose set forth.

74,835.-Ebenezer E. Lewis, Genera, N. Y.-Harvester.-February 25, 1868.-The first swath is delirered behind the middle of the enter bar, and by reversing the motion of the apron the second swath is delivered upon the former one.

Claim.-1. The reversible conreyer E, when used to delirer grain from a reaping machine behind the finger bar, sulsstantially as specified.
2. A discharging apparatus for harensters, which will delirecr the second strath fiom a reaping mathine directly upon or so near the first swatl as to form a double swath or windrow conrenient to be loaded upon a wagon.

74, 836. - Citristopher Lidren, Lafayette, Ind., assignor to hinself and I. Jacissox, same place.-Harvester lake.-Febrnary 25, 1868. -The grain falls on the metallic bars, is carried by the rake to the top of the main frame, falls into the hook jaw's which are folded upon it, and is then bonnd by hand. The rake tecth are raised during their morement toward the main frame, and depressed in their backward morement, being raised at the ontrard end of the stroke. The rake is actnated by comection to a lever upon a rock shaft which has an arm connected by a socket-jointed comection rod to an adjustable crank pin upon an arm of a slecte on the axle. The slecere lus ratelet elutch comection to a collar spliued mpon the axle and operated by a lerer.
Claim.-1. The hiuged platform $B$, in comection with the elastic metallic bars 1), constructed, arrauged, and applied in the manner substantially as and for the purpose herein set forth.
2. The reciproeating rake E, when operated from the wheel K of the main frame, through the medium of the jointed arms $h h^{\prime}$, rock shaft 1 , link L, and the slotted arme I on the axle of whel $K$, all arranged substantially as shorru and described.
3. The earriage F , in which the rake head or rod $b$ is fitted, in combination with the lever $\mathrm{F}^{\prime \prime}$, curved bar G, projection L, piu $J$, and the entved bir M, all arranged to operate or adjust the rake, substantially as set forth.
4. The hooks $\mathrm{N} \mathrm{N}^{\prime}$, arranged as shown, and operated from the rock shaft I, through the medinn of the lever Re, and the arm $m$ on the rock shatt, all arrauged substantially as specified.
g4,5:3\%.-Hexiy W. Loudme, Ephrata, Pa.Egy Beater-February 25, 18 (88. -The beaters are carried upon a central shaft and a sleere upon tho
latter, and are so connected to gearing as to have opposite rotation.
Claim.-The arrangement of the double beaters D d C C' pipe or slecre B , and spindle A , with the pinions $a b$, in combination with the box or corer K T, eogged gear and landle, sulstantially in the manner and for the purpose specified.

19,833.-Galusiha Marantille, Mampton, N. T., assignor to D. A. Wifson and Ebenezer Gould, Ji:--Mechanisin for Operating stationary MIachinery. - Fehrnary 25,1868 - The main shatt is connected by a train of whecls with the other shafts, the intermediate gearing being proportioned and adapted to the duty and speed recpured.

C'laim.-1. Transmitting, from one shaft B, by intermediate gear whecls and shafts C D F , motion to two revolving shafts F and H , and to one oscillating shaft ( r , all made and operating snbstantinlly as deseribed, so that, from one driving sha lt, three or more rarions machines may be operated, as set fortl.
2. The manner of converting rotmr into oscillating motion hy comnecting a short crank $l$, on the re rolving shaft F, ly means of a rod, $n$, with a long crank $\mathrm{m}_{\text {, on }}$ on the oseillating shaft $G$, substantially as herein shown and deseribed.
g 4, 839.-Oliver M. Marstox, Smulwich, N. H., and Moses L. Morse, Stoncham. Mass.-Pustening Shoe Lacing.-Februaly 25,1868 . The laces piass through two holess passing directly throngh the phate and are then turned sideways beneath the $\mathrm{sp}_{1}$ ring tongues.
Claim.-1. The base $a$, having openings $c$, for the lacings to pass throngh, and haring the ends $d$ bent uprard at any convenient angle.
2. The spring $b$, haring the celges $f$, which are parallel to the upturned ciges $d$ of the base, slightitly bent downward.
3. The combination and arrangement of the base $a$, with the spring $b$, to operate together as specified.

94,880--Charmes Maurice, New Tork, N. Y.Lithographic I'ress.- February 25, 1868; antedated February 13, 1868. -The lithographic stome is rertically adjustable upon a frame which is made adjustable in extension to suit stones of different sizes. The pressure roller is journaled in a frame haring a pendent, weighted rod.
Claim-1. Tho ease $C$, when arranged so tlat it can be adjusted for wider or marrower stones or blocks, substantially as herein shown aud deseribed.
2. The ease C, when consisting of two pieces or halves, which are laterally adjustable on the frame A, and when combined with the up-anc-down adjustable frame or plates IL, all wranged and operating substantially as herein shown thed deseribed.
3. The roller D, whea connected with the weighted frame $E$, and with the stone or block $G$. so that hy rotary motions of the roller the latter will be mosed over the stone ; i.e., it will come in eontact with and press upou each part of the paper and stone, and will not he drawn over the same, thereby insuring neatness of workmanship.
4. The adjustable frumes C and $\Pi$, in combination with the roller I) and weighted frame E, all made and operating substantially as and for the purposo herein showh and described.
g4,S41.-Norman Maxilan, Mancock, Vt., assiphor to himself and C. G. Robbiss, same phee. Ihub and Axle.-Febrnary 25, 1868. - The sand hend is attacherl to the lubl, and has two ont-turned flanges to prevent the passage of earth around its end. The sand head is corered by a bos attachod to the axle, which box has a slot in its lower side to allow the dirt to fall out.

UJaim.-The sand head D, in combination with the hul) A and corer II aud axle B 3 , substantially as shown and described, and for the phrposes set forth.
g4,842.-William Miller, Chicopee, Mass., assignor to himself ind Joha Boydre, Frie, Pab- 1 mi mal Trap.-Felruary 25, 1868.-The bit iss hung to a hook projecting through the concare phate attached to the post. The hook is attached to the cateh bar loy which the fore cud of the drop door is sustained.

A pull upon the bait trips the door. The back end of the door is weighted to render it rese tting.
Claim.-The conbination nad arrangement of the weighted drop door B, loop or eatch C, pivoted cateh D, having a bait hook $d^{\prime}$, formed upon or attached to it, spring $G$, standard or post $E$, and curved ginard plite F , with each other and with the top or cover $A$, substantially as herein shown and deseribed, and for the purpose set fortl.
g1, ©43. - Hexry Mrtchell, Racine, Wis,Wagon Coupling.-February 25, 1868.-The reach passes through tine metallic sucket platos which are attached to the rear bolster anll ayle and to the forward ends of the honnds respectively. The latter socket pieee has side sockets for reception of the ends of the hounds.
Claim.-1. The method of eoupling the reach C to the other running parts of $f$ wagon or other wheeled vehiele by means of the front coupling A and the rear eonupling 13 , construeted and attached substautially as shown and described.
2. The construction of the coupling box A, having the sides thereof bent intward, so as to formi thic sockets $a$, substantially as slown auld deseribed and for the purposes set forth.
3. The flanges $c$ upon the rear coupling box B, in combination with the bolster E and the axle F , sub). stantially as shown and described, and for the purposes set forth.
4. The manner of aljusting the length of the reach C to the length of the load, substantially as shown and deseribed.
5. The furward conpling box $\Delta$, with the reaeh C , and the hounds $D$, in combination with each other and with the rear coupling box $B$ and the axle $F$ and bolster $E$, subsstantially as shown and described, and for the purposes set forth.
g 4 ,344.-George Place, New Fork, N. Y.Show Plow.-Febrinary 25, 1868 .-The snow is divided by the vertieal kriives, and its upper stratum removed by the uppice plow in advance of the action of the lower plow.
Claim.-The combination and arrangement of the knives A A and B B in scetions, when conblined with ouc or more plows, attached to the truck frame, and with the frames E E E of the truck, in the manner and for the purpose therein described.
 and A. J. Fariaxd, Raritan, N. J.- Harvester Rake.-February 25, 1863. - The rake and reel revolre on a vertical axis over the shoe upoin a standard bolted directly to the inner end of an axiallyrocling hinged finger beam. The rake receives motion from the main asle, but is free from the irregular motions of the main frame.
Claim.-1. A standard for a revolving rake and reel, with its lase bolted dircetly to the inner end of a finger beam, having a roeking or rotling axle above a the plane of the eutters, between the finger beam and main frame, wherely the finger beam can roek mainu frame, whereby whe inthont disturbing its relation to the rale.
2. The combination, substantially as deseribed, of a revolving recl and rake with a standard bolted direetly to the inncr end of aut axially-rocking hinged fingcr beam, and without support on the main frame.
3. Monnting a rake and reel, revolving on a rertical axis, on a finger beatn hinged to the main frame by three joints, substantially as deseribed.
94,S46.-Thoifas Rattenbury, Detroit, Mich. - Self-Acting Bolt.-February 25, 1868-The first elosed of two folling' dours has the boit attached. The knob projects through an inclined slot, and is swrug around by the closing of the sceond door, thas forcing down the bolt.
Clainh.-1. The projection or thumb picee C, working in the slot $\mathbb{R}$, by which the closing of the seeond duor compels the bolt $B$ to aet.
2. The combination of the above deseribed parts with the frame $A$, the spring $D$, and the sten $F$, When constructed to aet antomatically, substantially as describel.

194,847.-J. H. Redfield and W. J. Cox, Salem, Ind.-LIarvester.-February 25, 1868.-The cutter
tecth are edged only on their concave side, and the bar is connceted to a erank at each end so as to operate Tith a draw cut. The cutter mechanism is vertically adjustable upon the pendent plate. The grain is carried by endless belts to the receptacle which is suspended on a roek shaft, by whose movement the grain is discharged.

Claim.-1. The cutter bar $i$, provided with the curved tecth $h$, haring their concare edges forming the eutters, in combination with the crank pulleys $j$ upon the vertieal shafts $k$, gears $l$, shafts $m m^{\prime}$, bevel gears $n$, shaft $o$, pinion $p$, aud gear wheel E upon the axle I), all arranged to operate as herein described, for the purpose specified.
2. The endless bands $q q$, when provided with the springs bx, in combination with the gavel recciver Ix, pinion $u$, curved segment $w$, shaft $w x$, and ciank $a x$, all arranged and operating as described, for the purpose specified.
3. The application of springs or elastic plates $b x$ to the endless bands $q$, for the purpose of discharging the cut grain into the grain reecptacle, substantially as set fortll.
4. The pendent plate I, when provided with the curved slots $f$, in combination with the set serew $e$, frame H , and bár A , all arranged and operating as described, for the purpose specified.
g4,848.-C. H. Rice, Port Menry, N. Y.-Boot Crimping JFachine.-F'cbruary 25, 1668.-The boot trees are attached to a central shaft Whiel carries them around in contact with the adjustable ribs, which are so bent as to crimp the leather upon the trecs.
Claim. -The rotary boot trees C, in combination with the jarrs or pressure plates D $\mathrm{D}^{\prime} \mathrm{D}^{\prime \prime}$, Dx Dxx Dxxx, all being construeted and arranged to operate in the manner substantially as and for the purpose set forth.

94,849.-David C. Ricifardsox, Lairrenec, Mass.-Car Ventilator.-February 25, 1868.-The automatic slntters are connected together by a rod of sufficient length to hold one of the shutters open when the other is closed. On the passage of the car through the air the forrard shutter is closed by the pressure of an upon it, and the rear one consequently opencl; the foul air being drawn through the rear opening.

Claim. - The combination and arrangement of the self-adjusting folders $d e$, connceted by the rod $j$, in the open-mouthed space between the weather plates $b c$, with the register plates $p p$, substantially as and for the purposes hercin set forth.
74,850.-Willilim Riga, London, England.Screw Cap for Oil Cans.- February 25, 1868; patcnted in Euglaud February 6, 186i7.-The "struck-up" cap las an imner and outcr screw thread, the former of which cngages the faucet. The outer flange is soldered to the can.
Claim.-1. The serew cap for oil cans, struck up from one picec of metal, and used as a scal, substantially as herein shown and described.
2. The combination of the faucet, having a eutter upon its serew-thicade: end, with the struck-up metallic eap and seal, substantially as deseribed, for the purpose specified.

74,851.-Honer Riggs, Oxford, Comn.-Boot and Shoe Sole.-February 25, 1868; antedated February 12,1868 . -The metallic toe and rear plates are so arranged that a concaro-convex metallic plate may be sprung in betreen them.

Ulaim. - The toe picce A and rear plate B, as construeted, and the mamer of inserting the orer sole E and securing it for wear, so that it can be sprung in or out, substantially as and for the purposes herein set forth.
ge 4,8.52.-Epriratim P. Rogers. Corning, NT. Y., assignor to himself, R. W. P'sine, and Hikam Pritcinala, same place.-Governor.-February $2 \overline{5}$, 1868. -The rabue stem passes loosely throng the tulular stem, through which motion is communieated to the balls by means of a miter wheel upon it. The ball arms raise the stem through the medinm of the cross bar which is swivel jointed thereto. The weight
rests br means of its slidines stem upon the cross bar to regulate the action of the revolring balls.

Claim.-The governor, construeted as described, and consisting of the hollow slotted disk A, haring tubular stem B and neek $n$, the weight K provided with stem $m$, valve stem C , swivel joint $f$, cross bar F, commections G, levers E and balls D, all arranged and operating as set forth.
74.8.5.3.-James Russell, Springfietd, Mass.-Card-Setting Machine. - February 25, 1868. The sheet of metal is clamped to the internittingly sliding carriage which is operated by the gear. The motion of the gear is dependent on the form of the cam and number of stops in the ring. The sheet of metal reecires a puncture at each panse. The sheet is then mored transpersely, and another line of punctures made in the return movement. In revolving in one direction the stop comes on one side of the roul, and when the motion is reversed, upon the other side of the same.

Claim.-1. A rerersible stop ring A, with its flanges $b b$, its sluts $c e$, and its rolls $d d$, and groore $a$, construeted as herein described, and for the purposes specificd.
2. In eombination with the above, a pin or plnnger I, worked by the eam K , as and for the purposes deseribed.
94.8.54.-P. J. Severson, Knowersrille, N. Y.-Beehive-February 25, 1868.-The surplus honey frames are divided at midlength to give a greater surface for the bees to operate on. The top bar of these frames is carricd across. The frames are separated by pendent perforated boards which limit the comb to the width of the frame.

Claim.-1. Separators E, when constructerl with top bar $G$ and pins II, substantially as and for the purpose described.
2. The clouble comb frames D, in combination with spaces $s s^{\prime} s^{\prime \prime}$ and separators E , substautially as herein set forth.
3. Surplus honer box B, with its eap or eover C, and double comb frames D D, and separators E, when constructed in the manner and for the purpose as lerein described.

74,5.55.-MFORRILL A. Shepard, Bridgeport, Ill. -Pan Lifter--February 25, 1868.-The near side of the pan is cmbraced by a laterally extending reetangular loop, and its distant side by the hook npon the sliding rod.

Claim.-A pan lifter, consisting of the members A, $a a^{\prime}, \mathrm{B}, \mathrm{C}$, and D , the whole being arranged and operating snbstautially as herein described and for the purpose set forth.

94,850.-Mexiri Shirey, Fond du Lae, Wis.Dumping Wagon.-February 25, 1868.-The bottom boards have end loops, by which they may be drawn out chdways when the supporting cross firames are tnrmed down. which is done by the longitudiual morement of the side rod to which their "cams " are connceted.

Claim.-1. The rerolring supporters $d d d d$, cams $f$, bar $g$, lever $h$, fulerum $k$, and brace $i$, constructed substantially as described and operating as set forth.
2. The bottom boards $b b$, loops $c e$, in combination with a boty or wagon bed, when constrneted and operating substantially in the manner and for the purposes set forth.
$74,5.5 \%$-Thomas P. Sink, Fairton, N. J., assignor to himself and J. F. Trexciard, Philadelphia, Pa-Oyster Dredging Machinery,-February
 tract with the lower roller, and prevent the contact of the tecth with the side of the ressel. The upper roller assists the dredre tecth in passing the lower roller, and catching the teeth completely tilts the dredge. A hinged bar may be plaeed between the rollers to support the teeth when traversing the space between the rollers.

Claim.-1. The two rollers F and G , arranged on the deek or gunwale of the vessel, for the boarding and tilting of the dredger, substantially as deseribed.
2. The combination, deseribed, of the rollers F and G with the hinged bai W.

74,8.58.-George and Gonfrey Smitir, New York, N. Y.-Boot and Shoe.-February 25, 1868.A portion of the surface of the "upper" is corrugated by the interposition of cords between the folds and a picee stitched beneath.
Claim.-The ornamenting of boots and shoes hy stitehing a pieee of leather or other suitable material to the inmer side of the upper in such a manner as to form pockets or grooves between the upper and the inner material, to inelose cords of any shitable material, by which prominenees are given the onter or external surface of the upper, substantially as shown and deseribed.

74,S59.-Hexry H. Smitir, Wilmington. Del.Pocket for Billet Straps.-February 25, 1868. The metallic socket is sewed fast by the perforated flange aromid its edge.

Claim.-A poeket E, of metal, or its equivalent. and at the lower edge of whieh is a perforated flange, for the purpose specified.
74,860.-W. H. SMitil and Josepif Stecer, New Tork, N. 1"-Car Brake,-February 25, 1868. The brake hars have anti-friction rollers, which receire the impact of spiral cams upon a shaft whieh is rotated by cords winding upon the hand shafta,

Clowim. -The combination of the spring K, cams I $I^{\prime}$, constructed as described, ropes or chatins $h$, and pullers $g$, substantially as and for the purposes described.

74, 861.-S. L. Stockstill and T. I. H. Scarte, Medwar, Ohio-Clover Marvester.-Febrnary is, 1868. - The heads are engaged by the comb teeth, and are remored theretron and into the reeciser by the knife bar, which has reciprocation in direction of the length of the teeth, being raised in its formard morement.

Claim.-1. The suspended bed C , in combination with the thills J J, attached to the axle $A$ and the shaft L, placed on the thills, with the segment $M$ on said shatt, the arm $O$, hand lever $P$ and pawl $Q$, all arranged substantially as and for the purpose set forth.
2. The eomb tecth D, attached to the front end of the bottom $a$ of the bed, in combination with the reciprocating bar G, operated substantially as shown and described, and provided with knives I I, which are provided with pendent pins $m$, to work in zimzag slots $n$, in one or more of the tecth D of the comb, to give said knires a reciprocating motion, as set forth.
g4,862.-Henry M. Stow, San Francisco, Cal.Street I'avement.-Febrnary 25, 1868. The blocks are guided while being inserted by beveled planks, Which are placed together to make a rectangular picee, and may be extraeted one picee at a time.
Claim.-A parement, composed of tiers of wedgeshaped wooden blocks, driven into a foundation bed of sand or earth, with spaces between said tier's packed with grarel, or sand and gravel, substantially as shown and described.
g. $4, \mathbf{8 6 3 . - A l v i n}$ Taplin, Somerville, Mass.-Lamp.-F'ebruary 25, 1868. -The hinge between the ammulus and the body of the burner allows the throwing back of the latter tor introdnction of the wiek.

Claim.-An improved lamp burner, constructed with the ammus E to screm into the neck or cap of the oil reservoir D, and with the body $A$ connected with the annulus by a hinge only, the whole being in order that the body, by means of the linge and the annulus, may be connected with the reservoir or its eap, in manner as speeified, and the body be movable relatively to such annulus, substantially as and for the purpose set forth.

71,864.-William A.Titus, Croversville, N.Y.Bread and Vegetable Outter.-February 25, 1868.One end of the knife is piroted to the lever, and the other is suided by an inclined slot so as to give the knife a draw-ent.

Claim. - A ranging the plates $B$ and $D$ in combination with the lever $F$ and knife $E$, all made and operating so that the knife will receive a slanting motion and the required pressure, substantially as set forth.

94,865.-Harriet Rutit Tracy, New York, N. X.-Crib Attachment for Ijedsteads.-Febriary 2.5, 1868.-The erib slips beneath the slats of the bedstead, entering at an opening in one of the side rails, which is cut away to admit it.

Claim.-The bedstead, when eut away in the center of its side to receive the erib E , sliding beneath the bars $e$ and betreen the transverse guide bars D , attached to the frame of the bedstead, the front end board of said erib enlarged to overlap the cut portion of the side of the bedstead, as herein set forth, for the purpose specified.

94,866.-Levi 13. Tyxg, Lowell, Mass.-Skate. -February 25, 1868.-The jaws of the stands embrace the rumer, and have a screw traversing a vertical slot in the same. Rabber blocks are interposed between the top and rumer, and serve to deaden the jar from rough ice.

Claim. -The combination and arrangement of the grooved stands $e e$, slots $d d$, serews or pins $n n$, spring seats $e e$, and springs $f f$, substantially as and for the purpose hercin specifica.

94,86\%.-Sigmund Ullman, New York, N. Y.-Envelope.-Februnry 25, 1868.-The side flaps are folded together and secured by one central eyelet. The end flaps are secured by eyclets passing through the letter, and serring also to sccure the cnds of the fold of the side flaps.

Claim.-1. The enrelope, formed with the end fanges or flaps F F and the folded aud interlocking edges $m m$, substautially as and for the purpose specified.
2. The combination of the eyelets $n n$, and stamped or printed impressions $v v$ around them, when constructed and employed substantially as and for the purposes specified.
94,868.-Charles Vogel, New York, N. Y.Trip Hammer.-February 25, 1868.-The crosshead of the hammer stem is connected by side rods to the angular arms of the beam, by which it is operated. The block against which the operative cam impinges is made adjustable upon the beam, to regulate the length of stroke. The sliding pulley is moved along the main shaft, so that the eam block of the beam will, when the hammer is raised, come in contact with its periphery and arrest the fall of the hammer, when desired. The treadle operates on the tightener frame, to briag an idler pulley down upon the main belt to start the machine or to increase the traction of the belt.
Claim.-1. The bars or rods $Q$ secured to the cross head P of the hammer stem K , when said rods are attached to the angular arms $R$ upou the fiont end of the beam S, as hercin shown and described,
2. The block U, prorided with the cam-shaped end $X$, when adjusted upon the beam $S$ by means of the slots $V$ and screw bolts $W$, as herein described, for the purpose speeified.
3. The arrangement of the sliding puller $A^{4}$, or its equiralent, with the block U and with the operating beam of the hammer, substantially as described, for the purpose specified.
4. The tightener frame $\mathrm{A}^{5}$, bearing in one end the driving pulley $B^{5}$, arranged with the comecting rods $\mathrm{C}^{5}$, cirved treadle $\mathrm{D}^{5}$, and spring $\mathrm{K}^{5}$, as herein described, for the purpose specified.

74,869.--Edward Wattis, Sr., Philadelphia, Pa.-Pepper Caster Bottle.-February 25, 18i3.The bottom is metallic, and has a sliding gate for the admission of pepper.

Claim.-The pepper caster bottle, haring a slide C in its flat bottom, cnabling the latter to be formed at the extreme lower end of the bottle, and increasing the eapacity of the same, as herein shorra and deseribed.

19,S70.-P. A. Whinner, Woodstock, Vt.-Drill and Countersink.-February 25,1868 . -The chuck is bisected to admit the drill, whose shank lies in grooves of the inner faces of the scetions, and has vertical adjustment therein.

Claim.-1. An adjustable tool for the drilling and countersinking holes, composed of the countersink $e$ in two parts, and a drill $D$ between the same, adjusted
by a key, or its cquivalent, held between the segments A and B of the chnck by being serewed into a socket C, substantially as shown and describod, and for the purposes set forth.
2. A chuck formed in sogments, having two splines or chanuels $a$ and $a^{\prime}$, of different depths, in combination with any countcrsink $e$, and drill D , substantially as shown and described, and for the purposes set fortli.
74.871.-T. M. Wilson, Scguin, Tex.-Cosmetie. -February 25, 1868. -Composed of sodn, 1 1b. ; potaslı, $1 \mathrm{lb} . ;$ chloride of lime, 2 liss.; liquid ammonia, $\frac{1}{4} \mathrm{lb}$. ; and distilled water, 2 galls.

Claim.-The composition of a cosmetic, substantially as herein described.
(4,872.-E. E. WORDEN and H. Wilms, Brandon, Vt.-Spring Bed Bottom.-Fcbruary 25, 1868. -The elliptical spring braces are riveted at the midthe of the upper and lower pieces, and their ends are slotted, to allow them a limited motion on the attaching rivets.

Claim.-The stays C supporting the outer edces of the frames $A B$, the ends of the upper piece of the stav, slotted to slide upon pins in the lower frame, and connceted at its center $f$ to the upper frame, the lower piece of said stay secured at its center to the lower firme, and at its end to upper picec, all operating as described, for the purpose specified.

74, 873.-GEORGE W. Wonster, Bangor, Me.Culinary Steamer.-Fehruary 25, 1868.-The steamcrs are set upon the cup-shaped receptacles, and the water is carried from the latter in small pipes haring outer discharge. The steam pipes rise above the bottoms of the cups, and prevent the raste water from flowing back into the boiler.

Claim.-1. Combining with tank $C$ a plurality of receptacles $b$ b $b$, substantially in manner as deseribed and shown.
2. Combining the receptacles $b b$ with the tubes $a$ a so that the tibes prevent the return of the condensed steam to the tank, substantially in manuer as and for the purposes specified.
3. Serrating the curbs or upper cnds of tubes $a$ a, as shown at $e e$, substantially as and for the purposes specificd.
4. In conncetion with receptacles $b b$, a conductor $i$, substantially as described and shown.
5. Combining with tank C , prorided with fised receptacles $b b$, a remorable rcceptacle $f$, substantially as described and shown.
6. The removable receptacle $f$ formed to fit ressels of rarions sizes by its outward flare, and provided with the interior rim $g g$, substantially as and for the purposes speeified.

74,874.-F. M. Abbott, Boston, Mass., and E. F. Fiedos, Lewiston, Me.-Stripper for Carding Cylinders. - February 25, 1868.-The shaft of the stripper is supported on sliding bearings, which are so operated by a shipper as to canse the stripper to be thrown forward to bring its teeth close to the teeth of the cylinder without ensaging therewith. The feed of the lap is discontinued during the cleaning of the main cylinder.

Claim.-1. The mechanism, constructed and oper ating substantially as described, for moving and regulating the "stripper," as and for the purpose set forth.
2. In combination with a " stripper," supported in a sliding bearing, a feed comecting and disconecting mechanism, substantially as deseribed, and for the purpose set forth.

74,875.-Hiram B. Averir, Bethel Tommship, Mieh.-Apparatus for Evaporating Sorghum. Juice and Other Liquids.-February 25, 1868.-The pan is placed on the steam chest, which has induction and eduction pipes furnished with stop eocks. Aseending from the eduction end are the safety valve, and air or steam escape pipes, the latter having a stop cock.

Claim.-The evaporator $\mathbf{B}$, in combination with the steam chest $A$, when said chest is furnished with pipes $c, g, h$, and $m$, substantially as set forth.
7s,S76.-Henty A. Axtell, Westficld, Mass.Sofa Cradle-February 25, 1868. - The rocking frame
has two uprichts, which are turned orer at the top, and hare adjusting serews whose points rest upon the tops of uprights on the ends of the main frame. By turning up the adjusting serews the rocker frame descenls upon the main frame, and one of its sides is turned over upon the top of the other side to form a sofa back. The morable side hats attaclments similar to a car-seat back.

Claim.-The combination of the swinging sofa cradle C , witlo the device for conserting the eradle into n sofa, consisting of the adjustable serews a a and hinge E, constructed and arranged substantially as described.
74.897.-JOHN Balidite, Salcm, Ohio- Lathe Tool IIolder.-February 25, 1868. The shank of the tool is leld between the bars, whiel are elamped by the set serew in the clasp

Clain. - The holders C C, when used in combination with the slotted elasp 13 and thumb-serew I), snbstantially as and for the purpose herein set forth.
\%4,SgS.-Hafdn M. Baker, New York. N. Y.Cleaning Cloths used by Bank Note Engravers.Felruant 25,1868 . The ink is remored from the cloths hiv the materials named, and the cloths being steamed and rinsed, the liydrocarbon is distilled and the water evaporated, leaving the priuting ink to be reground.

Clainn.-1. The use of coal tar, benzole, coal tar maptha, or refined coal tar lighlt cills, for removing printers' ink firom eloths or otice fibre used by banknote and other engravers.

2 . The separation iund recorery of the printers' ink and solvent by distillation, or any other method substantially the simne.

94, Sy9.-Robert M. Bartlett, Storrs Totrnship. Ohio.-Plant P'rotector.-F'elruary 25, 186z. The conical protector has a reqister for ventilation, and is counterbalanced by a treight at the end of a cord passing orer the pole so as to support it when elevated.

Claim-1. A plant protector, consisting of the following derices, to wit: A liood $A$, of iny suitaWhe shape, when used in connection with the pole 13 and snspending cord F , the whole being arranged and operating substantially as herein described :ind for the purpose set forth.
2 . In conbination witl the elements $\mathrm{A} a a^{\prime} a^{\prime \prime}, \mathrm{C}$ $\mathrm{C}^{\prime} \mathrm{C}^{\prime \prime}, \mathrm{B}$, and F , the ventilator D and cap E e $e^{\prime} e^{\prime \prime}$, as and for the purpose explained.
3. The conical hood A , haring one or more lighted openings or "bnll's-eces" " $C$, and adapted for suspension to a stick or pole, in the manner substantially as set forth.

94,880.-Jomi W. Beay, Henry, Ill-Apparatus for Bending AEctallic Plates.- February 25 , 1868. -The inner sides of the elamping plates are ribbed, to allow the passage of the hardeniug liquid to the stecl plate, when both plate and elainp are immersed in the liquid.

Cluim.-The implroved apparatus for bending and tempering plow and similar plates, when constrineted and arranged in its sereral parts substantially as described.

94,881. - Theodore Beardslex, Springfield, assignor to himself and J. Dana whans, Fitell. burg, Mass.-Soldering Iron.-February 25 , 1868.The combustion chamber is at the rear of the head, aud has perforated sides to admit air. The burner has a ralve seat at the end. The ralve stem traverses the supply pipe, and is comnected to a knob at the end of the liandle.

Claim.-1. A soldering iron, in which the point is heated by a flame fed by a resert vir of tluid contained in the hindede of the instrument.
2. The combination of the ralve If, reservoir B, and head C , substantially as and for the purpose set forth.
g4, SBr. - Latwson 13. Bidwele, Hartforl, Conm. -Raitroxd Chair.-February 25, 1868 -The chair has a loroal bearing yhere it rests ou the ties, and has lips which restrain the rail from lateral displace. ment.

Claim.-An improved railroad chair, eonstructed of plate iron, with a portion of the sides turned up at right angles to the hottom. in such il mamer as to leave the bearing ends of the same width as the origimal plate, and to have the turned up portion curved out to the edges of the bearing ends, to inerease their stifferess. substantially as specified.
74.SE:B.-Joseri N. B. Bond, New York, Ň. Y.Boiler Feed Low Water Detector. - February 25,1868 . -The buekling tube is at the height of the Iow water line, and is connected by pipes with the steam and water spaces. When the water falls below this level, the heated steam entering the buckling tube causes it to "buckle up," which morement opens the ralre of the steam whistle. The stop cock is then opened, admitting steam into the water touk and allowing the ontflow of water into the boiler. When the stop cock is elosed the water from the reserroir enters the tank tirst throngh a conical nozzle, and after the steam in the tank has condensed, through a conical pipe, until the float in the tank, by lising, eloses the cock in the supply pipe.

Claim.-1. 'lie buckling tube $B$, operating the alarm whistle F by means of the arms $D f$, and connected with the boiler 1 , as shown, when arranged and operating as lerein set forth and shown.
2. The float H. operating the ralre $l$, in the conical nozzle of the supply pipe $i$. Whieh is provided with the nozzle $n$ and check valre $o$, in combination with the pipes $h p$, steam cock $j$, and buckling tube $B$, substautially as and for the purposes deseribed.

74,SS4.-TOHN and Walter Bownen, Brushwick, N. Y.-Bellows.-February $25,1868 .-T h e$ air chamber has a gravitating top comneeted by a flexihle margin to the bottom of the upper ehamber. The air passes through a side slot to the inlet valve in the bottom of the upper chamber. The object is to dispense with downrardly-opening ralves and to provide an even hlast.

Claim.-1. The arrangement and combination of the valves $e^{x}, s, i, m$, and $c$, relatively to and with the foreing chambers $C$ and $B$, and air chamber $A$, substantially as set forth.
2. The eover a of the air chamber $A$, comeeted therewith by an annular flexible diaphragm. arranged tor operation in connection with the foreing chatrbers Is and C, substantially as specified.
3. The arrangement of the side slots $f^{*}$ between the fixed and yielding covers of the air chamber $\Lambda$, for admission of air to the forcing chamber $I$, throngly ralre $s$, substantially as shown and deseribed.
(9,885.-Jeremy Bradley, Owatonna, JTinn.P'low. -February $2.5,1868$. -The standard is clamped to the side of the beam br a elip similar to that frequently used in the attacliment of colters.

Claim.-The combination and arrangement of the plow A, standard B, and elasp C, in the manner and for the purposes herein specified.

74,886.- А. C. Briant, Lafayette, Ind.-Animal T'ap.-February 25, 1868. Whe platforms are attached to a rock shuft which has an unvard arm connected by a cord to a vertically sliding door ; and the rat, steppiner on the first platform to reach the bait, turns the roek shaft and shuts the door. In passing through the drop door into the inner compartment the rat steps upon the other platform and raises the door, thus resetting the trap.

Claim. - The combination of the box $A$, with its partition Js, shaft $H$, having platforms I and $J$ inserted direetly into said shaft, door K, abore platform $J$, and operated by the rod $G$ and cord $F$, all constructed and nsed substantially as specified.

74,887.-Manlove Butler, Vermon, Ind.-Animal Trap.-February 25, 1868.-The wheel has four wings projecting at right angles from the central shaft; the animal jumping upon either wing canses the partial rotation of the wheel and is cleposited in the dark chamber, from whence it escapes into the light chamber bencath a raising wate; the whecl returns to position, owing to one of its wings being londed.
Claim.-An animal trap, constructed with the
parts $\mathrm{A} \mathrm{A}^{\prime}, \mathrm{B}, \mathrm{C}$, and D , arranged as deseribed, the oseillating wheel D being construeted with one loaded wing $\mathrm{D}^{\prime}$, so as to act by giavity only, substantially in the manner set forth.
og 4,888.-Cornelius Callaghon, Great Britain. -Breech-Loading Fire-Arm.-February 25, $1868 .-$ The breceh bloeks swing outwardly for the introduction and removal of the shell, and both breeel blockis, when closed, are loeked to a central lib connecting the barrels to the rear part of the mefallie frame. 'The locks are eonneeted to the breech bloeks.

Claim.-1. The eombination with central rib, substantially such as described, of two breceh blocks swinging outwardly therefrom.
2. The combination, with a removable frame, of the breech bloeks, substantially as described, so that when the frame is remored from the stoek and the bloeks released from the rib the bloeks are free co be removed from the frame, substantially as described.

74,859.-Charles R. Capps, Mliopolia, Mll.Animal Trap.-February 25, 1868.-The platform is divided into seetions which are hinged and supported on springs, each section forming the bottom of a separate chamber. The platform is suspended on a rertical shaft which is connected to a spira spring that is wound up when the trap is set. Each jointed scetion of the platform has a stud whieh engages a projcetion on the base, and which is relcased therefrom by the falling of the section, owing to the weight of the rat, and allows the platform to make snfficient rotation to bring a fresh chamber to the side opening and the reeeption ehamber to the aper. ture of communication with the wire cage above.

Claim. - The eombination of the disk $A$, sections $b b^{1} b^{2} b^{3} b^{4}$, platforms $k k^{1} k^{2} k^{3} k^{4}$, with their studs and sprimgs, as shown, projection 0 , spmral spring $d$, easing $h$, and eage $R$, of an animal trap, as and for the purpose speeified.
74.9300.-Cilarles F. Carr and Gilbert F. HoLBROOK, Norwieh, N. Y.-Boot and Shoe Last.Februarv 25 , 1868.- The bolt slides in the instep block and enters a socket in the main part of the last. The hook hole in the last is slightly abore a similar hole in the bolt, and the introduetion of the tapering end of the last hook draws up the bolt and disengages the instep block.

Claim.-The sliding bolt $b$, operated on as deseribed and shown, and for the purposes as substantially set forth.

191,891.-Stephen Chamberlin, Boston, Mass. -Tip Sled.-Tebruary 25, 1868.-The box is supported on trumnions and on a front post, to which it is eonnceted by a hook.

Claim.-In combination with the sled rnmers, a body so mounted as to tip, substantially as described.

74,892.-George T. Chapman, New York, N. Y. -Horse Shoe.-Tebruary 25 , 1868.-The calks traverse rertical mortises in the shoe, and are retained by pins Trhich traverse the shoe obliquely. The pin socket is made half in the side of the mortise and half in the tenon of the ealk. The pin is elinched at the bottom face of the shoe.

Claim.-1. The eontinuons detachable ealk B, eombined with the part A, substantially as deseribed.
2. The continuous detachable calk B and pin C , in combination with the part $A$, substantially as deseribed.
-94,893.-Lewis S. Chicirester, Brooklyn, N. Y., assigior to himself, G. II. NichoLs, and C. W. Minss, same plaee.-Grain Drier-February 25, 1868. - The elear enlorie current is mingled with air to regulate its temperature, and is passed in a hori zontal direetion around the grain as it deseends through the series of hoppers. The eourse of the eurrent is dirceted as desired by dampers.
Claim.-1. The rertical air flne $a$, in eomlbination with the deflcetors $e$, platforms $c$, and grain tables, platiorms, or hoppers, sulustantially as and for the purposes set forth.
2. Lhe sections $g$, having hopper-shaped openings,
and placed togetlier, substantially as and for the purposes set forth.

94,894.-OlNey Churchml, Canton, Pa.-Carriage Jack. - February $25,1868 .-1$ he lifting bar is connected to tho lever by a strap passing over a roller at the top of upright. The end of the lever enters fulerum holes in the upright.

Claim.-A lever jack, when constructed and operating' substantially as shown and described.
g. 4,895.-C. C. Cole, Phelps, N. Y.-Combined Manure Fork and Hook.-February 25, 1868.-The tines and serapar are attached to the opposite sides of the turning bar which eonstitutes the top bar of the head. This bar turns in a soeket and has a collar which is slottent to receive the end of the spring bolt which holds the tines and scraper plate either nearly in line with or at a right angle to the staff.

Claim.-The spacial construetion and arrangement of the dirided socket $C$, provided with the corrugations or grooves $b c$, the spring pall $l$, and the circular bearing B, the whole combined with the changeable fork head $\Delta$ and seraper $G$, and operating in the manner and for the purpose herein set forth.
g. 9 89.-Willam S. Cooper, Philadelphia, Pa. - Valve for Water Closets. - February 25, 1868. The stem of the valve which eloses communieation be tween the induction and eduction pipes earries a down-turned eup valve which allows water to flow from the upper chamber when the valve stem is raised. The upper part of the valre stem has a spiral spring which forces the valve down npon its seat as soon as the water which was foresd fiom the upper chamber is resupplied, and this is done through a small passage whose capacity is governed by an adjnstable ralve.

Claim.-A water-eloset valve, comprising hollow picee $B$, annular space A $R$, and holes $R^{\prime}$ and $R$, and $h h$, all constrmeted and operated in the manner and for the purpose above set forth and deseribed.

74,89\%.-J. C. Govert, Newark, N. J.—Snap Hook--February 25, 1868.-The end of the springbolt abuts upon that of the hook and prevents the disengagement of the trace which is hitched npon the latter.

Claim.-As an article of manufacture, providing the shank of the smap hook with a groore, into which is dropped the sliding bolt $D$ and loose spring $e$, said groove being covered by means of the plate $G$, and the bridge I, which conceal, keep in place, and protect the spring and bolt, one end of the shank being so formed that it can be pivoted to a hold-back, the sereral parts being constructed and arranged as and for the purpose set forth.

74,898.-A. J. Crosby and O. W. Crow, Blnffton, Ind.-Apparatus for Bleaching with Sulphur Fumes.-February 25, 1868.-The box has doors for the introdnetion of the sulphur pots, and lias joist bars with side pins for the suspension of the object.

Claim.-The box A, with the doors B B , ressel C, having a regulating slide D, and the bars E E, the whole combined, arranged, and used in the manner and for the pmrposes speeified.

19,899.-D. H. Dotterer, Philadelphia, Pa.A pparatus for Heating and Ventilating Railway Cars.-February 25, 1868.-The air is heated in a ear speeially devoted to that purpose, and from this ear hot and eold air is distributed through the train.

Claim.-The within-deseribed combination of furnace, boiler, air-heating eliamber, and engine, with the fan-blower, or equiralent deviee, whereby a forcible emrent of heated or cold air is created and maintained through pipes which eonrey the air to and distribute it within the several ears of a railroad train, substantially in the mamner deseribed.
18,500.-E. II. Ebervin, Lampeter Square, Pa. -Railroad Rail Joint Splice.-February 25, 1868.The ends of the rails are dovetailed and are engaged by fish plates, each one laving a double doretail bloek extending half throngh the web of the rail.
Claim.-The construction of the flanged and double
doretailed brace and filling or plugs $\mathrm{B} \mathrm{B}^{\prime}, b b^{\prime}$, used jointly or sererally, in combination with the bolt C . and nut D and doretailed slot a cut in the dail, all arranged in the manner shown for the purpose specified.
g4,901.-Alfred B. Elx, Netrton, Mass.-Shoe Tip.-Fehruary 25, 1868. The fibrons substance is saturated with resiu and molded into shape by licat and pressure.

Claim.-1. The use of resinous bodies, combined with fibrous material, and shaped hy means of heat and pressure, substuntially as deceribed.
2. A shoe tip made of the foregoing substances, and formed into shape by means of suitable pressure, with or without heat, substantially as described.
3. A slooe tip made of felted or weren material saturated with resinons substances, or prepared rubber, which, when properly heated and pressed in molds, will assmme the proper shape and aequire or possess the proper harduess aud elasticity, substantially as described.

194,902.-Levi S. Enos, Ahnond, N. Y.-Wash ing Machine.-Felmary 25, 1868.-The pomeders slide on anti-ftiction rollers on the inclincel bottom and are drawn up alternately be radial arms upon a lotary shaft. The arms impinge against anti-friction rollers.

Claim.-The pounders D D, as constrmeted and arranged, for recoiving weiglits $J J$ in combination with the friction rollen's $a, a$, vertical stationary boad G having scrics of holes ii ii, and corlugrated hinged lid or corer H, substantially as and for the purposes hercin set forth.

44,903. - F. R. Ferris, Dora, Ind. - Tater Whecl.-Febrnary 25,1868 . -The gates are connected by a series of armus to a collar which smrounds the whecl shaft and are operated by a segmental rack on the rim; surrounding the upper end of the hub is a elntch collar upon which the former collar' rests. The impinging surfaces of the collars have inclines © ) that by turning the lower collar the upper one and $\mathbf{t}$ de gates are raised to enable their fiee movement.

Claim.-The collar H, in combination with the collar E, amms G, aud gates L L, the same being used substantially as and tor the purpose set forth.
(7,904.-Russel Frisbie, Cromwell, Conn., assignor to J. and IE. Stevers \& Co.-Toy Pistol.February 25,1868 - A small hole is made in the barrel inmediately in front of the piston, to allow the filling of the barrel with air, if the mouth be stopmed previonsly to withdrawing the piston.

Clam.-The toy gun, having its barrel provided with an orifice or fent $a$, arranged, in relation with the piston C , to operate substantially as and for the purpose specified.
74,905.-Heman Fritz, Clereland, Ohio. Electro Medical Battery.-February 25, 1868.-Tn applying the prime eurrent to the foot plates a wire is attached, extending from the insulated cover to the toot of the foot plate, forming the negative pole. The other cover is comnected in the same mamner to the other foot plate, forming the positive pole. If an interrupted eurrent be desired, the serew post in the insulating corer is comnected to the post connecting with the outer end of the prime coil. The screw post of the positive cover commects with the post comnected to the coil of the magnet. The foot plates are connected to the posts comnecting with the induction coils. It no electric current be desired through the foot plates the wires are removed therefrom and longer wires inserted when electrodes are required for different parts of the body.

Claim.-1. The bittery case, when constructed in scetions A B, in the mammer as and for the purpose substantially as set forth.
2. 'The special manner of comecting the porons cups to the caps of cylinders, by means of the shoulder $c^{\prime}$, metallic sercw collar or rime $e$, and cap S , in the manner snbstantially as described,
3. The arrangement of the helices $\mathrm{I}^{\prime}{ }^{\prime}{ }^{\prime}$, sumpounding the cylinders D E and inclosing circular magnets V, when said magnets are so armaged that they may be raised or lowered within said helices by an adjust-
ing serew $x$, for the purpose and in the manner described.
4. A case, constructed of metal or of ant other suitable material, inclosing the prime and induction coils $\mathrm{T}^{\prime} \mathrm{T}^{\prime}$ and $m^{\prime} m^{\prime \prime}$, for the purpose specilied.
5. The foot plates $B^{\prime}$, provided with the heel $\mathrm{K}^{\prime}$ and adjustable toe cap ${ }^{\prime \prime}$, as arranged in combination with the battery case, in the manner as and for the purpose set forth.
\%4,906.- William J. Fryer, West Trot, N. Y. assignor to himself and John $P$. Wimbeck, same place.-Stove Hearth. - February 25, 1808.-The ashes are carried by the inclined plate to the ash drawer, sliding in the hearth frome. To precent the dropping of ashes when the drawer is withdrawn the sliding replacing pan is pat temporarily in its place.

Claim.-The open hearth plate C, projecting from and extermally to the fire box of the stove, formed With flanges and slides, so as to carry, in combination with it, the ash pan or drawer D and replacing pan $\Pi$, as described.
y $1,00 \%$-TJ. W. Garnner, Shelbume Falls, Mass. - Mamufacture of Šolid Steel Knives. - Febrnary is 1868. - The ting is formed of a bow of metal, forming one piece with the blade and shoulder.

Clam.-A solid wrought steel knife or fork, with a skeleton or open handle, and formed out of one picec of metal, substantially as described.
\% $4,908 .-$ Malvin J. GaskiliL, Pleasant Plain, Ohio.-F'ence.-Fchruary $25,1868 .-T h e$ wires arc stretched by baris passing through mortises in the posts, and longitudiually slotted, to reccive tightening wedges.

Claim.-The holding of the wires firmly in their places upon the battens by means of clinches turned mpon the cuds of the wires and driven into the battens. substantially as set forth, and for the purposes specified.

74, (90).--J. B. GATHRIGIT, Louisville, Kr,Tree for s゙ide Saddles.-Ficbruary 25, 1868.- 'The cantle, pommel, and horm are attreched to the side bars and streng'thened by metallic strips.

Claim.-As an article of mannfacture, a tree for a side saddle, combining in its construction the following elements, viz: 'The bars A A' flattened eanthe B, extension D $\mathrm{D}^{\prime}$, leather base E, and block $\mathrm{F}^{\text {; }}$ said parts being lespectively constructed and arranged in relation to the other parts of the tree, ass herein described.

74,210.-H. S. GOLIGHTLY and C. S. TwitchElL, New Haren, Conn--Folding Chair.-Webruary 25, 1868.-The chatir is held in position for use When the hook beneath the scat is canght over the ronnd wheh nuites the posts at the back of the seat.

Claim.-1. A cross-legered folding chair, in whieh the back is hung npon pivots, or in an equivalent manner, so that it may move or swing independently of the scat and fiame, to adjust itselt to the back of the person occupying the chair, substantially as herein shown and described.
2. The combination with the back legs and the seat, whether rigid or flexible, of a folding chair, of the fiont legs and a back, piroted or hung between the ends of said legs, which extend above the seat, so as to swing or move independently of the seat ind legs, substantially in the manuer and for the porposes herein shown and speeified.

74,911.-Whliam Grover, Molyoke, Mass.Counting Attachment for I'hread-vinding Ma-chines.-February 25, 1868.-The index finger is actnated by the motion of the traversing shalf of the winding machine. The reciprocating motion of the rod which operates the finger to detach the spool thom the spindle also liberates the dial or index, so that it is free to be adjusted for the next registration.

Claim.-1. A releasing plate or tripper, in combination with the spool-removing mechanism of a thread-winding machine, as and for the purpose set forth.
2. The notehed adjustable plate $b$, secured to tho
ribrating arm, in combination with the traversing stud $a$, substantially as described.
3. The vibrating arm $b^{\prime}$ supporting the pawl $c$, sprinest $e$ and $e^{1}$, and notehed plate $b$, in eombination with the revolving dial plate, detent $m$, and tension spring $q^{2}$, substantially as set forth.
4. The combination of the adjustable stop) $s$ and pin $q$ with the revolving dial plate, or a revolving index, arranged and operating substantially as and for the purpose specified.
(7, 5ide-Antemus N. Madley, Richmond, Ind. -Tnsote for Boois and Shoes.-February 25, 1868. The rubber counter grasps the heel and lias a number of studs on its lower side, bearing upon the insole.

Claim.-1. The provision of the spur pieee or counter 13 at the rear edge of an clastic insole, substantially as and for the purpose set forth.
2. The combination of the sole piece $A$, spur or eounter 13 , and protuberances $C$, as and for the purpose set forth.
7.918.-Levi Heywood, Gardner, Mass.-Rattan Machine. - February 25, 1868. - The radial cutters are adjustable in distanee from the end of the "quill."

Claim.-A ecntral tube or "quill," prosided with slots or openings, in combination with a series of achjustable cutters 13 , substantially as and for the purpose set torth.
-9.944.-Robert Hitchicock and George A. Jones, New York, N. Y.-Gearing for Lamp Train. -February 25, 1868. -Improvement on the patents of F. 13. de Kararenan, of February 11, 1863, and of George A. Joncs, of Norember 10, 1863. The fan which supplies air to the burner is driven by gearing made of vuleanite.

Claim.-1. A gear wheel, constructed of hard rubber, or similar material, possessing sufficient hartness, with elasticity for gearing, for the purposes set forth.
2. The enmbination of gear whecls made of hard rubber or other material, uniting like hardness and clasticity, with metallic gearing in meehanieal movements, for the purposes set forth.
3. The combination, in mechanieal trains for supplying air to lamps, of the hard rubber gear $e$ with the fin-wheel screw shaft, substantially as and for the purposes set forth.

4,91.5.-Sinon Ifgresoll, Mianus, Comn., assignor by mesne assignments to himself and Jous Johnson. - Gate Latch.-February 25, 1868. - The lateh has side inclines by which it is raised by the stop pin. 'The latter enters a central noteh in the lower side of the lateh.

Claim.-The gate lath $e^{1} e^{2}$, suspended by the two fulerum pins $b^{1} b^{2}$, and moving between the plates $D$ and E , substantially in the manmer and for the purposes set forth.

4, 616.-GEORGE B. KIRKHAM, New York, N. Y.-Ntrap Molder.-Tebruary 25, 1868.-The slide moves on inclined ribs which earry its corrugated surface into hard contact rith the strap. The bent wire prerents the escape of the slide. The rectangular pin is passed through side holes in the frame, and has a wire spring in a earity of its lower side, the spring holding the point of the strap.

Claim. - The body of the holder as adapted with the slide. the bent wire $b$ and chain $c$ at one end, and as adapted with the catch and spring at the other end, all as herein described.

74, 9 B7.-Charles Klenn, Albany, N. Y.-Folding Crade.-February 25, 1868.-The ends and buttom are hinged so as to fodd to the sides, and the rockers are hinged to the legs so that the sides can be brought together into small compass.

Claim.-The scetions 13 B, bottom C, rockers A A, and end pieces D D, when the several parts are hinged together, as speeified, for the purposes set forth.
(4,918.-HUGH Laird, Mechaniesburg, Pa.-Tuyere-February 25, 1868. The valse opens inwardly, and, while allowing air to pass to feed the
fire when unused, closes when the blast is on, to prevent escape of air from the chamber.

Claim.-The combination of air chamber $A$, ralre recess $G$, valve $H$, plug $C$, and lever $D$, arranged substantially as deseribed.
(291919.-ALFORD LaMB, Jeffersonville, N. K., assignor to himself, William H. Morse, and Mary E. LayMan.- Washing Machine.-February 25, 1868. - The clothes are passed between the ribbed roller and a rubber rib upon a spring board secured to the tub bottom.

Claim.-The auxiliary spring bottom B, Indiarubber strip C , and fluted roller ${ }^{\circ} \mathrm{D}$, all arranged substantially as and for the purpose deseribed.
(3,320.-James Lamb, Mubbardstown, Mass.Rocking Chair.-February 25,1868 .-The top is conneeted to the base by springs, and in such manner as to allow a lateral as well as baekward and forward oseillation.

Claim.-The arrangement as well as the combination of the middle or zigzag and the side or leaf springs with the chair seat and base, substantially as described, the whole being. to operate as explained.
g4,921.-G. W. LawbaugiI, Geneseo, IllHarness Pad F'ress.-February 25, 1868. -The bottom leather of the pad is pressed into form between the plates, which are clamped together by serews.

Claim.-The combination of the bottom plate $A$, stirrup C, screws $d, d$, top plate $B$, and screw $F$, constructed and arranged in the manner herein as shown and deseribed, and for the purpose set forth.

学, B28.—Ellis Iuther, West Troy, N. Y.Horse Rake.-February 25, 1868. - To tilt the rake the driver draws the tilting lever toward him, which raises the rear cnd of the cradle; the hook then engagos the hooked lever and raises the rear part of the rake, while the eord disengages the dog from the lerer and allows it to pass. The whole rake may be raised from the ground by the eompound lever connected through a roek shaft, arm, and chain to the fore end of the eradle.
Claim.-1. The block $G$ and eradle $P$ in combination with each other and with the head of the rake, substantially as hereinbefore described and set forth.
2. The combination of the dog $b$ and the hook $e$ With the cradle $P$, substantially as hereinbefore deseribed and set forth.
3. The combination of the spring $d$ with the hook c, substantially as herein speeified and set forth.
4. The combination of the arm $N$ with the eradle $P$ and the lever $J$, substantially as herein speeified and set forth.
5. The combination of the cord $T$ with the dog $b$ and axle $A$, substantially as herein speeified and deseribed.
6. The lever $J$, the arm $N$, the cradle $P$, the hook $c$, the hooked lever $a$, and the spring $a$, all arranged and combined substantially as and for the purposes hereimbefore described and set forth.
7. The combination of the cradle $P$ with the chain $o$, substantially as hereinbefore stated and set forth.

7,923.-Cinoline L. Lutton, Philadelphia, Pa., administratrix of the estate of E.T. C. LUTTON, deceased. - ILachine for Shearing Iarn. February 25, 1868.-Improvement on the patent of E. T'. C. Lutton, December 18, 1866. The Jarn is passed round the rod into the curred eliammel of the guide to the space below the projection to and through the tube and so to the bobbin. The space is just sufficient in width to allow the yarm, which is temporarily twisted by the rerolving tube, to pass freely between the projections and the knife. The gride and plate are so adjustad that the Jarn shall be in close proximity to the kuife.

Claim.-1. The combination of the revolving blades $h$, the knife $D$, and a plate or projection m, betreen which and the knife the yarn is caused to trarerse, all substantially as described.
2. The combination of the abore with the guiding plate E and rerolving tubular spinde H .

74,324.-WiLlidM McCord, Sing Sing, N. Y.Horse Rake. - February 25, 1868; antedated Feb-
ruars 14, 1868. The radius arm projects formard fiom the piroted lever upon whieli the rake head turns. The head is adjustable on the radius arm to balance the rake upon its axis.

Claim. - The radius arm $c$, made adjustalne on the rake head $C$, and operating in combination whh said rake head, substantially as and for the purpose set forth.

74,025.-William N. McTrims, Northmberland. Pa.-Spring for Relay Magnets.-Febrnary 25, 1868 . The spring is loosely cobled to give nice adjnstment, and the tension is regulated by turning the shaft to which it is attached.

Claim.-The construction of the irregularly and loosely-coiled steel spring C , when attached to and combined with the winding axle $B$ and the armature $G$, as herein deseribed and for the purposes set fortl.

7-1,926.-Alexander McLeon, Coriugton, Kr. - Railway Suitch stand.-February 25, 1868. -The switel bar is sceured by the bolt, which enters one of a series of notches in its upper side and is secured in position by a padlock.

Claim.-The arrangement of stand $A A^{\prime}$, $a a^{\prime}$, target $\mathbb{C} \mathrm{C}^{\prime}$, switeh bar D , lerer E , shot bolt F , $f f^{\prime}$, pedal $I I$, and spring $G$, or weight $J$, as and for the parpose set forth.
g1,927.—TOHN MCMURTRI, Lexington, KT.Starting Cars.-February $25,1868$. - The friction brake roller acts by the spur wherl to draw the rack beam longitudinally, storing power in the spiral spring, which is exerted in starting the car by means of the slots in the beam eugaging the pins upon the disk, which in turn. by means of the double-headed pawl, engages the spur wheel upon the axle.

Claim.-l. The beam $c$, when provided with slots $d d$, and rack $b$, operatiug substantially as and for the purpose set forth.
2. 'Tle disk $J$, prorided mith pins $s$, , in combination with beam $c$, substantiall! as described.
3. The springe, in combination witl pins $t$ ant beam $c$, operating smbstantially as specificd.
4. The cog wheel II and double-acting pawl $q$, in combination with disk $J$, arranged substantially as and for the purpose described.
5. The friction wheel $f f$, and pinions $n n$, in combination with beam $c$, operating substautially as set forth.
6. The brake $g$, provided with a slot and spring $m$, in combination with friction- wheels $f f$ and pinions $n n$, as and for the purpose specified.

94,92s.-Q. F. Messinger, Easton, Pa.-Corn Harvester. - February 25, 1868.-The corn is cut by an ordinary cutter and carried by the radial pins at the periphery of a horizontal wheel to a plattorim at the rear, where the stallis are arranged by an atteudant. The floor of the platform consists of tilting boards which allow the deseent of the stallis to form a shock when sufficient quantity has accumulated. The platform has a lateral movement to place the shock ont of the horse track in the next ronnd.

Claim.-1. The rotating wheel K, with its pins $i$, in combination with the cutters, the bar L, or its equivalent, and with a platform. so connected to the rear of the machine as to be adjustable laterally for the purpose described.
2. The plattorm Li, consisting of a scries of plates $n$, in eombination with the deriees herein described, or the equiralent of the same for operating the said plates, all substantially as and for the purpose speeitied.
3. The arrangement of the bent bar II and the Wheel K, as and tor the parpose set forth.

194,929.-LEWIS Mrleer, Aliron, Ohio.-Marvester Ralie.-Febriary 25, 1868. -The rake rotates in a horizontal plane, being momnted on a post erected upon the platform. The end of the rake arm is extended and retracted by a roller running between gruide bars.

Claim. - The combination of two rerolring telescopic arms, turning upon a center arranged on the platform at $a$, one of which carries a fork or rake, and is caused to slide on the other by means of a roller or guide traversing a eam-path or way $D$,
formed br tro raised marginal ledges $c e$, also on the plat form, and surrounding the center $a$, substantially as and for the purpose described.

- 1,930 - Marcus Neumann, New Tork, V. F. Lassoe, Brooklyn, and C. W. Mac Comn, New Tork, N. Y.-Steam Generator.-I'ebruars $25,1868$. - A thin cmrent of water is passed down orer heated plates, flowing alternately ontward and inward; the caloric current being deflected against the plates. A cold air chamber is interposed between the areh of the firmaee and the superheater. The water is pmoned into the heater, which lias a perforated distributer over one of the heating vessels, and is drawn therefrom through a pipe, and foreed through another pipe to a second distributer that discharges into the upper part of the generator. 'The steam generator communieates throngh a pipe with the lower side of the seat of an annular valre at Whose mpper side is a chamber commonieating throngll the central opening of the valre witl the superheater, so that on the pressmre in the gencrator being in excess of that in the superheater the steam escapes through the ralve ports.

Claim.-1. A stean generator, provided or fitted with vessels $L$, forming flne enlargements, arranged one above the other, and containing draught defleetor's M. in combination with water comses or gen-erator-dividing plates $K$, sitnated below the vessels L, and having eseape ontlets or openings $l$, in such manuer as that water injeeted on to said ressels, or the mpper one thereof, is comverted into steam in its massage over them and the dividing plates, by the detond giren to the smoke and heated gases beneath and orer the deflectors, substantially as specificd.
2. The combination of a sprinklep or feed-water distributer $t$, with the flue enlargements or vessels L, containing deflectors M, and water-comses or generator-dividing plates $K$, provided with eseape outlets $l$, for operation together ns herein set forth.
3. The combination, with the superheater F and areh Is of the fire-box or chamber, of the cold-air passage $f$ arranged to communicate with the main or central flne, and controlled or supplied by suitable inlets from the outside, essentially as clescribed.
4. The feed-mater heater $N$, armaged essentially as specified, and fitted with one or more flue-en largements or resscls L, containing deflectors M for operation in combination with a feed-water spriukler $s$, or distributer, as herein set forth.
5. In combination with a stean generator and separate superleater, the antomatic pressure regulator, interposed between the generator and superheater, and operating to supply the latter with steam on the pressure in the generator exceeding that in the superheater, as herein set forth.
19331.-Halvor Olsen, San Franciseo, Cal. Combination of Iife-preserving and swimming A pparatus. - Fiebruary 25, 1868. - The floats are strapped to the back and chest. The webbed frames are attached to glores and sandals and have sufficient flexibility to open and partially close withont joints.

Claim.-The combined use and application of the floats, and the extended ribbed and webbed gloves and sandals, constructed and attrelied to the user, in the mamner and for the purpose herein deseribed and represented.

74,9:32._Jesse P. Outcalit, Laneaster, Pa.Ballot Box.-February 25, 1868. -The box has two spiral passages through whieh the balls pass as they gravitate toward the cresecnt-shaped tmmblers, Which are operated by the spring trigesers.

Claim.-1. The double spiral hopper, by which the balls are kept separate and conveyed to the tumblers in the manner described.
2. The erescent-shaped tumblers, by means of which the balls are taken separately from the hopper and deposited in the dramer, as set forth.
3. The spring $H$, in combination with the slide, and tumbler for retracting the same, as set forth.

17,93B.-Isaac E. Palmer, Mackensack, N. J. - Mosquito Canopy.-February 25, 1868. -The frame is somewhat similar to that of an umbrella. The inner ends of the braces are piroted to a fixed ring on the stem, and the inner ends of the libs to a
sliding sleceve which is held down by a spring catch, when the ribs are extended.
Claim.-The operating cord and holding stem, secured to the braces 1 , and arranged to work through the tubular socket $A$ of the ribs $B$, whereby the eanopy may be expanded from the exterion thereof, sulistantially as herein shown and described.

94,934.-Nelson Palmer, Albany, N. Y.Horse Hay Fork.-Febrnary 25, 1868.-The braces eonnect the handle to the tines, and the handle has a catel lever which engrages a eross bar of the bail, and keeps the tines in their clerated position. The catch lever has a trip eord.
Claim.-1. The eombination of the tines $a$ and $a^{\prime}$, the braces $d$ and $d^{\prime}$, and the handle $h$, when construeted and arranged substantially as and for the purpose set forth.
2. The combination of the tines $a$ and $a^{\prime}$ and braces $d$ and $d^{\prime}$, the handle $h$, the catch $g$, and the roller $i$, when constructed and arranged substantially as and for the purpose set forth.
3. The eateh $g$, eonstrueted and pivoted as deseribed, so as to be loeked by the action of the rol ler $i$ against the eatch $g$, bolow its pivot, substantially as deseribed.
4. The roller $i$, constructed as described, in com. bination with a catch, substantially as and for the purpose set forth.
(94,935.-Alfred Paraf, Boston, Mass.-Separating Coloring Matter from Madder and Other Plants.-Feln nary 25, 1868.-The powdered madder root is washed until the saccharine portion, (about 55 per cent., ) is removed. The remainder, after draining, is subjected to the aetion of cupric oxide with ammonia, by steeping in aqua ammonia in Which eopper turnings have been plaeed, in proportion of 1 lb . of the lattcr to 7 galls. of the former, for eaeh pound of ligneous matter to be removed. The matter is stired and ammonia added by passing a current of gaseous ammonia into the solution. The dissolved eellulose is removed by filtration and washing. The precipitate is mixed with aleohol, and a current of sulphuretted hydrogen passed through the mixture whieh forms the eopper into an insoluble cuprie sulphide, and the eoloring matter is set free in the alcohol by evaporation or by addition of aeetie aeic. When used immodiately for dyeing, the eellulose need not be removed.
claim.-1. The eompound proeess of liberating the coloring-matter of plants from the ligneons matter by the solution of the eellulose, and the separation of the eoloring matter from the insoluble compounds formed during the said solution, substantially as before set forth.
2. The empound proeess of liberating the coloring matter of plants from the sugary and ligneous matters thereof by the removal of the sugary matter, the solution of the eellulose, and the separation of the eoloring matter, substantially as before set forth.

74,936.-B. B. Perkins, Chestertomn, Md. Combined Boiler and Hot Air Register.-February 25,1868 . The boiler is placed in the hot-air flue immediately beneath the register, and serves to moisten the air by the steam eseaping through the perforations of its top and adjustable eoter.

Claim.-In eonnection with a boiler, arranged at the top or side of hot-air flues in houses, the conbination and arrangement of the perforated boiler top with the perforated eover F , pivoted at $f$, the eonneeting rod H, and the register 3 , when the parts referred to are eonstrueted and arranged substantially in the manner aud for the purposes set forth.

74,93\%.-Julus Petscir, Hanover, Prussia, and Stephen N. B. Burntziky, St. Petersburg, RussiaCoffee Making Apparatus.-February 25, 1868.-The eommunieation between the chambers above and below the inelined diaphragm is through a tube reaehing from a spaee beneath a gauze strainer in the upper elamber to near the bottom of the lower chamber. There is also eommunication through a small orifiee near the top of the lower ehamber for the escape of air when the water flows in. In use, the water is poured in and runs into the lower eham-
ber. The ground coffee is placed in the upper chamber and the gas heater lighter. The stean forms in the upper part of the lower chamber and drives the water through the pipe into the upper ehamb.r. whieh causes the pot to tilt back on its trunnivis. This movement closes the gas eock and rings the bell. The condensation of the steam in the lower chamber draws the water agaill through the ground coffec. This tilts the pot into a vertical position.

Cluim.-1. A coffee-making apparatus, constructed with the shell A, partition D, strainer D, and tube C , or the equivalent of these parts, to operate in the manner set forth, and provided with the minute vent-holes $c$ through the partition $\mathcal{B}$, substantially as and for the purpose set forth.
2. The eoffec-making apparatus, construeted with a shell A , partition B , strainer D , and tube C , or the equivalent of these parts, in eombination with the stand E , or its equivalent, to support the said apparatus upon trumnions, as and to the effect set forth.
3. The eoffee-making apparatus, as set forth in the next preecding elain, in eombination with a deriee to extinguish the heating-flame, substantially as set forth.
4. The signal-bell $n$, in connection with and operated by the eoffec-making apparatus set forth in the second preceding elaim, substantially as deseribed.
g 4,933.-Whlliam J. Quinx, Philadelphia, Pa., assignor to Furbush \& Gace, same plaec.-Loom.February 25, 1868.-The threads of the quiescent shuttles which are above the operating shuttle pass over the opposite cross-picees, and to the elge of the fabrie, where they are not liable to be struck by the fingers and interfere with the stop motion should the thread of the operating shuttle break. The thread from the shuttles below the operating shuttle will pass over the rod beneath the eross pieces in the reecss and to the edge of the fabrie; the recess formed by the bending of the rod receires these threads when the lathe is earried forward, so that they will not strike the fingers and interfere with the aetion of the stop-motion.
Claim.-1. The eombination with a drop-box of a serics of self-adjusting plates or eross-pieees o o ${ }^{1} 0^{2}$, whereley the threads of the shuttles above that in operation are held above the fingers of the weftfork, substantially as and for the purpose deserished.
2. The weft-fork, provided with a reeess $x$, formed between the rod $m$ and fingers $n$, as and for the purpose specified.
94,939.—Joun Raddin, Lymn, Mass.-Car Wheel.-Febrnary 25, 1868. The web cuters an annular groove in the seetional hab and is secured by bolts surrounded by rubber paeking, whieh allows the web a limited inorement.
Claim. -In embination with the web $a$, the sectional hub $c c^{\prime}$, and the bolts $g$ eonstrueted and arranged as shomin and deseribed, the elastie packing $h$, and the bolts, substantially as and for the purpose set forth.
74,340.-G. V. Rambaut, Petersburg, Va.Medical Compound or Bitters.-Febrnary 25, 1868.Composed of ginseng, 6 lbs.; orange peel, 3 lbs.; eardamom seed, 5 oz ; eloves, 4 oz ; eimnamon, 4 oz ; coriander seed, 4 oz.; Perutian bark, 4 oz.; lavender flowers, 4 oz .; eliamomile flowers, 4 oz : orris root, 4 oz ; red sanders, 8 oz ; six tresh orange peels; juiee from three oranges; essence of anise, one wine class fiull: French coloring, 1 pint; simple sirup, I pint; alcohol, 5 galls.; Jamaica spirits, 5 galls.; and Cologne spirits, 35 galls.
Claim. The eompound made of the materials and substantially as herein deseribed and for the purpose set forth.

94,941.-Joun B. Raynor, Mazo Manic, Wis.-Churn.-February 25, 1868.-The cream is beaten in the upper box from whieh it cazapes through a perforated bottom plate.

Claim.-The shaft C. provided with a series of straight arms If H, when arranged in eombination with the box B, having a series of rods I I, in the manner and for the purposes set forth.
g4,942.-Cilarles Richardson, Auburn, N. Y. -Machine for Grinding Reaper Kinives.-February 25. 1868. -The saw is elamped to the adjustable bar at tho top of the side frame. The stone has its periphery and a portion of its side faecd for grinding. The grindstone standards are npon a horizontal disk which is adjustable upon the earriage. The latter has longitudinal adjustment on the slide bars of the main frame.

Claim.-1. Making the top-pieco of the swingframe II, to whieh the entter is fastened when the knives are to be ground, adjustable, and using the same in combination with the arljnstable grindstone, in the manner and for the purpose substantially as deseribed.
2. Affixing the mater-tank or reservoir $P$ to one of the standards which support the krindstone, so that the same shall at all times liang directly under said stone, and nsing the same in eombination with an adjustable grindstone hung upon a movable plate or disk, substantially as and for the purpose deseribed.

94,943.-W. C. Robrison, Saltsburg, Pa. Churn.-February 25, 1868. The lower edge of the perforated, conical dasher is attached to a radial framo and has a horizontal disk at its apex.

Claim. - The dasher II, composed of the perforated hollow cone D , the frame F F , the eylinder E , and the disk G , as and for the purpose speeified.

74,944.-Edmuxd F. Schmeiaer, St. Lonis, Mo. -Umbrella.-February 25, 1868; antedated February 17, 1868.-The channel is formed of cloth, and is supported at eael rib by a wire frame. The rain is conducted to one or more discharge openings.

Claim. - An umbrella provided with a channel or eonduetor, secured to its lower outside edge, substantially as described.

94,945.-Daxiel Sileiwood, Lowell, Mass., as signor to Woods. Sherwoon \& Co.-Table Caster. February 25, 1868. -The easter is formed of wirework.

Claim.-As a new and improved artiele of manufacture, a table easter, consisting of the parts $a, b, c$, \&e., constructed substantially as described.

94,046.-Jonn F. Siebenmany. Milwankee, Wis. -Artificial Wine.-February 25,1868 . Composed of water, 50 galls.; white sugar, 95 lls.; turtarie acid, 31 bs .; tamarinds, 6 los.; raisins, 6 lbs. Or, white sugar; 150 lbs.; tartarie acid, $2 \frac{1}{2} 1 \mathrm{bs}$; ; tamarinds, 6 lbs.; and raisins, 12 lus.; yeast, 6 pints. The following may be added before the geast: fresh-dried elder flowers, 1 oz .; erished nutmegs, $\frac{1}{8}$ oz.; cut mace, $\frac{1}{4}$ oz.; "Florcutine iris root," $\frac{1}{2} 0 \mathrm{z}$; and ranilla I. pod. It may be colored with fruit or "Frencls color."

Claim. - The production of wine from the ingredicuts, and by the process, substantially as herein described.

94,947.-Jonn E. Sirth, Buffalo, N. Y.-Meat Cutter.-February 25,1868 . - The eutters have rertieal reciprocation, impinging on the upper surface of the block, whieh is rotated by pawls actuated by eecentries on the main shaft.

Claim.-1. The combination of the eentral shaft C, the eutting-knives E E, and the spring I, or its cquivalent, substantially as and for the purposes herein deseribed and set forth.
2. The double eccentrics T and U , the bars or spring eatches W and X, or the equivalent thercof, and the levers $\mathrm{U}^{\prime}$ and $\mathrm{T}^{\prime}$ ', when construeted and arranged substantially as and for the purposes described.

24,948.-D. M. Sifytir, Orange, N. J., assignor by mesne assiguments to JOHN T. Larr, New York, N. Y.-Machine for Sewing Books.-February 25, 1868.-The folded sheets are notehed in the back as usual, aud each shect is opened out upon the table with the hooked ends of the needles passing through the notel holes. The thread is then passed by the traveling hook beneath the needle hooks. The sheet is then folded, the hooks carrying the thread through the holes. 'The vertieally sliding side of the table is then depressed to bring tho top of
the sewn part even with the fixed portion of the table.

Claim.-1. The eombination of the needles with hooks at one end and eyes at the other, the needlo or its equiralent with an ere at the upper cud, and the traveling-hook, the said combination having a mode of operation sulstantially as and for the purpose speeiticel
2. The needles with a hook at one end for retaining the interlacing thread, and an eye at the other for the locking threads, substantially as and for the purposo described.

74,949.-D. E. Somes, Washington, D. C.Washing Machine.-February 25, 1868.-The elothes are placed in the slat-sided cyliuder, and the water circulated by the paddle-rheel at the other end of the suds box. A store beneath the metallir hottom gives means of heating. The eylinder and wheel are rotated by a wincl upon the padde-wheel shaft, and a chain comects the shafts.
Claim.-1. The wherl and erlinder, as deseribed, when operated together, substantially as and for the purpose set fortll.
2. The inclined floor of the box, in combination mith the wheel and eylinder, substantially as and for the purpose set forth.
3. The combination of the box, whecl, and eylinder, with or without netting or gatuze, as and for the purpose set fortl.
4. The wheel or rock-shaft, with buekets, and the cylinder, with means for heating the suds or generating steam, substantially as and for the purpose set forth.
5. A washing machime, substantially as deseribed, with means for leating the suls allid generating stean, in combination with a safety-valve attached to said machine, substantially as and for the purpose set forth.

74,050.-Joselif Steger, New Tork, N. Y.Hose Coupling.-Febranry 25, 1868; antedated Feb. ruary 14, 1868.-The inclined treth of the two parts of the coupling are eugaged with euch other by a twist which is maintained by a set serew.

C'laim. - The teetly $a a, b b$, and set serew $c$, or its equivalent, in combination with the two half-rouplings A B, coustructed and operating substantially as and for the purpose set forth.

74,951.-W.J. Stoweld, Baltimore, Mrd-Rail. way Switch. FFehruary 25, 1868.-Improvenent on his patent of June 19, 1860.-One of the switeh rails of the "turn out" is connected to one of the switeh rails of the main track by a eross-tie, and the latter switch rail is conneeted to a lever hy a rod passing horizontally through the stationary turn-0nt rail. The rod has a strong spring, serving to hold the switeln rail of the main track in line and in close contact with the stationary rail of the thrn-out.
Claim.-1. The arrangement of the switch-rail seetions $\mathrm{A}^{\prime}$ and $\mathrm{B}^{\prime}$, between the turn-out rail B and the main track rail A, the former being laid so as to overlap the fixed main rail A, substantially as described.
2. The spring $b$, or its equivalent, interposed between the rail $B$ and lever $D$, in combination with the connecting rod $a$, and switeh sections $\Lambda^{\prime} B^{\prime}$, substantially as described.
3. A railroad-rail switch, eonstructed and operating substantially as set forth.
'4,952.-W. R. Swinnerton, Pcorin, Tll-Mechanical Movement.-February 25, 1868. -The barrel shaft has a cross bar, whose ends carry pins which may form arbors to anti-friction rollers. The pins traverse radial trammel slots in the erucially-arranged arms of the wheel. The effect is to canse two rotations of the barrel to one of the hand wheel.

Claim.-l. The lever E, with its arms K, and all equivalents of the same, construeted and operating substantially as and for the purposes specified.
2. In combination witl lever E, the slotted whee as deseribed, and the shafts $L$ and G, constructed and operating substantially as set forth.
3. The mode of adjustment and arrangement of the shafts L and G, herein set forth, in sueli manner that their relative distance firom each other shall correspond to about one-fourth the diameter of the wheel.
4. The combination and arrangement of the varions parts lerein deseribed and shown, for the purpose of producing accelerated speed in machincry.

174,953.-Piulo SYlla, Elgin, Mll, assignor to himself, Willian IF. and EDWIN H. Sylua, same place.-Hat Rach for Seats.-February 25, 1868.-The forliod arm which receires the hat is piroted to a bracket attached to the seat.

Claim.-The combination of the forked rack F F G, rertical pirot H, and support C D E, snbstantially as and for the purposes set forth.

17,954.-John Tingley, Philadelphia, Pa., as signor to Pimhadelphia Wood and Hollow Ware Mandiacturing Company.-Churn.-February 2.5, 1868.-The churn is turned on trunnions upon its sides, and has a perforated diagonal diaphragm to cause the agitation of the cream.

Claim.-The inelined diaphragm. arranged diagonaliy in the ressel, and held in place by the detaclia. ble cover $h$, all substantially as set forth.

94,955.-JOSE TOLL, Locnst Grove, Ohio.-Chum.-February 25, 1868. -The middle one of the three dashers descends while the outer ones are ascending, and conversely.

Claim.-1. The arrangement of the three oppo-sitely-reciprocating dashers $\mathrm{B} \mathrm{B}^{\prime} \mathrm{B}^{\prime \prime}$, stems $\mathrm{C} \mathrm{C}^{\prime} \mathrm{C}^{\prime \prime}$, cross-head D, double crank I $i J j$, and pitman $\mathrm{K} L$, for the purpose set forth.
2. The perforated and vertically-adjustable frame M II' socket $N$, and pins $O O^{\prime}$, for the object cxplained.
g4,956.-B. VAN Vranken, Schenectady, N. Y.Brich Machine. - February 25, 1868. - The molds arc forwarded along the vertically adjustable table by a cross rod, which is fixed to spring holders that give way to extraordinary pressure which may oceur from the displacement of the mold. A stone occurring beneath the follower drives out a jointed section and relieves a rod from a friction catch. The movement of the rod turns the shaft of the cams upon which the fore end of the table rests, and allows the table to descencl. The play of the press box follower is adjustable by screws beneath the bar on which the cross head of the operating pitman acts.

Claim.-1. The spring catch $g^{4}$, rod $g^{2}$, and rock shaft $g^{1}$, for holding np one end of table E , in combination with the arm $w$, and press-box section $J^{\prime}$ arranged so as to operate substantially as described.
2. Depressing the mold-box table E , by an outward pressure of a hinged section $J^{\prime}$, or its equiralent, applied to the press box, snbstantially as described.
3. The application of a self-releasing follower to the mold box table $E$, substantially as and for the purposes described.
4. Providing for a parallel adjnstment of the bar $K$, br means of screws and pinion spur wheels, snbstantially as described.

24,95\%.-EliJaII Wagoner, Westminster, Md., assignor to himself and G. W. Matuews.-Rice Planter.-February 25, 1868. -The seed falls through the tnbular standard of the plow and is scattered by a deflecting board. The plow is followed by the corcrer, whiell consists of a plate cast with serrations or ribs upon its lower surface. The plow is concare on its lower side and is adjnstable in horizontal inclination.

Claim.-1. The plows E E when constructed in the form described, and provided with the incline $e$ and guards $e^{\prime} e^{\prime}$, substantially as and for the purpose set forth.
2. Comecting the coverer to the plow by a double joint $h$, as and for the pmpose described.
3. The coverer H when constructed in the form described, and prorided with the concare-formed edge and a corrngated under smrface, snbstantiolly as and for the purpose specificd.
4. The rod Gr passing from the plow throngh the arm F, and provided with a serew and nut, by which inelination of the plow can be adjnsted, snbstantially as specified.
5. Constructing the seed conductors of the finnnelformed sections I I I, connected by straps $i i$, substantially as and for the purpose specified.
6. The combination of the idler N , slide O , and rol ler K, substantially as and for the purpose indicated.
7. The markers R R when attached to the machine, and operating substantially as and for the purposes set fortlı.
8. The arrangement hercin described of a hoe or trencher outside of each of the supporting wheels.

94,958. - Henry Wanklin, U. S. revenne steamer Wilderness.-Salinometer Pot.-February 25, 1865. - The brine is weighed by its pressure upon the piston, whiel is connected to a weighing beam. The water flows from a side chamber into the eylinder at a point just above the highest position of the piston and flows ont throngh a lole at the upper end of the cylinder into a discharge chamber, so as to keep the cylinder nearly full while flowing through.

Claim.-A salinometer in which the specific grar ity of the water is determined or measured by its pressure on a morable piston, snbstantially as and for the pmpose set forth.

74,959.-GEORGE I. WASHBURN. Worcester Mass.-Feed Water Heater.-Fcbruary 25, 1868.The feed water is drawn through closed chambers throngh which the exhaust steam passes in condensing coils. The ent of the coil pipe has a stop valve throngh which the uncondensed steam passes into the coldest water chamber.

Claim.-1. The combination with the condenser C, arranged between the reservoir and pump of the surface condenser D, Fig. 1, situated between the pump and boiler, substantially as described.
2. The arrangement of the condenser between two pumps or two ends of the same pump, substantially as described.
3. A steam pump and condensing apparatus, constructed and arranged snbstantially as herein described.
1g 4, 960.-Hervy Waters,Boston. Mass.-Blank for Hoc.-February 25, 1868. -Improrement on his patent of February 26, 1867. The blank has deep indentations on its faces in direet line between the shanks, so as to partially divide the metal in a thick state and prevent its working orer in rolling.
C'laim.-A blank for shorels, lioes, \&ce, made snbstantially as shown and described.
\% 7 ,961.-Alfred Weed, Boston, Mass.-Boring Fracet.-Febrnary 25, 1868. -The ralre is at the rear end of the spigot, and its stem is turnod up at a right angle through a longitudinal slot in the top to form a handle. The valve carries a boring bit.

Claim.-A tapping fancet having a combined valre and bit, arranged to operate substantially as set forth.

74,96. - Martin Wesson, Springfield, Mass.-Shoe.-February 25, 2868. -The strip is woven the proper width to fold orer and form the outside and the lining of the vamp and quarters. It may be woren in a tube, forming both lining and ontside.

Claim.-As a new article of mannfacture, a shoc, the upper Thereof is composed of a moren or kint fabric, and having the "quarter" and the "ramp" of such upper, or cither of them, formed or a weh which is woren or knit of proper width to form the outside and the lining in one prece, whether such web is made tubular or flat, or with the lining attached to the ontside by tying or connecting, substantially as specified.

74,963.-Wells H. White, Troy, Ohio.-Concrete Pavement.-February 25, 1868.-Composed of pitch, 5 ; coal tar, 1 ; sand, 3 ; coal ashes, $1 \frac{1}{2}$ parts. The pitch and tar are boiled together. The dry matters heated in a pan and screral buckets of saturated solution of salt poured upon the grarel and ashes. The heated mixture of pitch and tar is then ponred npon the rest.

Claim.-Concrete parements composed of the ma. terials, and laid hot and then rolled with a hot roller. substantially as set forth.

17,964.-Lawrence Wiegel, Joserii Lehsbedter, and Cilarles Fegers, Cincinnati, Ohio.Preparing School Slates.-February 25, 1868.-The
pasteboard, when prepared as described in the claim, forms an artificial slate, and is mounted in the usual manner.

Claim.-An artificial slate made with a composition of liquid enoutchone, asphaltum, and pulverized pumiee stone, reduced to a thin paste with spirits of turpentine, and appliod to pasteboard by means of rollers, all substantially as and for the purposes specified.

4,965.-JoHN R. WILBUR, Chicopee, Mass.Corn skeller.-February 25, 1868.-The hopper has side reciprocation. The bomet has a comeare libbed, under surface. It is hinged to the frame at the upper side, and is drawn towards the eylinder by weiglits attached ly cords to its lower side.
claim.-1. The $V$-shaped ribs $k$, in combination with teeth or points $L$ on the face of the eylinder $A$ and bonnet B , constructed substantially as described and tor the purposes set forth.
2. The eriank II and shaft or arm E in combination with the hopper D, construeted as described and for the purposes set forth.

74,966.-David Wimliamson, New Tork, N.Y., assigner to James Williamson, same place.-Cork Pull.-February $25,1868$. - Atter the perforation of the cork the cross ban is thrown around by the spring and serves to enguge the cork.

Clatim.-The cork drawer formed with a mortise contuining the sliding and piroted eross bar with its catch, and the spring for moving the bur crosswise to the mortise, substantially as specified.
74.967.-ELlis Trizanski, Chicago, Ill.-Clay Washing and Stone Separating Machine.-Febrtary 25. 1868.-The clar and water are receired in a tank which has a statiouary partition, having sharply edered square birs and a beater mate in a similar way and secured to a verfical rotating shaft. 'The rods of the beater pasis between those of the partition. The water and elay pass out through a strainer. The stomes colleet in the bottom of the tank.

Claim.-She tink A provided with pirtition B, beater M, and sliding gate $E$ with strainer $G$, the whole construeted aud operating substantially as and in the manner herein set forth, forming the elay Wrashing and stone separating machine.
-4,968. Janics D. McBiride, Mansfield, Ohio. - Attachment for Hot Air Register.-February 25, 1868.-The register opens into the batek of an attachment haring an upper and under triry to contain water, and a space to receive a elothes drying rack.
C'laim.-1. In combination with an attachment for a hot air register, the water vessels 73 and D, arromged in the manner and substantially as herein described.
2. The stand $F$, when used for the purpose and in the manner substantially its herein set forth.
3. The eombination of the several parts $A, B, C$, D, E, and $F$, for the purpose and substantially as herein deseribed.

4, D69.- 4 . P. Wrishow, Cleveland, Ohio.Railroad C'ar stove.-February 25, 1868.-The store is surronnded by a fender whose sides are donble and inelose a water ehamber. The store stands upon a water tank which lias perforated pipes leading to the fire space, and discharging water therein when the store is upset. The flue traversing the top of the store longitudinally has plates prerenting the escape of burning matter when the stove is inverted.

Claim.-1. 'The water chamber or tank B and perforated water pipe I in combination with a railroad stove, substantially as and for the purpose set forth.
2. The gemads $a$ in eombination with a store, substantially as and for the purpose set forth.

74,970.-Abram Alexander, Pittsburg, Pa., assig'nor to Alexaniner Boli Manufacturing Co., same place-Furncee for Heating Bolt Blanks. - Mareh 3,1868 - Whe side; of the finmaee eonsist of water chambers. 'rubular openings admit the ends of the bolts whose exterior portions rest on the shelves.

Claim.-1. The bolt-blanks heatiug furnace herein
described, composed of a combination of a certain number ot hollow eastings or boxes forming the sides of the said fimmace.
2. The side $A$ having two or more rows of holes R R R, \&e., and slielves I I', \&e., urriuged and used for the purpose set forth.
3. Circulating water throngll the hollow sides of a furnace for heating bolt blanks, for the purpose of dispensing with the fire-briek lining therein.
4. In eombination with the hollow east or hollow made sides, the pipes Q, K, K, L, L, and MI, arranged substantially in the manner and for the purpose speeified.
5. In turnaees for heating bolt blanks, the apron $V$ in combination with one or two of the sides of the furnace, for the purpose set forth.

74,9\%1.-A. Merritt Asay, Philadelphia, Pa. - Card for Artificial Teeth.-Mirch 3, 1868; antedated Febrnary 20,1868 .-The eard lits the mamefacturers name printed upon one side, and its other side is corered by a piece of blotting piper which is coated with the wax upon which the teetle are placed.

Clam.-1. The cards or slips for holding artiticial teeth with the wax only on one side, substantially as abore cleseribeal.
2. Priuting the manufacturer's name or trade mark on one side of the slip, and eoating the opposite side of the same with beeswax or an equiralent material, substantially as deseribed and for the purposes specified.
3. The proeess of preparing the shects, ont of whieh the cards or slips are formed, to receive the coating of wax on their outer surfaces, sulbstantially as deseribed.

74,97 2.-S. K. Arers, Delton, Wis.-Lamp.Mareh 3, 1868. -The vent hole in the base ot the burner allows the entrance of air, which mingles with the gas formed in the upper part of the lamp to keep it cool and dilate it to a point below anl explosive state. 'The hole is closed by a valve when the lamp is mused.

C'laim.-A rent hole $c$ in the base of a lamp burner combined with a valre $d$, arranged and operating as and for the purpose described.
74.973. - James AYREs, Paterson, N. J.Spring Balance for Safety Talves.-Mareh 3, 18(s. The lower end of the box is attaehed to a fixed object, and the upper end of the stem has an eye reeeiving the satety ralve lever. 'The stem slicles freely in the head of the box, inclosing the springs whose ends enter carities in the head of the box innd a bloek at the toot of the stem, respectively. The length of the stem and consequent tension of the springs is adjusted br a light and left serew-headed set nut, whieh engag'es the upper and lower sections of the stem.

Claim.-The spring balanee formed by the combination of the box or tiome $A$, rod $B$, haring a hetd 6 formed upon its inner end, spring's C, long land nut $E$, and rod $F$ with each other, substantially as herein set forth.
 Ill-Curry Comu.-Marell 3, 1868.-The sides of the comb are expansible, and have stuare sockets to receire the rectangular ends of the transrerse bars. Each bar has tour serrated ribs extending radially and rectangularly therefiom, so that a fiesh edge may be brought into action when reqnired.

Ulaim.-1. The teeth eylinders C, the side pieces B , and the handle A , when combined and arranged as deseribed and for the purpose set for'th.
2. The eylinders C when provided with two or more sets of teeth $c$, substantially as deseribed and shown.

74,975.-William Barton, Troy, N. T.-Slat Matting.-Mareh 24,1868 .-The slats are held at the reduisite distance by the button blocks, and both are perforated for traverse of the stay ropes.

Claim.-Comnecting the slats and buttons, whieh form a slat mat, by means of ropes or other flexible material, whieh passes through the slats and buttons, substantially as and for the purpose herein shown and described.

4,976.-SaMUEL BEAN, Syracuse, Ohio.-Cane Cleaner.-March 3, 1868. -The two pairs of scraping plates move at right angles to each other, being pressed against the cane by the spiral springs. The plate to which the scrapers are sceured is pivoted at its upper and lower end to allow it frec oseillation.

Claim.-The plates $\mathrm{C} \mathrm{C}^{\prime}$ and springs $\mathrm{D}^{\prime}$ in combination with the piroted plate $B$ and frame $A$, all constructed, arranged, and operating substantially as and for the purpose set forth.
\%4,97\% - Lmmaif Bennet, Amsterdam, N. Y. Cutting out Bands and Fronts of Drawers.-Mirch 3, 1868. -The pile of fabric, consisting of a number of thicknesses, is clamped to the table by the orerlying patterns and ent by the outlines of the latter.

Claim. - The arrangement upon the table $A$ of the guides $\mathrm{B}, \mathrm{D}$, and F , press bar C , and knife guide E , as herein described for the purpose specified.

74,9\%8.-Randall Bisbee, Boston, Mass.-Fit ting Olothing.-March 3, 1868.-In incasuring a person's foot the flexible mold is applied in the sanoe manner as a laced boot. The sole of the mold is expanded or contracted to fit the foot, and the upper is laced up. A sheet of paper is then pressed down upon the pointers, which make a line of dots separated from each other more or less, according to the distention of the upper of the mold. The last is then fitted within the mold until the latter takes precisely the same contour as upon the foot.

Claim.-1. As an improrement in the mode of manufacturing or fitting clothing or other covering for the foot and other portions of the human figure, the employment of an inelastic but flexible mold, made perfect in form, constructed with yiclding openines or apertures, and provided with a device for indicating the shape or form of sueh openings, substantially as hercin shown and described.
2. As a means of indicating and noting the size and shape of the apertures in the mold, the pointers, or their equivalents, essentially as herein shown and described.
3. The construction of the sole of the mold for the foot, as divided in its center, and provided with a suitable means of confining it in position, substantially as before set forth and explained.

74,979.-Marcus Bockman, Brooklyn, N. Y.Meehanieal Movement.-Mareh 3, 1868.-The levers have side arms carrying anti-fiction rollers, which run upon the are of the segmental bloek. The said block has trunnions journaled in the uprights, and its oscillation is eaused by the alternate pressure of the rollers on cach side.

Claim.-The frame A $A$ and $B \mathrm{~B}$, with the levers $\mathrm{C} C$, with their arms D D, and rollers $J J$, and the segment $E$, and connceting bars F F , constructed, arranged, and operating substantially as and for the purpose set forth.
74.9S0.-GFORGE W. BRADY, New York. N. Y. -Safety Attachment to Railroad Cars.-Mareh 3, 1868. -The shield extends around the front, outside, and back of the wheel, and is attached to a spring frame by which it is held in near proximify to the rails, but allowed to rise over small obstructions.

Claim.-1. The shields G, when comected with slides II, which are fitted upon tapering dovetail or other tenons a a formed on the ends of the yoke $J$, Which rest upon the axle boxes of railroad cars, substantially as herein shown and described.
2. The abore, in combination with the springs I I, arranged as and for the purpose set forth.
3. The jokeJ, resting upon and fitting around the axle box, and extending down the side of the pedestal, the said joke having a dovetail tenon on each end, to which the metallie slide connected with the shield frame is attached.
-4,981.-JaCOB Brinkerioff, Auburn, N. Y.Corn Sheller.-Mareh 3, 1868.-The corn is pressed by the shelling erlinder against the surface, consisting of a scries of spring bloeks, which accommodate themsclves to ears of rarious size.

Claim.-The series of regulators or pressure blocks, each with its independent spiral spring, combined
and arranged substantially as and for the purpose herein set forth.

74,982.-RUFUS N. BRUCE, Springfield, Mass., assignor to himself and Amos Call, same place. Planer Chuek:-March 3, 1868. - The object is clamped between the fixed and movable jaw upon the "vise plate." The latter is linged to the base plate and inclined thereon by the setsurew at its free side. A scale denotes the angle to which the plate is set.

Claim.-A planer chuck in whicl the bottom plate A of the vise is hinged at one side to the bottomplate B of the chnek, between two projecting gruides K and K, and operated at the other side by an elerating device, consisting of a scret F , and loose nut E , the parts being combined and arranged together substantially in the manner described.

74,983.-Robert Bryson, Schenectady, N. Y.Harvester Rake.-March 3, 1868. - The finger bar and platform, with the rake mechanism attached thereto, are allorved to accommodate themselves to the inequalitios of the ground. The square shaft operating the raking and reel mechanism slides freely through the clutel hub, and is commected to the said mechanism through a gimbal joint, which allows the said canting of the platform to take place withont influencing the connection. The anti-fiction rollers upon the rake and reel arms are set at different distances from the axis, so that by moring the adjustable cam segment out or in, any arm may be allowed to descencl, when its rake is put into operation as a rake, whereas it, would otherwise act only as a beafer.

Claim.-1. The laferally-sliding segment I, ap plied to the plate or traek bed $\Pi$ by means of a slot and guide, or slots and guides, substantially as and for the purpose described.
2. The rod $\mathrm{K}^{\prime}$ and guide $n$ upon the draught frame A, in combination with lever $K$ and sliding segment track I, substantially as and for the purpose deseribed.
3. The combination of the sliding semment $I$, and its lever and connecting rods for operating it, with the track bed $H$, fixed cam $H^{2}$, and a series of revolving rakes and reels, sul)stantially as described.
4. The combination of a sliding elevating segment track I, with rake and reel arms, which rerolso around an axis, and with anti-friction wheels $e$ e, applied upon said arms at different distances fiom their respective axes of motion, substantially as and for the purposes described.
5. A gimbal-jointed rod S , which is allowed to slide ficely through the clutch lub $h$, and which carries upon it a sliding clutch $r$, in combination with spur wheels $f^{3} f^{2}$, longitudinal shaft $g$. and spur wheels $f f^{l}$, arranged to operate substantially as deseribed.
6. The sliding rod S and its gimbal or unirersal joint $T^{1}$, in combination with a clutelning device $r h$ a rotating bearing $p$, and a drivor $h^{\prime}$, substantially as and for the purpose herein described.
7. The arrangement of the rod $\mathrm{K}^{\prime}$, and the slide rod S, with its cluteh, upon the draught fiame of a front-cut machine, and in front of the driver, all in such relation to the driver's seat that the driver can convenicutly stop or start the rakes and recls, and also cause any one of them to operate cither as a rake or reel at pleasure, substantially as described.

74,954.-Axson Burchard, New Brenton, Ill. -Double Hoes.-March 3, 1868. - The loo liandle is sawn diametrically a portion of its length, and the parts are adjustable in clistance by a set serers. A scetion of the biseeted hoe is attached to each branch of the fork.

Claim.-1. Making them adjustable, so that the blades may be set near together or further apart, as desired.
2. As a means of adjusting domble hoes, a cleft or forked handle provided with a serew or other device, for adjusting the separation, substantially as described.
(7, 9S5.-Henry Burrows. Lotrell, Mass.-Ap naratus for Dyeing Piece Goods.-Marc! 3, 1868. The pieee of cloth, its ends being sewed together and rounded in form, is coiled around the roller's in a derious course, so that the whole piece has contimu
ous morement, in whieh it is alternately carried beneath and raised firom the liquid dye. When the cloth has been sufficiently dipped the ends are unserrn, and the forward end is passed between the wriuging rollers in a flat form.
Claim.-1. The combination as well as the arrangement of the series of guides I, and cither bars or rollers K , with the reserroir, its drum B , and roller H, the whole being to operats together as described, with a piece of eloth applied to them, in mamer as set forth.
2. The arrangement and combination of the gride arm L with the srstem of guides I, bars or rollers K, drum B, roller $\dot{1}$. and reservoir $\Lambda$.
3. The combination and arraugement of the pressure rollec O and forked arm N , or the same and the post II with the rescrroir, its drum, rollers, and guides, arranged as set forth.
4. The combination and arrangement of the roller F with the reservoil A, the drum 13, the roller If, and the srstem of guides I, or I and K, applied to the said rescrvoir, and arranged with the drum IB and roller $\Pi$, sulstantially as speeified.

74,956.-George E. Buit, Harrard, Mass.Mowing Machine.-March 3, 1868.-The eutter bar is supported on a chain passing over a grooved segment. whose axis is thmed by a foot lever to taise or lower the cutter. The cutter is counterbalanced by the seat. The main wheel has no axle, but has two concentric rings connecting by radial arms, and the inner ring ruming on anti-friction rollers journaled between two loose rings and rumning upon a eireular track rigidly fixed to the frame.
Claim.-1. The seat T, supported by mechanism constructed and arranged in suel it manner that the weight of the operator shall act to lift the cutter bar, substantially as desuribed, for the purpose set forth.
2. The foot lever $r$, when construeted with meelianism so arranged that, when operated upon, it shall aet, in conjunction with the operator's weight in the scat, to clerate the cutter bur, substantially as described and set forth.
3. The segment $s$, the gear $v$, the lever $r$, in eombination with the segment H , and elevating chain c , substantially as described for the purpose set forth.
4. The hanging boxes C C , the lever D, and the pivot $d$, in combination with the seat $T$, conss ructed and arranged substantially as described for tho purpose set forth.
5. The combination of the periphery rolls $f f f$, the rings $\mathcal{J} \mathcal{J}$, the revolving rim I, and the stationary hollow ring $K$, with the frame $A$, constructed and arrmged substantially as described for the purpose set forth.

74,989-TJoun Mexry Butler, Seotfsrille, Ky. -Rake.-Mareh 3, 18ti8. -The cireular rake head has a diametric bar, at whose middle the handle is piroted. The rim and cross bar liave teeth. The head may be allowed to turn upon the staff, or may be rendered rigild by hooks connceting the head and staff.

Clatim.-The circular and rotary construction of the machine abore described, comneeted with a handle, as abore deseribed, and having teeth inserted in the nsual manner in the circular frame, and by means of iron hooks and staples, above described, preventing the rotary motion of the machine, at pleasure, atid thereby converting it into a common rake.

94,088.-Joun Caldwell, Providence, R. I.-Lantern.-Mareh 3,1868. -The guard frame is formed to fit the top of the chimney and the lamp. It is so attached to the latter as to enable the use of a common chimney as a wind guard, and the application of a common flat lamp to out-door uses.

Claim. - The combination of a lantern frame $e c^{\prime} d$, construeted as described, with a lamp a and chimney $c$, in such a manncr that the frame may be readily fitted to the lamp, and the chimney will form the glass of the lantern, sulstantially as set forth.

74,059.—Jonn Cassidy, Montezuma, Iowa. Sled 13rake.-Mareh 3, 1868.-The brake is pivoted to the rave, and has two legs which stradde the runner, and are foreed into the track by a horizontal lever.

Claim.-1. The double-locking irons B E, bent or otherwise forming one contimous bar, all substantially as shown and deseribed, in combination with a sled or sleigh, for the purpose of retarding the progress of the latter, all as set forth.
2. The lifting bar $e$, substantially as shorm and described, in combination with the locking irous B B and lever $b$, all as and for the purpose set forth.
3. The frame $n$, substantialy as shown and doscribed, in combination with the roller $i$, locking irons $\mathcal{B}$, and lifting bar $e$, or the equivalent thereof, all as and for the purpose set fortl.
4. The roller $i$, sul)stantially as shown and described, in combination with the locking irons B B and frame $n$, all as and for the purpose set forth.

94,900.-Mugil Cawl, Douglass Comnivg, and Jamis W. Whemere, Troy, N. Y.-P'laiter for'seving Machines.-Mareh 3, 1868. -The cloth is laid on the lower plate, and being folded around the edges of the next plates, its edge is brouglit to the adiustable gause. In stitching the subseguent plaits, the edge of the upper plate is aljusted in the seam in the fold of the last plait.
C'Zaim.-The plates $\mathrm{A}, \mathrm{B}$, and C , and the gange D , for the purpose of guiding the cloth as it passes through the plaiter and regnlating the width of the first plait, in combination with the additional blade or galuge E, substantially in the manmer and for the purposes herein described and set forth.

74,091.-William IT. Cifamberine, Medina, N. Y.-Potato Digger.-Mareh 3, 1868. -The axle, which is fast in the driving wheels, earries a spurwheel meshing into a pinion on the shaft of the digger. The latter earries spiral series of curved tines, by which the potatoes are thrown out.
Claim.- 1 . The whels G , formed with three curred prongs $g^{\prime}$, and remorably arranged upon the shaft $E$, sul):tantially in the manner herein shown and de. seribed and for the purposes set forth.
?. The combination of the pronged wheels G, shaft F , frame B , gear wheels E and I , axle $A$, drive wheels C, and tongue I, with ench other, substan tially as herein shown and deseribed, and for tho purpose set forth.
3. The eombination of the tongue I, seat K, bar L J, lever M, and catch N, with the firame B and axle A, all constructed, arranged, and operating sul) stantially as herein set forth for the purpose specified.

194,992.-Thomas C. Constock, Marrodshurg, Tr.-Implement. - March 3, 18 68 . - The head of the nail is placed between the seriated beaks. Tho actiou of raising the handles brings the "fulerum nose" to aet as a fulcrum. The mail is drawn up through the channel, (by a series of holds, if necessary.) The chamnel gives means for extraction of the nail without bending and consequent danger of breaking.
Claim.-1. The nail drawer and liammer, constructed as deseribed, its handlo 13 morided with the beak E and fulerum nose D, forming the wrenel W , and also provided with the yertical opening H, for the passage of the nail being drawn, and the handle A, having the sharpened vertical jaw F, all arranged as described, for the purpose specified.
?. 'The nail drawer and hamuer', when provided with the beak D, jaws E F, opening H, hanmer C, serew driver G, and taek drawer I, all construeted and arranged as herein shown and described.
'g4,993.-IsAac Cook, St. Louis, Mo., assignor to himself and Franklin Manufactubing Company, assignors to Isace Cook and Geonge P. Herthel, Jr:-Adjustable Seat.-Mareh 3, 1868.- The ends of the seat have gudgeons which turn in rubler bushings in the frame and allow the seat to be placed in a horizontal or rertieal position. Rear projections of the seat engage rubler-faced lugs on the frame, and arrest the scat when being adjusted to cither position.

Claim. - The seat board A, in combination with the lever 13 , tho trmnion $m$, supported in a rubberbushed mortise of the stand $\mathbb{U}$, the shoulder E, its rubber facing $u$, and the cheek stud F with its rub. ber facing, all actiug to produce a noiselessly-moring seat, substautially as set forth.

194,994.-T. J. Cranmer, Vallicita, Cal.-SelfLoading Battery Gun.-March 3, 1868.-The eylinder has a series of radial cartridge chambers, only one in each longitudinal row having a nipple, the fire communicating from one chamber to another. The eylinder has intermitting rotation by a ratchet and pawl. Each row of chambers is bronght in turn beneath the powder charger, the ball charger, the rammer, and the cappis, and when horizontal, (or at any inclination (lesired,) is bronght in conjunction with the barrels, and the cap exploded by the hammer. The operations are all antomatically performed by connection to a man crank shaft. The discharge from the ammunition hoppers is regulated by cut-off slides, which, in the ease of the powder charger, is adjustable.

Claim.-1. The sash or fiame $\mathbf{R}$, provided with lugs for moving the slides S S, and constructed substantially as described, and for the purposes herein set forth.
2. The roek shaft and frame Q, provided with teeth that move the sash or frame $R$, substantially as and for the purposes herein shown and deseribed.
3. The construction of the lock for firing the rolleys, consisting of the sliding bar $J$ and dog $L$, with the hog a, hammer M, and spring $\mathrm{F}^{2}$, substantially as herein shown and described.
4. The device by which the caps are placed upon the nipples, consisting of a combination of the spring $\mathrm{E}^{2}$ dog' $n$, and lugs, with the sliding bar S , substantially as herein shown and described.
5. The combination of the hopper $\mathrm{O}^{2}$ with the tubes $p$ and plates $t$, lags $g$, and sash N , operating substantially as and for the purposes herein shown and described.
6. The construction and arrangement of the wall $S^{\prime}$ in each powder chamber', adjusted laterally by means of the set screws to regulate the charge of powder, substantially as and for the purpose specifed.

74,995.-Robert Crawford, Mercer, Pa.Churn Dasher.-March 3, 1868.-Below the concaroconrex winged disk is the air ressel, with an upper and lower opening. The latter opening has a valve closed by impingement against the cream, in the down stroke. 'The vessel, being raised above the cream, is filled with air, with which the cream mingles on rushing through the hole in the top.

Claim.-1. The air vessel D, of any suitable shape, for the purpose of displacing the cream and permittimes the same to pour into the said vessel, thercby commingling with the air in the ressel, substantially as shown and described, and for the purpose specified.
2. The valve $g$, of any suitable form, in combination with an air ressel D , and operating substantially as shown and clescribed, and for the purpose specified.
3. The concare radial wings a, in combination With the air ressel $D$, substantially as and for the purpose shown and described.
-74,996.-Charles F. Crehore, Newton Lower Falls, Miss. - Treating Paper for Various Purposes. - March 3, 1868. - The paper or millboard is immersed in melted sulphur to give it strength and flexibility, or to confer hardness to enable it to take a finish.

Claim.-The treatment, substantially as before described, of the different fabrieation of paper, by combining the same with sulphur, or any eombination with or equivalent to sulphur, for the pmpose of producing the material or effects before explained.

7i,93\%.-David B. Day, New York, N. K.Floating Thermometer.-March 3, 1868. - The bulb of the thermometer is in a rertical hole of the float, and its stem lies along the top thereof.

Claim.-1. The float A, bent thermometer tnbe B, and adjustable ballast weight D, constructed and eombined substantially as and for the purpose herein set forth.
2. A thermometer for measuring the temperature of liquids, so coustructed as to be suspended therein by means of a float making a part of the instrument, substantially in the manner and for the purpose set forth.

74,958.-Join M. Deariboinn, Boston, Mass.Animal Trap.-March 3, 1868.-The chambers are above a water receptacle, and hare dropping floors whose pendent arms are connected to the posts by springs so as to raise the trap doors after the animal has fitlen through. The ends of the chambers are of glass to admit light. Between the chambers is a wire-ganze bait receptacle. The frec ends of the trap door are supported by buttons until the rats become accustomed to leaping down upon them for bait.

Claim.-The combination of the side boards or plates $F$, glass cnd plates $G$, covering plates H, gauze or fine grating I, pivoted or hinged dron door or doors $B$, arms C , coiled springs D , and arms E , with each other and with the corer A, substantially as herein shown and described and for the purpose sct forth.
\%4,999.-Gilliard Dock, Wiconisco, Pa.-Car Wheel.-March 3, 1868.-The oil hole passes through a teat projecting into the oil chamber in the hub of the whecl. 'The device prevents the escape of oil when the hole is downward.

Olaim.-The perforated projection e, in combination with the recess $a$ in the hub $A$ of a car wheel, constructed and operating substantially as and for the purpose herein described.

75,000.-George E. Doniam, Last Abington, Mass.-Dentist's Flask.-March 3, 1868.-The flask is secured by a spring clamp to insure the closure of the same mader changing temperatures.

Claim.-1. In combination with the parts of a dentist's flask, and means for securing said parts together, means for allowing the parts to jield while retaining pressure on the contents of the flask, substantially as described.
2. The clamp, when made so as to yield, and arranged to be nsed with means for securing together the parts of a dentist's flask.
(75,001.-Gardner Drake, Farmington, Me. Car Brake Shoe.-March 3, 1868.-The shoe has studs on its rear side which enter the bar, and has a transrerse slot which receives the nut to the attaching holt. The upper side of the shoe is bereled to cast off snow and mud.

Claim.-1. The combination of the brake shoe $A$, haring the slot $a$ and the bereled end C , as herein described, for the purpose specified.
2. The combination of the slotted shoe A with the pins $a^{1}$, bolt $a^{2}$, and block $B$, as hereiu described, for the purpose specifich.

75,002. - William Dunn, Argostille, N. Y.Strainer for Fluids.-March 3, 1868. -The strainer has a siere made in one of its sides, and is clamped by the other side to the edge of the ressel.

Claim.-The arrangement of a strainer within a vessel, such strainer having a wire ganze or siere in its wall, and attachments for the purpose of connecting it to one side of the ressel, substantially as and for the purpose described.

75,003.-Alfred Duvall, Baltimore, Md.Excavating Under Water.-March 3. 1868; antedated February 28, 1868.-The earth is loosened by a rotary cxcarator and earried into a racuum box, from which the finer portions are withdrawn with the water, and the coarser allowed to colleet for smbsequent discharge. The barge has a valre at the bottom allowing passage to water for adjastment of flotation, which adjusts the apparatus rertically.

Claim.-1. The receiving box C , forming a horizontal portion of the pipe leading fiom the cxearator to the pump, construeted with doors to give access to its interior, and submerged in mater, or otherwise made air-tight, substantially as set forth.
2. The combination of the pmmp A, reeciving box $C$, and screen $E$, pipe $\mathbf{F} G$, and vertically-Torking excavator K, substantially as and for the purpose set forth.
3. The combination of the receiving inlet I and excavator K , respectively construeted and arranged to operate substantially as set forth.
4. The combination of the excarator K , vertical shaft J, and stationary cylinder L, with revolving
piston for supporting the shaft, substantially as set forth.
5. The arrangement of the linll of the boat with a partition $V$, ralre $T$, and pump $M$, for regulating the depth of the excavator, either when at work or for the purpose of adjustiug the shaft, substantially as set forth.

75,004.- Alfred Duvall, Baltimore, Mcl.Excarating Cnder Water:-Mareh 3, 18G8; antedated February 28. 1868 . - The excarator tubes have unirersal joints which allow their lateral and rertical movements. The earth is loosened by the excarators at the ends of the tubes. The latter diseharge into an air-tight receiving chamber from which the water and fine particles are exhausted by a rotary pump; a screw keeping back the coarser portions, which are subsequently discharged through the hatchways.

Claim.-1. The combination of the pump $A$, receiring box 13 . ralve $F$, tubes $E$, and pipes $I$, the latter tro being connected by a unirersal joint $H$, substantially as set forth.
2. The combination and arrangement of the stationary tubes E, horizontally and vertically morable pipes I, cord $J$, aud windlass $K$, substantially as set forth.
3. The combination and arrangement of the pipes I aud E, recciving bos B, screen C, pump $\Lambda$, and trough or series of troughs $P$, substantially as aud for the purpose set forth.
4. The receiving box $B$, with the adjustable valve $F$ and screen C, and exterual water box D, construeted and arranged substantially as set forth.

75,005.-Andrew R. Eggleston and Charles F. Swax, Milwankee, Wis.-Sceding MachimeMarch 3, 1868. - Improrement on their patent, February 19, 18i6. The bottom of the hopper is sloped longitudinally tomard the seed wheels, which have a series of peripheral eups to convey the seed to the exit loles. The latter may be adjusted in size or closed. The plows are raised from the , rronnd or adjusted rertically by chains which extend from the draw hars to a windlass whiel is turned by a rope coiled around it and comneeted to a lever.

Claim.-1. The combination with the rotating feed cups of the orerlapping stationary soekets or slields, substantially as set forth for the purpose described.

2 The combination of the feed cups, the gauge plate, and the shut-off slide, substantially as set forth.
3. The combination of the windlass, the hand lever, and drag bars, with lifting chains, arranged as deseribed, whereby the plows are lifted by the baekward morement of the lever, as set forth.

75,006.-Join Eliot, Vermillion, Ill.-Horse Rale.-March 3, 1868.-The rake may be used with two horses to draw the hay in considerable yuantities to a stack, or to glean grain fields.

Claim.-The hily gatherer, when provided with teeth B, having the rearward extensions to the under side of which and the head A the rumners C are seeured, as herein shown aud deseribed.

75,00\%-Benjamix Fisit, Mechaniesburg, Pa. -Tuyere--Marel 3, 1868. -The air chamber has a spring ralye which is closed by the pressure of air when the blast is on, but which othertrise springs open to allow passage to a small quantity of air to keep the ilre alive.

Claim.-The improved tnyere, herein deseribed, constructed and arranged substantially as set forth.

75,00S.-L. H. Gano, Milwaukee, Wis.-Bag Tie.-March 3, 1868; antedated Oetober 18, 1867.The jointed wire frame is placed aronnd the bag mouth, and is secured by the bent lever which is pivoted to the jointed link and passed through the other one. The end of the lever is lield by the spurs at the hinge of the jointed link.

Claim.-The lever $a$, provided with its tooth $c$, in combination with the elastic link $b$, the spur's $d d$, and the links $b^{\prime} b^{\prime \prime}$, arranged and operating substantially as described.

95,009.-M. D. Grow, Fort Dodge, Town. Water Whecl.-Marcl1 3, 1868. -The water is re-
ecired at the periphery of the wheel, flowing beneath an annular gate, which may be rertically adjusted to regulate its passage. The gate is supported on roller's which travel inclines upon the case, and the turning of the gate consequently causes its vertical adjustment. The water flows downward and outwild orer the spiral buckets.

Claim.-The bell-shaped wheel $\Lambda$, provided with the spiral buckets $S$ L, and haring, its npper ealse and guide band E arranged in relation to the amular chute plates B $B^{\prime}$, substantially as herein shown and described.
$75,010$. - Frederick Hansworth, Chicago, III.-Apparatus for Ventilating Water Clowets.March 3. 1868. - The air is receited in the fore cud of the flaring-ended tube; a ralve npon a sliding rod being driven by the wind to stop the rear opening. The air passes down a rertical pipe to an amular space surronuding the cone, and having exit at its lower end makes a domnwaid enrent through the pipe.

Claim.-A water closet ventilator, consisting of the ease D, pipe 3 G , and ralve $A$, substantially ins deseribed.

75,011.-Jovathan Hansworth, Chicago, In. -Stean Blower.-March 3, 1868 ; autedated February 24,1868 . The fan arms are on a vertical shaft held bet ween top and step centers. The steam enters axially through the step center and passes through the radial arms, which are curved at the ends to give the steam a tangential course and cause the rotation of the fan shaft. The step is inclosed in a chamber.

Claim.-1. The arrangement of the rertical shaft $G$ and steam enp $D$, as and for the purposes set forth. 2. The arrangenent of the rertical hollow center I and shaft $G$, as and for the purposes specified.
3. The combination of the eup D, steam duet C , and center $B$, as and for the purposes set forth.

75,012.-George Hart, New Bedforl, Mass. Traveler for Furling Sails.-Mareh 3, 18Ge. - The metallie guide is attached to the upper side of the yard, and has a circular groove to reeeire the erflindrieal part of the "traveler," and a flat-sided slot comeeting this rounded groove with the outside, and giving place for morement of the web of the trareler. The web and cylindrieal part have antifriction rollers.
Claim.-A traveler, with frietion rolls, runnines in a guide. for hauling in and ont square sails, as hereir set forth and deseribed.

95,013. - Axprew Hartman, Canton, Ohio. Raihroad Gate.-Mareh 3, 1868; antedated February 22,1868 . The gates are luid down flat hy the flange of the locomotive wheel, and caught in that position nutil relieved by a lever on the rear car.
Claim.-1. The combination of the rods F, H, J, box $G$, spring $q$, slide I , and nut $w$, the sereral parts being arranged in the manner and for the purpose herein specified.
2. The combination of the lever A , and the springs $d$ and $x$, the several parts being arranged as and for the purpose herein set forth.
3. The combination of the gates $0 o^{\prime}$, rods K and $l$, arms $i$ ik, spring $s$, and box $m$, the sereral parts being arranged in the manner and for the purpose specified.
4. The peeuliar arrangement of the irons $t$ t', lever's $r r^{\prime}$, catches L L', slotted irons $v v^{\prime}$, rods $u u^{\prime}$, and stops $h h^{\prime}$, the several parts being used as and for the purpose herein specified.
5. The peculiar arrangement and combination of the gates, levers, rock shafts, rods, springs, boxes, slides, eatches, and slotted irons, as herein shown, the whole forming a self-operating apparatus, in the manner and for the purpose herein specified.

75,014.-Gibrons G. Fichama, Coatesville, Pa. -Bottle.-Mareh 3, 1868.-The oblique tube is formed When the glass is in a plastie state, and extends so near the bottom of the bottle that the liquid has not space to gain sufficient momentum to carry it through the orifice. A small splint may he introduced through the tube and a portion of the contents abstracted. The deviee may be used for an inkstand.

Claim.-The eonical tube D, projecting obliquely downward and inward from the side of the bottle A. to a point very near the bottom thereof, as and for the purposes shown and described.
75,015.-Charles W. Holblook, New York, N. Y., assignor to himself, William Boardman, and Cinarles G. Bayler, same place.-Hydraulic Press.-March 3, 1868.-The ram acts through toggle arms upon the lifting rods, which are secured to the comers of the lower and moving platen.

Claim. - The combination and arrangement of the morable platen C C, rods K K K K, torgle-joints H H H, and arms E E E, with the central eylinder motor, all substantially as deseriked.

75,016.-Geonge Holman, Waterville, N. Y.Revolving Fire-arm.-March 3, 1868. -The cylinder has alternate riffed and smooth bores, and is made sutficiently long for the due effect of the powder on the projectile. The barrel is so large that the bullet and the small shot are allowed to spread. The rod, on which the eylinder turns, fits in gudgeons screwed into the ends of the oylinder.

Claim.-1. The plugs $\mathbf{E} \mathrm{E}^{\prime}$ in the ends of the central hole $a$ of cylinder D, in combination with the rot F , on which said cylinder is fitted, all arranged scbstantially as and for the purpose set forth.
2. The providing of the eylinder D with alternate riffed and smooth bores $c f$, smaller in diameter than the bore of barrel C, substantially as and for the purpose specified.
3. The attaching of the spring $I$, which operates the stop lever J, to the front side of the hammer $H$, for the purpose of insuring strengtl and clurability.

75,017.-Lewis Horton and Josiati A. McGaw, Manchester, N. H.-Trunk Caster.-Mareh 3, 1868. -The roller is journaled to a plate whieh is piroted to a plate secured to the trunk bottom.

Claim.-The trunk caster, consisting of the plate $a$, to which the plate $b$ is liung by the pin $c$, said plate bearing between the two arms $e$ the corrugated roller $d$, all constructed as deseribed, whereby the plate $a$ is secured in place without the pin $c$ entering the bottom of che trunk, and the plate $b$ allowed to revolve in contact with the plate $a$ without leverage, as leercin shown and described.

95,018.-Enward Howard, Boston, Mass.Dust Ring for Watchcs.-March 3, 1868.-The dust ring has a snap edge all around, which engages a corresponding beveled portion of the dial plate.

Claim. -The method of attaching the dust ring $a$ to the lower or dial plate of a wateh-movement, hy means of a bevel or snap edge on said plate, engaging with a corresponding edge in the dust ring, substantially as and for the purpose set forth.
$75,019,-$ Wrlitam O. Howard, New York, N. Y.-Shot Cartridge - March 3, 1868; antedated February 22, 1868.-A fibrous, clastic trube is tied at one end, and prepared with stearinc or similar substance, applied hot in a former; the small shot being inserted, the other end is tied. For breech loaders, the eartridge is inserted into a copper capsule charged with powder and fulminate, in any usual manner.
Claim.-The combination, with the fibrous, elastic covering A and shot B, of a coating of adamantinc, stearine, or equivalent substance, substantially as and for the purpose specified.

75,020.—Charles Hurst, Nett York, N. Y.Car Replacer-March 3, 1868.-A jacking frame is attached to cach end of the car, and has an axle and troo flanged wheels, which have transverse movement by a serew, and rertical movement by racks and spur wheels.

Claim. -The sliding axles $\mathrm{D} \mathrm{D}^{\prime}$, ratchet bars F , axle 1 , haring pinions $c$, screw-shaft I, arms $f$, and nuts $g$, in combination with the flanged whecls $\mathrm{E} \mathrm{E}^{\prime}$ and car A , whereby a vertical and lateral adjustment of the flanged wheels $E \mathrm{E}^{\prime}$ is obtained, substantially as herein shown and described, for the purpose specified.

75,021.-Charles B. Hutchivson, Auburn, N. X.-Machine for Jointing Staves.-Mareh 3, 1868.-

The stave is clamped upon the eurve-topped earriage, and is passed between the saws, which are earried upon inclined adjustable arbors.

Claim.-1. The combination of the right and left hand scrers $G$, pivoted muts L L, and pivoted side picces E E, carrying saw arbors and satrs, all constructed and arranged to operate to adjust the saws to different width of staves, substantially as described, and for the purposes set forth.
2. The combination of elamping levers $\mathrm{C} c$ with the carriage B, when construeted and operating substantially as described.

195,022.-Nicholas Jenkivs, New York, N. Y., assignor to himself, George Brown, and Charles F. Bliss, same placc.-Slide for Extension T'ables.Mareh 3, 1868.-The slides have dish-formed plates on the ends of studs, which are attached to one slite and traverse a groove in the slide adjoining. These disks take the place of the usual rectangular plates, the corners of which, when loose, plow into the edges of their guiding groove. The slides have stop pins, which strike the usual stop block when the slide is sufficiently closed.
Claim.-1. The cirenlar form of the metal plate $M$, when arranged relatively to the slides $A, B, \& \in$, and to the coneentrie fastening which sceures it, substantially in the manner and for the purpose herein set forth.
2. The stop N , centrally arranged relatively to the slides A, B, \&c., with the blocks G receiving the same, snbstantially in the manner and for the purpose herein set forth.

75,023.-Jomn Thomas Jones, New York, N. Y., assignor to the Singer Mavufacturing ComPANY, same place.-Friction Driver.-March 3, 1868. -The friction clamp embraces the hub of the feed wheel, and has two levers, each of which has a pawl which pinches the wheel to canse its intermitting rotation. The respectire pawis canse rotation in contrary direetions. The levers extend radially from the clamp, and have radial slots meeting at their open ends, and receiving a pin by whose reeiprocation a like morement is communicated to the lever whose slot it occupies. An arljustable brake rests against the portion of the circumference of the hub not eovered by the elamp, and prevents the back movement.
Claim.-1. The combination of the hub, friction elamp, two rocking cams, aud two operating levers, arranged at the same side of the hub, substandially as before set forth.
2. The combination of the hub, friction clamp, two rocking cams, operating levers, and reeiprocating driver, substantially as before set forth.
3. The connbination of the hub, friction clamp, tro rocking cams, operating levers, reciprocating driver, transferrer, and gauge, substantially as before set forth.
4. The combination of the lubl, rocking cam, lever, reciprocating driver, transferrer, gauge, and holding mechanism, substantially as before set forth.
'g5,024.-John Thomas Jones, New York, N. Y., assignor to the Singer Mavuracturing Compaxy, same place.-Friction Driver.-March 3, 1868. -The motion of a reciprocating shaft is made to cause the intermitting rotation of the feed wheel. The said shaft carries one or more split rings, each of which is associated with two lever-operated cams, by which the ring is adjusted to cause the said morement of the feed wheel in either direction.

Claim.-l. The combination of the hub, split ring, and cam, substantially as before set forth.
2. The combinatign of the hub, split ring, eam, and operating lever, substantially as before set forth.
3. The combination of the hub with two sets of split rings and cams, substantially as before set forth.
'95,025.-William Johnston, Appleton, Wis.Bedstead Fastoning. - Marel 3, 1868. - The rail catches are upon tro ringes cast together, and engage the sand inclines of the segmental pieces let into the post.

Claim. - The part D, when made in tro seetions of segmental form, seeured together by the single
pin $P$, in combination with the rings $R R$, joined together and cast in one piece, and bearing upon one side the neeks $s s$, and eatches $k$, as herein deseribed for the purpose speeified.

75, 0e6.-Geonge P. Kimball, Sim Francisco, Cal.-Construction of Tehicles.-March 3, 1868. -The ends of the pereh are turned up to form the jacks Which are strengthened by overlying bars and other bars which conneet their ends to the pereh. The plate on top of the head block and the bar under the axle are connected by vertical bolts to act as a safety attachment on fracture of the kingbolt. The strengthening bars of the jacks are attached to adjnsting screw bolts passing throngh the head bloek and receiring a nut.
Claim.-1. The combination of the pereh $A$ and jack $P$ with the bars $J J$ and II II, substantially as described and for the purposes set forth.
2. The combination of the bar D , plate O , bolts II, braces $G$, and pereh $A$, snbstantially as deseribed and for the purposes set forth.
3. The combination of the serew plate C and muts C with eye-bolt S. snbstantially as described and for the purposes set forth.

95,027.-Alimas A. Knowlitan, St. Albans, Vt. -Mold for Artificial Teeth.-March 3, 1868.-The matrix for the fiont of the teeth is in the frout part of the mold. The back part is divided into tiro seetions having respectively the matrices for the top and back of the teeth. The latter section carries the screws those points form the sererr-threaded attachment sockets.

Claim.-1. Forming the back part of the mold in trro pieces, B and C , the division line being located smbstantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the serews $h$ with the baek part C of the mold, substantially as herein shown and destribed, and for the purposes set forth.
3. Forming the holes for the platina pins in plain incisors and eanines in the bereled edge of the part C , and at an angle of trenty degrees or thinty degrees with the plane of the position of said teeth when in the month, substantially as herein shown and described, and for the purpose set forth.
4. The combination of the screws $d$ with the parts $B, C$, and $A$, of the mold, substantially as herein shown and described, and for the purpose set forth.
5. The combination of the pins $f$ with the parts $B$ and C of the mold, substantially as herein shown and described, and for the pnrpose set forth.

75,029. - Sayuel Lewis, Brookirn, N. Y.Snow Clearcr-March 3,1868.-The knife is attached to the tilting box which is raised up at the rear end to discharge the load. The tilting of the box is effected by a chain conneeted to its top, and coiled around the barrel of a windlass.

Claim. - The combination of the tilting rear box 6 , frame 1,2 , brace 8 , windlass 17 , and lever 13 , all arranged and operating substantially as deseribed for the purpose speeified.

75,029.-Samuel Lewis, Brookiyn, N. Y.-Ice Planing Hachine.-March 3, 1868.-The horizontal knife is placed with its flat side down, and is connected by braces to the rear cross-beam; it is connected by adjusting screw rods to the central crossbeam. The machine is monnted on runners, one of which runs on the made surface, and is so much lower than the other as to bring the machine lerel. An adjustable, vertical cutter forms the side of the furrow sliee. The fore end of the machine is raised by the carred clevator bars which are pivoted to the frame, and drawn baekward by the chains and windlass.

Claim.-1. The adjustable knife 7, in combination with a firme mounted on mnners 2020 , and all constructed and arranged to operate in the manner snbstantially as and for the purpose set fortll.
2. The manner of attaehing and bracing the knife 1 of an ice planer with its flat side downward, by the bolts 22 , braces 33 , taper washers 55 , and nuts 44, substantially as deseribed, and with the objeets specified.
3. The slots $b b$ in the knife 1 , when in combina-
tion with bolts 22 , braces 3 3, washers 55 , and nuts 44 , for the pnrpose explained.
4. The rertical eutters 99 , formed, attaehed, and operating as deseribed, and combined with tho knife 1, and its attachments, as shown.
5. The runners 11 11*, when made reversible and adjnstable as described, by means substantially as shown, aud combined with an adjustable knife and vertieal eutters, all as specified and explained.
6. The brake or elevator 16 , in combination with the chain 17 and windlass 14 , applied and arranged to operate in the manuer substantially as and for the purpose specified.

75,030. - H. W. Libbey, Clereland, OhioBosom I'ad.-Mareh 3, 1868.-An onter cover of flexible rubber cloth has $n$ central projection perforated by a valre opening, into which air is blown to expand the cover. The inner side of the rigid plate has a lining of silk stretehed from its ellge.
Claim.-1. A breast form or pad, haring a rigid base A, and a flexible rubber front, prorided with a valre at the nipple, and padded or stnffed, substantially as herein deseribed.
2. The valre $c$, as arranged, in combination with the clastic eorering C and nipple F , for the pmrpose and in the manner substantially as set forth.

75,031. - H. W. Libbey, Cleveland, OhionBosom Pad.-March 3, 1868.- 1 entral, rigid, dished plate has a flexible eorer stretched over its convex side, and a silk lining orer its concave side. The cover is inflated by air, introdnced at a valfecovered opening.
Claim.-1. The diaphram A, membrano B, and elastic covering C , combined and arranged substantially as speeified.
2. The nipple D and valre $\mathbf{E}$, combined and arranged substantially as and for the purpase specified.

75,032.-Samuel E. Lochwood, Westbury, N. Y.- Compound Punching and Upsetting Apparatus. - March 3, 1868.-The tire is clampel betveen the serrated smrfaces of the eams and abutments, and the moving frame is driven toward the fixed one by a cam and connecting rod, operated by a lecer. The punch is operated by the same cam as the npsetting mechanism.

Claim.-The improved machine herein doscribed, consisting of the stationary lead bloek U, sliding head block D, conneeting rod F, eccentrie E, upon shaft $G$, cecentrie disk $\bar{H}$, with its lover I, stationary blocks $J$, and sliding block $\mathrm{J}^{\prime}$, having serrated projections $i i^{\prime}$, toothed eceentric wheels $k$, and punch $n$, die bloek O , and openings $r \mathrm{~S}$, all constructed and arranged as described, for the purposes specified.
'95,033.-J. A. J. Logan, Moline, Ill.-Reflector. - March 3, 1868. -The shank is formed of a projecting tongue of the reflector plate which has a donble bend, so as to stand backward from the face of the reflector, but in a parallel plane.
Claim. - As an improved artiele of mannfacture, the coneave metallic reflector $A$, made in one picce, with its shank C, when said shank is formed with a shonlder 1 , arranged as deseribed.
75,034.-Menry O. Lothror, Milford, MassSteam Engine Cut-Off.-Mareh 3, 1868.-The anxiliary valves are one at each end of the primary valro, and operate in connection with ports in the ends of the primary valve, the anxiliary valves being operated by cams rotating within the steam chest. The cams have a lateral motion by a sliding rod which extends. into the can shaft, and is aetuated by the regulator:
Claim.-The improved "eut-off"' regulating inechanism, hercin described, consisting of the ruxiliary ralres K L, operated by the cams $c$ and $d$, applied to the shaft $c$ and slides $i$, the whole operating in combination with the main valve D and cylinder ports B and C, to produce the results before set focth and explained.

95,035.-Virall II. Lyon, Plainfield, IidiFruit Gatherer.-March 3, 1868.-The frame of the pieker is attached to the top of the rod which is made in sections. The upper end of eaeh section enters a socket formed by a ferrulo on the lower ead
of the section above it, and has a cross-headed pin which passes into at sualler socket extending from the larger one. The head of the pin traverses the slot of a transverse plate in the inner socket and is secured by a turn of $90^{\circ}$.

Claim.-1. The head $A$, fingers $C$ C C C, B B B B, in combination with sack $S$, when formed, constructed, and arranged in the manner herein de. scribed, and for the purpose sot forth.
2. The sectional rod D, in combination with liead A, when constructed and arranged substantially in the manner as herein shown, and for the purpose set forth
\%5,036.-Charles Manhein, New York, N. Y., assignor to E. L. I'ERRY, same place.-Oatamenial Sach.-March 3, 1868.-The sack is formed of material which is impervious to liquid and contains an absorbing smbstance, as spongo.

Claim.-The catamenial saek, constructed as deseribed, from one piece, in such a manner that the bags B C D are only formed when the enck is partially folded, as herein shown and deseribed.
 Ohio.-Window Shade.-March 3, 1868.-The upper roller is supported by the bands which are attached to the top of the frame and coiled around the ends of the rollcr; the weight of tho shade tonds to provent the downward rotation of the roller by being coiled in a contrary direction to the supporting ?ands. The upper roller has a band coiled around its middle orer the shade, and passing beneath a eravitating elutch on the frame top. The lower roller is sppported by tro cords attachod to the frame top, passing beneath the roller, and throngh eycs near the place of begimning, and from thence to the connecting tassel. The shade may be adjusted at each end so as to cover any portion of the window.

Olaim.-1. The arrangement of gravitating cateh H with the riband F , upper roller B , and bands $\mathrm{C} \mathrm{C}^{\prime}$, for the purpose set forth.
2. The arrangement of cord $I$, tassel $J$, and lorror roller E, for the purpose set forth.
3. The combination of the two rollers B E, bands $\mathrm{C} \mathrm{C}^{\prime} \mathrm{F}$, catch H , and cord I , substantially as and for the purposes set forth.
\%5,038. - David C. Mayo, Richmond, Va.Press for Packing Shred Tobaeco.-March 3, 1868.The required quantity of tobacco is placed in the fiattened, metallie tube. The tube and bag are placed beneath the press and the tobacco is forced by the plonger from tho former into the latter.

Claim. - The combination of the lever and counterpoise $d$, and connccting rods $b^{1} b^{2}$, and slides $B B$, cross-head E , plunger's $e$ e, with filling tubes $f f$, all arranged substantially as herein describorl.

75,039.-David Neflson Melvin, Buffalo, N. Y.-Furnace for Generating Steam.-March 3, 1868 -The conical tubes lave their smaller ends downward and receive the water at that end, having separate connection at their npper ends with the steam lrum. The combnstion chamber is orer the areh placed abore the center of the furmace. The caloric current passes through the side openings from the combustion chamber and onters the chamber containing the steam-generating tnbes. It las a downward course therein, and exit through side flues regulated by dampers.

Claim.-1. Constructing is steam boiler of one or more inverted conical water tubes B, each separate and independent of the others, substantially as set forth.
2. The mode of sustaining the said tubes $B$ in the metallic plates E E, as herein described, to allow of "their expansion and contraction.
3. Construeting furnaces having inclincl grates, with a bridge or partial diaphragin $K$, at the center, for diriding the dranght, in combination with the combustion chamber D , and side eseape fines $p p$, substantially as and for the purpose set forth.
4. The door $f$, provided with arm $h$ and weight $g$, and hinged so as to be self-operating and self-sus, taining, substantially as specified.
5. The arrangement of the tubes B , heating chambers C , and flues $p p$, whereby the heat through the
latter comes first in contact with the enlarged nuper surfaces of the tubes, and is thence retarded as it descends, substantially in tho manner and for the purpose set forth.
6. The series of dampers $q q$ in flue $G$, in combination witl the tubes 13, heating chamber C, aper tures $p$, and furnaee D , provided with a bridge K , arranged as described, for regulating and equalizing the draught among tho said tubes, as specified.

75,010.-William Mileiken, Cambridge, Mass. -Combined Book Cover and Stand.- March 3, 1808 -The file covers are sccured to an adjustable staud which supports the same in an inclined position.

Claim.-1. The combination of the cover's A A ancl the arljustable frame or stand B 13, substantially as and for the purpose set forth.
2. The adjustable bars or supports E E , in combination with the adjustable frame BB and covers A A, substantially as and for the purpose set forth.
\%5,041.-B. F. MoHn, Miffinburg, Pa. - $\boldsymbol{1}$ (\%chine for Boring Posts.-March 3, 1868.-The post is clamped to a longitudinally sliding carriage upon a transrersely sliding frame, which is operated by treadles to give the feed motion to and from the anger.

Olaim.-The combination of the levers H, J, and K, and II, with the pin I, notch $h$, and notehes on the bar $L$ of carriage $E$, or its equivalent, all eonstructed and opcrating in manner substantially as above set forth and deseribed.
ry5,042.-Halsey Moore, Bangall, N. X., as. signor to himself and $\triangle$ ARON W. KNipe, same place. - Air Condensing Apparatus. March 3, 1868. -The air pumps are operated by weights suspended on cords coiled upon drums. The motion is cormmmicated throngh a system of levers.

Claim.-1. The rock shaft $D$, with which the pis-ton-rods of the air pumps or condensers A are connected, operated by means of the sliding weights $G$ and H, moving back and forth npon the slotted arms F, attached to said shaft D. substantially as herein shown and described, and for the parpose set forth
2. The weights $G$ and $H$, morod back and forth upon the slotted arms $F$, from the Torking-beam $P$, by means of the conmecting rods $I$, levers $J$, connection rods L, bent or elbow levers M, and connecting rods $O$, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the toothed segment $R$, toothed segment S , Working-bonm T , connecting rods U, crank $V$, and shaft W with cach other and with the working-beam $P$, to impart motion to said beam, substantially as herein shotrn and described.
75,013.-Duncan Monrison; Portland, MeCoal Sifter:-March 3, 1868.-The box contains two compartments in which the hods are placed, which receive respectively the ashes and cinders, separated by the inclined reciprocating sierc.

Claim.-The arrangement of the several deriees hereinbefore described, in tho mamer' set furth, and for the purposes specifiet.

95,044.-ROBEuT Morton, Stockton-on-Tees, England. - Liquid Cooler. - March 3, 1868.-The pipes are laid in horizontal and parallel position in a tank through which the wort is passed. The pipes are formed each from three or more tubes, the middle one of mhich is made square and the outside ones flat on the imer side. The three are brazed together, making a compound pipe of flattened, oblong section. The bottoms of alternate pipes are eonnceted by plates which allow a passage for liquid beneath the pipe inclosed between the conneeted pipes. These intermediate pipes have upward ribs which cause the liquid to take a course beneath and abore each alternate pipe respectively. The pipes are connecter at each cnd alternatcly.

Olatim.-1. Tine arrangement of a series of flat tubes A, which are alternately provided Tith longitndinal ribs $c$, and connectod by corrugated strips $d$, substantially as and for the purpose set forth.
2. The caps $C$, in combination with the tubes $A$, ribs $c$, and connecting strips $d$, construeted and operating substantially as and for the purposes described.
75.015.-JOSELI NASON: New Tork, N. Y.Cotice Pot.-March 3, 1868.-A coek at the upper part of the lower chamber allows the air to escipe and permits the introduetion of the water. In use, after the eoffee and rater are placed in the upper and lower chambers respectively and the pot placed orer the lamp, the formation of steam in the lower chamber forees the water throngh the comecting pipe into the upper chamber. Tho water is drawn downward through the coffec by the condensation of the steam when the pot is remored from the lamp.

Claim. - The employment of two cocks, communieating respectively with the upper and lower parts of the cliamber of a duplex coffee urn, the several parts being constructed and arranged for joint operation, substantially as and for the purposes herein set forth.
'95,046.-BENJAMn Nott, Albany, N. I.-Cook: ing Stove and Range. March 3, 18is.- The basebnrning grate is fed from a cylindrical, corered tube whieli slides in a suitable rertical tube fired at the baek part of the top plate. 'The radiatiug heat from the fire may be used by a refleetor oren attached before it.

Claim.-1. A base-burning stove so arranged and constructed as to admit the feeding and burning of the coal at the rear of the firc-pot, in combination With lateral flues, surronuding orens at the sides thereof, for the parpose of making radiating fire surface at the front, or at $C$, for cooking purposes, in addition to the baking in the orens, substantially as described.
2. In combination with a base-burning store constructel as deseribed, the auxiliary supply openings, for the introduetion of lighter fuels, substantially as and for the purposo described.
195.04\%.-Georae F. Perisins, New York, N. I. - Collar and Yeck Tie Combined.-Mirch 3, 1868. The imitation cravat is upon tho collar and folded so as to hicle the button.

Claim.-The reversible paper cravat $B$, on the lomer edge of one end of the collar, and cut in one and the same piece with the latter, adapted to be folded into said collar abore the line $a$, and its free end inserted in the opposite end of the collar, as herein shown and described.

75,048.-Charles Perley, New Kork, N. Y.-Shoc.-Mnreh 3, 1868. -The gaiter is laeed at the hecl, and the tongue padded to fit the depressions abore the heel.

Claim.-1. The padding applied at $f$, within the rear portion of the shoe, for the purposes and substantially as specified.
2. 'The tongue $d$, stiffened with a padding, that also equalizes the pressure of tho lacing on the foot substantially as set forth.
3. The buttons or fastenings along the tongue $d$, between the Haps $9 g$, to hold said tongue properly in place as specified.

75,049.-Hypolite Pernot, Nen Tork, N. Y.Billiard Cue Trimmer. - March 3, 1868.-Theroughfaced, eireular rasp-plates of various concarity are associated in one handle so as to cnable the fiacing of different eues with the same instrument.

Claim.-1. A billiard ene trimmer $A$, consisting of a roughened or toothed concare or flat plate, substantially as herein shown and deseribed.
2. A billiard cue trimmer, consisting of two or more roughencd plates $\Lambda^{\prime} \mathcal{A}^{\prime}$, fitted into one hamille $\mathrm{B}^{\prime}$, substantially as described, so that different linds of cues may be trimmed by the same iuplement, is set forth.
$75,050 .-C . E$. PiERCE, St. Charles, M1.-Tire Heater.-March 3, 1868. - The tires are tmened upon rollers within the annular ease above the fire.

Claim.-1. Placing the tire box $B$ upon the forge A, and making it in integral part of the forge and (2immer, substantially as herein shown und described and for the purpose set forth.
2. The arrangement of the shifting rollers C E in the amular tire box 13, whereby the smaller tire is bung upon the roller C in the upper part of the flue, and the larger tire rests upon and is operated by the
roller E in the lomer part of the flue, as herein de scribed for the prupose specified.
3. The combination of the apron H witlu the lower part of the cloor $G$ or tire box B , substantially as herein showro and described, and for the purpose set fortll.
75.051.-EtiJAII S. Pience, Martforl, Comm.Connectiny Rod.-March 3, 1868. - The attuchment at one end of the eommecting rod is to a sliding collar resting against a spiral spring sufficiently strom to insure the necessing morement, but giring away if the motion of the motor exceeds that of the other crank or arm.

Claim.-1. An improred connecting rod, con structed and operating substantially as herein set fortl.
2. The combination of the devices C, F, G. and S, or their equivalent, substantially as specified.

55,0.5: - Benjamin Pine, New Toln, Ň. J., as signor to Cilaties F. ILARTSions, same place. Extension Ladder. - Mareh 3, 1808. - The sections of the ladrler slide mpon each other, and the apper one is extended by ehains which pass around rollers and are wound unon a windlass journaled to the lower section.

Claim.-In extension ladder composed of two parts A 3 , fitted together, and comeeted bp cricdless chains C C, all arrangel to operate snbstantially in the manner as shown and deseribed.
\%5,053.-Josetit L. Reilify, Chester, Pa.-F!!rnace Door Latch.-Wireh 3, 1eGs.-The littch is pivoted at distance from the rear end, and that ; inl enters a noteh in a lug beneath the mper binge whether the door be opened or closed.

Claim.-1. Providin! a furnaec door with a lateh B, which can be locked into a cateh I), for the purpose of hokling the door open, substantially as herein shown and deseribed.
2. 'The bolt B of a furnace door, when arrameed as described, so thit it serres to hold the door open and to keep it closed, substantially in the manner herein set fortil.

75,054.-E. S. RIce, Paw Paw, Mich.-Plow Whecl.-March 3, 1868. -The axle enters a close socket in the wheel, and the hub has a cirenmferential collar upon its imer elge, which is eorered by the removable collar upon the standard. The latter collar seres to retain the wheel and to keep dire fiom the journal.

Claim.-The combination of a remorable collar C With the wheel D, axle 1; and standard $A$, said collar being remorably attrehed to the maid standard, and passing around a flamge formed upon the hub or axle of the wheel, substantially as hercin shown and described, and for the purpose set forth.

75,055.-Silas O. Rogers, Jr., Stanfordville, N. Y.-Cor Coupling- - March 3, 1868.-The enter' ing link tilts back the piroted hook block, which me gages the link and is liekl by the spring bolt. The bolt may be drawn back by the lever to release the hook block and uncouple the ear.

Claim.-Ihe tumbler C, construeted substantially in the form and manner herein shown and deseribed, the slide bar E. coilcel spring F , or equivaleut. iant lerer $G$, in combination with caell other and irith the bumper head B, substantially as and for the purpose lecrein set forth and described.
7.5,0.56.-NOMMAN ROSE and E. W. Wriamp, Milford, N. Y.-Tater Whecl.-Mareh 3, 1868. -The water is received at the periphery of the central part of the wheel, and passess unward and downward, and then ontward, between curved buekets, which aro simultanmously aljustable, to act to best adrantage for the amount of water at command.

Claim.-The buckets $c$ at the central or main part of the wheel D, in combination with the adjnstable buekets $f f$ at the top and bottom of the same, substantially as and for the purpose specified.

75,057.-Sylvanus Sawyer, Fitchburg, Mass. -Steam Generator:-March 3, 1868.-The waterjacketed, detached fure box communeates rith the
boiler proper through steam and water pipes, and the fire box is so situated that the water fills all the part immediatcly exposed to the fire. The fire box has stcam drums commmieating with the steam spaee in the boiler.

Claim. - The eombination of the detaehed fire box, the steain drums or chambers, and the main boiler, arranged substantially as deseribed.

75,0.58.-Michaml Schall, New York, N. Y. Composition for Forming Casts and Faney Artieles. -Mareh 3, 1868.-Stearine is melted at a low tem. perature, and thereinto is stirred abont half the quantity of "Krem's white ;" moro stear'ine is then added, to enable it to be east into smooth articles. It is then east in molds.

Claim.-A eomposition formed of the ingredients herein named, for the purposes deseribed.

85,059.-William Sellers, Philadelphia, Pa. -Injector for Feeding Boilers.-March 3, 1868.Improrement on his patent, August 15, 1865. One objeet is to enable a small quantity of water to be thrown. The plug is made longer than eustomary, and a hole is drilled from its fore end whieh cxtends far enough to eommunicate by a cross hole with the steam space in the nozzle after the plug has elosed the tapered end of the nozzle. Tho exterior of the diseharging tube is eylindrieal, and supported in the brass bushing which is serewed into a plate cast with the onter shell. The bushing is sufficiently long to prevent the eseape of water in important quantity between it and the diseharging tube, which fits so as to slide freely therein. The eombining tube is preveated from moring so far toward the nozzle as to elose the rater opening, by the impingement of the piston against a small flange in the npper case, before the surfaces come in eontact. In starting the injeetor the water is diseharged through a valve and eseape opening until the quantity is inereased so as to produce a pressure in the chamber greater than that in the boiler. This will open the main eheck and permit the valve to close, forcing all the water into the boiler.

Claim.-1. The hole $c$ in the end of the plng, which plug regulates the diseharge of steam in the injeetor, substantially as herein set forth.
2. The flange $d d$, substantially as set forth.
3. The discharging tube K, eonstrueted substantially as described.
4. The arrangement of the waste orifiee $W$, substantially as speeified.

75,060.-Thomas SHAW, Philadelphia, Pa.Lathe Tool.-Mareh 3, 1868.-The cutter is doretailed into the end of the holder and secured by a medge.

Claim. - The eombination of holder a with eutter bit $b$ and wedge $c$, in the manner and for the purpose described.

75,061.-TACOB A. Sherman, New York, N. Y. -Truss.-March 3, 1868; antedated February 20, 1868.-The pad is carried at one end of a spring, which is morable upon extensible bars passing around the body. The latter bars are connected at their fore ends by an adjnstable hinge and by loops and a wedge, by whieh the pressure of the spring is adjusted.

Claim.-1. Uniting the bars a a by a hince, in combination with an adjustment applied betreen the lapping ends of sueh bars, substantially as and for the purposes specified.
2. Applying the spring that earries the hernial pad between the bar $a$ and the person, and fitting the same to slide at one end on the said bar $a$, substantially as set forth.
3. The plates $m$ and $n$, attached together by a serew and united at the end of the plate $m$, by a hinge, to the truss parl, and at the end of the plate $n$ to the spring $l$, so as to regulate the position of the hernial pad, as speeified.
4. The screw $t$, in combination with the pad plate $o$ and plates $m$ and $n$, as and for the purposes specified.

75,062.-Jacob Silbermann and Gustay Un. GER, New York, N. Y., assignors to themselves and

Jacob Heinemann, same place.-Loom.-Mareh 3, 1868. The reed has direrging plates set so as to be raised or lowered in respect to the fabrie, in combination with meehanism that raises and lowers the reed in the lay as the wearing progresses, and also eauses the diverging reed to occupy the proper position in respeet to the diverging warps passing from the heddles to the fabrie, so that there will not be undue strain on the said warps.

Claim.-1. A reed, supported in slides in the lay, in combination with mechanism, substantially as de. seribed, that gives an end movement to said reed eaeh reciproeation of the lay, in order that the wider portion of the diverging reed may come into the warps where they stand wider apart near the heddles, for the purposes and as set forth.
2. The eam $q$, lever $p$, link $n$, and shaft $l$, or its equivalent, in combination with the lay and diverging reed, fitted to slide in the lay, and operate in the mamer and for the purposes set forth.

75,063. - Anthoni W. Silvis, Birmingham, Iowa, assignor to himself and Samuel B. SHott, same plaee.-Hand Spinning Machine.-March 3, 1868. -The spool carries the loping for a selies of spindles, and is momnted on a carriage which reeiprocates to and from the spindles. The spool has firee lotation during a portion of its movement to allow sufficient roping to run off for one draw. 'The motions are antomatic, being aetuated from a main shaft turned by a winch.

Claim.-1. The earriage C , in combination with the feed roll D , guide rail F , spool E , catch $g$, and pin $t^{\prime}$, all operating as deseribed, whereloy, as the catch $g$ strikes the pin $t^{\prime}$, the fect roll $D$ is dropped upon the wheel $a$ of the earriage, and the guide rail Freleases the roping to be fed to the spiudles, as herein shown and described.
2. The combination of the carriage $C$, having the operating meehanism, the cord $m$, the sheave $n$, rods $s$, shaft $f$, cluteh pulley $p$, lerers $r^{\prime} r^{\prime}$, and finger $q^{\prime}$, as herein described, for the purpose speeified.
3. The slide $y$, conuccted with the drop $z$, and operated by the carriage $C$, as and for the purpose spceified.

75,064.-Russeld J. SknNer, Chicago, Th., assignor to J. W. ScotT \& Co., same plaee.-Chan-delier.-March 3, 1868. -Improrement on his patent of May 14, 186\%. The extension rod in that patent is replaced by a hollow or solid rod, which is plain or grooved, and combined with an India-rubber strap or hose, in such manner that when the chandelier is brought down the elastic strap supports it by its clasticity. A friction eollar is adjusted by a set screw.

Claim.-The hollon or solid extension rod H and the India-rmbber or other elastic strap, straps, or hose, $G$, placed inside or outside of the said rod H, both combined, arranged, and operating substantially as herein described and speeified, to be used for rais. ing aud lowering chandeliers, substantially as herein set forth.

75,065.-Thomas W. Shade, Manchester, Mass. -Funnel.-March 3, 1868.-The funnel is furnished with a series of detachablo ajutages to suit varioussized bung holes. The cross-bar near its top gives rest to the discharging ressel.

Claim.-1. The tunnel, as made, with the body and ajutage in separate parts, and provided with a bayonet eonneetion to hold them in comection, as set forth.
2. The arran gement and combination of the crossbar or rest $P$ with a liquor tumel eomposed of a conieal mouth pioce and an ajutage or discharge nozzle.

75,066.-Hamiton E. Smith, New Fork, N. Y.-Clothes Wringer.-March 3, 1868.-The upper roller is driven by the lower one through the intervention of wheels connected by bent and straight links so that the springing apart of the rollers shall not affect the mesling of the teeth.

Claim. -The spring posts A A', when provided with the adjusting screws $g g^{\prime}$ in their legs $e e^{\prime}$, combbined with the lollers $B \mathrm{~B}^{\prime}$ and the compensating gearing conneeting them, arranged and operating substantially as and for the purpose herein deseribal.

75,067.-Alfred Stark, New York, N. Y., assignor to Williad M. Wilding. same place.-Composition for Artificial Ivory.-March 3, 1868 ; antedated Fcbruary it, 1868.-Composed of shellac, 8 lbs.; asbestos, 7 lbs. ; kaolin, $2 \frac{1}{2} \mathrm{lbs}$, and camphor,受lb., with addition of coloring matter. The materials are heated to $240^{3}$ or $280^{\circ}$ Fahr., thoroughly ground betreen rollers, and shaped betweeu dies.

Claim.-The composition, made substantially as set forth, for forming au artifieial ivory, as specitied.
\%5,065.-Chatles Stelibach, Lima, Mich.Punching Machine.- March 3, 1868.-The punch is attached to the cross-bar of a sash frame which reciprocates in an adjustable frame by the action of a crank. The strip ot leather is confined between the parallel guide bars, which are adjustable in distance by a set screw.

Claim.-1. A punch mored br a crank, which may be set at any desirch angle, as berein specified and for the purposes set forth.
2. The adjustable parallel rulers, substantially as herein specitied.
g5,069.-GEORGE SteinegaER, Hirhland, Ml.Gang Plow.-March 3, 1868. - The plow beams are hinged to the axle and are connected by links to the elerating lerers, by which they may be ruised in or from the ground, more or less.

Claim.-The swinging beams $\mathrm{B} \mathrm{B}^{\prime}$, when lifted by the lever $b$ and link $h$, substantially as shown and described, in combiuation with the lateral braces $l$, eyc plates $i$, and bolts $k$, or their equiralent, all as and for the purpose set forth.
\% 5,070.-William II. Stevenson, Auburn, N. Y.-Harvester.- March 3, 1863. -The driving spur wheel of the cutter has a web which is dished to admit the attachment of the berel pinion upon the crank shaft of the pitman. This dished wheel dives a pinion which may be engaged bs a ratchet clutch, with the berel wheel engaging the berel pinion on the crank shaft. The imner end of the eutter bar is carried on a runner whose forward end has lateral and rertical adjustment by a lever, connecting rod, and sliding segment. The lever has a pawl by which the lateral adjustment is secured.

Clam.-1. In a two-wheel double-hinged joint harrestine maehine, the combination of the spur wheels I II E with a dished driring spur D, whieh will allow of the arrangement of the pitman crauk slatit I, substantially as and for the purposes described.
2. The arrangement of the wheels D E II I, the wheel E being plaeed loosely on its shaft F, constructed with a clutching face $f$, and provided with a latching lever $G$, substantially as described.
3. The construetion and arrangement of the adjustable shifter, holder, and guide, constructed in one picee, and made fast to the clrausht frame, by bolts passing through one or more slots, to enable the shifter to be mored back and forth to adjust its fork to the groove in the spur pinion, substantially as described.
4. The arraugement of the adjusting lerer $T$, linked connection $L$, and segment slide $S$, working loosely in a cruide box $k$. which does not extend below the draught frame, in combination with the drag bar P, all substantially in the manner shown and described.

75,07 I.-Geonge M. Strong, Boston, Mass.Sleigh Dell.-Mareli 3, 1868. -The eye bolt to whieh the tongue is humg is passed through the strap and rireted.
Claim.-The riveted eje bolt $C$ in combination with the tongue $T$, bell $B$, and strap $d$, substantially as described, and for the purpose set forth.

朐5,072.-Alvan Studley, Natick, Mass.-Curtain Fixture.-Mareln 3, 1868.-One end of the roller has a barrel around which the cord is coiled, the barrel having a reduced part forming a journal which turns in the end plate of a cylindrical case surround. ing the burrel, the case being slotted for passage of the cord. The other end of the roller is journaled in a hinged bearing which is pressed against the rollel by a splring.

Claim.-1. A socketed head $i$, jointed or hinged
so as to be eapable of being turned lateraliy against and be held in place by a spring, $k$.
2. The window-curtain-roller' end bearing, as composed of the cylindrically-socketed head $i$, the arm $\left(\frac{y}{x}\right.$, the suring $k$, and the carrier H , arranged so as to be applied to the curtain loller and window frame, and to operate with respect to the roller substantially as speeifica.
3. The combination of tho cyliudrieal case E, hat ing a bearing $r$, at its onter end, with the roller $C$, having a shoulder $x$, for the inner end of the ease to rest arrainst, and a journal $g$, to enter the bearing or socket $h$ of the head $i$.
4. The eombination of the eylindrical journal and roller with a piroted or hinged socket, to move latcrally, substantially as and for the purpose described.

75,073.-GEORGE W. Swett, Trof, N. Y.- 1 sh Pan of Cooking Stoves.-March 3, 1868.- Air flues surround the ash-pan drawer which communicate with the registers in such mauner as to furnish cold or heated air to the fire.

Claim.-1. The ash-pan drawel $\mathbf{A}$, having the rear part thereof, extending under the fire ehamber, so eonstructed as to receive the ashes or other matter falling fiom the combustion chamber while the fiont part of the top thereof is closed, and the whole arranged and conbined in the manuer substantially as herein described and set forth.
2. The combination of the ash-pan drawer $A$, or its equivalent, with the fire ehamber or chamber of combustion 13 , and so arranged in the hearth of a stove as to durnn the air flues or chambers $f . g, i$, and $j$, in the mamer and for the purposes substamtially as herein described and set forth.
3. Constructing the hearth of a stove with dampers and a tlue or flues therein for the purpose of eonducting atmospheric air firon the room on place where the stove is used into the said ash-pan dramer 1 and to the bottom of the said hearth, substantially as herein described and set forth.
 assignor to himself and Milton J. Palalen, same place.-Hame Fastener.-March 3, 1868.-The lower end of the strap is bent into a hook and is fastened and plays in the slot of the lever, while the lerer plays in the slot of the strap. The lowere end of the lerer has a hook which chgages the eres. At the end of the eye-picce is a hook which fastens in the loop of one hame, and at the opposite end of the strap is a look which fastens permancutly into the loop of the other hame.

Claim.-The lever C and slot F in the lever, and these parts in combination Tith each other and the slot of tho strap, eonstructed and operating in the manner and for tho purposo substantially as described.
'5.075.-D. C. Talisot, Molden, Mass.-Fishing Tackle-Mnrch 3, 1868.-The line has a loop which is passed over a weighted lerer, and, on the drawing of a fish mpon the line, the weighted end of the lever is depressed and tho other end, bearing the flag, is raised.

Claim.-1. The arrangement of the weight C , the loop $g$, the spring $i$, and the pin $j$, in combination with a signal flar and staff and fishing pole. sub) stantially as described and for the parposes set forth.
2. In combination with a fishing pole or tackle, tho flag staff $B$, (with the weight C, ) when attimehed to the pole and operated substantially as describert, either with or withont a reel.

75,076.-Esau D. Taylor, Mornellsville, N Y.-Base for Jall Players.-March 3, 1868.-The stake is inserted in the ground at the base, and the hooked stud upon it passes into the soeket plate of the cushion.

Claim.-The stako A, pin soeket B, swirnl cap D, and eushion or sand bag E , all in combination, to be used for the base or bounds for base ball players, substantially as and for the purposes herein set forth.

75,0\%7.-TACOB TAYLOR, Beloit, Ohio.-Sheen Rack.-March 3, 1868.-The side racks aro double, cach alternate vertical slat being attached to the
sliting frame, so that the spaces may bo made narrow when hay is fed, or wido enough to admit the head when grain is ted.

Claim.-1. Tho trough C, open at one ond, and consisting of the bottom $C$, inclined boards $e^{\prime}$, and perpendicular side pieces, in combination with the tiame A and sliding racks, substantially as described, for the purpose set forth.
2. The combination of the upright slicting side racks D with the frame A, and slats B, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the movablo rack $E$ with the frame $A$, slats 13 , and sliding racks D, sukstantially as hercin shown aud described, and for the purpose set forth.
4. The combination of the end board $e^{2}$ with the forivard end of the rack $E$ and With the trougli $C$, substantially as heroin shown and described, and for the purpose set forth.

1g5, 0 ge. - Alois Thoma, Now York, N. Y., assignur to himself; S. Brombera, and A. W. Vinder, same place. - Hurnace for Deearbonizing Pig Iron for the Produetion of Steel.-March 3, 1868.-The carbonic oxide produced in the furnaces at each side of the converting chamber is changed into carbonic acid gas by more thorough combastion, induced by blasts of heated air, entering chambers contiguons to the furmaces. The thoronghly oxidized caloric currents are distributed by passing through the holes in plates beside tho converting chamber, and circulate around tho iron pigs piled openly therein. The currents pass through damper-regulated openings in the floor and top of the converting chamber, and are discharged into the chinney, where they heat the pipes furnishing air to the combastion chamber. Between the combustion chamber and the distributing plate is a chamber in which a jet of cold water may be tirrown upon the heated current to reduce the temperature and mingle steam with it.

Claim.-1. The arrangement of the partitions $i i$ in the chamels a, for more thoroughly heating and burning the gases on their passage to the decarbonizing chamber, as set forth.
2. The perforated walls D D, arranged between the ends of the chammels $a$ and the chamber $B$, to allow the gases to gather in the chambers $K$ thus created, and to be cooled therein, as set forth.
3. Conducting the gases from the ehamber $B$ to a chamber $G$, through which the pipes II are laid, in which air is conducted to the channcls $a$, to aid the combustion of the grases in said channels, so that, by means of the gas discharged from the furnace, the air entering the same is heated, as set forth.
4. The channels $a$, partitions $i$, air chambers $H$, perforated wails D, decarbonizing chamber B, channels $o$ and $p$, cliamber $G$, and pipes $H$, all arranged as described, in combination with eaeh other, and all operating substantially as and for the purpose herein shown and described.
g5.079. - TV. H. Thomas, Galveston, Ind.Hemmer for Sewing Incuehines.-Marel 3, 1868.The fabric first passes over the central guide, downmard around the inner end of tho same, and thence along underneath to the front cage of the same, and mpward over the front at tho angle, so as to form the fold.

Claim. - The deflector $d x$, in combination with the gruiles a $b c$, substantially as and for the purpose speoified.

75,050.-Alexander C. Twinifg, New Haven, Conn.-Socket for Casters.-March 3, 1868. -The spiral ribs on the stock have grooves beside them $t$.) receive the displaced wood and provent splitting.

Claim.-1. The socket or stock, made with ridges edged, or nearly so, in planes acutely and equilly inclined to the axis of the socket, as and for the purpose described.
2. The rallejs, along the ridge bases, for an inereased prevention of splitting, as herein deseribed.
*5,081.-Wibilan Fine and Wildini H. Jubl, Norwalk, Conn.-Dyers' Vat.-MTareh 3, 1868. -The bottom of the inner tub is perforated, and its sides
slotted so as to allow the dye liquid to run out when the said tub is raised by the windlass.

Claim.-The arraugement of the double vat A and $B$ with hoisting attachments, in the manuer sulbstantially as herein set forth and for the purpose deseribed.
g5,088-INCREASE S. WAITE, Hubbardston, Mass.-Machine for Finishing Card Handles.March 3,1868 . Tho cutter heads are mounted on two parallel shafts, one of which is adjustable. Each cutter head is a recessed cylinder with two cutters, in throats opening into the periphery of the head. The larger cutter head has a flange with an annular groove and curved cutters to cut the cud of the handle into a curved form. The blank is placed on the rest and forced between the cutters, by which its sides aro bereled and its end rounded.

Clain. - In a machine for tenoning card-board handles, the rotary cutter-head $\Lambda$, with the curved concare flange $i$, provided with the eutters $g$ and $k$, the cutter-head $B$, with the cutters $h$, the rest $G$, and guide II, constructed and operating substantially as describod.
y5,083.-William Wakenshaw, Newart, N. J., assimnor to T. B. Pedmie, same place.-Traveling Bag.-March 3, 1868.-The fastenings are piroted to the sides of the frame and clamp the ends ot the bag.

Claim.- The fastenings D D, constructed of the form and applicd to the bag in the manner substantially as shown and described.

195,084. - Elisia W. Waliton, Drytotrn, assignor to Josepil H. Atkinson, San Franeisco, Cal. -Drill Sharpener.- March 3, 1868.-The point of the drill is laid in the forming die and the strage brought down upon it by morement of the lever.

Claim. - The combination of the swage, frame, and dio, in combination with the stirrup lever and an eecentric, for the purposes specified, all constructed and arranged substantially as described and shown.

75,085.-Frank J. Walz and Charles Steck, Hudson, N. J.-Beer Faucet.-March 3, 1868. The plug is trborlar and within it is a cylindcr which is perforated at the side just beneath the plunger when it is clevated. The eylinder has also a small perforation at its lower end. The piston is raised by a spring, and by forcing it downward while beer is running a jet of air is forced into the latter.
Claim.-The combination of the pump-barrel E, having side and ent perforations $e$ and $e^{\prime}$, the plunger F and spring K, arranged and operating in conneetion with the fancet, so as to commingle air with the liquor duriug its discharre, substantially as and for the purpose herein specifica.
ag5,086.-WILliam Pownle Ware, New Tork, assignor to himself and J AMES J. DE BARRY, Brooklyn, N. Y.-Sign for Strcet Lamps.-March 3, 1868. - 'he perforated plate has opaque letter's attached thereto.

Claim.-The transparent signs herein described, composed of perforated metal A, and opaque material B, combincd and arranged so as to serre in tho manner and for tho purposes and advantages hercin specified.

易,097.-B. J. Watson, Tros, Wis.-Heat Radiating Attaehment for Stoves.-March 3, 1865.-The caloric current passes into the lear end of the first clamber and through a pipo which extends around and beneath the perforated edge of the top plate; the ends of the pipe communicate with the fir ont ends of the tro chambers. The smoke passes off fiom the rear end of the secoud chamber.

Claim.-1. A flue attachment for stores, consisting of the chambers $G$ and II, and pipe $F$, substantially as shown and deseribed, and for the purposes set forth.
2. The chambers $G$ and $H$, in combination with a stove S , and pipe F , and damper $a^{\prime}$, substantiall, as shown and described, and for the purposes set forth.
3. The ehamber $G$, in combination with the pipe A, and the ehamber II, in combination with the pipe $B$, and damper $a^{\prime}$, substantially as shown and de. scribed, and for the purposes set forth.

75,058.-J. R. Weisiger, Danville, Ky.-Pump. -March 3, 1868; antedated February 28, 1868.-The hollow shaft is connected to a hollow radial head Whicll oseillates within the seetoral chamber. The radial Walls of the chamber and the sides of the hear hare talves, so that the water is dratin into the head and is discharged through the tnbnlar shaft.

Claim.-1. The construetion and arrangement of the hollow slatt I, having at it lower end the hollow head J, prorided with ralve M, the uprights arms $Q$, rack $O$, and pinion, all operating as deseribed, for the purpose specified.
2. The arrangement of the radial plates E, having valres ( $\mathfrak{r}$, hollow head J, haring ralres M, hollow shaft I, eylinder A, uprights P, rack $O$, arms $Q$, and pinion, as herein deseribed, for the purpose specitied.
7.5.059.-T, A. Weston, Buffalo, N. Y.-Ratchet Head and Lever:-Mareh 3, 1868.-The spring pawls slide in fangential carities in the collar of the spindle and engage the teeth upon the inner side of the strap.

Claim.-The ratelet lever head, when constructed with tceth cecee and parrls ceec, combined, arranged, and operating substantially as and for the purposes sliown and deseribed.
75,990.-T. A. Westor, Buffalo, N. Y.-Ratchet Head and Lever:-March 3, 1868.-The lerer is piroted betreen two lugs upon the strap or barel urd has oseillatory moveinents in the plane of the spindle. The parrls slide in cavities parallel with the spindle and drop alternately into the depressions between the lurge ratchet teeth.

Claim.-1. In a ratehet lever, witl a series of dufferential tecth and pawls $b e$, as deseribed, the construetion tud arrangement of parts as herein set forth, consisting of the feed serem D , socket $i$, the barrel A, turning thereon, and operated by lever B, the ratehet head C , seeured to the serew by the pin $d$ and trasher $k$, for retaining the springs in place, the whole operating in the manner and for the purpose specified.
2. The jointed lerer B, in combination with the devices thus constructed, substantially us set forth.
'g5,091.-T. A. Westor, Buffalo, N. I.-Ratchet Brace.-Mareh 3, 1868.-Sliding spring parms aet for right and left rotation respectisely upon the upper and lower head, and the intermediate parl barrel may be loeked by the sliding bolt, with either head, to eause a right or left rotation from the reciprocation of the lerer.

Claim, -1. The combination of two ratehet heads D E, an intermediate pawl barrel $A$, and the locking deviee, which may shift from one head to the other to engage and disengage the said heads, substantially as set forth.
2. The eombination of the slifting slide I and tightening serew $n$, or equivalent, with the ratehet heads D E, and pawl barrel A, substantially as herein set forth.

195,092.-T, A. Weston, Buffalo, N. Y.-Ratehat Brace or Lever, - Mareh 3, 1868. - The duplicate ratehets on cach side of the strap enable the nse of large tecth, the pawls falling in altermately.

Claim.-1. The special construetion and arrangement of the donble rateliet head 13 , with the end of the lever, forming a strap a, resting eentrally betreen the sets of ratehet teeth and the spring paws C C, on opposite sides, playing alternately in said teeth, the whole opurating in the manner and for the purpose specified.
2. The special construetion and arrangement of the parrls eomnecting with the one pirot $d$, and formed hollow, and receiving the springs $g g$, the whole operating in the manner and for tho purpose set forth.
'g5.09:B.-T. A. Westor, Buffalo, N. Y.-Ratehet Brace Lever.-Mareh 3, 1868. - The pawls act in turn to enguge the teeth of the ratehet.

Olaim, - The special arrangement of one sliding pawl F and one piroted pawl E, as deseribed, when combined with a ratchet head C , having an mequal number of teeth, with said pawls, the whole operating in the manner and for the purpose specified.

95, 094.-Samuel 7 . Whitaker, Cincinnati, Ohio.-Globe Talve.-MEreh 3, 1868.-The valve seat is a removable and reversible ring which is held down upon its compressible packing ring ly the tubular screw elamp.

Claim,-1. Tho self-atjusting metallie ralre seat $B$, in combination with the conical valre $\Lambda$, substantially as and for tho purposes set forth.
2. In combination with the aforesaid morable valve seat 13 , applied and operating as deseribed, the compressible packing ring D , for the purpose set forth.
3. The combination of the movable seat $B$ and serev clamp C, sulstantially as and for the purposes sct forth.

75,005.- Ralpil C. Whitenouse, Boothbar, Me.-Frying Pan.-March 3, 1868.-The pan eoinsists of two perfect frying pans mited by a side hinge so that their edges may be brought together,
Claim. - The combinatiou and arrangement of the two pans a $b$, mited hy hinge $e$, and having the handles arranged as herein set forth, for the purposes deseribed.

95, 096.-Harri D. Whittenione. Net: York, N. Y.-Brick Kiln.-Mareh 3, 18fie. -The brieks are placed upon trucks whose bottoms form grates for the furnaces. The trucks are run unon a rail track and are associated together in a rorr, witl division plates between them. The division plates have dampers fo regulate the cireulation of heat. A blast pipe has branches leading to cach furnace.
Claim. -The railwiy cars a a' $a^{\prime \prime}$, construetedin the form of a fire grate, and the artificial blast b, pipes e e e , Tith damper's $n$, all in comhination with the dampers $o o^{\prime} o^{\prime \prime}$, arranged with the vertical partition plates $m . m$, all arranged and operating substantially as herein set forth.

75,03\%-Charles F. Wiforf, St. Louis, Mo. assignor to himself and Charles ar. Elleard, same place.-Hot Lir Furnace.- Mareh 3, 1868. - The furnace is surronnded ly a series of vertical air pipes arising from an annular chamber aromed the base, learing an annular air chamber between the said finsnace and the pipes. The air aseends into an openbottomed, distributing vessel, from which it passes to the rooms to bo heated.
Claim.-l. The distributing chamber E, the water vessel $F$ and the furnace $A \Lambda^{\prime} 1$, when combined and arranged as deseribed and set forth.
2. In combination with the above, the series of pipes B , the anuular leating chamber ${ }^{3}$ ', aud the pipes $C$ and $\mathrm{C}^{\prime}$, as and for the purpose set forth.
g5,098.-Cuarles Williams, Vineland, N. J. assignor to himself and Isatc B. Ward, Nerr Yorls, N. Yे.-Construction of Walls of Buildings.-Mareh 3, 1868. -The slats are placed at an angle of $45^{\circ}$ with the posts and sills, and consequently at a right angle toward each other, The sides of half the slats are parallel with the walls, and of tho other's at right angles therefo.
Ulatim.-The arrangement of lattice frametrork, substantially as herein shown and deseribed, in corbination with conereto material, in the formation of walls, substantially as and for the purposes deseribed.
'75,099.-J. A. Wildiams, Elizabeth, Tll-Axle for Vehicles.-Mareh 3, 1868, -The friction collar: are cast upon the axlo; those portions of the axle being east with dovetail longitutinal wroores for the attachment of the collars. The spindhe shell has an inward extension whoso ratchet serrations engage similar serrations upon a ratelet bar to which it is bolted, and which is also bolted to the axle.
Claim.-1. The serrated oxtension 'T of the spindle E of an axle, in combination with a serrated rack $R$, for holding the said spindle firmly in its place, sub. stantially as and for the purpose shown and deseribed.
2. The longitudinal slots, stibstantially as described and for the purjose specified.
3. The reversible character of the rack R , substantially as described and for the purpose specified.

75,100.-N. Bangs Williams, Providenee, R. I.- Oil Cup.-March 3, 1868, - The oil passes from the cup through a central conieal chamber oceupied by fibrous material and a tapered serow plug. The pressure of the latter upon tho said material regulates the flow of oil.
Claim.-The tapering eompressing plug a in eombination with a elhamber B, containing a fibrous absorbent, for the purposes specified.
g\%.,101.-J.D. Willoughbr, Shippensburg, Pa. -Oider Mill.-Mareh 3, 1868; antedated Fobrruary 20, 1868. -The frruit passes betreen tho grinding cylinders and then between the pressure rolls, the juiec running off and the pomaco being mingled with water running, on it from a spout; a second quality is extracted by pressuro between the lower ralls.
Claim.-The arrangement of the grinding rolls B relatively with one or more pairs of pressing rolls $\mathrm{C} D$, and the spouts for receiving and conveying separately the various qualities of juieө produeed, suhstantially as shown and deseribed.
\%/5,102.-I. Shields Wilson and Morace See, Philadeppliia, Pa., assignors to themselres and N. D. Thompson, Borlentown, N. J.-Surface Condenser: $\rightarrow$ Mareh 3, 1868.-The eireulating end of the air pump discharges the water through the eondenser around the condensing pipes, and then into and out through the box. The exhanst steam enters the condenser and passes through the pipes, the water collecting in the reservoir, and the surplus water and vapor eseaping into the box. The feed pump takes its supply from the reservoir, and in ease of shortness of supply water ean be taken from the box, or from the diseharge pipe of the air pump.
Claim. - 1. Remoring the condensel steam, after it has passed through a surface condenser, and discharging it direetly into the boiler by the feed pump, when arranged, in councetion with the air pump, in the manner and for the purpose set fortll.
2. The pumps $I$ and $J$, when arranged in respeet to the surface condenser $E$, substantially as descrived and for the purpose set forth.

75,103.-R. C. Wrenn, Warerly, Mo.-Hemp Harvester.-Marel 3, 1868.-The metallie apron is formed like aplow moldboard, and earries the swath of hemp out of the course of the implement in the next through.
Clcieim.-In combination with a machine for cutting hemp, the eurved apron $D$, placed wehind the cutter bar, constructed, arrangel, and operating sulbstantially as deseribed.
gaf, 104.-Henry B. Abbott, Felieity, Ohio.-Hill-side Plow.-March 3, 1868.- The double plow admits of turning upon a horizontal arbor so as to bring the right or left-hand plow into the operative position; the other plow being inverted with its sole in proximity to the heam. In this position it is held by a pin sliding in eyes upon the sido of the beam.
Claim.-The eombination, with the two bar shares E E', eonneeting sheath G , and double moldboard F , of the conneeting bar $I$, bracket $C$, and locking bolt $J$, the latter being shifted from one set of staples to another on the opposite side of the plow beam, as and for the purpose explained.
\%5, 105.-Seaman Allatre, New Fork, N. Y., assignor to himself, ROBERT HENRY, and E. Wright VAssignor sane plaee,-CCarriage Hub.-MIareh 3,1868 . -The metal is extended radially, forming lengthened mortises for the spokes.
Claim.-The solid metallic hub A, provided with radial sleceves $b$ and wooden spokes $B$, when construeted and compined essentially as shown and deseribed.
255, 106. - Willian Allendert, New London, Conn.-Casting Aluminum Plates on Arificial Teeth. -Mareh 3, 1868. -Tho scetions of teeth are separated by a space when plaeed in the mold, to allow the eontraction of the plato in cooling, the molten metal being prerented from entering the spaces. The pins are pointed inward and may bo
eovered with eoiled wire for the purpose of allowing the metal to slip upon them in some degree, and the inner surface of the teeth is also made smooth for the same purpose. Mctal may be east outside the tceth and cooled from the outside to prevent the said eoneentration in cooling.
Claim.-1. In combination with the pouring of molten aluminum to form a base for artificial teeth, the so making or grinding off the blocks of teeth, designed for the reception of molten aluminum as a wase, as that the metal eannot seize or gripe, but slip upon, the teeth or bloeks, in contracting, and thus prevent the fraeture of the metal, or of the teeth, or bloeks of teeth, substantially as deseribed.
2. In combination with teeth or bloeks of teeth, on which alnminum is to be east for a base, the pointing of the pins or rivets toward each other, or toward the eenter of the bloek, or in the line of the greatest eontraction, substantially as described.
3. In combination with the molding of teeth or bloeks of teeth, or preparing them to receive molten aluminum, whieh is to form their base, the protected space betrreen them, to guard against the entrance of the metal or other material, as deseribed, so that the eontractile foree of the aluminum, in cooling, may draw them up together, or nearly so, substantially as deseribed.

195,107.-William Andrews, Alleghany County, Md.-Gidiron.-Mareh 3, 1868.-The skillet has an aentely-eorrugated bottom, the ehannels in which drain into the basin whose bottom is removed from direet aetion of the fire.

Claim.-Bars e e e, united as deseribed, and forming an imperforated bottom, in combination with the rim $d$, the basin $B$, and the month $C$, constructed substantially as and for the purpose set forth.
\%5,108.-G. W. Antisdale, Chagrin Falls, Ohio. -Truss and Supporter.-Mareh 3, 1868.-The front frame is composed of spring vars so bent as to fit the eurvature of the abdomen, and having pads adjustably attached near to their onds. The main spring bar eurves around upon one side and has an adjustable lumbar pad. A membrane may be stretehed over the front frame to form a supporter.

Claim.-The upright bar E, horizontal bar C, adjustable pad $G$, and pad II, as arranged in combination with the frame $A$, for the purpose and in the manner set forth.

95,109.-Charles W. Atkeson, St. Louis, Mo. -Cort.-Mareh 3, 1868. - The air is concentrated by the funnel-shaped opening Which may at the time be faeing the wind, and is led down the rertical, rentilating pipe by a deflector attached to the rane.

Claim.-1. The funnel head A, when combined with the duct B , the guide C , and the weather-eoek $\mathrm{C}^{2}$, substantially as deserived and shown.
2. The fumel head $A$, when constructed by means of the two disks $a$ and the vertieal partitions $a^{1}$, the whole eombined and arranged as deseribed and set forth.

75,110.-James S. and Thomas B. Atterburt, Pittsburg, Pa.-Manufacture of Glassware.-Mareh 3,1868 . -The hinge pieee is riveted to the piteher top. The rivet holes are formed nearly throngh the glass in the act of blowing, and the remaining thin shell is subsequently broken out.

Claim.-1. As a new artiele of manufacture, a piteher A B, produeed by blowing the glass or other suitable material in a mold, and poriding it with a metallie eover, substantially as deseribed.
2. The method herein deseribed of perforating glass pitchers and securing the eovers upon them, substantially as deseribed.
'g 5,111 .-L. F. Baycroft, Woreester, Mass., assignor to himself and Andeew B. Tetter, New York, N. X.-Street Sprinkler.-Mareh 3, 1868. The side water guards are attached to arms on a roeker slaft operated by a treadle, and are let down when it is desirable to prevent a side sprinkling.

Claim.-1. The combination of the side water guards D D with the sprinkler A, substantially as and for the purposes set forth.
2. The combinatiou, with the water guards D D,
of the bent levers e $e$, arms E E , and springs $h h$, substantially as and for tho purposes set fortl.

75,112.-Toin S. Barden, Proridence, R. I., assignor to Wildiam M. Stone, Attleborough, Mass. -Pump.-March 3. 1868. -The top and base of the pump are counceted by a cireular series of rods which surround the glass cylinder. The cylinder is confined between a tixed, lower gasket in which the valse may be cut, and an upper gasket foreed downward by an anmular ring-nut, whose thread is on its periphery, and which screws into the head boneath the lerel of the spout

Claim. - The combination and arrangement of the internal ammlar nut $G$ and its screw $e$ with the nose head B , connected with the base A by the series of rods C C , such nut $G$ serring to contine the glass barrel or tube D within the pump frame, as specified.

75,113.-Damp Barker, Northflect, England. -Drier.-March 3, 1868.- The trays supporting the blocks of fuel run upon rollers upon the angle iron bars secured in the walls. The walls have perforations to allow the escape of the vapors resulting from the drying of the blocks. Either heated air or steam pipes may be placed between the trays. The ends of the chamber may be elosed by metallic doors.

Claim.-Chanbers for drying artificial fuel and other substances, subdirided into horizontal com partments, as hereinbefore described, by permanent or remorable partitions, and provided with seres of lateral apertnies arranged along the lower part of each compartment for the escape and witherawal of vapors therefiom, the whole being constructed and arranged substantially as herein set forth.

95,114.-Jacob H. Beidler, Lincoln, Ml.-Washboard-March 3, 1868.-The corrusated zinc plate is perforated in the gutters, and is supported on a lougitudinally guttered board which allows escape of the water passing through the perforations.

Claim.-The corrugated perforated face plate C, in combination with the longitudinally corrugated board B, when used in a washboard as and for the purpose set forth.

75,115.-George W. Bennett, Thite Haven, Pa.-Center Plate for Railroad Cars.-Mareh 3, 1868. -The upper and lower parts of the center plate have concentrie rings; that upon the upper part lying closcly within the other. The inner ring has lugs apon its outer side which enter segmental eavities in the outer ring, and prevent the morement of the parts upon each other beyond a certain limit.
Claim.-The combination of the rings a $a^{\prime}$, haring the recesses ec and projections $e^{\prime} e^{\prime}$, operating in connection with each other when used in a center plate for cars, substantially as and for the purposes specified.

75, 116.-George W. Bishor, Stamford, Comu., assignor to Johis Laburt, Cohocton, N. Y.-GateMarch 3, 1868. -The rails are pivoted to the rear post and the upright, and turn upward in different, vertical plames. The elevating cord is attached to the top rail and passes orer a sheave upon a beam extending horizontally backward from the top of the post.

Clairr.-The combination, with a gate whose horizontal rails are piroted in advance of each other substantially as herein leseribed, of a siotted top rail and pulley, all constructed, arranged, and operating snbstantially as herein specified.
$75,117 .-\mathrm{J} . \mathrm{S}$. Boicourt and T. H. Barnes, Boonesboro, Iowi.-Rotary Steam Enginc.-March 3,1868 . - The sliding ralres are fored outward by the eceentric surfaces of the piston wheel, and are forced inward by the springs. The injection and exhaust ports are on erch side of the ralves.

Cluim.-The arrangement of tho sliding valres E and the springs F, with reference to the pistons D D, as herein set forth and described.
$75,118 .-$ Sterling Bonsall and Louis Milie:brand, Philadelphia, Pa.-Bell D'ull.-March 3, 1868. -The knob stem consists of jointed. curved sections, which are drawn throngh the socket in a downwardly curred direction.

Claim.-1. The construction of a plate B, with tho opening a at the upper cud, and boss $k$ at the rear, the slot $b$ at the lower end, with a pintle $e$ cast into and across the middle thereof, and with the screw hole $d$, substantially as described for the purpose specified.
2. The construction of a handle C, with a forked end at the lower part, a fongue $\mathrm{E}^{\prime}$ at the inner side of the upper end, and a knob or projection I) on the outer side of the apper end, substantially as described for the purpose specified.
3. The combiuation of plate B and handle C with the bar E, so fastened at $f$ as to make the slot $l$, resting over the pintle e, ind restrained by the plate B, act as a hinge, with the fulcrum inside of the per pendicular of the lever, substantially as described

75,119.-Elifiu Boswell, Mimhand. OhiosCorn Harrester.-March 3, 181, - The fallen stalks are raised by the down-cmrved guides and presented with the reritical stalks to the eutters. The stalks fall mon reel phatforms, which are allowed by the retraction of the spring bolt to rotate $90^{\circ}$ and deposit their loads.

Claim. -The sliding stop, composed of the rod $r$ and spring $s$, when these parts, constructed and operating together as explained, are used in combination with the revolsing recls or tables $\mathrm{R}^{\prime} \mathrm{N}^{\prime}$, for the pur pose of controlling their action, substantially as do scribed.

95,1:20.-Bentamin S. Boynstox, Richmond, Ind.-Lroning Stand and Clothes Dryer.-March 3, 1868; antedated February 28,1868 . - The cross frame has lorizontal bars to sustaiu the ironing board and rails to hold the articles.

Claim.-1. The stand, composed of hars A A A $\mathrm{A}^{\prime}$, strips a a, and clothes receptacle, comected by incans of the star, as set forth, and provided with the ironing bourd B , in the manner and for the purposes do seribed.
2. The combination of the bars $d d$ with their keep ers, and the slats,fff with the stand, as described and for the purposes set forth.
\%.j.121.-N. F. Burnham, York, Pa.-Water Wheel.-Mareh 3, 1868.-The gate is a ling having a limited revolving inotion and apertures, which may be brought more or less in conjunction with the chutes of the caso. The chutes are so curred as to receivo the water in a radial direction, and to deliver it against the bnckets in a tangential direction.

Claim. - The combination of the curved chates $s s$, when constructed with eurred walls near the outer extremity, and straight slightly-converging walls toward their inner cxtremitr, in the manner doscribed and shown, with the gate ring $R$ smrounding said chute, and having the openings $r r$, the whole derice operating to receive tho water in a direction toward the center of the wheel, and turn it by the concare wall until it is thrown in a compact inass against the buckets, tangentially to them, in the marr ner described.
\%5,122.-Axgelo Cattaneo, Nemark, N. J.Mrechine for Fulling Mat Bodies.-March 3, 1868.The movement of the swinging side of the fulling box callses the mass of hats to pass around regularly to insure equal nction on all their parts.

Claim.-The side piece $h$ to the box $f$, fitted to string on the hinge $i$, in combination with the hanmers $c e$, the parts being arranged and operatiug substantially as and for the purposes set forth
\%5, 耳23.-JOAN C. Cfanke, Elmira, N. Y.Potato Digger.-Minreh 3, 1868.-Whe eutter roller has longitudinal knives, and rolls over the ground to cut the vines. The potatoes are raised by a transverse row of roundly-pointed hoes or shares, and are cast upon the shaking sereen, which has a series of longitudinal rods extending baekward.

Olaim.-1. The cutter C , with arc-shaped knires a substantially as described.
2. The cutter $G$, sliding arms $F$, and pivoted braces E, combined and operating substantially as described.
3. The hoes $J$, provided with ridges $e$, substantially as deseribed.
4. The hoes $J$, sliding arms $I$, and piroted braces

H , combined and operating substantially as described.
5. The sliding bearing M, shaft L and cecentric $n$, or equiralent, in combination with the shaker O , substantially as and for the purposes described.
6. The combination of the arno o, eceentric $n$, or equivalent, and reciprocating frame N , substantially a.s and for the purposes set forth.

7 . The hinged blocks $k l$, in combination with the sliding bearing M, substantially as and for the purposes set forth.
8. The combination of the cutter $G$, hoes $J$, and shaker O , sủbstantially as described.
75, 124.-Tinadeed I. Clark, Mount Vernon, Ohio.-Spring Equalizer for Mill Spindles. March 3,1868 . -The boxes are between the jaws of the driver and contain rubber blocks compressed by convesended follow blocks. The blocks bear the pressure of the longer jaws.

Clain.-The oblong driver F, with a short and long jaw $z x$ at cach end, within which are-placed the boxes C C , beveled at their tops, and provided with rubber fillings D D and followcrs E E, when used in combination with the spindle $A$ and pinion $B$, substantiaily as and for the purposes set forth.

75, 125.-Grorge H. Colbert, Downsville, Md., assignor to himself and S. S. Hollenberger, same place and J. W. IAly, Martinsburg, W. Va.Stcering Apparatus.-Mareh 3, 1868.- The rudder shaft carries a pinion gearing with a larger spur wheel upon a shaft, whose cross lever is connected to the steering wheel by cords attached to its end.

Claim.-The vertical shaft $d$, provided with gearwhecl $c$ and cross-lever $f$, arranged in combination with pinion $b$, rudder 1 , cords $g g$, and pilot wheel $B$, substantially as and for the purpose set forth and described.

75, 126.-O. H. Cooke, Morristorn, Vt.-Shoe Lacer.-March 3, 1868. -The teeth are forced through the leather and elinched, and the bent shank or hook holds the string.

Claim.-The within described lacer as an article of manufacture, consisting of a concaro-convex body, provided with the teeth $c c$, and a shank which is curred, and which has a convex head upon it, constructed and arranged as and for the purpose hercin specificd.
g5, 197.-JOHN Crowntier, Oxford, Mich.-Cul-tivator.-March 3, 1868. -The rear wheels turn on cranks upon the cuds of a roek shaft, connected through a scrics of levers, with a vertical shaft carrring the fore wheels. The connection is such that the frame is raised or depressed simultaneonsly at both ends.

Claim.-Raising and lowering the frame $A$ by means of levers $D$ and $H$, and bars $C, F$, and $I$, and slaft $J$, substantially as liercin specified.
g5,128. - Francis Curtis, Newton, Mass. Roofing Fielt.-March 3, 1868.-The wooden pulp is mingled with ground woolen rags, and is saturated with tar or an equivalent.
Claim. -The new fabrication or compound material above described, consisting of the combination of woolen or worsted rags with wood or wood fibre.

155,129.-George Custer, Norristomn, Pa., assignor to himself and Wridiam Moore, same place. -Wasting Machinc. - March 3, 1868. -The square box has longitudinal ribs, and revolres in one direetion around a central, ribbed shaft, Thich rotates in a contrary direction.

Claim. -The box C, its ribs or projections $f$ and $f^{\prime}$, in combination with the ribbed roller $\mathcal{B}$, and with the within described derices, or their. equiralents, for imparting a rotary motion iu one dircetion to the box and in the other to the roller, substantially as and for the purpose specified.
g5,180. - Abbot R. Davis, East Cambridge, Mass.-Card Board for Printing.-Marel 3, 1868.The card is formed of thin strips of wood, in which the grain has been suffieiently demoralized br heary pressure as to destroy disposition to warp. The
strips are laid together with the grain in one strip crossing that of the other.
Claim.-Subjecting the sheets of wood to severe pressure by rollers or otherwise, to reduce the thickness of the rood, and to condense and unite the fibers, and thus prevent the card or card board thus made from twisting, warping, and breaking, substantially as specified.
g5, 131.-Thonas B. De Forest, Birmingham, Conn.-Machine for Reducing and Pointing Tire.March 3, 1868. - The jaws of the cutter dies hare continued rotation with the tubular shaft to which they are pivoted, and have radial reciprocation by the disk of a longitudinally reciprocating shaft, which is attuched to a frame actunted by a polygonal cam wheel on the main shaft. The end of the wire is inserted betreen the jaws which closo upon it, and point it by their revolntion.
Claim. -1 . The combination of the two jaws G and $\mathrm{G}^{\prime}$ with the revolving shaft D , when constrneted and arranged so as to receite from the said shaft a rotary notion, and further combined with the cam $J$ and shaft H , so that the said jaws receive therefrom a vibratory morement, and when both the jatrs are morable, or the one fixed and the other movable, sybstantially as herein set forth.
2. The hollow shaft D, carrsing the vibrating jatrs $G$, haring combined therewith a head $I$, and cam $J$, with its stirrup connection, so as to operate in the manner herein described.
Mg, 132-Andrew Ferdinand Dessau, Waishin eton, D. C.-Piano Fortc Frame.-March 3, 1868. -The bottom of the "stuare" piano is formed of a rectangular outside frame, with an obliqne inncp portion in which the beams run in a direction to take the strain of the strings. The pieces forming the frame are built up of strips of wood, which are caused to adhere together, and in which the grain of one strip runs obliquely to that in the contiguous strips.
Claim.-1. Constructing the bottom beams and frame of a piano of layers of picces of wood, in the mamer substantially as and for the purposes doscribed.
2. Constructing the beams and frames of the 17p anos by building the same up in the manner substantially as described.

75,133.-EDWARD L. DORSEY, Winslow, IndiGrain Separator.-March 3, 1868.-The screen has an octagonal form, and its sides have meshes which vary so as to allow passage to the differently formed objectionable seeds. The sereen is journaled in the ends of a box, which has limited oscillation on: a transverse shaft.

Claim.-1. The box $B$, made in $V$-shape, and balanced upon the piroted support C , so that it Till oscillate as and for the purpose set forth.
2. The screen E, proviled with arms $c$ e and $b b$, door way $R$, and slide $H$, when ased in combination with the oscillating loox $B$, as and for the purpose set forth.
3. Spout L and slide K, when nsed in combination with the box and screen, as and for the purpose specifica.

75,1:34. - Joseph Douglass, McConnellstomn, Pa.-Lifting Jack and Spikc Extractor.-March 3, 1868.- The vertically sliding bar, to which the upper end of the claw bar is linged, has a ratchet engaged by the claw lever. The lever is fulcruned to the upper ends of swaying standards, which allow its discngagement from the ratehet. A sliding pavel engages the ratchet to sustain the claw bar.

Olaim.-1. The remorable base A, in combination with the post $B$, Then used in a lifting jack or derice for extracting spikes, substantially as and for the purposes specified.
2. The hook J, with broad scrrated edge, as and for the purpose set forth.
3. The combination of the rod $F$, lever $G$, rocking fulerum $H$, spring $s$, pawl $I$, and spring $i$, substantially as and for the purpose set forth.
g.5,135. - John Ellston, Cleveland, Ohio. Grinding ivill.-Narch 3, 1868. - The collar is corb
nected to the curb by the elastic annalar diapliragm, and its lower edge is receired in am ammar groovo in the top of the stone. The air passes down the central opening in tho collar and the eje of the stome, passiug between tho stomes and up through the rertical spout to the fan. Tho meal has tho usual exit.

C'tim.-1. Tho elastic diapliragm J and collar I , in combination with the stome, substantially as and for the purpose set forth.
2. In combination with the abore, the pipe M, hinged corer $U$, with the curb and fin-case, arranged as and for the purpose substantially as set forth.
75. 136 .-Thanes Enery, Bucksport, Me.-Lamp Shede.-March 3, 1868.-The shade har panels for reception of pietures, and a slide wire whose lower end has a serpentine form to preveut the shade timening upon it. The upper end ot the slide rod is bent ofer and enters a socket formed by a spiral on the wire, whose lower end embraces the burner.

Claim.-1. The sereen supporter composed of the two wires $B$ and $C$, having two helis conls, serpentine bends, and a projection arranged as set forth.
2. The screen, as made with the middle pocket to receive the slider, made as deseribed.
75.137.-T. S. ENalevow, Cedar Fails, Toma.Heel for Boots und Shoes. - March 3, 1e68.-The top and bottom plates of the hollow heel aro perforated for purposes of rentilation.

Claim.-The hollow hard rubber, sutta-pereha, horn, or other similar heel a $b c$, with strengthening ribs $g g$, on its interior, and with remorable base plates or pieces A, in the manner as herein deseribed.
95.139.-E. C. Fairchild, Sunderland, Mass.Bag Holder. - March 3, 1868. -The mouth frame is attached to the post by sliding upon one of a rertical series of doretail cleats.

Claim.-The funnel-shaped month or frame $B$, provided upon its lower edge with hooks $d$, and upon one side with an arm C, and combined with a plate A, which said plate is constructed with lugs a for the adjustment of the frame $B$, and arranged in the manner substantially as set forth.

75, 133.-Solon Farrer, Ňew Tork, N. T.-Spoon.-Mareh 3, 1868. -The cover is connected to a compound lerer, whiel is influeneed by a spring to close it. The corer is deprossed by the lever. A portion at the point of the spoon is left uncorered to allow the exit of the medicine.

Clatm.-1. The movable corer, in combination with the bowl of the spoon, substantially as and for the purpose specified.
2. The combination, with the sponn and the morable corer, of the lever' D and spring $e$, substantially as and for the purpose specitied.
\% 9 , 140.- Henir Fassmañ, New Orleans, La.Cotton Bale Tie.- Warch 3, 1868. -The dianondshaped ends are connected by a central, perpendicular rib, and by two side ribs; around one of the latter an end oif the hoop is passed; the other end being passed through the other slot and beneath the cential rib.

Claim. - The cotton-bale tie, composed of the plate $\Lambda$, haring the slots a a, between which is a strengthening ridged. on one or both sides of the plate, and haring its ends strensthened by stout ridges $b b$, cast mpon the plate, substantially in the manner and for tho purpose described.
\%j5, 141.-H. 'L. Fexton, Philatelphia, Pa.Steain Generator.-March 3, 1868. - Improvement on his patent of May 7,1867 .-Orer the fire box, and commmicating therewith, is a cylindrical case of cast-iron, from whose top extend a series of rertical flues traversing the crown sheet. Within the castiron case is a circular series of vertical pipes, whose ends are bent outward and pass through the said case near to its ends. The heat causes a continued current throngh these pipes.

Claim.-The tertical boiler, its fire box $B$, central chamber $D$, pipes $F$ and tubes $F$, the whole being arranged substantially as and for the purpose herein set forth.

195, $143 .-J A M E S$ R. Fincif, Daton, Ohio. Grain Drill.-Mirch 3, 1868. -The secd apertures are regulated by sliding plates. The flanged agitator's have zigzas and radial flanges, and are supported orer the seed holes by a rotating shaft.

Claim.-1. The flanges e $e$, in combination with the zigzag wheel or auitator H, substantially as aud for the purpose specilied.
2. The arrangement of the plates $B$ B with the morable plate or shut-off C attached to tho bottom of the grain box $\Delta$, substantially as and for tho purposo set forth.
g.5, 113.-Sayuel L. Fisike, Philadelphia, I'a.Tenter IJar for Shaping Articles of Cloth. - Mnreh 3, 1868. - The sides of the cloth are seeured to the hooks of the tentering bars, and a "former" being placed boneath it, it is stretehed upon the sime by pressure of the detacliable bars upon its upper side.
claim.-The combination of the paralle tentering bars $b c$, their hooks $i$, the former $B$, and detachable bars e e, the whole being constructed and an'anged substantially as and for the purpose described.
7.j. 144.-Henry K. Flincimautih, Conestoga Center, Pa.-Fence Post.- March 3, 1868.-The posts are made of strap iron bent around at the top and spread at the bottom; the sides are connected ly stay rods, and are braced at the angle near the foot by angulilr-flanged frames.

Claim.- The mamer of construetmg the sides A of a post for a rail fence from strap iron, in combination with the cap 13 on the spread bise, with its feet a ind braces C D, arranged substantially in the manner shomin and specified.

75, 145.-Menry K. Flinchbaugh, Conestoga Conter, Pa.-Iron Post for Wire Fences.-Marel 3, 1868.-The posts are forked at the lower end, and tho lower ends of the forks bent angularly in opposite directions.

Claim.-The construction and application of the iron post $A$, with its spreading batso $13 B^{\prime}$ and feet 66 . When applied in the mamer and for the purposo specified.
-95, 146.-ORRIN FORSYTH and JOHN H. TRTEX, Rochester, N. I.- Feighing Senle-Mareh 3, 185s; antedated February 20, 1868. - The benms for weinhing the gross article, marking the tare and net, are rigidly commected, and hare a pendulous bar at the Cid which lias two weight supports for the same pur pose as the compound beam.

Claim.-1. Notching the under side of the beams. and emploring, in combination with the same and the sliding Treights, a spring-cateln $i$, operating in the manner and for the purpose specified.
2. Making the supports E G on the pendulum roct adjustable to different distanees apart, in the mamer and for the purpose herein set forth.

75, 147 .-D.Avid W. Fowlef, Goshen, Ind.. assignor to himself, George A. Ewhor, and Georges G. Kimmale, same place.-Illuminating Oil.-Minch 3, 1808.-Composed of maphtha, 1 gall. ; sulphate of copper, 1 oz ; oxide of zine, 1 oz. ; sulphate of alumina and potash, 4 oz ; chlorate of potash, $\frac{1}{2}$ oz. ; camphor, 1 draclinı ; and water, 20 oz.

Claim.-The combination of the abore ingredients, in manner and proportions as set forth, and for tho purposes specified.
\%5, 14. -JoIn J. Gisir, Milton, Ohio.-Mog Snout Slitter.-Mareh 3, 1868. -The cartilaginous portion of the snout is remored by the curred, guillotine entter.

Claim.-The berein described slitter, consisting of the frame $B$, bar $D$, stem $\mathbb{C}$, spring $G$, blade $E$, and block $A$, all constructed and armaned to operate in the manner and for the purpose specified.

75, 149.-Wimlam B. Gleason, Boston, Mass.Manufacture of Molded Articles.-MIarch 3, 1868.The inside of a mold is lined with thin sharings or reneers, and n plastic adhesive material forced in, which compels the rencer to takic the form of the mold.

Claim.-Tho process of produeing molded articles

Whith an adhering pelliele, by the use of a plastie adhesive compound under pressure as a former, substantially as deseribed.
F5, 150.-Richard J. P. Goodwin, Manchester, N. H.-Sad Iron.-March 3, 1868.-The cover is hinged at the back and held shut by a spring bolt at the fore end.

Claim.-The combination of the hinge joints E F and cover $B$ with the spring bolt $G$, operating in connection with the striker $J$, substantially as and for the purpose set forth.

F5,151.-R.J. Gould, New Kork, N. Y.-Packing for Hose Coupling.-March 3, 1868. -The paeking ring is formed to enter two rectangular annular grooves in one part of the eoupling and a $V$-shaped annular groove in the other part.

Claim.-The arrangement of a $\mathbf{T}$-shaped packing pieee $a$, having the ends of the cross bar flat or $\checkmark$-shaped, in combination with correspondingly shaped recesses 6 in the surfaces to be joined, said packing overlapping the inuer surfaces of both parts $A$ and $B$ of the coupling, substantially as and for the purposes set forth.

95,152.-John C. Govers, Washington, D.C.Window Shade.-Mareh 3,1868.-The journals of the roller are upon pieces sliding in vertical grooves in the casing, the pieces being conneetel to cords passing over sheaves in the easiug. The roller is turned by an endless cord which passes around sheaves at the bottom and top of the window and has one turn around the roller.

Olaim.-1. In combination with the roller C, the spring $g$ and journals $D$, with the slide $e$ attached to move in the grooves $G$, when constructed and arranged to operate substantially as described.
2. The roller C, spring $g$, journals D , and slide $e$ attached, in eombination with the groore $G$, and cords $a$ and $f$, When constructed and arranged to operate substantially as deseribed and for the purpose set forth.
'95,153.-Robert D. Gray, Lafayette, Ind., assignor to himself and William B. Brittingilam, same place.-Rotary Valve for Steam and other Enginery.-March 3, 1868.-T'he conieal valve has similar carities on the opposite sides, and is balaneed by the pressure of steam. The valve is oseillated by a tappet rod on which slides an arm adjustable on the piston rod.

Claim.-1. The construction of the conieal valve $F$, with reeesses and ends with reference to the chambers $\mathrm{F}^{1}$ and $\mathrm{F}^{2}$, valve chest D , and ports $\mathrm{D}^{1}$ and $\mathrm{D}^{2}$, substantially as herein set forth.
d. The arrangement of the oscillating valve F , valve stem $G$, arms $L$ and $K$, tappet rod $I$, stops $I^{\prime}$, and tappet arm H, substantially as deseribed.
195, 154.-Menry 13. Grebinger, Millersville, Pa., assignor to himself, B. E. Kexdig, and C. B. Henr, assine place.-Scrubber Holder.-March 3, 1868.-The strips of gum elastic are held between alternating metallie strips, which scrve to keep them asunder and seeure them in the head. The rubber and metallic strips are traversed by bolts passing through the sides.

Claim.-The intervening pieees $F$, with their perforations $f$, in combination with the slotted sides $B$ $c$, headed ser*v bolt $D$, all arranged and applied in the ma:ner and for the purpose specified.
75, 155.-C. B. Gregory, Beverly, N. J.-Fire-place.-March 3, 1868. -The stove has double walls, the annular chamber between which is filled with gravel. Air is admitted through registers at the bottom and passes through a number of apertures in all parts of the inner plate.

Claim.-A fireplace, consisting of a perforated casing, surrounded by a mass of gravel, or other equivalent granulated material, through which the air must pass to the fuel, substantially as and for the purpose herein set forth.
75,156.-Joun Grüssi, Clercland, Ohio--Flat Iron. - March 3, 1868. The top is hinged at the rea: end, and secured by a staple and hook at the fore
end. The ehareoal is placed on a grate supported above the bottom of the chamber. The air holes pass inward and downward, opening beneath the grate. The carbonic acid gas passes out through the side passages bencath the lid.
diaim.-1. The draught holes $d d$, arranged below the grate, in combination with the grate $H$, and vent $c$, and chamber ' $A^{\prime}$, as and for the purpose set forth.
2. The cover E , body A , chamber $\mathrm{A}^{\prime}$, and vent $c$, in combination with the grate $H$, draught holes $d a$, and door $J$, substantially as and for the purpose specified.

195,15\%.-John N. GUGER, Peoria, Ill.-Tug and Chain Carrier.-March 3, 1868.-The ring in the back strap to whieh the hip straps are attiehed has side hooks on which the chains are hung when unhitched.

Claim.-A tug and chain carrier attachment for a harness, construeted in the form herein shown and deseribed, and having hooks $G$ and pivot pin $H$ combined therewith, all arranged and operating as specified.
g5,158. - Jonathan R. Hamilon, Portland, Orecon.-Instrument for IIaking Local Applications in Uterine Diseases, de.-March 3, 1868.-The eup is fitted to contain lint saturated with the proper remedy, and is detachable from the stem, so as to be used without it, in some cases where the patient is in a reclining position.
Claim.-The cup $A$, as construeted and applied, substantially in the manner herein deseribed, for the purposes specified.
195,159. - John Harvey, Seranton, Pa.-Hat Hook.-March 3, 1868. -The hook is raised by the spring, but may be depressed and held by a button.

Claim.-The arrangement of the plate A, arm B, and spring C , when the several parts are constructed substantially as and for the purpose specified.
'95, 160.-Lewis T. Hawley, Salina, and Amos Westcott, Syracuse, $\mathbf{N}$. Y.-Cooling ILitk.-March 3,1868 . The ice reeeptacle fits into the mouth of the can, and has from the center of the bottom a cylindrical extension which passes down into the milk. The cover of the said reeeptacle has spring studs in its edge which hold it in place.
Olaim.-1. The felt jacket, or eovering of other suitable material, in combination with the stopper and iee reservoir A, arranged substantially as and for the purpose above set forth.
2. The reservoir for ice or cold water A, eonstructed and arranged substantially as abore destribed, and for the purpose above specified.
3. The knobs on the collar of the cover, substanially as and for the purpose above set forth.
go, 161.-Jonathav Heisler, Schuylkill Haven, Pa.-Tonic or Bitters.-ALareh 3, 1868.-Composed of black snake root, 1 oz ; wild cherry bark, 1 oz .; elecampane root, $\frac{1}{2} \mathrm{oz}$; ; sarsaparilla root, $\frac{1}{2}$ lb. ; pine tree gum, $\frac{1}{4}$ lb. ; buds of balsam tree, $\frac{1}{4}$ lb. ; alcohol, $\frac{1}{2}$ pint; and water, 8 qts.

Claim. The bitters or tonie, compounded and used substantially in the manner and for the purpose as herein described.
g5, 162.-Geonge W. Herring, Bangor, MeOant Hook.-Mareh 3, 1868.-The bar to which the hook is piroted is turned out beneath the lower end of the ferrule.
Claim.-The piroting of the hook C to the bar B, when said bar is provided with a lip $x$, and constructed to operate substantially as and for the purpuses specified.

1g5, 163.-J. S. Hootor, New Carlisle, Ind.Apparatus for Ileating and Purifying Fced Fater for Steam Generators-March 3, 1868. -Improrement on his patent of March 5, 1861. A bent pipe connects the lower part of the condenser with the filter, which has an overflow pipe near to the top, and a discharge ehamber for the aceumulation of water near the bottom.

Claim.-1. The combination of the man holes $a \operatorname{a}$ a a $a$, shelres or plates 12345678 , and the struc-
ture or easing A, constructed and operating substantially in the manner and for the purpose herein set forth.
2. The filtering ease $C$, ellow pipe $L$, spouts $G$ and $H$, in combination with the casing $A$ and plates or shelves 12345678 , all arranged and operating in the manner substantially as herein set forth.

95, 164.-Robert B. Huiunin, Clereland, Ohio. -Yen Reit.- Jareh 3, 1868. -The ring fits on the second finger and has a fork to receive the pen-holder.
claim. -The shield herein deseribed, for the purposes specified.

75, 165.-JonN S. Hull, Cincinnati, Ohio.-Hydrocarbon Burner.-March 3, 1868. - The hydrocarbon is forced from the reservoir by air injocted therein by pumps. The fluid passes through tubes above the bmuers, to canse its heating and attenuation. Jets of steam are mingled with the gas at the burners to assist combustion. Stean may be passed through the leating pipes to clear ont scales or sediment. The packing of the valres, which are subject to heat, is of prepared asbestos.

Claim.-1. A heater or burner apparatus, supplied at all points of combustion by the forco of compressed air acting upon the fluid, substantially as and for the purpose herein specified.
2. A ent-of ralve $C$, betweon the pump 13 and the reservoir, for the pupose set forth.
3. The location of the air and dluid ducts $a$ and $b$ outside of the reservoir, substantially as and for the purposo specified.
4. The donble bosses $f$, for attaching the pipe coupling to the reservoir, for the pmrpose set forth.
5. The arrangement of the burners ( $G$ G in numbers upon different tabes $\mathrm{F}^{4} \mathrm{~F}^{4}$, whieh are soparatoly or in sets, provided with eut-off ralres, so as to inerease or diminish or distribute the lourner's to any desired extent, substantially as herein set forth.
6. The superheating tubes $\mathrm{F}^{2} \mathrm{~F}^{2}$, extended orer the burners and commmmeating with the pipes $J$ J, substantially as and for the purpose herein set forth.
7. The arrangement of flame deflectors I I orer the superheating tubes, substantially as specified.
8. The arrangement of numbers of burners $G \mathrm{G}$, in line with one another, so that the burners $l l l$ of each set mar be connected with ono adjusting shaft, and adjusted simultaneously, substantially as specified.
9. The adjustment of the said bumer-points separately to their connections with the common adjusting shatt, for the pmepose set forth.
10. The introduction of the superheated stean jets into the fiame jets of the bumers directed thereto, substantially as aud for the purpose herein specified.
11. The employment of steam for elearing out the supply and burner tubes, which are so arranged as to admit the passage of the steam through them, substantially as herein described.

75,166.-James Hutchinson, Fond du Lae, Wis.-Hop Press.-March 3, 1868.-The eecentrie cam is piroted to a block which slides between the standards and is held down by pawls traveling down ratchets npon the sides of the standards. The beam also slides on the standards and has pawls which hold all the movement gained by the eam.

Claim.--The improved mechanical arrangement for pressing hops and similar substances, consisting of the linged lerer $G$, with its cccentric head II, block E, provided with the dogs $c$, in combination with the ratehet piates C and beam D , provided with the roller $F$ and pawls $a$, when construeted and arranged to operate as described.

75167 - Niels Johnson, Berlin, Wis.-Machine for Boring Hubs.-Mareh 3, 1868.-The hub is placed in the unirersal clutch, and a eylindrieal or tapering hole formed arially in the same. In forming the tapering hole, the cutter has antomatic, centrifugal morement simultancously witl its feed movement.

Claim.-The bars H H, clamps I and $J^{\prime}$, pinions L L, rack bar J, and set serow K, for forming a universal clamp for hubs, substantially as set forth.
'75,168.- E. H. Kirkним, Boston, Mass.Olothes Sprinkler.-March 3, 1868.-The water is in-
troduced through the ralre openings in the side of the head. 'The elastic bulb at the top aets cither to draw in the water or to enforee its ejection.

Claim.-1. A elothes sprinkler, made essentially as herein shown and described, that is to say, as composed of the elastic bulb a, tubular stem $e$, and foritminous cap $d$, the latter being provided with ports and valves, substantially in manner and for the purpose as hereinbefore explained.
2. The before deseribed mode of forming and applying the ralves $g g$, that is, as consisting of the aunulus $n$ and spurs $g$ applied to the neck of the stem $c$, and so as to cover the ports $a^{\prime} a^{\prime}$, the whole being arranged and operating as set forth and explained.
95.169. - Riciiard Kitson, Lowell, Mass.Brake for Cotton Lappers.-March 3, 1868. - The frietion pulley is fastened to the shaft of the pinion between the arm and the shiell, which form the swinging yoke. The upward notion brings the friction pulley into contact with the shoe, to eheck the motion of the said pulley, and the down ward motion of the yoke releases the pulley from contact with the shoe. 'The joke shield is on the eentral shaft, formbig a caso to protect the gear and pinion from sand and short fiber, and also forming a support for one end of the pinion shaft which passes through the firiotion pulley and enters the arm at the junction of the horizontal and vertieal portions thereof.

Claim.-1. The stationary shoe C, combined with the friction pulley $B$ and swinging yoke, in the manner and for the purpose substantially as specificd.
え. Tho swinging yoke, consisting of the shield D and arm $b$, arranged and applied substantially in the manner and for the purpose set forth.
3. The shield I), arranged to cover the gears, and form one bearing or support for the shaft of the pinion a and pulley J , as explained.
4. The combination of the shicld $D$, gear $F$, pinion $a$, friction pulley B , stationary shoo C , arm or lever $b$, transvorse lever $g$, weight $f$, connecting rod $d$, and foot lever $G$, all arranged to operate substantially as and for the purposes set forth.

75,170.-JOHN L. Klefn, New Tork, N. Y.Manufacture of Soap.—March 3, 1868.-Parafline, 1,000 lbs., and "regetable wax," 500 lbs., are melted, and then salt lye, 200 Bammé, 500 lbs., is addod; boil 1 hour, and then add soda lye, $20^{\circ} 13 a m e ́$, 1,500 lbs.; boil 2 hours, then turn off the stemn, rim off the lye, and add fish oil, 1,000 lbs. ; palm oil, 50 lbs ; and salt lye, 500 lbs .; boil 1 hour, then add canstic soda lyo, 1,000 lbs. ; boil 4 or 5 homs, and settle.

Claim.-The combination of paraffine and ceriajaponiea to make soap, using for that purpose the aforesaid componnd and ingredients, or any other substantially the same, and which will produco the intended effect.

75,171.- Habiry K. Leech, Harrisburg, Pa. Railroad Switch.-Irarch 3, 1868. - The guide has a weighted bottom, so as to readjust itself after divergence by a passing train, and tends to guide a car passing in any way upon the main track. The guide may lo held by the lever so as to guide a car on to the side track.

Claim.-The guide J, hnug in fixed and morable bearings, when construeted and adjusted with the rails, substantially as and for tho purposo herein set forth.

75,172.-1. H. Lightiald and Cilarles F. North, Cohoes, N. Y., assignor to Cuarees F. Nortir, same place. Car Heater.-March 3, 1868. The furnace is placod beneath the floor of the ear, and is inelosed in a shell, leaving an annular ail space outside the furnace, from which the air escapes into the ear throngh a register. The air for combustion is received through one of the fore-and-aft flar-ing-mouthed ducts, and the smoke escapes through side flues.

Claim.- A heater for railroad cars, having eylindors B and C , fire and ash boxes, as described, rod N, elutch $O$, lugs $L$, draught finnmel $I$, griddle $S$, and wire $T$, construeted, combined, and arranged substantially as specified.

95, 178.-TVilifiam A. Lightifall, New York, N. Y.-Securing Thbes in Surface Condensers.Mareh 3, 1868.-A transverse slot is made near the end of the tube, and a longitudinal slot from the end taps its mildle. The resulting lips are bent outward.

Claim.-Making the slotted apertures in the ends of the tubes of surface condensers for steam engines in tho manner and for tho purposes set forth.

75, 1\%4.-Join T. Lotvrey, James A. Case, and Richard Chew, High Banks, Ind.-Corn Planter. -Mareh 3, 1868. -The seed slide is operated by the foot and a spring. The seed is covered by the corrugated drags. The sides may be adjusted in distanee, or one may be removod from the other and used in planting single rows.

Claim. -The combination of the $\operatorname{drag} \Lambda$, so construeted that the part $\mathrm{A}^{\prime}$ may be detaehed, in combination with the parts $\mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{E}, \mathrm{F}$, and G , ar ranged to operate for planting double or single rows, substantially as deseribed.
 and Frederick S. GwYer, New York, N. Y.-Bottom for Ice Box in Refrigerators.-Mareh 3, 1868.The plate has an upturned edge, and is so corrugated and inclined as to run the water to the discharging orifice.

Claim.-The radially-corrugated sheet-metal bottom, formed and adapted for use in refrigerators, substantially as and with the advantages hercin specified.

75,196.-James F. Mortin, Columbus, Ohio. Scaffolding for Building.-Mareh 3, 1868; antedated February 22, 1868.-The bars by which the inner sides of the brackets are supported extend into or through the wall; in the first ease having an upturned end, and in the other case having an cye giving engagement to a brace rod extendirig to the sills or joists. The hoisting frame eonsists of a gallows which is connected to the outside of the brackets, and has a hook at its head for attachment of the pulley block.

Claim.-1. The combination, with the brackets C , of the bars $a$, fitted into the joints of the wall, and braced by suitable tension braces $c$ against the strain exerted thereon by the aforesaid brackets, substantially as and for the purpose specificd.
2. The arrangement of a removable hoisting frame D, with reference to the seaffold constructed with detaehable supporting brackets $0^{\prime}$, substantially as and for the purpose specitied.
$75,17 \mathrm{~g}$. -Sanuel McGee, Madison, N. J.Boring Faucet.-Mareh 3, 1868. -The stoek of the cutter serews into the diaphragm, and is held by a cross pin. The cutter is adjustable dianetrically in the stock, and is secured by a set screw.
Claim. - 1 . The combination of a faucet and an adjustable cutter so arranged that they may be adaptod to fancets of varions sizes, substantially as set forth.
2. Constructing a faucet with a diaphragm $i$ to form a chamber in the ond to receive the cutting mado by the bit in entering the barrel, substantially as set forth.
\%5,1\%8.-James S. McMurray, Toronto, Canada, assignor to himself, Thomas Richard Fuller, and Samuel Street Fuller, Stratford, Canada West.-Oar Coupling.- March 3, 1868.-One end of the link has a pendent pin which braces against the rear end of a slot in the lower side of the dratr head, and holds the link in a horizontal position.

Claim.-The pin $g$ upon the coupling link $I$, in combination with the inner beveled end of the slot $c$, the piroted pin C , crank G , and weighted crank E , as hercin described, for the purpose speeificd.
g5,179.-Thomas Meikle, Louistille, Ky.Machinc for Making Plow Olerises.-March 3, 1868. -The conter piece or former is secured to the sliding plate, and the blank bent around it by the piyoted jaws which are forced upon it by the anti-frietion rollers on the enide frame. The plate is reeiprocated by link connection to an arm of a bar roeked by a
lever. A pair of anvil blocks give bearing to a series of "sets" which may be raised from their sockets by treadles.

Claim.-1. The combination of the sliding plate $J$, having a fixed center piece lu attached thereto, with the compressing levers or jaws II, rollors I, screw P, and mechanism for operating the sliding plate, substantially as and for the purpose set forth.
2. The swages and blocks construeted as deseribed, for use successively in forming a flat iron bar, so that the cleris may be eompleted by bending it in a machine fitted for that purpose, substantially in the manner set forth.
g. 18, 180.-John H. Mercer, New Xork, N. Y.Bath Thu.-March 3, 1868.-The escape ralre and supply pipes are inclosed in a separate chamber dirided from the other part of the tub by a perforated plate. This chamber also contains the float which raises the exit valve when the tub is filled.
Claim.-1. The perforated plate $q$ at the end of the bath, eovering up the descending pipes and their cocks, substantially as set forth.
2. The arrangement of the pipes $g, h, k$, and $l$, at the end of the bath tub, in combination with the cocks 0 and $p$, the handles of which are above the table piece $w$, as and for the purposes set forth.
3. The arrangement of the float $s$ and valre $d$, opcrating in the manncr set forth, in combination with the bath tub and perforated end plate $q$, as specified.
\%5,181.-Henry J. Miller, Nashua, N. H.Boot Jack and Blacking Brush.-March 3, 1868 -The backs of the brush and dauber liare plates with tapering doretail recesses, by which they are connected to the opposite jaws of the boot jack. The latter constitntes a handle.

Claim. - The combination of the boot jack $A$ and brushes B C, Then they are conneeted together and held in the manner specified.

195,182.-JoHN MIX, West Cheshire, Conn. Manufacturing Gimlets.-Mareh 3, 1868.-The blank is bent and grooved by swaging, and is tormed into a epiral gimlet by a series of operations.
claim. -The method herein deseribed of forming blanks for gimlets or gimlet bits.
g5,193.-Hiran Moon, Red Creek, N. Y.-Carrage-March 3, 1868. - The fifth wheel consist of two disks with counterpart concontric ribs and depressions upon their contiguous faces.
Claim. -The eombination and arrangement of the upper and lower part of the circle $A A^{\prime}$ with spring brace $k$ and pereh plate $m$, as and for the purpose set forth and described.

75,184. - Vallace T. Munger, Branford Conu., assignor to Thonas Fennedy, same place. Reversible Knob Latch.-March 3, 1868. - The fol lower has motion on the hub under the influenee of the spiral spring when the spindle is withdramn and allows the yoke to move forward so that the head of the latel may be reversed.

Claim. - The combination of the follower K, provided upon its inner side with the points $k k$ for operating the latel, and with projections L L and $n$ for reeciving the hab I; the said hub I being prorided upon one side with a shoulder $i$, to form a bearing in the plate of the ease, and upon the opposite side a slot $J$, and shoulder $m$ to receive the projections L L and $n$ on the follower, and the whole constructed and arranged so as to operate the latch bolt in the manner herein set forth.
 tivator. - March 3, 1868. -The draw bar and the handles are adjustable so as to work the plow with cither side coineiding with the line of draught. The fore end of the draw bar is supported on a spring.

Claim.-1. The dranght-rod $B$, when made and applied and supported by a spring, as specified
2. The method of fastening and adjusting the handles by means of the support E , as set forth.
3. The teeth F, G, H, I, and J, when constructed and arranced substantially as specified; also, the furrow board, when made and applied to the teeth, substantially as set forth.

75,156.-JoHn A. Nesbit, Charlottesville, Ind. - Joot Crimping JIachine. Mirch 3, 1868. The "former" is tixed in a frame, and is forced down between the adjustable jaws by a raek and pinion.

Claim.-1. The guide B, sliding on ways attached to the fiome $\Lambda$, and so eut array on the lower edre that the clamps may bo attached to the edges of the leather while ou the brake and inder pressure, and used in combination with removable brake C , adjustable jaws D, and clamps G, substantially as described.
2. The arrangement of the reciprocating guide B , ways $A$, remorable brake $C$, winch $E$, and pinion and rack F , substantially as and for the purpose set forth.

75, 157.-Miltun W. and George W. Nesmiti, Metamora, Mll.-Grain Register.-March 3, 1868.The register is operated by the movement of a spring lerer, against which the measure is foreod to impinge by a post in the receiving box.

Claim.-1. A grain-measuling apparatus, construeted substantially as deseribed, and provided With a recistering derice operated by a lever, so arranged, that by lraming the mensure past it in one direction, the register will be operatod substantially as deseribed.
2. The registering derice, consisting of the dial Wheels $v$, provided with the pins $x$, and having the gear wheels $m$ attached, in combination with the double wheel $u$, when said parts are arranged as deseribed, and operated by the pawl $P$, as and for the purpose set forth.
3. The parrl P , having the dog $t$, with the stop $r$ and spring $n$, all arranged substantially as described.
4. The combination of the registering device, the pawl $P$, and the lever L, all arrangal to operate as and for the purpose set forth.

75,155.-Walter B. Noyms, Dorchester, N. H. —Saw Jointer.-Mareh 3, 1868.-The file is clamped to a earriage on the arm, which is seeured to the frame, giring journal bearing to tho saw mandrel. Upon the opposite side of tho saw is a clutch to prevent vibration.

Claim.-The jointer $g$, constrnetod and operating as and for the purpose set forth.
\%5,1S9.- Peter Numsex, Baltimoro, Md. Fruit Can.-Mareh 3, 1868. -The domm-turned flange, forming the side of the hole, has an inturned edge to support the cap, whieh is a flanged disk, and when insertod, is flush with the can top.

Claim.-1. The combination of a hole C , and eap D, shown in Figs. 1, 4, 5, construeted and operated in the manner and for the purposo herein sulbstantially set forth.
3. Forming or shaping a hole, C , as shown in Figs. $1,4,5$, in the manner and for the purpose herein set forth.

95, 190. - J. P. Olis, Westfield, Ohio. - Corn Marker, de.-March 3, 1868.-The cross bean, to which the standards of the shoes are attached, has two joints to allow of the sections bearing the outer standards being thrown orer upon the middle section to shorten the implement or to orerride obstacles.

Claim. The arns $E$, braced and hinged to the frame $A$, and markers $B^{\prime}$, in eombination with the fiame $A^{\prime}$ and adjustable markers $B$, substantially as and for the purpose set forth.

75, 191.-Thomas W. Plum, London, England. -Siphon Faucet.-March 3, 1868. -The coek is conmected to a flexible, floating pipe, which draws the liquid fiom immediatcly boneath the surface, and the exit of the coek is so low that it will draw all the liquid out, acting at the last as a siphon.

Claim.-A tap or cock so constructed as that its discharging aperture may bo opened and closed below the lerel of the hottom of the cask or vessel into which it is inserted, and whose inner ead consists of or terminates in a floating flexible tube, all substantially in the mamer and for the purpose hercin set forth.
g5,192.-D. H. Porter, Bridgenort, Conn.Pivoting Teeth. March 3, 1868. -The bent portion
of the U-shaped piece is inserted in the tooth during mannfacture, and the expanded ends are inserted in the plate.

Claim.-The herein deseribed double-headed Urivet, for insertion into mineral teeth, in the manner and for the purpose substantially as herein set forth.
g5, 193. - Hexry G. Porter, Grand Rapids, Mich.-May Elevator.-March 3, 1868.-One barrel shaft of the stationary horse-power is connected by a eluteh to a barrel upon which the hoisting cord is coiled. The fork is allowed to descend by unclutching the barrel from the ratchet wheel upon the shaft.
Olaim.-1. The arrangement of the horse-power, with the ratehet wheel I), spool $E$, parml $E$, lever $G$, and cords $J$ and $K$, substantially as and for the purpose set forth.
2. The combination of the fork with the lorsopower, ratchet wheel D, spool E, pawl F, lever and cords, whrm the parts are arranged and operating substantially as and for the purposes set forth.
\%5, 194.-J. C. Potrer, Alfied, N. I.-Indicator jor Knitting Machines.- ILareh 3, 1868. - The shaft of the index finger is so connceted to the knitting mechanism as to donote tho number of rounds knit, as an indication for widening or naroming.

Claim.-1. The arrangement of the slaft E With the gear wheel Gr. ratehet wheel II, finger $L$, and dial plate $F$, substantially as and for the purpose set fortli.
2. The combination, with the needle-supporting bed and the shaft C, of a knitting machine, provided with a serew, of the clamp B, shaft $E$, gear wheel $G$, finger L, adjustable dial-plate $\mathrm{F}^{\prime}$, all arranged and operating as set forth.

75, 195.-William S. Reeder, St. Lomis, Mo.Head Block for Saw Mills.-March 3, 1868. A coged rack runs the entire length of the carriage, and being operated by a segmental rack upon a lever at one end, actuates the cors wheels upon the feed screws of the log rests of the head blocks. These cog Wheels connect to the feed scremis by ratchets and pawls, so as to make the retrograde movement of the raek inoperative upon the screws.

Claim.-1. The mrangernent and combination of the lever device $\mathrm{E}^{\prime}$, the giaduated limo E , the rack D , and the cog wheels $c^{1}$, substantially as and for for purposes set forth.
2. 'The arrangement and combination of the cmans wheel $C^{\prime}$, the parrl $c^{3}$, ratchet wheel $c^{2}$, and the applieation thereof to actuate the serew C to prodnce the feed motion of the head block $B^{\prime}$, as set forth.
3. The spring brake $\mathbf{F}$, to prevent small logs from being thrown orel too far, when constrneted substantially as set forth.
\%5.196.-George Riciandison, Lowell, Jiasw. Machine Clock.-Mareh 3, 1068. - The machine elock is intendel to show the number of reciprocations or rerolutions made by any part of a machine. Motion is communicated to a worm gear, which communieates by a system of gear wheels with the index finger:

Claim.-The applieation of the stationary internet gears a ind $e$, traveling gears $j$ and $n$, and pinious i and $l$, when arranged to operate substantially ias described and for the jurposes filly sot forth.

75, 197.-Alfred Rominson, New York, N. Y. - Process and Apparatus for the JIanufacture of Roofing Fabric. - March 3, 1868. - The strips of paper are tarred, cemented, and pressed logether by passage between rollers. The tarring lollers rotate in fountain troughs, and laise the contents into contact with the paper.
Claim.-1. The process of preparing roofing fabric, substantially as herein specitiod.
2. The combination of a system of pressure and saturating rollers so arranged relatively with each other as to accomplish the purpose of my invention, substantially as herein specified.

175, $198 .-J o h n$ Root, New Maren, Conn., nssignor to himself and MaCTAGON \& STEVENS, same place.-Bolt Heading Machine.-March 3, 1868. The header is reciprocated vertically by a crazk on
the maln shaft, which has pitman. connection by a lever operating the header slide. The dies are foreed in upon the blank by the projections from the cylinder. The latter has vertical reciprocation by comnection to a crank on the main shaft.

Claim.-1. The arrangement of the cylinder B, with its projections $f$, the levers $e$, and die-holders $b$, so as to force up and withdraw the said die-holders, in the manner substantially as deseribed.
2. The combination of the slide $F$, fulcrum pin $i$, block $I$, and eccentric $L$, with the lever $H$, all as hercin described and for the purpose set forth.
'75,199.-H. ScIUYI.ER ROSs, Buffalo, N. Y., assignor to Charles G. Ross, New York, N. Y., Wrench.-March 3, 1868. -The fixed jaw is pivoted to the cam lever, and has a slot in which the sliding jaw mores. The sliding jaw is forced toward the fixed jaw by a eam surface bpon the lerer, and is pressed from the fixed jaw by a spring.
Claim.-1. A wrench composed of a stationary jaw $A$, a morable jaw $B$, cam $D$, and handle $E$, constructed and arranged substantially as and for the purpose specified.
2. A wrench having its movable jaw $B$, operated by a cam D, pin $h$, and groore C , or their equivalents, substantially as herein specified.

95,200.-E. A. G. Roulstone, Roxbury, Mass.Trunk Corner.-March 3, 1868. -The corner is made of one piece of metal in which the buckling side is cut out at the corner. The cnds may lap and be secured together, or a reinforcing piece may be laid over and secured.
Claim.-A metal corner for traveling trunks, in which the metal is cut away or incised to form the corner, substantially as set forth.
75,201.-Daniel Rudolph, Sugar Grove, Ohio. -Bee Hive.-March 3, 1868.-The tin drawers have inturned flanges at top which prevent the ascent of worms and have grates above whieh allow the worms, of any eggs deposited upon them, to fall through into the drawers.
Claim.-The constrnction, arrangement, and combination of the flanged tin drawers with a wire sieve above, and surrounded by open chambers on each side, as hercin described, for the purpose of entrapping moths, millers, and worms, and preventing their infesting the bee house.
75,202.-J. RUHL, Defiance, Ohio-Harrow.March 3, 1868. -The gudgeons of the toothed rollers turn in a frame to which tho harrow frame is hinged. The latter may be swung upward and forward by a lever whose pawl engages a circular ratchet.
Claim.-The revolving harrows B B, hinged frame C , lever $g$, pawl $h$, and stationary ratchet wheel $f$, all arranged in combination, substantially as and for the purpose set forth and described.

75,20:3. - S. Franklin Sohoonmaker, New York, N. Y.-Preserving Hops.-March 3, 1868; antedated February 22, 1868.-A chanber is rendered air tight by linisg with plates of thin iron whose joints are made tight by strips of metal with rubber lining. The only commanication with the chamber is through the hatchway, which is hermetically closed after introduction of the hops, and through pipes through which the air is withdrawn and the disoxygenated air returned. The air is disoxygenated by passing over oxide of barytes heated to a low red.

Claim.-In conncetion with a suitably inclosed chamber or compartment, nitrogen gas, whell produced from the contined air by the agency of a chemical compound and heat, without the production of carbonic acid gas, substantially as and for the purpose described.

75,204.-Gustav Schumacher, New York, N. Y.-Combined Knou Latch and Lock.-March 3, 1868. -The stad of the spring tumbler enters a lengthened depression when the lock is used as a spring lateh, and allows the movement of the lateh, but enters a small notch when it is thrown forward by the key, and locked.

Claim.-A sliding latch-bolt, provided with stads 3, for the cam $b$ to act against, and with two talons 4 and 5 , for the key to act upon, in combination with the tumbler $c$, stud 10 , and notches 11 and 19 , as and for the purposes set forth.

195,205.-B. W. Shaw and George A. SimMoNs, Morristown, Vt.-Churn.-March 3, 1868.The barrel has circumferential flanges forming whecls, and las gudgeons journaled in a frame so as to churn the cream by being rolled abont.
Claim.-The combination of the eylinder A and the wheels B B, when constructed and operated substantially as and for the purpose hercin sct forth.
gh,206.-Edwin R. Shepard, Scranton, Pa.Rail for Railways.-Mareh 3, 1868. - The boits pass horizontally through the rertical plates of the rail and chair; and are secured by keys passing through their slots and held in place by the S-spring through which pass the projections at the ends of the keys.

Claim.-An inclined and wedge-keyed bolt, constructed substantially as described, in combination with a compound rail, as and for the purpose set forth.

75,20g.-N. B. SHERWOOD, Millville, N. Y.Cotton Seed Planter.-March 3, 1868. -'The seed is raised by the hooked conveyers upon an endless clain, and is dropped by the descending conveycrs into the discharge opening.

Claim.-1. The construction and relative arrangement, in connection with the chains, of the couveyer D, substantially in the manner and for the purposes herein shown and deseribed.
2. The application of the flat link chains C, with conveyers ID attached, to cotton-seed planters, substantially in the manner and for the purposes shown and described.
3. The sunkon channels within the drums $P$, and the surface bonrd $J$, for the carrice chains $C$, or their equivalents, to trarel in, ior the purposes herein showa and described.

95,208.-A. M. Shurtleff, Boston, Mass.Apparatus for A tomizing Liquids.-March 3, 1868.The air ressel communicates with an elerated rater tank, the water from which displaces the air in the said vessel.

Claim.-In combination with atomizing tubes, an air vessel having means of connection both with the atomizing tabes and a stationary liquid head, substantially as set forth.
g5,209.-Franz G. Siemers, Winona, Minn.Scraper for Ice Cream. Freezers. - Harch 3, 1868.Improvement on his patent of January 21, 1868. The flaring scrapers hare reetangular faces; their edges being eurved to fit the side of the ressel. The rods hare screw threaded portions at their ends which receive auts by which the scrapers are sccured to them.

Claim.-The scraper E, constructed substantially as described, and made adjustable on the arm D , as set forth.

95,210.-Warrex A. Simonds, Boston, Mass., assignor to himself and Hexry H. Hyoe, same place.-Gas Regulator.-March 3, 1868.-The bell is connected to the rod of the sliding talre and opens the same as the gas becomes cxhausted from the said bell.
Claim.-1. The arrangement of cylinder A , with its interior annular ring or chamber, filled with nercury, and inlet and cgress passages $B$ and $D$, in connection with the floating bell F and rod $h$, opening and closing valve $l$, in valve chest $C$, all operating together as and for the purpose described.
2. The construction of the regulation valve, consisting of valve chest $C$, with its trianguiar opening $n$ in plate 0 , and haring arranged within it slide $l$, pressed by spring $m$, to open or close the said opening, all operating together, as and for the purposo deseribed.

95,211. - David S. Slater, Poymett, Wib.-Cultivator.-March 3, 1868.-The frame is constructed of iron, and has acentrai and two laterally-aljustod
side plows. The side plows are so clipped to the standards that they may be set sideways, more or less, to throw the soil in the required dircetion.

Claim.- A cultivator consisting of the central bar A, having the adjustablo handles $C$ and the rigid share ot attached thereto, in combination with the laterally adjustable side bars $B$, having the adjustable shares o seeured thereto, and all arranged to operato substantially as shown and dezeribed.
75.212.-BENJAMN M. SMITH, New York, N. Y.-Button Hole for Paper Articles of Apparcl.March 3, 1868. -The fore end of the bntton hole has a motallie plate bent around the edge, serving to strengthen it.

Claim. -The metallie shield picee $a$, in combinntion with the button hole $A^{*}$ of a paper article of apparel, substantially as and for the purpose speeified.

75,213.-J. C. SPARKs, Pliladelphia, Pa., assignor to himself and A. G. Buzby, same placo.Carriage Whecl.-March 3, 1868. -The ends of the felloes and the spoke are received into the reetangular ferrule.

Claim.-The arrangement of the ferrule $\mathbf{A}$, haring tapering soekets as described, the felloes $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, and spoke 13 , when projections on the said felloes are recessed for the reeeption of a tenon on the spoke, Which projeets through the side of and into the ferrule, all as set forth.

75,214.-George B. St. JoHn, Boston, Mass., assignor to himself and Nomman S. Cate, same plaee.-Watch Key.-Mareh 3, 1868.-The accumulation of dirt is forced from the soeket by the plunger Which is retracted by the spiral spring surrounding it.

Claim.-The combination and arrangement of the elongated swirel or plunger and its surronnding spring with the key head and the pin D, substantially in the manner and for the purposes herein shown and deseriber.

75,215.-A. S. Stone, Plainview, Minn.-Grain Binder-Mareh 3, 1868. -The grain falls on four endless belts or chains, earried on sproeket or chain wheels; the rear pair of belts earry a rake whose head bar is bent around reetangnlarly at the ends, and these arms are aeted on by guides to clevate the rake teeth in the forward stroke and allow them to present buekward on return. The grain is carried to the binder. Tho latter has two rigid semieirenlar arms on two lock shafts earrying spur wheels gearing together, and motion is eommunicated to them through a erank shaft npon one of them. These arms earry upon their ends devices for automatically tristing and eutting the binding wire and for gripping the end of the same, whieh is then carried down beneath the path of the grain as it passes into the binder. After binding the sheaf is seized by the antomatie cateh and dropped behind the maehine. The size of the sheaf is regulated by adjustable, flexible bars within the rigid arms, and whoso lower ends are conneeted together by an elastie strap.

Claim.-1. The arms $G G^{\prime}$, arranged upon the shafts $\mathrm{D} \mathrm{D}^{\prime}$, with the springs $\mathrm{H}^{\prime}$, rubber L , box O, with twisting derice, and pineers R , and ehisels, all constructed, arranged, and operating in the manner substantially as and for the purposes herein fully set forth.
2. The earrying deviee, composed of the bar $X$, shaft M, with its cogs $y y^{1}$, and wheel $z$, with its frame, and refolving pinchers $Q$, when constructed and used in the manner and for the purposes specified.
3. The combination of the reaper platform $c$, rake shafts $\mathrm{C} \mathrm{C}^{\prime}$, wheels $d d^{\prime}$, chains $g g$, with, rakes $e$, and entters $b b$, with the grain-binding devices herein described, all arranged and used substantially as specified.

75,216.-Enoch E. Stubbs, West Elkton, Ohio. -Combination Padlock.-March 3, 1868.-The disk tumblers have notches into which projections upon lasp hooks may enter, when the tumblers are set to the proper combination. The disks have small reetangular notehes into which the spring pawl drops, when not raised by the D-formed, turning stud. The safety bolt is held up by a hook on a stud, so as to prevent the retraetion of the hasp, and may be freed
by turning the stud. Another sturl has a slot into whieh a thin projection of the hasp onters when it is thrown baek; this last turning stud has to be set to proper position to allow unlocking ; this is done by the curved end of the key whieh is inserted through the edge of the padloek, and aets on the lower end of the spring hasp.

Claim.-1. The combination of the safety bolt $f$ with the look E and hasp look F , arranged and operating substantially as described for the purpose specified.
2. The spring pawl $D$ and eceentrie stud 7 , in combination with tumbler a and piroted hook $F$, arranged and operating conjointly in tho manner and for the purpose described.

75,217.-George H. Taylor, New York, N. Y.-Apparatus for Exercise.-March 3, 1868. -The adjustable eonch lias an aperture through whiel the headed rods project and are eaused to inpinge npon the person of the pationt by connoetion to a lever which has vertical and horizontal oscillatory recip. roeation by eomneetion to a crank on a rotatiner horizontal shaft.

Claim.-1. The headed rods F , driren by any suitable mechanism for produeing a reeiproeating or eirenlar motion of the headed ends of said rods, substantially as and for the purposo set forth.
2. The combination, with the headed rods F, of the lever $G$, said lerer $G$ being driren substantially as deseribed to produce the motion set forth.
3. The combination, with the headed rods $F$ and lever $G$, of the crank $K$, substantially as and for the purpose set forth.
4. The combination, with the headed rods $F$ and levor $G$, of the jointed parallelogram $I$, eonstrueted and operating sibstantially as set forth.
5. The eombination, with the headed rods $F$, of the top 13 of tho eoueh, said top 13 being made adjustable to different angles of inelination by means of the hinges $C$ and a pawl or prop working in a rack or ratchet, or their equiralents, substantially as set forth.

75,215.-George H. Taylor, New York, N. Y. - Apparatus for Exercise.-March 3, 1863.-An oseillatory movement, adjustable in extent, is given to the hand and foot rests by conneetion to cranks on a rotating shaft. The erank arms on the sliafts of the hand-hold and foot rest havo diametrie adjustment in the said shafts to regulate the extent of movement.

Claim.-1. The handle $B$, driven by any suitable mechanism by whieh a vibratory or oseillating motion is imparted to it, substantially as and for the purpose set forth.
2. The shoe or foot-holder $B^{\prime}$, driven by any suitablo meehanism by which a vibratory or oseillating motion is imparted to it, substantially as and for the purpose set forth.
3. The combination with the handle B of the shaft A, erank $C$, erank E , and rod D , substantially as and for the purposo set forth.
4. The combination, with the foot-holder $B^{\prime}$ of the shaft $A^{\prime}$, cranks $E^{\prime}$ and $C^{\prime}$, and the rod $D^{\prime}$, substan. tially as and for the purpose speeified.
5. The combination with the handle $B$ and footholder $B^{\prime}$ and their immediate connections, of the driving shaft $F$, pulleys $G$ and 1I, and a suitable means for applying power, as described, the whole eonstituting a machine construeted and operating. substantially as and to the effect sot forth.

75,219.-Heniry R. Taylor, Westport, Conn. - Gear Cutting Tool.-March 3, 1868. -The cutter's are so pivoted to the stock that they may be turned up in a lathe by a baekward rotation; and may then bo swung ont so as to give the proper prominence to the cutting edgo.

Claim.-The rotary cutter, made up substantially as deseribed, of a stock or holdor and looso or separate cutting teeth or blades pivoted to the holder, and forming curvilinear sections ontside of the latter, and construeted so as to bo self-arljustable therein, or relatively thereto and each other.

75,220.-David B. Thompson, Brooklyn, N. Y. -Elevator for Buildings. - March 3, 1868. The hatchways are elosed by safety platforms whioh aro
thrown forward by springs from cach side of the aperture. The hoisting stage has upper and lower inelines which force back the sliding platforms to allow its passace.

Claim.-1. The arrangement of a singlo or double inclined plane on the npper or lower, or both ends of the elevator, substantially as and for the purpose specified.
2. The single or double inclined plane, arrauged upon a vertical axis, at the bottom of the elerator, for operation substantially as and for the purpose set forth.

75,221.-Hiram Thompson, Worcester, Mass. -Machine for Heading Bolts. -March 3, 1868. -The end of the heated rod is thrust between the dies in the intermittingly rotating wheel, and the blank sheared off. A tiansverse wedge is forcod endways by an incline to tighten the dies mpon the blank which is carried beneatlo the header by rotatory movement of the die wheel. The die whecl shaft earries a wheel which has radial slots extending from its periphery, and a side pin of the cog wheel upon the cam shaft enters one of these slots at each rotation and eauses the forward movement of the die wheel. This wheel is locked in position after each movement, by a sliding pin which enters one of the radial slots, and whieh is operated by levers actuated by the pin of the cog wheel. The bolt is freed from the dies by the driving backward of the clamping wedge by an inclined surface.

Claim.-1. The improred machine as a whole, arranged as specified, with or withont the cutting attachment.
2. The hollow dio S, in combination with the holding die $u$, and die $m$, for the pmrpose specified, when the dies $S$ and $m$ are operated by the means and in the order specified.
3. The chambered die stock $F$, constructed as described, in combination with the dies $S, m$, and $u$, when said parts are arranged as and for the parpose spocified.
4. As means for operating the discharging puneh, the cross-bar $W$, incline 5, and cams $\bar{X}$ combined.

75,222.-John C. Tunison, Decatur, M1.-Stationary Spittoon for Cars. - March 3, 1868.-The top is cast with open work aud the conieal bottom has a weighted valve which is opened by the dashing through of a bueket of water.

Claim.-A spittoon, composed of an open-mork top, a conical-shaped body, and a weighted valve to cover an opening $f$, in said body, all construeted and arranged to operate substantially in the manner and for the purpose described.

75,223.-H. B. VAN Voormis, Pittsburg, Pa.Coal Stove.-March 3, 1868.-The base and upper part of each stovo are comected by horizontal pipes to a vertical pipe between the two stoves, and the top of either store may be made to communicate with the exit fluo. The pipes have dampers by which the calorie current fiom cither stove may be made to pass npward throngh the fire of the other.

Claim.-Connecting the stoves $A$ and $B$ together by flue $K$ and pipes 8 , in such a manner that the smoke of each ean be passed beneath and throngh the fire of the other, substantially as and for the purpose set forth.

75,224.-W. F. Veber, Pcrrysburg, Ohio.Gate Post.-Mareh 3, 1868.-The gate post is made in sections, one of which is inserted in the gronnd and the other turns npon it. A flanged disk on the apper seetion rests upon a plain disk of the lower one, and a hooked dowel pin of the former turns in a central socket of the latter. The gate rnns on a roller arbored to the upper section, and is moved into a balance, and then swung open by tnining the upper seetion.

Claim.-The plates E and pin D , as arianged, in combination with the posts $A$, $B$, for the purpose and in the manner substautially as set forth.
$75,225 \cdot-F r a n z$ Wagner and Louis Sexauer, New York, N. Y.-Water Meter.-Mareh 3, $1868 .-$ The piston has two stops, whieh, in the reciprocating motion of the piston causent? by the tluid, are
brought in contact with the spring toggle arms by which the valve is changed. The valvo is a fourway coek seated in the cylinder and connects by levers with the registering apparatus. The fluid passes throush a filter on its way to the meter.

Claim.-1. The oscillating valye E, with chambers $n$ n and ports o o $o^{\prime} p p^{\prime}$, in eombination with the reeiprocating piston $B$, stops $k i$, , toggle arms $d^{\prime} f$, spring lever $c$, and elbow lever $d d^{\prime}$, all constructed and operating substantially as and for the purpose deseribed.
2. The combination of the valve $t$, bolt $u$, and plug I, in the mud cistern H, substantially as and for the purpose set forth.
3. 'the channels $s r$, in combination with the snpply pipe $G$, mud cistern $H$, and eylinder $A$, substantially as and for the purpose described.

75,226.-Piillipp Wentzel, Mentz, Germany, assignor to H. C. Lauterback, Roxbury, Mass.Window Sash Supporter. - March 3, 1868.- The friction rolls are sprong against the sides of the sash and contain coiled springs which tend to keep the sash elevated.

Claim.-The employment of a presser roll or rolls, containing a spring or springs, the stress of which tends to turn the roll and to raise or support the sash, substantially as set forth.

75,227.-Thomas Aldridge Weston, King's Norton, England.-Coupling and Brake.- March 3, 1868.-The two series of disks are comneeted respectively to the two shafts to be coupled together; the disks on one shaft alternating with those on the other, and each disk having longitudinal motion on its shaft or counecting cage respeetively. The friction of the disks against each other is regrulated by a nut serewing on one of the shafts. The devico constitntes an adjustable friction coupling.
Claim.- A new or improved coupling and brake for transmitting or regulating or arresting motion, the parts of which are arranged or combined substantially in the manner hereinbefore described, and illustrated in the accompaying dratrings.

75,228.-PHilo B. and M. C. White, Downgiac, Mich.-Pump.- March 3, 1868. - The cylinder is slotted to allow passage to the rod conneeting the bucket to the double pitman. The bueket has two heads, each end having a valve, and is double-acting. Eaeh end of the cylinder has a side passage leading to the pump stock. The side passages have ralves. The water flows into the cylinder throngh the side slots.

Clain.-The submerged box G, provided with a water inlet in its side, channels $\mathrm{BC} \mathrm{C}^{\prime}$, valves $e c^{\prime}$, slotted plunger $D$, with its valves $d d^{\prime}$, said plunger operated by the lever E and shaft F , all substantially as and for the purposes set forth.

195,229.-ABNER Whiteley, Springfield, Ohio, assignor to William N. Whiteley, Jl., same place. -Harvester.-Mareh 3, 1868. -The finger bar is supported in a globular roller at its inner end, and is counterbalanced by the adjustable seat.

Claim.-1. 'The globular roller B, placed at the inner end of and in line with the finger bar of a harvesting machine, in combination with the bearing wheel $A$, and the driver's seat $D$, arranged and operating substantially as described.
2. The globular roller B, placed on the end of the finger bar, in combination with said finger bar, the main frame, brace rod E, and driving whecl $A$, as set forth and described.

75,930.-William Wickerisham, Boston, Mass. -Mrarble Cutting Machine.-Mareh 3, 1868.-The diamouds are held in the ends of split serew bolts or elarnps which are tapered and foreed into tapering earities eausing them to contract upon the diamonds. The diamonds are applied on the edge of a rotating disk, or the links of an endless chain, and the supporting standard of the disk or chain is so connected to the driving meehanism that it may have foed in any direction.

Olaim.-1. In marble eutting machines, the combination of the diamond with a chain, in the manner and for the parpose described.
2. The clamps $u u^{\prime}$, in combination with the diamond, in the manuer specified and for the purpose set forth.
3. In machines for eufting marble and other stone, the combination of the diamond chain $e$, the chain gears $w w^{\prime}$, and the standard $g$, arranged and operating as described.
4. A deviee for moving the chain standard to any position, consisting of the sesew $h$, the worm gear $f$, combined with the chain standard, constructed and operatiug as described.
5. In marble cutting machines, feeding the machine along while it is working by communieating motion from the driving shaft to one or more of the trucks, substantially as described and for the purpose set forth.
6. A device for cutting underneath blocks of marble in a quarry, consisting of a diamond chain, chain standard, and upriglit shaft, all arranged as deseribed, to ent groores in a horizontal plane, in connection $\pi$ ith an apparatus for feeding the machine along while it is working, in the mamer and for the purpose described.
7. A deviee for cutting channels underneath blocks of marble in a quarry, consisting of a disk $e$, on an upright shaft attached to the slide $r$, working in the manner deseribed, in connection witl a fceding apparatus to leed said disk along while working, in the manner and for the purpose set forth.

75,231.-Gibonge I. Witsil, Philadelphia, Pa., assignor to Thomas E. Huniberger. - Clothes Wringer.- Mareh 3, 1868.-The upper roller is journaled in reeesses of the bent springs which are rigidly attached to the side pieces.

Claim.-The combination of a fixed roller $\mathrm{D}^{\prime}$, Fielding upper roller D, and springs E, when the latter are formed as set forth, and attached to the frame at both euds, so as to give them staumehness to resist lateral pressure, and also so constructed as to form bearings for the upper roller, by being bent into the shape substantially as set forth.

75,23:B-DAVid C. Wolf, South English, Towa. -Spinning Machine.-Mareh 3, 1868.-'The rolls are fed between the fir'st two lollers, over the table, and between the three suceeeding rollers, to the spindles and spools. The feed of the rollers oceurs only while the cord is elamped by the lever and the fork. When the carriage is traveling torard the front, the lower end of the lever comes ayainst the pin, which forces the upper end of the lerer against the cord, and earries the cord up into the lork. The spring lever aets on the former lever, binding it against the cord. As the carriage is trareling baekward, the end of the spring lever comes against the outer elliptical erge of the plate, is foreed ontward and releases the other lever, which thus ceases to bind the eord.

Claim.-1. The combination of the fork $s$, levers $t$ and $r$, plate $v$, and pin $u$, for clamping and liberating the cord, substantially as and for the purpose herein recited.
2. The bar $h^{\prime \prime \prime}$, operated by the bar $e^{\prime \prime \prime}$, for holding the roller $h^{\prime}$, as and lor the purpose herein described.
3. The wheel $y^{\prime \prime \prime}$, having the pin $x^{\prime \prime \prime}$, and the other means and deviees eomected therewith, substantially as described for the purpose herein recited.

85,2:33.-Lsidoro Zamiboni, St. Louis, Mo., assignor to himself, Peter Zopri, and Join Ruidy same place.-Bottle Stopper.-March 3, 1868.-The elastic packing surface is foreed upon the neek of the bottle by the hinge and eatch.

Claim.-The caps C, when provided with a packing surface $c^{4}$, and combined witn the bottle A by means of the hinge $c$ and lateh $c^{1} c^{2} c^{3}$, substantially in the manner shown and described.

25,234.-NELSon B. ADAMs, San Franciseo, Cal.-Boat Detaching Block.-March 10, 1868.-The ineurved, lower ends of the levers form jaws, whieh are operated by a toggle at the upper ends of the levers.

Claim.-Th combination with a bloek, the jaws E $E$, with the long arms $\mathrm{F} F$, the short levers II H, with shoulders a a, forming a knee-joint, the operating lever $J$, having its fulerum at $G$, and pivoted to the knee-joint $I$, the whole constructed, combined,
and operating as a detaching apparatus, sulstantially as and for the purposes herein described.

75,235.-Thomas P. Akers, New York, N.T. Lealige Jeasure, Alarm, and Indicator.- March 10, 1868.-Two weights balance cach ofher at the ends of a ball chain, hanging orer a chain wheel connected with a registering derice. One of the weights is in the well of a ship's hold, and is floated up by the bige water.

Claim.-1. Providing for indicating the height of leakage water in the hold of a vessel by means of weights of greater specific gravity than water, suspended from a puller, so that one of the weights shall rise and descend with the rise and fall of the water, and the other make similar movements, but in a reverse manner, and by its movements communicate motion to legistering, indicating, or alarm meehanisin, substantially as described.
2. The combination of a leakare measure whet consists of two weights and a chain, which is arlanged to unwind from a pulley as fast as it winds upon the same, wiflo an alarm, or with an indicator, or with a combined alarm and indieator, substantially as described.
3. The combination of the wheels $\mathrm{L} \mathrm{L}^{\prime}$, chain F , weights $\mathrm{G} \mathrm{G}^{\prime}$, pulley E , and disks $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, substantially as and for the purpose deseribed.
4. The combination of a lakage measure, operat ing substantially as described, with the figured disks, the alam deviees, and the gearing $\mathrm{L} L$ and M, substantially in the manner and for the purpose deseribed.
5. The eursed piece $h$, constructed and applied to the hammer arm, substantially in the manne: and for the purpose described.
6. The combination of the weight $G$, eylinder $H$, pendulum $K$, and double-aeting poppet ralve, substautially as and for the purpose described.
7. Arranging all the gearing, the alarm devices, the indicating disks, and the pulley of the weightchain or eord, upon a frame or spidur of the ease $A$, substantially as described.

75,236.-Abraham Armstong, Newberg, Ohio -Floor Cleaner.-March 10, 1868.-The head is chambered to receive one edge of the flexible sepa rating strips.

Claim.-In a floor eleaner, as described, adjustiug the rubber and intervening plates by means of the set serews, for the purpose set forth.

75,937 .-TEFferson Augine, Daston, Ohio.Colter Molder.-Mareh 10, 1868. -The colter xests between projections upon the outer disks. The disks have counterpart serrations upon their engawing faces, and the axial bolt being loosened, the outer disk may be turned upon the inner one to adjust tho cutter:

Claim.-The combination of the plates or disks C colter 1 , bean $A$, and bolt $e$, substanfially as described, and for the purpose specified.

75,23S.-Henry Baldwin, Titusville, Pa.-Apparatus for Burning Crude P'etroleum. - March IU, 1868. - The jet nozzle of the petroleum pipe is concentric with, but slightly projeets from, the inelosing nozzle of the air pipe. 'The steam-jet nozzle is beneath that of the petroleun. These nozzles are protected by a hood upon whose bottom the liquid impinges. A eurved, defleeting plate extends in front of and partially beneath the hood, and from the center of sad deflector a jet of steam with or withont air is thrown mpon the bottom of the hood.

Claim.-1. The jacket $e$, as arranged to surround the supply pipes and a portion of the heater, and used in eombination with the same, substantially as and for the purposes set forth.
2. The reflector $f$, as arranged with relation to the heater, when used in conjunction with the same, substantially as and for the purposes set forth.
3. 'The supplementary refleetor $g$ and blow pipe $h$, as arranged with relation to the refeetor $f$ and heater $a$, substantially as and for the purposes set forth.

75, 239.-William B. Bement, Philadelphia, Pa. -Bolt Threading Machine.-March 10, 1868.-Tho dies are adjustable and reversible on their slide
blocks, and the blocks may be moved centrifugally when desired. The drop reservoir has a pump whose piunger is depressed by an eccentric cam and raised by a spring. The oil is pnmped through a pipe Which discharges upon the cutting dies or tap

Claim.-1. For opening and closing the dies while the machine is in motion, two or more cranked or eccentric spindles $f$, each carrying a toothed segment or pinion, adapted to internal teeth in a loose disk, which is controlled partly by a spring $d$, and partly by the friction clanp herein described, or any equivalent to the same, the whole being combined with the spindle of a screwing machine, substantially as specified.
2. The cutting dies $l l$, secured to the blocks $n n$, but admitting of an adjustmont independently of tho latter, substantially as specified.
3. The pump, with its piston and spring, in combiuation with the spindle $B$, and its eccentric or cam, substantially as and for the purpose herein set forth.
4. The within described lever, spring pawl, and rack, arranged for operating the sliding head or plate, substantially as set forth.
\% 5.240 .-JOHN F. Bennett, Pittsburg, Pa.Puritying Iron and Steel.-March 10, 1868; antodated February 28, 1868. - After the conversion of the cast iron into wrought iron by the pneumatic process, carbonic acid gas is driven through the molten iron to remove the sulphur, phosphorns, \&c.

Claim.-The use of carbonic acid gas, either alone or mixed with atmospheric air, or with other gases or vapors, when introduced into the body of molten iron or other metal, in combination with or immedi ately following the pnenmatic process, for the purpose of removing sulphnr, phosphorus, and any other impurities which will form chemical combinations with the oxygen of the carbonic acid, and deposit the earbon, substantially as hereinbefore described.
g.j,241.-Hiram S. Blunt, New York, N. Y.-Metronome.--March 10, 1868.--Four stop disks (which may be united) are attached to a longitudinally sliding index shaft, whiel is connected to clockwort. The disks liave various uumbers of escape stops, and either of the said disks may be brought in commection with tho pallet to give any desired number of beats to one rotation of the shaft
Claim.--The adjustablorings or plates $\mathrm{A}^{\prime} \mathrm{A}^{\prime} \mathrm{A}^{\prime \prime} \mathrm{A}^{\prime \prime \prime}$, separated or united, in the form of a drum, with pins or stops $n n n n$ secured to and forming a part of the movable shaft $C$ and $B$, in combination with the index or hand $d$, and with or without the dial D, for the purpose of indicating the number of beats in a bar of music, in the manner substantially as described, and shown in the drawings.

75,242.-JOseph Brakeley, Bordentomn, N. J. -Preserving Eggs.-March 10, 1868.-The shell is removed by immersion in acid, and the eng, after Washing in clear water, is cried in vaeno, at a low temperature.

Claim.- The preservation of eggs of hens or other forrls in the manner substantially as set forth abore; that is to say, by drying them with their natural integument.

75,243.-John K. Caldwell, Pittshnrg, Pa.Brick Carrying Car.-Mareh 10, 1868.-The tables rest in notches of the standards, which are so formed as to allow either edge of the frames or tables to be raised up for the loading or muloading of the frames beneath. Wedge-formed tenons enter mortises in the lower sides of the frames when they are turned up, and hold then to place.

Ulaim.-1. A series of tables $b$, rosting and turning on lecesses in the supports $a$ in a briek-drying car, substantially as and for the purposes set forth.
2. In a brick-drying and bearing car, the supports $a$, having ledges $c$, ineline $c^{\prime}$, and tenons $e$, constructed and used substantially as and for the purposes set forth.
3. The eombination of the tables $b$, supports $a$, ledges $e$, inclines $c^{\prime}$, and tenons $e$, in a briek-drying car, when constructed and arranged as and for the purpose specified.

195,241.-BenJamin Chambers, Jl', Washington, D. C.-Letter Balance.-March 10, 1868.-The ends of the knife-edge bar are prevented from projecting from the lags by plates, one of which is piroted to the lug so that it may be raised up, and the beam renoved by withdrawing the bar, one end at a time.

Claim.-The knife edges in holes passing through the lugs, as hercin described, and covered, the cororing plate at one ond being pivotod, whereby the knife edges are kept in plaee, and can be readily removed when it is required to removo them.

155,245.-William Clough, Cincinnati, Ohio.Deodorizing and Refining Saccharine and Other Fluids.-March 10, 1868; antedated February 28, 1868. - After reducing the sirup to from $16^{\circ}$ to $20^{\circ}$ Banme, the pulverized barytes of other heavy powder is added. The sirup is then tested with litmus paper and any acid neutralized with lino. Silicate of soda reduced to $5^{\circ}$ or $10^{\circ}$ Baume is then added. The silicate is used in proportion of 1 per cent. to the sirup.

Claim.-The process of refining and doodorizing saceharino and other fluids, hercin speeified.

75,946.-Charles W. Conant, Gardner, Mass. -Rocking Chair.-March 10, 1868.-'The roekers rest on a frame, and the ends of the pendent arch arc attached to a spring whose middle is secured to a cross bar of the frame, and aets to restore the ehair to an upright position.

Claim.-The arrangement, as well as the combination, of the spring $D$ and the arch piece $C$ with the chair seat $A$, the rockers $c$ c, and the supporting frame B thereof, the whole being to operate substantially as described.

75,247.-L. S. COVEY and JOHN DUFFY, St. Croix County, Wis.-Mop Press.-March 10, 1868.The mop is placed in the receiver, its statf passing through a slot in front thereof, and the plunger is brought down to expel the water from the cloth. The water passes throngh the holes and is reccived in a bucket.

Claim. - The box or receiver E, constructed and operated substantially as described, in combination With the plinger $C$, the lever $D$, and the cross beam $F$, and grooves e e, all eonstructed and arranged substantially as and for the purpose deseribed.
-5,24. -John Franklin Crabtree and Wilmam Newton Crabtieee, Visalia, Cal.-Gun Lock -March 10, 1868.-The sear is pivoted on the trig. ger arbor, and is held to the tumbler by its spring. The sear and trigger each have rear projections which rest upon the formard end of a lerer whose rear end is depressed by the main spring when the hammer is cocked. The drawing of the trigger forward releases the fore end of the lerer, which is then thrown np and detaches the sear from the tumbler noteh. The hammer, when mucocked, is held by a spring cateh, which is released by a small levor out side of the stock.

Claim.-1. The pawl picce $B$, in combination with the trigger E and the lever $F$, acted noon by the main spring $G$.
2. The spring catch $I$, in combination with the lever $M$, with the inclined oblong slot $O$, for the purposes described and in a manner substantially as set forth.

75,249.-Jomn D. Creaner, San Franeisco, Cal.-Raising and Lowering Window Sashes.March 10, 1868.-The disk at the end of the staff enters the recess in the top bar of the upper sash.

Claim.-The combination and arrangement of the sereral parts of my device, namely, the recess A with the slotted plate B and the plate D, connected to the staff C by the curred piece $c$, substantially as described.

75,250.-BENJAMIN Crawford, Alleoheny City, Pa.-Hame.--March 10, 1868.--The hookis adjustable longitudinally on the extended staple of the hime, so as to bring the draught mpon the desired point

Claim.-1. Mrking fastenings, for comecting har ness tugs or traces to hames, adjustable by an eye
through the inner or formard cnd of each, such eye to be operated on a staple, $d$ or $d^{\prime}$, in conncetion with proper loeks or supports $e e^{\prime}$, the same being attached to the hames or hames plate, for holding such fastenings at the proper point of adjustment, substantially as and for the purposes described.
2. The shoulders $i i^{\prime}$ construeted on the fastenings $f f^{\prime}$, in combination with tho supports $e e^{\prime}$, for the purpose of relieving the strain which would otherWise come ou the staples $d^{\prime} d^{\prime}$, substantially in the manner above described.
 -Clothes Drier.-Harch 10, 1868.-The arms are piroted to the sides so as to project in somewhat tangential directions. The arms are held in a horizontal position ly buttons which are turmed to rest upon the rear ends of the arms.

Claim.-1. The combination, in a folding clothes drier, of the arms $13 B$, latehes $a$ a and springs $b b$ With the central polygonal shaft $A$, arranged and constmeted substantially as and for the purposes herein deseribed aud set forth.
2. The combination of the arms C C and legs D D with the shaft $A$, arranged and constructed to fold mp, substantially as herein described and set forth.

75,252.-JESSE S. Edwards, Mredford, N. J.Machine for Distributing Fertilizers.-March 10, 1868.-The fertilizer is agitated by radial pins on a rertical crank shaft which is actuated by a crank, or the shaft of a pinion turned by a wheel on the axle.

Claim.-The arrangement of the hopper A, distributing shaft $G$, wheels $C$ and $D$, and plows $B$, as and for the purpose specificd.

75,253.-Riciard W. Exglisii, Buffalo, N. Y. -Mop Head.-Mareh 10, 1868.-The cross-hcad is depressed by tmrning the thumb nut which rotates in a collar upon the mpper bar and engages the serew ferrule in which the lower end of the staff is secured. The lower end of the ferrule has a diametric slot receiving a tenoll on the eross head.

Claim.-l. The cross head $A$ and shank $B$, in combination with a serew ferrule $K$, provided with a slot $R$, as and for the purposes substantially described.
$\stackrel{\rightharpoonup}{2}$. The thumb nut $C$, in combination with the parts E E and collar D, substantially as and for the purposes deseribed.
3. The employment of the binding wire for holding the collar U und parts E E together, as herein shown and set forth.

75,254.-Bantholone Essig, Sacramento, Cal. -Bedstead Fastening-March 10, 1863.-The plate attached to the rail has an inelined entch which engages in a suitable groove of a plate secured to the inner side of the post.

Claim.-1. The plate C for attaching the side rail of a bedstead to the post, having an arm $c$, and oblique lige $b$, so as to be firmly sceured to the post by the tenon on the end rail, substantially as described.
2. In combination with the plate C , the plato D , fastened to the side rail, having a lug or key $g$, fitting into a slot or groove on the plate $C$, substantially as and for the purposes described.

35,255.-Green Fenton, Streetsboro, Ohio.May Knife.-Mareh 10, 1868. -The shank of the forted eutter is retained in the socket ot the handle by a spring pin. The spring has a divergent arm forming a foot rest.

Claim.-The handle $A$, spring $C$, pin $a$, arm $c$, and blade $B$, all constrmeted and arranged in the manner as and for the purpose specified.

75,256 .-E. L. Ferguson, Buffialo, N. Y., assignor to himself and Charles B. Clark, same place.-Lamp Bracket.-Mareh 10, 1868. -The jaws are held asunder by a eam and drawn together by an India-rubber spring band. The reflector is joined to a moring collar on an adjnstable upright.

Claim.-1. The eombination of the two jointed arms $A^{\prime} A^{\prime \prime}$, provided with suitable jaws for holding lamps of different sizes.
2. The India rubber ring E , in combination with
the said arms, arranged substantially in tho manner set forth.
3. The eombination of the arms $A^{\prime} A^{\prime \prime}$, ring $E$, and cam $f$, or equiralent, for distending the jaws of the clamp, substantially as set forth.
4. The peculiar construetion of the jaws $D$ D, proFided with shoulder $m$, flange $n$, and contraeted bottom, as shown and described, for holding lamps and fountains of different forms and sizes.
5. The peculiarly-formed casting C, constructed and arranged with the plate $B$, and braekot arm 1 so as to secure the latter in its socket, and also form a receptacle for matches, in the manmer shown and described.

175,25\% -Milton A. Fisk, Springfield, Mass., assignor to EDWARD M. Wesson, same place.-Hurness Trimming.-Mareh 10, 1868. -'The ends of the Wire loop are bent around and the alloy cast thereon in a three-part mold. When a staple or pius aro required for attachment the bend is cast in the heid.

Claim.-As a new article of manufacture, a rosette or harmess trimming, when constructed as herein deseribed, and for the purpose specified.
\%5,258.-Marshall L. Forbes, WestMeriden, Comn., assignor to the Meriden Britanima ConPANY, same place.-Plating Spoons and Other Ar-ticles.-Mareh 10, 1868. -The spoons are secured to a tiltiug trame, which is adjusted by a set serew so as to bring any desired portion into the bath.

Claim.-1. The mode, substantially as before set forth, of coating spoons and similar artieles with a regulated unequal thickness of the plating inetal by immersing different portions of the article for different periods in the bath of the electroplating apparatus with which the artiele is conneeted.
2. The combination of a holder, adapted to confine the artiele to be coated, with regulating mechanism to hold the artiele partially ummersed to the required extent in the depositing bath, substantially as before set forth.
3. The combination of a holder, adapted to confine the artieles, with mechanism for tilting the article, so as to vary the extent of immersion in the depositing bath, substantially as before set forth.

195,259.-John Fomrest, Lamrence, Mass., assignor to himself, JOHN ARCHIBALD, and JOHN 'Tayloh, same place.-Machinery for Printing Tarm. Marel 10, 1868.-The skeins are stretched on hooks mpon two endless ehains and passed by the revolution of the latter between the coloring rollers or wheels, whose axes are parallel with the threads.

Claim.-1. The combination as well as the arrangement of the two carricrs for earrying skeins of yarn, in the manner deseribed, with one or two series of printing wheels, connposed of ammur disks, their eolor rollers, and eellular troughs, the whole being provided with meehanism to operate them, substantially as and for the purpose specified.
2. The combination of the drying eylinder or apparatus, the two earriers as above, one or two scries of printing wheels, their eolor rollers, and cellular troughs, the whole being provided with mechanism to operate them, substantially as and for the purpose specified.

75,260.-GUY P. Fuller, Adrian, Mich.-In dicator for Knitting Machines.-Mareh 10, 1868.The indicator is attached to a "Lamb" knitting maehine and denotes the number of rounds knit as a direetion when to narrow or widen the work.

Claim.-The combination of the finger A, the disk or dial plate 13 , the geared wheel C, the pinion D, or their equivalents, the frame E , the ratehet F , the lever $G$, the friction wheel $I$, the nut $I$, the shaft $J$, the plate $K$, when constructed substantially as deseribed for the purposes herein set torth.

75,261.-Benjamin F. Graves, Groton, Mass.Milking Machine.-Mareh 10, 1868. -The teat eups are upon extensible pipes and the head is comneeted by a flexible hose to the exhauster, through the lower end of which the milk passes to the discharge pipe. The teat cups are transparent, and as each teat is exhausted its stop cock is closed.

Claim.-The arrangement of the pump with the
flexible tubes, teat cups, glass tubes, stop coeks, deviees for adjusting the teat cups to the udder of the corr, all construeted and arranged substantially as described and for the purposes speeified.

75,262.--Menry B. Hale and Thomas Flagler, Grass Lake, Mieh. - Attaching Animals to Car-riages.-Mareh 10, 1868. -The traees in the single harness are attaehed to hooks upon the ends of a single eord which passes behind sheaves from hook to hook. In double harness the onter traee of each horse is attaehed in this manner to a single cord and the inner traees to a cord doubled around on a single roller.

Claim.-The construetion of a draught or extension bar, with or without joints, iu connection with pulleys, straps, chains, and rods, arrauged in the manner and for the purposes specified.
'5,263.-THOMAS HARDING, Springfield, OhioHarvester Rake.-March 10, 1868.-The eombined reel and rake urms are under control of the operator, so that one arm in four, or crery other one, may be allowed to deseend to operate as a rake.

Claim.-1. An automatie deriee whieh opens the switch $g$ at each revolution of the rake and reel, and at the same time is under the control of the driver to make the raking only when it is neeessary, in combination with a revolving reel and rake on a harvester, substantially as set forth and deseribed.
2. The eollar $O$, provided with the elntel pin $n$ and lag 0 , in combination with the tripper $l$, elutch lever $u$, and switch $g$, whereby the drirer while on his seat may depress said eollar and throw the eluteh pin $n$ out of eonnection with the head $I$ to stop the rake from sweeping the grain from the platform, as desired.
3. Working the switeh $g$ automatieally by means of the triple lever $l$, and a lng attached to a collar surrounding and revolved by the rake shaft, substantially as set forth.
4. Arranging the tripper $l$, between the guide-way and rake-arm head upon the box or bearing of the rake shaft, substantially as set forth.

5 . The eombination and arrangement of the switeh $g$, provided with the arm $j$ and spring $k$, with the tripper $l$ and lug o, or its equivalent.

75,964.-John Haseltine, Warren, N. H., assignor to himself and Person Noyes, Lowell, Mass. -Composition for Stuffing Leather.-Mareli10, 1868. -Strong alkaline solution, 8 galls., is boiled with fatty oil, 1 gall.; after mixing, rosin 2 to 5 lbs . is added, and then soda ash, 5 oz.

Claim. -The combination of the herein-deseribed ingredients in about the proportion speeified, for the purpose and in the manner substantially as deseribed.

75,265.-William Heath, Bath, Me.-Invalid Bedstead.-Mareh 10, 1868. - The flexions of the couch are governed by the movement of a piroted frame which is tilted by a single spur wheel and curved raek.

Claim.-1. The eombination of the reeesses $K K$, L L , or their equivalents, with the frame $A$, the two frames D E, and meehanism for moving and depressing or operating the baek frame E, substantially in manner as described.
2. The combination of the folding leges M M, the toothed seetors and their arms $f f$, the frame A , and the parts $B, C, D$, and $E$, arranged and eonneeted substantially as specified.

95,266.-EDWard Heaton, New Haven, Conn. -shank Spring.-Mareh 10, 1868. -The springs for the right and left boots, whieh require opposite eurres, are eut in like form, the blanks for one hav. ing a contrary, vertical bend to that of the other.

Olaim.-The construetion of shank springs, when cut or stamped out of the sheet without serap or waste, substantially is specified.

75,267 .-JUHN W. Hedenberg, Chicago, Ill.Cotton Bale Tie. - Mareh 10, 1868. -The sides are bent reetangularly and eonnected by three transrerse bars over which the hoop is doubled.

Claim.-A cotton tie buekle made and construeted snbstantially in the manner described.

75,968.-Charles Hess, Lyons City, Iowa.Gang Plow-March 10, 1868.- The bolts, by which the tongue is secured to the eross beans, traverse slots in the same to allow of the adjustment of the tongue. The draw bars are pivoted to the pendent arms of the fore eross beam, and are adjustably sustained by pins traversing the pendants of the rear cross beam.

Claim.-1. The slot $T$ in the head piece, and axle to adjust the tongue.
2. The iron beams, when used in a gang plow.
3. The eombination and arrangement of the parts, when eonstrueted and used as above set forth.

75,269.-L. B. Hort, Cedar Falls, Iowa.-Strazo Cutter.-Mareh 10, 1868. -The knives are earried on radial arms of the balance wheel, the intermediate arms, being set outward to avoid striking the feed as it is thrust forward by the rollers. Motion is eommumieated through the lower feed roll, whieh is interchangeable for one of different diameter so as to regnlate the rate of feed.

Claim.-1. The balanee wheel B, when provided with recessed and bevelled arms $r$ rand eurved knives E , attached thereto, in combination with the bevel gears e $f$, the interehangeable feed rollers C C D, and erank $g$, as and for the purpose speeified.
2. The within deseribed arrangement of the intermediate spokes $r$, of the balanee wheel, with referenee to the lrnife-carrying spokes $r$ thereof, and the interehangeable feed rollers C C, substantially as and for the purpose specified.
3. The method, herein deseribed, of graduating the feed by the detaehable or interchangeable rolls C, of different sizes, arranged to operate underneath the yielding roll D , and operated by the erank $g$.

175,970.-Winfield M. Hoover, North Benton, Ohio.-Car Coupling.-Marel 10, 1868.-The link on entering, raises the drop, and allows the deseent of the pin; it then aets as a weight to preserve the horizontality of the link. The pin is connected to a hand bar extending to the ear roef, and to two treadles extending transversely to the sides of the ear.

Claim. - The combination of the pivoted drop E , link $D$, pin $C$, and drawhead $B$, when operated by the bar H , with its side levers $H \mathrm{H}$, all eonstructed and used substantially as and for the purposes set forth.

175,271.-Eben N. Honsford, Cambridge, Mass. -Preparation of Acid Phosphate of Lime.-Mareh 10, 1868.-Common tribasic phosphate of lime is dissolved to saturation in nitrie aeid, 1, 2, 3 specifie gravity, requiring of the phosphate 3 lbs., to nitric aeid 2 lbs., Wrich gires nitrate of lime and monobasie phosphate of lime. To the above is added oil of vitriol, diluted, (HO. Soz.,) 2 lbs., to precipitate any sulphate of lead. The liquid is then siploned off the preeipitate. The nitrie acid is then driven off by gentle heat, and may be saved in a condenser. The aeid phosphate of lime may be separated from the sulphate by leaehing. It may be used, eombined with bicarbonate of soda, to lighten bread.

Claim.-1. The method of produeing a pulverulent acid phosphate of lime, substantially as and for the purposes above set forth.
2. The produet obtained by the proeess, substan. tially as and for the purposes above deseribed.

75,27马.-Eben N. Horsfond, Cambridge, Mass. - Iilanufacture of Acid Phosphate to be Used in Food.-Mareh 10, 1868.-Sulphurie acid is added to tribasie phosphate of lime in proportion of about 10 of the former to 14 of the latter. The aeid withdraws a little more than two atoms of lime from the phosphate, learing a monobasie pliosphate of lime and a small proportion of free phosphoric acid in solution with the gypsum. The solution is separated from the gypsnm by leaching.

Claim. - The manufaeture of liquid aeid phosphate of lime, for use as a eondiment or article of diet, or ingredient to be employed in beverages or food, substantially as and for the purposes herein set forth.

75,273.-GEORGE W. Hubbard and Scott A. Smith, Philadelphia, Pa., assignors to Cresson \&

Smith, same plaee.-Grinding Mill.-March 10, 1868.-The "burr" is trued by a disk, whose periphery is bereled to agree with its inner surface. The coneave ease is held between two flanged side plates traversed by the spindle. The spindle has movable collars, by whieh the grinding surfaees are adjusted.

Claim.-1. The bur B, combined with and trued by the disk a substantially as deseribed.
2. The shell D , with its inehned edge adapted to the plate E, substantially as set forth.
3. The spindle A with its burr, when eonfined in its place within the shell by two adjustable collars arranged upon the spindle, as specified.

75,274.-P. H. HURD, Croton, Mieh., assignor to Clara ILurd and E. D. Hurton, same plaeeBaby Creaper or Walker. - Hareh 10, 1868. - The flexible seat is surrounded by a flat frame, supported on easters.

Claim.-1. Frame A, chair B, and rollers C, in combination, substantially as deseribed.
2. Revolviug ehair B , with flexible seat D and strap E , in combination with frame A , substantially as and for the purpose deseribed.
$75,275 .-$ Willan L. Imlay, Philadelphia, Pa. -Closing Fruit Jars.-Mareh 10, 1868.-The eover is held down upon the rubber gasket by the spiral Wire which engages the serew thread upon the neek. The wire is bent orer and rests upon the top ot the lid.

Claim.-1. Aaking and adapting the neek of a fruit jar so as to be insed for a spiral wire coil, substantially as and for the purposes set forth.
2. A wire coil, arranged and used about or around the neek of a fruit jur, so as to make a fastening for fruit jars, substantially as set forth.
3. The arrangement and construetion of a wire coil about the neek of a fruit jar, so as to make an elastic pressure on the eover, as deseribed.
4. The broad seated ring or gasket $H$, when retained in place by the bereled or inelined top I, substantially as and for the purposes speeified.

175,276.-JOHN L. JaNEwAY, Flemington, N.J. -Gate.-March 10, 1868.-The gate is slich horizontally until it balanees, and is then swung around the swirel.

Claim.-The continued arrangement of an ornamental or garden gate 13 with the stationary posts A A, swirel bar C, piroted disks $f g$, and easter rolls $m \mathrm{~m}$, the whole construeted and operating as deseribed, for the purpuses set forth.
$75,27 \%$ - Jesse B. Jonnson, Indianapolis, Ind., assignor to himself, 'Thonas E. Johnson, and BenJamin F. Johnson.-Grain Drier.-Mareh 10, 1868. -The furnace has no ehimmeys, but has upper bars Which support tiers, first of larese and then ot smaller stones. 'Ihe stones prevent the eseape of sparkis. Above the stones are defleeting plates, which may be turned to earry the ealoric eurrents in the desired directions.

Claim.-1. Making the top of the furnaee of drying kilns of cobble-stones or boulders, or their equivalents, nrranged substantially in the inanner and for the purpose set forth.
2. The deflecting plates D , in combination with the furnaee, construeted as deseribed, substantially as and for the purpose set forth.

75,27S.-ARNE D. Juelson, Wooster, Ohio.Rockers for Child's Carriagc.-Mareh 10, 1868.-'Ihe double roeker has adjustable metallie hooks at the ends whieh receive the wheels of a carriage, and the springs hold the wheels to place.

Claim.-The adjustable plate C, hooks D, standard E , and spring F , as arranged, in combination with the roekers $\stackrel{A}{\mathcal{B}}$, for the purpose and in the manner substantially as set forth.

75,279.-Peter M. Kafer, Trenton, N. J.Tubc of Stcam Gcnerator.- Mareh 10, 1868. -The spiral partition in the annular space between the two eoneentrie tubes eanses an even temperature at both sides of the tube and prevents warping.

Claim.-1. The eontinuous spiral guide, of uniform piteh, forming a continuous channel in vertical or
inelined water tubes of steam-boilers, substantially as set fortli and deseribed.
2. The $V$-shaped picece $e$, substantially as deseribed and for the purpose set forth.

75,280.-Sylvester Larned Lafgdon, New Orleans, La.-Locomotive Engine.-Mareh 10, 1868 ; antedated February 28, 1868. - The steam is ex hausted through the smoke pipe, whieh is earried baekward above the boiler and thon upward. The objeet is to remove to a distance from the passen gers the smoke and sound of the exhaust, and to deaden the noise.
Olaim.-The arrangement of the eylinder of a street railroad loeomotive engine on the uncler side of the eylindrieal portion of the boiler by means of plates J, or their equivalents, formed on the erlinder, one head of whieh is rigidly seeured to the fire box, substautially as and for the purposes set forth.

75,251.-A. D. Laws, Bridgeport, Conn.-Lamp Wick Tube.-Mareh 10, 1868.- The edges of the tube, in place of being merely brought together, are lapped.

Claim.-A flat lamp burner tube, or lamp burner tube adapted to the use of flat wicks, formed of a piece of shoet metal bent round aud overlapped aloug the whole edge, substantially as herein shown and deseribed.

75,2S2.-Tames E. Lobdeli, Center Lisle, N. Y.-Horsc Hay Forh.-Mareh 10, 1868. -The main bar has a entting poiut, and the hooks are hinged to it near the lower end. The hooks have side projeetions linuekle jointed to the sliding bar, whieh has a lug entering an eceentrie slot in the operative lever.

Claim.-1. The sliding bar B with knuekle-head $f$ and slots $e e$, when used in eombination with the main bar A and hooks or prong's $d d$, substantially as set forth.
2. The arrangement and combination of the main eutting bar and blade $A$, slide bar $B$, lateh $c$, and euting hooks $d d$, substantially as and for the purposes set forth.

75,283.-Joserir L. Lowry, Pittsburg, Pa.-Stcam-Engine.-Mareli 10, 1868; antedated February 20, 1868.-The eylinders are so connected together that the stean, after aeting against the under side of the eylinder of the first engine sufticiently to complete the stroke, is then shut off, and allowed to aet upon the second cylinder'. The communieation between the lower part of the eylinder being now elosed, the steam above the piston in the second eylinder is allowed to pass above the piston in the first cylinder, and simultaneouslr therewith the steam from the lower part of the first eylinder passes into a reservoir communicating with the upper part of the second eflinder, until the messure in the reservoir equals that in the eylinder, when the commonieation is elosed, and the remaiuder of the steam allowed to eseape.

Claim.-1. An arrangement of the eylinders, valves, and passages tor the steam, by which I am enabled to use the stean alternately below and above the piston, substantially as herein deseribed.
2. In combination with the above-deseribed arrangement, the reservoir tor the reeeption of steam from the first and primary eylinder, substantially as herein deseribed.

75,284. Josern L. Lownx, Pittsburg, Pa.Pumping Enginc.-Mareh 10, 1868; antedated February 24, 1868. - The pump pitmen are jointed to the ends of the are of an oseillating sector; and the conneeting rod of the piston is jointed to the center of the are so that the pitmen move faster in the commeneement of the stroke of the piston in the lifting stroke, and so that when the steam is ent off carly its expansion may complete the stroke.

Claim.-The herein-deseribed engine, when arranged as shown, and in combination with the pumps for raising water, substantially as shown and deseribed.

95,985.-Morris Mattson, New York, N. Y.Nasal Irrigator.-Mareh 10, 1868. -The nozzle is made in conoidal form to fit the nostril.

Claim.-1. The nasal plug. $A$, so shaped as to fit
and elose nostrils of different sizes, constructed substantially as describod.
2. The combination of the nasal plage $A$, constructed substantially as described, with the syringe BCD, substantially as and for the purposes set forth.

175,286.-HENRY McDonough, New York, N. Y. -Churn-Dasher.-March 10, 1868.-The dasher has a horizontal perforated disk and vertieal wings. The staff is swiveled to the pitman and has a spiral groove to grve it reeiprocal rotation simaltaneously with its vertical movement.

Claim.-The dasher $b$, eonstructed as specified, and mounted on the rod $c$, to which a revolving movement is communieated by the spiral rib or groove as the parts are reciprocated, as and for the purposes set forth.

75,987 -T. C. McK Enzie, Adrian, Mieh--Brick-Machine.-Marek 10, 1868.-One or both ends of the mold-rack are supported on springs, which yicld when a stone enters tho mold, and prevent fracture. An adjustable seraper removes any clay from the fiee of the plunger. Tho beveled bars in tho bottom of the press-box are removable to allow of pressing different sizes and forms of bricks. The segmental racks operating the plunger are made reversible.

Claion.-1. The springs TV, arranged and operating in combination with the bolts $X$ and sliding hangers $X^{2}$, to afford an elastic support for tho moldraek, substantially as and for the purpose deseribed.
2. The seraper N , adjustablo by means of slots $n$ and set-serews $m$, employed in combination with the pivoted planger $E$, as and for the purpose specified.
3. Making some or all of the bars L L' removable by means of the buttons $l^{\prime}$ or their equivalents, substantially as and for the purpose set forth.
4. The segmental racks $J j$, constructed substantially as represented and deseribed, so as to admit of their reversal when worn.

75,288.-William R.McKinley, Lucas County, Iowa.-Machinc for Marking Ground for Plant-ing.-Mareh 10, 1868. - Tho frame has four marker wheels, and owing to its extreme length a portion at eaeh end is hinged to the middle portion so as to bo thrown over upon the middle section when passing through a gate.

Claim. -The frame $c c$, wheels a a a $a$, rods $f f f f$, in all combined, eonstructed, and arranged as shown and deseribed.
-95,289.- Firancis Bowyer Miller, Sydney, New South Wales.-Treating Gold Bullion to Toughen and Rcfine it.-Mareh 10, 1868.-The gold is melted in clay erucibles and treated with ehlorine gas to convert the baser metals into chlorides, in which form they arc earried off.

Claim. - The process of refining gold by applying chlorino to it while in a molten state, substantially as hereinbeforc set forth.

75,290.-LANG MONROE, Lowell, assignor to himself and Charles G. Sargent, Graniteville, Mass. Raek for Carding-Engines,-March 10, 1868.-A series of oseillating slats is arranged beneatl and around a eonsiderable portion of the main eylinder or tumbler, the slats being parallel with the axis of said eylinder or tumbler. The slats operate so near to the eard-surface that all the fiber thrown off therefiom may be eaught up by tho card-teeth and carried forwart.

Claim.-1. A series of slats or bars $g$, eonstructed and operating substantially as described, for tho purpose set forth.
2. The links $d$, in combination with the pivoted slats or bars $g$, as and for the purpose set forth.
3. In eombination with the two series of oseillating bars, the link or rod $D$, for connecting one series of sueh slats or bars with the othor series of similar bars, and for operating tho samo, substantially as and for the purpose speeificd.
4. The eeeentrie $e$, and slotted arm $c$, or the equivalent thereof, combined with the series of pivoted slats or bars, and arranged to operate tho same, in the manner and for the purpose substantially as specified.
5. The end connection H, provided with a pivot $a$
and stud $b$, for connecting and operating tho slats or bars, as set forth.

75,291.-James W. Mortmer, Peoria, Il.-Stovc-pipc Cleaner.-March 10, 1868. -The cleaner disk is pivoted to the arm in sueh manner that it will assume a more or less horizontal position when pushed forward in the pipo, but will take a horizontal position on return.

Claim.-A stove-pipe cleancr having disk A, arm $B$, rod $C$, and washer $D$, eonstructed, combined, and operating substantially as and for the purposes herein specified.

75,292.-ToEl Moulton, Boston, Mass.-Manufacturc of Elastic Rolls.-March 10, 1868.-The fibrous web is coated with a sheet of India-rubber and wound spirally on a core, after whieh it is vuleanized.

Claim.-As an improved manufaeture, the clastic roll or tubing, made substantially as herein shown and described, that is, as composed of India-rubber, or other analogous gum, and a suitable webbing, with the fibers of the latter radiating from the center or about the center of tho roll outward, as ex. plained.

75,293.-ADOLPH OTt, New York, N. Y., as signor to Antonio Pelletien, Washington, D.C.Extracting the Precious Mctals from Ores.—March 10, 1868. - The operation is carried on in his apparatus, patent of even date herewith, No. 75,294. The ore liaving previonsly been separated from a portion of its impurities may be mixed with 2 to 4 per cent. of sodium, potassium, caleium, magnesium, iron, copper, or with their lypochlorites. It may be mixed dry or with water. In the first oven the ore is heated. In the second oven where sulphur is climinated, the steam and hot air are injected and most of the sulphur is carried off. In the lower oven the ore will be further heated and treated with hydro-carbonaccous vapors from the furnaee to deeompose the sulphates. The volatile metals passing off fiom this ehamber are condensed in the shower-bath of the diving flue. Hyponitrous aeid gas or oxygen may be introdueed into the furnaee. If the ore be auriferous it is plaeed in the tanks, dampened with steam, and saturated with ehlorine gas, after which it is treated in the centrifugal machine. If the ore be argentiferous it is brought from the furmaee immediately to the centrifugal maehine and treated with hot water roturned several times over and over the same ore, and the liquid resulting from that treatment is pumped up from the lower tank to the upper tank, and from thence falls in a fine shower down the diving flue, where the sulphmetted hydrogen produced in the furnaee precipitates the silver in form of sulphite. This is repeated several times. The sulphite is melted with iron, producing sulphnret of iron and silver.

Claim.-1. Roasting sulphurets, tailings, and residua from other treatments, either alone or mixed with ehemieals, in the progressive and eontinuous manner hercin deseribed.
2. In the roasting proeess of the oro or tailings, the uso of ehloride of iron, eopper, or maguesium, and of hyperehlorites of an alkaline, earthy, or metallie base, mixed with tho ore or tailings, and employed as speeified.
3. The introduetion of hyponitrous-acid gas, or or oxygen gas, obtained as set forth, in the roasting process.
4. Precipitating precions metals from a solution of their soluble salts by means and with the use of the sulphuretted hydrogen gas produeed in the process of roasting said ore, or by a solution of the same in water.
5. The extraction of silver, or of silver and gold, from the roasted ore, by means and with the use of the double sulphite of an alkaline base, ( $\mathrm{KO}{ }^{2} \mathrm{SO}^{2}$, or $\mathrm{NaO},{ }^{2} \mathrm{SO}^{2}$, and of the hyposulplites of an earthy or metallic base, in the manner specified.

175,294.-ADOLPH OTt, New York, N. Y., assignor to Antonio Pelletien, Washington, D. C. Apparatus for Extracting Prccious Mretal.-March 10, 1868. - The pulverized ore is plaeed in the hopper, and by the arms of the rotating shaft is mored first
centrifugally and then eentripetally orer the floors of the rertical series of ovens. It las discharge into the cooling chamber. While passing through the orens the ore is exposed to the action of the calorie current, and to injections of coll or hot air or steam. Tho sulphurous and other rapors escape into tho condensing chamber and are condensed in the shower-bath of the diving flue. After this operation the ore is placed in the tanks, where it is treated rith gaseous rapors and steam, and the slime rum from thence into it contrifugal machine which separates the solid from the liquid parts.

Claim.-1. The ore-roasting furnaco A, composed of a series of ovens C D E, with alternate flat and depressed hearths, in combination with the shaft $I$, arms L L $\mathrm{s}^{\prime} \mathrm{L}^{\prime \prime}$, flues $P P^{\prime} \mathrm{P}^{\prime \prime} \mathrm{P}^{\prime \prime \prime} \mathrm{P}^{\prime \prime \prime \prime}$, flues $M$ and N , and chambers $R$ and $F$, arranged and pperating as set forth.
2. In an oven for roasting ore, the fluo $S$ and trank $T$.
3. The combination of the flue U , holes $V \nabla V V$, and ovens C D E, with the pipe $x$ and $y$.
4. The apparatus B, composed of the apparatus a, tank $b b b$, and strainer $h$, arranged togethor and operating as specified.

75,295.-David A. Parks, Fairview, Tll.-Penstalk for Cnderground Drains.-March 10, 1868.The vertical partition foreas the water up to near the top of the penstock, within reach of cattle. A gate in the partition may be raised to allow the water to rum off.

Claim.-The combination of tho stock A A, partition D , gate E , and pipes B B , arranged substantially as and for the purpose herein doscribed.

75,296.-PATRICK QUNN, South Nenmarket, N. H., assignor to himself and Charles R. Paul, same place.-Stean Generator.-March 10, 1868.-The steam is superheated by placing upon the top of the generator a spiral pipe which commmnieates with the steam space of the gencrator and with the steam pipe of the engine. The flues discharge into a eylindrical chamber within the coil, and the heated current passes out through perforations at its upper end, and from thence downward outside the coil into the annular flue space surrouding the generator. The turning of a damper allows the caloric current direct exit.

Claim.-The combination and arrangement of the coiled pipe $o$, deflector $q$, jacket $g$, and flues $k$ and $l$, the whole being arranged and operatiug together to produce the results before described.

75,297.-Owen Redjond, Rochester, N. Y.Harvester Rake.- Mareh 10, 1868. - The sercral motions of an automatic sireep rake are accomplished by the netion of a simple erank through a rock lever to which it is jointed in such a manner as to allow the necessary flexions.

Claim.-Producing the automatic morements of a sweep rake for harvesters, by the employment of a orank $D$, and a rock lerer $\mathbf{E}$, jointed as described, the whole operating in the manner and for the purpose hercin set forth.
$75,298 .-T m o t h y ~ R o s e, ~ C o r t l a n d v i l l e, ~ N . ~ Y .-~-~$ Scroll for Water Wheels.-March 10, 1868.-Within the eccentric scroll is a ease concentric with the wheel and having apertures through which the water passes. Guide wings extend from the forward sides of these apertures which serve to turn a certain amount of the water onto the buckets. Curred gates are arranged within the scroll which serve practically to shorten the same when the water supply partially fails.

Claim.-1. Making the curb D, between the guides $b$ and openings $a$, concentric with and inclosing the wheel so as to form a closed case to the buekets of the Wheel between each guide and opening, in the manner herein deseribed.
~. The hinged gate $F$, the concentric curb $D$, with its issmes a and projecting guides $b$, when arrionged and combined as deseribed.
3. The gate F , hinged within the seroll, for the purpose of shortening or diminishine the length of the same, to adapt it to the supply of water, as deseribed.

25,299.-Elias SaNrord, Meriden, Conn.Yoke for Morses.-March 10, 1868.-The haves are piroted in the yoke at their lower ends. The draw ring is secured to a metallic bridgo standing upon the yoke.

Claim.-1. The peculiar construetion of the ordinary hames, such as are used in dratnght haruess for horses, so as to dispense with traces, and connect them for dranght with a beam or yoke passing under the horses' necks, by lengthening and extending downward through mortises in the ends of said yoke, and fastened by pin on the under side, as shown in the drawings.
2. The slide plate $D$, secured to the under part of the boam, by which moans the hames may be adjusted to the necks of the horses, and then firmly secured in position by the set serew, as shown in the drawings.

75,300.-Gottliel Scmreyer, Columbus, Ohio. -Furnace.-Mareh 10, 1868.-The escaping caloric current is cireumseribed at a point traversed in opposite directions by jets of air from the two transverse duets.

Claim.-1. The contraeted throat $b$, which is formed by two independent air-receiring conduits or chambers $G$ a, from which two independent streams of air escape, and meet or cross one another in said throat, substantially as and for the purpose described.
2. The construction and relative arrangement of the independent air-receiving air conduits is $G$, and escape aperture $b$ in the fire chamber, in the manner and for tho purposes described.

95,301.-Williair C. Selven, Brooklyn, N. Y. -Steam and Water Paehing.-March 10, 1868. Improrement on the patent of William C. Selden and John 'T. Daris, of July 27, 1867. Alternate layers of cloth and moist paper are put into a press. The paper and eloth may be wound on a rubber or rattan core. The packing should be soaked in melted tallow. When India-rubber is used, the tallow must not be allowed to penetrate to it

Claim.-1. A packing for steam engines, pumps, \&c., made substantially as deseribed, by combining cloth or fibrous material with paper, or with compounds in which paper is an clement.
2. Combining vulcanized India-rubber, or other equivalent clastic substance, with paper packing in any of its rarious forms, or with componnds for packing purposes in which paper is an clement, in the manner substantially as deseribed, to secure the results specified.
3. Saturating paper packing with tallow, to aceomplish the purposes specified.

75,302.-Frederick I. Seymour, Wolcottville, Conn.- Metal Top Lamp Chimney.-March 10, 1868. -Tho metallic eap is rigidly coniceted at top by a rivet. The bottom is merely lapped, and has a cireumferentinl groove formed on its inner side, which contains a spring wire to foreo it outward against the chimney top.
Claim.-i. Connecting the lapped edges of the sheet-metal cap, hear the upper or smaller end, by means of a rivet, or its equivalent, for the purposes and substantially as set forth.
2. An expansive ring, introduced in the bead formed near the base of the sheet-metal cone, for the purposes and substantially as set forth.

75,303.-Frederick I. Seymour, Wolcottville, Conn.-Clamp for Forming Sheet-metal Cones.March $10,186^{\circ}$. -The cap is held in the bell-formed clamp while the groove is formed near its lower edge. The said groore contains the spreading wire. The device is applied in the manufacture of the ehimney eaps to which the preceding patent 75,302 relates.

Claim.-1. The clamp for sheot-metal cones, formed of the cones $a$ and $c$ locked together, as and for the purposes set forth.
2. In combination therewith, the sleeve $e$, surrounding the cone $c$, substantially as and for tho purposes set forth.

75,304.-Henry Franklin Shaw, West Roxbury, Mass.-Differential Gear Power Machine. March 10, 1868.-The pullcys have respectirely in-
terior and exterior cog gears, the inclosing wheel being of so mueh the larger diameter that the inner wheel only engages upon one side thereof. The inner gear is eceentrically journaled ou the shaft, and either pulley being prevented from rotation while the shaft rotates eauses a gradual rotation of the other pulley but respectively in opposite directions.

Claim.-The two pulleys or winding barrels in the differential gear power maehine, comected by gear as described, eccentrieally hung upon a free revolving actuating shaft, operating substantially as described, and for the purpose set fotrh.
\%5,305.- James Shaw, Ballardvale, Mass.-Loom.-Mareh 10, 1868. - The arms supporting the lay have semi-circular slots which receive the wrist pins of eranks on the ends of a transrerse shaft, and the motion of the lay is caused by this means. The pickers are connectod by cords to the horizontal, oseillating arms of two vertical shafts which are actuated by springs and by the tappets upon the eam shaft whieh operates the hamess.

Claim.-The combination of the short shaft $C$, pinion $D$, shaft $E$, pinion $H$, shaft $F$, pinion $G$, tappets $k \%$, roller arm $l$, vertical shaft $g$, spring $i$, and lerer $e$, all eonstructed and arranged with the loom frame, as and for the purpose set forth.

75,306.-Edward A. Surty, St. Albans, Vt, assignor to limself and John W. Newton.-Seat for Harvestors.-Mareh 10, 1868.-The seat is attached by a hook and eye bolt at the center, and is supported tht the edge by spiral springs.

Claim. -The seat for mowers or reapers, formed with soekets on the under side of the seat, receiving helieal or spiral springs, in combination with the sockets on the crown piece or seat supporter, and with the connecting link $i$, substantially as and for the purposes set forth.

अ5,307.-Scott A. Smith, Philadelphia, Pa., assignor to Cresson and Smith, same place.-Flour Bolt.-March 10, 1868. -The bolt is conneeted to the shaft by metallic rods in such a manner as to admit of ribration, which is commumicated by springs. The latter are conneeted to the spider to which the bolt is attached, and have bearing against the end of the bolt. The springs are raised by a cam, and on recoil strike a projeetion on the elastic metallic belt surrounding the bolt.

Claim.-1. The bolt, unsupported, exeepting at its opposite ends, and having a belt arranged for boing struek by recoiling springs or other equivalent derices, all substantially as and for the purpose herein set forth.
2. In combination with the above, a spring or springs secured to the bolt, or to the box containing the same, and operated snbstantially in the manner herein set forth, and for the purpose specified.
g5,308.-Tames F. Snidiker and Willian F. Bailey, Bristol, Pa.-Apparatus for Charging Gas Retorts. - Mareh 10, 1868.-The seoop is sustained on swivel and sliding bearings, upon the truek whieh runs on a track, and conveys coal from the heap to the benel of retorts. The scoop is run into the retort, and the bottom is drawn hack by the rod ex. tending beneath the hapdle; this discharges the coal.

Claim.-1. The truek $A$ and its swivel bearings $d$, in combination with a series of sooops $C$, the handles of wheh rest on and slide in the said bearings, substantially as and for the purpose deseribed.
2. A slicling bottom F , in combination with a scoop C, substantially as and for the purpose specified.
3. A scoop, consisting of acljustable side picees $m m$, and bottom picces o o $o^{\prime}$, construeted, arranged, and connected to the handle $f$, substantially as and for the purpose set forth.
4. The wheels $t$, in eombination with a scoop C for the purpose described.

75,309. - Cmarles W. Stafford, Saybrook, Conn.-I'avement.-Mareh 10, 1868. The metallic sections forming the foundation, and having eavities to reeeire the tapered ends of the wooden bloeks, hare side flanges by which they are scemed together by means of links which pass through holes in the flanges, and have keys driven through their ends.

The adjacent corners of four frames are connected by the crucial spanner which lies bencath the corners, and has stnds entering holes in tho lover sides of the said seetions. The spanner is held in position by a central vertical bolt screwed into it from above.

Claim.-1. The arrangement of the oblong bloeks, decreasing in depth from the centre to the sides, so as to form a camber in the street, while resting on a level metallie base C.
2. In combination with the base of a sectional pavement, the spanner $G$ and serew $H$, operating as described.
3. The combination and arrangement of the flanges $n n$, link $p$, and keys $s s$, substantially as and for the purpose described.

95,310.-Phirander H. Standish, Martinez, Cal., assignor to himself and Oliver C. Coffin. Steam Plow and Cultivator.-March 10, 1868. -Tho engine is earried on the platform of the locomotire plow, and :ower is communieated from it to the vertical shafts earrying radial arms at their lower ends. The arms hare vertieal eutters, whieh, by their rev. olution, stir the ground as the machine passes along. The machine is guided by a single leading wheel.

Claim.-1. A steam plow, having the rotary knives $i$ operating in a horizontal plane and transversely to the travel of the machine, and the supporting arms $k k$, or their equiralents, together with the vertical shafts $h$, the whole construeted and operating substantially as herein deseribed.
2. The movable frame $U$ and the arms a a , together with the chains $V$ and capstans IV for raising and depressing the plows, substantially as hercin described.
3. Operating the plows, when moving in $\Omega$ horizontal plane, direetly from the engine by the belt $b$, or an equivalent deviee, substantially as described.

75,311.-A. Stankowitch, Philadelphia, Pa.Washstand. - Mareh 10, 1868. -The reservoir is filled from above and has a cock in the lower side.

Claim.-A Water reservoir H, secured to the lid of a washstand, and so arranged as to be receired by the basin $G$ when the lid is elosed, all substantially as described.
75.312.-Alfred Stari, New Tork, N. Y.Solder for Aluminum.-Mareh 10, 1868.-Composed of silver, 2; zine, 1; lead, 2; and tin, 2 parts.
Claim.-'I'he eompound or alloy specified, as a solder for aluminum.

75,313. - Chanles Stein, Philadelphia, Pa. Fluid Meter.-Mareh 10, 1868. -The liquid passes through the vertieal eylinder tangentially and impinging on the spheres canses the revolution of the magnet on which they are suspended. The opposite poles of the magnet act through the copper plate in the side of the eylinder, and eause the alternate attraetion and repulsion of the oseillating bar: communieating motion to the registering wheels.

Claim.-The combination, substantially as doseribed, of a rerolving or oseillating magnet and tho registering bar J, or its equivalent, with a fluid meter, for the purpose specified.

95,314.—TOHN SWITZER, Lynn, Mass.-Securing the Ends of Felloes and Spokes in Carriage Wheels. - March 10, 1868. - The metallie block has a tapering. soeket to receire the end of the spoke, and half soekets for the ends of the felloes.

Claim. The improved mode of fastening the ends of the felloes and the spokes in carriage wheels, by means of the metallic bloek $\mathbf{E}$, construeted and npplied and seeured by the bolts $d d$, as explained.

195, $315 .-$ R. H. Surti Thompson, Georgetomn, D. C.-Device for Preventing Water Pipes from Bursting.-March 10, 1868.-The water pipe has shoulders at intervals giving inereased diameter to the pipe. In the recoptaele so formed is placed a double ejlinder with an air eushion between. The inner eylinder is flexible, and gives space to the inereased bulk of the water when freezing.

Claim.-The arrangement at the joints of water pipes of two concentric cylinders, the interior cylin-
der to be of clastic material, and thus form an air cushion, and to operate substantially as described.
(75,316.-Timothy S. Thons, South Amboy, N. J.-Folding Fan.-March 10, 1868.-The wings are hung on a central arbor and may be spread ont so as to form a circular fan ; or slipped over each other so as to lic side by side. The handle is jointed.

Claim.-1. The combination, with the ribs $\mathrm{B}, \mathrm{C}$, and $C^{\prime}$, and handle $D$, of the ferrule $G$, substantially as and for the purpose set forth.
2. Tho combination, with the ribs C and $\mathrm{C}^{\prime}$, of the clasp $F$, terrule $G$, and handle $D$, substantially as and for the purpose set forth.

55,31\%.-EvwIN J. Toof, Fort Madison, Iowa. -Lamp Extinguisher.-March 10, 1868.-The cone is hinged to the burner, and the raising of the former When lighting the lanp raises the extinguisher, and engages it with the detent. The extinguisher is closed down upon the top of the wick tube either by hand or by the shaft operating the wick regulator.

Claim.-1. So combining a hinged cone D, extinguisher or cap $B$, and a connecting arm $C$, or its equivalent, that the opening of the cone will remove the extinguisher from the wick tube substantially as herein specified aud set forth.
2. In combination with said extinguisher, cone, and conneeting arm, the arrangement of a suitable support E , to retain the extinguisher away from the wick tube when the cone is closed, substantially as herein specified and described.
3. The combination of a finger d, operating through a slot in the external case of the burner, in combination with the arm E , connecting arm C, extingnisiner E , and cone D , substantially in the manner and for the purposes set forth.
4. In combination with the cone D , hinged as described, and the arm E, arranged in connection therewith substantially as described, a stop or rest F, upon the case of the burner, arranged so as to sustain the cone in place, and prerent it swinging over upon its hinge, substantially in the manner described.
5. In combination with the extinguisher $B$, eono D , conneeting arm C , arm E , provided with a suitable rest and a lever $e$, the shaft $H$ and arm J, arranged to operate substantially in the manner herein set forth.
y5,318.-EDwIN J. Toof, Fort Madison, Ioma.Wich Regulator.-Narch 10, 1868.- 'lhe semi-band lies along one side of the wick tube, and has points which pass through the side of the tube and pierce the wick. The said points are forced into the wick by a spiral spring around their operative shaft and may be withdrawn by retraction of the shaft. The spring also forces ont the arm of the engaging ring of the chimncy and causes the ring to held the chimney in place.

Claim.-1. In combination with a wick tube, provided with vertical slots $a^{\prime} a^{\prime}$, the arrangement of a slide $b$, upon the ontside of the tube, provided with points $b^{\prime} b^{\prime}$, projecting into said tube through said slots, so as to operate in the manner and for the purposes described.
2. The combination of the slotted wick tube a, the slide $b$, provided with points $b^{\prime} b^{\prime}$ and the shaft $d^{\prime}$, or its equiralent, arranged and operating substantially as and for the purposes set forth.
3. The arrangement of a spring, in combination With the above, operating as and for the purposes set forth.
4. The combination of the tube $a$, slide $b$, shaft $d^{\prime}$, and springs, with the chimney clamp D E F F, as and for the purposes specified.
\%5,319.-William Trowbridge, New Orleans, La.-Cotton Bale Tie.-March 10, 1868. - The wire is bent so as to form two hooks, and an eye for securing the two ends of the cord or wire.

Claim. - The device herein described, to wit, a section or piece of wire, so formed is to be provided with the loop or eye C , and the hooks B
herein dosoribed for the purpose set forth.
\%5,320.-William H. Van Gieson, Passaic, N. J., and Jonn J. Crooke, New York, N. Y.-Machine
for making Butt Hinges.-Mareh 10, 1863.-Improve-
ment on the patent of Brown and Van Gieson, April 9,1861 . The single blank is carried from beneath the pile in the hopper by a finger which remains beneath the pile and sustains the samenntil the retractiou of the finger. The frame to which the fingers are attached is raised by springs so as to clear tho blanks during its backward motion, and is lowered and held down by $n$ cam so as to eatel the blanks and carry them forward in its forward movement. The slides which carry the dios are dramm togethel by the springs and foreed apart by the wedge-shaped lower end of the gate. The joint of the hinge is turned by the dies to which the blank is carried by the fingers, and its lower edge is held by tlle stop while being operated upou.

Claim.-1. The combination of transferring fingers, with dies $e^{\prime} e^{\prime}$, when said fingers and dies aro operated by mechanism substantially as and for the purpose set forth.
2. The combination of the levers $y^{2}$, cam $a^{\prime}$ and fingers $l$, with the slides $b^{\prime} b^{\prime}$, the whole being arranged substantially as and for the purpose hereinabore specified.

75,321.-Henry B. Walbridge, Tolodo, Ohio. -Bed Bottom.-March 10, 1868.-The sacking frame is hinged at midlength. The sacking is attached to one end, and passing around the other is rolled on a bar whieh enters a groove bencath the end; so that the bottom may be doubled, the bar taken out, and more of the sacking taken up thereon. The bar is then replaced, and the unfolding of the frame strains the sacking.

Claim.-1. A bed bottom, which is composed of a hingod sectional frame $\mathrm{B}^{\prime} \mathrm{B}^{\prime}$, haring the sacking secured permanently to one section, and applied to the other seetion by means of a flat bar $c$, and clamps $g g$, substantially as deseribed.
2. Coustructing the sacking framo $\mathrm{B}^{\prime}$, and applying the sacking thereto, in such manner that, While the sacking can be more or less slackoned or tightencd at pleasure, one section of said frnme will serve as a means for forcibly tightening the sacking, in combination with retaining cleats and remorable pins applied to the bedstead rails, substantially as described.

75,322.-C. II. WEBB, Ner York, N. I.-Adding Machine.-March 10, 1868.-The two numerator wheels are inclosed in an opaque case. The unit and ten wheel has two semicircular series of numbers, cach from 0 to 99 inclnsire; and the hundred and thousand wheel is numbered from 0 to 49 inclusive. The case has a semicircular slot abore a series of holes in caell wheel, and each indieator finger has a pin traversing the slot and entering the holes to cause the rotation of the wheel. The case is numbered on the are trareled by the finger of the larger wheel. In nse both wheels are set so that 0 comes beneath an aperture in the case, and the finger of the larger wheel is mored to the number on the case Which is to be added, and its pin entering the wheel the finger is turned back to number 1 on the ease. In this manner ono number after another may bo added. At each semi-rotation ot the larger wheel a pin on the said wheel impinges on the swinging spring sector und mores the smaller wheel one fignre. Hundieds or thousands may be added immediately by the smaller wheel.
claim.-1. The duplicato series of numbers, arranged upon the margiu of the numerator wheel B , substantially as and for the purpose specified.
2. In combination with the abore, the semicireular slot $L$, in the dial plate $J$, corresponding in extent With one of the duplicate series of numbers, for the purpose substantially as described.
3. Arranging, on the dial plate $J$, a series of numbers corresponding in cxtent with one of the series of numbers upon the numerator wheel $B$, substantially as described, and for the purposes specified.
4. The prefix of a eipher, upon the numerator Wheel $B$, to the digital numbers from zero $(0)$ to nine, $(9$,$) inclusive, for the purpose specified.$
5. In combination with the numerator wheel B, the revolving multiplying wheel E , when arranged in apposition to the numerator wheel, and having its edge in contact, or nearly in contact, therewith.
6. In combimation with the clements of the abore.
the slot $K$ in the dial plate $J$, for the purpose specified.
7. The arrangement of the numerator wheel $B$, lever $G$, and mnltiplying wheel $E$, all construeted substantially as deseribed and for the purposes specified.
8. In combination with the arrangemont above specified, the slotted dial plate $J$, when construeted snbstantially as and for the purposes specified.
'95.333.-David M. Weston, Boston, Mass.Sclf Oiling Mub for Pulleys, de.-March 10, 1868.An oil chamber in the hub conneets with tho shaft in the center of the hub, and lias one or more longitudinal partitions which earry the oil over and around the shaft. Annular recesses in the ends of the hub have under-cut outer edges, and holes leading therefrom, which tend centrifugally and inwardly, and communieate with the oil chamber; the centrifugal foree of the rotating pulley earrying the oil from the recesses into the chamber.

Claim.-1. A loose wheel or pulley, having its hub provided with the chamber D , and opening E , with the partition $a$, or its equivalent, when constructed and arranged to operate substantially as described.
2. In combination with the ehamber D , the dovetailed recess $l$, with the passages $e$, leading into said chamber, substantially as and for the purpose set forth.
'75,324.-BENJAMIN F. WhITAKER, Whitestown, Ind.-Gate and Door Spring.-March 10, 1868.-One end of the curved rod is secured to the post and the other passes throngh a hole in the gate. 'The curved rod supports a coiled spring which serves to close the gate.

Claim.-The application of the eircular rod, and also the coil of wire used as a circular spring, as set forth in the drawing.
'5,325.-GEORGE F. Wilson, East Providence, R. I. - Manufacture of Phosphatie FertilizerMareh 10, 1868. -The "niter eake" or "salt cake" left in the retort in the production of nitrie or muriatie acid, while in a viscid state, is removed from the retort and placed in a cylinder rotating on tnbular journals. The cylinder has iron bars projecting from the side toward the center. With the said "cake " are mixed bones, bone ash, bone coal, or spent black, either or all. Steam is applied through the journals and under a high pressure.

Claim.-1. The method of decomposing the said bone phospliates by the said salt cakes, substantially as above described.
2. The fertilizing product, prodnced substantially as above described.
3. The revolving eflinder, substantially as above deseribed, when used in connection with the manufacture of cither nitric, muriatic, or sulphuric acid, or two or more of them, for the purpose of producing the aforesaid fertilizer or compound, substantially as abore described.
4. The manufactnre of the aforosaid fertilizer in connection with either, any, or all of the aforesaid acids, by the use of the resulting residnary salt cake or cakes, substantially as and for the purpose above described.
75.326 -George F. Wilson, East Providenee, R. I.-Preparation of Bones for the Manufacture of Phosphoric Acid and Phosphates.-March 10, 1868. - The bones are burnt to a gray color, (allowing abont 12 per cent. of carbon to remain.) The coarse-grained powder is spread to a depth of 3 or 4 inches over the floor of the fnrnace, which is heated by lnes above and bencath it. The mass is occasionally and quickly turued, the exit being closed at the time of turning to prevent the draught. When it has assumed the proper gray tint it is withdrawn. The object is to lemore the eyanides, sulphides, \&e., and to retain the carbon.

Claim.-1. My new and improved process of bmrning and roasting bones gray, substantially as and for the purposes hereinbefore deseribed, as preliminary to the extraction therefrom of acid phosphate of lime.
2. As an improrement in the process of preparing acid phosphate of lime, the use of bone coal treated substantially as hereinbefore described.
3. The improved furnace, constrneted and operat-
ing substantially as and for the purposes as herein before deseribed.
g5,327.-GEORGE F. WILson, East Providence, R. I.-Manufaeture of Phosphates for Agrieultural Purposes.-March 10, 1868.-Unboiled bones and dilute sulphnric aeid are pnt into a lead-lined wooden tank, which is heated by a steam coil of leaden pipe. The matter is kept under heat antil the bones are softened, and finally until it is evaporated to dryness.

Claim.-This process of reducing bones with acid, substantially as above described, whereby I have made the manufacture of a fertilizer under the name of snperphosphate of lime more eeonomical and more valnable than by any other process heretofore known.

75,388.-George F. Wilson, East Providence, R. I.-Manufacture of A cid Phosphates.-Mareh 10, 1868.-The starch and aeid phosphate, already coarsely mixed, are passed between cylindrical rollers having different veloeities; one of which is capable of motion to and from the other, and held thercto by springs or weights.

Claim.-1. The improved process, hereinbefore de. seribed, of mixing farinaccous matter with acid phosphate of lime, in the manner and for the pnrpose above deseribed.
2. The improved grinding or disintegrating apparatus, construeted and operating snbstantially in the manner and for the purposes above described.
3. The application of granite rollers in the manner and for the purpose above described.
4. The combination of the grinding rollers and their connections with the self-adjusting pressmre lever, snbstantially as and for the purposes deseribed.

75,329.-George F. Wilson, East Providence, R. I.-Preparing Bones for the Manufaeture of Acid Phosphates.-March 10, 1868.-The bones are distilled in a bench of retorts with fire and smoke flues snbstantially like those of a gas retort. Vertical pipes condnct the gases to a reserroir which connects with a system of vertical condensers ampanged orer a receptacle for the condensed gases, including carbonate of ammonia. The uneondensed gases, including ammoniacal gas, are condneted through an agitator containing muriatic or sulphnric acid, so as to abstract the remaining ammonia. The uncondensed gases are condueted to the furnace.

Claim.-1. The new and improved method or process of destrnctive distillation of bones, whereby the producte of distillation are principally condensed, the ammoniacal products thereof preserved, and the remaining gases conveyed to the furnace, thereby adding heat to the flame and destroving the offensive odor's, substantially as above described.
2. A new and improved means or method of destructive distillation of bones by the nse of horizontal retorts, in connection with the coolers above described, whereby the retorts of the furnace way be continuously used without losing their heat, while at the same time the bnrned or distille bone is being cooled and exeluded from the air in said coolers.
3. The combination of the retorts $A$, the reserroir E , the condenser B , and the chamber D , with its mechauical agitator, or its equivalent, and the connecting pipes above deseribed, snbstantially as and for the purposes hereinbefore set forth.
4. The combination of the retorts $A$, the reservoir E, the condenser $B$, and the conncetiag pipe $g^{\mathrm{ii}} g^{\mathrm{iv}}$, for the purpose above described.

75,3:30.-George F. Wilson, East Providence, R. I.-Drying Acid Phosphates.-March 10, 1868.For drying the mixture of farinaceous matter and acid phosphate of lime, made aecording to Forsford's patent. Highly heated air circulates slowly through a chamber, in which the above preparation is main. tained in numerons wide, thin vertical sheets, supported each by two parallel frames of lattice work, so arranged that at intervals a quantity of dried aeid is discharged at the bottom and a fresh supply reeeived at the top.

Claim.-1. My improved process of drying the grannlated aeid phosphate of lime by exposing the same to continuous currents of heated air on both
sides of the colmmns thereof, substantially as and for the purposes deseribed.
2. The application of the improved apparatus, constrneted and operated substantially as deseribed for the purpose aforesaid.
3. The arrangement of the revolving tronghs, or their equivalent, combined with the rertieal lattiee flues, snbstantially as above described, by whiel the proeess of drying is rendered uniform and continuons.

75,331.-GEorge F. Wilson, East Providence R. I.-Apparatus for the Mranufaeture of Aeid Phos-phates.-Mareh 10, 1868. - The ground matter is passed into a rotary bolt and the tailings carried by an elerator to the feed hopper to be reground.

Claim. - The improved mechanism tor sifting this mixture of coarsely and finely-powdered aeid phosphate of lime, as described under Horsford's patents, and separating the coarser parts of the same, snbstantially as and for the purposo deseribed.

75,332.-George F. Wilson, East Providenee, R. I.-Burning Bones for the MLanufacture of Acid Phosphates.-Mareh 10, 1868. The bones, each class by itself, are plaeed in the fire-brick furnace, which is heated by flnes orer and beneath it, the latter discharging into the turnace space. The bones are burned to whiteness, being oceasionally stirred, but eare taken to exelude a snperflnity of air which would othermise cool the bones and prevent thoir thorongh burning.

Claim.-1. The new and improved furnace, sul)stantially as above deseribed, wherehy the flame is carried under the hearth thereot, and is introdnced into the ehamber whiel contains the bones, where it burns with the combnstible products of distillation and atmospheric air, admitted in regulated quantities, and thus, while the offensive odors are destroyed, the heat of the ehamber is intensified to the degree required for the prodnction of white-burned bone, without converting the same into an insolnblo pyrophosphate of lime, the flame and products of combustion then passing into the flues over the ehamber into the escape flue.
2. The new and improved process of burning bones White, whereby I am enabled to obtain trom them a pure plosphate of lime, in the manner and for the purpose above specified.

95,333.-George F. Wilson, East Providence, R. I.-Grinding and Pulverizing Aeid Phosphates.Marel 10, 1868.-The acid phosphate is gromnd in a "Chilian mill," which prevents the adhesion indneed by heat in an ordinary mill.

Clciom.-1. An improved process of disintegrating and pulverizing the dried and granulated mixtnre of acid phosphate of lime and farinaeeous matters, substantially in the manner and for the purposes deseribed, whereby the heating thereot is prevented, by eausing the pulverizing action of the mill to be applied to any partieular portion of the mixtnre to be at intervals, whieh allow time tor eooling betreen snceessive impaets.
2. The application of the abore deseribed apparatus to the pulverization of aeid phosphate of lime mixed with tarinaecons matters, substantially as abore deseribed.

195,334.-GEORGE F. Wilson, East Providenee, R. I.-Granulating Acid Phosphates.-March 10, 1868.-The deviee bears relation to Horsford's patented mixture of acid plosphate of lime and farinaceous matter. The horizontal wirc grating reeiprocates beneath a hopper or vertieal chnte containing the mixture stated.
Claim.-1. The proeess of dividing the lumps of mixed acid phosphate of lime and farinaccous matter into small lumps, substantially as and tor the purpose specified.
2. The combination of the fceding spont and ribrating sieve or grater, constructed and operated substantially as above deseribed, and for the purpose above set torth.

95,335.-George F. Wilson, East Providence, R. I.-Apparatus for Conveying Acid Phosphates and other Acid Liquids.- Mareh 10, 1868. - Tho pump is formed of lead and fitted with a eopper pis-
ton rod, vuleanized rubber or gutta-pereha ball valves and connected with the diseharging and receiving vessels by flexible, vuleanized rubber lose.
Claim. -1 . My improred pump, eonstrneted of lead and ruleanized rubber or gutta-percha, snbstantially as and tor the purpose above specified.
2. The applieation of rulcanized rubber or gutta perela hoso, in combination with the above described pump, for the transfer of aeid phosphate of lime liquor, for the purpose above set forth.

95,336.-George F. Wilson, East Providenee, R. I., and Eben Nortos Horsford, Cambridgo, Mass.-Manufacture of Phosphates, and Extracting Phosphoric Aeid from Bones.-Mareh 10, 1868.-The bones, after calcination to a gray color, (in which state a proportion of earbon remains, are treated with sulphurie aeid and the soluble acid phosphate leaehed therefiom, leaving the relatively insoluble sulphate of lime and earbon. The remaining carbon assists in retention of the eellular structurc of the bone, and prevents the choling of the interstices of the leach. The "dredging" or treatment with snlphurie acid is carried on for abont 18 honrs, and the mass, which is eontained in a lead-lined tank, is kept in eontinual agitation. When leaehing, the mass is tamped down npon the felt, to cause an equal consistence in the material.
Clain.-1. The new and inproved process of extracting acid phosplate of lime from bones, as hereinbetore stated.
2. The continuons agitation of the misture of sulphuric acid, acid phosphate of lime, and pulverized gray bones, by which the aetion of the sulphuric aeid is rendered ninitorm, and the sulphate of lime, produeed in the decomposition of the gray bone, is prorentcd from setting or hardening in lnmps or in mass, which would interfere with leaehing, as well as with the perfeet decomposition of the gray bones.
3. The distribution of the mass to be leached in brond, shallow pans, in the manner and for the pur. poso above described.
4. The use of ressels made of lead, or lined with lead, for the parpose above deseribed.
5. The applieation of the tamping operation or its eqnivalent to the mixed acid phosphate of lime, earbon, and sulphate of lime, to keep them as nearly as possible of uniform thichness and consisteney upon the leach cloth, in order to the more uniforin and perfect leaching thereof.
6. The treatment of the burned bones above deseribed with sulphurie acid, diluted to or beyond the point of preeipitating the sulphate of lead present therein, this dilution being mado with a weak solution of acid phosphate of lime.
7. The apparatus above and substantially as deseribed, as a wholo, for the purpose of obtaining liquid acil phosphate of lime, snbstantially as above deseribed.

195,33\%-GEORGE F. Wil.Son, East Providenee, R. I., and Eben Norton Honsford, Cambridge, Mass.-Treating the Mixture of Aeid Phosphate of Lime and Farinaceous Matters in order to Granulate them.-Mareh 10, 1.868. -The preparation, coarsely disintegrated, is placed under the influenee of light and air at a temperature of $75^{\circ}$ Fahr., and is stirred and tmrned twiee a day, and the size of the lmmps lesscned. This is continued two weeks, more or less.

Claim.-The new and improved process of treating acid phosphate of lime when mixed with farinaceous matters, for the purpose of so drying and ageing tho same as to prepare it for the suecessful applieation of meehanism for granulation, in the manner substantially as and for the purpose above doseribod.

75,338.-George F. Wilson, East Providence, R. I., and Eben Nomton Horsforn, Cambridge, Mass.-Treating Acid Phosphates in the Manufacture of Yeast Powders, ec.-March 10, 1868.-This invention relates to the mannfacture of Horsford's patent acid phosphate of lime and farinaecons matter. The liquid and calcined bones are divided among the kettles, and after sufficient eoncentration it is mixed intimately in a common receptacle to insure homogeneity. In thus condition it may be mixed
with the farinaceous matters, or the mixture may be made aftcr cooling.

Claim.-The use of the kettle or common reeeptacle for mixing together the viscid mass resulting from each day's work, after partial erystallization, with farinaceous dilutants, in the manner and for the purpose abore sct forth.

75,339.-George F. Wilson, East Providence, R. I., and Eben Norton Honsford, Cambridge, Mass. - Apparatus for Concentrating Acid Phos: phate of Lime.-Mareh 10, 1868.-The liquid is eonpentrated in porcelain-lined iron pots which stand side by side, but each hare a separate fire pot whose bottom may be slid out when necessary to allow the firc to drop into the ash pit. The flues all communicate with a common flue leading to the smoke staek.

Claim.-1. The new and improved method or process of coneentrating the acid phosphate of lime liquor by means of the apparatus construeted and arranged substautially as and for the purposes above deseribed.
2. The usc of metallie eraporating kettles lined with porcelain, for coneentrating the solution of aeid phosphate of lime, in the manufacture of Horsford's pulverulent phosphorie acid.
3. 'Ihe improred fire pot, substantially as described, that is to say, consisting of fire brick, lining a short metallic tube, or a short contimuous fire-brick tube, with a surrounding air spaec, in comneetion with the usc of the poreclain-lined kettle, for coneentrating aeid phosphate of lime liquor.
4. The movable grate, in eombination with the fire pot and porcelain-lined kettle, substantially as and for the purpose above described.
5. The arrangement of the serics or beneh of single kettles above described, having a scparate fire for eaeh, in the manner and for the purpose set forth.
g5,340.-Sylvanus C. Wrlson, Central Falls, R. I., assignor to himself, Edwards Mathews, and Willisam N. Strong, same place.-Egg Beater.Mareh 10, 1868. - The perforated dasher is reeiproeated rertieally and may be milled to beat the cegs.

Claim.-A dasher attached to the lower extremity of the rod C. perforated with round holes and having a concare surface, upon which are soldered narrow strips of tin, passing across the eenter of the holes, substantially as described, and for the purposes specified.
g5,341.-Alexavder Allen, Chieago, Ml., assignor to himsclf, W. G. Wood, Jomi G. Walker, and W. R. Walrorw, same place.-Machine for Cutting Kags.-March 10, 1868.--The moving jaiv of the shears is connceted to one arm of a bell crank whose other arm has a stud traveling in a cam groove in the periphery of a rotating wheel.
claim.-1. The eombination of the table $A$, shears $a b$, and movable bed or guard $B$, all arranged and operating in the manner and for the purposes deseribed and set forth.
2. In combination with said shears $a b$, the rock shaft $h$, arm $m$, parw wheel $C$, when arranged with connceting arms and joints sulstantially as specified, and for the purposes deseribed.
g5, 3 42.-Letcester Allen, New York, N. Y., assignor to himself and Solomon P. SMrTh, Waterford, N. Y.-Fluid Meter.-March 10, 1868.-The piston is balanced by a spring in such a manner that the flow of water will open the valre and give free passage to the water as loug as there is no back flow. In the latter case the valve is closed wholly or in part. The amount of water passing is recorded by a register.
Claim.-1. The combination of the openings $b$ and $i$, withlvalves fixed to a pivoted arm, $v^{\prime}$, in such a manner that by the movement of the arm the openings shall always be proportionately uncovered or closed, when this combination is used in a fluid meter, substantially as and for the purposes specificd.
2. The cylinder C , provided with the piston D and opening $c$, or their cquiralent, when uscd in a fluid meter, substantially as and for the purpose specitied.
3. The chamber J, provided with the diaphragm $m$, substantially as and for the purpose specified.
4. The arrangement, in a fluid meter, of the cham-
bers $\mathrm{B} \mathrm{B}^{\prime}$, cylinder C , piston and rod $\mathrm{D} \mathrm{D}^{\prime}$, arm $v^{\prime}$, and ralves $v v^{\prime \prime}$, substantially in the manuer and for the purposes sct forth.
g5,343.-E. A. Apgar and A. C. Apgar, Trenton, N. J.-M1ap and Chart Holder.-March 10, 1868. -The eharts are stretched on frames whioll arc hinged to and inelosed by a case.

Claim.-The self-adjusting rotary eompound hinge, as deseribed, and for the purposes set forth.
g5,344.-T. R. Bailey, jr., Loekport, N. Y.-Hydrant.-Mareh 10, 1868.-The lower end of the cylmdrical valre is seated on a leatherdisk. A valve is formed in the center of the disk whose metallie cap has an arm whieln is depressed by the cylindrical valve when it is upon its seat, and the water in the hydrant is allowed to rum out through the escape pipc.

Claim.-1. A hydrant or water plug, eonstructed substantially as shown and deseribed, that is to say, with the parts $A$ and $B$ eomeeted together as shorm, and with a eylnder valve and a waste water valve eonneeted and operated in eombination, substantially as herein speeified.
2. The arrangement of the parts A B, valre D, ease C, and stufting box H, as hercin deseribed, for the purpose specified.

75,345.-William C. Baker, New Fork, N. Y. -Railroad Car Heater.--March 10, 1868. - The water rises in a coil of pipe in immediate proximity to or within the store and passes into a chamber from which steam and air may eseape through a satety valve. The water (whiel may be mingled with some substance to prevent ficezing) eirculates through pipes beneath the seat and returns through a course of pipes at a lower lorel.

Claim.-1. A cireulating hot water apparatus, adapted to railroad cars and other vehieles, in which a rising water pipe from the heater opens into a water vessel, in combination with a descending pipe and radiating or heating tubes, substantially as and for the purposes set forth.
2. The heating tubes, arranged as shown, to run from the side of the ear, beneath the respectice seats, and furnish warmth to the individual passcngers, in combination with the aforesaid hot water heating apparatus set forth.

75,346.-Russell A. Ballou, Boston, Mass.-Fire-proof Safe.-March 10, 1868.-A stratum of wood is cmbedded in the filling.

Claim.-Enbedding in the filling of a fire-proof safc a stratum or strata of wood, arranged substantially as deseribed, for the purpose of enhancing the non-condueting power of the safe walls, as spceified.

75,34\%-Frederick Baumgartaer, Brooklyn, N. Y.-Sash Stop for Windows and Doors.-Mareh 10, 1868. The sash has spring friction rollers which bear against the imer beading and keep the sash tightly against the outer bead.
Claim.-The combination, with the sash and fiame, of a sliding window or door, of a combined spring $A$, and roller $B$, arranged and operating substantially as and for the purposes herein specified.
g5,34S.-N. S. Beax, Manehester, N. H.-Self Propelling Engine.-March 10, 1868.-The balance wheel shaft has chain gear enunection with the propulsion wheels. The ends of the forc axle are eonneeted by a chain to a barrel thich has a wheel turned by a serew gear to guide the cngine.

Claim-1. In a stean fire engine, in which the steam and pump eylinders are arranged as described, operating the wheels of the cngine to propel it orer the road, substantially as specified.
2. The arrangement, on the shaft driven by the stean eylinders whieh work the main pumps of steam fire cugines, of the driving theel $d$, or its equiralent, so that it ean be made fast or loose on said shaft, sul)stantially as and for the purpose speeified.
3. The combination of the axle of the stecring wheels with the band whecl 0 , br means of the chains $s$, windlass barrels $l$, shaft $j$, worm gear $k$, worm $m$, and shaft $n$, substantially as and for the purpose specified.
$75,349 .-\mathrm{ENOCH}$ Beard. Salem, Iorra,-Moth Proof Bee-Hive Portal.-Mareh 10, 1868. -The platform forms the floor of an appendage to the lipe entrance and has slots in it which allow passage to the moth but refnse it to the bee. Beneath the platform is a drawer whiel eontains some attraetive liquid in Which the moth is destroved.

Claim.-1. The platform H, with its ereviees D D D and E E , and flap F , and crevice G , when eonstrueted and used as set forth.
2. The back $I$, when combined with the box $J$, and construeted and used as shown.
3. The box $J$, separated into stories by the floor $U$, when construeted and used as set forth.

- 4. The tubes $T$ ' 5 , when constructed and usod as herein shorm.

5. The drawer C, when combined with the partition $\mathrm{N}^{2}$, and eonstrueted and used as shown.
6. The slide $M$, in combination with the movable gange $L$, when construeted and used as set forth.
7. The partition $\mathrm{N}^{2}$, attached to the under surface of the plattorm $H$, when construeted and used as set forth.
75.350 - JASON A. Bidwell, East Boston, Mass.-Machine for Threading Screws.-March 10, 1868. -The thread is made by the "threading elamps," which are counterparts of the thread and core, and which are applicd to jaws which have a ribratins and rectilinear, reciprocating motion, so that while the blanks are being rotated or oscillated, the clamps will traverse back and forth and so complete the serew. The clamps have clastie conneetion to half nuts, which allow the jaws adjustment to the diminishing eore of the serew while governing their reetilincar, reeiprocating morement. The gripping jaws are operated by cams so as to clamp the blank. A sealo connected with the gripping jarrs denotes, aceording to the diameter of the blank, the number of rotations required to a certain lengtl. The spindle of the gripping jaws has riglat or left rotation as desired.
Claim.-1. The construction of the threadine elamps or dies E E with cutters and recesses, in sueli mamer as to form eounterparts of the serews which they are designed to produce, substantially as deseribed.
8. The application of threading clamps E E to laterally-ribrating jaws or carriers $\mathrm{E}^{1}$, in combination with a derice for holding serew blanks while they aro being threaded, substantially as deseribed.
9. The laterally vibrating and reetilinear reciprocating die carriers $\mathrm{E}^{1} \mathrm{E}^{1}$ in combination with the leader serew $c$, substantially as deseribed.
10. The application of clastic rielding half-nuts $d d$ to ribrating threading die earricrs $\mathrm{E}^{1} \mathrm{E}^{1}$, substantially as deseribed.
11. The combination of closing eams $B$ B and opening spring e with the threading die carriers $E^{1}$ substantially as deseribed.
12. The combination with the machinery, substantially as herein described, for produeing theads on sorer blanks, of the griping jatws $g g$ and cams $g^{1} g^{1}$, applied and arranged so as to operate substantially as horein described.
13. In a machine for producing threads upon serew blanks, the griping jars $g$, eams $g^{1}$, and tonorles $h^{1}$, combined with a sliding collar II, and applied to a spindle, all substantially as deseribed.
14. The arrangement of the devices specified for adjusting the eams $g^{1} g^{1}$ in the serew blank threading machine, herein shown and described, for the purpose set forth.
15. In a serew-thread cutting machine, cmploying an intermittent rotating spindle carrying the blank holders, the index wheel O with its dogs $p p$, applied substantially as described.
16. In combination with the wheel 0 and its dogs $p p$, the vibrating lever N , latehes $\mathrm{P} \mathrm{P}^{1}$, and lever L, said parts being applied to a serew cutting machine, so as to operate substantially as and for the purposes deseribed.
17. The spring arms MI M, the lifting lever $N$, right and left latches $P P^{1}$, and the ribrating lever frame L , carrying the slifting gear $\mathrm{L}^{1} \mathrm{~L}^{2}$, all combined and applied to a serew threading machine, substantially as deseribed.
18. The pitman rod $\mathrm{L}^{3}$, with its eheek stud $n$ and
the slotted ruide $n^{1}$ in eombination with tho lever frame L, substantially as described.
19. Proriding the lever fiame L with light and left latehes $\mathrm{P} \mathrm{P}^{1}$, for arresting this framo at the termini of its strokes, said parts being applied to a screw threading maehine, and operating substantially as described.
20. 'The driving of the leader serew shaft $F$ ' and the gripping jaw, earrying spindle $G$, by means of a single wheel $J$, which receives intermittent rotary or oscillating motions from shifting wheels $\mathrm{L}^{1} \mathrm{~L}^{2}$, substantially ns deseribed.
21. The adjustable yoke $B^{1}$ applicd upon the cam rods B B , for the purpose of regulating the amom of lateral vibration of jats EI carrying threading dies or cutters E, substantially as described.

75,351.-JAMES S. BLACK, Oakland, Tl.-Lamp Chionney Cleaner.-March 10, 1868.-The springs are attached at the ends to the handle, and to the liead of a rod sliding axially in the handle. The contraetion of the rod eauses the ontward movement of the springs, and distension of their eloth eovering.

Claim.-The disk D, in eombination with the springs I and sliding eentral rod C , all arranged a: deseribed, whereby the springs are presented from bending inward as they are extended, as hereis shown and deseribed.

75,352.-S. C. Blinn, J. J. Alvord, and H Brewer, Tecumselı, Mielı, assignors to S. C. Buinn -Machine for Cutting Moops from the Edge of a Board.-Mrarch 10, 1868. -The free side of the pirot ed supporting frame of the table rests upon a rerolving eam, by whieh means it is inelined, to cause the hoops to be ent beveling; thieker, alternately on the mpper and under sides. The knife has a draw cut by its suspension upon pendulous arms and eon nection to a crank at one chd.

Claim.-The combination of the knife $K$, arms M and $\mathrm{M}^{\prime}$, and guides N and $\mathrm{N}^{\prime}$, with the crank $\mathrm{B}^{2}$ pitman $\mathrm{K}^{\prime}$, and rods L , when the parts are construeted and arraneed to operato so as to permit the knife to trarel with a reciprocating and curved transverse morement, substantially as set forth.
75.353.-HenRy Bögel, Watertown, Wis.Knitting Machine.-Mareh 10, 1868.-Two sets ot necdles, each working independently of the other, may be operated singly or sionultancously. A series of horizontal lateh needles are mored back an l forth by a reeiprocating bar, to whieh motion is imparted by a belt whiel passes orer two oseillating pulleys, and both ends of which are attached to the bar. 'Jo the same reciprocating bar or plate are attached latel openers, whieh open the needle latelea and lay a fresh thread on tho hook of the needle.

Claim.-1. The arrangement of the grooves $p, q$, w and S , in the lower surface of the plate D , in con nection with the movable plate $t$, whereby the groore $S$ may be cloced, and the groores $p$ and $r$ conneeted dircetly with each other, all as set forth.
2. The plate M. sliding on the plate D, and oper ating the plates $t$ and arms $g^{\prime}$ and $h^{\prime}$, substantiall as aud for the purposes herein shown and described.
3. The device for taking up the slaek of the thread consisting of the hars $c^{\prime}$ (or $d^{\prime}$ ) in combination witle springs $c^{\prime}$ and arms $g^{\prime}$, (or $h^{\prime}$, the latter being oper ated hy the plate M. 'all made and operating substantially as herein shown and described.
4. 'The elastic extension $b^{\prime}$ of the spools I and the bars $c^{\prime}$ (or $d^{\prime}$ ) for taking up the slack of the threal, sulsiantially as deseribed.
5. The slotted lateln onener N , in combination wit", the thread holder $l$ and supports $K \mathrm{~K}$ of the spool, sill made and operating substantially as herein shovn and deseribed.

75,354.-Willinm H. Boswell, Buffalo, N. Y. -Lantern.-Mareh 10, 1868. - Improvement on the patent of Mugh Sangster, May 28, 1867.-The catches pass through the concentric bands of the top and lamp, and are withdrawn by a thumb piece for disongagement.

Claim.-The combination and arrangement of the springs I I with the rims $\mathbf{A}$ or $\mathbf{B}$ and openings $\mathrm{C} \mathbf{C}$, as and for the purposes deseribed.
$195,355 .-G e o r g e ~ W . ~ B o w e n, ~ F o r t ~ W a y n e, ~ I n d . ~$ Well Borcr.-Mareh 10, 1868.-The shank of the hand anger is made in detachable sections so as to admit of use in a decper or shallower well.
Claim.-1. The circular plate D, for well cleaning, when provided with holes $a$, for the purpose of allowing the escape of water from the dirt or sand being lifted from the well, as herein set forth for the purpose specified.
2. The plate D, having spring cutting edges, all formed in one piece, aud provided with holes a, as and for the purpose specified.
3. The application of the ropes to the plate D , for the purpose of elevating the tool from the well, as and for the parpose specified.
4. The tool for cleaning wells, constructed as doseribed, consisting of the perforated disk D, having spring cutting-edges, surromided by the rim Fr, and provided with adjustable handle A $B$, as hercin shown aud described.

195,356.-John Bowers, Clinton, Wis., assignor to ELiJah W. Blatsdeli, Jr., Rockport, Ill.-Gate. --Mareh 10, 1868. - The upper part of the gate is piroted to the ends of levers whieh turn on truunions at their lower ends, and one of which has a countcrbalance weight. The gate is swung upward and longitudinally by cords, which extend over pulleys upon an clevated framc. The cords cxtend aloug the side of the way, to cuable the opening and closiug of the gate by the occupants of a conveyance.

Claim.-1. The extension of the main levers F F, and the application to the lower end of the same of the balance weight A.
2. The double pulley block, with dcad eyes to kecp the cord on the pulleys, suspended ou a single rod, or working with journals iu the head of the gate, and operating with a swringing or lateral motion on the opening and shutting of the same, as shown by diagram.

195,35\%.-Alfred Bridges, Newton, Mass.Car Truck.-March 10, 1868.-The car is suspended from the journal box by an auxiliary housing. which is connected to the jourual box by metallic links in such a manner as to allow the lateral vibration of the car independently of the journal box. The journal box is so arranged within the housing as to prevent any twisting or longitudinal movement of the said box.

Claim. - The combination of the journal boxes and housiugs with the links for supporting the car body, and the cross heads upon which said links are held in the mauner described, so that the said boxes, while having a frce lateral motion, shall be prevented from twisting in their housings, as herein shown and set forth.
rg. 358. James II. Burnett, Jr., Newark, N. J.-Trunk.-Mareh 10, 1868.-The front portion of the top part of the trunk is hinged to the baek part at the lid, and may be turned up thereon so as to expose the falling doors of the hinged and fixed portions of the upper part.
Claim.-In combination with a trunk constructed as described, the lid $X X$, made in two sections, hinged together, one section being also hinged to the frout edge of the trunk at $\bar{Y}$, and the other adapted to fit aganst the vertical part of the truuk, both forming an obtuse angle, the removable partition $\mathrm{A}^{2}$ in the body of the truuk, and the hat receptacle, as herein shown and described.
$75.359 .-J . N$. Burton, Senoia, Ga.-Hat Buckle.-March 10, 1868.-The ordinary buekle has a spriug attached to the lower side of the frame, and bearing against the upper side picee. A railWay check may be placed behind the spring.

Olaim.-As a new artiele of manufacture, a ticketholding attachment for hats, consisting of the buckle A, carrying the spring C, all made and operating substantially as herein shown and described.

75,360.-Henry W. Busse, Chieago, M1.-Combined Knob Latch and Door Lock.-Mareh 10, 1868. -The upper side of the bolt has a recess which receives the ead of a vertical bar tumbler. The bolt,

When thrown forward, operates a bent lever, whose upper eud enters a notcli in the latch and prevents its withdrawal. The lock has a contral plate, and the key is made in two portions, one of which is connceted to a rod passing axially through the other part, and turning thercin. The tumbler is thrown up by the former part of the key, (which is the only part passing through the central plate,) and the bolt is thrown back by the latter part.

Claim.-The combination, in a door lock, of the latch B, provided with a notch $b$, the bolt C, provided with a slot $c$, and notches $e f$, the bent arm $D$, the bar $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$, provided with a tongue $t$, the spring a $a^{\prime}$, and the plate $G$, all arranged aud operating substantially as and for the purposes specified.

95,361. -James J. Butts and A. S. Stone, Plaiuvier, Minu.-Universal Joint.-March 10,1868. -The ball has two flanged ribs projecting rectangularly from its sides, and occupying undercut, curred groores in the heads of the arms. The heads have a limited longitudinal morement on the arms; and are made in two parts to allow the removal of the ball.
Claim.-The ball B and arms A A, constructed and connceted substantially in the manner and used for the purpose specified.

95,362.-L. Caldera and L. Montu Turin, Italy.-Piano Forte.-March 10, 1868.-Combined with each pair of strings is a small metallic hammer covered with felt, aud having an elastic handle. A rapiit oscillatory movement is imparted to the hammer by clock-work, acting through a wave-faccd cam. The oscillations of the hammer follow each other so fast that the car fails to distinguish the separate waves of sound, and receives the impression of continuity.

Claim.-1. The method of prolonging the vibrations of the strings of a piano, substantially in the manner and by the means herein shown and described.
2. The combination, with the ordinary striking hammer, damper, and other parts of the action of a piano, of an auxiliary oscillatory or vibratory hammer aud clock-work, or equivalent mechanism for imparting the desired motion to the same, substantially in the manner and for the purposes herein shown and described.
'75,363.-George'J. Capewell, West Cheshire, Conn.-Lamp Burner.-March 10, 1868. - The springs upon the burner stcady the chimney.

Claim.-In a lamp burner, such as herein doscribed, the rim $B$ and standard $E$, provided with the springs $c$ and $d$, when the latter are constructed and arranged in the manner as herein shown and specified, and for the purposes set forth.

V5, 364.-John M. Case, Athens, Ohio.-Angular Shaft Ooupling.-March 10, 1868.-Thc shafts are jointed to the different parts of the coupling, and these are linked together and engage by segmental gears so as to make a gimbal joint.
Claim. -The combiuation of the oblong frames C , haring cogs or teeth $c^{\prime}$, formed upon the ends of their forwarl sides, and the pivoted counecting bars D, with cach other, and with the ends of the connected or coupled shafts, substantially as herein shown and described, and for the purpose set forth.

95,365.-Alfred H. Castlee, Ann Arbor, Mich. -Insulator.-Mareh 10, 1868. The hooked iusulator pin is screwed into a block of wood inserted in a mass of non-conducting substance in a chamber in the lower eud of the downwardly-inclined braeket.
Claim.-1. A telegraph iusulator or braeket constructed with a groove $\mathbf{E}$, substantially as aud for the purpose set forth.
2. The cavity or chamber B and groove E , in combination with the bracket $A$, substantially as set forth

95,366.-Simeon B. Castle, Cortland, N. Y.Elevator. - March 10, 1868.-The "cross-head elerators" are attached to endless belts revolving upon pulleys in a frame which is secured to a wagon which receires the articles raised, whether hay, stones, or other matters.

Claim.-1. The slotted frame A, in combination with the cross-head elerators B, for the uses and purposes set forth.
2. The adjustable table $b$, in combination $w$ ith the elevator heads, for the parpose described.
3. The quadrant-shaped bars $c^{\prime} c^{\prime}$, in combination with the frame $A$ and axle of the driving wheels, for thie purpose of raising and lowering the main upparatus.

75,367.-M. L. Cinaprelf, New York, N. Y., and C. H. Pettir, Jersey City, N. J.-BungMarch 10, 1868. - The dogs slide in radial ways in the lower part of the bung and have lugs cutering convolute cam grooves in the upper part; by tmoning the latter the siid dogs are forced out to engage the sides of the bung-lole.

Claim.-1. The sliding dogs C, formed with inclined planes or faces $e^{\prime}$, and operated by the eccentric grooves $c$, in combination with the two parts or portions A B, substantially as and for tho purpose herein set forth.
2. The spurs or projections $f$, formed upon the lower part, B , of the bung, substantially as and for the purpose speeified.

75,365.-Charles Chimstiax, Milwankee, Wis. -Corn Sheller.-Mareh 10, 1868. - The spring claws hare spiral feed ribs and tectli by which the corn is slelled from the eob.

Claim.-1. In combination with the laand corn sheller A A, the curved gruard plates D D, substantially as and for the purpose set forth.

2 . In combination with the hand corn sheller A A, the set serew E , substantially as and for the purpose set forth.
3. A liand corn sheller, constrneted with the plates A A, as described, and provided with the guard plates D D, spriugs $i i$, and set, scrow E, substantially as and for the purpose set forth.

75,369.-Ciarles B. Clark, Buffalo, N. Y.Clamp for Scrub Brushes.-AIarch 10, 1868.-The head is 1langed to hold the outer side of the brush top. The collar has projections which hold the inwer side of the brush. The said collar is forecd dorrn by the thumb nat upon the serew-threaded ferrule of the staff.

Claim.-Constructing the sliding collar $c$ with the flange $s$, when arranged on the inclined shank a, and operated by a nut E, in the manuer and for the purpose shown and deseribed.
75.370.-Dominicus N. Clark, Eastport, Me. - Railway Chair and Fastening.-March 10, 1868. -One of the jams of the chair may be cast solid therowith and the other attachable by bolts. The bolts are split at the imuer end and spread by a wedge which enters tho split by impingement against the bottom of the hole in the stone slecper.

Claim-1. The chairs C, clamps E, tics F, and sleepers $B$, when said parts arc constructed and combined with each other, substantially is herein shown and described, and for the purpose set forth.
2. The combination of the iron tics $F$, having an enlargement or shoulder $f^{l}$ upon each end, witlitho chairs C, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the intermerliate ties $F$, constructed with stationary jaws $f^{2}$ and shoulders $f^{3}$, formed upon them, and removable jaws $f^{4}$, with the rails $A$ and sleepers $B$, substantially as herein shown and described, and for the purpose set forth.

75,371.-Thaddeus L. Clark, Mount Vemon, Ohio-Mead Block:- March 10, 1868.-The sliafts carry the spur wheels which engage the rack by which the head blocks are actuated, and also carry Whecls which are spirally srooved at the periphery. The spiral groove receives a plate comected to a slecre, and sliding on a spindle attached to the housing of the operating shaft. As the head blocks are moved toward the saw the indicator is moved on the spindle and denotes the distance of the lead block frem the sam.

Clam.-1. The indicating wheels K K, provided with groores $x x$, and different series of figures on
their peripheries in combination with the indieators $j j$, as and for the purpose set forth.
2. The combination of the shafts C C, indicating wheels K K, and ratchet wheels D D, with the hous ings $1 \mathbb{L}^{\circ} \mathrm{H}$, quadrants I I, and lerers E , when constructer and operated substantially as described and used for the purposo set forth.

75,372.-CHarles Colby, Marlison, Wis. Lock for Fruit Boxes, de.-Mareh 10, 1868; antedated September 10, 1867.-The single bourd is angularly grooved in transverse direction, to enable its bending rectangularly, to form the eoruers. The sides are sloted through to reeeire tongues mpan the "bottom." Thoends of the board are lapped, and the onter one being tapered off, its end is bent around rectancularly and pussed throngh the side

Claim.-1. Fastening and loolding the band or cord of tho box by means of a single loop $m$, with donble grooves $b$ e, which double forms a hook which keeps the loon in mortise or slot $k$ : illso the double aroove def, which, when bent, furms a groove to "eceive and hold the end e e of hand or strip, substantially as set forth and deseribed.
2. In combinatiou with the subjeet-matter of the abuve, the doublo bearings or rests $n n$, for the bottom of the loox, substantially as set forth.

75,373.-Claudius O. Collignon, Closter, N. J., assignor to self and Nicholas Colfignow, same place.-Cottage Chair.-March 10, 1868.-The rear braec is hinged to the side pieces and is slotted to receive the cnds of the cross bar at the buek of the seat. Tho whole is aranged to fold together.

Claim. - The combination of the back $A$, seat $B$ and brace $F$, with the srooves $h$ and bar $G$, and their sereral conncetions, as and for the purpose set forth.

195,374.-William S. Cooper, Philadclphia, Pa. - Water Closet Valve.-March 10, 1868.-When the plunger is raised the water escapes from the upper chamber, flowing outside the cup-lcather packing. When the water re-enters this upper chamber the plunger and the ralre attached thereto desccud. The water flows through a slot in a tubular stem, and the length of the slot is rerglated by turning the stem, when by the serew upon it, it is cither raised or depressed to regulate the amount of water passage into the upper chamber, and consequent longth of time in which the water flows through the valve.

Claim.-1. The ralve $\mathbf{D}$, construeted as described, and provided with tho cup-leathers e and $e^{\prime}$, substantially as specified.
2. The fixed hollow central stem $m$ of the cap $C$, with the water passuges $k$, in combination with the valve D and chamber 1 , substantially as set forth.
3. The combination of the regulating serew IF, fixed contral stem $m$ of the cap $C$, passages $l$, and chamber 13, substantially as described and for the purpose specified.
g5, $375 .-$ William S. Cooren, Philartplinia, Pa - Water Closet.—Mareh 10, 1868.-The Iifting rod is adjustable in the end of the lever operating the cup. The hand cup is adjustable in the "lug" by a screw upon its cyliudrieal part. The drippings from the water valre are canght in a bisin and diseharged into a pan through a pipe which is bent so as to hold a portion of the water and stop the escape of fumes.

Claim.-1. A water closet top plate, provided with $\operatorname{lng} \mathrm{L}$, so constructed that the horizoutil lever L may be raised higher than the top plate, as and for the purpose specified.
2. A water closet articulated lifting rod $\mathrm{R}^{\prime}$ combined with lever L, pieco C D, and thumb serew $\mathrm{T}^{\prime}$ $S^{\prime}$, constructed and operated in the manner and for the purpose above sct forth and described.
m5, 8 6.-Tilliam S. Cooper, Philadelphia, Pa. - Valve Cock.-Mareh 10, 1868.-A chamber in the cap lias a small waste socket communicating therewith, through which the water at one end of the pipo is allowed to cseape when the ralve cock is closed. When the valve cock is open the chamber is closed

Claim. - The combination of the valre $n$, spindle II with its serew S , the cap C with its chamber M and Taste passare $t^{\prime}$, substantially as specitiod, and for the purpose deseribed.

75,37g.-Joun S. Cox, Delaware, Ohio.-Refrigerator Cofin.-Mareh 10, 1863.-The head and foot of the cofin communicate with chambers formed on the ends and containing refrigerating material.

Claim. - The double-walled refrigerator coffin, construeted as described, with the ice chambers acat the head and foot of the corpse chamber $b$, said ice chambers having exterior openings $f f$ for the escape of the water, and communicating with the corpse chamber coutaining the rack, by means of openings in the bottom of the inner walls of said chambers, as herein deseribed for the purpose specified.

75,378.-William J. Crane, Carbondale, Pa.Creaser for Cloth. - March 10, 1868.- The implement is clamped to the table or the machine and the crease is made by the adjustable bevel-edged wheel under which the fabric is drawn.

Claim. -The ereasers C, $\alpha c^{\prime}$, and D, constructed as clescribed, combined with the clamp $A$ and set serew $b$, as and for the purpose set forth.
g5,379.-Robert Crumksmank, Lawrenceville, N. J.-Desk and Seat.-March 10, 1868.-Ono end of the curred brace is linged to lugs beneath the fore side of the seat, and the other end is hinged to a horizontal sliding bar resting against a rubber bloek. The seat may be turned up against the desk when desired.

Claim.-1. Connecting the lower end of a curved arm D with the end frames A, by means of sliding blocks E and horizontal guide rods $F$, substantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the rubber block $G$, or equivalent spring, with the grude rod F and with the sliding block E , said spring or rubber block being placed in such a position that the said sliding block will strike against it, both when the seat C is in a horizontal and when in a vertical position.
3. The supporting end pieecs $\Lambda$, when cast with dovetailed upper conds, adapted to fit into corresponding groores formed in the under side of the top B of the desk, as herein shown and described, for the purpose specified.
\%5,380.-William Daggett, 4th, Cordova, 111. - Corn Planter.-March 10, 1868.-The seed cavity is in the side of the slide, and is regulated in size by the adjustable plate whose end is bent down and forms the upper end of the said cavity. The seed falls to the bottom of the spout when the slide is raised and is thrust out by the descending end of the slide.

Claim.-1. The gauge $a^{2}$ for regnlating the size of the cavity $a^{3}$ in the plunger E of a hand corn planter, substantially as deseribed.
2. The corn planter constracted as deseribed, and consisting of tho box $A$, haring partitions $D d$, spring plate $a$, scraper $d^{\prime}$, plunger I , having carity $a^{3}$, gange $a^{2}$, and pin $a^{1}$, all constructed, arranged, and operating as set fortli.

55,381.-ANTIONY G. Davis, Watertomn, Conn. -Umbrella Runner.-March 10, 1868.-The strip of metal is longitudinally slotted and then corrugated to form the head. The inner corners are soldered to the cylindrical part of the runner.
claim.-The cylinder A and flanged cap $a$, in combination with the head $b^{\prime}$, the latter being construeted of the slotted strip $B$, shaped as deseribed, and arranged in such manner that the slots lic contignous to each other, the bends between being solid metal, substantially as and for the purpose set forth.
\%5,35\%-BENJAMIN J. Davis and Isaac S. CraMER, Sergeantsville, N. J.-Cribbing Preventer.Mareh 10, 1868.-The device is attached to the throat lap, and aets to pierce the animal's neck when it draws its head backward in the peeuliar manner practiced in crib-biting.

Claim. -The parts C and B, the one sliding within the other, in combination with the prieking point a and spring s, all substantially as shown and deseribed, for the purpose of prerenting horses from indnlging in the so-ealled habit of cribbing, all as set forth.
eg 5, 3 \& 2 - JOHN S. Davis, Tiffin, Olio.-Har-vester.-March 10, 1868. The fore end of the shoe
is sceured to an arm by whieh it may be adjusted to bring the finger bar in line with the pionan. The tongue has longitudinal adjustment on the lower frame which is attached beneath the axle.

Claim.-1. Attaching the adjustable bar G' to a harvester in such a manner that the finger bar $\mathbb{H}$ and connecting rod $b$ may be held in the same line, or parallel with each other, as and for the purposes set forth.
2. The adjustable arm $G$, in combination with the frame $C$ and shoe $E$, as and for the purpose specified.
3. The block $x$, in combination with the adjustable arm G, shoe E, and frame C, substantially as and for the purpose set forth.
4. The arrangement of the seat $K$ with the bar M, so that the middle of said seat is in a line with the middle of the axle A, suibstantially as and for the purposes set forth.
5. The draw irons L L, in combination with the cross bar $N$, draught pole $T$, and arm M, as arranged and for the purpose specified.
6. The arrangement of the frame $C$ beneath the axle $A$ with the draw irons L L, tongue F , and bar $M$, so that the rear end of the said frame $C$ may bo raised or elevated without elevating or throwing up the driver in his seat, substantially as specified, and for the purpose set forth.
\%5, 38 告- William C. Day, Mohamk, N. Y., and Pardon B. Day, Shelby, Minn.- Wind Mill.Mareh 10, 1868. -The outer edges of the doors are operated by two ropes or chains which pass around rollers. The ropes arc coiled in contrary directions on a windlass, so that tho doors are simultancously either opened or closed. The ropes are attached to the doors by spring strips.

Claim.-1, The arrangement of chain or rope $C$, Trindlass B , and pulleys $e f$, with the doors A , surrounding the wind wheel E , substantially as shown and described.
2. The combination of chain or rope $C$, doors $A$, and springs $D$, substantially in the manner as and for the purpose set forth.
g5,385.-JOHN DEAN, Baraboo, Wis. - Hop Picking Tool.-March 10, 1868. -The teeth are drawn dorn the pole and their sharp points ent the rines therefrom. The inner parts of the tecth detach the hops from the vines to some extent and the operation is completed on a siere.

Claim.-1. A hop-picking instrument. consisting of a rake, having curred tecth $C$ and cutters D D at the ends, substantially as herein shown and described.
2. The diamond-shaped tecth C , with coneare front edges, substantially as and for the purpose herein slown aud described.

75,386.-Julius DeBary, Offenbach, Germany, assignor to Wildiam Enistern, New York, N. Y. Grain Drier.-March 10, 1868.-The grain is mored alternately to the right and left, orer fincly perforated plates, by the slats or endless chains which pass over the plates. Hot air from a blast or other means passes upward through the plates and grain. The Grain drops from the end of each plate to the one immediately beneath.

Claim.-In a malt and grain-drying machine, the outer wooden case $A$, inner metallic ease $a$, with an interposed air space, the adjustable endless chain serapers E , perforated plates G I, imperforato plate $H$, pipes Ix, and zigzag hot-air flue $D$, when constructed, arranged, and operating as described, for the purpose specified.

65,387.-EDWard N. Dickenson, New York, N. Y. - Valve Gear for Steam Engines.-March 10, 1868. -The cut-off is effected by an independent slide. The steam ralre is not opened until the piston reaches the end of the stroko, or a little later, and is then opened gradually for a short time. The exhanst valve does not release the steam until its foree is expended, and then cloes so quickly. The erhanst is kept open so long that no cushion is formed.

Claim.-1. A reversing link, ribrated by one cecentric, capable of being moved in the direction of
its length for reversing, suspended at its neutral point by a radius bar, or other equivalent device, upon which it vibrates, and upon the opposite side of Which it works the valre for the forward and back. Trard motion of the engine, substantially as deseribed, in combination With an independent cut-off apparatus of any sort, for closing the ports which it apens.
2. An independent eut-off apparatus, adjustable while the engine is in motion, by altering the angular position of the eceentric which works the independent eut-off slide, in roference to the line of the erank, substantially as deseribed.
3. The combination of a pin or block fixed in the main shaft. With a pipe surronnding the main shaft to which the eut-off eccentries are fixed, and with an extcrior slidiug slecte surrounding the said pipe, provided with two grooves, one of which reecives the end of the fixed pin, and the other of whiel receives a block or pin fixed upon the eceontric pipe, and one or both of which grooves are spiral, as a derice for the purpose of rarying the angular position of the eut-off eccentries upon the main shaft, substantially as described.
4. A graduated opening through the main port, or valre, in combination with the exhaust openings, so arranged as that one exhaust aperture will be opened before the other closes, and with an independent adjustable cut-off, for the purpose of preventing a "eushion" of the steam and the shook of sudden admission, without "wire-drawing" through the graduated opening in eutting off, substantially as deseribed.

75,388.-Thomas A. Dickinson, Woreester, Mass.-Card Setting Machinery.-March 10, 1868. The operative parts are actuated by the eams on the main shaft. The wire is inserted in the slide and is held between the slide and the spring. When the wire has completed its forward morement the spring is reliered by the lever, and the wire released. The Wire is then held by the jaws while the slide makes the baek morement, at the end of whieh the lever is withdrawn from the spring which closes the jaw upon the wire. As the slide again advances, the wire is thrust through the pipe, and into the leather, to form the card. The wire is antomatically eut.

Claim. - 1. The round slide $M$, construeted and operating as described.
2. The combination of the slide $M$, slide $i$, link $P$, and lerer $Q$, in the manner described.
3. The mode described of elamping the wire to the slide $M$ by means of the jaw L and spring $K$, operating as specified.
4. The elamping jaws $c$ d, operated by the spring S, substantially in the manner set forth.
5. The cutter cylinder $\bar{\nabla}$, constructed and operating as described.

75,389.- William B. Dodds, Cincinnati, Ohio, assignor to Dodds, MacNeale \& Urban, same place.-Door of Fire proof Safes.-Mareh 10, 1868. The back plate of the door is hinged so as to give access to the works of the lock.

Claim.-The prorision, in a fire-proof safe, of the auxiliary door C, hinged to, and, when open, affording access to the entire lock and door-bolt movement and filling of the door proper, as set forth.
$75,330 .-\mathrm{T} . \mathrm{B}$. Doolittle, Bridgeport, Conn., assignor to himself, GEORGE Doolitille, and GEORGE H. Dimonn.-Lamp shade.-March 10, 1868.-The corrugated shade has a spiral spring bearing against the ehimney.

Claim.-1. A lamp shade or reflector, formed of sheet metal, adapted to be applied to the chimney of a lamp, and so eorrugated or crimped as to bo capable of sufficiont spring or elasticity to permit it to be sprung on to the chimney, substantially as described.
2. The employment, in combination with a shade or reflector, of a spiral or coil spring or springs arranged in the upper edge of the shade so as to roll orer a spring-back, substantially as deseribed for the purpose set forth.
3. Forming a corragated or crimped metallic shade, with projecting teals or lips $s s$, substantially as deseribed for the purpose set forth.

55,391.-Charles Doty, St. Louis, Mo.- Appa ratus for Tanning in Vacuo, and for Other Pur-poses.-Mareh 10, 1868. -The receiver for the leather is connected by a pipe with stop-eocks to a scparato steam condenser, by which it is exhausted of air.

Claim.-The ressels $A$ and $B$, when coupled together with the pipe D , and otherwise provided with the cocks $\mathrm{C}, a^{\prime}$, and $h$, and doors $a b$, all arranged and operated substantially as herein shown and deseribed.

195,392.-S. B. Dougherty, Bordentomn, N. J. assicnor to himself and John Ashcroft, New York, N. Y.-Safety Valve.-March 10, 1868.-The lower end of the close-bottomed cylinder is let down into the steam drum, and has side perforations which admit the steam to an annular space around tho valve eylinder. Tho latter rests on serits in the outer eylinder at the upper and lower ends of the annular steam spaee. When the valro eylinder is raised from its seats the steam passing througly the lower aperture exhausts through the center of the valvo eylinder.

Claim.-1. The arrangement of the crlinder A, with its perforations $f f$, annular chambers E a H and ralve-seats I I, substantially as deseribed and set forth.
2. The construetion of the inner cylinder or donble seat valre K, with its reeess L, shoulder $m$, seats $\hbar$ and $h^{\prime}$, and internal steam-cxit opening $n n^{\prime}$, substantially as set forth and deseribed.

75,393.-Whliaj O. Draper, Albert C. Swebtland, and George H. Draper, North Attleboro, Mass.-Imitating Cluster-Jewelry.-March 10, 1868. -The "stones" are not formed separately, as usual, but consist of bosses disposed on a slass disk of similar material, and are covered by a singlo metallic plate suitably perforated.

Claim.-The method of construeting eluster-work jewelry, substantially as herein deseribed.

75,394.-A. A. DUNK, Philadelphia, Pa.-Print ing Press.-March 10, 1868. -The nipper shafts aro journaled in wheels of larger diameter than the platen-erlinder and the series of nippers outnamber the platen surfaees. The platen-cylinder has longitudinal recesses in its periphery into which the nipper slafts enter when iu proximity to the formcylinder, and by the larger diameter of tho nipperwheels the sliects are earried to a firesh surface at eacli revolution to recoive the portion put on in fiesh eolor. The inking rollers are moved radially, to bring them to their proper type and to aroid the forms earrying another culor, by cam groores which give the necessary motion to their journal-frames. The distributors have their reciprocation by the obliquity of their motive wheel.
Claim.-1. The combination of the form-cylinder $\mathrm{D}^{\prime}$, the eylinder G sepurated into as many sogmental platens as there are forms on tho said cylinder ${ }^{\prime} \mathrm{D}^{\prime}$, and nippers construeted in the manner described, or any equivalent to the same, but, in number, one in excess of that of the forms or segmental platens, and arranged to revolve in a eirclo larger in diameter than, but cecentric with, that of the platen-roller, all substantially as and for the purpose herein set forth.
2. The groores or channels $b$ of the cylinder $G$ and interroning segmental platens, in combination with the series of nippers, so many in number in respect to the grooves, and revolving in a course so eccentric with that of the cylinder that each set of nippers will transfer a sheet from one platen to the other, and will find its way from one groore to another, all substantially as and for the purpose herein set forth.
3. The said revolving nippers, moring in a circle eccentric with the cylinder $G$, having segmental platens, in number, ono less than that of the nippes's, in eombination with the devices herein described, or any equivalent to tho same, by the aid of which the paper, carried by any one set of nippers, shall be relcased, but not before it has been carried round as many times as there aro platens on the said eylinder.

75,395.-Valmolex A. Dunn, West Peru, Me. Anvil-Cutter.-March 10, 1868. -The lower cutter is upon one oud of a lever whose other end is elovated
by a spring to open the jaws. The jaws are elosed by a blow of the hammer npon the outer end of the lever.

Claim.-The improved shears, composed of the fixed ar'm $b$ and jaw $B$, lever $\mathrm{C}^{\prime}$, C , and spring D , combined and arranged in manner substantially as above set forth and deseribed.

195,396.-Daniel W. Dyer and James H. McVavgh, Philadelphia, Pa.-Sash-Bead Fastener. Mareh 10, 1868.-The bead is seenred by a scries of drop-catches pivoted in the framo.
Claim.-The eatch E , constructed snbstantially as hercin shown and described, in combination with the slotted plates F and D, beads B and C, either or hoth, and easing A , as and for the purpose herein set forth.

95,39\% - Walter A. Eddy, East Randolph, N. Y.-Sect for Vehieles.-March 10, 1868.-The two sliding bars by which the seat is secured to the side of the box are connected to the lever at different sides of the fulcrum, so as to be simultancously driven forward or retracted.

Claim.-The arrangement of the lever B with the connecting rods C C, piates D D, when sceured or adjusted to the bottom of a seat $A$, for the purpose of securing the same on a buggy, wagon, or euttertop, substantially as and for the purpose hercin set forth.

195,398.-Henry Eldridge, Lynn, Mass.-Boot and Shoe.-March 10, 1868.-A series of boards or rollers, around which the "lasting" is wound, are suspended oll adjustable centers, and the lasting unwound from them in several layers, which rest upon a bench, preparatory to eutting out.

Claim.-Suspending and cornbining the rolls of material in the manner described, whereby they may be unwound and lapped one upon another, essentially as herein shown and speeified.

95,399.-JoHN J. Ellis, Auburn, N. X.-Wreneh.-March 10, 1868.-The axial shank is extended from the end of the handle, forming the fixed jaw of the wrench. The moving jaw has a reetangular ratchet-arm which passes through a mortise in the fiscd jaw.

Claim.-The shank B, extending through the handie $A$, and furnished at one end with a scrowthread, upon which is serewed hammer C , the opposite end of shank $B$ boing formed with a jaw, all arranged in combination with jaw D and slide E, substantially for the purpose set forth.

75,400.-D. L. Enerson, Rockford, Ill.-Petroleum or Gas-Stove.-March 10, 1868.-The pipes are so coupled to the main supply.pipe that they ean be raised from the stove and thrown orer out of the way wheu desired.
Olaim.-The oil-reserroir D and lamp I, (as one vessel, ) in combination with the tubos B B, and burners $\mathrm{E} \mathrm{E}^{\prime}$ and $\mathrm{F} \mathrm{F}^{\prime}$, construeted as described, and operating as and for the purposes set forth.

95, 401.-E. W. Famman, Orfordrille, Wis.-Harvester.-March 10, 1868.-The oscillating bar aetuating the cutter, reccives motion from a zigzag cam-groove in the periphery of a wheel upon the axle. The said bar is pivoted to a hinged pioce which may be thrown up to disengage the bar from the cam-groove.
Claim-The hinged or pivoted plate $A^{*}$, combined with the lerer E, cam-wheel C, and lever (r, arranged apd operating substantially as and for the purpose specified.

95,102.-Moritz Fiedler, Rochester, N. Y., assignor to himself and John Klens, same place.Fiving MIachine.-Mareh 10, 1868. -The file receives vertical reciprocation from a pitman whose crosshead has a horizontal slot traversed by a crank-pin on a rotating disk. The table is piroted and has a semicircular rack which is engaged by a screwgear to incline the table.

Craim.-The combination of the table $a$, toothed segment $d$, and worm $e$, with the slotted pitman $n$ and crank $r$, arranged substantially as described.

75, 103.-Charles Ford, Forest City, Ill.-Com-Husker.-March 10, 1868.-As the machine is pushod before the horses the stalks are drawn down by the inetined rollers, and the cars are cither crowded out of the husks or broken from the stem by the spiral snapper. The ears are earried baek over the rubber rollers by which the lusk and silk are taken from the car as it passes backward to the elevator which delivers it into the wagon.

Claim.-1. A scrrated feed hard roller H, and rubber-roller I, usod as herein set forth, for husking corn, by eatching the husk and stalks and passing them through beneath, while the ear is left on top,
2. The rollers made, as herein sct forth, (Fig. 2, ) smaller for near one-third their length at the front end, to admit the stalks between the rollers.
3. The use of the gain-thread $J$, which increases the acuteness of its angle with the roller, as it runs back (sec Fig. 3) from the point to the swell of the rollers, thereby pulling the cornstalk gently over at first, but more quickly afterward. and also keeping the stalks parallel with the threads that pull them, thus avoiding the danger of breaking them off before they get into the hopper.
4. The nse of the right-hand gain-thread on the front end of the left-hand roller, and the left-hand gain-thread, (see Fig. 1, J,) on the right-hand roller, in eonncetion with the inward and downward motion of the rollers.
5. The hopper F , made and used as herein set forth.
6. The snapper G, made and used for breaking the cars from the stalks ancl husk, while the latter are hold firmly beneath, between the rubber and serrated rollers, and also for earrying the ears back under the presser.
7. The presser T, for pressing the ears down and rolling them over as it passes them back betreen the rubber and scrrated rollers, so that any romaining husk or siik may be taken off before they pass out onto the droppci.
8. The dropper L, arranged as hercin lescribed, in conncetion with the mouth $m$ of the machine, in such manner that the ear-corn is delivered in a wagon, if driven for that purpose, without other assistanco
9. The broaker Z, made and used as herein set forth, to break the tops of the stalks back, so they will pass down between the rollers before they get far back on them.
10. The combination of the gain-thread $J$, rubber roller I, serrated roller H, fenders S , snapper $G$, presser T, hopper F , dropper L, gearing N , and frame D , arranged and used as hercin described.

195,404.-Andre Foubert, New York, N. Y.Manufacture of Vinegar.-March 10,1868. - Improvement on his patent, March 19, 1867. The vapor from mash or shavings passes into tubs containing concentrating platforms, and screens that admit a shower of acidulated water to condense the vapor. The liquor runs ont, and over the shavings in a yat.
Claim,-An craporating tub containing platforms and vapor-tubes, in combination with the apparatus for supplying water and vinegar, and with the rat containing shavings, substantially as and for the purposes set forth.
$75,405 .-J o h n$ Freelayd and Daniel Ward, New York, N. Y.-Machine for Coiling Springs.March 10, 1868. -The mandrel turns in its adjusting serew, and has a longitudinal slot which receires tho end of the plate of which the convolute spring is formed. The mandrel is rotated by the ehuck noon the head-stock spindle. The rost bears npon the under zide of the screw-plate, and is automatically drawn downward as the coil of metal increases upon the mandrel.

Claim. -1 . The slotted coiling spindle $e$ and the sliding screw $\mathbf{E}$, in combination with the chuck $b$, all constructed, arranged, and oporating substantially as and for the purpose herein described.
2. The guide-rest $H$ and the sliding block $I$, in combination with the coiling spindle $e$, constructal and operating substantialiy as and for the purpse herein described.
3. The combination of the pulleys $C$, the chuck $b$, the coiling-spindle $e$. the sliding screw $E$, the quide
rest $H$, and the sliding bloek I, constructed, arranged and operating substantially as and for purposes set fortlı aud deseribed.

75, 40G.-Treffle Gairceau and Edmard De la Granja, Boston, Mass.-Fabric for the Manufacture of Hats, Caps, \&e.-Mareh 10, 1868.-India-rubber, dissolved, from 2 to 20 parts ; and paraffine, from 1 to 5 parts, are added to pape; pulp, and the same mar be rolled out by itself or upon muslin.

Claim.-1. The composition above described, substantially as and for the purpose set forth.
2. 'The process of manufacturiug hats, caps, bonnets, neek-ties, and ribbons, substantially as speeified.

75,40y.-Dendarin Gartin and R. J. Pettibone, Oshkosh, Wis.-Joint for Pipes.-Mareh 10, 1868.-One of the elbows has a socket to receive the end of the other elbow, and thes are held by a transrerse bolt passing axially through the coupling, and having a head and nut resting against suitable seats at the points of the elbows.

Claim.-The parts A A, constructed as specifierl, and used with the bolt $a$, whieh said bolt passes transversely through both of said parts and is suitably secured on both of their outer sides by nuts and washers, or their equiralents, as set forth.

75,405.-GEORGE Gibis and William Gibiss, Canton,Ohio.-Singlctree.-March 10, 1868.-The end elevices of the doubletrec are sceured to springs at the rear thereof.

Olaim.-The tree a, provided with the short disconnected springs $b b$, loops $e c$, and one or more indicators e, for marking the number's on said loops, all combined and used substantially as set forth.
\%5, 109 -Trancis M. Gifford, Eric, Pa., assignor to himself and John C. SELDEN, same place.Thip Lock:- Jarch 10, 1808. -The jaws are dranin together by a serew bolt and engage the handle of the whip. The bolt is turned by a suitable key.

Claim.-1. A lock for secmring a whip in the socket apon the dasher of any vehicle, composed of the arms A, forming two sets of jaws operated by a screw $D$, and key E , and a spring $a$, or its equiralent, substantially as shown and described, and for the purposes set forth.
2. The arms $\boldsymbol{A}$, in combination with the vibrating nut $C$ and the wire spring $a$, and the vibrating socket $B$ and the serew $D$, substantially is shown and described, and for the purposes set forth.

75, 410.-1. J. Going, Clinton, La.-Cotton Seed Planter.-Mareh 10, 1868. The cotton seed is carricd through a laterally adjustable longitudinal slot in the hottom of the liopper by the radial arms of a hub attaehed to the turning axle.

Claim.-1. The fixed metallic strips $g g$, in combimation with the laterally adjustable metallic strips $\hbar h$. placed at the bottom of the hopper I, and the radial arins $e$, attached to the axle C, and working. between the strips $g g, h h$, all construeted and arranged for joint operation, substantially in the manner as and for the purpose set forth.
2. The furrow opener II and harrow $F$, in combination with the cotton seed distributing mechanism, all construeted, arranged, and applied for joint operation, substantially as and for the purpose specified.
7.5.411.-TOIN Grant, Northampton, Mass.Grinder for Planer Kinives.-March 10, 1868.-The grinder is splined to a shaft which is secured to the frame of the planer and turned by a hand crank, so as to grind the cutters while in the head.

Claim.-A device for sharpening the knires of planers and similar tools, eonsisting of the serew II, piece $G$, wheel $D$, and ground spindle $F$, the parts and the whole being construeted and arranged sub. stantially as shown.

175, 112.-JoIn G. MavFIELD, Cineinnati, Ohio.Surgical Cup.-March 10, 1868.-The edge of the cup has a groore to receive the inner edge of the rubber packing whose outer edge rests against the person.

Claim.-The provision, in a surgical eup, of a groove $a$, to receire and hold an India-rubber lip B. in the manuer set forth.

75,413.-Isaac Hall, New York, N. Y.-MIachine for Carving in Wood.-Mareh 10, 1868.- Tho pattern is placed on the bed plate and secured in place by the sliding blocks, which are adjusted by tho set serews. One or more copies are made either of the same size as the pattern or in any proportion thereto. When carring a copy of the exact size of the pattern, the tracer is arranged directly beneath the entter. In this cuse the sliding firame is so atjusted that its central point may be in line with the turning joints of the piroted frame. When cutting eopies of different size the sliding frame is adjusted so that one of its ends projects further than the other, and the tracer is moved outward or inward from the rertical line of the cutter of the frame. This is done by a scale.

Claim.-1. The combination of one or more piroted or swinging frames I $J$, constructed substantially as herein shown and described, with the pivoted frame II, as and for the purpose lierein set forth.
2. The frame II, adjustable with relation to the piroting frame $C$, for the purpose of carring two exaet copies of the pattern at the same time, or increasing or diminishing the size of the copy in exact proportion to the pattern, substantially as herein shown and described.
3. The tracer S , adjustably seeured to the slotted bar or arm O of the swinging or piroted firame I hy means of the slotted bar $V$, rods $W$ Y , and sockets I Z X , substantially as herein shown and deseribed, and for the purpose set forth.
4. The combination of the slotted bar $V$, piroted rod W, and adjustable pivoting rod $\bar{T}$. With each other and with the tracer $S$ and slotted bar or arm $O$ of the piroted frame I, substantially as herein shown and described, and for the purpose set forth.
5. The combination and arrangement of the pulleys $L$ and $N$ with the pivoted frame or frames $I$ and $J$, frame II, and driving pulless I) E, for the parpose of kecping the band or bands F tant while operating the eutters, whatever may be the relative positions of the said firames, substantially as herein shown and described.
6. The arrangement of the holder and frame $P$ with relation to the piroted frame $I$, tracer $\mathbb{S}$, and cutter in the arm $i$, substantially as described, and for the purpose specified.

75, 4 4.-Tames H. Mall, Maysrille, Ky.-Attaching Colters to P'low Beams.-March 10, 1868. The side plate against which the colter is clamped has longitudinal arljustment on the beam, to allow a similar adjustment in the eolter.

Claim.-The said wrought-iron sliding plate, with its flanges, mortises, and adaptation to the purpose of regulating the position of and hohling fast the eutter to a plow beam.

75,415.-R. Henry Hall, Taunton, Mass.Furnace for Smelting Ores of Lead and other Metals. - March 10, 1868. - The receirer is constructed of iron, lined with fire-clay, and is placed beneath the spout extendiug from the timp lole. The receiver has a hood of similar construetion. The metal, slag, and flame are allowed to issue from the tamp hole. The slag flows away through the spout at the upper part of the receiver, and the metal is drawn off through the tamp hole communicating with the lorrer part of the receirer.
Claim.-'The applieation of a receiving basin, as herein deseribed, to furnaces used for smelting ores of gold, silver, or lead.

195,416.—JOIN HanPER, Millsboro, Ioma.-Hay Raker and Loader.-Mareh 10, 1868.-The turning rake head has tangential teeth which engage the hay, and the baek rotation of the head is mrevented by the ratchet and pawl. The head is smpported on pivoted derrick arms, which are raised by a windlass

Claim.-1. The revolving rake head $G$ attaehed to arms E E, nud used in combination with the ele rating cords I and spool C, and the ratchet $F^{\prime}$ and pawl $H$, said parts being arranged to operate substantially in the manner and for the purpose set forth.
2. In combination with the frame $A$ and clevating arms E , the pieces D , piroted to the frame, and held extended by the pins $D^{\prime}$, so as to permit the width of
the frame to be diminished when necessary, substantially in the manner set forth.

95, $41 \%$ - Samuel Harris, Springfield, Mass.Grain Separator.-March 10, 1868.-The sieve is longitndinally reciprocated by a rotating tripart cam, which turns in a slot of the stem and impinges upon anti-friction rollers at the ends of the slot. The sieve has vertieal agitation by projections upon its bottom, which strike upon rollers journaled in the frame.

Claim.-1. The combination of the slotted rod E , having rollers $c$, with the triangular surface cam $D$, when used and arranged upon a sifter, substantially as herein deseribed.
2. In combination with the above, the double-inclined agitators e e, \&e., arranged as described.

95,418.-Henry M. Hartshorn, Malden, as signor to limself and Daniel Fobes, Boston, Mass. -Lamp Shade.-Mareh 10, 1868.-The shade admits of folding into small compass for carriage or putting away.

Claim.-1. As my invention, the folding shade made of trapezoids, connected at their edges by strips of cloth, or the eqnivalent thercof, so that the several sections may be either folded on unfolded as specified.
2. The combination, as well as the arrangement, of the series of seetional supporters $c$, and a folding shade composed of a series of trapezoids a, arranged and comected or hinged together at their edges substantially in manner as specified.

95,413.-Charles Hayden, Collinsville, Conn. -Subsoil Attachment for Plow.-Mareh 10, 1868.The subsoil share is at the foot of a standard which slides in a plate upon the beam and another at the sole of the plow.
Claim.-1. The share standard $F$, fitted in the plates $\mathrm{E} G$, and retained at the desired height by the pin $d$, in one of a scries of holes $c$, substantially as and for the purpose specified.
2. The combination of the lever I and pins $e$ with the share standard F, all constructed, arranged, and applied substantially in the manner as and for the purpose set forth.
75,420.-G. W. Haynie, Olney, Ill.-Car Coup-ling.-March 10, 1868.-The pivoted rack block engages a rack upon the coupling pin, and raises the same as the said block is swung up by the entering link. When the link has passed the block and pin the latter drops down and the car is coupled. The falling of the pin and block is assisted by a spring, against which the latter inpinges when thrown np.
Claim.-1. The combination of the segmental cam pinion $\mathcal{B} b$ and coupling pin $\mathrm{E} e$, when the same are adapted to be operated by the coupling link, substantially as deseribed.
2. The spring $\bar{F}$, applied and operating substantially as and for the purpose specified.
G5,421.-Daniel E. Hayward, Malden, Mass. -Scrub Brush.-March 10, 1868. -The brush has alternate transverse rows of rubber and bristles.

Claim. - As an article of manufacture, the brush as described, viz, when composed of alternate rows of rubber and bristles.

95,422. - D. K. Hickok, Morristille, Vt.Clothes Pin.-March 10, 1868.-One of the blocks has a shoulder which has a recess, into which the cord enters and is retained by the spring blook, which is drawn toward the shoulder by embracing rubber bands.

Claim.-The blocks A and B, constructed substantially as described, and connected together by means of the bands or elastic straps C C, as and for the purpose set forth.
g5,483.-George Hoover, Richmond, Ind.Trammel for Stair Rails.-Mareh 10, 1868. -The "tram" turns on an adjustable rod, and when the stuff is placed upon the draught board in an oblique direction, the irregularly curved lines are traced upon it by the tram.

Claim.-1. The herein-deseribed tram, composed of the cylinder F and arm E , in combination writh
rod I, substantially as deseribed, and for the purpose set forth.
2. The horizontal rod I, vertical adjustable rods $G$ and $\Pi$, in combination with the collars $K$ and $K$, clutehes $J$ and $J$, and draught board $\Lambda$, substantially as set forth, and for the purpose speeificd.

95,424.-William L. Horne, Batavia, Ill.Steam Water Elevator.-Mareh 10, 1868.-Improvement on his patent of May 28, 1867. An upturned siphon pipe emanates from the lower part of the erlinder and furuishes means of escape for air. The upper part of the valve chamber communicates with the upper part of the siphon pipe when the ralve is closed against the admission of steam.

Claim. -The combination of the siphon $n$ with the steam water elevator, construeted and operated substantially as herein set forth.
95,425.-Robert B. Hugunin, Cleveland, Ohio. -Clothes Wringer.-Mareh 10, 1868.-The upper roller is depressed upon the other roller by wooden springs extending from one follow-block to the other, and borne upon at mid-length by a temper serew.

Claim.-'The arrangement of the right and left helical gear wheels $B^{2}$ and $B^{\prime}$, in combination with the elastic rollers $A$ and $A^{\prime}$, end pieces $C$ and $C^{\prime}$, journal blocks $E$ and $E^{\prime}$, spring bars $F$ and $F^{\prime}$, stop $H$, and adjusting serew' $J$, substantially as and for the purposes specified.

195,426.-C. S. Hunt, Parish of Terre Bonne, La. -Stopping and Starting Cars.-Mareh 10, 1868. The loose pulleys have bevel gears which engage a bevel wheel turning loosely on a vertical arbor. This wheel insures the opposite rotation of the loose pullers upon the axle. The outer sides have crown ratehets, by which they are clutched to ratchet collars sliding upon the axle, but having diametric pins traversing a slot in the axle to insure their rotation therewith. Chains connected to a spring are wound on the pulleys, when they are caused to rotate, by clutching to the axle, and the car is stopped by this means. When starting, the other clatch is brought into operation; and the first clutch being disconnected, the foree of the spring is expended upon the axle in starting-the car.

Claim.-1. The loose pullers $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$ on axle C , in combination with chains $E$ and $E^{\prime}$ and spring $D$, arranged and operating substantially as and for the purpose set forth.
2. The loose pullers $\mathrm{F} \mathrm{F}^{\prime}$, chains $\mathrm{E} \mathrm{E}^{\prime}$, and spring $D$, in combination with clutches $G G^{\prime}$ and their actuating levers, arranged for joint operation substantially as described.

195,42\%.-John Hrslop, Jr., and Charles E. Phillirs, Abington, Mass.-Lifter and Tongs.Mareh 10, 1868. -The tougs have vertical and horizontal jaws, and a notched projection on one jaw forms a cover lifter.

Claim.-The lifter and tongs, constructed as described, consisting of the parts A 13 pivoted together, the part B provided with a longitudinal slit for the passage of the part $A$, and having at its forward end the double lips $d d$ and $e e$, the part $A$ having the lip $b$ and the lip $c$ provided with the shoulder $d x$, all arranged and operating as deseribed for the purposes specified.

75,428.-Joserh B. Johnson, Lynn, Mass.Machine for Shaping the Sole of a Shoe.-March 10 , 1868.--Improvement on his patent, Norember 26, 1867.-The sole is pressed into form between an up per fixed mold bloeis and the last upon the platen, which is raised by toggle levers actuated by a treadle Upon the platen is a turning bar, each end of which has a post with a last at its upper end. When operating, one sole is clamped upon one last, while an other sole is being subjected to pressure upon the other last.
Claim.-1. The combination of the rotary bar $u$, or the same and the auxiliary last $v$, with the main last $u^{\prime}$, the mold A, and the press.
2. The application of cach last $u v^{\prime}$ to the rotary bar $u$, so as to be capable of being rerolved on an axis passing through or extending from the last.
3. The application of the mold $A$ to the areh bar
of the press, by means substantially as described, or the equivalent thereof, whereby such mold is enabled, under pressure of the sole against it, to adjust itself to the sole.
4. The combination and amancement of the facing plate $z$, with the last and its clastie eushion $y$ applied thereto, as represented.
5. The combination of the slide bar $k$, the wedge $m^{\prime}$, and the auxiliary treadle lever 0 , with the toggles and their operative pitman and treadle lever.
6. Each last, as made with the extra or lower foot, arranged with the main foot, and being for the purposes as set forth.

75,429.-DANEL KeliogG, Jackson, Mich.Gas Heater.-Marel 10, 1868.-The air-regulating dish is formed in the segment of a sphere, and has its concave side npward. The influx of air is regrllated by the rertical distance between the edge of the dish and the bottom of the stove. Above the frame is a rotating disk, eonsisting of a series of inclined scetoral wings which distribute the heat.

Claim.-1. The employment of a revolving disk, substantially as shown and described, for the purpose of spreading the flame of a gas or oil stove, all as set forth.
2. The adjustable dish $H$, in eombination with the burner $b$ and disk K , substantially as and for the purpose shomn and described.
3. The rod $c$, and clerating screws $m$, for adjusting the height of the disk above the burner, substantially as shown and deseribed.
4. Providing the rod $e$ with a serew thread or other equiralent derice, for the lateral adjustment of the disk, substantially as and for the purpose shown and described.
5. The ring damper $G$, in combination with the disk K , substantially as shown and deseribed, and for the purpose specified.

75,430.-GEORGE KINNEY, Bristol, Ind.-Horse Hay Fork.-Mareh 10, 1868. -The bar, by whose morement the hooks are thrown out, is operated by a bell-crank lever. The eentral stem is flanked by two long, vertical tincs.

Claim.-The combination of the stem or central prong $A$, eross bar $B$, side prongs $C$, arm $D$, piroted hooks or fingers E, shield $F$, and trip lerer $G$, with eaeh other, said parts being construeted and arranged substantially as herein shown and described, and for the purpose set forth.

75, 431.-Almas A. Knowlton, St. Albans, Vt. -Artificial Teeth. - March 10, 1868. - After the closing of the mold upon the teeth, small serews are inserted, which enter the lingual side of the tooth. The screws are extracted after the teetle are baked, leaving a screw-threaded socket in the same. The vulcanite enters the cavity and serves to secure the tooth to the plate.

Claim.-Artifieial teeth, provided with holes $c$, formed with a serew thread, when seeured to a vulcanite or rubber base $b$, bj means of screws $d$, of the same material, all constructed and arranged substantially as and for the purpose set forth.

75,432.-A. E. Lazell, West Meriden, Conn.-Hygrometer.-Mareli 10, 1868.-A semi-circularstrip of wood, having the grain running transtersely, has its convex sidecoated with water-tight cement. The free end of the strip is conneeted to a registering apparatus whieh indicates the humidity by the expansion of the exposed side of the strip.

Claim. - The eurvilinear strip of wood, eonstrueted as described, and having one of its surfaees rendered impervious to moisture, in eombination with an index, substantially as and for the purpose specified.

75,133.-William Leighton, Wrandott, Mich. -Fagot for Railroad Rails.-Mareh 10, 1868. - The steel has a dove-tail, longitudinal rib which enters a suitable groove in the iron, and the line of division extends from the thinnest part of the rib to the upper corners of the fagot. The stcel by successive rollings is made to corer tlie sides of the tread in the finished rail.

Claim.-The Y or dove-tail shaped piece of steel,
with $V$-shaped top, in conjunction with ans suitable fagot which will make a rail, as skown in lig. 2.

55, 134.- H. W. Libber, Cleteland, Ohio.Catamenial Sack.-March 10, 1868.-The sack is of oil silk, and its edges spread out by elastic binding. It is connected by an clastic band to an adjustablo elastie belt.

Claim.-The sack A, haring the elastic picees a a in ereh side to gire it shape, and tho chastic band $B$, in combination with the adjustable belt $D$, all eonstrueted in the manner described as and for the purpose set forth.
\%5,435.-NOYES Lidnell and Mommis Lidnelil, Lafarette, N. Y.-Corn Planter.-March 10, 1868.The seed tubo has a hinged side which is operated by a lever, and a pin on the rotating feed wheel, and acts to drop the seed which rests at its lower end. A bell is antomatically rung by the said wheel to indiente the time of dropping.

Claim.-1. The eombination and arrangement of the tube C , lever E , pin D , and bell H , for the purpose deseribol.
2. The slide J, as leseribed.
3. The method clescribed of adjusting the feed wheels on the shaft $O$.
4. The method deseribed of throwins the shaft $O$ n and out of gear.

75,436.-M. F. Lowth and T. J. Mowe, Owatonna, Minn.-Cultivator Tooth.-March 10, 1868.The standard and braco are made in one piece. The former is hinged to the beam and the latter passes through a vertical slot in the same. The brace passes throngh a link resting in a horizontal transverse slot in the beam and the brace is clamped by the link whieh is dramn against it by a wedge inserted between one of its ends and tho beam.

Claim.-The combination of the beam A, having the mortises $m n$, as cleseribed, with the link $c$, wedge $w$, and hinged tooth ' I , having the brace B , substantially as and for the purposes set forth.

75,437.-C. A. LUNDY, Marshalltown, Iowa.Straw Cutter.-March 10, 1868.- The V-shaped knife is bolted to the frame and the fore encl of the box secured to a sash reciprocated vertically by pitman conncetion to the erank.

Claim.-The box $A$, provided with the $V$-slinped knife, in combinatiou with the spring $N$, feeder $L$, gate $H$, and spring gauge $m$, all arranged in the manmer herein set forth and described.

25,138.-Major B. Manshall, Draw Bridre, Md.-Animal Trap.-Mareh 10, 18(i8.-The spring pole is conmected to two loops which hang through slots in the table. The spring pole is tripped by a morement of the bait, and the animal is dramil up by the loop.

Claim.-1. In an animal trap, a table A, haring two slots $a \quad a$, and a central apertare $B$, and provided with legs c cece, and standards $\mathrm{D} \mathrm{D}^{\prime}$, substantially as and for the purpose speeified.
2. The combination of the spring pole $O$, cords $C$, e e, bar $N$, rods $K$ and $T$, and chokers $o a$, substantially as and for the purposo set forth.
3. The notehed and graduated bar N, when used in a trap of this description, substantially as aud for the purpose set forth.

## 75,435.-Canceled.

75, 40.-W. W. Mratirews, Yates City, Ill.-Treblatrec.-March 10, 1868, -The imer ends of the two doubletrees are double the length of the other ends, and the singletree of the middle horse is conneeted to them.

Claim.-l. The staple attachment $d e$ of the inner ends of drawing bars a a ; and
2. The eurved hook $b$, shown in Fig. 2 , cach and all substantially as shown, and in combination as and for the uses and purposes herein expressed.
g5,441.-James W. Maxey, Plymonth, Ind.Producing Motion for Sawing Machines.-Marcli 10, 1868. -The drag saw is driven by a erank on the main shaft and the cireular saw by a belt from the
same. The mechanism is driven by a pair of hand levers.
Claim.-The hand levers F F, operating alternately, and connected to wheels $D$ and $R$ by pitmen E E and eombined with shaft B, wheel G, shaft C, drums II, and balanee wheels I I, when constructed to operate substantially as described
\%5,442.-Theodore McDowell, Light Street, Pa., assignol to T. McDowell and A. McDowell. -Producing Hot Blast in Furnaces.-Mareh 10, 1868. - The air engine and air pump pistons are conneeted to opposite ends of a walking beam; both have donble action and are connected to a scrpentine pipe in a elamber at the top of the eupola and eommunicating therewith. The engine cylinder has double the diameter of the pump so that the foree will be double mpon its piston to what it is upon that of the pump, and consequently will drive the latter. The pump and cugine have suitable valves and communieate respectively with the outer air and the blast jipe.

Claim. -The engine $c^{\prime}$, pump c, pipes I, ressels F and ehamber $H$, when combined snbstantially as and for the purpose explained.

75,443.-Joseph P. Minburn, Washington, D. C.-Tumbler Washer.-March 10, 1868.-The pressure of the tumbler upon the valve stem opens the valve and the water is ejected from the perforation of the annular pipe to wash the outside of the tumbler, simultaneously with the jet of water from the eentral tube to wash the inside.

Claim.-1. The combination, with the central pipe orer which the turabler is plaeed, of an annular pipe or a series of pipes for discharging water upon the exterior of the tumbler, and a valve meehanism operated by the weight of the tumbler, so as to admit rater to both the contral and the exterior pipe or pipes, substantially as and for the purposes hercin shown and set forth.
2. The arrangement of the nozzles or orifices through which water is diseharged upon the exterior of the tumbler in the manner described, so that the jets of water shall be discharged tangentiady or thereabouts to the tumbler, substantially as and for the purposes herein shown and set forth.
3. The eombination, with the central pipe, of the annular or exterior pipe and adjusting screws or equivalent meehanism for regulating the pressure of water in the said pipe, substantially as and for the purposes herein shown and specified.

䒵5, 44.-Charles G. Miller, Springfield, Ohio. -Harvester:-March 10, 1868.-Upon the hub of the driving whecl and free to turn thercon is a spur whecl which engages with a wheel of double its diametor. 'Ihc latter whecl is eonnected to an eceentric whose strap is eonnceted to the split wedge, which forces the pitman crank into contaet with the catch, so that it is cansed to rerolve with the wheel. As the thin part of the werge is brought betreen the erank and the whecl, the spring forees the crank from the catch, and the hub is left fice to turn within it, allowing it to remain stationary. This takes place when the lake is at the baek of the platform and allows it to remain there during one rotation of the driving wheel.

Claim.-1. Stopping the rake antomatically at the rear of the platform during each alternate levolution of the driving wheel, by means of the herein-described mechanism, or the equivalent thercof, for the purpose set forth.
2. The combination of the strap $s^{\prime \prime}$, ceeentrie $n^{\prime}$, and pinions $p^{\prime}$ and $A^{\prime}$, with the hubs of the driving wheel and rake's crank, substantially as described, for the purpose of throwing the rake in or out of gear automatically, as described.
3. The combination and arrangement of the foot lever $g^{\prime \prime}$, collar $g^{\prime}$, clutch pin $h^{\prime}$, running throngh the arm of the driving wheel into the driving pinion $A$, for the purpose of throwing the rake ont of gear at the will of the attendant.
4. The combination of the catch $b^{\prime \prime}$, on the cnd of the hub of the driving wheel C, the collar $\dot{j}$, provided With the eatches $c^{\prime \prime}$ and $d^{\prime \prime}$, and the catch $a^{\prime \prime}$, on the hub of the rake crank, substantially as ant for the purpose set forth.
5. The shoe $P$, construeted as deseribed, so that it may be adjusted and fixed at its forward end in the manner set forth.
6. The reel post $Q$, monnted mpon the inner shoe, and eurved forward, so that the attendant may grasp its upper end as a lever to ruise the outer end of the cufting apparatus from the ground, as set forth.
7. The sliding carriage $t$, eomneeted with the rake head by the arm $u$ and link $v$, arranged substantially as set forth, so as to push the rake backrard with the tecth vertieal, and draw said rake formard again with the teeth horizontal.
8. The reel sliding head $t^{\prime \prime}$, construeted with the loose nut bar $p^{\prime \prime}$, as and for the purpose set forth.
9. The spriug latch $s^{\prime}$, construeted as deseribed, and for the purpose set forth.
10. The construetion or arrangement of the eutting apparatus, shoe P , antomatie reciprocating rake, reel $\mathrm{P}^{\prime}$, and their operative moehanism, in relatiou to the main fraine, so that the eutting apparatus, wifh its rake and reel, may be folded and so main. tained rhile being moved from place to place, substantially as shown and deseribed.
11. The guide rods $d^{\prime}$ and $b^{\prime}$, for the outer end of the rake, constructed and arranged as set forth and deseribed, eombined with the onter or guide tooth $u^{\prime \prime}$ of the rake.
12. The hook $s$ and flange $v^{\prime \prime}$ to retain the rake upon its side while being drawn forward, as set forth and described.
(75, 45.-J. E. Milliken, Bridgeton, Me.-Bedstead Fastening.-March 10, 1868.-A metallic hinge is attached to the upper edge of the side rail and the post. The pintle is removable. The post is turned down against the cnd of the rail and seeured by a brace hook.

Claim.-The hinge C, construeted as deseribed, its lcares piroted together at their upper ends, P -one leaf extending across the edge of the rail $B$, and beneath it, and fitting at its angle upon the shoulder $\alpha$ of the rertical leaf secured to the post A, all arranged as deseribed, whereby the post $A$ is adapted to swing up or down upon the pivot $P$, as and for the purpose specified.

75,446.-JACOB B. Moore, New York, N. Y.Window Shade Fixture.-Mareh 10, 1868.-The roller is suspened on the ends of a weighted eord in sueh a manner that the end of the shade counterbalances the weight, and the shade may occupy as much space as required, and stand at any eleration.

Claim.-1. Rolling or unrolling the eurtain antomatically by meaus of the cord, and the small axes of the roller substantially $\Omega$ s described.
2. Creatiug an equilibriun betwcen the roller of the window shade and the lower rod $F$, through the medium of the suspended eord and small axes D, whercby the shade is rolled or unrolled, substantially as herein shown and described.
3. In combination with the shade suspended upon ares $D$ and the lower rod F , the weight H , whereby said shade is held at any desired poiut, substantially as described for the purpose specified.
75, 44. - II. B. Molirison, Le Roy, N. Y.-Car Mover.-Mrareh 10, 1868.-The whecls of the machine are grooved circumferentially to increase the traetional hold on the rail. The maehine is secured to the end of the car and the attachment mechanism raised so as to throw a portion of the weight of the car upon the main wheels of the machine to give sufficient firietion betrecn the motor wheels and the rails. The machine is mored by spring pamls which enter lantern gear in the whecls, and have movement by levers. The pawls may hare a half rotation in the sockets so as to turn the wheel in either direction.
Claim.-1. In a car morer, constructed as described, the two driving wheels D and E, phaced in line with each other, so as to run upon the same rail of the track, and connected to cach other with an endless chain F, substantially as herein shown and described, and for the purpose set forth.
2. The combination of a side wheel $\mathrm{U}^{\prime}$. with the projecting chd of the axle $B$ of the car mover, substantially as herein shown and described, and for tho purpose set forth.
3. The driving wheels $D$ and $E$, consfructed with
groores of peeuliar shape for the reception of the endless ehain $F$, and to enablo them to huge the rail more closely, substantially as herein shown and deseribed.
4. The combination of the elbow lover $\mathrm{C}^{\prime} \mathrm{R}^{\prime}$, bars $\mathrm{F}^{\prime \prime} \mathrm{D}^{\prime}$ and $\mathrm{O}^{\prime} \mathrm{F}^{\prime}$, and pawls $\mathrm{A}^{1}$ and $\mathrm{H}^{\prime}$ with each other, and with the cog wheel $d^{\prime}$, formed upou or attached to the driving wheel D , substantially as hereiu shown and described, for the purpose of operating the machine.
5. The eombination of the adjinstable slide $\mathrm{E}^{\prime}$ with the bar's $\mathrm{F}^{\prime}$ and $\mathrm{D}^{\prime}$, substantidly as herein shown and deseribed, and for the purpose set forth.
6. The combination of the adjustable slide $\mathrm{P}^{\prime}$ with the lever $\mathrm{G}^{\prime}$ and bar $\mathrm{O}^{\prime}$, substantially as herein shown and deseribed, and for the purpose set forth.
7. The combiuation of the reversible parl $\Lambda^{\prime}$, haring a hindle $a^{2}$ attached to its mpper end, and coiled spring $C^{\prime}$, with the soeket $B^{\prime}$ and cog wheel $d^{\prime}$, substantially as herein shown and deseribed, and for the purpose set forth.
8. The combination of the parvl $\mathrm{H}^{\prime}$, haring a handle $h^{\prime}$ attached to its upper chd, spring $J^{\prime}$, arm $3 I^{\prime}$, coiled spriug $\mathrm{L}^{\prime}$, and socket arm $I^{\prime}$, with each other and with the eog wheel $d^{\prime}$, and bar $K^{\prime}$, smbstautially as herein shown and deseribed, and for the purpose set forth.
9. The combination of the bar $K$, slide blocks $N$ and $O$, serew $P$, adjustable bars M U, slide $V$, adjustable standard $R$, aud piroted soeket $S$, with each other and with the clbow lever T W and frame $G$, substantially as herein shown and described, aud for the purpose set forth.
10. The eombination of the slicle-bar $\mathrm{T}^{\prime}$ with the frame A of the machine, snbstantially as herein shown and described. and for the purpose set forth.
11. The combination of the guide stars $\Delta^{2}$ with the shaft II, ferrules $\mathrm{B}^{2}$, and sockets S , substantially as herein shown and described, and for the purpose bet forth.

75, 448.- Richard Murdocir, Baltimore, Ma.Suspending Scale P'an. - March 10, 1868.-The arms of the seale are jointed at their lower euds, so as to lic down upon the dish.

Claim.-1. A dish for spriug balauees, constructed with two or more bowed arms, $a^{\prime} a^{\prime}$, so operating that they ean be folded together when not in use, substantially as described.
Q. The combination of tho standards $s s$, sliding rings $t t$, and piroted arms or bails $a^{\prime} a^{\prime}$, substantially as and for the purposes set forth.

75,449.-PETER NAYMor, New York, Ň. Y.-Tinning.-March 10, 1868.-A sponge saturated with a solution of muriate of zine is dram through the lead pipe to insuro the adherenee of the molteu tin.

Claim.-The means, herein specified, for applying flux to the interior of a length of lead pipe previous to tinning the same with melted tin, as specified.
75.450.-W. T. Nicirols, Rutland, Vt.-Hay Raker and Loader.-March 10, 1868.-'The tecth ard long. and mounted upon whecls so that the points will run upon the ground, rising therefrom with a gradual incline, and will gather the hay whien passes backward rpon the frame until a load is accumulated on the bars. The team is then backed, which causes the lerer to stiek into the ground and raises the forward end of the teeth above the elajper, which then falls, and the formard ends of the teeth rest upon it. The loaded machine may then be driven off.

Claim.-1. The combination of the gathering and loading rake $q^{\prime} q^{\prime}, \& \in c$, and the smpplementary clastic teeth q q, substantially as and for the purposes set forth and doseribed.
2. The combination of the ribrating gathering rake, and the anxiliary loading frame $f f$, substantially as set forth and described.
3. Driving the anxiliary loading firame $f$ by the carrying wheels $a$, or their equivalent, said wheels being attached to and ribrating with the gathering frame $q^{\prime} q^{\prime}$, substantially as set fortl.
4. The combination of the land wheel $a$. pinions $b$ and $c$, cranks $d$, and rock-shaft $c$, substantially as and for the purpose set forth.
d. The small wheels $n$ n located between the teeth
$q^{\prime} q^{\prime}$, and having their hearing attached to said teeth, substantially as set for'th.
6. The conuceting frame $i i$, attached to rake frames, as and for tho purposes set forth and deseribed.
ry5,451.-Peter II. Nires, Bostou, Mass.Lunch Box.-March 10, 1868; antedited Marelı C, 1808.-The ends of the box are linged so as to be collapsing, and the bottom, top, and sides are hinged together, so that the whole may be folded into a fiat form.

Claim.- A portnble collapsing lunclı box, composed of a top and bottom, in combination with donble-acting end-picees and single-acting sides, substantially as deseribed.

75, 152.-Samuel Page, MeAlisterville, PrHorse May Fork.-March 10, 1868.-The curved hooks are hinged to a rod sliding in the ease, and are thrown out radially by depression of the rod. The case has a entting point. Flanking tines holi the lay from falling off sideways.

Claim.-The strap D, movided Title slots $x x$, in the npper ends of which is a jog or offset, the rod or bar $\mathrm{F}^{+}$, and its hooks $\mathrm{G} G$, the frame E , tines $J J$ and lerer II, with its cord, the several parts being constructed, used, and operating in the manner and for the purpose set forth.

195,453.-William P. Patton, Marisburg, Pa. assighor to James M. Fostere, same place.-Skate Buckling I'ongs.-Mareh 10, 1868.-One of the jaws is groored to enable the better holding of the strap. One of the cross liandles has a piroted drill to form the hole in the heel.

Claim.-The within deseribed tongs, when constructed substantially as and for the purpose lecein set forth.

65,454.-Tra T. Payne, Chester, Conn.-Auger. - March 10, 1868; antedated February ¿28, 1868. The projection is made beneath the floor lip to render filing casy; it practically leares a reeess behind the projection and leares less metal to eut away in sharpening.

Claim. - The projection C on the floor-lip, for the purposes set forth.

75,455.-JOHN D. PECK, Triangle, N. K.-Plovo. - Mareh 10, 1868.-An inclined metallic plate extends from the top of the mold-boand to the beam, and prevents matters falling between the mold-board and landside.

Claim.-She applieation of a cap or roof to the common farm plow, as herein described, and for the purposes lierein set forth.

75,456.-Ciarles II. Perkins, Providenee, R. T.-Forming Horscshoe Blanks.-Mareh 10, 1868. The bar of iron is rolled into a double hlank, which is dirided longitndinally to form two shoes.

Utaim.-The improved double blank for horseshoes herein described, as an article of mannfacture.
\% \% 5.57 . Whllam P. Porter, Pittsbmrg, Pa.Machine for Rolling Aailes.- March 10, 186. -The axle is rolled betwecn three rollers which are parallel with it, and two of which are adjustable.

Claim.-'Tle combination of the adjustable rolls A and B and the roll C, constructed ind arranged in relation to one another, and to the frame which supports them, as and for the purposo hercin describer.

25,459.-Aaron TV. Pratt, Pultneyville, N. Y. -Armlet I'ort-monnaic.-March 10, 18ti8.-The adjustable armlets enter slots in the box, and are held by pins therein. The lid is locked down. The loox is curved to suit the arm.

Claim.-The combination of theretaining bolts I, lock $f^{\prime}$, slotted box A, c c, and retaining bands B I B, as hercin shown, and for the purpose described.

奇 5,450 - Thomerit L. Teaney, Jersey City, N J., and John s. Connelt, Brooklyn, N. Y., assign ors to Jonn S. Comnelis and H. L. PEase, Brook Iyn, N. Y.-Valve Gear for Steam Engines.-March

10, 1868.-The connecting rod is secured to the piston rod at the mid-length of the latter, whieh aets as a pump plunger. The slide-valve elhest is in one pieee with the cylinder head, and the valre is reciproeated by ears whiel embraee an eccentrie roller upon one end of the main shaft whieh enters the said eliest.

Claim.-1. The arrangement of the eylinder B , the valre passages $b$ c $d e$, and inlet and outlet pipes I J, so that the steam chest K and eylinder cover being in one pieee, may eover both the end of the eylinder, its vulve, and passages, substantially as shown and deseribed.
2. The construction and arrangement of the valve $\mathbf{L}$, the shaft C , and its eceentrie pin $g$, relatively to the cylinder $B$, conneeting rod $F$, and rod or ram $G$, essentially as shown and deseribed.
3. The slide valve L, with its ears $h h$, aeted upon by an ceeentrie pin or roller on the end of the main shaft $c$, as shown and described.

75,460.-Edmund D. Reynolds and O. Bradford Reynolds, North Bridgewater, Mass. - Wheel Hoe.-Mareh 10, 1868.-The wheeled hoe has a eentral and two side hoes, whieh are horizontal and incline baekward.
Claim.-1. In combination with the eenter blades $h$, (made vertically adjustable,) the rear blades $l$, made adjustable, both vertically and laterally, substantially as shown and deseribed.
2. Supporting the vertieally-adjustable standards between guide-lips $g$, substantially as described.
3. In combination with the plate to which the blades $l$ are secured, the laterally sliding supports $m$, substantially as deseribed.
4. Forming eaeh hoe blade and its standard from a plate, bent both at right angles and with an inelination rearward, substantially as shown and deseribed.
5. Forming the standard of the tro formard blades, by relding together the two rertical plates, substantially as deseribed.
6. In a hoe in whieh the blades are made adjustable, as deseribed, applying the handle with provision for vertieal adjustment, substantially as set forth.

195,461.-E. S. Roberts, Columbus, Ga.-Cotton Bale Tie.-Mareh 10, 1868.-The open box has tro transverse pins which hold restrietively the two ends of the binding hoop.

Claim.-The cotton bale tie, construeted as deseribed, and eonsisting of the open box 1 , provided near. each end with a transverse removable pin, $b$, around which the hoop A passes, the extremities of said hoop, after passing around the pins, being bent back between the bale and the hoop, in whieh position they are held by the outward pressure of the bale, all arranged as deseribed for the parpose specified.

75,462.-D. C. Robre, Springfield, Mass., assignor to limself and II. E. Bostrick, same placeLathe for Turning Buttons.-Mareh 10, 1868. -The moving jaw of the eluteh is foreed against the blank by a spring, and drawn back by depression of the treadle. The bits are brought singly against the blank, being moved thereto by the bell-erank hand lever.

Claim.-1. The two spindles B and C, operated by a shipper, so as to bring them alternately against the stock at opposite sides, when construeted and arranged substantiully as deseribed.
2. The elutch, consisting of the stationary jaw $m$, and piroted jav $n$, operated by the treadle $K$, and spring L, arranged and construeted substantially as shown, when used in connection with my device, in the manner described.

75,463.-George Fremeric Roskopf, Chaux-de-Fonds, Stritzerlaud, assignor to himself and Jules D. Huguenin Vuillichin, New Xork, N. Y. -Changcable Escapement for Watches.-March 10, 1868. -The escapement meehanism is earried by a detaehable plate, which is so arranged that the es. eape wheel is adjustable in relation to the pallets, and that the eseape wheel pinion may remain properly in gear with the other meehanism of the wateh under any adjustment of the escapo wheel.

Claim.-1. Placing or attaehing the eseapement of a watel to a separate or independent plate or frame, applied or fitted to the plates or frame which eontain the "train," or other portion of the wateh movement, in sueh a manner that the eseapement attached may be removed at will, and another eseapement substituted therefor, substantially as shown and doseribed.
2. The slot $i$, in the eseapement-plate B , and the serew $k$ inserted therein, or an equivalent means, for the purpose of adjusting the 'seape-wheel and the lever pallets in a proper relative position with each other, substantially as set forth.

75,464.-Robert P. Ross, Bethlehem, ParBasin Faucet.-Mareh 10, 1868.-The valve turns freely in the head and has a socket on its lower side which reeeives a rubber block that paeks against the top of the water pipe.

Claim.-1. The cap 0 , when made hollow for the reeeption of the stem of the valve D, said ralve haring its seat upon the tube A, within the chamber B, as herein described, for the purpose specified.
2. The loose valre $D$, in the tight eap C, fitting into the upper end of the chamber $\mathbf{B}$, the packing $\mathbf{E}$ of said ralve resting upon the upper end of the stem A, when the water is shut off by turniigg down said eliamber, and lifted above the end of the stem A when the water is turned on, by turning ap said chamber, as herein shown and described.
'95,465. - Thomas J. Rowley and William Polayd, Chillicothe, Ohio. - Lubricating Box.March 10, 1868.-A thimble is fitted on the wrist pin, and the thimble has radial oil holes communieating with an annular oil chamber at its outside.

Claim.-The lubrieating box C, when provided with the eentral annular eliamber $a$ surrounding the eentral portion of the thimble box B , and eommunieating with the wrist A by means of the transverso openings $c$, all construeted and arranged as deseribed for the purpose specified.

75,466. - Andrew Ruvstetler and Albert Wradeck; Peoria, Ill.-Machine for Planting Cotton Sced and Com.-Mareh 10, 1868. -The box in the hopper bottom is remored when planting corn, in which case an oseillating eylinder is placed in the hopper and the corn allowed to drop throngh an upper and a lower adjustable opening in the sides of the eylinder. The eotton seed is operated on by arms on a rock shaft similar to that earrying the eorn dropping eylinder. The cotton seed is foreed down between the bars of an upwardly extending V-shaped frame attached to the remorable bottom of the hopper. The roek slaft is actuated by a raek bar eomnected to a erank upon the asle. A harrow precedes the planting deriee and a roller follows it.

Claim.-1. In is convertible eorn and eotton planter, the norable metallie box $O$, having separat ing trires $v, x$, and $y$, in combination with the rerolving forks $d e f$, and the stirrer $P$, substantially as set forth
2. The combination, in such a machine, of the perforated block $Q$, drill $L$, eut-off $S$, and tongue $T$, so eonstructed aud arranged that they may be, alternately with the cotton seeding mechanism, attaeled sulstantially as set forth.
3. The eombination of the reeiprocating eogged slide $I$, rollers o $g$, adjustable erank $K$, and driving roil $J$, for communieating motion from the roller $F$ to the seeding mechanism of either the corn or eotton planter, substantially as set forth.
4. The combination of the drill tecth $b$. track elearers $a$, and harrow $q$, arranged substantially as set forth.

75, $\mathbf{1 6 7}$ - -Lewis L. Sagendorphe, Boston, Mass., assignor to himself and Sa3uel C. Moore, same place.-Lamp.-Mareh 10, 1868.-The air, atter passing through the perforations of the brass plate, is defleeted to the space beneath the cone by an annular plate whose upwardly extending eylindrieal flange loosely surrouds the cone, alloring an annular air passage between them.

Claim.-1. The blaze-eap C, so arranged with refcrenee to the imperforate base plate 13 , as to direet the air to the flame through an annular passage or
opeuing around the blaze-cap, in the manner and for the purpose specitied.
2. Supporting the blaze-cap by pins resting in slits in the upright Hange $B^{\prime}$ of the base plate, in the manner described.

75,46S.-Janes Sangister, Buffalo, N. X., assignor to hiniself and Daniel H. Bertis, same place. - Machine for Carburetting Air.-March 10, 1868.The spiral wheel. by its rotation, causes the flow of air through its axial tulce. The air passes through a pipe extending to the bottom of the carburetter and issues through the corrugated pipe by which it is divided into small bubbles so as to cause its thorough carbonization. The air may be driren through a tube furnished with a stop cock and leading immediately into the gas holder so as to mix air with the conteuts wheu sufticiently carbonized to cause smoke. The coupling of the exit tube has a catch basin to arrest any liquid condensing from the carburetted air as it passes beneath the partition whose lower edge citers the said basin.
Claim.-1. The construction and arrangement of the air wheel A in combination with the guard B, substantially as and for the purposes herein described and set forth.
2. The arrangement and form of the frame MI , as and for the purposes described in clause third of this specification or description.
3. The combination of the weight $\mathrm{A}^{4}$ and tube $\mathrm{C}^{4}$, as and for the purposes described.
4. The coupling $R^{5}$, as and for the purposes herein set forth and deseribed.

75,469.-Jayise Sangster, Buffalo, N. Y., as signor to himsclf and Datiel H. Burtis, same place. -Machine for Carburetting Air.-March 10, 1868. The stationiary tube connects the npper part of the annular "nou--air-toreing chamber" "with the inverted cup bencath Whose edge the air flows into the carburetting liquid. The said chamber has openings which rise above the surface of the water after the gir-forcing ehambers are elosed by their clges passing into the water. The inverted cup is inclosed in a crlindrical case which communicates at its lower end with the hydrocirbon liquid and whose top extends abcre the surface of the same.

Claim. - 1. The combination of an air-forciug wheel with a stationary arr tube and a non-forcing gir-chamber I, providech with openings K, the whole being constructed to operate substantially as and for the purposes herein set forth and described.
2. The combination of an air floating Yessel D , and an air-discharging tube, the diseharging cund E of which projects abore the carburetting liqnid, as and for the purposes substantially described.
3. The supplemental tube $\mathrm{F}^{2}$, as and for the purposes substantially as described.
4. The tapering morable gas holder A , as and for the purposes substantially described.

75, 470. - William Shillivg, Baltimore, Md.Apparatus for Distilling Spirituous Liquors.March 10, 1868.-An ausiliary condenser is so arranged as to intercept the passage of the vapor and condense the low wine and prevent the ilow of fuscl oil through the cooling worm. A reservoir receires the low wine until it is turned back into the doubler.

Claim. -1 . The combination of the condenser $J$ and the low-winc reserroir L, or their substantial equiv. alents, with the doubler and the cooler C , esscntially as described.
2. The eombination of the low wine reservoir L and condenser $J$ with the cooler $C$ and the meter, substantially as described.
3. Thic low-wine reservoir L, urranged, in relation to the doubler, for the purposes substantially as described.
4. The combination of the low-wine reservoir and the condenser, or their substantial equiralents.
5. The condenser, having its bottom sunk and its top raised, in the mamner and for the purpose sulb. stantially as described.
6. The perforated disk $p$.
7. The condenser, haring a collar $d$, essentially as described.
8. The combiuation of the supply pipe $s$, and cock

S, and draw-off cock $x$, or their equiralents, with a eondenser constructed substantially as described.

75,471.-George Scott, Stenbentille, Ohio.Holder for Razor Strops-March 10, 1868. - The leather strap forms the chord of the curved spring.

Claim.-As a new article of manufacture, the razor strop, when the leather thereof is sceured to the curled ends of the spring-stecl back, whereby said leather is prevented from slackening by stretehing, and is kept in a constant state of tension, as herem shown and described.

75,472. - Emel Selbacu, Columbus, Ohio. Stove Drum.-March 10, 1868. - The Arum has a movable tray which contains water and which has flanged-sided apertures to allow passage to the air, which is dampened by the steam generated from the water in the pan.

Claim.-The pan D, in combination with the drum C, operating and arranged substantially as and for the purpose set forth.

95,473.-Albert M. Shaw, Lebanon, N. H.Composition Cement for P'avements, \&c.-ILareh 10, 1868. - Composed of tar, 100 galls.; "Albert" coal, 50 lbs ., and rosin 50 lbs . ; three inches of pebbles is saturated with the above. Then one inch of gravel and the same of sand are spread on and saturated. The matters are compacted thoroughly in the different stages.

Claion.-A cement for parements and flooring, roofing, and other purposes, composed of the ingredicuts abore named, mised, applied, and finished in the manner abore described.

75,474. - Abram Shoemaker and Wallace Phelis, Conesrille, N. Y.-Frame for Hop Vines.March 10, 1868.-Four strong stakes are set reetangularly in the ground and connected by horizontal pieecs. From the top of each of the stakes proceed three hoop-poles which are bent over and cnter the grond at a distance from the stakes, forming sixteen points at which plants may be set.

Claim.-An improved hop-vine frame formed in squares of four stakes, a a, joined torether at top by the eross-ties $b b$, in combination with the bent poles c $c$, arranged as and for the purposes herein described.

95,475.-Walter S. Shotwell, Paterson, N. J.-Railroad Chair.-March 10, 1868. -The chair is of wrought iron and has flanges bent up reetangularly upon it to cmbrace the base of the rail. A bridge is formed at the middlc. The said bridge enters transrerse horizontal slots formed in the ends of the rails. The spikes are driven through holes in the chair.
Claim.-In chairs for railroad rails, holding the rails by sheet metal presented edgewise to the rails, snbstantially as and in the manner herein set forth.
75.476.-Walter S. Shotwell, Patcrson, N. J. - Railway Truck:-March 10, 1868.-The upward pressure of the axles is against the periphery of antifriction rollers which aro journaled in the frame, and having a spring bearing.
Claim.-1. The wheels D, with groored periphery, in combination with shaft $B$, provided with a thange or flanged eoilar $a$, substantially as and for the purpose specified.
2. The arrangement of the bars $\Pi I \Pi$ with the crossties K K, the wheels D D, aud the axles B B whereby I am enabled to have a double number of bearings, and to have said bearings at any desirable point between the wheels $\Lambda$, or outside of them if nceessary, as is herein fully set forth.
'95.47\%.-Fiederick II. Smith, Baltimore, Md. -Bridge.-March 10, 1868.-The longitudinal rois of the lower chord are in clusters and pass through the nut plates. The bolts comnceting the wut plates to the angle blocks tiarcise the nut plates centrally, and lave a nut on each side of the angle blocks by which the said blocks may be moved longitudinally to loosen any of the timbers for repairs.

Claim.-1. A bottom ehord, formed of elusters of rods connected, as described, in the pancls, and connected to each other, through the brace blocks, by a
single rod, substantially as and for the purpose spe cified.
2. The combination of the elusters of rods D , nut plates $E$, single rods $G$, angle blocks $B$, and nuts II with each other, with the horizontal cross rods M, by which the various lines of elusters are connceted to each other and with the vertieal rods I, by which the bottom chord and superstrueture of the bridge are conneeted together, substantially as herein shown and deseribed, and for the purpose set forth.

## 95,478.-Canceled.

75,479.-Willard H. Smithr, New York, N.Y.-Lamp.-Mareh 10, 1868.-An upturned flange around the upper end of the wiek tube collects the condensed oil and returns it to the wiek at a point some distance below. The edges of the longitudinal slot of the argand burner by which, in eombination with the spiral groove, the fecd motion is communieated to the wick) are folded orer so as to form a stiff and smooth edge to the said slot. A small hole is made in the side of the reservoir which just allows passare to the proper quantity of air to take the place of the oil outhowing to feed the lamp wiek.
Claim.-1. The round wiek tube A, provided with a flange $K$ ou its outside, and a passage $B$, in combination with the worm-pipe D , construeted with an inward flange at its top, substantially as herein shown, and for the purposes deseribed.
2. Coustructing the wick tube $A$ with a slot $B$, made in the manner and for the purpose substantially as herein shown.
3. Providing the two openings $e$ and $f$ on the tube M, arrauged in relation to each other, substantially as and for the purpose herein set forth.
4. The constructiou and arraugement of the top edge of the spiral tube D, being below the edse of the tube $A$, for the purpose of preventing the flame reaching the tnbe D and heating the burner, substantially as herein shom.
5. The tube F', tightly jointed, and uniting with the wick tube A, substantially as and for the purpose herein deseribed.

75,480.-Albert Snyder, Jackson, Mich.-Fly Trap.-Mareh 10, 1868. -The dish has an inside aud outside horizontal rim and a gauze dome emanating from the rim and perforated around its bottom to allow passage to the flies.

Claim. - The combiuation of the dome $A$ and platform $C$ with the holes $I I$, dish $D$, and rim $B$, as aud for the purpose set forth.
75,481.-Harvey B. Steele, West Winsted, Conn.-Horse Hay Fork. -Mareh 10, 1868. -The two bars of the stock are iuclosed in a scabbard to prereut clogging by hay.

Claim.-The shicld or scabbard A, constructed as described, in combination with the lever $B \mathrm{E}$, connecting rod $F$, and prong $G$, arranged and operating substantially as and for the purposes set forth.

75,48:- Jacob Stehman, Lancaster, Pa.-Photographic Printing Apparatus.-March 10, 1868.As fast as the photographs are printed they are placed on the priuting board and the halo-former adjusted over the figure. The light will strike around the beveled edges of the disk. The effect will be to render the outside dark, and the color will gradually fade toward the likeness.

Claim.-The additional printing process, substantially in the mauuer specified.

75,483. - CORNELIUS St. Jorn, Charlestown, Mass.-Lamp Burner.-March 10,1868.-The burner is supported at the tops of standards which serve as guides to a cross bar attacherl to the wick tube. The wick tube may be depressed so as to bring its top beneath the burner for lighting or trimming.

Claim.-1. In combination with the wiek tube applied to the eap serew or lamp body, so as to be movable rentically, relatirely to the air deflector or chimney supporter, substantially in manner as specified, the foraminous eup or gutard $D$, made and arranged with the chimney supporter aud the air deflector, substantially as specitiod.
2. The combinatiou and arraugement of the guide

K, with the standards $\mathrm{E}, \mathrm{E}$, and the chimney supporter $C$, and the part $D$, applied thereto as specified.
3. The improved lamp burner, as composed of the chimney-holding springs $l l$, the ehimney-supporting cone and air deffector $\mathbb{C}$, the perforated cap 0 , the standards E E, the serew cap B, and the wick tube A, and its guide K, arranged as described, and having the wick movable in the cap $B$ aud guide $K$, by means and in manner as described.

75,484.-Frederick A. Stomlmann, Brooklyn, N. X.-Truss Pad.-March 10, 1868.-The pad is made like the human hand, with spring-fingers that conform to the movements of the body.

Claim.-A truss pad, formed with spring fingers, padded and attached to the truss spring, as and for the purposes set forth.
g5,485.-Firederfck A. Stomlmann, Brooklyn, N. X.-Syringe.-March 10, 1868.-The nozzle is at the end of the tubular piston rod.

Claim.-A syringe with a hollow piston rod $d$, piston $e$, serow-head or $\operatorname{cap} b$, and neek $g$, as and for the purposes set forth.

195,486.-Mrram C. Stouffer and Abraham Stoufren, Beaver Township, Ohio.-Horse Hay Fork-March 10, 1868.-The tines are arranged to fold together and form a single point for insertion in the hay, but are spread out horizontally to engage the same in raising the load.

Claim.-The tines B C, links E D, and shaft A, in combination with the lever $F$, all constructed and arrauged to operate in the manner as set forth.

75, $48^{\prime \prime}$-O. W. STow.-Plantsville, Comn.- $M a-$ chine for Forming Tubular Beads on Sheet-metal Gutters.-March 10, 1868.-The jaws havo pendent arms which are expanded by a lever-operated cam, to cause the contraction of the jaws upon the bead of the gutter whose edge enters a radial, longitudinal groove in the turning "former" around which the bead is bent.

Claim. -The combination of the cam-lever F G with the pivoted jaws D D, wherely the jaws are closed to form the bead, substantially as described for the purpose specified.

195, 4 89.- Enocm E. Stubbs, West Elkton, Ohio. -Bolt Fastening.-Mareh 10, 1868.-The spring-dog has a projection which is foreed by the sliding, wedge-shaped key into the recess in the bolt, and prevents its retraction.

Claim.-The combination of key $d$, $\operatorname{dog} a$, and spring $e$, witl the clasp $D$ and reccssed bolt $A$, when the several parts are constructed, arranged, and operate coujointly in the manner aud for the purpose specified.

75,489.- ASHER W. Sullenberaer, Laurel, Ind.-Car Coupling.-March 10, 1868.-The link is directed into the draw-head by a crank, and releases the pin by a trigger which trips a sectoral block sustained by a turning shaft, the pin being held up by a chain counected to the scetor.

Claim. - In combination with the shaft E, segment $D$, and pin $C$, suspended therefrom, the yoke H and trigger $G$, for holding the pin suspended in a vertical position and dropping it automatically, on the entrance of the liuk into the draw-head, substantially as described.

75, $\mathbf{3 9 0} 90$-Riciand Tattershall, Beloit, Wis.Spring Bed Bottom. - Mareh 10, 1868.-The ends of the slats rest in rubber loops sarrounded by metallie rings which have sufficient diameter to allow a limited movement to the slats. The loops rest upon hooks which are riveted to bars resting in hookbrackets secured to the head and tail boards. The slats rest at their midlength upon a cross slat whose cuds are supported similarly to the longitudinal slats.
Claim.-1. The emplorment of the device herein described for sceuring the supporters C' to the bedstead D, as set forth.
2. The guard bands H, or their equiratent, in combination with the supports $\mathbb{C}$, brackets $E$,
lockiug pins $e$, hooks $b$, the transrerse slat $I$, rubber springs $B$, and slats $A$, when constructed and arranged substantially as herein set forth and deseribed, for the purpose specified.

75,491.-Jasper Van Wormer and Micirael McGArvei. Albany, N. Y.-Coal Stove.-Mareh 10 1868. -The hopper is detached from the magazino cylinder, whose top is disconnected from that of the stove. The air passes from the ash pit upward throngh the grate, and through a register in the fore part of a horizontal plate on a level with the grate bottom. The caloric enrent circulates around the magazine and passes through a register in the aforesaid plate to the exit flue cmanating from the base.

Cluim.-1. In baso buming or magazino stores, a funnel or hopper attnched to or supported by the top or outside casing of the store, in combination with the open-top magazino cylinder $K$, as and for the purpose set forth.
2. The perforated chcek-dranght plate $l$, in a dommorarl-dranght flue, provided with a rogister X , so arranged as to pass the soot and ashes that collect upon them, through the register and plate, into the escape flue, when the register is traversed for that purpose.

75,44~-Croarwell Fleetwood Tarley, Now York, N. Y. - Telegraph Pole.-March 10, 1868.-The insulators are comected with the ground, so that a leak from any oue of the wires shall not affect the others.

Claim. - The combination of a eondncting wire, rumning to the ground, with the telegraphl polo and the insulators attached thereto, substautially as and for the purpose set forth.

95, 493.-H. Vogel, Berlin, Prussia, assignor to Wilson \& Hood, Pliladelphia, Pa.-Photometer.March 10, 1868.-The box has a spring bottons and a glass and wooden corer. On the under side of the glass are secured a series of thin strips of paper, arranged in layers so that each layer projects orer the edge of the strip abore it; thus prodncing a graduated semi-transparent medium. The number of layers at any partienar point is indicated by black figures on the lowest strip. Upon this fuls bottom is spread a scries of strips of paper rendered sensitive by saturation with alkaline chromate. The apparatus is then exposed to the light, and the strips of sensitive paper will be suceessively darkened according to the depth of overlying paper.

Claim.-1. The arrangement of the transparent paper strips C, which are arranged in steps, and Which are divided into sections, cach section having an oparpe portion, substantially as hercin shown and described.
2. The box $A$, when prorided with a cover $B$, har. ing a glass plate $b$, and the step-formed paper $C$, and with the sliding false bottom D, pressed against the paper C, by means of a spring E, as set forth, all made and operiting substantially as herein shown and described.
3. The paper strips, saturated with alkalino chromate, when they aro applied to a photometer, substantially as herein shown and deseribed.

25,494.-JoHn Wagner, Washington, D. C.Attaehing Morseshoes.- ITareh 10, 1868.-Tho metallie strups or curved plato are attached by serews to lugs projecting upward from the shoe.

Claim.-Attaehing tho bands C and D to a horseshoe B , in the manner substantially as shown and deseribed, and for the purpose set forth.
\%5, $4685 .-$ Eaton Walker, Dundee, Ill-Converting Rotary into Reciproeating MIotion.-March 10, 1868. -The pitman is connected to the arm of the lever, which is pivoted at the middlo, and whose ends carry rollers which trarel cam-tracks on the inner side of the whecl rims. The cams are so arranged is to canse the retraction of cach end of the lever, alternately.

Claim.-The combination of the wheels A, provided with the cams $a$, the oscillating lever D , provided with the friction-rollers $f$, and the arm F , all constructed aud arranged to operate substantialle as described.

75,496. -Thomas Ward, Columbus, Ohio.-Ta por Eurner.- Mareh 10, 1868.-The pipe leads from an elevated rescrroir to the burner, and is curred orer the latter. Two packings, the first of cotton wicking, and the last of brass wire, prevent the tao quick How of the hydro-earbon liquid and gas lospectively. The gias issues from the side of the burner, and is confined between the pipe and detlecting plato so as to flatten the flame.

Claim.-1. The application of the double packing H and I, to regulate the flnid and gas, as set forth in the abovo specification.
2. The brass or metal plate F, haring the lowt end formed into a cup D, attaclied to the burner, and its upper end bent inward toward the gencrating chamber, all constrieted as herein shown, and ni ranged in relation to the aperturo $g$, substantially as and for the pmposes set forth.

95,497.-Willaju Ward, Clereland, Ohio.Oil for Paint, dec.-Mareh 10, 1868.-Tho wasto liquor from the bleaching of paper stock is purified by filtration and mixed in equal proportion with linseed oil. It may be thinned by a dryer and nsed as rarnisl, or may be mixed with pigments to form paint.

Cluim.-1. The herein-deseribed compound, consistiug of the waste and linseed oil, or its equivalent, When componnded in the mamer, and in any proportion, for the purpose substantially as set forth.
2. The cement, consisting of waste, linseed oil, and lime, or its cquivalents, when componnded in tho manner and for the purposo substantially as described.
3. The utilizing of the waste from the bleaching apparatus of paper-mills, by compounding the said waste with linsced oil, or its equivalents, or with crudo petroleum, or with its distillates; also, in componnding the same with lime in its various conditions, and with the pigments uscd for paint, iu tho manner substantially as described.

75,49S.-WILLiAM II. Warrwn, Woreester, Mass.-Planer's Chuck.-March 10, 1868.-The sliding jart is set up by screws traversing remorable pins, whose position may be altered to suit larger or smaller objects. The said jaw has a central rertical bolt whose head slides in an under-ent groore of the disk, and whiel has a handle nut by whose rotation the jarr is clamped in position. The slotted blocks may be moyed between the set-screw points and tho jaw to avoid the necessity of moving the pins in some instances.

Claim.-1. The improred plancr's ehuck, herein described, when its several parts are constrncted and arranged smbstantially as set fortb.
2. The sliding jaw G, having the slotted blocks E E attaeled thereto, in combination with bed-plate and set-screws, all constrmeted as and for tho purpose set forth.
3. The subject-matter of second claim, in combination with the morable pins C C, when arranged to operate in the manner substantially as specified.

75, 499.-Latrience B. Waterman, Indianapolis, Ind., assignor to Joinn Carlon \& Co. - Inling Apparatus for Color-Painting.-March 10, 1868. Tho inking surfaces consist of the conrex edges of conrved plates, which are secured to a longitndinal rod at the surface of the eylinder. The plates are adjustable on the rod, and may be associated in any number to regulate the width of the ink surface.

Claim.-1. The screw-rod D and nuts $e e$, in eombination with sectional plates $c$ c, haring slots $c^{\prime} c^{\prime}$, all combined and arramged substantially as and for the purpose set forth.
2. The inking roller I provided with the removar ble shaft $K$, rorking in a sliding bearing $H$, in combination with the distributing roller J , having fixed bearings $J^{\prime}$, substantially as and for the purpose set forth.
75.500.-G. A. WATKINs, Proctorsville, Vt:Weaving Chair-Seats.-March 10, 1868.-The end of the splint is elamped in the jarrs so as to lie beside the peedlo. The latter acts as a follower through which the splint may be beaten up.

Claim.- I needle or shuttle, of flat shape or bar
form, construeted, as deseribed, to hold the splints at their one ond in sueh manner as that the splint may be readily detachable therefrom after it has been passed through the warp, and shaped to form a batten for beating up the filling, substantially as speeified.

155,501.-James White and Thomas Lingle, South Amboy, N.J.-Car-Brake.-Mareh 10, $1868 .-$ A comnter-shaft is hung beneath the rear part of the loeomotive, and is eaused to rotate by belt conneetion with the rear axle of the same. A chain, by whieh the brakes are applied to the whole train, is coiled around the elutch-sleeve upon the said shaft.

Claim.-1. The suspended frame C , in combination with the shaft $E$, axle $A$, and band $d$, and the deviees for preserving the tension of the band, substantially as deseribed, for the purpose specified.
2. The sliding clutch and sleeve $F$, with brakechain $G$ attached, substantially as described, for the purpose specified.
3. In combination with the sliding eluteh, the rod $c$, piu $f$, bell-crank $g$, and rod $h$, substantially as desoribed, for the purpose specified.
4. The self-acting gauge, when the same is arranged for the purposes set forth, and when consisting of the adjustable bar $j$, arranged as describer,, in combination with the bar $e$, bell-crank $g$, (or' its equivalent, ) and rod $h$, all made and operating substantially as and for the purpose herein shown and described.
5. The adjustable gauge $j$, in combination with grooved sleere $F$ and lod e, substantially as deseribed, for the purpose speeified.
6. The device for operating the brakes by the chain $G$, said device consisting of the arrangement and combination with the lever $K$ of the lever $O$, (having an arm $r$, ) the sliding bar $N$, spring $s$, and pulleys $p, p$, all made and operating substantially as and for the purpose herein shown and described.
7. The lever K, in combination with the lever $O$ and ehain $L$, for the purpose of combining the handbrake with that whieh is operated from the locomotive, substantially as set forth.
8. The ratehet wheel $k$ and spring pawl $l$, in combination with the sleeve $F$, all constructed as deseribed, for the purposo specified.

5,502-T. B. White, New Brighton, Pa.-Bridge.-March 10, 1868.- Rectangular metallic frames are made by rielding to both sides of longitudinal bars of flat iron cross pieces of the same or of angle-iron, and letting the cross pieces into tho opposite sides of adjacent chord-timbers of the bridge.

Claim.-The clamps and packing blocks $\mathrm{E}, \mathrm{H}$, and $G$, made of wrought iron, and constructed and arranged for use substantially as described, and for the purposes set forth.
$175,503 .-J O N A T I A N$ Whitnex, Fort Winnebago, Wis. - Hop-Drier. - March 10, 1868. - The tilting drying frame runs on a track extending through the drying and store rooms, so that the hops, after drying above the furnace in the former room, may be doposited in the latter.

Claim.-1. A hop-drier, consisting of a clyying room E and store 1 oom F , and provided with a curbed frame $B$, having tilting drying floors, mounted on a traek $D$, all constructed and arranged to operate substantially as deseribed, and for the purnose set forth. 2. The eurbed frame B, and tilting drying floors A, construeted and arranged to operate substantially as deseribed, and for the purpose set forth.

55,504.-C. WILLIAMs, New York, N. Y.-Pave-ment.-Mareh 10, 1868. -The blocks are rabbeted at the edges and a certain distance down the side. The rabbets of the adjacent bloeks form vertical grooves, in whose sides horizontal doretailed grooves are formed; these are filled with conerete and serve to cement the blocks together. Bencath the blocks are arranged slabs of the same superfieial form and so placed as to break the joints of the upper course.

Claim.-The eonstruction and ariangement (in a Wooden pavement) of the bloeks A A, in such a manner that double dovetailed grooves shall be formed between said blocks, so that when the same are filled
with cement, as herein described, such filling will operate as a tio to said blocks, substantially as herein set forth.

175,505.-Gile J. Willson, Reading, PaWatch Case.-March 10, 1868.-The upper edge of the ring forms a shoulder to receive the watch movement, and the lower edge finds its bearing in the lower side of the center of the watch ease, thus exeluding dust from working into the morement through or around the pusher to the cap spring. The key-hole protector is in form of a tube, which passes from the eap to the upper plate of the movement and has bearing in the said plate in some elastic material. The cylinder is either inside or outside the usual dust eup.

Claim.-1. The application of a separate entire ring to the center of an ordinary watch case, (new or old, which the movement of the wateh will connect with, in the manner set forth, made of any convenient material, and of any size, shape, or form, to answer the purposes set forth.
2. The applieation of a conical-pointed tube, with its bearing or packing on the movement of a watch or some clastie substance, and connceted with the cap of the wateh in any convenient manner, to answer the purposes set forth.
g5,506.-ROBERT WOLF, Burlington, IowanDovetail Machine. - March 10, 1868. -Intended specially for dovetailing drawer stuff. The side picee is sceured to an oscillating carriage, and brought in contaet with the cireular saw at the required angle. The tront and back picees are seeured to the carriage and dovetailed, by ehisels. The upright ehisel euts the back of the recess and makes the inclined face, owing to its inelined position. The horizontal ehisel determines the depth of the recess and prevents splitting. The machine is adjusted to move the stuff regularly and dispense with laying off.

- Claim.-1. The combination of the eam $F$ and jointed lever G with the fork $f$, pin $g$, and carriage I, all made and operating so that a suitable oscillating motion is imparted to the carriage I, substantially as and for the purpose herein shown and deseribed.

2. The longitudinally-movable frame $H$, in combination with the oseillating carriage I, and laterallymovable bed $J$, all made as described, and operating with the saw E, substantially as and for the purpose herein shown and deseribed.
3. The combination of the lever K , pawl $j$, slotted adjustable pawl $k$, spring cateh $i$, and bed J, all constructed, arranged, and operating substantially as described.
4. The eombination of the oscillating plate $P$, slide $u$, levers M $O$, and chisel $N$, substantially as deseribed for the purpose specified.
5 . The levers 0 M and chisel N , in combination with the cam L, operating substantially as described for the purpose speeified.
5. The eombination of the bed $T$, tripping levers $Z^{\prime} c^{\prime}$, sliding rack $U$, and the slide. $V$, construeted and operating substantially as deseribed for the purpose specified.

195,507.-W. Inck Adams, New Tork, N. Y.Card Holder.-March 17, 1868.-The frame is attached to a trunk, and has one end open for introduetion of a direction card, whieh is retained by the spring-baek plate.

Claim. -The removable spring-back plate $D$, when provided upon its sides, near one end, with the lugs E, fitting in to the inclined grooves $F$ npon the under side of the frame A, the free end of said plate press. ing against the under side of the shoulder $a$, as herein deseribed, for the purpose speeified.

65,50S.-Truman P. Allen, Gowanda, N. Y.Feed Cutter.-March 17, 1868.-The two knires, which are respeetirely above and below the throat, are connected at their ends by parallel, piroted bars, and are operated by the same forked lever, so as to have draw cuts in opposite direetions.

Claim.-1. Arrang̣ing the two linives C and D , substantially as herein shown and deseribed, so as to obtain a drawing stroke mith each knife.
2. Applying the power directly to the knives; sub-
stantially as herein shown and deseribed, and for the purpose set forth.
3. The eombination of the knires C and D , pivoted connecting bars E , and branched operating lever $F$ with cach other, substantially as herein shown and described, and for the purpose set forth.

55,509. - William Anheuser, St. Louis, Mo.Extracting Saccharine Matter from Malt.-March 17, 1868 .- After infusion of the malt the liquid is extricted by pressure.

Claim.-1. The process of extracting the saccharine malt liquid from the malt by pressing.
2. The process of pressing the malt refuse left after infusion, for the purpose of obtaining an additional quantity of saceharinc juice.

75,510.-Ellis S. Archer, Net Yorle, N. Y., assignor to Aricher, Pancoast \& Co., same place. -Lantern.-March 17, 1868.-The top is formed of an arched corrugated cap and a centrally-perforated plate, to which the cap is attached by the guard wires. The corners of the said plates are cut out, so that when the sides are turned downward the rounded projections of the cormers may be passed througli slits in the upright eorner pieces of the frame. The upper euds ot the guard wires are formed into eyes, to which the handle is hinged.
claim.-1. The combination of the top piece or plate E, constructed and formed as described, with the frame aud side plates of a lantern, substantially as and for the purpose set forth.
2. The passing the spring through the side of the lamp, and soldering it upon the inside of said side, substantially as described.
3. The forming the eatch of the spring by punching and striking out a portion of the spring itself, substantially as and for the purpose set fort h.
4. The combination of the spring $O$, constructed and attached as described, With the lamp and frame of a lantern, substantially as described and for the purpose set forth.

75,511.-Jearum Atkins, Washington, D.C.Smoke Stack for Locomotive Engincs.-March 17, 1868. - The lower cind of the smoke stack has an inFerted, iruncate-conical portion Which descencls into the smolie box and contains a number of flaring tubes supported between two horizontal perforated dishs. The cxhanst pipe passes up centrally through this portion and ends in seren (more or less) nozzles, pointing to as many eircular or hexagonal flaring tubes, inclosed in a case and forming the smoke exit.

Claim.-1. Providing a scries ot conical or tapering tubes or passaces, through which the products of combustion are mate to pass on their way from the furnaces of steam generators, arranged substantially as shown and described.
2. The combination of the divided exhaust nozzle and the taperius tubes or passages, substantially as shown and described.
3. The arranerement of blast tubes M, with reference to the tubes or passages $J J J$ and F F , substantially as show'r and described.

75,512.-Solomon S. Avis, Pennsgrote, N. J.Stump Extractor.- March 17, 1868. -'The lower plate of the lever has a series of notelies to reecire the fulcrum-bar of the trestle, and the upper plate has a forked end to engage tho hoisting chain which is attaehed to the lifting chaw.

Claim.-1. The trestle horse A c c c c, e e, and lerer $B$, substantially as shown and deseribed, in combinatiou with the chain $i$, as and for the purpose set forth.
2. The plates $b$ and $d$, substantially as shown and described, in combination with the lever $B$ and trestle horse. as and for the purposes set forth.
3. The perlestal plankse, in combination with the trestle horse and level 3 , substantially as and for the purpose shown and described.
\%5,51:3.-Josept Baysore, Freeport, Ill--Car Truck:-Mareh 17, 1868 .-The circle plate attached to the under side of the car bed rests upon rollers, upon a transperse, sliding bar which is supportcal between the two central eross bars of the truek, and on springs beneath its ends, which rest on a cross bar secured by hanging straps to the said eentral eross
bars. The cud cross bars of the truck hare brackets cmbracing the circle plate and giving bearing to rollers tracking thercon. These rollers and brackets serve to support either corner of the truck when an axle or wheel is broken.

Claim.-1. The axamgement and method of connection of the axles $A$ of the truck to the car bed $K$, through the medium of the straps $\bar{F}$, bars D , rollers $L$, and circle plate $J$, arranged substantially in the manner as and for the purpose set forth.
2. The springs C E arranged and applied to the truck substantially in the manner as and for the purpose specified.

75,514.-Henry L. Beacir, Montrose, Pa., assignor to Beach Wheel Holise Rake Mayufacturing Co.-Morse Rake.-March 17, 1868. - The shoe is formed to run easily orer the ground withont perforating the same. It is made of wood or iron and may be applied to the ends of common, metallic tecth, or to those formed purposely, hirving their ends curved around for engagement of a liey.

Claim.-1. A shoe or foot, construeted and operating shlostantially as described, for the purposes specified.
2. Attaching the shoc or foot substantially us herein described, for the purpose specified.

75,515.-H. II. DENT, Antwerp, N. Y., assignor to himself and E. Sixis.-Checse Vat.-Marcli 17, 1868. - The water, after passing around the milk pan, runs into one end of a tilting box, which then descends and raises the emptied chd of the box. The water then runs out of the full side, and the same movement is repeated. The tilting box is connected to the pendulous frame which is thus oscillated, and the milk agitated by its adjustable horizontal bar.

Claim. - The box L, provided with partition $R$ and discharge pipes $S$, in combination with the standard P, ribrating bars K II II, and the adjustable paddle or agitator I, the sercral parts being constructed and operated substantially as and for the purpose herein fully set forth.

75,516.-Joun Q. Birkey, Philadelphia, Pa.Gas and other Heaters.-MLarch 17, 1808.-The nosious rapors arising from combustion of gas or other fucl is collected in a conical receirer and eonducted through a pipe to a vessel containing liquid to condense the said vapors.

Claim.-1. The receiver D, for collecting the noxious vapors, dcleterious gases, and other impurities arising from the combustion of fucl, in combination with a pipe, tube, or outlet, for conducting the said gases and impurities to tho ressel where the same are ncutralized, substantially as set forth.
2. Neutralizing or destroying the impurities arising from combustion in water or chemical agent, substantially as described.
g5,51\%.-Wrllim Brown, Addison, Mich.Farm Gate.-March 17, 1868.-The gate is suspended on rollers which track on a bar in an upper frame. The bar is inclined by toggle levers conneeted to and operated by cords which extend up and down the track for convonience of the occupants of conveyances. The inclination of the bar eauses the grate to slide open or shut, as the ense may be.

Claim.-1. Tho levers J, when constructed and operating for the purposes hereinbefore described.
2. The combination of tho above levers with tho gate A , the upright bars $\mathrm{B} C$, tho wheels D , tho horizontal bar $E$, the double posts $\mathrm{F}^{\prime} \dot{(1)}$, the horizontal bar, described as loeing hung upon rods near the top of the posts $C$ II, the cranks 1 , the rings or blocks ML $N$, the cords or chains L, the posts and arms $O$, the guides $P$, and the lateh $R$, when constructed, arranged, and operating substantially as and for the purposes herein set forth.

75,-518.-Wmlian F. Burke, Brighton, Mass., assignor to himself and Janes E. Whison, Springfiek, Mc.-Car Brakc.-March 17, 1868.-The brakes are applied by cams which are conneeted to wheels turned by serew gear's upon a shaft operated by bevel-whecl engagement with the shaft of the hand wheel.

Claim.- The combination and arrangement of the
three shafts F F I, their screws II II, worm gears G G, eams E, and the bevel gears L M, and vertical hand-wheel shiuft N , arranged at either or each ond of the carriage, and with respect to the brakes D, substantially in mauncr as sṕecified.

75,519.-Ezra Caswell, Xjons, N. Y.-Bed Bottom.-Mareh 17, 1868.-Tho ends of the slats are secured in a metallic frame. A rubber loop is secured by a wedge in a transverse slot of the frame, and the loop is secured by tho hooked link to the hooks of the bracket.
Claim.-The bed bottom constructed as desoribed, and consisting of the slats C, frame D, having slotted cross-bar $f$, plate $a$, having hooks 13 , link $F$, elastie strap E , wedge $g$, and serew $e$, all arranged and operating as described, and for the purpose speeified.

195,520.-W. T. Chaffee, Richmond, Va., assignor to himself and Samuel M. Drinkere, same place.-Grain Separator. - March 17, 1868. -The two beveled bars are placed side by side so as to form an inclined trongh through whieh the grain passes by the longitndinal, reciprocal motion imparted to the bars by connection to a compound crank shaft. The bars have downwardly flaring perforations to allow the escape of obnoxious seeds.
Claim.-1. The combination of the perforated, sliding, triangular bars B and C , with each other and with the trame A, substantially as herein shown and described, and for the purpose set forth.
2. Connecting one of the triangular bars, as C , to the cross-bars $a^{\prime}$ of the frame $\mathbb{A}$ by the dovetailed bars E and G and hand screws F , or by equivalent means, so that it may be moved back and forth or adjusted laterally, substantially as herein shown and deseribed, and for the purpose set forth.
3. The combination of the crank shaft $H$ and pitmen I with the sliding triangular bars B and C , and with the frame A, substantially as herein shown and desoribed, and for the purpose set forth.
95.521.-S. Baldwin Chapman, New York, N. Y.-Car Wheel. -March 17, 1868.-The tread of the whecl is a wooden annulus made in seetional blocks, so arranged that the grain of the wood runs radially. The annulus is inelosed at every point but the periphery, by the metallie part of the wheel.

Olaim.-A wheel for railray cars, composed of the metal plates A E, wooden sections C, and the elastic ring Ax, all being secured together by bolts, and used with or without rings 1) D, substantially as herein shown and described.

75,522.-Daniel G. Chase, Boston, Mass.Shuttle for Looms.-Mareh 17, 1868. -The bobbin spindle is hinged to its head, and is raised for insertion in the bobbin. The spindle is drawn dorm into working position by a spiral spring, and the flange of the bobbin is engaged by the npturned end of the flat spring to hold it in place non the spindle.

Claim.-The combination of the open slotted spindle-head $c$, coiled spring $h$, and plate spring $c$, with the shuttle $A$ and stop pin $g$, the whole being construeted and arranged for operation as herein shown and described.
\%5,523.-Daniel L. F. Chase, Boston, Mass.Steam Engine Governor.-March 17, 1868. - The governor valve stem earries the sectoral raek lever which is aeted on by a spur wheel on a shaft which reeeires rotation from the motive shaft, and has vertical movement by connection to a lever actuated by the ehanging movement of the governor balls. The rertieal movement of the spur wheel brings it in engagement with the upper or under rack npon the sectoral lever, to eanse the inerease or decrease in quantity of steam by the partial rotation of the val ve.
Claim.-1. The combination of the valve stem and sectoral rack or lever with the vibratory arm $k$, pinion $h$, and shaft $i$, reeeiving motion directly from the driving shaft $o$, substantially as and for the purposes shown and set forth.
2. The combination of the ralve stem, the sectoral raek or lever, and its actuating pinion and vibratory shaft of the gear $m n$, shaft $o$, and lever $v$, link $z$, and sleeve $s$, substantially as and for the purposes herein shown and speeified.
3. The construction of the scetoral lever $d$, as composed of the cecentric slot $e$, with its enlargements $a^{1} a^{2}$ and its toother racks $f$ and $g$, essentialty as bofore set forth and explained.
4. The combination, with the arch $l$, of the vibrating. arm or bracket $k$, the shaft $i$, and the gears $n s$ and $n$, the bracket being pivoted to the areh, ars bofore explained.
-75,524.-Justus Chase, Jr., Watertown, N. Y. -Bake Pan.-Mareh 17, 1868.-The pan has a tight cover which is considerably raised, and receires the steam from the bread, which can only escape by passing baek agrain through the bread.
Claim.-The bread pan, consisting of dome D and base A B, with suitable connecting devices, constructed as herein described, and for the purposes set forth.
'95,525.-Sydney E. Chase, Mendon, Mich, Covering for Shaft Coupling.-Mareh 17, 1868. -The two parts of the conical-ended, cylindrical case are hinged together, and are made to cover a shaft coupling which may be in an exposed situation,
Claim.-The construction of a coupling cover, as hereinbefore described, and operating substantially as and for the purposes set forth.
195,596.-James A. Clarke, New York, N. Y.Ferry Bridge Guard.-March 17, 1868.-The draw is npon a rock beam which is rolled by weighted cords so as to raise the draw, and is rolled so as to lay down the draw, by the inward movement of the fender, when a landing is made.
Claim.-The self-acting draw $k$, actuated by the fender $c$, substantially as and for the purposes set forth.

75,52\%.-John C. Clime, Philadelphia, Pa, assignor to himsclf and d. Moone Henvricks, same piace.-Bedstead.-March 17, 1868.-The slats are supported by springs at the ends and near the midzdle. The bar supporting the head springs is mate adjustable by thumb screws. The springs are coiled around perforated tubes intended to contain a disinfectant.
Claim.-1. The arrangement of the notehed slats $A$, coil springs $B$, middle supporting bar $C$, and adjustable head bars D, when these several parts are constructed substantially as shown and described, for the purpose specified.
2. The perforated hollow tube F in combination with the coil springs 13 , substantially as set fortri.
75.528. - Join S. Coffanan and Manassah Graybill, Greenville, Ind.-Hay Raker and Loader. -Mareh 17, 1868. -The hay is dropped from the endless elevator upon a tilting platform, from which it is depositcd in heaps.
Claim.-1. The loose teeth $F$ and bar $G$, in combination with the piroted arm H, rols $\mathrm{J} i$, jointed conneeting bar $k$, and lever $\mathrm{P}^{\prime}$, all arranged to operate as herein shown and deseribed.
2. The reeeiving platform $\mathbf{E}$, when adjusted upon the frame D by means of the cord $o$, ratchet and pawl, and the erank $p$ npon the rod $n$, as herein deseribed, for the purpose specified.
3. The arrangement of the frame $D$, burden wheel A, easter wheels B, atjustable apron E, loose teeth F, and their operating mechanism, the endless apron C, and shaft G, all operating as described, for the purpose specified.

M5,529.-Noain L. Cole, Norwich, Conn.Lamp Lighting Deviee--Mareh 17, 1868; antedated February 28,1868 . -The wrench is used for turning on the gas. The draw pin is dramn back until the spring eatches over the end of the eylinder and the piston is drawn to the end of the tuming erlinder; then, by pashing down the thumb spring, the piston is adranced and forces the matel through the lighting derice.

Claim.-1. The within-described combination of clerices for cjecting matehes, eonsisting essentially of the rerolving chambered eylinder $g$, piston $e_{3}$ eatch spring $f$, draw pin $d$, spring $b$, eylinders $a$ and $l$, and handle $e$, or their equiralents, arranged and operating substantially as described.
2. In combination with the elements of the preceding clanse, the igniting and holding spring $k$, applied and operating substantially as deseribed.
3. The wreneh $i$, applied to a mateh-ejeeting instrument, in the manner and for the purpose deseribed.

75,530.-GEORGE Cnompton, Worcester, Mass. -Loom.-Mareh 17, 1868.-Inmediately before the operation of the pattern cylinder apon the heddles, the levers are elamped between the eveners, so as to insure the proper alignment of the levers, and to cause the slots not only to be brouglit into line but into such relation to the elerator or depresser lever, that their upper and lower surfaces are earried out of line With the edges of the said levers. Each set of shuttle boxes is mounted on a vertieal rod and supported on a spring whieh rests upon the top of the stirrup. The stirrup is operated by the tappets by means of the tappet lever which is fulcrumed on the framo and conneeted to the stirrup.

Claim.-1. In combination with angular lifter and depresser levers, working upon fulcra the plane of the eloth-making line, horizontal rigid evener bars fixed to the slide rods and operating to even the jaeks, substantially as described.
2. In combination, horizontal rigid eveners, seeured to slide rods, angular lifter and depresser levers, and the slotted jaeks, substantially as deseribed.
3. The slotted angular lifter and depresser levers, working on stationary fulcra, combined substantially as described with the slide rods.
4. Angular lifter and depresser levers, vibrating on stationary but adjustable fulera, and fixed by sliding or yielding eomnections to the actuating rods, substantiallr as deseribed.
5. In combination with the movable shattle boxes and mechanism for supporting and for ehanging them, the stirrup $s$, arranged to operate substantially as described.
6. In eombination with the tappet lever aud stirrup, eonstrueted as described, the link $b$, connecting the łever and stirrup, and arranged relatively thereto, substantially as deseribed.

75,531. - Williay George Crossiex, Cambridge, England.-Velocipede for Land and Water. - Mareh 17, 1868. -The body is formed as a boat, and has side wheels and paddles, whieh are upon a double erank-shaft turmed by treadles and hand levers.

Claim.-l. The velocipede, in whieh the body is made so as to serve as a boat or ear, as the same is used upon land or water, and eonstrueted substantially as herein deseribed.
2. The eombination of treadles B and levers $a, b, c$, $\& \cdot \mathrm{c}$, for operating the shaft, arranged substantially in the manner shown.

75,532.-B. W. Davis, Fol't Madison, Iowa.Horse Rake. March 17, 1868.- The stirrups are adjustable on the handle frame and lap around the deseending arms of the sliaft frame.

Claim.-A band or stirrup, A, for eonneeting the shaft B to the handle C of any rotating horse-rake D, furnished with the slot or holes $a$, substantially as shown and deseribed, and for the purposes set forth.

75,533.-L. L. Davis, Springfield, Mass. Spirit Level.-Mareh 17, 1868.-The frame has an upper and unter straight edge, and a eireular portion to whieh the ring is pivoted. The ring has at its periphery two studs at a distance of $90^{\circ}$ from each other, and the studs impinge against the conical ends of stop serews in the ease when the straight edges are rertical or horizontal.

Claim.-In combination with the serows $d d^{\prime}$, having the eonical points $e e^{\prime}$, the stucis $i i^{\prime}$, plaeed in the ring D , which has a reciproeating potary motion, all construeted and arranged substantially as herein deseribed and set forth.
(75,534.-L. L. Davis, Springfield, Mass.-Adjustable Spirit Level.-Mareh 17, 1868.-The spirit glass is in a frame aljusted by temper serews.

Claim.-l. The adjustable bubble-glass ease $h$, having the elastic adjusting ears $i i$ and projection $o$,
when constructed and arranged substantially as described and for the purposes herein set forth.
2. In an adjustable spirit level, the case $h$, having the elastic aljusting ears $i$ ind tho projection 0 , and operated or adjusted by means of the serews $f f$, in combination with the plate $a$ and pin $n$, substantially as herein described and sot forth.

75,535.-Jonas Dienle, East Freedom, Pa.Tanning and Coloring Sheep Skins.-March 17, 1868. -Composed of a strong solution of stable manure strained through a linen eloth, 8 galls.; alum, dissolyed, 3 lbs.; salt, 1 qt.; chamber lye, 1 gall; solferino crystal, $\frac{3}{4}$ oz.; Water, 3 galls. The abovo is sufticient to tan and color three sheep-skins.
Claim. - A taming and coloring liquor, composed of the ingredients and mixed in the proportions about as specified, for tanuing and coloring sheep skins, as sot forth.

75,536.-Oscar G. Ditmars, New York, N. Y. -Medical Compound.-Mareh 17, 1868.-For trentment of eoughs, and as a tonic. Composed of Jamaiea rum, 1 qall. ; loaf sugar, I lb. ; balm of Gilead buds, $\frac{1}{2} \mathrm{lb}$. The strength of the buds is extraeted by slow distillation, the liquid is then filtered.

Claim.-The medicine herein described, ealled "Tho American Cough Balm."
7. $7.537 .-O s c a r$ G. Ditmars, New York, N. Y. - IIedical Compound.-March 17, 1868.- For treatment of dyspepsia, \&c. Composed of whisky, I gall. ; wild cherry bark, $\frac{1}{2}$ lb. ; peach tree bark, $\frac{1}{2}$ lb. ; spikenard root, ilb.; sarsaparilla root, $\frac{1}{2} \mathrm{lb}$. The mediene is distilled from the ingredients.

Claim.-The medieine herein described, called "The American Dyspepsia Cure."

75,535.-Cyprien Marie Tessié Du Motay, Mctz, France, and Edouard Karcier, Saarbruck, Prussia.- MCanufacture of Hluoride of Silicium. Maveh 17, 1868.-An intimate mixture of silica, 11 equivalents ; and fluoride of ealeium, 18 cquvalents, are dissolved in a closed crucible in presence ot car. bon. The earbon aets as a reducing agent of part of the oxygen eontained in the siliea and aids the direet union of the fluorine and silicium.

Claim.- The manufacture of fluoride of silicium, by reducing the oxygen of silica by means of earbon or earbonated compounds in presence of thoride of calcium, substantially in the manner inorcin described.

75,539.-GEORGE C. Fitch, Randolph, N. Y.-Churn.-March 17, 1868.-The ends of the radial dasher arms give journal bearing to the eurve-lipped buckets, which hare free rotation as the dasher is turned.

Claim.-The arrangement of the buckets D D, provided with four elongated lips, as deseribed aud used npon the arms C C, in the box $A$, substantially as speeified.
\% $5.540 .-T h a n d e u s$ Fowler, Seymour, Conn., assignor to the United States Pin Cominy, New Haven, Conn.- Machine for Preparing Pins. Mareh 17, 1868; antedated Mareh 7, 1868.-The spring ent-off has a series of points whieln pass in between the first and seeond pins in eaeh row, and hold. up all but the ent-off pins, which are allowed to fall into the stieking apparatus. The latter has a series of grooves, in front of which is a spring door that is swung down by the action of a rake that enters the grooves and forees the pins into the paper:.

Claim.-1. The pointed eut-offs $s$, applied at tho lower ends of the eouduetors, in combination witl the stop bar $r$, substantially as and tor the purposes set forth.
2. The groored breast $c$, and spring door $i$, in oombination with the rake $k$, substantially as and for the purposos set forth.
$75,541 .-E$. A. Goones, Philadelphia, Pa., assignor to himself, E. L. Miller, and W. H. Mor: Fornd, same place.- Funnel and Grater.-March 17 1868.-The edge of the cylindrical nozzle is serrated to form an apple corcr. The upper edre of tho Hare is corrugated to form a fancy cakc cuiter and a
pie erimper. The handle has a grater, and its ring has a serrated side whieh serves to remove green corn fiom the cob when passed through it.

Claim.-1. The corrugated rim $f$, around the top of the funnel, and the serrated cdge $e$ of the nozzle $B$, in combination with a fummel, substantially as and for the purposes deseribed.
2. The handlo C, with the perforations or grater $g$, and the wing $h$, with tho serrated edge, in combination witl a funnel, substantially as and for the purposes set forth.
75.542.-William A. Grailam, Carlisle, Pa., assimnor to himself and Charles Carr, Trenton, N. J.-Brich Machine.-Mareh 17, 1868.-The mold and pressure wheels rotate together. After having contaet with the pressure wheel the side of the brick is trimmed by a knife, and then passes on opposite to the presser bloek, whieh is upon the arm of a roek shaft. Pins on the side of the mold wheel impinge against a projeetion upon a eurved arm of the roek shaft, and cause its movement. The presser block slides on the arm, bearing against a spiral spring surrounding the arm, so as to allow its movement with the revolving molds.

Olaim.-1. The eombination of the shafts $\mathrm{N} R$, knife $P$, and rollers $n n$, with the wheels $C^{\prime} C^{\prime}$, wheu construeted and operating as specified.
2. The roek shaft I with its upper and lower eurred arms L. M, presser $O$, and spring $m$, when used with the wheel $\mathrm{C}^{\prime}$, as set forth.
3. The combination of the solid-faeed wheel $C$, briek-mold wheel $\mathrm{C}^{\prime}$, plungeris $i i$, segment $K$, roek shaft, with its arms L M, shafts N R, kuife I' cam F , and belt E , the varions parts being construeted and operating substantially as and for the purposes set forth.
m.5. © $13 .-A R T H U R$ HADWEN, Roehester, N. Y.Potato Digger.-Mareh 17, 1868. - The potatoes, after raising, are carried orer the longitudinally barred sereen, and then dirested of the earth upon the rotating screen. 'The eams near the fore end regulate the inclination of the seraper at the fore end of the fixed screen.

Claim.-1. The arrangement of the rotary screen $F$, arm $A^{\prime}$, pulley $S$, in combination with the belt ' $I$, substantially in the mamer herein shown and deseribed, and for the purposes set forth.
2. The arrangement of the seraper D , ccecntrie cam $y$, in eombination with the shovel plow E , substantially in the manner and for the purposes herein showu and deseribed.
3. The arrangement of the lateh B in combination with the sides C , for the purposes herein shown and deseribed.

75,544.-URI HASKN, Jr., Pittsburg, Pa.-Spiral Gearing.-Marel 17, 1868. -The gear wheels have conneeting spiral ribs and grooves.

Claim.-Spiral-toothed gearing, consisting of teeth whieh run around the periphery of the gear wheel, and meet iu an augle on a line midway from either edge of the wheel, constructed and arranged substantially as hereinbefore deseribed.
y5,545.-Franklin Haskins, Ware, Mass.Shuttle Binder. - Mareh 17, 1868. - The shuttle binder is made in two parts, one of whieh is supported on the shuttle box, and in turn supports the other part, the face of whiel is chrved and acts as a friction pieee, it having a longitudinal motion in referenes to the supporting part, and also a lateral motion in referenee to the lathe. These adjustments are controlled by set screws. The longitudinal motion governs the plaee of applying the friction, and lateral motion regulates the amount of friction.

Claim. - The tapering supporting picec $\mathbf{A}$, in combination with the friction piece $1 B$, screws $d$ and $e$, and nuts $b$ and $f$, the whole arranged and operating substantially as deseribed.

75,54.6-TsAAC W. HENDERSON, Leavenworth, Kansas.-Pen Holder for Ruling Machines.-Mareh 17, 1868. - The pens are clamped to the arms and rule parallel lines. The jaws are adjustable to regnate the distance of the lines.

Claim.-1. A Loolder for pens, consisting of the
two arms B and $C$, hinged together, substantially as and for the purpose deseribed.
2. The set serew I, in eombination with the above, substantially as and for the purpose speeified.
3. The eombination of the arms 13 and $C$, eaeh adapted to receive a pen or pens, and set serews $G$ L, substantially as and for the purpose deseribed.
g5,54g.-Pathick Hickey, Philadelphia, Pa., assignor to himself and Robert Ponter, same place. - Can for Putting up Alkalies.-Mareh 17, 1868.-The top of the side has a compound flango having a flaring and cylindrieal portion, and the head has a flaring flange whieh lies fairly on that of the side. A collar is placed around the ean, beneath the flanges, and the cylindrical portion of the side flange is closed down upon tho head.

Claim.-Setting the hearls into alkali, paint, or other similar cans, by means of the flanges $2,3,4$, and a collar, D, encircling the body, so that said heads may be permanently and tiglitly set into the body whilst full, aud sitting in an upright position, substantially as deseribed, and for the purpose set forth.
F.5. $18 .-$ James N. Hicks, Barre Center, N. Y. -Hors Fake. - Mareh 17, 1868. - The ratehet is upon the rake shaft, and has two tecth, whieh engage the pawl when the same is not raised by the lever. The teeth aet upon the pawl so as to stop the rake eaeh time at a half rotation, and in a vertieal positioll.

Claim.-1. The revolving wire-toothed rake head, formed of the bar A and the teeth B B, \&e., in combination with the arms C C and the lever G, substantially as shown and deseribed, and for the purpose set forth.
2. The ratehet $K$ and the pawl $L$, in combination with the lever O, operating for the purpose and in the manner shown and deseribed.
3. The lever $G$, in combination with the arms C C, operating for the purpose and in the maumer above shown and deseribed.
 Privy. - Nrareh 17, 1868. - Tho sink is made in two cast-iron seetions bolted together, and has a rounded bottom. The mouth of the over-flow trap pipe is proteeted by a grating on whieh slide elearing bars operated by a handle rising through the privy floor.

Claim.-A sliding elearer, combined with a stationary grating in a privy ranlt or sink, for the purposes and substantially as set forth.

195,550. - JOB Jomnson, Brooklyn, N. Y. Oyster Tongs.-Mareh 17, 1868.-The serrated jaws are connected to toggle levers, and operated by two cords, so as to lowel the jaws in an open position, and cause them to be drawn together in lifting.

Claim.-1. The pair of toggle bars $g h$, jointed to the ends of the tongs $d e$, substantially as speeified so that the tougs will be closed ly drawing up the joint between the bars $g h$, or opened by drawing the joint between the bars $d e$, toward the said joint, between the bars $g h$.
2. In combination with the toggle bars $g h$ and tongs $e d$, as aforesaid, the pole or bar $m n$, and the ropes or chains $k l$, substantially as and for the purposes specified.

75,551.-SEbastian Kelier, Elizabethtown, Pa.-Portable Fence.-March 17, 1868.-The fenee is inelined toward the stakes whieh pass the upper aperture, and are seeured to the fenec by traversing pins.

Claim.-The mode of supporting portable feneing as herein deseribed.
75.5.52.-Henry N. King, Adrian, Miel.Adjustable Jaw for Vises.-March 17, 1868.-The faee of one jaw is socket-jointed so as to conform in inclination to the other jarr.

Claim. -The eombination of the stationary jaw $\mathbf{A}$, the morable jaw $B$, the plate $C$, the bolt D, the ball E , the collar F , the plate G , the face plate H , the adjustable stops $I$, and the projecting standard, when eonstructed, arranged, and operating substantially as and for the purposes herein set forth.
75.553.-John Kocn, Brookline, Mass.-Furniture Dravers and Fastcnings.-Mareh 17, 1868. The lower drawer has a usual lock, and at the reai end of its bottom is a roller, whieh, when the drawer is closed, depresses a rertieal bar at the rear of the drawers. The bar lias a scries of hooks which engage all the drawers cxcept the lower oue.

Claim.-1. The combinatiou of the inelined plane, or lever $k$, the spring $e$, aud the bolt $\Pi$, made with hooks arranged to eateh upon the clrarrers, as specified, such combination being arranged in manner and so as to operate with the drawers, as oxplained, and being what I term the primary or boltiug or fastening mechanism.
2. The combiuation of the bar $I$, the spring $K$, the notel I , the knob $o$, the ratehet $p$, and the pawl $q$, as arranged with a drawer and its case, substantially as set forth, such combination being what I term the auxiliary fastening meehanism.
3. The arrangement of the primary and auxiliary fastening mechanism with the series of drawers and their case, all as deseribed, for the purposes set forth.

195,554.-H. Lemaistre, Brussels, Belginm.-Belting.-March 17, 1868.-The formard end of the lap is in each case eovered by a lip on the hody of the belt so as to leave no formardly-iucliued eorucr to become folded baek.

Claim.-1. The manner herein shown and described of uniting picees of leather for making belts, by tapering their ends aud learing a lip a on cvery other end, as described, and uniting them by the means hereinafter described.
2. Cutting the euds of leather straps, substantially iu the manner described, so that they ean easily be unitcel for belting, as set forth.
195.555.-William Lilley, Washington, D. C. -Propagation and Treatment of House Plants.March 17, 1868.-The saneer has a central, jaised portion which supports the pot, and an amular outer trough coutainiug water to moisten the air around the plant.

Claim.-Propagating and treating honse plants in the mauuer and by the means substantially as and for the purposes herciu set forth
75.556.-Joserh Liness, Chicago, Mll.- Tindow Sash.-March 17, 1868; autedated February 28, 1868.-The filling, or cross-bar work, of the sash consists of an onter and inner frame, sceured together by serews inserted from the inside. The glass is held in by strips, its edges being paeked with rubber to insure tightness and lessen jur.

Claim.-1. Construction of a sash with a filling of bars and mullious, with a removable outer section I F, and a removable inner scetion E D, so that one or both may be remored without disturbing the frame, substantially as specified.
2. The cross bar or plate U, when plaeed aeross the interscetion of the bars and mullions on the inside, so as to be coneeald when the sash is put together, substantially as shown.
3. The method of seeuring the removable bars and mullions in the frame, by means of the strips $D$, made with bereled or eoped ends, to fit over the eorresponding bevel or molding of the bars and mullions, substantially as specified.

75, $55 \%$ - William I. Lutier, Roehester, N. Y. -Bottle Faucet.-Marcli 17, 1868.-The faveet has a pointed ralve at its lower end which closes the tube against the entranee of small picees of cork while passing through the cork, and which springs out after insertiou to allow flow of liquor.

Claim.-1. An automatic faucet for ehampagne bottles, \&e., in which the passage at the end of the screw self-eloses in entering the eork, and self-opons when passed through the eork, substantially as herein set forth.
2. The combination of the independent stop-eock $d$ with the automatic point $f$ and serew $b$, operating substantially as and for the purpose specified.
3. The special construction and arrangement of the parts, consisting of the case $A$, eock $d$, serew $b$, point $f$, shank $g$, cross head $h$, and spring $h$, oporating as deseribed, and for the purpose set forth.
g5,558.—James B. Macduff, New York, N. Y. -Forming Raised Ornaments on Wood.-March 17, 1868. - The ontlines of the letter or ornament are cut by a knife of suitable form whiell is forced into the face of the wood. The letter is then depressed by the follower, and the salient surfaee sawn off. The letter is then raised by moisture applied to the wood.

Claim.-Raising ornaments upon wood by means of the knife $A$ and follotrer B, operated as described, whereby the knife is forced into the wood and removed, and the follower B applied to compress the ormaments, which, after the blank is samed off, are raised to the desired height by stcaming, as herein shown and cleseribed.

75,559.-Willay C. McBride, Somerville, N. J.- ILachine for Dressing Flax.-Mareh 17, 1868.Improvement on his patent, January 25, 1859.-The upper end of the flax is iuserted between the rope aud the periphery of the wheel. The portion of flax abose the rope is folded orel upon the top of the wheel by au inelined guide plate.

The flax is first earied to the beaters of the first sentching chamber. At the eenter of the seutehing chamber the flax is presented to the combs which lighten up the fibers. At the end of the first seutching chamber the unscutehed top is eombed out, and the whole passed through a slot in an upright plate. The lower end of tho flax is then grasped by another rope, and the top dressed out by the upwardly operating sentehers in tho sceond chamber.

Claim.-1. The toothed rheels $I$, in eombination with the revolring disk $\mathrm{E}^{\prime}$ and fecrling rope $\mathrm{F}^{\prime}$, all constructed, arranged, aud operating as licrein shown and deseribed.
2. The arrangement of the oblique fiuger above the carryiug disk $\mathrm{E}^{\prime}$ and cord $\mathrm{F}^{\prime}$, for the porpose of depositing the upper eud of the fiber upon the surfaee of the disk, substantially as set forth.
3. The beaters $G \operatorname{G}$, eoustrueted as doscribed, having two opposite straight sides and two curved sides, convex in the center and eoneare at the cdges, all arranged and operating as deseribed, for the purpose specified.
4. Providing the straight sides of the beaters Ge $G$ with oblique rounded teeth e $c$, as herein described, for the purpose specified.
5. The revolving comb wheels $f$ and $f^{\prime}$, arranged so as to straighten the fibers after they are discharged from the scutehing chamber, substantially as and for the purpose herein shown and deseribed.
6. The toothed disk J, wheu arranged as deseriberd, for the purpose of taking the dressed flax from the rope F , and depositing the same upon tho table $L$, as set forth

75, 5 dio.-Alexander McKenzie, Menry, IllInsect Destroyer.-Mareh 17, 1868.-Fence 1ails aro immersed in a solution composed of aeetic acid 2 oz ; oil of wormwood, 1 oz ; oil of fireweed, $\frac{1}{4} \mathrm{oz}$. The nails are then driven into the tree both below and above ground.

Claim,-The solution, composed substantially as herein described, and applied in eombination with irou, substantially as and for the purposes specified.

75,561.—JOHN McKINSEx, Millville, N. J.-Vermifuge.-March 17, 1868.-Composed of worm seed, 1 oz.; "catgut," (a medicinal plaut,) 1 oz.; and aloes, $\frac{1}{4} \mathrm{oz}$; white sugar, 1 lb .; essence of sassafias, 5 drops.

Claim.-A rermifuge or rorm medicine, composed of the ingredients (and in about the proportions) named, or substautially as described.
195.562.- Bevel S. Morgan, Delhi, Towa.Clothes Tounder.-Mareh 17, 1868.-The levers and jaws of the clothes tongs may be elosed to form a cylindricalls-ended pounder.

Claim.- The construction of the two pieces of wood D D and E E, the hollowed surface of each of the tro scetions of the head CC , forming the eavity C when closed, as and for the purpose specified.

195,56:3.-James Morton, Philadelphia, Pa.Cutting Saw Teeth.-March 17, 1868.-The disks
have counterpart, angular projections and depressions at the sides of their peripheries which form a zigrag-edged cutter.

Claim.-A tooth-eutting machine, consisting of the two-toothed revolving circular dies $\mathbf{D}$ and $\mathbf{E}$, geared together and moving in opposite directions, substantially as herein shown and described.

195,564.—Hezeriah Munroe, Fall River, Mass. -Caster for Furniture.-Mareh 17, 1868.-The lower part of the spindle has side bearing against antifirietion rollcrs.

Claim.-The construetion and arrangement in the casc E of the friction rollers $c$ c upon the vertieal screws $a$, and adapted to bear and revolve against the shank of the spindle $B$, below the collar $d$ and above the bottom plate $b$, without contact with the top or bottom of the caso $\mathbf{E}$, as herein described, for the purpose specified.

75,565. - George Neilson, Boston, Mass. Lamp Burner.-March 17, 1868. -The lower end of the air supply tube is turned outward to form a ohimney rest which, in combination with the springs, supports the chimney.

Claim.-1. The combination, with the wick tube, of a deflector, and an air supply cylinder for supporting the same, when the said cylinder constitutes at the same time the rest or seat for the lamp chimney, as herein described.
2. The combination, with the wick tube and elevated deflector, of a cylinder, forming at once the rest for the deflector and the lamp chimney, and supported upon a perforated air distributing plate or diapluragm monuted upon a wick tnbe, substantially as herein described.
3. The combination, with the wick tube and air distributing plate or diaphragm mounted thereon, of the deflector and combined air supply cylinder and chimney rest, when the latter is detachable and removable from the said diaphragm and wick tube, substantially as herein shown and described.
4. The combination, with the air supply cylinder, when constituting at the same time the chimney seat or rest, of springs for supporting the chimney in position, snbstantially as hercin specified.
5. The combination, with the wick tube, of the air distributer or diaphragm and the receptacle or cup formed in that part of the said diaphragm immediatcly surrounding the wick tube, as and for the purposes herein shown and set forth.

55,566. - George Neilson, Boston, Mass. Lamp Burner.-March 17, 1868. -The periphery of the lower part of the bnrner has a bereled seat upon Which the globe framo rests, by a circular flange Which is forced thercon. The seat may lue either detachable or made in one piece with the bumer.

Claim. - The combination, with a lamp-bnrner in which the base or chimney rest is combined with an elevated deflector, as herein specified, of a globe frame, adjnstable upon or permanently united with the said chimney rest, substantially in the manner and for the purposes shown and set forth.
195,567.-William Nelson, Cacherville, Cal., assignor to himself, C. E. Moore, and A.J. Praster. -Gang Plow.-March 17, 1868. -The beams are adjustably picoted on the axle and may be thrown up so as to raise the plows clear of the ground or regulate their depth.

Claim.-1. The attaching of the plow bean $\mathrm{N} N$ to the axle A by means of the boxes L L, constructed substantially as shown, in combination with the frame C , to which the draught-pole D is attached, said frame being connected to the axle A, as shown, and all arranged to operate in the manner substantially as and for the purpose set forth.
2. The notched segment bar G, in combination with the lever $H$ and arm $J$, connceted by the chain $I$, and attached respectively to the draught-pole $D$ and the axle $A$, and all arranged so opcrate in the manner substantially as and for tho purpose specified.
3. The fokes or frames $O$, provided with the serews $f$, and attached to the lower plates $b$ of the boxes $L$, $L$, with the plow beams $N$ passing through 'them, substantially as and for the purpose set forth.

75,568.-Hiram B. Nickerson, Boston, Mass., assignor to himself and Stillman B. Allen, same place.-File.-March 17, 1868.-The obliquity of the teeth is intended to inerease their efficiency.

Claim.-A rasp having the teetl of each range of teeth disposed obliquely to the edges of the rasp, and so that the cutting face of each tooth shall have its oblicquity arranged in a direction opposite to or about at right angles with that of each of the teeth of the next adjacent range, the whole being sulsstantially as exhibited in Fig. I, and as hereinbefore described.

75,569.-HIRAM Norton, Delton, Wis.-Door Lock.-March 17, 1868.-The tumblers have a catch at each end, and one end is depressed by a spring; they are raised by a key whicll is inserted transversely, and has its upper surface curved, so as to clear the tumbler from ono noteh without engaging the other.

Claim.-The employment of two or more tnmblers a, having their centre of movement at or near their middle points, and having their ends catching into notches $n n^{\prime \prime \prime}$, on the bolt $B$, all substantially as and for the purpose shown and deseribed.
75.5\%0.-ELIAS OGDEN, Lynehburg, Va.-Harvester Rake.-March 17, 1868.-The rake extends at right angles from a bar which is supported on the Wrist pins of two cranks which give it a backward movement in a lower place than that of its forward movement, thereby sweeping the platform during its back stroke.

Claim. - The combination of the two erank wheels B , two cranks F H , staple or slotted arm G , and L-shaped rake E with each other, substantially as hercin shown and described, and for the purpose set forth.
$75,5 \%$.-S. J. Patterson, Bridgeport, Conn. Apparatus for Leaching Bark and Other Materials. - March 17, 1868.-The cylindrical casc has manholes for the introduction of bark and water, and has a perforated diaphragm which acts as a strainer. The cylinder turns on a perforated shaft through which steam may bo introduced. The cylinder is snpported at midlength on rollers.

Claim.-1. A horizontal cylindrieal revolving leach A, constrncted with a remorable screen or strainer $C$, and with openings $a^{1}$ and $a^{2}$, substautially as herein shown, and for the purpose set forth.
2. The combination of the perforated hollow shaft D with the cylinder A, substantially as herein.shown and described, and for the purposes set forth.
3. The combination of the supporting friction rollers $G$ with the revolving cylindrical leach $A$, substantially as hercin shown and described, and for the purpose set fortli.

75,5\%2.-Philetus Phillips, Matawan, N. J. Musical Notation.-MIarch 17, 1868.-Tho seven primary notes are represented by seven lines which are made so different as to be easily distingmishable from each other. Five of the lines and fonr intervening spaces form.a staff, for which purpose the altcrnate lines are taken. The lines arc numbered from the battom. Leger lines may be added. If the lowest line of the staff be number 3, the second is 5 the third 7 , the fourth 2 , and fiftl 4 , which is the natural scalc. In the scale of two sharps the lowest line is 2 , and the others are in order, $4,6,1,3$. With one flat the lines are $7,2,4,6,1$.

Claim.-The combination of the ordinary staff on which music is printed with bars (which separate the measnres) intersecting small portions of the staff formed on the principle of the patent of May 27,1856, as above described.

25,573.-Jonn W. Pierce, Millbury, Mass.Mowing Machine.-March 17, 1868.-The lower of the two levers is attached by one end to the shoe and operates by depression of its free end to raise the outcr end of the finger bar. This lever is depressed by a hand lever which is held in position by a ratchet.

Claim.-The piroted bent lever L, finger bar K, $\operatorname{rod} \mathrm{M}$, lever N , and irons I , in combination with the lever $G$, all operating as described, whereby the inner end of the finger bar is raised by the lever $G$, and its
outer end by the lever $L$, the whole construeted and arranged in the manner and for the purpose set forth.

75,574.-TOHN W. Pollock, Cross Bridges, Tenn. - Wagon Hub, Axle, and Box.-Mareh 17, 1868. -The spindle is firmly seeured within the hub and turns in a box attached to the under side of the axle.

Claim.-1. The combination of the hub A and the box D with each other and with the axle C , substantially as shown and deseribed, and for the purposes set forth.
2. The combination of the box D with the axle C , substantially as shown and deseribed, and for the purposes set forth.
\%5.575.-O. M. Pond, Independence, Iowa.Combincd Sceding Mfachine and Cultivator.-Mareh 17, 1868. - The width of the longitudinal slot in the hopper bottom is regulated by the adjustable part of the bottom, which is moved by serews extending to the outside of the hopper. A stop-off slide is moved by a lever extending outside the hopper. The seed is fed to the diseharge slot by a fluted roller which has rotation by a belt.

Claim. -1 . The seed box D, provided with an adjustable bottom E F , and shde G, in eombination with the flated feed roller I, for the purpose and in the manner as set forth.
2. The cultivators $O$, adjnsting bar $P$, check bar $C^{\prime}$, as construeted and arranged to operate in relation to the seed box $D$, for the purpose substantially as described.

75,5\%6.-Mason Prentiss, Cambridge, N. Y. Tise.-Mareh 17, 1868.-The inner jaw of the rise is arranged to turn so as to accommodate itself to tapering objeets.

Claim.-The improred vise herein deseribod, its sereral parts being construeted and arranged substantially as set forth.

75,577.-DANiel C. Ripley, Pittsburg, Pa.ATanufacture of Glass.-Mareh 17, 1868.-The top and handle are east in one piece, and under pressure. The body is blown separately, and the parts eemented together.

Claim.-A glass or poreclain pressed top, for sirup or eream jugs or pitehers, substantially as deseribed.
75.57S.-Eleazer B. Roberts, Rochester, N. Y.-Cultivator.-Mareh 17, 1868.-The rotary hoes are driven by gear conncetion with the axle, and their ases are adjustable in inelination.

Claim.-1. The applieation, to ealtivators, of rotary weod cutters hung on a rertical shatt, and operating substantially in the manner herein shown and described, and for the purposes set forth.
2. The applieation, to cultivators, of rotating hoes hung on a vertical shaft, and operating substantially in the manner herein shown and described, and for the purposes set forth.
3. The arrangement of the arm M , in combination With the rotary hoe D, substantially in the manner and for the purposes herein shown and deseribed.
75.579.-J. G. Roux, Crystal Springs, Miss.Extension Wardrobe.-Mareh 17, 1868.-The wardrobe has two seetions which may be slid apart by turning a crank slaft, eonneeting by gear wheels and raeks with the said seetions. The separation of the sides exposes the uprights upon whieh the clothes are linng.

Claim.-1. An extension wardrobe, construeted substantially as shown and deseribed.
2. The drmms or boxes A $A^{\prime}$, sliding horizontally, substantially as and for the purpose, shown and deseribed.
3. The novable uprights $\mathrm{G} \mathrm{G}^{\prime} \mathrm{G}^{\prime \prime}$, substantially as and for the purposes shown and deseribed.
4. The frames $B B^{\prime}$, supported by a post $D$, substantially as and for the purposes shown and deseribed.
5. The hollow post D, substantially as and for the purpose shown and deseribed.
6. The vertical slaft $a$, with its pinions $s s c$, in
combination with a wardrobe, substantially as and for the purposes shown and deseribed.
7. The ehannels H, in combination with the racks $r r$ substantially as and for the purposes shown and described
8. The uprights $G G^{\prime} G^{\prime \prime}$, in combination with the notched feet $u u^{\prime} u^{\prime \prime}$, substantially as described, for the purpose specified.
9. Conneeting two parts $A A^{\prime}$, of a mardrobe with raeks $r r$, substantially as and for the purposes shown and described.
(95.5S0.-Joserh G. Rust, Xenia, Ohio.-Lasting Boots and Shocs.-March 17, 1868.-The two pairs of jaws engage the sides of the leather, being drawn thereupon and inward simultaneously, by the action of the cam lever.

Glaim.-The piston D, and the lever II and eliek L, in eomection therewith, in combination with the piston $D$, all arranged substantially in the mamer as and for the purposes herein set forth.
'55,531.-L. Savace, Aslitabula, Ohio.-Rail. road Freight Car.-Mareh 17, 1868.-The ear bodies are made to roll off the trucks upon splerieal rollers, Which follow transyerse ehannels in the body, truck, and receiving stand.

Claim.-1. The construction and arrangement of freight ears in two parts, the upper part or lieight reecptacle $B$ being made separate and remorable from the lower or rumning part, $A$, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the metallic groores or ehannels D and frietion wheels E , with cither or both the parts $A$ and $B$ of the ear, and with the trestles or platform C , for the purpose of diminishing the friction in moring the said part $B$, substantially as herein shown and deseribed.

75,582.-A. D. SCHNACKENBERG, Brooklyn, N. V.-Vessel for IHincral Water.-Mareh 17, $1868 .-$ The liquid has ingress and egress through a side tube. The stopper is a downwardly-opening spring ralre, depressed by a thumb kuob.
Claim.- A eap $C$ for mineral water bottles or jars, when provided with a ralre, $d$, and upright or nearly upright tube $F$, substantially as herein shown and deseribed, so that the use of a draught tube is dispensed with, as set forth.

75,553.-M. Seaman, Middleport, N. Y.-Railroad Rail Fastening.-Mareh 17, 1868.-An inter. mediate section of rail is fitted between the ends of the rails; the said section hariug longitudinal side extensions which are let into and bolted to the rails.

Claim.-The construetion and arrangement of the intermediate seetion $B$, provided with the head $b^{\prime}$ resting upon the flanges ol $d$ of the rails A A, its sides or ends a a projeeting from the middle in opposite direetions, one over the outer side of one of the rails $\Delta$, and the other orer the inner side of the opposite rail $A$, the point of connection of the ends of the rails A and intermediate rail 13 fitting into each other at an obligue or diagonal angle, when all are constructed and arranged as herein set forth, for the purpose speeified.

75,584. - Matinew Senior, Frankford, Pa. Lubricating Device.-Mareh 17, 1868.-The eap has a rertical, central oil hole, and the sleeve has two oil holes upon the opposite sides of the journal, and on the opposite sides of the oil hole, which eommunieates with the spline shaft.

Claim.-Lmbrieating the feather D upon the shaft C from each side of said feather, through the holes $e$ e in the tubular joumal $B$, and the hole $f$ in the hollow eap $g$, as hercin described for the purpose specified.

75,585.-S. B. Sexton, Baltimore, Mrl.-Base Burning Stove.-Mareh 17, 1868.-The fire pot is surrounded by an air-leating ehamber, which may communicate with the registers of different apartments. The sides of the finel reservoir are exposed to the outer air.

Claim.-1. The flaring or funnel-shaped eliamber II, constituting the magazine and intermediate outer
wall of the stove, in combination with the contracted passage $J$, substantially as and for the purpose described.
2. The arrangement of the air-heating chamber $\mathbf{E}$, applied around the fire pot $D$, between the base and top) of said pot, with a coal reservoir, whieh constitutes the simgle exposed outer intermediate wall of the store, and is united to the fire pot by an inclined illumination ring $G$, substantially as and for the purpose described.
3. An upwardly flaring coal reservoir, exposed as described, provided with a supporting ring $G$, having door or window openings through it, and arranged over a flaring fire chamber or pot, substantially as described.

75,586.-Henry M. Seys, Oil City, Pa.-Surgical Suppository. - Mareh 17, 1868.-The suppository aets as a valve within the anus and gradually melts away, eommunieating to the part the medicaments of which it is partially composed.

Claim.-1. A suppository, which, whilo it aets in the reetum as a pessary and valve upon the bloodressels, shall impart the medieinal properties of whieh it is eomposed to the diseased vessels, substantially as described.
2. A suppository, composed of linseed meal or pulverized oil-eake, or the two combined in proper proportions, or other similar oleaginous or mucilaginous vegetable material alone, or mixed with suitable anodyne and astringent medicines, formed into a conoidal-shaped mass, so that when introdueed into the rectuin it shall produce the effeets as herein shown and described.
25.58\%.-Samuel Shea and E. W. Gillman, Long Island City, N. Y.-Lamp.-March 17, 1868.The burner has an open sleeve sprung upon it, and the opening in the sleeve may be brought in conjunction with an opening in the burner, and allow the removal of the rriek-feed shaft.

Claim.-1. Providing a lamp burner with a remorable ratehet and arbor, substantially as herein shown and described.
2. The sleeve E , when arranged around a burner A, in whiel a hole $\alpha$ is provided, to allow the insertion and removal of the ratehet and arbor, substantially as herein shown and deseribed.
\%5.588.-Calvin W. Sherwood, Chieago, Tll.Portable Book Clamp.-March 17, 1868.-The erossbar of the windlass is engaged by sliding stops to prevent the unwinding of the eord whieh serves to clamp the books between the bars.

Claim.-1. A book grapple, consisting of the bars A and C, with the eord E, and windlass F, with the stops $a$, all eonstrueted and arranged to operate substantially as described.
2. In combination with a grapple for holding the books, the box B, eonstrueted and arranged for use, substantially as herein deseribed.
\%5,589.-A. W. Shidler, South Bend, Ind.Cider Press. - March 17, 1868.-The presser-head moves horizontally, and slides upon perforated tubes through whieh a portion of the juiee escapes.

Claim. - The tubes $G$ and head $\mathbf{C}$, in eombination With the perforated or open sides $A$, bottom $B$, and serew $D$, arranged and operating in tho mamner and for the purpose substantially as set forth.

75,530.-JAMEs II. Sperbeck, Warsaw, N. X.Horse Collar.-March 17, 1868.-The traees are eonnected to ears whieh extend baekward from the body of the collar.

Claim.-The combination of the elongated ears E D with the hameless horse collar, as deseribed, when eonstructed substantially as set forth.
'95,591.-Morris F. Spore, Preble, N. X.-Mechanical Movernent.-Mareh 17, 1868. - The train of cloek gear is run by a weight, and is regulated by a pendulum eseapement. A rotary or reeiprocating morement may be communieated.

Olaim.-1. The arrangement of the escapement pallets upon a piroted arm or lever, and employing the same thus arrauged in eombination with a cloekmechanism, as a meaus for operating a pump, churn,
or other similar machine, substantially as herein described.
2. The arrangement of the shaft which carrics the pinion and spur-wheels which transmit the power of the cloek-movement to the crank-shaft, upon the frame A, and upon a hand lever, in such a manner that said whecls ean be thrown out of and in gear with the eloek movement, substantially as described.
3. The arrangement of the train of gearing herein deacribed, hand-adjusting levers, pendulum, weight, and reeiprocating slicle, all substantially as and for the purpose set forth.
g5,592.-EDMUND STAIR, Harrisonville, Mo.Washing Machine.-Mareh 17, 1868. - Tho elothes are placed in a swing-basket whose transverse ribs enter slots in the corrugated semi-eylindrieal washboard, forming the bottom of the suds box.

Claim.-A rashing machine, consisting of the tub A, corrugated washboard $C$, grooved transrersely at F, piroted end pieces D, eonnecting rod d', notched conneeting bars E , and ribs F , all constructed, arranged, and operating as set forth.

75,593.-Robert J. Steele, Jr., Rockingham, N.C.-Harnoss Trace.-March 17, 1868.-The traces are formed of thin strips of iron.

Claim.-A harnoss trace A B, made of flat bars of metal, eoated or covered with any suitable material, the extremities of the trace being provided with links a $f$, and the parts $\triangle \mathrm{B}$ being coupled together by means of the hook $c$ and eye $d$, substantially as described, for the purpose specifiod.

75,594.-David L. Stiles, Rochester, N. Y., assignor to Aufusta P. Stiles, same placc.-Fire Pot for Stovas.-Mareh 17, 1868. -The fire pot is made of staves, and has a series of upright passages in the wall; the said passages are open at the lower ends, and eommunicate with the interior

Claim.-1. The combination, with a fire pot formed of a series of staves, of passages formed in said staves, which will allow air to pass directly through the wall of the fire pot from the base, as herein set forth.
2. In combination with the fire pot, mado of a series of staves, and having air passages passing direetly through the walls of the fire pot fiom the base, a series of perforations, slots, or equivalent passages, opening through the whole intcrior of tho fire pot to admit air to burn the gases, as herein set forth.

㘶5,595.-STEPHEN D. STONE, Warmiek, R. I.-Cattle-Stall.-Mareh 17, 1838.- A cross bar has vertieal adjustment above the eow's baek and somewhat before the mid-lengeth of the animal; so that when she raises her baek in the aet of urinating, it will eomo in contaet with the bar and cause her to step backward, and deposit the evacuations upon the lower platforin.

Claim.-Plaeing the bar $A$, or its equivalent, in the position with regard to the animal in the stall, substantially as herein described, and for the purpose set forth.
\%5, $996 .-T o m n$ Taggart, Poxbury, Mass., assiguor by mesne assignments to Sarah P. Taggart. -Briek Machine.-Mareh 17, 1868.-The pug-mill has three mixing shafts, and at the ends of the receptaele are plungers whieh foree the elay into the molds of the endless flexible frame craveling beneath. The plungers are operated by a working beam actuated by a eam. The bricks are earried forward and eompressed against a gradually narrowing surface, and are discharged by a roller:

Claim.-1. The combination of the endless former H, eonstrueted substantially in manner as deseribed, the top and bottom covering plates $y K$ and one or two plates or redueers I I, arranged in manner and so as to operate with it, as explained.
2. A elay-reserroir $A$, as made with the plunger and semi-ereseential clay-receiving recesses or ehambers $V$, arranged at its ends, and provided with diseharging openings leading therefrom, as explained.
3. The combination of the tro plungers F F and their operative meehanism with the clay-reservoir

A and its mechanism for stirring and mixing the clay.
4. The combination, as well as the arrangement, of the endless former 11, constructed substantially as deseribed, the platform $K$, one or more reducers $I$, the rescroir A, and mechanism for mixing the elay therein, and mechanism for expelling it therefrom into the molds and pressing mechanism, substantially as deseribed.
5. The combination of the discharging roller $U$ and its operatire mechanism with the platform K, the endless former, and the redueer or reducers I I, applied thereto, substantially in manner and so as to operate as described.

75, お97.-Henry Tarplex, Wesley, Ky.-HorsePower Sawing Blachme.-March 17, 1868.-The ground wheels are connected with the main shaft, and form fly-wheels when the saw is operated.

Claim. - The combination of the cndless platform horse-power $C$ with the cart $A$ and the reciproeating saw $H$, all arranged in sueh a manner that the horsepower may be rendered available for propelling the maehine along from place to place, and also for driring the saw, as set forth.

75,598.-Waldemar Thimany, Cleveland, Ohio.-Steam Engine Balanee Slide-Valve.-Marel 17, 1868.-The head steam passes through the eentral eliamber in the slide-valve, and, when cxhansted from the eylinder, passes into the steam chest. The slide-valve is stcam balaneed. A chamber outside the steam chest contains two pistons sliding with a steam-tight surface in a cylindrical case, and an open space between the two pistons communieates with the head steam in the chamber of the slidevalve, so as to make an equal pressure on both sides of the plate. The space within the onter chamber and ontside the said cylindrical case, communieates with the portion of the valve chest through whieh the steam is cxliausted.

Claim.-1. The arrangement of the valve $J$, plate $K$, lngs $e$, and passages $d d^{\prime}$, with refcrence to the cylinder $A_{\text {: }}$ substantially as speeified.
2. The pistons $A^{\prime}$, as coustructel and arranged in relation to the plate K , substantially as set forth.

75,590. - Samuel Thomison, Ballston Spa, N. Y.-Hanging Sieves and Sereens.-March 17 , 1868.-The sercen is suspended on chains or divergent, piroted rods, and is reciprocated longitudinally by a pitman. The compound motion required is produced thereby.

Claim.-Suspendlng or supporting a frame $c$, or tray, or box, or other vessel by two or more pairs of direrging rods or chains, substantially as shown and deseribed, or the equivalent thereol, for the purpose of producing in the said frame, tray, box, or other ressel the peenliar eompound agitating motion, as abore set forth.
-55,600.-Fredelick W. Tilton, Moline, Ill.Seed Planting Machine.-March 17, 1868; antedated March 7, 1868.-The axle is tubular and contains at core whieh has longitudinal adjustment therein. Surrounding the axle and engaged thereto is a collar with equal longitudinal projections and recesses; slidiner on the axle, but connceted to the imncr core, is a similar collar. The projections of one collar enter the recesses of the other, and the amount of interlocking regulates the size of the recesses whieh form the sced carrities.

Claim.-The adjusting serew-bolt C , having a recess or groove $e^{3}$, as represented, in eombination with the section or crown D, fixed on the onter' sliaft A, and section or crown E, having an inward connection to the interior shaft $A^{\prime}$, all arranged substantially in the manner and for the purposes herein set fortli.

75,601.-Frederick W. Tiliton, Bristol Station, Ill.-Seed Sower.-Mareh 17, 1868; antcdated March $7,1868$. -The wheels are earricd upon the sleeve which covcrs the central shatt from wheel to wheel, and has adjustable seed cavities upon it.

Claim.-In a seed-planting machine, so arranging the sleere E as to perform the double function of carrying the seeding devices, and of supporting the
weight of the machine, substantially as above set forth.

75,602.-G. G. Townsend, Roehester, N. I.-Shoe-Inife Guard.-March 17, 1868.-'The guard is secured to a common shoc-knife, and follows tho groove between the sole and upper, to prevent the lieking of the latter in trimming the former.

Claim.- The skeleton gnard $G$ for shoemakers' trimming knires, consisting of the lip $g$, shank 8 , fiame $f$, and eneireling bar $b$, in combination with the binding serew $s^{\prime}$, substantially in the manner and for the purposes set fortl.

75,603.-GEORGE W. Trimble, Bloomsburg, Pa., assignor to himself, E. Hughes, and Wesley Buckel, same place.-Miner Lamp.-March 17, 1868.-The feeder plate has two angular eorners upon its upper end, which engrge the wiek when the plate is raised, and release it when the plate is moved downward, so that the reciproeation of the plate will feed the wiek.

Claim.-Proriding the tube or spout of a mining and furnace lamp with a feed-deriee for the wiek, substantially as described.

75,604.-David Tunpie, Sandwich, Mass., assiguor to lboston año Sandwich Glass Company. Glass Mold.-March 17, 1868.-The hollow-slotted eylunder is added to the usual parts of the mold, and picees are attaelied to the outer shell and extend into the slot of the cylinder and nearly throngh it. A part only of the handle is formed by the outer shell, and all the rertieal ontside of the glass is formed by the inner surface of the cylinder.

Claim.- A glass mold, constructed and arranged to operate substantially as and for the purpose deseribed.

75,605.-Carl Vignal, New Tork, N. Y.Tegetable Mashing and Cutting Maehine. March 17, 1868. -The object is plaeed ppon the rest, and sliced or grated necording as the cutter or grater is upon the shaft. The grated matter luns out of the larger end of the truneate-eonical grater and into the coneave reeess of the shicld, by which it is gathered and discharged in a heap.

Claim.-'The combination of the removable truneated cone $D$, prorided with the graters or cutters $c$, the revolving, curved gathering shield E , rest $\mathrm{F}^{\mathbf{}}$, and hinged bearings $b$, said concs and shield revolving upon the shaft $B$ independently of cach other, all constructed and arranged to operate as herein described for the purpose specified.

75,605.-LORENzo Wallace, Leavenworth, Kansas.-IIarvester.-Mareh 17, 1868.-The spokes and intermediate pins act on the inclined ends of the bell-crank levers to operate the cutter bar. These levers ire moved into proximity with the wheel by a hand lever.

Claim.-1. The spokes a $b$, in combination With the bent levers I $I^{\prime}$, adjnstable hand lever $H$, eonneeting rods $J J^{\prime}$, vibrating rod $K$, conneeting rod L, and cutter-bar M, as herein described for the purpose specified.
2. The attaehing of the bent levers I I' to the hand lever H, arranged substantially as slown, and provided with a spring eatch $g$, for the purpose of rendering the cutter bar inoperative whenever desired.
\%5, 607.-Whlber S. Wandell, Battle Creek, Mich.-Gate.-Mareh 17, 1868.-The weighted top and bottom bars are pivoted to the tilting bar whicli turns in a vertical plane npon a central arbor. The fore cud of the gate is engaged by two pins which are attached to a spring bar secured to the bottom of the post and cxtending np its side.

Claim. -The pins $m$ m' upon the spring $h$, in eombination with the weiglited gate $A$ and pin $n$, whereby, as the pin $m^{\prime}$ is withdrawn by the spring $h$, the gate is permitted to swing into a horizontal position upon the pins $m n$, for the passage beneath it of logs or sheep, as herein shown and described.

75, 608.-GaRDNER WaRREN, Roxbury, Mass.Extracting Tannin from Bark.-Mareh 17, 1868; antedated Mareh 6, 1868.-The bark is stcamed,
and while hot is immersed in water, after which it is passed between pressure rollers. This is repeated as often as required, and the decoction concentrated by eraporation.

Caam.-1. The method of treating bark, for the purpose of obtaining its tanning or other qualities, by the three operations of steaming, soaking, and squeezing the same, substantinlly as deseribed.
2. The method of preparing several qualitics of extracts from the samo bark, by preserving the products of the several successive pressings separate fiom each other, substantially as deseribed.

75,609.-JOSEPII W. Wattles, Canton, Mass.Cleaver for Ring Spinning Machines.-March 17, 1868.- $A$ toothed disk is fixed on a rertical shaft, and arranged close to two rings. The shaft extends through the rail and beyond its lower surface a distance equal to the altitnde of the ring above the traveler, when the latter is clrawa upward by the yarn. In the descent of the ring rail, the lower end of the disk shaft is brought down upon the spindle rail, and any filaments upon the lings will be caught in the teeth and cjected therefrom by centrifugal foree.

Claim.-1. The combination of the rotary toothed ring cleancr with a ring and traveler and the ring rail.
2. The rotary ring cleaner $G$, as composed of the toothed wheel, or serics of teeth and the shank or supporting rod thereof, when the same are for use with a ring rail and its ring and traveler, as set forth.
3. The arrangement of a ring eleaner, substantially as described, between two next adjacent rings, so as to serve as a means of cleaning both of the travelers thereof.
4. The application of a ring cleaner to the ring rail, so as to be movable vertically up to or near to the puth of the ring during a descent of the ring rail, and be depressed below or away from sueh path during ascent of the rail, as set forth.
5. The application to the ring rail of a traveler cleaner or toothed wheel or series of teeth, so as to be capable of being freely rerolved, as Trell as of being raised and depressed relatively to the ring rail, and a ring and traveler thereof, in manner and for the purpose specified.

195,610.-Joseph W. Wattles, Canton, Mass.Ring and Traveler Spinning Machine-Mareh 17, 1868.-Improvement on the patent of John Birkenhead, May 24, 1864. The ring and its receiver are held together, and in the rail, by a single serew.

Claim.-The ring receiver constructed substantially as described, that is to say, not only with a shank to fit the rail socket, and with a bore eccentric With the cylindical outer surface of sueh shank, as described, but also so as to be eapable of being sprung or contracted upon the shank of the ling by tlie screw inserted in the rail, and employed to confine the receiver in the socket of the rail, as set forth.
ry, 611.-Joserh Davis Westaate, San Francisco, Cal.-Sad Iron Holder.-Mareh 17, 1868.-The shield is attached to the holder, and operates to prerent the radiation of heat from the iron to the hand.

Claim.-A sad iron holder, constructed with pockets for the thumb and fingers, and with an interlining of gypsum or other similar non-eonducting substanee, in combination with a shield $B$, having a similar interlining or covering, substantially as described.
\%5,612.-Joun R. Wharry, Moundsville, W. Va. - Window Netting.-March 17, 1868.-Theslip hinges of the netting frames allow their removal, and the staples furnish means for their suspension npon the hooks, near the lower end of the blinds.

Claim.-1. The slotted netting frames C and slip hinges $c$, in combination with an $J$ window casing $A$, substantially as shown and described, and for the purposes set forth.
2. The hooks $d$ and blinds B , in combination with the netting frames $C$ and staples $e^{2}$, substantially as shown and described, and for the purposes set forth.
\%5, 613.-Silvanus C. WILder, Sardinia, Ohio.Seed Planter. - Mareh 17,1868. -The corn is dropped
from the hopper by a cup nt tho top of a curred bar extending through the hopper boltom. The cup is raised up through the corn and deposits its load into the seed spout at the side of the hopper. The droppor is actuated by a lever within reach of a person npon the seat or walking benind.

Claim.-1. Tho combination of the curved bar or stem S , lever T , spring $\mathrm{C}^{\prime}$, connecting Dars U , rock shaft and arms $V v^{1} v^{2}$, double-jointed connecting rod W, rock shaft and arms $\mathrm{X} x^{1} x^{2}$, and treadle bar $Y$, with each other, and with the seed boxes $O$ and slotted beam A, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the lever $Z$, sliding bar A', and slide post or rest $\mathrm{B}^{\prime}$, with ench other and with the treadle bar $Y$, substantially as herein shown and described, and for the purpose set forth.

75, 614.-L. D. Woodmanser, Dayton, Ohio.Driving Line.-March 17, 1868.-The check lines are carried backward within reach of the driver, and have loops, by which they may be operated to draw the horses' hoads inward when fractions.

Claim.-1. The check lines $b b$, extending rearward, and forming loops $d$ d for the hands of the driver, in combination with the lines $a$, in the manner and for tho purpose deseribed.
2. The lines a and $b$, constructed and connceted in the inanner deseribed, in combination with the bit $A$, for the purpose described.

75,615.-Horace H. W. Wright, Sonth Boston, Mass., assignor to himself, James Morse, Richard S. Jenness, and Albeit Picilernell, same place.-Hammer. - March 17, 1868.-The serewdriver may project from the end of the handle, or may be revcrised, so as to be receired within the handle and be flush with tho end of the same.

Claim.-A repersible screw-chriver, with shoulders, sceured by a spring, in a socket, in the end of a hammer handle, construeted and arranged substantially as described.
\%5,616.-R. B. WRIGFT, Vormillion, Ill.-Seed Planter.-Mareh 17, 1868. - Improvement on his patent, February 26, 1867.-The plow standards are attached to two cross shafts which have connected arms. The shafts are rolled around on their gndgeons to raise the plows from the ground. The firame has two seats for driver and dropper, respectively. The dropping mechanism is actuated by a lever.

Claim.-1. The connecting of the seed slides $h h$ by the rod $j$, which is attached to a rod $k$, parallel With $j$, by links $l l$, and the connecting of the rod $k$ to a swinging or piroted yoke K, which is actnated by the dropper through the medium of a lever $L$, all constructed and arranged to operate in the manner substantially as and for the purpose set forth.
2. The sliding or adjustable seats M N, in combination with the two pairs of wheels $\mathrm{B} \mathrm{B}, \mathrm{C} \mathrm{C}$, all arranged substantially in the manner as and for tho purposes specified.
3. The connecting of the draught pole I to the frame A by a chain $f$, in addition to the usual joint $e$, for the purpose of limiting the upward tilting movement of the front part of the frame, substantially as set forth.

175,61.7.-Lumon B. Yale, Bainbridge, N. Y.Rocker for Ohairs. - March 17, 1868. -The rocker is made of angle iron and has a series of holes in its rertical flange for attachment to the ehair.
Olaim.-As a new article of manufacture, a metallic rocker A. for chairs, when made angular in its transrerse section, and provided with a series of holes $c$, near each end, as described, for the purpose spccified.

75,618.-Wilimam W. Bailey, New York, N. Y.-Low Water Detector for Steam Generators. March 17, 1868.-The expansion pipe is connected (by pipes) with the boiler at and beneath the low water mark. When the water exposes the mouth of the former pipe the steam takes the place of the water and the hoat expands the said pipo and raises the tosglo levera, which are commected to its ends, and which raiso the whistle valve stem.

Claim.-1. The tension-valve opencr, in combina-
tion with an expansive tube, fitted and operating substantially as and for the purposes set forth.
2. The combination of an expansive tube with the tension-ralve opener and alarm whistle, substantially as set forth.
\%5,619.-William G. Blymyer, Findlay, Ohio. -Printers' Galley.-MLarch 17, 1868.-The side-stick is connected to the frame by extensible links which allow its use with any desired wicth of matter.

Claim.-The slot B and set serew C, applied to a printers' galley, substantially as and for tho purposo set forth.

95,620.-Francis E. Bord, Boston, Mrass. Feeding Nail Plates.-March 17, 1868.- The inverting and oscillating motions are automatic. The nipper rod and barrel are so connected with the frame as to enable the rod to be removed from the inachiue when the nail plate is used up, and another nipper rod with a fresh plate to bo substituted during the operation of the machiue.

Claim.-l. The movable nipper rod F , in combination with the rack bar I, head K, sliding block $\bar{I}$, and parrl $l$, substantially as and for the purpose specified.
¿. The combination of the holder or barrel D, prorided with the projection or pind and the wheel $B$ $B^{\prime} B$, substantially as and for the purpose set forth.
3. The tilting frame $A^{\prime} A^{\prime}$, in combination with tho holder or barrel $D$, rack bar $I$, and wheel $B B^{\prime} \mathrm{B}$, as and for the purpose specified.
'75,621.-Eugene T. Brownfield, Smithfield, Pa.-Churn.-March 17, 1868.-The dasher las ob lique horizontal slats. It has rectangular sockets in its eross pieces which receive the cnds of arbors turning in the sides of the eream box. One of the arbors mar be drawn ont to allow the remoral of the dasher. The lid lias funnels protected by shiclds to prevent the out-splashing of cream.

Claim.-l. The top $\overline{\mathrm{H}}$, when provided with the funncls $\mathcal{J} J \cdot J$ and shields P P P P , substantially for the purpose set forth.
2. Dasher B. constructed with oblique slats, substantially as herein deseribed.
3. The dasher $B$, in combination with the axles $m$ and $e$, slide $k$, and lerer $c^{\prime}$, the whole constructed and arranged substantially as specified.
\%5,622.-EUGENE T. Brownfield, Smithficld, Pa.-Apparatus for Tempering Cream Preparatory to Churning.-March 17, 1868. -The upper part of the close milk vessel communicates by a pipe with the steam generator and has an escape pipe for tho surplus steam.

Claim.-The within-described proeess for tempering or souring cream or milk, when effected by derices constructed and arranged substantially as set forth.

75, 623.-AbNER H. BryANT, Wilmington, Del. -Suspension Egg Carrier.-March 17, 1868.-The eggs are supported in the pockets attached to the cord net-work.

Claim.- $A$ suspension egg carrier, composed of cloth pouches for holding single eggs, suspended between meshes of cords or twine, laced throurgh the sides of the wooden trays set in a wooden lolder, constructed and arranged as set forth by the drawings.

75, 624.-William H. Cifandler, North Scitnate, R. I., assignor to himself, John Wheelen, and Earl D. Baliden. - Machine for Strapping and Grinding Cards.-March 17, 1868. - The travele head, (to which is attached the rpparatus operating on tho card teeth,) has a downirardly extonding bar, Which is slotted to receive the stud extending from the side of the belt. The revolution of the belt canses the reeiprocation of the traveler.

Claim. - The combination of a slot $I$ in the traveler A with a stud K, belt J J, and pulleys I I', gear wheel $\Pi$, and worm $G$, substantially as and for the purpose specified.
75.685.-Joinn Werster Cochran, Now York, N. Y.-Fixed Ammunition Holder for Cartridge

Boxes.-Mareh 17, 1868.-The stiap has a series of sockets which hold the cartridges by their flanges.

Claim. - The cartridge holder, constructed with the series of separately grooved sockets $a$, formed and arranged in relation with each other substantially as and for the purposes specified.
\%5,626:-John Webster Cochran, Now York, N. Y.-Fixed Ammunition Holder for Cartridge Boxes.-Mirch 17, 1868.-The fromes hare two lecessed rubber plates which receive the ends of tho cartridges. The recesses leceiring the flanged ends are cylindrical, and those receiving the points aro concare and sufficiently elastic to give wily when tho flanged end is iuserted.

Claim. -The plates $\mathrm{A}^{*} \mathrm{~B}^{*}$, recessed as described, in combination with tho frame $A$, substantially as and for the purposo specified.
75,627.—T. Webster Cochran, New York, N. Y.-Breech Loading Fire-Arm. March 17, 1868. The aperture in the top of the brecelh, through which the cartridge is introduced, is covered by a curved plate which serres in part to lock the bolt in place. The firing pin is made in sections which are not in position to aet in conjunction, except when the parts are all arranged for firing. The extractor nechanism is an improvement on his patent, Fel. 28, 1866.

Claim.-1. The external shicld $I$, in combination with the lecoil bolt, constructed and operated as deseribed, substantially as and for tho purposo specified.
2. The firing pin $J$, in combination, substantially as described, with the recoil bolt $F$, and the lammel or striking deviee, whereby, when the recoil bolt is turned preparatory to opening the breech, the firing pin shall be turned or brought out of line or contact With the said liammer or deviee, substantially as and for the purpose specified.
3. The head $l^{*}$ of the firing pin, arranged in relation with the recess $e^{*}$ and the hammer, sulbstantially as and for the purpose specified.
4. The arrangement of the head $d^{*}$ of the firing pin with reference to the recessed portion $f^{*}$ of the hammer, substantially as and for the purpose specified.

75,628.- ALENANDER CONKLIN, Trartford, Conn. -Reaming Tool.-March 17, 1868. -The cutters occupy radial longitudinal slots in the lead, and aro forced outward by a tapering central core, which is arljusted by a screw.
Claim. - Ihe combination of the derices $\Lambda$ BCD, coustructed and operating substantially as described, When used to form an expanding tool as herein specificd.

55,629.-JOIN COOPER, Dublin, Ind.- Washing Machine.-March 17, 1868 ; antedated March 6, 1868. -Improvement on his patent, $A n \mathrm{~g} .13,1867$. The beaters consist of a series of metallic bows secured to a bar which is linged to the shaft.

Claim.-'Ihe slaft D, haring the beaters E hinged to it as described, when constructed aud arranged to operate substantially as set forth.

75, $9: 30$ - H. Pelilam Curtis, Washington, D. C. -Lifting Hook, Guard, dec., for Stoves-M Mrell 17, 1868.- The handle is carried out to a distance from the shicld, and the end thereof is tristed so as to form a lifting hook.

Claim.-'lhe combination of shield, hook, and handle, marked respectirely $\mathrm{A}, \mathrm{B}$, and C , substantially in the manner and for the purposes herein described,

75,6:31.-Albert Malloweli, Lowell, Mass.Apparatus for IIeating Flat-Irons.-March 17, 1868. - The valro admitting gas to the burner leaks slightly so as to sustain a small flame. The iron rests upon the head of the valve stem when heating, and allows suffieient gas to flow to feed a full flame.

Claim.-1. The combination as well as the arrangoment of the valve $d$ aud its stem $e$ with the flat-irom stand $A$ and the was burner $B$, applied thereto substantially as specificd.
2. The combination and arrangement of the ad.
justable deflector $k$ with the valvo $d$, its stom $e$, the dat-iron stand, and the burmer, arranged as set fortll. 3. The eombiuation and arrangement of the eonical flame guide $p$ with the adjustable deffector $k$, the valve $d$, its stem $e$, and the burner $B$, or the latter and the flat-iron stand $A$, arranged as represented.

195,639.-Alexander Harroun, Jr., South Onondaga, N. Y.-Harness.-March 17, 1868; antedated March 4, 1868. -The rod is attaehed to the back baud, aud has a slide to which the forked arms are seeured. The reins lie upou tho arms and are prevented from being eaught beneath the tail of the horse.

Claim.-1. The rod $a$, Fig. 1, or its equivalent, when employed substantially as and for the purpose set forth.
2. The arms $c$, when connceted by a common joiut, or its equivalent, when employed substautially as and for the purpose set forth.
3. The combination of the clasp $f$ and the arm $g$, or their equivalent, when employed substantially as and for the purpose set forth.
4. The clasp $n$, Fig. 2, and the arms 0 , in combination, or their equivalent, when employed substantially as and for the purpose set forth.

95, 633.-JOSIAH Y. HOAGLAND, Auburn, N. Y. - Machine for Grinding Harvcster Knives.-Mareh 17, 1868. - The clamp rest of the cutter bar has an adjustable gimbal joint to enable the presentation of the eutter to the stone at the proper inelination. The saw has lateral adjustment in the frame: The frame has longitndinal movement by chain connection to a hand lever or treadle.

Claim.-1. Affixing the machine for grinding the knives or sections of a harvester upon the frame of an ordinary grindstone, so as to bring the said kuires or seetions to the face of the stone to be ground, substautially as above described.
2. The grooved platform $C$, in combination with the bottom piece $D$ and the standard $E F G$, substantially as and for the purpose above deseribed.
3. The combination of the three parts $\mathrm{E}, \mathrm{F}$, aud G , of the standard, eonstrneted and arranged substantially as and for the purpose deseribed.
4. The combination of the three parts $\mathbf{E}, \mathrm{F}$, and $G$, with the holder II $I$, so as to form a uuiversal joint, substautially as and for the purpose above described.
5. Attaching a spring to the bottom piece $D$, so as to draw the eutter bar from the stone, substantially as deseribed.
6. The eombination of the spring $a$, the chain $b$, and the lever J, substantially as and for the purpose deseribed.
7. The eombination of the spring $a$, the ehain $b$, and the treadle $c$, substautially as and for tho purpose described.
8. Attaching a spring to the bottom pieec $D$, so as to draw the eutter bar to the stone, making thereby an automatie presser, substantially as and for the purpose deseribed.

25,634.-Jorin H. Hood, Danville, N. Y.-Composition for Roofing.-Marel 17, 1868. - Stont paper is secured to the roof by strips of felt eloth which are tacked over the edges. The paper is eoated with a eomposition of eoal tar, 10 galls.; plaster, 2 bushels; aud saw-dust, I bushel. Pulverized erystal roek is then sifted on and left to dry, after which a mixture of the tar and erystal rock is spread on.

Claim.-A roof prepared as speeified, and eovered with the compound made in the manner deseribed.

75,935.-Charles W. Isbell, New York, N. X.-Rotary Blower.-Mareh 17, 1868.-Improvement ou the patent of W. P. Maekenzie, Oet. 25, 1864. The vanes are upon a shaft whieh is eoneentric with the cylindcr, and reecive motion from tho eecentrie drum through whose longitudinal slots the said vanes have radial movement. The vanes pass through paeking eylinders of soft metal whieh roll in the slots of the drom and mako an air-tight joint.

Claim. - The revolving shaft C, having one of the vanes B rigidly attached and the others loose thercon, and smpported in journals in the arms $L$ of the stationary shafts F , in combiuation with the drum D
and eylinder H , all arranged and operating substantially as and for the purposes set forth.

75,636.-Tames Lamont, Pittsburg, Pa.-Fence and Trellis Post.-March 17, 1868. -The foot of the post is stepped iu a bloek of brick or stone. Similar bloeks slide upon the post and serve to steady it at varions altitudes bencath the surface of the gromnt. The next block to the step block rests upon a cross pin and anehors the post.

Claim.-1. The combination, with a metallie post, $a$, for fonces, trollis work, \&e., of a recessed base or step $e$, and a series of bloeks d, throngh whieh the post a passes, with or without the pins $f$, in tho inanner and for the purposes substantially as hereinbefore described.
2. In eombination with a metallie post or stake, furnished with supports $d e$, a trellis work eonsisting of eross bars $b$, with euds c projecting upward, substantially as and for the purposes above set forth.
\%5.637.-C. H. Lockwoon, Hawleyville, Conn. - Guide for Hat Lining in Sewing Maeline. March 17, 1868. - The clamp whieh holds the lapped olge8 of the tip and side lining in eontaet is rotated by the feed meehanism. By the rotation of the clamp the lapped odges are fed under the needle.

Claim.-The oval plate H, provided with the ofal coneentric rim $I$, in eombination with the bar $C$, provided with the rollers D D, aud the slot a and pin $d$, or their equivalents, to serve as a guide for the plate II, all constructed and arranged to operate in the manner substantially as and for tho purposo set forth.

95,638.-J. C. W. MaAs and Carl Fischer, Hamburg, Germany.-Machine for Stamping Let-ters.-Mareh 17, 1868. -The feed roller has sping pins whieh are thrust outward by a fixed eam so that the point upon the end of the pin will engage one letter of the pile and foed it between the feed and the stamp rollers. The stamps reccive ink firom cylindrieal rollers.

Claim.-1. The roller A and holders b, with their springs aud cams $c$, substantially as describoct.
2. The eylinders $A$ and $B$, stamps $e$, and yielding pressure deviee $f g$, all substantially as deseribed.

95,639.-A. D. McMaster, Rochester, N. Y.Fruit Jar.-Marel 17, 1868.-The stopper serews into the mouth by means of sectional, spiral ribs whiel engage lugs on the inside of the mouth. It is sealed by a rubber gasket.

Claim.-The eylindrical stopper B, having its lower end anuularly reeessed and abruptly shouldered, and prorided with an clastic gasket $c$, in combination with an unshouldered but tapering necked jar, provided with projeetious $d d$, arranged with reference to the inelined lugs $f f$ of the stopper, substantially in the manner and for the purposes set forth.

75,640.-EliJaif W. Merrill, West Buxton, Me.-Harvester.-March 17, 1868.-The cutter pitman head is guided by a slot in line with the eutter bar. The said head is traversed by a pin whieh slides therein and forms the end of an oseillating lever whose rear end enters a cam groore. This lever is fulerumed on another lever which may be moved to free the arm from tho cam and stop the eutter.

Claim. - The ribrating arm d, in combination Tith and when sct upon the swinging lever $x$, together with the hand lever $f$ and eateh parl $y$, the head a and rod $e$, when arranged as and for the purpose speeified.
re5, 641.-EdMund B. Miller, Greenville, Tenn. - Ifachine for Stuffing Horse Collars.- Mareh 17, 1868. -The "rim" is stuffed wholly from one end, and the eollar is sceured by the tivo clamps while this operation is going on. When the rim is filled the outer elamp is not used. The faeing of finely cut straw or fibrous material is mext inserted by a funnel and stiek. The collar is then placed in the bed with the rim upward and the stuffing eompleted.
Claim.-1. The beds Y Y in the platform B, when constructed and used in the manner and for the purpose specified.
2. The fluted cyliuder $N$, substantially as and for the purpose set forth.
3. Operating the crlinder N by means of the arms, shaft $R$, crank $R^{\prime}$, rod $U$, dog $T$, and ratchet wheel S , in connection with the plunger P or traction rods $v v$, when the sereral parts are construeted and combined substantially as and for the purpose described. 4. The combination of the clarmp D, constructed and operating as shown and described, with the treadle $L$ and connecting rod $L^{\prime}$, in the mamer and for the purpose shown.
5. The swingiug platform B , having the clamp C , rack $r$, and the beds $\mathbf{Y} \mathbf{Y}$, substantially as and for the parpose described.
6. The weirhted basket M, prorided with an eye $m$, and connected with the plunger $I$, substantially as and for the purpose set forth.
7. The slotted arm or lever $T$, when used in combination with the clamp $t$, dog $\mathrm{T}^{\prime}$, and ratchet wheel S , substantially as and for the parposo described.

75,642.-Peter L. Milen, Mechanicsbirg, Pa. -Gate. March 17, 1868.-By a single sweep of either lever the latel is raised and the grate swnug open or shat, and latched in that position.

Claim.-The combination of the bell cranks $F \Pi$, rods $G G^{\prime}, I, J$, and levers $D D^{\prime}$ with the latch $A^{\prime \prime}$, all arranged and operating substantially as and for the purpose specified.

75,643.-ADRLAN V. B. ORr, Steelville, Pa.Spring Washer and Safety Nut.-March 17, 1868. The open washer has one end turned down rectangularly to enter the wood or metal, and has the other end inclined upward to form a pawl which engages a ratchet on the under side of the nut.

Claim.-Che notched or ratchet uut $N$, with its central bearing $n$, in combination with the spring washer $W$, the whole being constructed and operated as described, and for the purpose set forth.

195,644.-Joirn Powers and J. B. Van Deusen, New York, N. Y.-Fluid Meter.-Mareh 17, 1868.The cylinders are open at their ends aud the fluid passes off through a double central head within each cylinder. The pistons are conuected to cranks which stand at right angles to each other upon a shaft. The ralres are mored by levers operated by eccentrics on the shaft.

Claim.-1. The double-acting eylinder, open at the ends, and made with a double partition near the micldle, in combiuation with two pistons, connected by a rod and with the ports 6 and 7 , and valve, substantially as and for the purposes set forth.
2. The arrangement of tro or moro cylinders, constructed as aforesaid, to operate upon one shaft, with two crank pins, at about ninety degrees to eael other, to form a fluid meter, substantially as specified.
3. The levers $v$ and $v$, counected to the valves, and operated from the sliaft $r$ by mechanism, substantially as specified, to more the ralres in the manner set forth, in combination with the double-actiug eylinders and their pistons, substantially as specified."
4. A D or hollow valve, applied within the water space of the meter, and abore the cylinder, in combination with an exhaust water-wray beneath the saicl valve, sulustantially as and for the purposes set forth.
5. The trunk $l$, extending aeross below the eylinder's $f g$, and comecting the water-ways $k$ with the delivery pipe $e^{\prime}$, as and for the purposes specified.
6. The case a, formed witl a receptaclo for sediment, below the operative parts, in eombinatiou with a cock or phug for the discharge of said sediment, substantially as set forth.

75, 695.-TEET B. Raymond and Willyam HanLey, Lockport, Ill.--Coupling for Sectional Vessels. March 17,1868 .--Tho bow of one section enters the incurred stern of that in adrance, and is engaged thereto by hinged arms which extend forward fiom the bow and receive pins upon the stern. The arms are piroted to lever arms which are brought down upon the deek to tighten the connection.

Claim.--'The combination of the coupling apparatas, consisting of the arm $c$, pins $d$, lever $i$, and rings $e$, with the hull of the sectional ressel a a, when arranged and operating as and for the purposes set forth.

75,616.-E. B. RequA, Jersey Cits, N. J.-Balance Talve.- Inareh 17, 1868. -The diaphrarm of the throttle ralve has upwardly and downwardly opening puppet valves which balance each other, and whose stems are connected to the opposite ends of a working lever. This is fulcrumed at its milllength upon a shaft which is turued by a haud lever, secured in its adjustment by a set screw which traverses a slot concentric with the fulcrum shat.

Claim.-1. The adjustable pitman $g$, in combination with the working lever $F$, shell $A$, and valres $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, constructed and operating as and for the purpose herein shown aud described.
2. The arrandement of the slotted hand lever II and thumb nut $K$ with relation to the working lever F , adjustable valre stems, and ralres $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, as herein described for the purpose specified.

75,647.-T. H. Rexnerson, Ploasant Plains, Iowa.-Oultivator.-March 17, 1868. - The fore end of the draw bars are adjustably attached to the fore cross beam. The inner pair of plows are moved latcrally by stirrups in which the feet rest.

Claim.-1. The horizontal bar I, vertical bars $H$, rock shaft $\dot{K}$, having arms $f$, arm $h$, lever L , and chain $g$, in combination with the plow beams $F G$, all irranged and operating as described, whereby tho depression of the lever L raises the outer beains $\&$, through the medimm of the arms $h f$ and chain $g$, and the inner beans F , through the medium of the vertieal bars II and horicontal bar $I$, as and for the purpose herein set forth.
2. The rertieal bars II and horizontal bar I, in combination with the plow beams F G and lerer L, as hercin described, for the purpose specified.
3. Tho horizontal bars H, attaehed to the inner beams F , when the lower ends of said bars are provided with the projecting foot rests $d$, arranred and operating as described, for the purpose specified.

195,648.-Andrew J. Reynolds, Sturgis, Mich. Marine Propulsion. - March 17, 1868. -Tlec water from an clerated reservoir is discharged upon tho fore or rear side of the wheel, as a forward or backrard rotation is required. The water falls into buckets which operate npon the wheel similarly to those of an overshot water-wheel. The buckets are connected by pirots to the two parts of the wheel, so that when the parts are unclutched the rotation of one iu respect to the other will give a contrary inclination to the buckets. This morement of one part of the wheel upon the other is caused by the action of the water upon the paddles when the wheel has stopped.

Claim.-1. A propelling apparatus for ressels aeting unon the water in which the ressel floats when driven by a water. wheel of auy suitable construction.
2. The combination of the wheels C C and D D with the pirotel buekets $D^{\prime}$, substautially as and for the pmrpose set forth.

95,649.-John Robeitson, Brooklyn, N. Y.Manufacture of Rubber Tubes, and in Machinery therefor.-March 17,1868. -The "riams" turu around on the head so as to expose the top of the cylinders. The eore passes out with the pipe to prevent collapsing of the same, as it is foreed out through tho anuular space between the core and the die.

Claim.-1. The rams B B, having a compressing action, in common with each other, and hung so as to be capable of being swang out of liue with their eylinders, substantially as and for the purpose or purposes herein sct forth.
2. The traveling core II, in combination with the hollow coro $F$ and die $G$, arranged for operation transversely, or thereabouts, to the axial line or lines of the gum-compressing ram or rams, cssentially as shown and described, and for the purposes specified.

55,650.-Mrax Rosenthal, Philadelphia, Pa.Button Fastening.-March 17, 1868. -The point of the spiral is turned toward the button so as to entor the eloth when the button is attached aud prevent its turning.

Claim.- A button fastening formed of wire bent and shaped as shown and described, and having tho pointed end of the spiral turned upward, for the purposes set forth.

95,651. - Michael Simons, Middletown, Conn. -Tea and Coffee Pot.-March 17, 1868.-The spout strainer slides into place and is removable.
Claim. - The construction of the sliding strainer, with its round and convex center $E$, to prevent the grounds from choking up tho spout, as herein doscribed and set forth.

75,652.-Henry C. Sisco, Indianapolis, Ind.Combined Shovel and Tongs.-Mareh 17, 1868.-The finger of the tongs impinges upon the top of the shovel.

Claim.-The shovel and tongs combincd in one implement, provided with the spring $D$, substantially as set forth.

75,653. - Anthony W. Smitir, Birmingham, Pa.-Gas Meter.-March 17, 1868.-The top of the meter has a reservoir containing water; the said reservoir communicates through fonr passages with the water chamber in the meter. The holes of communication are at the required water lerel so as to keep the meter properly filled, and to render incffective any attempted fraud by inclining the meter.

Clain.-1. The constrnetion of the wet gas-meter, with the reservoir $E$, the passages $G G G G$, the double stop-cock $H$, with the bores I I', and the cap $J$, all arranged for the purpose and in the mauner substantially as set forth and described.
2. The manner of constructing the condensing well A, the passage $B$, and the cap $C$, all arranged for the purpose substantially as set forth and deseribed.
3. The "filler" K, construeted with the double stop-cock $L$, with the bores $\mathrm{N}^{\prime} \mathrm{N}^{\prime}$, the extension tube 0 , the smivel M, the screw tube and plag $P$, and the handle $Q$, all arranged and operating in the manner and for the purposes substantially as set forth aud described.

195,654.--Solonon Snyder, Harrisville, Pa.Thread Tension Meehanism for Sewing Machines.Mareh 17, 1868.-The tension of the thread is adjusted by a spring brake upon a grooved palley on the spool shatt. The spring is adjusted by a thumbscrew. The shaft is square, and has a flat spring bearing against one side of the spool socket, so as to prevent the turning of the spool npon the shaft. The thread passes around in a spiral groove of an adjustable guide arm.

Claim.-The tension apparatus above described, when its several parts are eonstrneted and combined to operate substantially in the manner and for the purposes set forth.
\%5,655.-Elihu Spencer, Elizabeth, N. J., assignor to Robert Westcott, same plaee.-Water Meter.-March 17, 1868.-Improrement on his patent of June 12, 1866. The case containing the operating parts is tight and is so construeted as to form the heads of the eylinders, whereby stuffing boxes are dispensed with. The pistons are connected to the cranks of the shaft of the eccentrics which operate the slide valves.

Claiin.-l. Constructing the box containing the operating parts of the meter, so as to form the heads of the eylinders and render the box itself water tight, substantially as and for the purposes herein specified. 2. The arrangement of the piston rods $g g$, in the free guides $h h$, in combination with the comneeting rods $i$, snbstantially as and for the purpose set forth.
F5, 656.-Claus Spreckels, San Francisco, Cal. -Manufacture of Crushed Sugar.-Mareh 17, 1868. -The sngar is removed from the centrifugal machine to the molds and immediately pressed; after this it is snbjected to a moderate heat and then to a greater heat in an oven. It is then ready for crushing and pulverizing.

Claim.- The manufacture of the crushed sugar of commeree directly from the centrifugal machinc, in the manner substantially as herein described.
$95,65 \%$.-Charles T. Ulaman, New York, and Marcus jockman, Brooklyn, N. Y.-Hand Engine. -Mareh 1.7, 1868.-The reciprocation imparted to the operative arms eauses the oscillation of the triangular levers which cause the rotation of the tly
wheel through the medium of the working beam and crank and their contections.

Claim.-1. The combination of handles K, projections I, levers H, working beam $G$, soeket E, and arms L, when arranged as and for the purpose set forth.
2. The main lever E , when constructed as and for the purpose set forth.
3. The combination of arms D and C , and the triangular crank or quarter erook B, when arranged as and for the purpose set forth.

75,658.-John S. Van Rensselaer, Albany, N. Y.-Apparatus for Relief of Involuntary Discharge of Urine.-Mareh 17, 1868.-The discharging member is placed in a tube communicating by a flexible pipe with a receiving vessel.
Claim.-The combination of the inclined bed A, the India-rubber or other proteeting covering $H$, the tube C , with its fumuel E , and the reeciver D , substantially as described, and for the purposes set forth in these spceifications.
'95,659.-Ambiose S. Vose, Randolph, Vt.-Calendar--March 17, 1867.-The caleudar is placed upon the top of a eommon clock and is operated by the hour hand, by means of a lever running from the calendar and intersecting the course of the hand. The day, week, and month are exhibited through apertnres in the face.
Claim.-1. The eonstruetion of the perpetual caleudar, whereby it is adapted to be attached to and operated by any clock, by means of the hour hand and forked lever, snbstantially as deseribed.
2. The levers $s$ and $J$, combined with the plate $q$, to set the month hand $e$ from the last day of months of different lengths to the first day of the succeeding month, and to set the month of the year at the same time, substantially as deseribed.

75,660.-William C. Watson, Paterson, N.J. - Portable Book Clamp.-March 17, 1868. - The clamping cord is wound ou the ends of the rotatiug handle.

Olaim.-The drum or windlass B , supported in suitable bearings at each end of the strip A, provided with a ratehet wheel $c$, and pawl $d$, in combination with the strip $C$ and cord $D$, substantially as and for the purpose specified.

## 195,601.-Canceled.

75,662.-Henry W. Bailet, Spriugficld, Mass., assiguor to himself and Williay C. Bailex, same place.-Die for Making Hammers--March 17, 1868. -The blank is placed on a die which has a matrix to receive the metal forced from the eje and form the said metal into an inward extension of the socket. The eye is opened by a drop punch which does not entirely reach the bottom of the matrix. The punching is completed by a cold punch. The head is then formed on a mandrel by swages.

Claim.-The combination of the punch $A$ and die B, herein deseribed, when constructed and operating substantially as and for the purpose set forth.

75,663.-Henry D. Blake, New Britain, Conn., assignor to P. and F. Combis, same place.- llachine for Riveting Hinges. - Mareh 17, 1808. -The ends of the pintle are swaged simultancously by dies having contrary rotations.

Claim. -1 . A riveting tool, composed of a rod of metal having V -shaped grooves crossing and radiating from its longitudinal axis across a face or end surface which is otherwise perpendicular to the axis of said rod, substantially as described.
2. The riveting tool set forth in the foregoing claim, in combination with meehanism for operatiug the same, arranged substantially as described.

75,664.-Charles H. Buck, St. Louis, Mo.Window for Stoves.-Mareh 17, 1868.-The glass plates in the oven doors are held in position by springs which prevent the coneussion procuced by slanming the doors from being communicated to the plate. The plate is also unaffected by the expansion and contraction of the metal indueed br heat.

Claim.-The combination of springs with glass
plates whieh are applied to stove doors, substautially as described.
\%5,665.-GandNer Cimlson, Boston, Mass.Cooking Stove. - Wareh 17, 1868. -The water cham ber is plaeed beforo tho firo and au air chamber in front of that.

Claim.-1. The arrangement of the water heater, the oven, and the jambs of tho fireplace, the said jambs, under such arrangement, being between the oren and the heater, and the latter being at the jamb of the fireplaee, as set forth.
2. The eombiuation and arrangement of the insulating air charuber and its door opening, and the door or door's thereof, with the water heater', arranged in front of the fireplace in manner as explained.

75,669.-ARChibald C. CRaRy, Utiea, N. Y.Power Attachment to Sewing Machines.-Mareh 17, 1868. -The seat is depressed by the weight of the operator aud is raised by spiral springs. Its movement operates to wind tho motive spring of tho sewing machine.

Clarm. - The herein-deseribod mode of winding up the spriug, by the pressure of the operator ou the seat.

75,66\%.-Archibald C. Clant, Utica, N. Y.Apparatus for Operating Sewing Machines.-Mareh 17, 1868. -The operative meehanism of a sewing maehine, lathe, \&e., is driven by eloek work, and the cloek work is wound by treadles or equivalent means. The rotating seat is upon a plunger gravitating in a slot ted eylinder and haring a rack connecting with derices to wiud the main springs by the downmard motion of the seat.

Claim.-l. The eombination and arrangement of a series of springs and their conneetion, for the purpose of propelling or operating sewing machines, substantially as deseribed.
2. The applieation of motive power or foreo to the periphery or peripheries of eoneentrie or coiled springs, or alternately to the peripheries of a series of springs, substantially as herein deseribed, for the purpose of propelling or operatiug sowing machines, substantially as deseribed.
3. The mode or manner, substantially as herein deseribed, of coiling or wirding up eoneentrie or coiled springs for the uses and purposes herein stated, by means of the treadle or its equivalent, viz: the operator's rotating seat, the serew, the erank, and the lever.
4. The mode, substantially as herein deseribed, of construeting the operator's rotating seat, and of its attaeliment, for the uses aud purposes aforesaid.

75,668.-RENSSELAER CuTler, St. Louis, and George C. Siralloty, Columbia, Mo.-Brick: Ma-chine.-Mareh 17, 1868.-The lower wings upon the pug-mill slaft are formed to fit the upper side, perforated plate. whieh is interposod betweon tho pugmill and mold whecl.

Olaim. -The pag-mill B, when its bottom wings $b$ are formod eonearely on the bottom, and combined with a disk C, and intermediato convex plato, as deseribed and shown.
'95,669.-T. D. De Turk, Exeter, Pa.-Cultivator Tecth. Mareh 17, 1868.-The tooth is hinged to a bloek attaelied to the frame and kept in rigid connection therewith by a woodon pin whieh grivos way under extreme pressure.

Claim.-The eap, represented in Figs. 1, 2, 3, and 4 , intended to be fastened to tho eultirator beam, into whieh the tooth is to be inserted, and fastened by the iron hinge bolt a, Figs. 1, 2, and 3. and the wooden pin or key at letter c, Figs. 2 and 3, by the use of which the breaking of the tooth can be avoided.

75, 690.-Frank Douglass, Norwioh, Conn.Globe Valve.-March 17, 1868.- Tho valvo has a central scrow stud on which are placed a disk of vuleanito, and a eovering disk of metal. The metallic disk lias small perforations whieh permit tho passage of steam to expand the vuleanite, and foreo the lower, metallic, disk valvo to its scat.

Olaim.-1. The arrangement of the flexiblo ring $S$ to form a valvo, when compressed betwoon ring $\mathbb{A}$
and ring or valvo E , in sueh a mannor as to expand ring Cin diameter, to form a tightjoint, substantially as specified.
2. The arrangement of the metallie ring A with channels $i i$, for the purposo herein speeified.

75,671.-George Dowling, Fair Haven, Conn. - Apparatus for Lowering Ships' Masts.- Mareh 17, 18ti8. -The lower end of the mast is stopped in socket bloek which has a pawl aeting upon it seg. mental ratehet to hold tho mast to any lesired inelination. The mast passes through and is secured to a firano which is hinged to the deek.

Claim.-1. Tho arrangement of the mast A upon tho trumnions a and step $B$, combined with a segmontal traek $C$, and pawl $P$, and toothed segment $d$, so as to operate in tho hamnor aud for tho purpose horein set forth.
2. In eombination with the above, the lateh $f$, arrangod so as to lock the mast in an upriglit position, in tho manner described.

75,692.-Menry H. Ebaugh, Hereford, Mrd.Mucilage Bottle.-Mareh 17, 1868.-Tho fountain tube is flaring upward, and deseonds vertically and eentrally in the ean. More or less mueilage may be alloworl to enter the tubo by tho atmission of air into the ean. This admission takes place through a small opening corered by a valve or stopper.
Olaim.-A mueilage can or holder, witli a fountain tube B , in eombination with a stoppered brush, eonstruetod and operating substantially as and for the purposes herein specitied.

75, $673 .-\mathrm{A} . \quad$ J. Gibson, Cineinnati, Ohio.-Broiler.-Maerh 17, 1868.-The meat is laid upor tho hollow eones or corrugations in the imperforated bottom of tho broiler.

Claim.-The eombinatiou, in a broiling ressel, of nou-perforated cones and eor'ugations, substantially as deseribed.
$75,674 .-$ SsA E. Greason, Nowton: Mieh.Grain Platform for Harvesters.-Mareh 17, 1863; antodated Mareh 9. 1868. -The platform eonsists of a receiring box topped with wiro work, through whose meshes the seed drops.

Olaim.-A reaping or mowing maelino platform, having perforations or interstiees, in eonnection and combination with box compartments F , providod with opening's aud doors G and D, the whole constructed, attached, and supported substantially as aud for the purpose hercin specified.

75, 675.- Almon B. Glover, Birmingham, Conn.-Machine for Meading Bolts.-Mareh 17, 1868.-For forming the hearls of "bed serews." Aftor the heading dio has elosed upon the head, tho follower adranees and eompletes tho same. An antomatie finger at tho proper time presonts itself to the holding die to support the blank.

Claim.-1. The combination of tho eam R, slide $O$, and die $f$, with the eam $T$, auxiliary slide $U$, serew-threaded follower $h$, muts $n n$, all constracted and arranged as deseribed.
2. Tho supporting finger $b$, in combination with the holding dies $\mathrm{F}^{\circ}$ and E , when eonstrueted and arranged so as to bo presented and retire at tho proper timo, as and for the purpose set forth.

75, 676.-Willam F. Goodwin, East New York, N. Y.-Mechanical MLovement.-Mareh 17, 1868.-The motive shaft has arms which eamy spur wheels engroging the inner gear of the drum, and a pinion which is fast to tho sceond shaft, haring similar arms and spur wheels engaging a pinion on the third shaft. This may bo extended as far as desired; the proportion between the planet wheels and their pinions regulates the iuereaso of speed gaiued.

Olaim.-1. The arrangement of two or moro shafts in line with each other, one having a pivotal bearing in ant operated by the other, substantially as described.
2. The arrangement of the line shafts within the coneentric internally-eogged drum or ease, substanially as described.
3. The internally-cogged drum subdivided tato
separate eompartments, or provided with the bearing partitions for the lino shafts, as deseribed.
4. The line shafts provided with spme wheels, or their equivalent, in combination with tho internallycogged drum, substantially as deseribed.

75,67\%.-WILLIAM F. Goodwin, East New York, N. Y., and A. M. Smith, Washington, D. C., assiguors to Wilhiam F. GoodWin.-Harvester.March 17, 1868.-The multiplying mechanism consists of an inside-eogged eylindrieal case, and a train of corrwheels and their conncetions therein. A shaft cxtending directly forward from the axle, and receiving rotation therefrom, has a crank within the case, and the wrist pin of the erank carries a spur wheel whieh engages the inside gear of the case and also engages with a pinion of smaller diameter secured to a shaft eonecntrie with the ease. This latter shaft has an arm earrying a spur wheel, similar to that first mentioned, and operating similarly. The second pinion slaft carries a disk to whose eecentric wrist pin the cutter pitman is strapped.

Claim.-1. The eoncentrie arrangement of the multiplying gear relative to the erank shaft or an extension of the axial line thereof, substantially as deseribed.
2. The location of the multiplying gear at the droopiug end of the vibrating eutter frame and in line with the hinge conncetion of the eutting apparatus with said firame.
3. The arrangement of the erank shaft mpon the vibrating cutter frame in lime with the shaft from which it receives its motion.
4. The inclosing gear box or ease having one or more central bearing partitions, for the purpose and substantially as deseribed.
5. The gear box or ease provided with the two pivotal bearings at right augles to each other, substantially as described.
6. The internally-eogged drum or gear ease ar ranged relative to and vibrating with the cutter firame, substantially as described.
7. The entter frame provided with the yoke to reeeive the gear box, or its equivalent, and with the ease inelosing the bevel gears, substantially as described.
8. The arrangement of the erank shaft and connecting rod, in the deseribed relation to the two pirots at right angles to each other, upon Which the finger bar turns in aecommodating itself to the surfaee of the gronnd over whiel it is drawn.
9. The cap or casc inclosing the outer end of the pitman, as described.
10. The removable hooked tongue plate adapted to be secured to or removed from the axle or sleeve, substantially as clescribed.

35, 6g. B.-Henry H. Gnidlex, Anburn, N. Y.Scu Mill.-Mareh 17, 1868.-The carriage is moved laterally from the saw while gigging back to prevent the contact of the log and saw. One end of the rock lever holds the frietion shaft aud the other end holds the tightening pulley. The head of the rook lever is so arranged as to permit changing the height of the tightening pulley to aecommodate the varying leng.th of the baeking belt.

Claim.-1. The combination of the lerer $f$, shaft E , and its conneeting links, with the piroted arm B , carrying in a slot the adjustable box, with the friction shaft $d$, and the adjustable stud of the tightening palley $b$, all coustructed and operating substantially as deseribed.
2. The combination of the slide bar $r$, with its springs $s$, and the dogs $t$, with the slide rack $l$, substantially as and for the purpose deseribed.
3. The eombination of the segment pinion $k$, upon the end of the lever or arm of the automatic setting apparatns, with the auxiliary rack nuder the sliding rack $l$, substantially as aud for the purpose described.
'g5, 37 .-James H. Gridley, Washington, D. C. assimnor to S. F. Dickinson, New York, N. Y.Dřop Wringer.-Mareh 17, 1868. - The wringer rollers are journaled to cars on the boards so as to lic along one edge, the other edge of the boards being hinged to bar's fitted upon the top of the tub. A
reetangularly projeeting arm on one board is hinged to a eonnceting rod extending to the other board so that depression of one board eauses that of the other.

Claim.-1. The combination of the pivoted boards or frames $\mathrm{C}^{1}$ with the eonnecting rod D , in the manner and for the purposes set forth.
2. In combination with the boards $C C^{1}, \operatorname{rod} D$, and spring $E$, the rollers $R \mathrm{R}$, substantially as and for the purpose specified.
3. The above-deseribed method of attaching the mop wringer to the tub, when in use, to prevent its slipping upon the tub, substantially as set forth.
g5,680.-F. W. Henss, New York, N. Y. Washing Machine.-Mareh 17, 1868.-The snds box is liung upou trunnions and is oscillated by handles extending firom the ends.

Claim.-As an improvementin mashing maehines the body $A$, whose bottom and ends are formed of a single sheet of metal, bent or stamped into continnous corrugations throughout its entire length, with the strengthening board $e$, and bars $d$, whieh sustain the gudgcons $a$, on whieh the body oseillates, substantially as and for the purpose described.
\%5,681.-Williay H. Houston, New York, N. Y, - Machine for Sctting and Distributing Type.Mareh 17, 1868. -Improrement on his patent, Mareh 31,1857 . The types are distributed by the machine into a series of channels of whieh there is one for each letter, or char'aeter, quadrat, space, \&ee. After distribution, the ease is transferred to the eomposing part of the maehine. In distribution, the column of type is pushed formard in the galley and each line of type is lifted from those adjacent, and when raised it ean be pushed laterally without impediment. A plate is fitted to the face of the lifter which can be put on under the lip to euable the use of the lifter for solid or leaded mafter. The said plate prevents the lead from falling until the descent of the lifter, and is dratrn baek to allow the falling of the lead when the lifter deseends. As the raised line of types is driven forward the end one is seized by the eheek, whiell adjusts itself to the thiekness of the type and carries it to the appropriate channel. The whole cannot be briefly deseribed.

Claim.-1. The combination of the lifting plate, operated substantially as herein deseribed, for lifting the types to be distributed line by liue, the galley on Which the types to be distributed are plaeed, and on which they are advanced toward the liftiug plate, the mechanism, or the equivalent thereof, by whiel the lifting plate is operated, and the means, or the equivalent thereof, by whieh the depressing mechanism is connected with the driving porrer so soon as a line of types has been delivered to the distributing mechanism, and discomected so soon as another line is to be litted, substantially as deseribed.
2. The projecting lip on the face of the lifting plate to draw down the leads, substantially as set forth, in combination with the sliding plate under the galley, substantially as described, to prerent tho leads from dropping out before they are required to be delivered, as set forth.
3. In combination with tho projeeting lip on the face of the lifting plate, the employment of a separate plate, whiel may be applied to or remored from the face of the lifting plate. and moder the projecting lip, that the machine may be ased for distributing either leaded or solid matter, substantially as described.
4. The means herein described for separating the types of rarious thiekness one by one from the line, and delivering then to be distributed, consisting of the combination of the chamnel-way 10 which the line of types is moved, the eheek against which the foremost type of the line is mored, and whieh is eansed to recede by intermittent motions, each of not greater range than the thiekness of the thinnest type, and the reeiprocating hammer, or its equivalent, whieh strikes a scries of light blows against the foremost type, to feel Then it can pass by the end of the channel way, and finally moves far enough to deliver the type to the distribntor, the said instruments being operated by the mechauisms deseribed, or equivaleuts therefor, as set forth.
5. The eombs haviug a lateral reciprocating motion, substantially as described, in combination with the scries of racks for the reeeption of the appropriato
trpes, and the spring or self-adapting plungers and followers, which hold the types at each operation, while the combs are moved laterally, by means of Which the types are shifted at each operation, and each type in turn presented to the several raeks until it fiuds the one into which it ean pass; the parts so claimed in combination being operated by the mechanical means herein described, or the equivialents thereof.
6. Tho reeiprocating comb plates, in combination with the elutel on the shaft from which the said motions are derived, the said combination being effected by the intermediate mechanism deseribed, or the equivalent thereof, whereby the shaft is unclutehed from the driving pulley and stopped, if by reason of any impediment the combs fail to eomplete their motion in either direetion.
7. In combination with the series of racks for receiring the types as distributed, and with apertures at their rear ends for their diseharge into the ease, the employment of a vibrating or reeiprocating hammer to strike the types in ease they should hare a tendency to stick in the racks, substantially as deseribed.
8. The reciprocating plate, back of the apertnres, in the racks throngh which the distributed types are delivered in the several eompartments or ehannelways of the case, and whieh descends in fiont of the types after they have been pushed back to make room for the next types to be delivered, substantially as deseribed, in combination with the clutel on the shaft from which the motions of the said plate are derived, whereby the said shaft will be molutehed from its driving pulley and stopped in ease the said plate meets with any impediment, the said combination being effected by the meehanism hereinabore deseribed, or any equivalent theretor.
9. In the composing part of the machine herein deseribed, the means, substantially as herein deseribed, by whieh the keys when depressed merely indicate the type whieh is to be lifted from the case, in combination with the mechanism by whieh the types wre lifted, snbstantially as deseribed.
10. The lifters for lifting the types from the case, substantially as deseribed, in eombination with the cluteh on the shaft from whieh the litters derive their motions, substantially as deseribed, whereby the said shaft is melutehed from its driving pulley and stopped whenerer any one of the litters is stopped, so that it camnot complete its upward motion, the said combination being effeeted by the meehanism herein described, or by eqnivalent means.
11. Giving a lifting motion to the plate whieh holds down the types in the ease that are baek of the foremost type in each ehannel way, that they may not be drawn up by the type whieli is being lifted, substantially as deseribed, the said motion being giren to the said plate at the time of and to free the types when they are being adraneed, as set forth.
12. So constructing and arranging the self-adapting pressure plate, which constitntes one side of the passage in whieh the types are reecired from the case, and in whieh they are made to slide by the sluttles, that it shall ribrate on its longitudinal axis, substantially as and for the purpose deseribed.
13. The combination of the two reeiproeating sluttles with the one channel-way or passage in Which the types trarel, substantially as deseribed, the said slouttles being alternately lifted in their re turn motion, that the one which is returning may pass over or by the one whieh is adrancing, as described.
14. The means, substantially as herein described, by which the shaft which drives the eomposing meehanism is unclutehed from its driving pulley, and stopped so soon as a line is eompleted, that the lines may not be overrun, as set forth.
15. In eombination with the shaft whieh drives the meehanism for transferring eaeh lino of type to the galley, the starting key and elutch, sibsstantially as deseribed, so that the operation of transferring ench line is performed automatieally, the operator being required simply to operate the said key.

75,682.-EDWARD Howell, Ashtabula, Ohio, assignor to himself and P.C. Ford, same plaec. Thill Strap.-Mareh 17, 1868. -The strap from the saddle passes through bands, which are riveted to
the metallie loop, and a spring attached to the loopplate has a tongue passing through the plate and into one of a scries of loles in the leather strap.

Claim.-The loop C, conneeted with the spring E, in combination with the pin $e$, strap A, and loops $a a$, substantially as and for the purpose set forth.
\%5,633.-Thomas S. Junson, Matteaman, N. Y., assignor to himself and MENRY A. A lnen, same plaec.-Tie Strap.-Mareh 17, 1868.-A rubber cord is passed in a straight line through the strap when the latter is folded into zigzag form, so as to exert a contractile foree on the rubber when the strap is pullerl upon.

Claim.-The combination with a hitehing or halter strap, made of any ordinary or suitable material, of an elastic band or spring, applied to said strap sulbstantially in the manner and for the purposes herein shown and set forth.

75, 694.-Peter Keffer, Reading, Pa., assignot to himself, William Levan, and Isaac W. Levin same place.-Machine for Stretching Hat Bodies. Mareh 17, 1868. -The hat body is plaeed over tho lower frame, whieh is raised by the treadle so as to bring the body in contaet with the head frane, whose arms press into the spaees between the arms of the lower frame.

Claim.-Tle pivoted arms $l$, to whieh a rertical reeiprocating motiou can be imparted, and which ean be mored outward by the aetion of the eonieal block $F$, or its equiralent, in combination with the stationary pendent arms $q$, the said movable and stationary arms being arranged for joint aetion on a hat body, as and for the purpose herein set forth.

75,655.-Thomas A. Lawrence and Joins H MuliFEr, New York, N. Y.-Combined Sweat Band Fastener and Size Mark for Hats.-Mareh IT, 1868. -The fastener has a disk on whieh is impressed the number indicating the sizo, and has two points for clinching in the band.

Claim.-As an improved artiele of manufacture, a hat band fastener A, mrovided with pointed projections a $a$, and laving the size of the hat stamped upon it, as deseribed.

75,6866.-William Louder, Fairfield, Iowa.Hay Elevator. - Mareh 17, 1868. -The traek bar is attaehed to il pyramidal trame at eaeh ent, and has a stop at each end which arrests tho carringe. The earriage is dram to one of the stops by a weighted cord, and is automatically latehed thereto, remaining attaehed while the load is being raised. When the load is ruised to the carriage, the tripping block comes in contaet with the eatel and raises the same, allowing the carriage to trawel to the point of clelirery, to whiel it is impelled by the hoisting rope.

Claim. - 1. The frame B, provided with the grooved slide $n$ and pulley $g$, in eombination with the bar or traek $A$ and hoisting tackle $R$, all arranged to operate substantially as set forth.
2. The manner of supportng and sustaining the poles II K by means of a cord or ropo o, so that the poles composing the supporting-fiame C ean be shifted withont disarranging the position of the pulley M, substantially as set forth.
3. Passing the rope $J$, whieh sustains the end of the bar A, throngh the sheare $I$, and seeuring it to one of the poles, as at T , substantially in the manner as and for the pmrpose set forth.
4. The manner of adjusting two or more triangular pyramidal frames npon another frame, for trans. portation, wherein the base of one frame will extend into the spaee oecupied by the frame adjacent, thus securing economy of space and rendering the apparatus compact, substantially as shown and set forth,
5. The arrangement of the triple bolt, (Fig. 4.) construeted substantially in the manner as and for the purpose set forth.
6. The stop S, construeted in the manner substantially as shorrn and deseribed.
7. The plate $P$, when used in eombination with a stop whose npper end has its eorners rounded off, and has the rope passing through its center, all arranged substantially as shown and described.
8. The arrangement of the trip-rod $m$ with the lateh $t$, whereby, when the former is pressed up the
latter will serve as its support, substantially as set forth.

75,687.-Alexanier Mackiy, New York, N. Y.-Centrifugal Machine for Draining Sugar.March 17, 1868. -Improvement on the patent of George E. Evans, September 3, 1867. - The wedgeformed blocks are plaeed behind the guides to prevcut the accumulation of sugar in the angles formed between the lower ends of the guides and the cone. Tho cylindrical portion at the lower end of the cone is to form an cren and compact sido to the wall of sugar, which is formed by the drawing up of the cone.
Claim.-1. The guides F F and the wedge-shaped pieees T T, substantially as described.
2. The perpendicular edge on lower or larger end of cone, substantially as deseribed, for the purpose spocified.

75, 688.-Darious A. Matiews, Geneva, N. Y., assignor to D. W. Baird.-Carriage Perch Connec-tion.-March 17, 1868.-The axle, axle block, and spring are secured together by portions of the middlo, and upper and under brace bars, by which the perch is sceured to the same. The middle bar recerves the end of the perch and its T-head ends in screws passing through the brace bars, which form members of the clip. The upper brace bar has a cross bar lying upon the spring, and having downcurved ears taking over the outside of the spring.

Claim.-1. The T-piece A, provided with screws and nuts, as described, and a fork or socket for the wooden perch C ; and, in combinatiou with the T . pieco above clamed, the brace B, prorided with an arm, K, and screw and nut, substantially as deseribed and for the purposes set iorth.
2. Combining with the brace B, the arms I I, and ears or lugs $G$ G , substantially as shown and described and for the purposes set forth; and, in combination with the $T$-piece $A$ and brace $B$, the brace E, perforated for the bolt and screws, as deseribed.
g5,689.-Mornis Mattson, New York, N. Y.Case for Holding Syringes.-March 17, 1868. The injecting tubes rest iu the notches of a tray, which has an aperture to allow the projection of the upper part of the bulb.

Claim.-As a new artiele of manufaeture, a syringe casc, construeted substantially as described, with a removablo tray, and having such tray reeessed or cut away at or near one cnd, to allow the bulb of the syringe to pass up through the tray, aud fittel at the other end with suitable rests or grooves to hold and keep separate from each other the several injecting tubes required.
75.690.-Harrison B. Meech, Fort Edward, N. Y.-Manufacture of Artificial Leather.-March 17, 1868.-Pulp of fibrous material is formed into sheets on a eylinder machine, and then passed through a composition of dissolved gutta percha, glue, and gum valatta. It is then doubled together and formed into an endless belt. It may bo alternately folded and passed through the mixture, and this is repeated until the belt has assumed sufficient thickncss. The belt is then passed through an oil vessel, and betwecn ribbed rollers and over heated cylinders to work and dry-in the oil.
Olaim.-1. As a now article of manufacture, leather made from fibrous substances, as described.
2. The application of gutta percha, valata, or balata, and other adhesive gums, and saccharinc matter with pulp, for the mauufacture of artificial leather', substantially as deseribed.
3. The method of applying the solutions of glue and other adhesive substances and saccharinc matter to the shects of pulp, as and for the purposes specified.
4. The method of working, pressing, drying, and vuleanizing the leather, substantially as described.
5. The use of oils, applied substantially as and for the purposes specified.
6. The method of drying the leather, in combination with the oiling process, substantially as described.
7. The use of sand or pulverized emery, in combination with the sheets of pulp, substantially as and for the purposes specified.
8. The use of corrugated or grooved rolls, for the purpose of working the leather and rendering it soft and flexible, substantially as described.
9. Forming the fibers of the pulp in the shects into spirals, by the use of wire eloth, substantially as and for the purpose specified.
75,691.-S. T. Merrill, Beloit, Wis.-Bleaching Paper Stock.- March 17, 1868.-The stock is carried up a backwardly inclined, endless apron, and between rubber rollers, by which tho liquid is pressed out.

Claim.-1. The manipulation of paper stock, (particularly wood and straw, ) in the bleaching fluids, without the use of draining vats.
2. The desiccation of "stuff" and "half stuff" with rubber rolls, substantially as set forth.
g5,692.-Charliss M. Minor, Bridgeport, and Henty S. Frost, Watertown, assignors to themselves, AUGustus $N$. Woolson, and Anthony $G$. Davis, Watertown, Conn.-Umbrella.-Mareh 17, 1868.-One part of the jointed bow forms a latch for the other part when opened out. The two parts of the bow aud the brace are attaehed to one piece.

Claim.-1. The construetion of the loop npon the end of one of the parts of the ribs, so as to rcceive and lock or brace the other part thereiu, substantially as set forth.
2. The folding joint, consisting of the three parts $a b$ and $c$, by means of the block $i$, tro of the parts beiug jointed or pivoted, substantially as set forth.
g5,993.-James A. Morrell, Chieago, Ill., assimnor to himsclf and Isaac Smmons, Baltimore, Md.-Taginal Syringe.-March 17, 1868.-The saek is expanded in the vagina to close the passage, aud the injected medicament may be drawn back into the compressible reservoir.

Claim.-1. A syringe, provided with an expansible air-sack, susceptible of being introduced within the vagiua, so as to expand against the interior walls of the passage, substantially in the manner and for the purposes specified.
2. The combination of the rescrvoir $A$, tube $B_{3}$ and expansible sack 1 , arranged so that tho injected fluid may be withdrawn into the reserroir, substantially as spceified and described.
3. The combination of the tube B , the sack D , or its equivalcut, the reservoir $A$, and compresscrs $C$, arrauged to operate substantially in the manuer set forth.
g5,614.-James A. Morrell, Chieago, M11., assignor to himself and Isanc Simmons, Baltimore, Mil. - Uterine Supporter. - March 17, 1868. - The stem of the pessary is hinged to its supporting bar, Which is hung to a strap attached by buckles to the belt. The upper cavity of the cup has dowurardly and outwardly extending passages.

Claim.-1. The combination of a pessary $A$, tube B , spring C , tube D , aud rod E , arranged and operating substantially as and for the purposes specifica
2. Connecting the stem of a uterine supporter to the stem supporter by a hinge or joint, so as to operate substantially as described.
3. The combination of a pessary A, and its stem, constructed substantially as described, with the jointed arm $F$, and the elastic strap $H$, arranged and operating in the mauuer and for the purposes specified.

75,695 - James A. Morrell, Chieago, Ill., assignor to himself aud Isanc Simarons, Baltimore, Mil. - Abdominal Supporter.-March 17, 1868. -The derice is laced upou the abdomen so as to give the required upward support.

Claim.-1. Au abdominal supporter, having its front cdges constructed in the curred form shown and described, for the purposes set forth.
2. Providiug an abdominal supporter with the front lower lacings, $b b$, or their equivalont, as and for the purposes described.
3. An abdominal supporter provided with the curred front edges, when coustructed with the upper and lowrer front lacings, and the rear lacing, substantially as and for the purposes speeified.

75,696.-Thomas W. Murray, New York, N.Y. -Rudder.-Mareh 17, 1868.-Tho lower end of the tiller shaft is turned into a erank, whose outer end embraees a pin on the rudder.

Claim. -The shaft $A$, formed with a erank upon its lower end, when used in eombination with the rudder blade C , to whieh it is eonnocted at its outer edge by means of a pin or pirot, substautially as and for the purpose herein set forth.

75,697.-R. W. Park, Philadelphia, Pa., assignor to C. W. Park, same place.-Lamp Burner. - Mareh 17, 1868. - The lower and larger ends of the air tubes have free communieation with the atmosphere, and their upper ends are in communication with the flame.

Claim.-1. In eombination with the dome of a coal. oil lamp, two air tubes, ehannels, or orifices, ir' ranged, in respeet to the clongated slot of the dome, substantially as set forth.
2. The eombination of the perforated easing $A$, plate E , dome D , and air tubes $a$ a, the whole being arranged substantially as deseribed.

75, 698.-George Pennoyer, New York, N. Y. -Thill Coupling.- Mareh 17, 1868. -The end of the thill iron has soekets which reeeive the side studs on a lug on the fiont side of the elip. One of the socket eaps is upon a piece whieh is jointed to the main part aud sceured by a serew bolt.
claim.-1. The double solid eone, in combination with the elip, Fig. 1.
2. The solid conie caps $\mathbf{A} \mathbf{A}$, in combination with the solid eones.
3. The serew bolt, in the position and for the purposes described.
4. The capped joint in construeting a earriage coupling, as and for the purposes described.

75,693.-F. P. Pflealiar, New Haveu, Conn.Brace for Bits.-Mareh 17, 1868. -The saddle is drawn down upon the shoulder of the bit by the nut.

Claim. -The arrangement of the saddle Ci upon the soeket $A$, and eombined with the nut 13 , so that the saddle C may be turned from the bit, and the whole eonstrueted so as to operate in the manner herein set forth.

75, \%00.-Tames Ramage and Thomas Nelson, Edinburgh, Scotland.-Production of Plates for Printing.-Mareh 17, 1868; patented in England, Mareh 26, 18tit.-A solution of biehromate of potash, or of ammonia mixed with gelatine dissolred in Water, is poured upon a sheot of suitable material, and when dry exposed under a negative drawing, engraring, or print. It is then imnersed in water until the parts not aeted on by the light swell up to the desired extent. The surfaee water is then removed, and a solution of gutta-pereha is poured orer the surface to form a skin thereon. The baek of the skin is filled up with wax or other material, and when separated from the gelatime an eleetrotype is taken from the mold thus produeed.

Claim.-The combined proesss, herein deseribed, for the production of bloeks and plates for printing, such eombined process consisting in acting on a film of gelatine rendered sensitive by a elnomatie salt, With light passed throngh a positive or negative of the design lequired, then wetting the gelatine surface. so as to cause it to swell in parts, then eoating the swollen surface with an impervious skin, afterward taking a cast from the surface so obtained, and lastly, stereotyping or eleetrotyping the mold so obtained, substantially as herein deseribed.

75,701.-William Reid, Granton, North Bri-tain.-Supplying Cattle with Food and Water on Railway Cars.-Mareh 17, 1868.-The ears are provided with troushs, whieh are filled from the outside and extend within.

Claim.-A stationary or detaehable tank or trougl, arranged upon a railway ear so as to both extend into and projeet beyond the outer side of the same, substantially as and for the pmrpose deseribed.

75,702. - Lewis Rice, Stoekbridge, Mieh.Shoe Lace.-Mareh 17, 1868.-A picee of leather has strings eut upon one side, which aro loft to hang liko
a fringe upon it, and one is passed through each of the laee holes. The strings hare hooks upon their ends whieh engage the other side of the opening. The upper end of the eomecting piece has a hook whieh engages an ere, so placed that the strings are drawn tight when the look is engaged.

Claim.-As an artiele of manufaeture, the shoelaeing deviec, as described, and for the purposes set forth.

75,g03.-JOHN W. Rogers, Decatur, Ill.Tuycre. - Mareh 17, 1868. -Raised side-hlast issues, are combined with a slightly raised ecentral issue, Whieh aets to prerent a dead space in tho eenter of the fire.

Claim.-1. The upper portion $\Delta$ of the turere, eonstrocted as deseribed, and having the blast openings arranged therein substantially as set forth.
2. The pot-shaped under portion of the tuyere, having the weighted valves $j m$ arranged upon it, as and for the purpose herein deseribed and represented.

75,704.-Eugene Scirmeltz, New York, N. Y., assignor to himself and Paul E. Fleury.-Bielt Fastening.-Mareh 17, 1868.-The laee is passed but partially throngh the belt, so as to be free from wear and to eause little unevenness in the surface.

Claim.- The improved mode of lacing together belts or bands, de., substantially as herein deseribed, the same eonsisting in passing a lacing, eord or cords, or other lines, from one to the other of the contaet faces to the belt or band, de., where overlapped, and partially through the thiekness of same, substantially as specitied.

75,705.-J. L. Sileprard, Charleston, S. C.Cotton Bale I'ie.-March 17, 1868. -The first side of the band hoop is passed through the eye, and the other end of the bind is run through the eje and the end brought back and placed beneath the arm.

Claim.- The cotton-bale tie abore deseribed, consisting of the ring a a $a^{\prime} a^{\prime}$, having the sides a a straight and parallel, and the sides $a^{\prime} a^{\prime}$ curred, the central opening being of sneh a form as to enable the loop to be inserted over the ends $a^{\prime} a^{\prime}$, and tmined so as to rest mpou the sides $a$, when sueh ling is used in comncetion with an arm B , between which and the nearest side $a$ is an open recess $c$, all the said parts being constrneted and arranged substantially in the manner and for the purpose speeifiod.

75,706.—JOIN M. STONE, Philadelphia, Paー Construction of Shect-metal I'a and Coffee PotyMarch 17, 1868. - The base and the lower part of the body are each made in a separate picee, whieh is stamped into form. Tho strainer eonsists of a perforated, conieal plate, having a rertically flanged edge, which tits the side of the lower reeess of the pot. A rod ascouds vertically from tho apex of the strainer, and affords means for operating it. The tea leaves or eoffee grounds are eontined beneath the strainer.

Claim.-1. A sheet-metal tea or eoffee pot, having the lower end C I) of its body, and the upper side of its base A I formed up, and eonmeeted together at their sinaller ends, so as to produce the satid bottom and base, with the reecssed portion $E$ E between them, as and for the purpose deseribed.
2. In combination with the smbjeet-matter of the preceding elaim, the strainer G II I, constructed and applied substantially as described and set forth.
195,90\%.-William Mont Storm, New Yurk, N. Y.-Clothes Wringer.-Mareh 17, 1868; mntedated Marelı 10, 1868.-The ammular, rigid disks are stiung on a vielding core, and loosely connected together by longitudinal serew rods.

Claim.-Constitnting the roll or rolls of a series of inclastie anmular disks, having an clastic bushines of India-1rubber, or its equivalent, the whole mounted on a shaft or shafts, and operating substantially in the manner and for the purpose described.

75, \%08.-Henry M. Stow, San Franeiseo, Cal. -Well Drill.-Mareh 17, 1868. - The side cutters are foreed ontward by the insertion behind them of wedrepointed bars, which are attached to the drill rod, ind have vertieal movement in the head, on the drill
striking the bottom of the hole. The object is to allow the insertion of a lining pipe through which the drill head may be extracted.

Olaim.-In combination with a drill stock in two parto, as described, morable cutters, operated by wedge-shaped tenons, to enlarge the hole formed by the drill, substantially as shown and described.
g5, 9 (09.-JOHN A. ThOMPSON, Auburn, N. Y., assignor to himself and Lorenzo W. Nye, same place.-Mrachine for Grinding Knives of Marvesters. - March 17, 1868. - The cutter bar is secured to the tilting bar by adjustable attachments. 'Lhe tilting bar frame has lateral movement on the main frame.

Claim.-1. In combiuation witll the movable base F, pedestal G, and tilting supporting bar $I$, the elastic clamps H H, with thumb serew and bolt T , formng novable joints, for the purposes set forth.
2. The connection of the supporting bar $I$, by the tocrgle elbow joints J J J J , with bar K.
3. The hood guard M and the rotary guard $N$, as and for the purposes specified.
4. The thimble $O$ and angular frame F , all com bined and operating in manner substantially as set forth, and for the purposes specified.

75,710.-Josern W. Torrey, Milford, Mass. assignor to himself and John S. Johnston, same place.-Protector for the Body.-March 17, 1868.The cloth bags hang ofer the breast and back, aud are supported by the shoulder straps.
Claim.-The new article of manufacture described, to wit, a breast and back protector, consisting of a cloth bag or case lined or filled with paper, substantially as described.
$75,711 .-T a m e s ~ P . ~ T y s o n, ~ P h i l a d e l p h i a, ~ P a .-~$ Carriage Thill-March 17, 1868.-A rubber strip passes through a rertical hole in the clip and prevents rattling by bearing against the cross pin of the thill iron.

Claim.- $\Delta$ tapering strip $C$ of gum-clastic, or its equivalent, secured at one end to the bar $B$, and extending between the eud of the latter and the coupling block, substantially as and for the purposo described.

75, 712. -GEORGE Walters and Thomas ShafFen, Phonixville, Pa.-Fagot for Beams.-March 17, 1868. - The interrening bars are made the width of the outer bars, less the depth of the rib, and someWhat thimner than the rib, so as to give the outcr bars a firm bearing there-against.

Claim.-A pile or fagot, (for wrought-iron beams or girders, consisting of a solid bar or bars $A$, har. ing a rib $a$, griped by and hotween bars $b$ and $b^{\prime}$, secured by transverse rivets to intevening bars, which are, together, less in thickness than the said rib $a$, all as set forth, for the purpose spocified.
\%.5.713.-ROBERT B. WHeatley, Grandriew, Ind.-Tire Setting Machine.-March 17, 1808.-The wheel is clamped to the rotatable frame, which is faced with metal, and may be placed in a horizontal position to reccive the tire, and then turned into a vertical position to shrink the same by revolution in the watcr.

Claim.-The devico of the serew bolt $u$, passing through and rotating in the eyo bolt $y$, which, being firmly fastencd to the crab, allows the wheel to be revolved in the water with tho crab for a support, during the process of cooling the tire, and so as to govern completely the dish of tho wheel more readily than if the work were performed with the wheel and crab in the usual horizontal position, or if the wheel were left withont any support whatever.
75.714.—Jerome Wheelock, Worcester, Mass. -Piston.-March 17, 1868.-A radial, wedge-formed recess is made in the flexible ring, and a suitable bloek fitted therein with a steam-tight joint. The block is forced outward by the curved strap, which is secmed by bolt whose nuts occupy dovetail recesses in the ring.

Claim. -The ring A, when the same is provided with a wedge-shaped cavity, and corresponding piece fitted into, the same, in oombination with tho strap C and serews $d$ e, substantialy tis shown aud described.

95, 9 \$5.-Charles Williams, Manchester, N. II.-Coal Stove.-March 17, 1868.-The soapstone panels are exposed through openings in the outer plates of metal. The said plates are held by the rabbets of the posts, which also contain pancls of stealite.

Claim.-The combination of the flue plate $I$, the flue $c$, the case $A$, the stand pipe $B$, and the air and smoke box C , with the rebated posts E , the cap D , the series of soapstone panels F G IV, and the lap plates MI, the wholo constituting a stove, substantially as set ferth.
gotarg.-Samuel Woolverton, Trenton, N. J., assignor to himself, Georee L. Taylor, and LEwis Parker, Jr.-Dental Forceps.-March 17, 1868.-Both jaws of the lower-molar forceps hare a horn and erescent shaped beak. The upper-molar forceps have the crescent and horn on one jaw, and the crescent only on the other.

Claim.-Dental molar forceps, when provided with horn and crescent bcak combined, substantially as described and for the purpose set forth.
ry. 5.7 . -Wilbur R. Worden, New Haven, Comm.-Sprinkler.-March 17, 1868.-The inner sides of the perforations of the crust cap are cleared by the arms of the plate, which is partially rotated by drawing out a taugential rod pivoted thereto, and has returu movement by a spiral spring.

Claim.- The arrangement of the plate $B_{1}$ with its arms $b$, upon the plate $A$, with its perforations corresponding to the said arms, and combined with one or more operating rods D and return spring $a$, the whole to operate in the manner substantially as set forth.

75, \%18.-W. R. ADans, Independence, Mo.Corm Oultivator.-March 24, 1868.-The beams are connected to a draw plate in front and to a hinged cross bar st the rear. Tho outer plows hare adjust able conuection to the draw plate, and their standards are conuected by an adjustable cross bar which is hinged to them by ring bolts.

Claim.-1. The semicircular-shaped plate a, substantially as described and for the purposes sed forth.
2. The cross piece $D$, as described, and for tho purpose set forth.
3. The adjustable slides E , substantially as deseribed and for the purpose set forth.
4. The combination of these threo plows, the plate $a$, the cross piece $D$, and the slide $E$, substantially as described and for the purposo set forth.
\%5, $719 .-$ Sylvister Albee, Providence, R. I.Parlor Coal Gifter.-March 24, 1868. -The prismatic sievo is inclosed in a tight bos, and has an open side for the introduction of cinders, \&c., and discharge of ashes. The radial arms impinge against stops to shake the cinders, and one of the stops is remorable to allow the inversion and emptying of the sieve.

Claim.-The radial arms B C, in combination with the siere $a b$ c $d f$, and movable stop K , substantially as described and for the purpose set forth.
75.g92.-Williait Allen, Woreester, Mass., assignol to Ames Plow Company.-Mowing MLa-chine.-March 24, 1868. - The edges of the hub are covered by a flange upon the axle aud an auuular face plate. This is chiefly to prevent entrance of an abradant which would act to wear the surfaces. The pitman crank has an additional bearing.

Claim.-1. Constructing the hub $f$ with a lip or flange $u$, to project over aud cover the edge of the axlo, substantially as shown and described.
2. Constructing the face plate $w$ with a lip or flange $x$, to cover and protect the adjacent edge or corner of the hub, substantially as shown and described.
3. Combining with the crabl bearing $p$ an auxiliary bearing $o^{\prime}$, secured to tho frame a by flanges $p^{\prime}$ $q^{\prime} \dot{r}^{\prime}$, substantially as set forth.
75, \%21.-R. H. ATwell, Baltimore, Md.-Liquiả Metcr.-March 24, 1868; antedated March 7, 1868. The crlindrical case has a piston which turns on an axial shaft communicating motion to the register, and carrying an arm which at the end of each stroke charges a cylindrical valve, so as to cause the water
to alternately onter and discharge from the measuring chamber, at opposite sides of the internal partition.

Claim.-1. The arrangement, within a measuring chamber B , of the oseillating piston E and diaphragm or partition C , with a reversible ralve automatieally operated by the same meehanism that mores the piston, substantially as and for the pmrpose set forth.
2. The oseillating arm $\mathrm{L} \mathrm{L}^{1}$ and springs $\mathrm{L}^{2} \mathrm{~L}^{3}$, in combination with the lateh $J$ fund spring $K$, or their equiralents, substantially as and for the purpose speeified.
3. The valye F , haring separate ehambers $\mathrm{F}^{2} \mathrm{~F}^{3}$, in combination with the reeciving and discharge chambers $\mathrm{G}^{1} \mathrm{G}^{2}$, substantially as and for the purpose deseribed.

75, '922.- WhliaM Babin, New York, N. Y.-Buchle.-Mareh 24, 1868. -The finme is attanhed to the garment by holes in the downbent, eentral portions of the sides. 'Lhe tongue plates are separisted to allow the end of one strip to be passed between them, and the other end is passed through an additional inetallie loop at one end of the fiame.

Claim.-1. The double buckle lerein deseribed, haring the tongues and buekle frame, together with the ejes or means of fastening the buckle to the back of the garment, arranged with reference to cach other substantially as deseribed, so as to proride for tucking away the loose end of one of the straps minder the bnckle Then the buekle is fastened to the back of the grament, substantially as described.
2. The loop $g$, in combination with a double buckle, construeted in other respects in the manner and for ${ }^{\circ}$ the purposes herein described.
3. In a double buekle having one frame and two opposite tongues, the ere holes or fastening deviees at the middle of eaeli side of the bnekle fiome, substantially as deseribed.
75.723.-TAMES H. BAKER, Saratoga Springs, N. Y.-Viriable Exhaust for Non-condensing En-gines.-March 24,1868 . -The disk valre is operated by the oscillatory movement of the lerer to simultancously regulate the openings in the series of ports.

Claim.-The arrangement of the lerer $G$, bult $F^{F}$, disk ralve $D$, chamber $A$, and pipe $B$, substantially as herein described.

75, 724.-HENRY D. Blake, New Britain, Conn., assignor to P. and F. Colbbin, same place.-IFachine for Making Butt Hinges.-March 24, 1868.-Tmprovement on the patent of Thomas Tracy, Marel 19, 1867. A feeding, ganging, and entting device is combined with the driving device of the above. The wire is drawn from a coil, ganged to length, ent off, and driven into the butt antomatically.

Claim.-1. The jaws o o $o^{\prime}$, arranged mon the stoek $h$, and actnated by cam $d^{\prime}$, through the stock $h^{\prime}$, nrm $k$, plate $m$, or their equiralents, to feed the wire $y$ into the holding and cutting die $r$, substantially as and for the purpose deseribed.
2. In combination with the above the screw $x$, or its equivalent, for fixing the extent of the backward motion of the stock $h$, whereby the length of the wires being ent is regulated.
3. The combination of the cams $e t^{\prime}$, lever $t$, shear $s$, for cutting the wire at cach successive rerolution of the shaft $b$, and all coustrueted and arrauged substantially as described.

75, 735.-Ferdinand Blauss, New York, N. Y. Apparatus for Supplying Water to Grindstones.March 24, 1868.-The Water from the grindstone is conreyed to a side trough, from which it may be raised to the dripping vessel by a pump operated by a crank on the spindle of the stone.
Claim.-1. The separation of the water trough of a grindstone from the grindstone, so that the lower part of the stone does not remain immersed in water or exposed to the action of moisture of water when the stone is in a state of rest, and furnishing water from the water trough to the upper surface of the stone by means of a pmmp, or its meehanical equiralent, worked by the revolution of the stone.
2. The supply of water to the upper surface by means of streams from the ends of the distributer, all substantially in the manner and for the purpose herein deseribed.

75, 7®G.-GEORGE Brabrook, Taunton, Mass. assiguor to Reed \& Barton, same place.-Name Plate for Coffins, de-March'24, 1868.-The name plate has a perforated extension, whieh is recessed to reecire a likeness and its proteeting glass. The likeness is held in place br the spring.

Claim. - The arrangenent of the name plate, the spring, and the pieture frame, the whole being substuntially as set forth.

195,727.-LI. B. Braman, Boston, Mass.-Reclining Chair.-Marel 24, 1868.- A slotted morable bar is piroted to the smpport, which is comneeted to the foot rest. A pin passes through the slot and the side of the main stand; and on its imer end is an elastic washer which, being forcibly pressed against the slotted bar, serves to hold it in position muder ordinary strain, but gives way to an extraordinary strain to prevent fiacture of the joints.

Olaim. - 1 . The combination of the slotted adjusting har E with the rod F and clastie washer, substantially as and for the purpose specificd.
2. In combination with the above, the derice $b d$, eonstrueted as deseribed, for connectiug together the portions of the movable frame, as and for the purpose set forth.

75, \%28.-GEORGE Brooks and Samurl ClemExt, Delloit, Mich.-Machine for Matking Excelsior. - Mareh 25, 1868. -The bolt is pressed downward Tithin its fixed case by a weighted lever, and subjeeted to the action of the scoring and plane cutters at the upper surface of the horizontal rotating wheel.

Clain.-The arangement of the wheel $\Delta$, shatt $B$, the spurs $C$, and plane irons $D$ in their proper openings in the rim of the wheel, the braces E and $G$ and the lever $H$, when combined and operating substantially as and for the purposes herein set forth.
g5, 9 g9.-Whluam Cimistuan, Philadelphia, Pa. -Iniment for LIorses and other Animals.-Mareh 24, 1868.-For treatment of spavin, \&c. Composed of camphor, 1 oz ; turpentine, 8 oz ; balsam of sulphur, 6 oz ; and hog's lard, 1 oz .

Claim.-The above combination in the proportions specified.

75, '9:30.-S. H. Clapl, Malden, Mass.-Brick Kiln.-Mareh 24, 1868.-The smoke stack has two flues which communicate at their lower ends, and have dampers at their upper ends, by which the caloric current may receive an mpward or downward tendency. The kiln communicates with one of the flues through a rertieal series of apertures, and ab damper slides in the flue by which the emrent may be confined to any number of apertures, either at top or bottom.

Claim.-The briek kiln A prosided with the flues $\mathrm{M} \mathrm{M}^{\prime}$, dampers $\mathrm{N} \mathrm{N}^{\prime}$ and H , and the openings $\mathrm{K}^{\prime} \mathrm{K}^{\prime}$ and $L$, combined and arranged as set forth aud described.

75, \%31.-Mezekiah M. Clahk, Cleveland, Ohio. -Lamp.-Mareh 24,1808 . - The tube passes vertieally througl the globe. The top and bottom plates surrounding the tube are radially corrongated, and the corrugatious covered by dists so as to leave small passages. The lower passages commmicate with holes through the tube and one for the flow of oil between the slobe and tube. The upper passayes allow the exit of gas to the flame, but are too small to allow flame to pass through. The lamp is filled through the wick tube and overflows iuto the globe.

Claim.-1. The corrugntions $c$ in eombination with the perforated tube IS and flange $C$, substantially as and for the purpose set forth.
2. The grooved flange D in combination with the tube $B$ and globe, substantially as and for the purpose set forth.

75,732.-Horace Clark, Northampton, Mass., assignor to Dwight I. Clafe, same place.-Medical Comporend.-March 24, 1868.-Liniment. Composed of olive oil, 1 ; oil of origanum, 1 ; and oik of tar or turpentine, 1 part. It may be taken internally.

Claim.-The abore-cxplained eomposition, as composed of the constituents hereinbefore mentioned, such being for the purpose or purposes as set forth.
 -Saw.-Mireh 24, 1868. -The curved teeth enter suitably-shaped slots extending baekward from the edge of the saw, and their edges are reeossed to receive the angular edges of the slots. The teeth have a "wind" to give them tho set, and are bent sideways to increase their frietional hold in the plate.

Claim.-1. The saw tooth A when eonstructed with a sidewiso bend, forming a spring to hold it in the slot of the saw plato, substantially in the manner and for the purpose described.
2. The saw teoth A A when construeted with a twist alternately in opposite direetions for the purpose of giving a set to the tooth, and an additional seenrity in holding the tooth in the slot in tho san plate, in the mamer set forth.
3. The saw tooth A wheu eonstrueted with a sidewise bend and a trist, substantially as deseribed.
4. The saw tooth A when eonstrueted with a sidewise bend, a twist, and haring its sides on lines dissimilar to the lines on the edges of the slots in the saw plate, substantially as deseribed.

75, \%34.-WiLLIAM Clemson, Middletown, N. Y. -Sau. - Mareh 24, 1868. -The tooth slot has a doubly beveled edge whieh enters an angular groove in the edge of the tooth. The tooth is bent sideways and tivisted so as to give tho set and a frictional hold in the plate.

Clairr.-The curbed tooth $b$ when construeted thinner than the saw plate, slightly bent sidewise and tristed, in eombination with the reeess in the saw plate, when said recess is eonstructed substantially as deseribed.

75,935.-J. L. Colfins and H. C. Burgie, Chieago, Ill.-Sheave.-Mareh 24, 1868.-The edges of the eircumferential groove are turned over in a lip to hold the soft metal east therein.

Claim.-In the manufaeture of sheares the formation of a rabbet or flange $a$ in or upon that part of the sheave in whieh the soft metal is applied, substautially as and for the purposes set forth.

75, '836.-Matthew F. Connett, Ladoga, Ind., assignor to himself, 'I'. G. Mraiden, and Willian C. Hexonicks. - Wood Turning Lathe.-Mareh 24, 1868.-Improvement on the "Blanehard" turning lathe. The two vibrating frames support respeetively the pattern and the blank. Tho trembling of the blank is prevented by a baek rest and nnder rests, which are attached to a vibrating stoek that is oarried on hangers upon the earriage. Tho stock is aeted on by springs whieh give the rests a coustant tendeney toward the eutters. A enrved arm extends from the stoek to the pattern to limit the movement of the stoek. The patteru has an enlargement at eael end which operates to foree baek the frame and rest stoek, so as to remore the artiele from the proximity of the entter to allow its removal. The finishing eutters are flanked on eaeh side by roughing entters, so as to allow the same to aet in each traverse of the carriage.

Claim.-1. The two vibrating frames G $H$ employod, respeetively, to hold the pattern and the material to be operated in or nearly in the same plane with the axis of the cutters, and ribrate them at equal distanees from the eenters of points of vibration of the frames, so as to produee a fac simile of the pattern, substantially as lleseribed.
2. Releasing the stuff E from the baek rest aud eutters by means of the eonieal enlargements $f f$, formed upon the end of the patteru $F$, substantially as set forth.
3. The adjustable arm or rest $\mathrm{O}^{4}$ in combination With the yielding stoek $\mathrm{O}^{2}$ and baek rest O , all arranged and operating substantially as deseribed and represented.

75, \%8\%.-Walter Crocker, Meadrille, Pa.Uterine Abdominal Supporter.-March 24, 1868.- A single pad rests against tho lumbar region of the baek, and the other tro pads rest upon the sides of the lower part of the abdomen. Straps from the lower sides of the front pads connect with flexible straps depending from the lower edge of the baek portion of the belt.

Claim.-The band $A$ A and pad $D$ in combination
with the pads E E and the straps F F and $m \mathrm{~m}$, When the same are eonstructed and arranged as deseribed for the purposes set forth.
195.938.-Rolan Daily, Canal Township, Pa.Car Coupling.-March 24, 1868.-The eoupling pin is hinged to a spring lever, whieh, in preparation for eoupling, is held by a spring detent bar. Tho entering link impinges against a rod pivoted to this bar, and releasing the lever the pin is inserted through the link by movement thereof.

Claim.-A car coupling coinposed of the pin $S$, lever $R$, spring catehes and oporating deviees conneetod therewith, for loeking the arm B, all arranged in a draw head, combined and operated as deseribed for the purposes set forth.

195, g3. - Alfred de Pindray, Paris, France. Boiler Furnace.-March 24, 1868.-The spaees surrounding the boiler have a width of $2 \frac{3}{4}$ inches, exeept above, where the wails close apon the boilers, and below at the ledge where a space of 4 inehes is left. The rear ond of the ash pit communieates with the floor of the brieked part of the furnaee by a enrved ineline. This is intended to prorent return draught.

Claim.-1. A furnaee so eonstrueted that the walls surround tho boiler and leave spaees, in manner substantially as speeified, and having the fire box disposed between vertieal walls of said furnaee, and of the relativo dimensions and in manner substantially as shown and deseribed.
2. Tho inclined eoneare wall $K$, eonnceting the floor of tho ash pit with the floor of the flue at the rear end of tho ash pit, substantially as set forth and described.
(95, 740.-R. H. Dilley, Regnicr's Mills, Ohio.Watch Key.-March 24, 1868.-The soeket pieee projects rectangularly firom the hinged door. The door may be elosed, in whieh ease the soeket pieeo is eontained in the case and the door is held by a spring eateh. In nse tho door is folded upon the lower end of the ease, and the soeket piceo projects in position for winding.

Claim. -The improved wateh key eonsisting of the hollow case, provided with tho hinged door A and springs E and $D$, when construeted as and for the purposo deseribed.

95, g4t.-G. L. Dutaney and J. A. Kaurana, Mechanicsburg, Pa.-Railroad Switch.-Marel 24, 1868.-The weights tend to keep the tongues of the switeh in conncetion with the main traek. Inelined levers are plaeed beside the rails, which are operated by treadle bars upon the ear, so as to make the eonneetion with either side traek.

Claim.-1. The gravitating weight $a^{2}$ with its jointed eomnceting rod and fulerum, in combination with the switeh rails $a \alpha$, in tho manner and for the purpose herein described.
2. The eombination of the inelined levers $B^{2} B^{3}$ With the rods oo, in the manner and for the piapose herein deseribed.
3. The eombination and arrangement of the weights $a^{3}$, bolts $\mathrm{D}^{1}$, and switeh rails $a a$, in the manner and for the purpose herein deseribed.

175, 登4.-THEODORE EXSZLIN, Newburg, N. Y. -Salve.-Mareh 24, 1868.-Clear bntter, 4 oz., is, after melting and skimming, cooked for 15 minutes with malra rotundi folia, $\frac{1}{2}$ oz. The vegetable is then well pressed and the exudation forms the salve for treatment of sores.

Claim.-The eombination of the materials eontained in the composition of matter herein described.

75, 943.-Leroy B. Eirman, Cbieago, In.-Electric Commutators.-March 24, 1868.- A wheel, whose cireumferenee is unbroken by pins or projections. has eertain seetions composed of grtta-pereha or other non-eonductor. The rotation of the wheel brings the non-eondueting surfaees of the periphery at eertain times in eontaet with the poles of the wires to break the eirenit. The device is speoially intended for firealarm telegraphs.

Claim.-A eommutating wheel, composed of two plates, eireular or annular, one of a condueting and one of a non-condueting material, L D, when altern-
ate sections of the tro plates of their peripheries are mored in contaet with the point $d$, and when the points of alternation are chamfered off and kept from contact with each other, in the mamner and for the purposes specified and deseribed.
75.744.-William H. Flinn, Nashua, N. H., assignor to himself and $A$ libert H. Saundres, same place-Modicine Bottle.-March 24, 1868.-The cork is bored axially and receives tho cylindrical part of the administering ressel, The ressel has it side opening throngh which it communicates with the bottle, and when it is filled the opening may be elosed by turning the ressel or partly withdrawing the same. The outside of the ressel lias a projection Which acts as a stop to linit the turning.

Claim.-The combination of the administering ressel or cup 1 , and its indnction tube D, provided with the opening, aud sealed at bottom, as deseribed, With the cork or stopper of a bottle, the whole being ar'ringed aud so as to operate substantially as aud for the purpose specified.

75,745.-Wilifam M. Flinn, Nashua, N. H., as simnor to himself and Alberit H. Salniners, same plice.-Medicine Bottle.-March 24, 1868.-The cup coutains a dose of the medicine and may be marled With a scale $\underset{m}{ }$ raduated to different ages.

Claim. - The arrangement of the enp with the stopper, so that when the latter is within the neek of the bottle, the cup will extend into the bottle, as speeified.

75, 7 46. - William Franklin and T. M. Smitil East Randolyh, N. Y.-Dash Board for C'ariages - March 24,1868 . - The sheet-metal panels are secured in the grooves of the frame.

Claim.-The grooved frame $B$, with its plates $A$ A, and connceting pieces II H, when constructed substantially as specified.
75.769.-Roberit Gilliland and R. H. Armsthong, Iudson, Mich.-Pump.-March 24, 1868.$\Delta$ box is inferted upon the pump cylinder and forms a water chamber which is traversed by the piston rod and is intended to prerent the entrance of air.

Claim.-The arrangement of the $\begin{array}{r}\text { anter chamber }\end{array}$ E. upon the top of scetion 13 , for causing a cold water packing, which is formed bs the operation of the pump, and constitutes a double-acting force and suction puinp, without placing the working parts under water, as set forth.
75.748.-Wilitaje C. Googins, Portland, Me.Meating Stove and Furnace.- March 24, 1868; antedated Jareh 18, 1868.- A rertical air-heating thbe passes axially through the fumace. The grate is bisected and its semieircular sections are made to tilt. The furnace is surrounded by an air chamber.
claim.-The combination and arrangement of the tube $a$, air chambers $f$, doors $g$. semicircular tipping grates $e$, and ash pit $h$, in a heating furnace, substan tially as and for the purpose set forth.

75, 749.-Mrary P. Grega, Cincinmati, Ohio.Corn Planter. March 24, 1868. -The seed slide has different sized cavities at the opposite ends and is rerersible to regulate the amount ot seed planted. The seed in passing through the contracted chute is arransed ready for oceupation of the eavity.

Claim.-1. The manner of adjusting the cups $c$ and $d$ in their depth by leversing them, for the purpose described.
2. The na'row chute or ante-chamber $b$, for the purpose of pre-irringing the grains iofore entering the cup, as specified.
3. The combination of a morable reversible measuring eup, with a stationary tube, when attached to a hoe, for the purpose herein set forth.

95,950.-Wilmer D. Grinley; New Britain, Comm.-Curtain Fixture.-Mareh 24,1868, -The cord passes through the bracket between the fixed and spring pads and is relieved by drawing ont the knob which is attached to the latter pad.

Claim.-A curtain friction bracket, consisting of the socket case $f$, frietion pads $h i$, spring $k$, knob $n$, substantially as described.
\%5.751.-HEber C. Griffin, Franklin, N. H., assignor to himself, George W. Griffin, and Joun N. IIowe.-Billiard Cue.-March 24, 1868.-The inwardly-beveled edge of the socket of the staff forrule has an interior screw by which it is secured to the staff, and which also serves to engage the iuver end of the biseeted tip socket, which is clamped upon the tip by sereming into the terrule socket.

Clam.-The billiard cue A, composed of two separate jaws C and D , and tip E , and socket B , constructed and arranged substantially as and for the pinpose described.
75,7.5:- Eahl J. Mall, Indiamapolis, Ind.Wind Whech.-March 24, 1868. -The inner ends of the wings are turned toward the windward side. The chain operating the gates is comnected to the ball governor so as to equalize the speed.

Claim.-1. The fins or wings B, haring their surfaces in straiglit lines, exeepting at their imer ends, which are prorided with the short curves $b^{\prime}$, for the purpose described.
2. The gorernor D, wheel $d^{3}$, and chain $c^{\prime}$, when combined and aranged substantially as described.
75.758.-William Mamiton, Chicopec, Mass. -Oiling Fast and Loose Pulley.-March $24,18 \mathrm{iz}$. Improrement on his patent, October ${ }_{\sim}^{2}, 186 t i$. The loose pulley is fast to a sleere. This slecre turus in the box and forms the cnd bearing of the shaft. An endless chain is latel mon the sleeve and carries mp oil from the receptacle. The oil flows thourh small holes in the sleere into an amular chamber between it and the shaft and returns to the reeeptacle by passing between the end of the box and the sleere.

Claim.-1. The sleore B, with the hoilow exlinder $e_{\text {, }}$ (rnstructed as shown, and arranged upon the shat C, substantially in the manner and for the purpose described.
2. In combination with the sleeve $B$, the shaft ( , formed as shown, witl the taper and projection $i$, substantially as set forth.
3. The tongine $k$, when connected with a dripping trongh $i$, for the purpose and in the manner shown.

175,954.-Josepli IIarmisor, Jr., Philadelphia, Pa.-Love- Wrater Detector- - 11 arch 24, 1868.- 1 tubu communienting at one end with the boikr, at the low Water lerel, is closed at the end and rests agminst a picee of glass forming the eud of a water pipe. On the fall of the water, allowing the massige of sitcam into the pipe, the pipe expands and fractures the glass, which allows the flow of water into the furnate.
Claim. - A tnbe B, commmicating at one end With a steam boiler, and closed at the opposite end, in combination with the water supmly pipe $F$, and the diski of gliss, or any equivalent to the same, the whole being construeted and operating substantially as and for the purpose herein set forth.

75, 75.5. - Richnonn Hathawat, Chicopee, Mass. - Caster for Sewing Machines.-Mareh á4, 1868. -The casters hare rertical movement and are operated by levers actuated by cams on the treade rock shaft when the said shaft is laised by the hand lever. 'The casters may be depressed in relation to the machine so as to support it when it is to be moved.

Claim.-The arrangement of the levers C and $\mathrm{C}^{1}$, with casters and commeeting rod E, combined with the liand lever $B$ and treadle $\Lambda$, with can $K$, substantially as and for the purpose shown.

75, 756. - IENRRy A. Hennerson, Aroca, assignor to himself and Charles M. Gray, Whitestown, N. Y.-Farm Gate. Marel 24, 1868.-The gate has end movement hoon rollers and admits of laising vertically, in whieh position it is sustamed at the rear end by the hook upon the post.

Claim.-A firm gate having the guide board $D$, slot $\mathrm{E}^{4}$, rolls $\mathrm{B}^{1}$ and $\mathrm{B}^{8}$, and the notelies $\mathrm{E}^{6}$ and $\mathrm{E}^{7}$, and the hook $B^{2}$, in eombination, for the uses and purposes mentioned.

195, $9.57 .-L E v i$ Merr, West Lampeter, Pa.Trace Fastener.-Mareh 24, 1868.-A metallic plate at the end of the trace is iuserted into a rectaugular
socket of a plate secured to tho end of the singletree and is retained by a pin upon a spring lever, the said 1 in traversing both platus.

Claim. -Tho shallow box A, with its spring-bolt trigger B B B b, screw or flangre attachment D, in combination with the trace plate E, arranged and operating substantially in the manner and for the purposes specified.

75,758. - James Mester, Knoxville, Ml.-Securing Checks, Drafts, \&e., from Fraud.- MLarch 24, 1868.- Private marks or instructions are concealed in folded slips, wheh areattached to checks or drats by metallic or other fastencrs, and the instructions cannot be inspected mutil the fastening is destroyed

Claim.-1. The method of attaching and nsing upon checks, drafts, and such like papers, concealed private marks and instructions, substantrally as described, and represcnted by example O ou specimen No. 1.
2. The method of making, folding, and fastening concealed privato marks, instructions, and simnatmes, upon stubs or blank ends of checks, drafts, \&e., substantially in the manner and for the purposes as herein described, and as shown by examplo 'I'S on specimen No. 2.
9.5.759.-S. B. Hewett, Jr., Eagle Grove, Iowa. -Wire-Fence Fey.-March 24, 1868.-The wire is receired in the slot of the head, and coiled around its cylindrical part by operation of the lever which is inserted between the catch-lngs.

Claim.-1. The combination of the wheel A, provided with flanges, as shown, and a slot D, with the removable pins $C$, or their equivalent, arranged and operating as and for the parposes herein set forth.
2. In combination with the abore, the arrangement of the jaws or lips E , as and for the purposes specified.
'g5, $660 .-$ Benjamin Hogan, Albany. N. Y.-Hat-Conformator.-March 24, 1868.-The usnal hatconformator has a second rim added, which may be removed vertically, and holds the arms in positions. A register, through medinm of a cord, indicates the size.

Claim.-1. The pressing rim B, spring C, and holding catches $d a$, combined and arranged substantially as and for the purpose specificd.
2. In combination with the neasuring fingers or arms of a hat conformator, the ring or band $B$, or eqnivaleat device, for secnring the said arms in fixed position, substantially as described.
3. In combination with a hat conformator, an indicator, or equivalent registering device, upon which is indicated the size to which tho measuring arms are distended, snbstantially as described.
4. The cord or chain $m$, fingers $F$, and indicator H, arranged and operating as described.

75,761.-Amitail Hubibell, Sharon, Com., assimnor to himself, E. P. H. Capkon, Smingfield, Ohio, and Geonge V. Caprox, Sharon, Comm.-Machine for Hulling G•ain.-March 24, 1868.-Cross straps extend over the upper stone, and vertical screws in the straps give means for the adjustment of the npper stone, which is supported on adjustable pirots. The lower stone is adjusted by means of the spindle, whose upper bearings are adjusted by screws turning in lugs upon the straps.

Claim.-The construction and arrangement upon the straps $f$ of the bearings $K$ for the shaft $B$, and the adjusting serews $i$ for trimming the stone $D$, as herein set forth, for the purpose specified.
75.g62.-Williail C. Hunter, Newport, Ky.Washing Machine. March 94 , 1868.-The suds-bor has side and bottom rollers, and the oscillating arm has a cross-head with a series of pendent pins. This arm is adjustable in a cylindrical rocking block in the licl, and is connected to a lever fulcrumed at the end of the box.

Claim.-The rollers I and K, the vibrating fingerbar D , having the cross-head E , and fingers $\mathrm{E}^{\prime} \mathrm{E}^{\prime}$, the eylindrical box B , pin C , and eonnecting rod G , and lerer H , when the same are construeted and nrranged substantially as herein described and for the purpose specified.

75, \%6B.-C. W. Inglis, Paterson, N. J.-Machine for Preparing Peat.-March 24, 1868.-The peat is subjected to the action of the spiral rows of pins on a cylinder rotating within a hopper. At the hopper bottom is a plunger-box, from which tho peat is forced by the reciprocating "crowder."

Claim.-1. The reciprocating crowder D, scraper H, and passage M, arranged relatisely to the mill A $a, B b$, or its equivalent, substantislly in tho manner and so as to operate as herein set forth
2. The cutter I, passage M, reciprocating crowder $D$, and mill $\Lambda B$, combined and arranged as herein represented and deseribed.

75, '964.-J. W. A. Jones, Memphis, Tenn.-Strect-IRailway Seraper.-March 24, 1868.-The scrapers are ordinarily kept above the surface of the track by the elasticity of their supporting springs, but may be brought in contact with the rails to remore dirt or show therefrom.

Claim.-The combination of the springs B B, levers H H and G G, in connection with the fulera $h$ and $g$, the hinge $F$, and the upright shaft $C$, all constructed and arranged as described and for the purpose specifica.

95, \%65.-J. O. Jorce, Dayton, Ohio.-Water Whecl.-Mareh 24, 1868.-The wheel is of the doubleturbine, center.vent kind, and has a cylindrical exterior bat conical interior: so as to give the watcu a free vent. The buckets necessarily decrease in width downward.

Claim.-The amular concave plates 1, 2, and 3 having the buckets $k l$ arranged betwecn them, so that the npper ones $k$ will alternate in position with the lower ones $l$, the plates and buckets gradnally diminishing in depth from the top downward, so as to rive the wheel a eylindrical exterior and $n$ conical interior, all constructed as described, and arranged in connection with the register-casc E and gate or chute-cylinder H, substantially as speci fied.

75,766.-EDwARD S. JudaE, Baltimore, Md.Producing an Extra Surface on Papier-MIaché.March 24, 1868.-The monld has a fixed snrface of ground lead and oil. When making a cast, the smrface is painted with a misture of glue and whiting, which comes off with the papier-maché.

Claim.-1. The application of lead and oil on the surface of the mold to prevent the adhesion of the gurface-coating to the mold.
2. The admixture of ground lead in the plaster of Paris or composition of which the mold is made.
3. The obtaining of an extra surface on papier machó, by coating the mold before the impression of the papier-mache therein with the aforesaid com position, or any other substantially the same, and which will produce the intended effect.
17.5.7G7.-Eben W. Keyes, Boston, Mass.-Tor pedo Toy-Gun.- March 24, 186太. - A cup at the end of the rod receives the torpedo, and the rod is drawn back in the cylindrical case, thercby compressing the spiral spring. The head has a cross bar, which engages a hook on the casc, bat may be tripped therefrom to project the torpedo.

Claim.-1. Attaching to one end of the rod D a eup for holding the torpedo, and to the other end a knob or ring for pulling back the rod, operated by a spring, substantially as deseribed and for the purpose set forth.
2. Combining with the abore the pin L and hook K, substantially as described and for the purpose set forth.

75, 9 68.-NICOLAUS Kincminer, Philadelp!aia, Pa.-Fastening Shoes.-Mareh 24, 1868.-The flap of the shoc has a series of loops through which the flexible levers are passed. One end of each is hinged to its plate, and the other end catches over it.

Claim.-A fastening for shoes and gaiters, consisting of the springy lever $B$ and plate $C$, constructed and combined tosether substantially as deseribed, and operating, when applied to the shoe or gaiter, as a lever for drawing the closing parts together, and as a spring-catch for fastening them in that position, as described.

195,769.-ANDREW KlomaN, Pittsburg, Pa.Pile for Girder Iron. - March 24, 1868. The top and bottom pieces are conrex on their adjacent sides, and are grooved for reception of the edse of cach altermate comnecting picce.

Claim.-Making up a pile or fagot, to be rolled into girder-beams, of top and bottom pieces a a', connected together by plates $b$ and $c$, in any desirable number, the plates bentering srooves in the lower and upper faces of the top and bottom picces respectively, and alternating with plates c, substantially in the manner and for the purposes hereinbefore set forth.
75.770.-ANDREW Kloman, Pittsburg, Pa.Alaling Piles for Girder-Beams.-Mareh 24,1868 Each piece has a web, and has a top and bottom flange projecting elicefly upon one sude, so as to form side ribs, and a slight longitndinal aperture between the webs when placed together.

Claim.-Grooving those parts of a pile or fagot for making girder-beams which, when rolled, are to form the web of the beam, so as to secure an aperture $b$, along through the heart of the pile or fageot, substantially as and for the parposes hereinbefore set forth.
75.771.-Ciristian Kisetiy, Chicago, Thl.Burglar Alarm. - Larch 24, 1868. - The spur plate is inserted in the erack of the door, and upon any attempt to open the door it impinges upon the sliding tripper which releases the hammer from the spring detent.

Claim.-1. Combining the spring $b$ and hammer $c$, constructed in a single piece, with the stationary pistol-barrel $d$, all adranged as described.
2. Combining the piston $g$, hammer and spring $e$, substantially it the inanmer shown.
3. Adjusting the piston $g$ by means of the thamb. nut $i$, substantally as shown.
4. In a burerlar alarm, the combination of the pistolbarrel $d$, hammer $c$, spring $b$, piston $g$, spring $c$, and thumb-piece $i$, all arranged and constrneted as described.
g5,782.-WiLLIAM LAMB, Rochelle, Ill.-Churn. - Narch 24,1858 . - The arm which is elamped to the dash rod enters a socket in a plate clamped to one of the arms of the fly wheel, and the dasher receives a rertical reciprocation as well as horizontal oseillation.

Claim-The adjustable clamp K, in combination with the wheel If and elasp L, the several parts being constructed and operating substantially as set forth.
75.773.-Tsrael Lancaster, Baltimore, Md.-Harvester.-March 24, 1868. -The cutter-bar has a flexible extension which is secured to the end of its oscillating motive lever.

Claim.-In combination with a flexible knife-bar, between the point of attachment to the reciprocating lever and the first knife section, a ligid attachment of the knife-bar to the end of the reciprocatiug lever, forming a joint, immorable in any direction.

75, \%\% to-IsraEL LANCASTER, Baltimore, MI.-Harvester.-March 24, 1868. -The lever which actuates the cutter-bar is oseillated by the corm surfince on the side of the wheel. The lever has a central collar or fulerum block, which is traversed by the ratial pins of tho pirot block. The pivot block slides on the angular shart and is adjusted by a temper-nut, which is sceured by a jam-nut.

Claim.-'The racthod of holding the reciprocating lever D D up to its work, by means of muts serew. ing on the driving-wheel slaft, substantially as described.
75.795.-Samuel S. Laws, New York, N. Y.Signaling Apparatus.-March 24, 1868.-Improrement on his patent of Docember 31, 18kif. 'The dial faces are marked in whole mumbers and fractions, and are comnected by wheels from which an intermitting rotary ruotion is commmicated. Each motor wheel has a boss-headed stud upon its periphery. whieh enters one of a series of notehes in tho moved
wheel, and between the notehes are recessed enres, in which the periphery of tho motor wheel turns around and preveats the morement of the other wheel except by the passage of the stud and its side recesses. Forwand or backward rotation is communicated to the first wheel by escapements operated by the armatures, and so arranged as to allow the escape of but one tooth for each wotion of the armature lever.

Claim.-1. A series of wheels thus alternately moved and held in check, in combination with contrivances for giving either an adrance or a retrograde morement, according to cireumstances, substartially in the mannor and for tho purpose above set forth.
2. In a reporting and signaling apparatns, the series of disks and wheels, as above shown, in combination with tho coils $\mathrm{O}^{\prime} \mathrm{O}^{\prime}$, the armatures $\mathrm{R} \mathrm{R}^{\prime}$ and the lever's $L L^{\prime}$, constructed, armaged, and operating substantially as above set forth.
3. In a reporting and signaling apparatns, intended specially to report the rise and fiall of gold, stocks, \&e., the use of disks operated substantially as above shown, and so arranged as to present interers representing tens, humdreás, \&c., as well as fractious varying by eighths, when the whole are so disposed, either in rows or in any other prearranged order, as to commmonicate at a glance the changes in the stock murket, substantially in the manner above dencribed.
75.776.-Elifott A. Lowdirmill, Grand Junction, Tenn-Medical Compountl.- Larch 24 , 1868.-For treatment of phemmonia, sce. One pound each of alum and blue vitriol are burnt and pulverized, and are then mixed with alcohol, 1 gall.; gum camphor, 3 oz ; honey, 1 gall.; and spirits of turpentine, 1 gall.

Claim.-The componnd fluid, composed of alcohol, hones, spirits of turpentine, fum camphor, ahum, and blue vitrol, in the proportions hervin specified, and for the use and purpose described.

75, 7 g7.-C. C. LyMan, Ellenboro, Pa.-Animal Trap.-March 24, 1868. - The wing wheel has rotation by the weighted cord, when relicved fiom the spring catch. The spring eatch is forcerl back by the toe of the platform lever on which the animal steps in reaching tho bait, and the next wing is arrested in passing the eateh to reset the trap.

Claim.- . The revolving wings or platiorms $B$, and levers F , palley C , cord $\mathrm{C}^{\prime}$, and weight L , ar ranged in the manmer and for the pnrpose substantially as deseribed.
2. The wings IS with piroted levers $F$, in conn bination with the spring catch $I$, and catch $G$, arranged as and for the purpose substantially set forth.

65, 798.-James Macferrañ, Pliladelphia, Pa. - Kight Chair. - March ©4, 1868. - The eover is first closed over the pot and the hinged arms folded down thereon; after which the molded calp encloses the cover and arms. The pot is supported in a slide which is withdrawn at the side and anothor slide forms a cover thereto.

Claim.-1. The double slide $\Gamma \mathrm{F}^{\prime}$, combined and armanged with the pot and chair, silbstantially as and for the purpose above set forth.
3. The combination and arrangenent of the cover H witl the seat $G$ and arms I I, sulstantially as deseribed, and for the purpose specified.
3. The combination of the elaspes of and $J$ ' with the cover IS and ams I I, snbstantially as and for the purposes set forth.
7.5, 7 g 9.- -GEORGE I. Mason, Lewistown, Ill. assighor to himself and WhrLAM M. ScotT, same place.-Heel Seat for Boots and Shoes.-Mareh ご4 1868; antedated Mareh 10, 1868. - The cresecnt-formed block is attached to tho removable sole, and is inserted into the boot, when the heel is worn mequally 80 as to crowd the hecl of tho foot orer the unworn side of the hecl.

Claim.-A licel seat with solo attachad, for the purpose specified, and consisting of the crescent form with sole attached, as and for the purpose specified.

75,780 .-Hugh McDougald, Chieago, Ill., assighor to himself, Robert Stewart, and Coll McDovgall, same place. - Wooden I'avement. Marel 24, 1868.-The guides have a serios of pins which pass between and support the blocks until suffieient concrete has boen introdueed into the crevices to support tho blocks.

Claim.-The guide A, when provided with fingers a a, or open spaces for the admission of grarel, substantially as specified.

75,781.—TACOB Naylor, Hedgesville, W. Va.Machine for Bending Tires.-Mareh 24, 1868.-The tire lies upon a eurved former, and passes beneath an adjustable bar at the further end of the former. The tire is sceured to the operative lever by straps, within whieh it slides as the operation progresses.

Claim.-A former A, provided with flanges $b b$ and adjustable stirrups for holding the bar $B$, all construeted, arranged, and combined as deseribed.

75, \%82.-Franklin Nelson, Wyandotte, Mich. -Punching Machine.-March 24, 1868. - The pendulum levers are hinged respectively to the head of the machine, and to tho pmehe and their approaching ends are hinged to the horizontal lever at such points as to be operated by the oscillation of the samo. The horizontal lever is aetuated by togglelevers.

Clain.-1. The pendulum levers D and E, working upon tulera K and P, operatod by lever F, when secnured to sliding blocks I by the trunnion's ' I , in combination with the plates $O$, trmunions $N$, and operating substantially as herein sct torth.
2. 'The combination of all the above described parts, when used in connection with the punch J and die $I$, and any proper frame $A$ and any snitable levers $\mathrm{F}, \mathrm{G}$, and H, arranged and operating substantially as and for the purposes herein deseribed.

75,783.-W. T. NICHOLS, Rutland, Vt.-Excavator or Shovel.-March 24, 1868.-The carth is taken up on the shovel and slides backward in the box. When snfficient has acenmulated in the front part the bail is released from the cateh, by the treadle, and the box allowed to tilt back. When discharging, the tail gate is opencd and the bos tilted.

Claim.-1. A combined cart box and scraper or shovel, in eombination with the front seltacting end boards and the self-fastening rear end door, substantially as set forth and described.
2. The connecting or drausht trame $C$, together with the combination of the foot lever $G$, the hand lever H, and the slotted tongue U , substantially as set forth and described.
3. The application of the dranght to the hor A at the rear of and below the axle by tastening the ends ot the frame $C$ to said box, and the change of draught from the rear to the fiont of said box $\bar{A}$. by the use of the bail E and the slotted tongue U, substantially as set forth and describert.
4. The drop and loist levers D D, piroted in front of the axlc, for the purposes and substantially as set forth and described.
5. A self-loading cart, constructed of the parts lettered from A to $V$ respectively, in the manner and for the purposes hereiu set torth and describod.

75,754.-B. S. NonRIs, Riplcy, Ohio. - Boot Crimping Serew.-March 24, 1868.-The serrated jaws are jointed together and adjusted by a set screw.

Claim.-The jaws A and B, providod with tho screw $D$, when combined and arranged to operate in conjunetion witl the serew $E$ and nut $F$, substantially as described, and tor the purposes set torth.
g5,985.-Jonathan Null, Quiney, Pa. - Wood Boring Machine. - March 24, 1868. -The post is clamped to a carriage and is adjusted in frout of the auger by movement of tho carriage.

Claim.-The frame F, mored by the shaft $G, \cos$ whecks $H$, crank $I$. wheel $K$, and wright $L$, and the movable frame $M$, controlled by the spring $N$, when constructal and arranged to operate substantially in the manuer and tor the purposes as set forth.

75,786.-Oscar Paddock, Watertown, N. K. Horse Hay Fork:-March 24, 1868.- 'The two claws are cansed to project by the depression ot the eenter rod, and the operating mechanism of the rod is proteeted by the housing tiames.
claim.-1. A hay fork in which the center rod and claws are combined with the slieath, in streh manner that the elaws, when projected, shall bear With a lateral pressure against the sheath, or against shoulders or beurings formed therein, so as to relieve the eenter rod from upward pressure or strain, substantially as and for the purposes set forth.
2. The combination of the ecnter rod and its piroted claws, notehed, or provided with inclined shoulders, as herein described, with the sheath, and correspondinerly shaped bearings formed in the same, for the reecption of said shoulders, substantially as and for the purposes shown and set forth.
3. The combination, with the center rod and claws, of the spring, "locking bolt," and lever, and rope, or its equivalent, attached to both center rod and lever, under the arrangement and tor operation as herein described.
4. In a hay fork in whieh the olaws and ecnter rod are combined with the sheath, as described, the method of raising the center or clevating rod and retracting the claws by means of a spring or springs combined with the said rod, snbstantially in the manner lerein shown and described.
5. The combination, with the center rod, of the sheath, its handle, and a locking mechanism for the said rod, attached to and arranged within the said handle, substantially as herein shown and specified.

75, $78 \%$ - Willian H. Peirce, Bangor, Me. Egg Beater.-March 24, 1868. -The spiral wire is in a conical form and has a rertical handle attached to its apex. It is operated by altryate elevation and depression, the lower coil being continually in eontact with the bowl, and the other coils being brought in contact therewith at cach depression.

Claim.-An egrg beater, constructed of a cone of coiled wire, left tree to move vertically as a spring, snbstantially in manner as described and shown.
75.g88.-J. A. Pipo and W. Walbaum. Hoboken, N. J.-Shutter Fastening.-March 24, 1868.-The lock is plaecd upor the stile upon the insile of one of the blinds, and has a spring hook to engage a catch upon the other blind ot the sume window. The hook is raised by a key which is partially inserted in one position, and then turned to allow complete insertion, after which it must receive another turn to cngase the hook, and allow its partial withdrawal to raise the same.
claim.-1. The combination, in a blind lock or fastener, of the catch 13 and spring detent $F$, substantially as and to the effect set torth.
2. The combination, in a blind lock or fastener, of the eatch 3 , detent $F$, and key $G$, substantially as set forth.
3. The combination of the catch B, letent $F$, and staple K, snbstantially as herein set forth.
4. The combination of the catch 13 , detent $F$, staple K, and pin I, or its equiralent, substantially as liereinabove set forth.
75.989.- Willian H. Prescott and Whitcomb Jutuson, Galesburg, Ill.-Odometer.-March 24, 1868; antedated March 9, 1868.-One pointer indieates the miles traveled 11 p to 50 , and itis shaft actuates that of another pointer which indieates up to 500 .

Claim.-1. Imparting notion to the grearing by means of an cccentric on the end of the actuating shatt, operating a slide with a pawl, substantially in the minner and for the purpose as herein described.
2. Providing a stationary dial plato with two sets of figures and two hands. a mile hand and a miltiplier, operated substantially in the manner and tor the purpose as herein described.
3. The construction of the ratchet wheel C with pinion $e$, the stationary and movable wheels $e$ and $d$, the loose hub D, with tooth $g$ and ratehet wheel E, as arranged and operated substantially in the manner and for the purposes as hercin described.
'y5, 900 - A. J. Preston, Guilford, N. Y.-Hay Rake and Locader.-Mareh 24, 1868. -The hay is
gathered by the rake, raised by the fork, and deposited on the wagon by the elearer." The machine is drawn forward by connection with the wagon, and the mechanism is aetuated by conncetion to one of the wheels.

Olaim.-1. Tho combination of a fork, laving a vibrating and reciprocating motion, with a hay rake and $n$ clearer, substantially as deseribed.
2. So arrancing and supporting a hav fork, which vibrates about a horizontal axis, that this fork shall remove the hay, gathereal by a rake, from this rake, and after the delivery of its load npon a magon, it shall rise over and arrange itself in rear of the load Which was gathered upou the rake dnring said delivery movement, substantially as described.
3. The arrangement of the rake teeth upon arms projecting trom beam $a$, in combination with means Which will eause the fork to rise over the loirl gathered upon the rake during the delivery movernent of the fork, substantially as and for tho pmrposes deseriberl.
4. Providing a frame, carrying har raking and loading clevices, with a pole $\mathrm{P}^{1}$, and two steadying arms $R \mathrm{R}$, the latter carrying on their tront end rollers $g^{2}$, for the purposo and in the manner substantially as deseribed.

75,791.-Lewis T. Prott, Philadelphia, Pa.Cooking Stove. - March 24, 1868. - The grate is mounted on wheels and has longitudinal movement to bring it beneath the pot holes or oven.

Claim.-1. The combined furnace and truek $\Lambda$, momited upon boxed or eneased wheels $B$ B, as deseribed and for the purpose specified.
2. In combination with the foreroing, the $V$-shaped rails, extending from the rear of the stove to the fiont of the hearth, as and for the purposes explained.
3. The automatic division plate or damper I) $d$, operated by the motion of the timrnace, as and for the pmposes described.
4. The detaining plate E , in combination with the shifting furnace $A$, in the manuer described.

75, \%32.-W. W. RILEY, Columbus, Ohio.-Gate. -March 24, 1868.-The uprights are extended upward and piroted to the posts, and their ends arro weighted as a comnterbalance to the gate, which is swnig upwawd in opening.

Claim.-Swinging or revolving the gate between two posts, by means of two piroted arms and balance weights, as slown and described.

75, $998 .-A \mathrm{dam}$ G. Ritz, Elizabethtown, Ind., assignor to himselt, John B. CAFTER, and Willian INDLEF.-Shingle Machine.-March 24, 1868.-'The bolts are laid in the cavities of the disk and clamped by the down-turned ends of tho reighted levers. Before coming in contact with the saws the bolts are freed from the clamp and arranged obliquelg to eause the taper of the shingle. This arrangement is secured by allowing tie bolt to gravitate upon a flooring block whose inclination is eaused by the roek levers, whose arms are depressed more or less by the spring strips, which are adjusted by set serers.

Claim. - The springs or strips $\dot{\gamma}$, operated by set screws $g$, and arranged radially across the anmula grooro $S$ beneath wheel $B$, in combination with crank levers $n$, for adjusting ilae platforms $m$, sub)stantially as deseribed, and for the pmrpose set forth.

75,794.-Louis S. Iombins, New Tork, N. Y.Preserving Skins of Animals.-Mirch 24, 1808.-The skins are placed in a close chamber and treated with the rapors thom the distillation of tar or other hydrocarbons.

Claim.-The process herein deseribed for preserving the skins of amimals from the destructive influence of the atmosplere and the attacks of erery species of insects, the same consisting in saturating the skins with rapors of carbolic acid, obtained fiom the oil of coal tan', woorl tar, bitumen, or other similar substances, substantially as herein deseribed.

75, 9 9.7.-Louis s. Robbins, New York, N. Y.Oiling, Preserving, and Strengthening Leather.Mareh 24,1818 . - The tanned licles are placed in a chamber in communication with a retort in which oleaginous matter is distilled.

Claim.-1. The process for saturating skins or leather with oleaginous vapors and compounds, before, atter, and during the operation of currying the same, snbstantially as herein deserihed.
2. The application of the same process or treatment to all such articles manufactured fiom leather as may repnile the use of oils, either to render them impervious to moisture, or to inerease their flexibility, strength, and durability.
g5, 9 98.--Wrlliam A. Robinson, Grand Rapids, Mich.- Hop Head.-Mareh 24, 1868.-The cross bar of the head lass a row of sermations against which the cloth is held by the bows, which are swung around and secured by slip rings.

Claim.-1. The combination of the arms $d$ d, the socket $\alpha$, and teeth $f$, and the mode thus provided for attaching and holding the bows $c c$, substantially as and for the purpose deseribed.
2. The arrangement and combination of the socket $a$, liend $b$, bows $c$ c, braces $h h$, with the arms $d d$, links $e \quad c$, and tecth $f$, substantially as and for tho purposo inteuded.
75.797.-Clealent Rússell and W. K. Milider, Massillon, Ohio.-IIarvester.-Minch 24, 1868.-'The rear cud of the divider and the platform are made moreable, and a dropper substituted, which is automatically operated from the reel shaft.
Claim.- 1 . The construction and arrangement by which the platform and dropper are made interchangeable for hand raking or mechanical dropping, under tho control of the driver, substantially is described.
2. Making the end board S in two parts, so that the after part can bo remored with or when the platform is remored, to adapt the machine for the application of the dropper, snbstantially as described.
3. 'The combination of the pulles 2, pulley lever 3, holder 4, and rubber spring 5, or its eqnivalent, for taking np the slack in the recl cham, when said spring pulley is arranged on the slack sife of the chain, and is nsed in commection with a fixed pulley 1, substantially as and for the purpose described.

75,795.-Thomas SAmpson, Wansknck, R. I., assignor to Georgle S. llarwoon and George II. QUNCT.-Fecding Mechanism for Carding Engines. -Mareh 24, 1868.-Improvement on the patent of Sames Apperly, and W. Clissold, (No. 18,888.) A rotating shaft is monnted $1 n$ front of the muchine, and travels at the same speed as the sliver, which passes over it to the teed rolls. As the shaft mores with the sliver the latter is not stretehed.

Claim.-In a machine such as deseribed, the applieation and use of a revolving shatt, monnted in the front of the machine, at or near tho point whero the sliver is delivered to the traversing guide, substantially as and for the parposes herein shown and set forth.

75,799.-Frederic Saunders, New York, N. Y.-Smoking Iipe.-March 24, 1868.-The smoie passew throngla a tube which rises within the bowi or a separate chamber, so that the oil of the tobaceo cannot enter the stem.
Claim.-The nse of a tube and hood placed in the bowl, or a tube or tubes placed in a separate chamber or chambers, or their equivalents, in pipes tor smoking with, for the pnrpose specitied.

195, 800. WIlliay Scioll, Marion Township Pa.-Horse May Fork.-March 24, 1868.-The tines are curved like a pair of calipers, and are secured together at the npper end by a metallic loop which engages over the end of one of the levers and is tripped by a bent lever to whioh the trip cord is seemred.

Claim.-Tho curved lever D, bent and piroted at its upper end, and provided with a projection $e$, for securing the metal loop E , when used in combination with the tines A B and pullef C , with their cords, all construeted, arranged, and operating as set forth.

75,801.-William H. SEYMOUR and Aaron Palmen, liockport, N. Y.-Harvester Rake.-Mireh 24, 1868.-The rake arm is pivoted to the tree end of the tnbular, swinging crane arm. The latter is
actuated by a crank, whose connecting rod has a partial wimbal joint, to the roek sliaft so as to cause the rocking and osedlation of the same. The roek shaft traverses the erane arm axially, and has an arm which passes through the side of the crane arm and engages the rake arm to raise it free of the grain on its forward sweep).

Claim.-1. The rake arm mounted in the swinging end of the rake frame or crane, and provided with a slot or perforation, substantially as and for the purpose deseribed.
2. The swinging rake frame or crane, in combination with the ancular rod or rock shaft and rake arm, substantially as described.
3. 'Ihe angular rod or shaft, in combination with the rake arm, operating as deseribed.
4. Operating the bent arm or roek shaft to raise and depress the rake by means of the crank and pitman, substantially as described.
5. The eceentrie slotted erank arm, or its equivalent, whereby the speed of the rake is varied, as described.
6. Jhe shipping lever and spring, in combination with the rake gearing on standard $H$, substantially as described.

75,802.-Eleazer Small, Dennisport, Mass.Sad Iron Heater, Nurse Lamp, and Foot Warmer.March 24, 1868. -The ease has a central, rertical partition which admits of inelination. The top and sides slide so as to be partially or wholly petracted.
Claim.-The box a perforated as set forth, and provided with the lamp $D$, the movable partition $G$, and the sliding eover $\mathbb{C}$, when the several parts are arranged and eonstructed as and for the pmpose set fortit.

75,803.-Samuel, Smith, Plainview, Minn.Attaching Traces to Whifletrees.-March 24,1868 .The end fermules of the singletree have lugs, so that the ring at tho end of the trace may be placed on the ferrule and turned into working position, wherein it is seeured by the lugs.

Claim.-The combination of the ferrule B , with its projections $x$ a $x x$, and the ring C , with its culargement $f$, all constructed and used sulostantially as set forth.

75,804.-M. S. Snow, Forestrille, N. Y.-Bee-hive.-Mareh 24, 1868. -The miller box is removably attaehed to the hive bottom, and is separated by gauze from the bee ehamber.

Claim.-The miller box $\mathbf{R}$, prorided with perforated diaphragm $v$ and aperture $w$, arranged with the opening $P$ and wire cloth $q$, snbstantially in the manner and for the purpose set forth.
759805.-L. W. Siencer, New York, N. Y.Machine for Outting Tobacco.- Tareh 24, 1868.-The stock is carried formard upon an endless apron, and compressed between the apper and lower cylindrical rollers and the inclined, smooth, motallie sides. The fonives are earried in contact with an emery wheel at each revolution. The emery wheel rotates at higll speed within a ease whieh is filled with steam, and has a longitudinal aperture allowing the contaet of the knives and wheel, and also the passage of steam to moisten the knives and prevent the aeeumulation of hard gum thercon.

Claim.-1. The feed rolls $I^{1} I^{2}$, eondueting ease M , and cutters $d d$, eombined as and for the purpose herein set forth.
2. The contraeted mouth pieeo $\mathrm{B}^{\prime}$, adjaeent to the cutter $d$, arranged as represented relatively to the passage $M$ and rolls $I^{1} I^{2}$, as and for the purpose as herein set fortlı.
3. The diverging sides B B of the feed box, as and for the purpose herein speeified.
4. The plates $m$, eonstructed and arranged relatively to the feed box $B B$ and feealing deriees $I^{1} I^{2}$, as and for the purposes herein set forth.
5. The grinding surfaee E, arranged and operated relatively to the eutters sabstantially as represented, so as to sharpen the knires and entters d $d$ while they are in operation, substantially as and for the purpose herein set forth.
6. The applieation of steam to the entters $d d$ or their equivalents previous to each cnt, by conducting
the steam from a boiler or the like into the casing through or past whieh the cutters revolve, substantially as and for the purpose herein sat forth.
g5, S06.-Frederick Stearas, Dotroit, Mich.-Hair-Dressing Compound.-Mareh 24,1868 .-Cocoamut fat, 18 lbs., is melted in a water bath, and castor oil, 16 qts., added thereto; when nearly cold, alcohol, 16 gts., 80 per cent. proof, is added.

Claim. -The combination of cocoannt fat, castor oil, and alcohol, with any appropriate perfumes, sub. stantially in the proportions named, and for the purposes deseribed.
g5,S6\%:-E. M. Stevens, Chelsea, Mass., assignor to himself and W. N. ELY, (trustee,) Stratford, Conn.-Manufacture of Enameled Cloth.March 24, 1868.-The cloth is enameled with a mix. ture of boiled oil, litharge, and 15 per eent. more or less of dissolval rubber; burnt umber may be added.

Claim.-The eompound rubber-enamel cloth, substantially as described.

75,S0S.-ANDRLW STRURE, Frederiek, Md.Power Hammer.-March 24, 1868. -The hammer is adjustably pivoted to the npright, and has toggle comnection with the treadle, whose depression causes the descent of the hammer upon the anvil. The hammer is raised by a spring.

Claim.-1. The arrangement of the treadle E and lever $F$ with the bars $G G$, soeket $L$, and adjustable frame $D$, as and for the pnrpose set forth.
2. The arrangement of the lever $I$, spring $J$, and movable eross bar $Z$ with the bars if II, soeket $I$, and slide $N$, with its screm $K$, as and for the purpose specified.
\%5,509.-D. B. Sturdevant and B. M. Halmon, Clifton Springs, N. Y.-Removing Tin from Sheet Metal.-March 24, 1868.-The cylindrical retort has a perforated, in verted, eonieal bottom, through which the melted tin is discharged into the receiver.

Claim.-1. The process, lierein deseribed, of ra moring tin coatings from sheet metal, by the combined use of hot air and steam reting upon the mass in a elosed retort, snbstantially as herein set forth.
2. The special combination and arrangement of the apparatus for prodneing the result, the same consisting of the retort A, grate C, hot-air pipes D E, and water receptaele $G$, the whole operating in tho manner and for the purpose herein set forth.
g5,810.-James B. Summerill, Penh's Grofe, N. J.-Hay Elevator.-March $24,1868 .-4$ frame is plaeed on the running gears of a wagon, and after the load is hanled to the barm, ehains from the hoisting head are attaehel to hooks npon the firame, which, with its load, is hoisted up to a carriage frame trilveling upon traeks attaehed to a beam seeured boneath the upper ends of the rafters. The chain npon one side has a tripping eonnection, so that the load may be dumped into the mow.

Claim.-1. The hoisting frame A, eonstrueted and arranged as and for the purpose deseribed.
2. The tripping cateh C, eonstrmeted as described.
3. The combination, substantially as described, of the hoisting frame $A$, the snspension frame 13 , and the tripping eateh, for the purpose set forth.
4. T'he traversing frame $H$, arranged and operating substantially as described.
5. The combination, as described, with the tra versing firame and supporting beam, of the loeking dog I, for the purpose set forth.
6. The eombination, substantially as described, of tho looisting block and trarersing frame, with the locking eatches $G$, for the purpose speeified.
7. The combination, with the truversing frame and eatches $\mathrm{G}^{\prime}$, of the sprimg guides N on the beam, for the purpose set forth.
8. The combination, with the loeking $\log I$, of the lifter ' $I$ ', arranged to be operated by the ascent of tho bloek, as described.
9. The eombination, mnbstantially as deseribed, of the hoisting bloek and traversing fiame, with a ropo eonneeting the two, and so arianged as to lift tho bloek vertieally and loek it in the traversing frame, and then to unloek the frame and traverse it hori.
zontally to the place of discharge, by a continuous pull on the same rope.
10. The trippiug rope, arranged so as to dump the loistiug frame, and then to retract the traversing frame, by a continnous pull, in the mamer described.
\%5,S11.-Joserft A. Talper, Somerville, assignor to liinself and Mrellex Bray, Boston. Mass. -Rotary Pump.-Mareh 24, 1868.-The annular piston is moved eceentrieally around inside the eylinder. The convex-faced ralve is supported on a spring arm ind follows the morement of the eylinder, so as to form a continned separatiou between the induetion and edtetion passages.

Claim.-1. The eombination, with the eylinder of a rotary pump, of the cecentric piston ring, its netuating eam or cecentrie, and the ralve and valve arm, for regulating the admission and discharge of tho fluid into and from the said eylinder, in the manner and for the purposes herein shown and set forth.
2. The combination, with the pump eylinder and eceentric piston ring, of the valve and arm for hold. ing the same in position, and the orifices or pipes for the induetion and ednetion of the fluid, arranged and operating substantially as herein shown and deseribed.
3. The construction and arrangement, within the pump ease and eylinder, of the linged ralve aud valve arm, substantially as slown and deseribed.

75,812.-Bjarne Thompson, Chicago, Ml.Runner for Whecled Vehicles.-Mareh 24, 1868.-The wheel cuters a recess in the rmmer, and is secured by the stirrups. A linged side plate is operated by a lever and aets as a side guide.

Claim.-1. The hinged stirrnps D and bolts $g$, in combiuation with a detachable rumner, having in it a groove or recess fitted to the wheel, substantially as specified.
2. The gnide C , to prevent the side slipping of the runner when operated by the direet aetion of the lerer $i j$, substantially as specified.
\%5,813.—Tames B. Thorp, Warrenstille, Ohio. - Wood Boring Machine. Marel 24, 1868.-The spindle is turned by a hand erank, and is snpported in an eceentric bushing whieh has longitudinal movement between the guide pieces, aud is secured by a nut. The frame standards have spurs to enter the timber, and the frame is seemred in position by dogs.

Claim. - The cceentrie bush E, earrying the slaft of the anger, so coustructed and arranged that it can be revolved within the nut $F$ and elamped in any desired position, substantially in the manner and for the purpose set forth.

75,814.-Henry Turner, Boston, Mass., assignor to himself and Meleen Bray, same place. Spring Chain.-Mareh 24, 1868.-Eaeh link has two disks, between which is an annular bloek of rubber, forming a spring between the disks, which are attached to barss sliding upon each other.

Claim.-1. The combination, in a spring such as deseribed, of the bifureated or forked link $B$, and its slotted head, with the link A, and its slotted head, under the arrangement and for operation as herein deseribed, so that the end of each link shall pass throngh and be capable of sliding in the head of the other liuk, as and for tho purposes set forth.
2. The combination, with the sliding links, and their slotted or perforated heads, arranged as deseribed, of the rubber eylinder or other elastie body, monnted upon said links, and interposed between their heads, as and for the purposes herein shown suld specified.
3. The combination of two or more springs, such as deseribed, in the manner herein shown and set forth, so as to form an clastic and extensible chain.

75,815.-C. F. Varley, New York, N. Y.-Insulator for Telegraphs.-Mareh 24, 1868.-The iron wire used as a condnetor in the insulator is galvanized with zine and dipped in molten tin. Tho insulating enoutchone is put on when dissolved, and galvanized snbsequently. In placing this insulated wire into the insulator, eement is nsed, and the whole is immersed in melted paraffine to expel the water and air from the cement.

Claim.-1. The method, substantially as deseribed, of preventing the metallie pins of insulators for telegraplie wires from rusting, and tho vuleanite covering from being defective and being injured, br coating the said metal pius with zlue, and then with tin, or an alloy of tin, preparatory to and in combination with the onter covering of valeanite. as set forth.
2. As an improvement on the well-known mode of seenring the metallie pins, corered with vuleanite, with the insulating eups, by means of cement, and as a means of exeludiug moisture and preventing the eril effeets therefrom, filling the pores and interstiees with parnffue wax, applied substantially as herein deseribed.
3. Covering picees of wire with rnleanite, for in sertion at the points of support, substantially as de. seribed.
75.816.-TuAN゙Z Vester, Newark, N.J.-Drill. - Mareh 24, 1868. -The spring entter terds outward against the sides of the lole of the guide plate, and is made to bore a hole similar to the pattern.

Claim.-The spring eutter $B$, the stay post $e$, and gnide plate C , when used in combination with an ordinnry drill or anger $\Lambda$, smbstantially as and for the purposes deseribed and set forth.

75, ST\%.-Robert L. Walker, Globe Village, Mass.-Steam Boiler Furnace.-Mareh 24, 1868.The furnace is flanked by steam generators which communicate with the water grate where one is used. Outside the flanking generators are heat eliambers, through which tho ealorio eurrent is allowed to circulate.

Claim.-The combiuation and arrangement of ono or both the auxiliary steam generators with a furnace and boiler, substantially in manuer and so as to operate therewith as deseribed.
2. The combination and arrangement of the heating ehamber E with each of the auxiliary geucrators, and the furnaee or furnace and boiler, arranged and combined substantially as deseribed.
3. The combination of the water grate with the auxiliary generator or gencrators, the furmace and boiler, arrauged aud combined substantially as dosoribed.
\%5,818. TOIN B. Warizg, New Tork, N. Y.-Car-Starting and Stopping Apparatus.-Marel 24 , 1858. - The ehain is wound upon the drum, to bring the ear to a stand, by contraction of the serew; and the tension of the serew is brought to bear in assisting to start the car.

Claim.-1. The pawl II, spring I, and series of detents $b$, arranged to operate in combination witl a wheel, previously turned the reverso to the axle, substantially as and for the purpose herein set forth.
2. 'Tho turning part $P$, arranged relatively to the wheel $\mathrm{G}^{2}$, parrl I , and series of detents $b$, substantially as lerein set forth.
3. Diseonneeting the pawl If from the series of detents $b$ by means of the eam-like projeetion $j$, arranged to operate substantially as and for the purpose herein set forth.
 to himself and Ciristopier Dexter, Last Providenee, R. I.-Pump.-Mareh 24, 1868.-The pmmp is doublo aeting. The foree pump is connected with tho induetion, and the lifting puinps with the eduetion, pipo.

Claim.- A pumping apparatus, consisting of a central force pump and two or more lift or suetion pumps, the area of the first being quite oqual to tho area of both or all the others, and so arranged that power applied to the main or ecutral piston rod is communieated by means of a eross head to both or all the othor piston rods, so that the power of foreing the main or contral piston downward is fully componsatod or baluueed in its aseent, substantially as showa aud deseribed.

175,820.-TOHN D. Wilkinson, TMattsburg, N. Y.-Bed Bottom.-Marelı 24, 1868.-The slats aro supportod on cords, whiel are curried over pnlleys and connected to springs beneath.

Claim.-'Tho arrangement of the elamp C and spring $E$ with the cord $E$, pulleys $D$, and slats $I$,
substantially iu the manner and for the purpose specified.

95,821-Alfred Young, Philadelphia, Pa. Curtain Fixture.-Mareh 24, 1868. -The springs bear against the shade and eatuse it to eoil evenly upon the roller.

Claim.-The springs $g g$, fastened to the frame of the window and bearing upon the eurtain in such manner that the eurtaiu will be tightly and erenly strained.
g. $922 .-$ Frederick Zibell, St. Louis, Mo.Turning Lathe.-Mareh 24, 1868. -The slatt is held between two tail centers and dressed off longitndinally br a series of annular entters, seeured to a slide rest. The shaft may be rotated; in which ease the cutters in the ammular holder will be modified to snit the direction of eut.

Claim.-1. The combination of the nut I, serew A, and cutters H H with the earriage head, as above deseribed, and for the purposes set forth.
2. The turning head S, Fig. 4, with the eutters M M and feed serews, in eombination with the carriage head 00 , as above described, and for the purposes set forth.
g5,893.-Jomi H. Abbotr, Malden, and Jermmati A. Mander, Boston, Mass., assignors to Joinn H. Abbott and Cuables E. AbbotT--LeatherSplitting Mrachine.-Mareh 24, 1868.-The ends of the band knife are attached to bloeks pivoted to the ends of levers, which are operated by heart-shaped cams on a eommon shaft. The levers are fulerumed upon trist pins of pendulous cranks, aud are guided by radius rods.

Claim. -1 . Operating the knife of a leather-splitting maehine by levers driven by eams, substantially in the manuer set forth.
2. The clamp H, constrneted and operating as deseribed, to hold the end of the knife aud assist the adjustment of its tension, as speeified.
3. The combination and arrungement of the eams D $\mathrm{D}^{\prime}$, levers $\mathrm{E} \mathrm{E}^{\prime}$, elamp $H$, and kuife $J$, in the manner and for the purpose deseribed.

75,824.-George Achelis, Westehester, Pa., and Hermany Poprexhusex, New York, N. Y.- Instrument for Measuring Distances.-Marel 24, 1868; -The bars hare upturned ends, forming "sights," and are set by a seale to diverge more or less, so as to indieate the angular distanee between two objeets.
Claim. - The instrument for measuring approximately the relative size and proportion of objeets mately in a landseape, eonstrueted and operating substantially as aud for the purposes deseribed.
75.825.-D. S. Ames, Laelede, Mo., assignor to himself and John F. Pershivg, same place--Corn Planter.-Marel 24,1868 . -The seed box is piroted to one leg end the seed slide oscillated by a rod connected to the other leg.
Claim.-The legs $\bar{A} A^{\prime}$ and the hopper C , when combined with the dropping slide D , and otherwise arranged as leerein deseribed and set forth.
g5,826.-Bentamin Anyan, Fitehville, Ohio.-Cultivator.-March 24, 1868.-The eultivator tongue is seenred by a rertieal pivot pin to the fore end of the supplemental hounds, which are in turn secured to the hounds proper of the fore wheels of a wagon by a bolt, whieh passes through the holes used in attaching an ordinary tongne. This attaehment altaching lateral and vertieal oseillations to the tongue, and the former is accomplished by the feet of the operator through a raek-bar attached to the rear end of the tongue.

Claim.-1. The supplemental hounds $b b$, with the dranglit pole $G$ attached, and both said parts attaehed to the honnds proper D D, as shown, when said parts are applied to or used in connection with the front running gear of an ordinary farm wagon, for the purpose speeified.
2. The attaehing of the standards II of the front shovels II to the supplemental hounds $b b$, and the attaching of the standards K of the rear shovels J $J^{\prime}$ to the bars L L conneeted to the hounds proper D D , substatially as and for the purpose set forth.
y5, BZ\%.-Jearum ATkins, Washington, D. C. -Caliper.-Mareh 24, 1868.-The legs of the calipers are riveted together, and the head, whose shoulder is flush with the face of the leg, has a screw-threaded extension, furnished with a elamping disk and thumb nut.
Claim.-The within-deseribed arrangement, for fasteuing and clamping ealipers, of tho combined rivet and serew $A$, with its nut $G$ and washer F , substantially as described.
H5, 828.-Benjamin T. Babbitt, New York, N. X.-Preserving Coffee.-Marelı 24,1868 . The greeu eoffee is immersed for fire minutes, in olive oil or butter, at a temperature of $500^{\circ}$ Falirenheit.
Claim.-The process of preparing coffee for use by boiling or cooking the same in olive oil, butter, or equiralent oleaginous or unctuous material, substantially as herein set forth.
75,829.-B. T. Babbirt, New York, N. Y.Coffee Roaster.-Mareh 24,1868 .-The tubular journal of the eylinder ineloses the stem of a thermometer, whose bulb is within the eoffee chamber.
Clain.-The thermometer, arranged in the tnbular journal of the rotating air-tight vessel or cyliuder, substantially as and for the purpose speeified.
g5,830.-J. L. Babbitt, Glen Core, N. Y., assignor to the Fuel Furnace Company, Netr Xorli, N. Y.-Grcite.-Mareh 24, 1868.-The sloping grate bars are seeured in position by clips or shoulders at their upper ends.

Claim.-1. An inelined grate in which the bars are so suspended and supported as that they are restrained from sliding or slipping downward in dirce. tion of their length, while they are free to move upward in sueh direetion, substantially as specified.
2. The inclined bars A, suspended and supported for motion or aetion as deseribed, when formed with clips $a$, that, in addition to their effecting the suspension of the bars, also serve as guiding surfaces for transverse adjustment of the latter along their snpports, essentially as shomn and described.
e5, 831 - -J. W. Bailey, New Orleans, La.-Toy Pistol. Mareh 24, 1868. -The brecel preee consists of a lever, whose upper end is swung baek from the breceh to allow the introduction of the fire-eracker. The lerer is held in firing position by the fore-finger, and the fuse which issues throngh a noteh in the breeeh is ignited by a matel.

Claim. - The stoek $A$, the barrel $B$, the piece $C$ and the pin $f$, construeted, arranged, and combined substantially as deseribed for the purposes set forth.

皆5,832.-C. N. Bakewell, Normal, Ill.-Sulky Plow and Harrow. - Mareh 24, 1868.-The plow, or harrow, is eonneeted to an adjustable lever upon the wheel-frame by longitnainal ehains, to which chains, depending from the lever, are attached. The fore ends of the beams are also connected by ehains to the frame and to the double-tree.

Claim.-1. Broadly attaehing the same dranght to both the plow beans and earriage, by divided tugs, in sueh monner that each draught is independent of the other, as herein speeified.
2. The eombinatiou of the frame $A$, supported upon wheals $B$, driver's seat $E$. and lever $F$ and elains $G$ and H, for suspending adjustably a plow or harrow, substantially in the manner set forth.
3. The eombination of the chains G and H , for suspenting the plow or harrow, and lateral ehains $\mathrm{H}^{\prime}$, attached to the frame, substantially as and for the purpose set forth.
g5,Siz3. - T. C. BanKs, Wallingford, Conn.Boiler Alarm Gauge.-Mareh 24, 1868.- The expansion tube is so arranged that the steam entering thercin, on the water filling below the proper lerel, and expanding it, shall operate the alarm Falye. This tube is combined with an inrerted siphon pipe and three-ray coek, so arranged that the apparatns will be in all cases either blowing off the sediment or in oper:ation, and all danger from carelessness will be avoided.

Claim.-The inverted siphon and three-way cock,
in combination with tho expansion tube $B$ and an alarm, substantially as and for the purposes set forth.

75, 8:34.-Asimbel P. Baflow, Claremont, N. H. -Saw Mill.-March 24, 1868.- A transverse shaft carries a friction disk at one eud, aud has a spiral spring at the other end, whiel serves to force tho disk into constaut contact with the periphery of a friction wheel, which is splined upon a vertical shaft so as to have Tertical moremeut on the faee of its driving disk, and canse a faster or slower rotation in the shaft aud in either direction. 'Tlo motion of the shaft is comunnieated to the carriage, aud aetuates it in its feed or gigging movement. The pivoted frame carries an anti-friction roller on which the stuff rests between the head blocks, and the frame is beut backward to remove tho rollers from contact with the stuff when gigging back.

Claim.-1. The piroted frame $d$, in combination With the adjustable uprights $e$, roller $a^{\prime}$, and clamp scref or bar $f$, constructed and operating substantially as described.
2. In combination with the abore device, the adjusting serew with its eoutrolling nuts, follower $c^{\prime}$, and slide bolts $f^{1}$, surronnded by coiled springs, all constructed aud arranged to operate as deseribed.
3. The upright shatt $j$, fiction plate $k$, piroted box $m$, rerolving plate $i$, shaft $h$, and its box, with plates, spring, and temper serew, in combination with piroted lever $r$ and slotted lever $r^{\prime}$, all arranged to operate in the manner substantially as described.
4. The catches or trips $x x^{\prime}$ on tho carriage, in combinatiou with the lever $w$, ant springs, levers, and shaft $j$, all operatiug in the manner as described.

75,Si35. - AsHBEL P. Barlow, Claremont, N. H.-Lubricating the Slides of Muley Saw Mills.March 24,1868 . - The tallow boxes are plaeed outside the guide plates, and have tight corers to prorent catrance of dust. The tallow passes through holes drilled in the traversing plates, nad serves to lubricate the lower hearl.

Claim.-1. The guides $g$, ohambered and perforated, as shown at $c$ and $d$, in combination with the lnbricating box $a$, constructod aud operating substantially as leseribed.
2. The guides 9 aud perforated muley head, in combination with the lubrieating box a, all constructed as herein described, for the purposes set forth.

75,836.- - T. Barnes, Tiffin, Ohio, assignor to Tiffin Aghicultural Works, same place.Horse Rake.-Mareh 24, 1868. Tho brace rods extend from the draw bars to the standards to stiengthen the knees, and have adjusting nuts bohind the stendards.

Claim.-The adjusting braces, hariug their front ends secured to the lower sides of the draw-bars D, and their rear ends extending through the standable C, with serew nuts upon these rear ends for tiglitening up the parts at will, substantially as described.

75,837.-Theodore A. Barry and Bendanin Adams Patten, San Francisco, Cal.-Medical Prep-aration.-Mareh 24 , le68. - The tonie is composed of peppermint leares, $\frac{3}{4}$ oz.; balm leaves, $\frac{3}{4}$ oz. ; sage leares, $\frac{3}{4}$ oz.; rosemary leares, $\frac{1}{2}$ oz.; scordinum leaves, 1. oz.; blessel thistle, $\frac{1}{4}$ oz.; juniper berries, $\frac{t}{2}$ lb.; chamomile flowers, $\frac{1}{2} 1 \mathrm{~b}$. ; anise secd, 2 oz ; cubebs, 2 oz. ; galengral root, 2oz. ; cardamom sced, „oz. ; clover, 1 oz ; cinnamon, 1 oz.; ginger, 1 oz . ; nutmegs, 1 oz . ; and dog's grass, 2 oz. After maceration in a mixture of brandy, $2 \frac{1}{2}$ galls., and water, $2 \frac{1}{4}$ gralls., two grallons are withdrawn by distillation. Fine sugar, 2 lbs., and cochineal, 1 oz., are placed in a pan, and one gallon of the liquor is drawn from the alembic. The two gallous first distilled are then added.

Clerim.-A tonie made of tho ingredients herein enumerated, mixed and compounded together in about the proportions herein described.

195,838.-F. H. Bartholomew, New York, N. Y.-Door Lock.-March 24, 1868.-A common lock has one or more circular disks applied to it in such manner that they rotate with the key. One of the disks has a projecting tooth, whieh, when a wrong
key or pick is user, comes in contact with a spring that is attached to a slidiug plate and prevents the back turuing of the disks, which is necessary to the romoval of the iustriment.

Claim.-The combination of the revolving toothed disk with the slidiug tumbler and spring cateh, all operating as herein shown and described.

75,539.-Menry C. Bascon, La Crosse, Wis.Charger for Powder Flasks.-March 24, 1868 ; antedated March 16, 1868.-The moutli piece has a conical inner end, and incloses another similarly-ended tube. The end of the flask has an inwardly-projceting pin, whiel traverses a longitudinal slot in the month piece, and an ineliued slot in the imner tube. The conical ends have radial openings, whiel aro brought together by the partial rotation of the imer tube when foreing the mouth picce inward, so as to allow it to fill with powder'. 'The tubes are pressed outward by a spiral spring.

Claim.-The combination of the inner tabe $A$, provided with the spiral slot a, the onter tube 13 , provided with the longitudinal slot $b$, and the screw pin H passing throngh both slots, all construeted and operating as deseribed, whereby the pressure upon the mouth-piece 0 pushes forward the tube 13 in a longitudinal direction, and partially rotates the inner tube A, causing the perforations in the ends D of said tubes to regrister for discharging the powder, as herein shown and described.

75,S40.-Allen J. Beech, Linden, Mich.-Ap paratus for Working Wagon Tongues.-DIarch 24, 1868.-The tongue is clamped to the ardustable framo, and the irons are set by the gruuge bar.

Claim.- The construction of an apparatus for the purpose described, combining the slotted bar C, bolt and hand nut 1), the standard transrerse bar E, the npright rods $F$, the nuts $G$, the grage bar H, the lever $I$, the hand nut $K$, the set serems $L$, the ears M, the set screws $N$, the bolt $P$, and hand nut $I$, with the bench or truss $A$, or their equivalents, when arranged aud operating substatially as and for the purposes described.

75, 841.-Sanuel N. Beeciner, Milford, Comi. assighor to himself and Charles W. Miles, sumo place.-Sliding Seat for Carriages.-Mareh $24,1868$. - The seat is jointed at mid-length, and has eyes which aro ensaged by pins projecting inward from the body. The seat may be drawn endways against the spring to relieve the other end from its holding pin, and allow its folding over.

Claim.-The arrangement of the spring $a$ upon one end of the double seat, in combination with the catch or pirot a upon the other enil of the double seat, so as to operate to permit the foldiug of the seat as set forth.

35,842.- MenRy C. Bell, Heyworth, Ill. Ohurn. - March 24, 1868. - The dasher has hormshaped, horizontal tubes projecting radially, and rotating with the convex side foremost, so as to diaw the air througln the tubular shatt, aud eause it to issue fiom the big end of the horn. 'Transverse partitions prevent rotary movement of the eream.

Claim.-The combination of the tubular dasher shaft II, tiso or more curved funnels I, and the vertieal partition boards $J$ and $K$ with each other and with the body $A$ of the churn, substantially as herein shown and described, aud for the purpose set forth.
\%5,813.-TDWIN L. Berastiesser, Hilblers-burg.-Sceding Attachment to Moes.-March ${ }^{2} 4$, 1868. - The soed disk has a scries of holes of different sizes, so as to rary the quantity of seed. Each cavity has an appropriate ear to which the working rod is attached. The seed drops into a spout from which it is carried before the hoe.

Claim. - 1 . The aljustable vibrating disk E, applied to and used in connection with the looe, substantially as described.
2. Tho stationary disks $\mathrm{B} \mathrm{B}^{\prime}$ or their equivaleut, and vibrating perforated disk $\dot{E}$, arranged and oper ating substantially as deseribed.
3. The disks B $\mathrm{B}^{\prime}$ 'and E , hopper C , and seed tube $G$, in combination with the hoe A $A^{\prime}$, arranged and operating as deseribed.
g5,844.- Horatio M. Bingham and Join C. Hunt, Terre Haate, Ind.-Grain Drier--March 24, 1868. - The meal passes through a rotating, prismatic case surrounded by the caloric enrent from a furnace, and npon delivery from the drying ease is elevated to a canvas-covered ehamber, and subjected to a blast of air to cool and dry it.

Claim.-1. The polygonal inclined reel C , in oombination with the furnace or heating cylinder A , the same being previded with a draught hole or holes $f$, near its lower end, with a chimney E, and with a tube $F$, for the escape of moisture from the meal, as set forth.
2. Making the shaft B , on which the reel C is hung, of two pieces, which are conneeted by a coupling $h$, so that the reel can be easily removed, as set forth.
3. Providing the reel C with a flange $d$, at its upper open end, as set forth.
4. The cooler K, when provided with aigzag eanvas or porous sides $j$, substantially as and for the purpose herein shown and described.
5. The cooler K, when provided with zigzag sides $j$, false revolving bottom $l$, stationary bottom $k$, and streepers $q$, as set forth.
6. The cooler K, when provided with zigzag porous sides, in combination with the fan H, inclined stationary cylinder or furnaee A , and inclined revolving polygonal reel C, all made and operating substantially as and for the purpose herein shown and deseribed.
$\% 5,845$. -Lewis Bishor, Talladega, Ala.-Cultivator and Seeder. Mareh 24, 1868. -The axle turns in bearings at the ends of springs secnred beneath the frame and connects by gearing with a longitudinal and transverse shaft to eause their rotation. The longitudinal shaft carries a cotton ehopper and a star wheel whose projections impinge against the lower end of a spring snpporting the agitator of the grain lopper. The transverse shaft has pins whieh impinge against springs to which the bottoms of the cotton seed hoppers are attached and canse the movement of the said bottom plates.

Claim.-1. The employment of the spring S, as construeted, or other equivalent derice, for obtaining in cultivators or secders, of whatever kind or constrnction, a vertically yielding tension, substantially as and for the purpose herein shown and described.
2. The plates $m$, operated substantially as and for the purpose herein shown and described.
3. The hopper or trough $O^{\prime}$, with its agitator $i$, substantially as and for the pnrposes shown and deseribed.
4. The star wheel J, or other equivalent deviee, for lifting the agitator $i$, substantially as and for the purposes herein shown and described.

75,816.-William R. Bishop and Oriml D. Bishop, Harrison, Wis. -Ifachine for Saving Staves.-March 24, 1868.-The bolt is elamped to the piroted frame and is fed beneath the teeth of the transrersely-curred saw. The eurve of the saw is concentrie with the axis of the frame so as to feed the stuff in the proper durection to aroid pincling the saw which cuts the staves of the proper transverse curve.
Claim.-The combination of the apron E with the bent shaft $F$, whereby the block, from which the stares are cut, is depressed to bear against the tecth of the saiv $P$, to cat a stave of uniform thickness, eonstructed and operated as herein shown and deseribed.
g5,84\%.-William Bocm, Newton, N. Y.-Attaching Door Knobs to Spindles. March 24, 1868.The portion of the socket piece cutering the inwardly extending cavity of the knob is spread therein by the wedges which are forced into it by its insertion into the carity.

Claim.-The metallic soeket B, eonstructed with the split sides $e$, for the entrance of the wedges C, so arranged that its interior socket formation remains the same while its sides are forced outward by driving in the socket to form a rigid connection between it and the knob, substantially as shown and deseribed for the purpose set forth.

25,84S.-Winber F. Boggs, Petersburg, 171. , .
place.-Machine for Measuring Oloth.-March 24, 1868. -The cloth is passed between two rollers and its length indicated ly a registor which may be connectal to one of them.

Claim.-1. The drum F, eord $f$, and drum $f^{\prime}$, when combined with the piroted eloek frame L , in the manner deseribed, and for the purpose of reversing the same, as set forth.
2. The combination and arrangement of the pivotce clock frame E , its tripping bar E , and the adjusting bar $\&$ as and for tho purpose set forth.
3. The frietion roller' ${ }^{1}$, and its spring frame $d d^{\prime}$, in combination with the measuring roller D , as shown and described.
4. The roller $G$, its serew-bearing $g$, friction pul ley $g^{1}$, eord $g^{2}$, and weight $W$, when combined and operated as herein deseribed and set forth.
g5, $849 .-C$ Cinarles F. Bowers, Boston, Mass.Seerct Bed.-Mareh 24, 1868.-The bed frame is so jointed as to admit of folding together within the lower portion of a book case.

Claim.-1. The combination, with a book case or other upright piece of furniture, of a bed frame having folding rails, and flanges for snpporting the bed, said bed being made in scetions, and so as to cross the joints in the rails, and the rails and bed being folded and arranged together within the bottom of a case $a$, when the bed is not in use, substantially as set forth.
2. Combining with the upper part of the case $a$ the sliding mirror, substantially as set forth.

75,850. - Elijaf C. Brown, Crawfordstille, Ind.-Corn and Sced Planter.-Irarch 24, 1868.The seeding frame is so hung as to swing sideways in a horizontal plane so as to plant npou each side alternately, the marker being swung over to mark the two subseqnent rows on the other side of the tongue.
Claim.-1. The tro arms B and $B^{\prime}$, and the spring $Q$, when the same are constructed, combined, and used in manner and form as aforesaid.
2. The combination of the said B and $\mathrm{B}^{\prime}$ and Q , with the said lever A A and the suid sliding bottom RR , for the purpose and in the manner substantially as set forth.
3. The whole combination herein set forth, when the same is constructed, combined, and nsed, in its several parts, substantially as set forth.
'75,851.-EliJail C. Bnown, Crawfordsville, Ind.-Guide for Corn and Seed Planters.-March 24, 1868. -The marker staff is hinged to the tongue, and has vertical cross pins which mark out two lines for subsequent rows or drills. It may be thrown over npon either side for this purpose.

Claim.-The index and guide staff, hereinbefore deseribed, When the same is constructed in manner and form in its several parts, and nsed for the purpose and in the way, substantially as set forth.
75,852.-R. E. Bucilanan, Carrollton, Ill.-Sash Stop.-March 24, 1868. -The lock plate has a lunate form, and is so placed in the frame that either of the scrrated ends of the curved edge may be bronght in contact with the sash to lock it.

Claim.-The lock e of segmental form, prorided with the axle $c^{3}$ and linob $\mathbb{C}^{\prime}$, operating solcly as a handle, the middle part of the rim of which lock is smooth, while the end parts are serrated, and all three parts of which rim are at snch distances froms the center of motion of the lock as to form a doubleacting fastener, substantially as deseribed.

95,853.-Thomas Bullivant, London, Eng-land.-Hanging Window Sashes.-Mareh 24, 1868.The balance cords are attached to metallic plates, which are adjustable, are removably secnred to the sash, and act as guides thereto.
Claim. - The method of attachment of the weight eords D to the sashes, throught the medium of the atdjustable plates G, construeted, arranged, and applicd in the manner sho:rn, se as to admit of being adjusted to serve as guides for the sashes, and also to admit of the sashes being readily removed from the window frame when desired.

75, 854.-A. G. Buiron, Rochester, N. X.-Loek for Drawers, de.-March 24, 1868.-The key guide turns in a hole which traverses the lock, and lias an arm by which the bolt is actuated. The key is inserted in a deep groove in one side of the guide and has bits which aet on the tumblers. The guide has a viug to disarrange the tumblers by the baek turning of the key. Tho key eas only be withdrawn when the derice is locked.

Claim.-1. In eombination with the key guido D and friction tumblers $G G$, the counter cams $g h$, the former operating to retaiu tho key guide and key, as described, and the latter to distributo the tumblers, substintially as set forth.
2. The combination with the key guide D of the shielding barrel C, of larger dinmeter, closed by the head $e$, and so arranged as to leave ample space between the body of the guide and the barrel, for the operation of the wings $g h$, or their cquivalent, substantially as and for the purposes set forth.
3. So arranging the key E with relation to the arm $e$ and shoutder $\theta$ that when the said arm relieres the said shoulder, to act upon the bolt, the key will come opposite, or nearly opposite, the pirot m, where it can have the least aetion upon tho tumblers, as hercin set forth.
4. The wiug $g$ and the ledge $i$, when employed in cor: bination with the key guide D and key E, to prepent its withdratral whon tho lock is unlocked, as herein set forth.
'95,8.5.5.-James W. Byraes, Washincton, D. C.-Composition Pavement for Streets.-March 24 , 1868. -The usual street-paring stoucs are laid in a conerete, eomposed of sand, gravel, and coal ashes, in equal quantities, with 5 per eent. of ecinent, and mixed with coal tar, 2, pine tar, 1 , and the residum of crude eoal oil, 1 part. The paving stones are laid in the eonerete and their interstices filled with the same.

Claim.-Conerete, compounded from the ingredients named, and used in combination with stone in the construction of parements, substantially as set forth.

95,556.-T. B. Cargill, New Haven, Conn.Corset Clasp.-Marelı 24, 1868. -The clasp is formed from a blauk, haring a projection upon cach side lougitudinally to the stecl stem. The two projections are bent up and turned so as to form a heal.
claim.-The hercin-deseribed corset-clasp trimming, consisting of the plate provided with the button, eomposed of the two parts C and D , in the manner substantially as hercin set forth.

75,85\% -Georae TV. Carpender, Jarvis, Ind.Combined Weather Strip and Door Alarm.-Mareh 24,1868 . The metallic weather strip is hung to the bottom of the door, and when the door is closed its lower cdge enters a rabbet at the outer side of a metallie strip fastened upon the threshold. At the outer; lower eorner of the door is a cam lever, which is raised by the opening of the door, and, by means of a lever with which it is conneeted, turns the can disk, and causes it to retract and then to release the spring, which actuates the bell clapper.
claim.-The plates C and $g$, cam D, rod E, plate F, cam $G$, spring K, clapper J, and bell $H$, all constructed, arranged, and operating in the manner described, whercloy an alarm is given by the weather strip, as set forth.

75,858. - Nicolaús Carstens and Ciairles Caristers, New York, N. X.-Weeding Machinc.March 24, 1868.-The fore end of the frame is supported upon a wheel, and the machine is driven forward by a crutch frame. The cutter is vertically adjustable and swings upon pirots. The rake is rotated by a band running on a pulley upon the axles.

Claim.-1. Arranging a revolving rake in rear of the cutter of a weeding machine, substantially as and for the purpose herein shown and deseribed.
2. Pivoting the cutter of a weeding maehine to the frame, so that it can swing freely on the pivots, substantially as herein shown and described.

75,859.-John F. Chambers, Calistoga, Cal. Washing Machine.-March 24, 1868. The rubbers have ratchet serrations, and are supported on a lever
actuated by an ceeentrie, so as to work the clothes against the corrugated bottom, which is heated by a furmace bencath it.

Claim.-The combination of the toothed beaters or rubbers E E with tho yiclding corrugated metallie bottom C'C, coustrueted and operating substantially as described.
'35.860. - Jaires Cmase, Rochester, N. Y.-Curtain Fixture.-Marelı 24, 1868. - The left roller journal enters a recess, formed ly a eurved flanga projecting fiom the sido of the bracket. The right end of the roller has a lianging beariug, which is swang outwad hy the operative cord, to allow the rotation of the roller. The eastings are so formed as to bo put together without serews or rivets.

Claim.-1. Connecting the end of the curtain rollor with a swinginer lever $C$, so as to be thrown out bodily, aud combining therewith the ratehet wheel E and setent $n$ in such a mamer that the weight of the roller and curtain themselves serves to re-engare tho parts when thus thrown out, substantially as herein set forth.
$\underset{\sim}{2}$ Adapting the bearing B and lever C , without fitting, by means of the extension $c$, with slot $d$ and shoulder of the former, and the bit $i$ and bearing $K$ of tho latter, the whole arranged and operating in the manner and for the purpose herein set forth.
3. The seroll flange $p p^{\prime}$ of bearing $B^{\prime}$, arranged as described, and operating in the mauner and for tho purposo set forth.

795,501.-W. W. Chipman, Brooklyn, N. Y., assignor to himself and W. D. Gookin, New York, N. Y.-Manufacture of Whiting and Paris White.Mareh 24, 1868. -The lime is slaked and redueed by water to the consistence of cream. The fine part is allowed to flow off, and, being placed in a tank, lias carbonic acid gas passed through it until it is thoronghly carbonized. It is then dried.

Claim. - Tho within-described process of manufacturing Paris white and whiting from limestone, by the threo sereral steps of burning, slaking, and reearbonizing, substantially as and for the purposes herein set forth.

75,868.-C. B. Clark, Buffalo, N. Y.-Blind Mi:rge-Minch 24, 1868; antedated October 18, 1867. -The linueklo of the protmuling portion of tho hinge has a flange, which fits in a correrponding recess formed in the eontignous edge of the wing of the other portion, and thereby prevents the separation of the parts after the blind has been hung. The latter portion has an upright shoulder, against which the edge of the wing of the other portion strikes, arvesting the motion of the blind after it has beon swanse open to the proper position.

Claim.-A self-locking blind butt, when provided with flange $n$, recess $o$, stop $l$, and abutting portion m , constructed, al'anged, and operating substantially in the manner and for the purposes set forth.

75, Sis. - Aaron Colton, Syeamore, Ill.Damper for Stove Pipes.- March 24, 1868.-Tho blast operates to eloso the damper by raising its larger wing to the stop, and the weight of the said wing acts to open the damper. The position of the damper is regulated by a weiglit which is placed on one of the rectangulaily projecting notehed arms of the damper :haft.

Claim.-Tlhe damper, construeted as doscribed, consisting of the light-angular shaft $C$, passing transversely through the stove pipe $A$, and seeured to the under side of the damper $B$, the amms $a a^{\prime}$ of said shaft, mpon each side of the stove pipe, beins notched to receive the weight D , as hercin described, for the purposo specified.
75,864.-EDWARD A. Cooper, Laneastcr, N. Y.-IIames Fastener.-Mareh 24, 1868.-A rack bar is hinged to each hamo aud slides in a central caso by action of a spur wheel therein, whieh is turned by a thumb and held by a ratchet wheel and pawl.
Claim.-1. The two hook bars B B3, one or both provided with rack teeth, in combination with a guiding slceve C , and operating pinion $d$, substantially as set forth.
2. 'The pawl, and ratchet wheel in combination
therewith, operating substantially in the manner and for tale purpose set forth.
g5,895.-Curistoriner Corbix, Christiana, Pa. -Mill Step. Mareh 24, 1868. - The temper screws of the follow blocks stand in a tangential clircetion so that the side strain of the step block may not come directly upon the throads.

Claim.-Placing around the toe of a spindle a scries of werdge-shaped followers $C$ C $C$ C, constructed with boxes $\mathrm{B} B \mathrm{~B}$, screws a a a a movable piece Gr, steel plate D, and operating as deseribed, in combination with the reeess $e \infty$, in the plate $A$ A, all arranged for the purpose herein specificd.
75.866.-Samuel II. Cowles, Oakville, Conn.Car Coupling.-March 24, 1868. -The pivoted hook is retained in a vertical plane by the down-enrred slotted plate and is depressed by a spring. The front end of the hook is inclined and it is raised by the catering link.

Claim.-The slotted metal guide C placed within the month of the draw head $A$, as speeiticd, and used in combination with the pivoted hook $B$, the front of which is beveled from top to bottom, and constructed and operating as set forth.

75,86'.-TsaAC Crum, West Chester, Ohio.-Harrow.-March 24, 1868.-The eontral seetion of the harrow is assoeiated with the sled in such manner that by the action of a leror that scetion may bo raised in relation to the sled so as to ride thereon. The side sections are then turned up on the sled; and tho whole may be eonveycd to another field.

Claim. - The eombination of the harrow B with the sled $H$ and the adjusting mechanism $i, d, G$, or its equivalent, arranged and operating substantially as and for the purposo described.

75,868.-JOHN B. Cullen, Philadelphia, Pa., assignor to himself and JoHn P. Cheston, samo plaee, assignors to themsclves and John A. Fulton. -Marine Steam Engine.-Mareh 24, 1868. - The steam cyliuder and piston are so arranged in relation to the propeller shaft as to foree the same rearward as the propeller leaves tho water, but to yield as tho propeller sinks. The action of the valve is also sueh as to regulate the passage of steam, and consequently the speed of the enginc, in conformity with the dip of the propeller during the pitehing of the vessel.

Claim.-A propeller shatt, arranged within a res. sel as set forth, in combination with a steam cylinder and piston, and with the deviees deseribed, or equivalent deviees, Whereby the movements of tho shaft are commnnieated to a valve regulating the passage of steam to the enginc, all substantially as specified.

75,869.-Thomas Curley, Troy, N. Y.-Cur. tain Fixture.-Marel 24, 1868. - At its lower end the curtain eord passes around a roller upon the end of an arm extending radially from a ratchet disk whieh is tnrmed to ar(just the tension of tho eord.

Claim.-1. The ratchet B , the pawl E, and the arm C , either with or without a loose pnlley D , arranged snbstantially as described for the pmposes set forth.
2. In eombination with the abore, the plate A, for the purpose deseribed.

75,870.-Charles M. Daboll, New London, Conn., assignor to the WILson MaNUFACTURNG Company, same place.-Brace for Bits.-Mareh 24 , 1868. -The jaws are hinged to the stoek by their cross heads, and are forced against the bit shank by the serew sleepe.

Claim.-1. The jaws C, construeted as deseribed, having a semi-eircular base inelining ontward, and provided with the $T$-shaped shank, fitting without pivots in the $T$ slot of the stoek $A$, as lierein deseribed, for the purpose speeified.
2. The jaws C, eonstrnetcd as described, in eombination with the screw nnt $B$, when the inner inclined surfaee of sueh nut bears eqnally at all points around the inclined eircumferenee of the jaws C , provided with the $T$ shanks, as herein deseribed, for the purpose speeified.
3. The stoek $A$, when provided with the $T$ slot, adapted to receive the $T$ shank of the jaws $C$, in
eombination with the nut $B$, whose serew thread is above the jaws, as herein described, for the parpose specified.
195,891.-GEORGE J. Daill, Stoekton, Cal,Gang Plov.-March 24, 1868.-The standard has an offset for reeeption of the landside, and the latter has dovetail lugs whieh enter the orifices in the standard, and the plate is held back by the mold-board to seeure the attachment of the inclined faces of the lugs and orifices, and to dispense with serew bolts. The caster wheel has a U-formed seraper pivoted to its yoke.

Claim.-1. A plow standard, constructed substantially as shown and described.
2. The orifices $n n$ of the offsct $m$, as and for the purpose set forth.
3. The tenon hooks $n^{\prime} n^{\prime}$ of the adjustablo landside $m^{\prime}$, as and for the purpose set forth.
4. The head piece $h$ of the standard D, consts ucted as described, and made with the central opening $i$, as and for the purpose set forth.

5 . The adjustable landside $m$ ', in combination with the standard D , arranged in the mamer doscribed.
6. The scraper $e$, in combination with the caster whecl $d$, as and for the purpose set forth.
7. A series of plows, eonstrueted and operating as set forth, in con口cetion with a frame of tho kind described.

75,872.-F. Davison, Richmond, Va.-Lathe Chuck.-Mareh 24, 1868. - The clamping shell is attaehed to the face by two serew bolts, one of which forms a pivot on which it turns, and the other traverses a curved slot and forins a set screw to fix the clntch eoncentric with the faee plate or in any dogree eccentric therewith.

Claim.-The eombination of the pivoted shell, provided with holding jaws, the slotted disk or faee plate, and the tightening serew, substantially as and for tho purpose speeified.

75,873.-Augustr De Bergue, Paris, France. - Brake for Locomotives.-Mareh 24, 1868.- When it is desired to stop the train tho steam eommunica tions of the cylinders are closed, the valves reversed, and air passages opened, so that the engines pump the air into the reeeiver, when by its increased density it reaets upon the piston to stop its movements, and consequently arrest the motion of the train. Tho eompressed air may be used in a piston to apply an ordinary brake npon the wheels.

Claim.-1. The eombination of the external air adit 13 and reservoir E with the motive eylinder and piston of a loeomotive, substantially as deseribed and speeified.
2. The combination of the rod $N$ with the motive erlinder, whereby to introduce a jet of steam to lubrieate the interior surface of the eylinder while steam is shut off and while air is in the eylinder, substantially as herein shown and described.
3. The eombination of the extermal air adit B with the cxhanst pipes, funnel, and cylinder of a locomotive, substantially as deseribed and speeified.
4. The arrangement of the air reservoir E , substantially as shown and deseribed, with the motive eylinders of a locomotive, whereby to receive and retain the eompressed air, as set forth.
5. The eseape valve $H$, snbstantially as shown and described, in combination with the air reservoir E and motive cylinders of a loeomotive, whereby to permit the eseape of the air, as set forth.
6. The exit valvo I, when combined with the air reservoir E and motive eylinders of a loeomotive, substantially as shown and described.
7. The arraugement of the valye D , substantially as shown and deseribed, with pipes $i$ and $F$, and opering $n$, whereby the motive eylinders of a locomotive are rendered available in eompressing the air, as set forth.
8. The arrangement of the pipe $n$ with relation to tho air reservoir E, supplementary air eylinder and piston $o$, frietion brakes $q$, and arm $p$, snbstantially as herein described and speeified.

175,874.-Zanoc P. Dederick and Isaac Grass, Newark, N.J.-Steam Carriage.-March 24, 1868.A steam engine is connected to a system of levers

Whieh move, iu imitation of tho human legs, by the reeiprocation of the piston. The meehanism is attaehed to a wheeled carriage whiel serves to stoady the figure upon its legs, and is drawn thereby.

Claim.-1. The eombination of the erank E, eonneeting rods $F$, bell-crank lovers $G^{\prime} G^{\prime}$, and rods $H$ $\Pi$, the said parts being arranged to produce an al-temately-stepping motion, substantially as described.
2. The combination of the rods $\mathrm{G}^{\prime} \mathrm{G}^{\prime}$ and II II with the rods $L$ L and $M \mathrm{M}$, and foot picees $I$ I, substantially as deseribed.
3. The eombination of the rods $I I \Pi$ and $Q Q^{\prime}$, substantially as and for the purpose set forth.
4. The foot piece I, piroted to the rods II eentrally, and at the heel to the rod M. when said rods are so aetunted as to cause an oseillating motion of the foot, substantially as and for the purpose set forth.
5. The eombination of the lever $N$, rods $P$ and $Q$, With the rods $\mathrm{G}^{\prime}$ and $\Pi$, substantially as and for the purpose set forth.
6. The arraumement of the eireular support $U$ to the machines, aud the eords $S$ and tiller ' $T$, substantially as set forth.
$75,975 .-J o H n ~ M . ~ D o u b l e d a r, ~ M o n t e l a i r, ~ N . ~$ J.-Tipping Umbrella Frames.-March 24, 1868.The cre is made in the metallic rib, and an ormamental metallic tip is swaged ou the globular end of the same.

Claim.-The eovering or overlaying, with metals or other substances, the ends of ribs employed in umbrella or parasol frames, substantially as and for the purposes set forth.
75.S'6.-Beriah Douglas, Appleton, Wis.Toy liailroad and Car.-March 24, 1868.-The car is mored on the track by the hands of the rider, whiel are applied to the longitudimal sido ropes supported on uprights fixed to the track.

Claim.-1. The inventiou of placing the axles of this hand-running ear within and through the box or body, so as to drop the floor down very near to the rails, for the reasons above specificd.
2. The invention of turuing up the ends of car rails, esseutially in the manner aud for the purposes mentioned.
3. The inreution of the hand supports and ropes or rods, as combined with the rails, cssentially and as the best means for running the bar by the hands of the riders, for pleasant and healthful exercise.

75,5\%\%.-F. H. Drake, Kenosha, Wis,-Bag Fastener.-Marel 24, 1868,-A strap is riveted to the mouth of the bag.

Claim.- 1 bag fastener, consisting of the strap $D$ and buekle $B$ united, and seeured to the bag by means of the metal plate $A$, or its oquivalent, substantially as described.
g5,898.-Isaac Dripes, Fort Waync, Ind.Railroad Car Ventilator.-Mareh 24, 1868.-The horizontal, firusto-conical tulse turis on a vertical shaft, and communieates with a vertieal tule exteud ing through the car roof. A wing acts to keep the larger end of the tube to the rear, and a partial vacuum is formed therein whiel draws the foul air from the car.

Claim.-1. The combination of the wings E of a butterfy valre, the bifureated bell-erank lever H, and segiment L, arranged to operate substantially as aud for the purposes described.
2. The combination of the tapering tubular hood $B$, pipe $A$, and the regulating valve placed in the latter, arranged to operate substautially in the mauner and for the purpose set forth.

75,879.-Smeon W. Drowne, Norwich, Conn. —Locling Linn万 Latch.-March 24, 18(i8.-The connecting bar passes from the hub to a sleere upon the bolt. The sleere is arranged to allow the bolt to slide backward, but eauses its retraction by turning the hub. The tumblers preveut the retraction of the slecre except when they are moved by the key, so that though the lateh bolt may be driren in at any time by elosing the door, it eannot be drawn back by the knob without the tuiublers are adjusted by the proper key. 'The bolts have projeeting arms by

Thieh, in eombination with a min, they may be held clear of the sleeve, and the lock be usod as a common latch.

Claim.-The combination of the lateh bolt $B$ spring F , slcere K , nibs I , conneeting bar L , tunblers N , with projections P and $\mathrm{R}^{2}$, and knob key $R$, all eonstrueted and operating as deseribed for tho purpose spocified.
ge, SSO.-EliJait F. Dunawat, Cincinnati, Olio. - Clamp for Doors and Sashes.- March 24, 1868. The sash or door framo is clamped between lonei tudinally-aljustable metallic stops on the adjustable and clamping bar. 'Ihe latter is operated by the eam lever's, which are seeured in their adjustment by ratehet racks.

Claim.-l. The construetion of the stops $a^{\prime}$, and operating in the manner as herein described, for the purpose speerfed.
2. The combination of the oscillating bars $A^{\prime}$, the sliding bur C , cam levers B , rods $a^{\prime \prime}$, springs S , and rack bars D, as herein described, for the pupose specified.
3. Tho rack bars $D$, in combination with the carriage $O$, and sliding bars $C$, as hereiv described, for the purpose specified.
4. The clamping of the sash or cloors upon the ear riage $O$, by meams of the stops $a^{\prime} a^{\prime}$ mounted upoll it and bar $(\dot{r}$, laving stop $F$, and working in slot $o$, and operated by cam lever $N$, in the mamer and for tho purposes substantially as above set forth and described.

195,881.-W. Duryea, Glen Cove, N. Y., and W. EnNis, Hudson, N. J.-Furnace-March id, 1868. - Improvement on the patent of Joseph Mindle assignee of IF. Braun, May 17, 1864. The basket grate has bars at the bottom, and is eorered by an arch which is perforated to allow passage to the air to supply combustion. The fuel is supplied through openings extending uprard from the sides of tho furnace. The furnaec has an ordinary door at orie end and an exit due at the other.

Claim.-1. In a furnnce of the claraeter described, and composed of a basket grate $A$, with feed open ings for fuel down either side, and reflector B, he combination of a chamber $C$, supplied with air frem the exterior, and eommunicating with the fireplace by openings or perforations $b$, made in or through the reflector, substantially as specified.
2. The eombination of the close fuel ehambers D D with the basket grate $A$, with which they are in communieation, by openiugs $c$, and scparated fron each other by an intervening space or chamber C essentially as shown and deseribed.

75,882.-A. EDWABDs, New Huren, Coum. ILachine for Felling Trees.-March 24 , 1868.-The head has chisel and spur cutters which are made to cut into the tree by the oseillation of the lever and the feed morement of the earriage. Ono or more of the legs has provision for extension.

Claim.-The ribrating catter head J, provided with spur entters d a, and the enttors $i i$, and opcrating so that each of the cutters $i$ euts fiom the path marked by the spur eutters d, previously moved in an opposite direction hy the oscillation of the pir oted lever II, substantially as speeified.

195,88:3.-R. S. Edwands, Savanmah, Mo.-Corn Planter.-Marel 24, 1868. - The eultivator has a fore and rear part, each supported on two wheels, md the parts may be rigidly connected together, or the fore part may be allowed an oscillatory movement on a point near the axle of the rear part. The peripher? of the fore wheles liave a contex $V$-form, and the hind wheels hare a lecessed $V$-form, the former to open the seed drills, and the latter to close them. The latter wheels have serapers to keep the peripheral groore clear. The seed hopper hats two sponts which drop the seed belind the front wheels. The front whecls may be prevented fiom turning, and the sced meehanism eonseguently stopped, when desired.

Claim.-1. Constructing the frame of the machine of two parts $A \mathrm{~B}$, connected by a bolt $a$, in connection with the arm $E$ on pirt ls, provided with the peudent pin $c$, to fit in the plate $C$ of the part $A$, all
arranged substantially as and for the purpose set forth.
2. Tho seed.distributing device, consisting of the two valves $f f^{\prime}$, in the spouts L of the seed box K , arranged as shown, and operated by the levers $M$ and the cams or wipers $h$, from the front axle H, substantially as shown and deseribed.
3. The ailjustable horizontal bar $O$, eonneeted with the lever R, and proviled with the notelied arms o, in combination with the lugs or projections $e$ on the flanges I of the wheels $G \mathcal{G}$, ull arranged substantially as and for the purpose specified.
\%5,884.-W. St. G. Elliott, Morristorn, N. J. - Seuving Machine.-Mareh 24, 1868.-The feed mechanism is so arranged as to enable the feeding of the eloth in any direetion desired without stopping the machine.

Clcim.-The eurved arm F , having the presser J , pivoted lever $L$ having feed foot $K$ and arm M, adjustable bent lever $\mathbb{N}$ and spring P , in combination with the sliding sleeve $G$, needle bar $I$, and collar 0 , all eonstruetel and arranged to operato as herciu shown and deseribed.

195,885.-Wm. H. Emony, Ashburnham, Mass. -Toy Pistol. March 24, 1868 ; anterlated March 16. 1868. -The spring plays in a longitudinal slot in the barrel, and is held by the noteh of the upper rod, from which it is released by the spring trigger.

Claim.-The combination of the spring C with the slotted barrel $B$, and the trigeer and lock $F$, the parts being arranged substantially as and for the purpose herein deseribed.

155,886.-Lancelot H. Everutt, New Orleans, La.-A coustic Telegraphing.-Mareh 24, 1868.-Improvement on his patent, November 17, 1863. Sounds prodnced at one end of the telegrapll are trausmittod to the other end along a wire.

Claim.-1. An aconstic battery for telegraphing, a machine which creates and modulates somnds, that, when arranged and sounded under specific symbolic formule, they are made to represent and express all the letters of the English alphabet and all Arabie notations, and when thus evoked into existence the maehine refleets these sounds and transmits them through naked wire, buried in tho land or water, to their Clestination, where they impart their rarious interpretations with such distinetness and order to the auditor who receires them as to becomo the most important and efficient commissioners of intelligelice.
2. This mode of eliciting two different tones of sound from the air, Dy means of the chorda tympani, the mallens, the key, the incus, the stape; of renlecting them from the polished phonic fossa; of conducting them to the acoustie messenger through the nipple of the incus, and transmitting them throngh non-insulated wire to the cochlea, restibule, aud auricular, whieh delivers them to the auditor with preeision and regularity:
3. This mode of associating these tro modulated tones, and arranging them under fire different order's of sount, expressive of letters and notations, as herein described, and this method of using similar and dissimilar silont interrals of time in separating amt combining sounds, thus giving force and decided character to the symbolic formula of a letter or notation when echoed from the phonic fossa and transmitted tlirough naked wire to the end of the adxicular.
4. This mode of creating and regulating these two primary orders of sound and other orders erolsed from them, systematically, by means of a diatonic staff and two bars attached thereto, and signalizing diffierent somds by red and blue colored disks, which represent two very dissimilar tones that are convertible into intelligent symbols, as herein deseribed, or by any other means substantially the same, and which will produce the intended effect.

175,88\%.-M. Falk, New York, N. Y.-Packing Tobacco.-Marcl 24, 1868.-The point of the flap has a metallic hook which engages the side of the bag.
claim.- 1 packing of cut smoking tobacco, the envelope of which is a eloth bag, provided with a flaj a and a suitable fastening $b$, substantially as shown and described.
\%9,885.-Josevil C. Tifield, Lowell, Mass., assicnor to W. N. Ely, Stratford, Comn. TVeft Stop Motion for Looms.-March 24, 1868.-The shattlo threat lies along the upper sito of the lay, above slots in the samo, and the finger piece is arranged for its fingers to enter the slots when the thread breaks. In this ease the fingers act upon a compound lever, and so adjust the same that, in "beating up," it impinges apon the shifter lever and stops the loom. The fingers are raised by levers operated by a eara on the motive shaft when the lay is thrown back.

Claim.-1. The weft stop motion meehanism, construeted, arranged, and operating, as to its several parts, in the manmer and by the means described, in combination with the lay, as set forth.
2. Tho finger device, construeted and arranged in the manner and operated by tho means deseribed.
3. The combination with the lay of parts L, $n, m$, and $m^{\prime}$, when construeted and arranged as and for the purposes set fortli.
\%5,835.-J. L. Finn, Elyria, Ohio.-Telegraph Insulator.-March 24, 1868.-The couclucting wire is passed through the hooked ends of the forked pin, which is inserted in a glass socket, in turn inserted in a soeket of the metallic cup piece, whose shank is secured in tho horizontal arm of the telegrapll post. Local elcetricity is conducted from the wire by a series of points on a coppler plate, which is attached to the edge of the boll piece and communieates with the ground.
Claim.-1. The combination and arrangement of the beil-shaped shell $A$, forked shank $C$, the adjustable toothed conduetor $D$, ant conducting wire $K$, substantially as deseribed for the purpose speeified.
2. Seeuring the shank $a$ to the bearer $X$ by means of the tangential pins $T$, passing through a groove in the side of the said shank, substantially as described for the purpose specified.
g5, 800. - Ferdinand Fiscier, Cambridge, Mass.—Machine for Stufing Leather. -March 24, 1868. -The heating chamber's of the rotating stnffing eylinder are placed inside eaeh head and receire steam through the tubular gudgeous. The steam passes off through radial pipes.

Claim.-1. Combining with the stnffing wheel a flat steam heated box $i$, placed in juxtaposition with and parallel to the inner surface of one of the heads of the wheel, and arranged to receive and clischarge steam, substantially as set forth.
2. Connecting this box $i$ with tho opposite hollow journal and its steam pipe $f$ by as pipe $k$, arranged substantially as set forth.
3. Plaeing a box $i$ against each head $a$, connccting the tro by the pipe $h$, substantially as set forth.
4. Combining with one or both of the heaters $i, a$ waste pipe or waste pipes $m$, substantially as shown ancl described.
g5, 8D1.-Harvey Fleming, Vienna, N. J.Wood Boring Machine.-March 24, 1868.-The carrias; e lias longitudinal morement for adjustment of the stufi to the anger, and has lateral morement toward the auger.

Claim.-With the stationary aurer C , the earriages $D$ and $E$, moving laterally and horizontally, the carriage $E$ being movible simultaneously with and also independently of the earriage $D$, all constructed ank arranged to operate substantially in tho manmer and for the purposes as set forth.

胢5,892.-JOHN, JACOB, and Joserf FORTENBaCiI, Carlstadt, N. J.- Watch Case Cuttcr.-- IFarch 24, 1868. - The cover or eenter is clamped to a bloek whieh rests upon a disk that is vertically adjustable in a eylindrical turret upon the carriage, and is brought in contact with the rotary cutter to form the hinge reeess. The bloek has a concave end to receive tho conrex side of the corer. and the same or another block has a convex or frusto conical end to roceire the concare side of the corer. The upper side of the corer rests against a remorable plate and is clamped thereto by the npward morement of the block.

Claim.-1. The improved machine for eutting the
hinge recesses in watch cases, made and operating sulstantially as herein shown and described.
2. The up-and-down adjustable sliding turret $D$ When combined with the lerer $d$, up-and-down adjustable block E , and clamping plate F , all made and operating substantially as herein shown and described.
3. The block E for snpporting the covers or centers of watch cases when formed for the said object, substantially as herein shown and described.
4. The up-and-down adjustable sliding turret when carrying the cover or center of the watch case, in combination with the longritudinally adjustable rotary cutters, by which the hinge recesses are cnt into the covers or ecuters, substantially as berein shown and described.
g5,893.-Bentamin W. Foster, Aulumm, N. K., assignor to Franiolin L. and Charles L. Sheldon, same place.-Machine for Making Carriage Axles. - Lurch 24, 1868. - A bar of metal is fed into the machine and automatically formed into axles which are cut off as finished.

Claim.-1. The combination of the sliaping rollers which form the jommal and taper the bar of an axle, With the dies which form the collar by lengthwise pressure of the bar, substantially as described.
2. A pair of rolls for acting simultancously on opposite surfaces of a bar of metal, haring dies a $b c$, ar'anged in relation one to the other and to the rolls, snbstantially as herein set forth.
3. In combination with the die-rolls claimed in the abore second clause, the cutting edge $d$, as described.
4. In combination with the die rolls claimed in the above second clause, a pair of rolls arranged perpendicularly thereto and for joint action therewith, substantially as deseribed.
5. In combination with a pair of die-rolls, the derices, herein described, for accommodating dies of greater or less thickness, substantially as set fortll.
6. Mounting one set of rolls npon vertical shafts which revolre in bearings upon sleeres on the other shaft, substantially as and for the purpose described.
7. In combination with dic 2 and socket 4, or their equiralents, the pointed screw 13 , as and for the purposes sel forth.
8. The improved machine as a whole, constructed and operating substantially as set forth.
g5,934.-Charles E. Gatligan, Paw Paw, Mich. - Stump Extractor.- March 24, 1868. -The lerer is suspended from the cross beam at its mid. length, and the duplicate ends have cach a block and taclile and a slot through which pass the hoisting links, each link haring a hook which engages the liftince chain. The links hare adjustment in the longitudinal slots of the lever so as to bring more or less power to bear. The machine is operated by securing to the chain the hook of the link upon one of the lever and the pulley block of the other end of the lever, and then drawing upon the rope whichiruns through the block. When the block end of the lerer is drawn down the other link and block are bronght into action.

Claim. -The combination and arrangement of the runners or bearings $A$ the cross beam C, the hooked rods D D, the lerer 'T, prorided with the slotted openings I I, the double sheares E E, the ropes F F , the double blocks H H, the links K K, the pins $a^{\prime} a^{\prime}, \& c$., and the grub hooks O O, all arranged sulbstantially as described and for the purpose designed.
\%ex, 395 - Willitam S. Gatlin and Benjamin R. Hulibard, Green Top, Mo, -Gang Plow,-Mareh 24, 1868. -The draw bars are connected by links at their fore ends to hand lerers, and are adjusted by the same. The rear ends of the dram bars have vertical adjustment by link connection with the arms of a rock bar operated by a treadle.

Claim.-1. The construction and arrangement of the draw bars $b$, the links $C$, the levers $C$, and the lacks $C^{2}$, with reference to the frame $\Lambda^{\prime}$ 'and the plow beams 3 .
2. The device $\mathrm{D}, \mathrm{D}^{1}, \mathrm{D}^{2}, \mathrm{D}^{3}$, and $d$, for lifting the plows up out of the ground, substantially as deficribed and set forth.
\%5.896.-T. Gilbert and P. M. Sofirld, Newark, N.J.-Manufacture of Wash Bowls.-March 24,1868 . - The lower edge of the flaring part enters the labbet aronnd the upper outer edge of the base.

Claim.-The circumferential rebate around the base a, substantially as shown and describod, for forming the conncetion between the base and the upper part $c$ of the ressel, as set forth.
$75,897 .-F$. R. Gonsg, Boston, Mass., assignor to himself and D. Wilcox, sume place.- Block for Cutting and Shaping Frims of IIats.-March 24 , 1868. - I sinkage is provided immediately around the center, guiding, or band block, into which the brim of the hat may be pressed. The guiding edge rewalates the movement of the entting gange.
Claim.-1. The recess $11 \mathrm{H}^{2}$, formed immediately around the band block and between the crowin block and cutting guide E, substantially as described and for the parpose set forth.
2. The griding clige a $b c$ d of the gnide E , against Which the slionlder of the cutting giuge K rests in the operation of cutting the curl, in combination witl the hat block, substantially as described and for the purpose set forth.
g5, 519 5.-TOMN D. Grünererg and Samurl II. Gimisilit, Spring Mils, N. J.-Coating MetalMarel 24,1848 . The sheet iron is laid between two sheets of tin alloyed with lead, copper, zinc, antimons, or bimmoth, and the sheets caused to adhere by rulhing under heary pressure. The sheet of iron may be eoated by immersion for 15 minutes more or less in a bath composed of dilute muriate or nitrate of tin at a temperature of $98^{\circ}$ Fahr.

Claim.-The within mode of coating or plating hard metals, substantially as described.

75,939.-W. Grunert and G. E. Bringham, Mil waukee, Wis., assignors to themselves and O. L Packald, same place.-Portable Upright Flue Bra-zer.- Larcli 24, l868. - The furnace lias car's carying groored rollers which track aguinst the uprights and enable the vertical adjustment of the finmace by metns of a rack and an engaging spur-rheel upon a shaft turned by hand.

Claim.-The furmace C, capable of vertical adjust ment, for adapting the lheat to the seans of pipes or flucs, when brazing in an upright position, substantially as inerein represented.

95,900.-C.S. Male and O. C. Mubberl. Cleve land, Ohio.-Spring Bottom for Boots and Skoes.March 24, 1868. - 'lhe metallic plate, shaped as a half-sole, is connected by a spring to a plate extending from end to end of the slooe, and to which a rubber heel is attruched.

Claim.-1. In combination with a spring, the plates A D, and boot or shoc, substantially is and for the purpose described.
2. In combination with the above, the clastic heel $B$, as and for the purpose set forth.
g5,901.-W. E. Mardin, Bowling Greon, Mo.-Plow.-March 24, 1868.-A frame having a curred bearing bar is eccentrically lung to a turning disk which is operated loy a lerer, to either raise the fiame clear of the ground, on to allow it to swing down and raise the plow from the ground. The spindle arm has an upivardly-cxtending plate which has two recesses for reception of the wooden axle so as to allow of its rertical idljustment.

Claim.-1. The lifter $\mathrm{D} d^{1} \mathrm{D}^{1} \mathrm{D}^{2}$. When constructed and operated as described and set forth.
2. The adjustable axle $\mathcal{A}^{\prime} a$, when construeted and employed in the manner shown and deseribed.

195,902.-Eliza J. Marding, St. Louis, Mo.Abdominal and Citerine Supporter.-Mareh 24, 1868. -The pads have respectively fore and rear benring, and are connected by aljustable straps.

Claim.-The pads $\Lambda \Lambda^{\prime}$ and the bands $a a^{1}$, when construeted and employed as hereiu shown, and for the purpose set forth.

95,90:3-Cirarles J. Hauck, Williamsbucg, N. Y.-Minge for Slecet Metal Moxes.-March 24 , 1868.-One part of the hinge is of shect metal and
the other of wire, and they are passed through the flanges of the bottom and lid respectively.

Claim.-The wire $b$, with its eurved ends passing through holes in the rim of the box or cover, and fastened thereto by solder, in combination with the sheet-metal loop $\alpha$, having its shanks passing through the rim of the box or cover, and fastened thereto by solder, as shown and desoribed.
g5,904.-C. J. Hauck, Williamsburg, N. Y.Oil Can.-March 24, 1868.-An air pipo from the upper part of the can enters the oiler and allows the escape of oil from the can only so long as its end is uneovered. When the oiler is filled the end of the air-pipe is covered.
claim.-The arrangement of the gauge or stop E , in combination with the vent-tube 1 and spout $C$ of a hermetically-closed can A, substantially as and for the purpose described.

75,905.-Horace R. Hawkins, Akron, OhioHorse Rake.-March 24, 1868.-The rake teeth, after bendiug around the shaft upon which the head turns, are extended upward, and are drawn back against the bar by conncetion to eurved springs, which vield when the point of the tooth strikes a fixed obstacle.

Claim.-1. The combination with the rakc-head T and bar 0 of the teeth $J$, loops 4 , and springs 5 , arranged for joint operation, substantially as set forth.
2. The combination with the rake-head F and the peculiarly eonstrueted teeth $J$ of the bars O and $n$, links or loops 4 , and springs 5 , substantially as and for the purpose set forth.
3. The combination with the rake-head of teeth held to the head by springs or their meehanical equiralents, ander the arrangement described, whereby the said teeth will be supported, so that when their lower ends are raised by eoming in eontaet witlo obstructions, their upper ends will partially rovolve about the head, substiantially as set forth.
g.j.906.-J. Haythorn, and J. Martin, Thompsonville, Conn.-Carding Bachine.-March 24, 1868. -The strippers and workers are actuated by a cam on the shait of the main cylinder and operate to open the stock and "even" it upon the said cylinder.

Claim.-Imparting a reciprocating motion to the workers or strippers of a earding machine, substantially in the manner and for the purpose herein shown and set forth.
g5, ⿹勹J.-S. E. Hews, Albany, N. Y.-Extension and Step Ladder.-Mareh 24, 1868. The flat, removable step has hooks which may be applied to the ends of any of the round steps; the flut portion resting on the step immediately beneath.

Claim.-The step C, in combination with the ladder, substantially as shown and deseribed.
g5,908.-D. K. Hrckok, Morrisville, Vt.-Carriage and Sleigh Top.-March 24, 1868. -The staff has a reetangular tapered end which enters a suitable socket in the seat. The top may be raised on the staff, and the radial arms supporting the eover let down into a horizontal position. When mused, the head is slipped dorwn, the arms are folded up to the staff and it is withdrawn from the socket.

Claim. - The circular flanged plate J, with its angular dirisions $M$, clips $L$, and slide $G$, in combination with the several parts of a carriage and sleigh top, construeted as deseribed.
\%5, ©09.-Robert Hirst, Hudson, N. Y.-Pen.March 24,1868 . The flap with the pen forms a small, open chamber in which the ink is held by capillary attraction, mntil withdrawn by nise.

Claim. -The flap B, when piroted at its widest end to the coneave side of the pen $\Lambda$, corresponding in shape to the outer part of said pen, and held thereto whon in use, by atmospheric pressure, as herein deseribed, for the purpose specified.
g5, 210.-Robert Hitchcock, Springfield, Mass. - Car Ventilator.-March 24, 1868.-The rentilator has a mouth at one end and a small rent for the ashes and dust at the other. The deflectors are so arranged that a direet current is not passed through the passages.

Claim.-1. In a ear ventilator, the combination of the deflector A, deflector 1), and vent F, arranged in an outside case, substantially as shown.
2. The arrangement of alternately reversed rentilators, $1,2,3,4, \& c$., producing alternately exhaust and supply, as the car moves in either direction, respectively.
95,911.-Christopher Hoagland, Delavan, Ill. -Cultivator.-MIarch 24, 1868.-The standards are jointed and links are attached by which the plows are raised from the ground. The inner plows have lateral movement by treadles. The npper ends of the plow standards are eonnected togethor so that the plows shall be simultaneously raised from the ground by insuring an equivalent flexion of the standards.

Claim.-1. The eombination of the jointed plow standards $\mathrm{C}^{\prime}$, plates $d$, links K , serapers $r$, and conneeting links $l k$, as herein described, for the purpose specified.
2. The links $l k$, or other equiralent derice, for commeeting the front and rear standards, for the purpose of operating the latter simultaneously with the former, substantially as shown and deseribed.
3. The plates $d$, with their bolts $f$, or other equiralent deviee, for forming a hinge between the standards $\mathrm{C}^{\prime}$ and plows $\mathrm{P}^{\prime} \mathrm{P}^{\prime}$, substantially as shown and deseribed.
4. The spring catch $O$, or its cquivalent, for holding the standards formard, substantially as and for the purpose shown and deseribed.
5. The rod L, for vibrating the standards C laterally, substantially as shown and deseribed.
6. The arms N, for operating the rod L, substantially as shown and deseribed.
7. The rod I, with its bend J, or other equiralent device, substantially as and for the purposes shown and described.
8. The laterally ribrating standards C , in combination with the rod L and bend $J$, substantially as and for the purposes shown and described.
9. The plow cleaner $r$, or other equivalent device, attached and working substantially as shown and described.
 Apparatus for Crushing and Pulverizing Stone and Other Hard Substances.-March 24, 1868. -The material, as it is finely pulrerized, is carried off by the air blast and deposited in a chamber whose walls allow escape of the air, but retain the pulverized matter. The crushing surfaces are kept clear by scrapers.
Claim.-1. The eombination of the rake or scraper $j$, carriage D, crusher IB, bed C, and the pneumatie apparatus, construeted and operiting substantially as and for the purpose described.
2. The lips or flanges $n n$, extending orer the surfaces of the crusher 13 and bed C , substantially as and for the purpose described.
(73, 918. -TOHN W. HOLLINGSWORTH and MORAmo D. Weaver, Mount Vernon, Ind.- - Ice Crusher. Mareh 24, 1868. -The iee is placed in the eylinder. and the toothed plunger brought forcibly down upon it. 'the iee is discharged by swinging the eylinder from orer the plate.

Claim.-The sliding eup $C$, in eombination with planger D, construeted and arranged substantialiy in the manner set forth.
g5,914.-Lewns Holmies, Keene, N. H.-Meat Broiler.-Mareh 24, 1868.-The iorrer part of the jointed frame is pivoted to the bail, and the latter has an eve throngh thich the piroted handle passes. The gridiron may be held at any required inclination by the handle and bail.
Claim.-A broiler for broiling meat, and for all the purposes for which broilers are used, eomposed of the parts $A$ and $B$ hinged together, the whole rotating within the bend of a coil C, and operated by a handle D, substantially as shown and described, and for the purposes set forth.

75,915.-Gilman Hoor, West Harwich, Mass.Ifarine Paint.-Mareh 24, 1868.-A pasty mixture of whito lead and oil is mixed with a pasty solution
of eaoutchoue in equal proportions and thimned sufficiently with boiled linsced oil. Arsenic may be added for use below water.
Claim.-The combination of white lead and boiled linseed oil with dissolved caontchoue, or gutta-percha, in the production of a paint, substantially as herein described.
75,916.-Hexhr C. Hoover, Green Castle, Pa.-Carriage-Bow Setter:-March 2.1, 1808.-The frame is sceured to the carriage seat and the botss fixed in the adjustable holders nitil they are "set."
Claim.-1. The siiding boards E E, as and for the purpose set forth.
3. The slotted holders $d d$, in combination with sliding boards E E, substantially as deseribed.
3. The bloek C C, in combination with boards E E, substantially in the manner specified.
4. The grauge bars D D, substantially as set forth.
5. The combination of sliding blocks C C, boards E E holders $d d$, and bars D D, all arranged as described.

75, 01\%-George W. Huffnagle, New Hope, Pa.-Oyster Inife.-March 24, 1868.- The metallic cross bar forms a hammer with which the shell is broken.

Claim.-The knife, composed of the handle $A$, cross bar C , and blade B , when constructed in the manner and for the purpose substantially as herein set forth.

75,21.5.-G. R. Huntlet, Tannton, Mass.-Faucet-MTareh 2.4, 1868.-A small, wertieal groore is formed in the upper end of the plag whieh allows passage of air to the month, so as to admit free discharge of liquor contained therein aiter elosing the fauect. The flange at the barrel top (a portion of Which is ent away for traverse of the stop pin) is serew-threaded, and reccives the seretr-threaded "concentrie ring."

Claian.-In combination with the barrel and pher. the concentrie ring $d$, rent $g$, pin $c$, and stops $f f$, all constructed and arranged to operate substantially in manner as and for the purposes speciited.
\% \%, 513.-Jonatian Hunton, Hackensack, N. J., assignor to himself and L. Freblavi, same place. - C'usting Plowshares.-March 24, 1868. The chillplate is made with detachable picces so that the share can be casily removed from the mold.

Claim.- The employment or use, with the chillplate $A$, for easting plowshares, of the removable or detachable parts 1 B D, either or both, arranyed substantially as and for the purpose set forth.
95,920.-Franz HÜTwoill, New York, N. Y.Fumiture Edge.-MIareh 24, 1868. -The threads of the eanras eover are arranged obliquely to the length and circumferenee of the roll, so as to cuable its bending aromed the eorners.

Claim.-As a new article of mannfacture, a stuffec furniture edge $A$, the covering eanras $b$ of wheh has its threads arranged diagonally across the surface of the roll A, substantially as herein shown and deseribed.
75,321.-G. A. Jomison, Oxford, Coun.-Dress Trimming.-Mareh 24, 1868.-In making a spherieal ornament, hollow hemispheres are corered, and the covering, being lapped aromid the edses, is seemred by a tianged disk npon which the hemispheres are forced. The whole is axialls perforated for stringing.
Claim. - The dress ornament, formed in two parts, corered as deseribed, and secured together by the disk C, as set forth.
\%y,922.-Marcus A. Jones, Frankfort, Ky.Bread Jaking Machine. - Mareh 24, 1868. - The dough is kneaded by two pairs of rollers in the upper compartment, and the slide bottom is then withdrawn, and the dough allowed to fall on to the pan in the next compartment. A roller is drawn over the pan which eanses the division walls of the pan to eut turough the dough. The bottom of the seeond enmpartinent is then withdrawn and the pan allowed to drop into the lower compartment, from whose side it is withdrawn.

Claim. -The combination of the rollers $a$ a sliding bottoms $A$ and $G$, and roller frame $D$, all substantially as shown and deseribed, and for the purpose set fortll.

195,923.-Monton Judd, New Haven, Conn.Sash and Door Button.-Mareh 24, 1868. -The socket piece is let into the rood and has a spiral spring which bears against the under side of the button. An annular prominence of the socket piece enter's a cylindrical carity in the bntton.

Claim.-1. The socket $b$, with the flange $i$ and rim $o$, in combination with the fastener or bitton $\alpha$, hating a cirenlar recess setting over the rim 0 , as and for the purposes set forth.
2. The helieal spring $x$, in a carity in the socket $b$, in combination with the button $a$ and rim 0 , is and for the purposes set forth.
3. The plato $f$, with its stops $g$ and $h$, in combination with the button $a$ and soeket $b$, as and for the purposes specified.
g5,9®4.-Rosivele Judson and Wlletam H. Lixch, Matteawan, N. Y.-Fastening Wearing Apparel, Shoes, de. March 24, 1868. -The elges of tho opening are enlarged by a heary cord or wire and are hed together by a series of slides, whose jaws chgage the saill edges.
Claim.-As a new artiele of mannfacture, the herein-deseribed garment fastener, the same consisting of a series of solid donble jawed slides, prorided with perforations e c, and combined with a ribbou or band, which is applied and held to the said slides in the manner and for the purposes hercin shorn and specified.
g5,925.-Johi L. Keasor, Laconia, N. H.Gang Plow.-Mirch 24,1868 . - The plow beans are connceted to the firame by chains, and are adjnstable by this means. The plow standards are comnected to transserse sliding rods. The arrangement allows the plows a firee morement within adjustable limits.
Claim.-1. The combination of the rertical standards II, ere bolts or keepers $n^{\prime}$, vertieal bars N , horizontal bar's $O$, and keepers $R S$, with caeh other, with the plows G or II, and with the longitudinal bars $F$, substantially as herein shown and described, and for the purpose set forth.
2. In combination with the sliaft U , arranged as shown and described, the eams $V$, ehains $T$, and horizontal bars F , all construeted and operating as deseribed, whereby the plows G II are raised and lowered.
3. The construetion, combination, and arrangement of the adjustable lever. IV with the shatt U, for the purpose of operating said shaft, substantially as herein shown and deseribed.
4. The combination of the draught chains I with the bolster E and forward ends of the plow beans $g^{\prime}$ or $h^{\prime}$, substantially is herein shown and deseribed.
5. The combination of the elains $J$ with the forward ends of the plow beams $g^{\prime}$ or $h^{\prime}$, and with the longitndinal bars E, substantially as lecrein shown and deseribed.
F5, T2 G.-ANDREW W. KENDRICK, Kenia.OhioBed Bottom. - Mareh 24, 1868. - The bed firame is jointed so that the head part may be turned np to form an incline. This part iss sureorted by a pawl and raek on each side. The parrls tire connected by a roek shaft traversing the bed, and operated by a lever extension upon one of the paiswh.

Claim.-1. The arrmgement of outer frames B C $\mathrm{B}^{\prime} \mathrm{C}^{\prime}$, and inner and adjustable frame $b c, b^{\prime} c$, racks L L, and parls or levers K , in combination $\pi$ ith tho series of shats F, supported transrersely on the helieal springs E, resting' upon the ledges $\mathrm{B} \mathrm{B}^{\prime}$ and $b b^{\prime}$ of the onter and inner frames respectively, sulstantially as set forth.
2. In the deseribed combination, the graduated or deereasing series of helieal springs E, with the stationary and adjustable frames $\mathrm{BC}, \mathrm{B}^{\prime} \mathrm{C}$ and $b c, b^{\prime} c^{\prime}$ respectively.
gร,92:\%。--Julius King, Moboken, N. J.-Piston Packing-Mareh 24,1868 .-Between the two disks of the piston are a set of rings haring stean-tight joints between them. Each ring is drawn in by a
serew bolt at one point so as to eause the expansion of a portion of the remainder.

Claim.-A piston packing, composed of four or more uncut rings $B$ B $B$, ench scenred to the piston by means of a serew C , or its equivalent, and all made and operating substantially in the manner herein shown and deseribed, the rings havine either perfeetly conceutric or irregular inner edges, as set forth.

195,923.-Williajr King, Notw York, N. Y.Fur Collar.-Mareh 24, 1868.-A spring eneircling the neok and two attachment springs in front give the required eontour to the fur collar.
Olaim.-The combination of the spring $A$ and the springs or stays $B B$, or their equivalents with a lady's fur collar, in the manner and for the purpose hereinbefore set forth.
 faciure of Glycerine. - Mareh 24, 1868. - Animal or vegetable oil, 1 ; and crude glycerine 4 parts are placed in the retort. A jet of steam enters the retort at a temperature of $420^{\circ}$ Fahr. Eaeh lower bend of the rertieal worm has a eondensing pipe wheh conduets a way the condensed glycerine which falls from the stean.

Claim.-1. The employment of any oleaginous substances, fat, or fatty aeids, in the refinement or rectifieation of glycerine, snbstantially as and for the purposes set forth.
2. The employment of a jet of superheated steam, introduced into a glycerive retort or still, substantially as and for the purposes set forth.

F5,930.-R. M. La Rue, Andersonville, Ind. Saddle and Marness.-Mareh 24, 1868.-The crupper strap enters the drim at the upper part of the pad or gig saddle, and is wound upon a spindle whose ratchet and parl prevent nuwinding.

Claim. - The drum B, eonstrueted as described, its front end recciving the terret, and its rear end slotted for the passage of the strap of the harness, when the latter is wouud within the drum upon the shaft of the ratehet $C$ and thumb serew $D$, as herein described for the purpose specified.

75,981.-Josepil A. Latham, New Haven, Conn.-Garter.-March 24, 1868.-The cireular form of the garter is secured by an inclosed metallie spring, and it bears upon tho leg only at certain points, so as to avoid interferenee with the circulation.

Claim.-The herein-deseribed garter, construeted with the spring a, and provided with three or more cushions or pads C, with spaces between them, upon the inside of the band, as an improved artiele of manufacture.
g5,932.-N. F. Leeta, Middletorn, Conn.Lamp Shade-March 24, 1868.-The spring ring embraces the burner, and one end of the S-shaped bar turns in a soeket at one side of the ring. The other end of the bar gives bearing to the bail to which the reflector is pivoted.

Clacim. - The combination and arrangement of the ring A with one or more soekets $a$, so as to receire the arm $B$, the said arm having attached thereto the arms C C, pivoting the shade D, so that the said shade may be turned to a different inelination on the pivots $d$, and to different positions to the right or left in the soekets $a$, as and for the purpose herein set forth.

75,933.-GEORGE W. Lewin, Woreester, Mass. - Lathe Carriage.-Mareh 24, 1868.-The earriage is intended to support plates in a horizontal position and to allow their adjustment longitudinally or vertically. The plate rests upon a number of posts whose racks are engraged hy spur whecls on a series of eonnceted rods whieh are actuated by a screw gear.

Claim.-The arrangement of the cudless serews $c c$, raek and pinion of the posts F F, with the platform E , as and for the puppose described.
\%5, 93 4.-Edward A. Locke, Boston, Mass.Cusk, Label.-March 24, 1868.-The label is a metal-
lie, concavo-convex disk, whose edge is placed upon the inwardly projecting flange of the annulus surrounding the spigot hole; by flattening the disk the edge enters a groove immediately above the said flange.
Claim.-1. The metal ring, with its flange and groove, for receiving an identifying disk or plate to be applied to a eask, sulbstantially as set forth.
2. Forming the disk $k$, with the slits $o$, snbstantially as and for the purpose set forth.
g5,935.-H. E. Lova, Plymouth, Ind., assignor to W. A. Loxg and Geonge B. LivDsey-Printers' Galley.-March 24, 1868.-On one edge of the face is a dovetailed groove and therenpon is plaeed a jaw plate having oblique slots thercin. The heads of the pins onter the groore, and their shanks pass through the inelined slots, so that by moring the pins either toward or awray from each other, the jaw is mored outward or inward.

Claim.-The slotted jaw B, used in combination with the galley, Which has one edge grooved, and with the pins C C. snbstantially as and for the purpose herein set forth.
lg5,936.--James P. Long, Osage, Iowa.-Combined Broadcast Seeder, Cultivator, and Roller:Mareh 24, 1868.-The machine may be supported on wheels or npon the roller which is formed of stares secured to two flanged, metallie heads. The roller is kept elean by serapers. The grain falls upon scattering plates at the lower onds of the spouts.

Claim.-1. The combination of the curs $b^{6}$, angular flanges $b$ and angnlar flanges $b^{1}$, for securing the stares of the rollers, as described.
2. The combination of the open bearing Q with the detachable eaps $P$, to facilitate the removal of the rollers $13{ }^{1} 3^{\prime}$, snbstantially as explained.
3. The serapers S, constructed with sloping backs $s$, and downturned edges $s^{\prime}$, and fastened under tapering hloeks $U$, attached to the under side of the rear of the frame, substantially as and for the purposes set forth.
4. Constructing the conducting tubes L, with flanges $l$, for attrehing them beneath the frame, and permitting their ready removal, as explained.
5. The T-headed seatterers $L^{\prime} l$ ' when made separately from the tubes L, and attached in connection therewith, but eapable of independent removal, substantially as described.

75,937.-Thomas Carr Lovaton, Trenton, N. J.-Oil Cup.-Mareli 24, 1868.-The lower end of the nozzle has a bulbous part, making a ball ralve, which is held to its seat by a spiral spring beneath it. When filling the oiler, the valre is depressed and the oil poured into the earity abore the ralve.
Claim.-'The oil eup, with an adjustable nozzle, having a spiral spring beneath it, all substantially as shown and described.

75,938. - John Lovatt, Tarrytown, N. Y.Ifaehine for Winding Button Hole Twist, de.Mareh 24, 1868.-The twist is earriel by the flier which revolves in a contrary direction to the rotation of the spool, and at an inelination thereto.

Claim.-1. The adjustable flier and holder, constructed and arranged to operate substantially as describerl.
2. The parter $\mathrm{L}^{2}$, or its equiralent, combined and arranged with the flicr, substantially as and for the purpose specified.
75,939. - Samuel Love, Indianapolis, Ind.Apparatus for Filling Railroad Tanks with Water. - March 24,1868 . -The piston rod of the submerged pump is connceted to a lever oscillated by eonneetion to the draw bar of the loeomotive.
Claim.-The deviee herein deseribed, when the same is eonstructed in its several parts and operated in the way and for the purpose substantially as set forth.
ge9,910.-Henry Lumbard, Chieago, Ill, assignor to himself, Geonae E. Gerts, and Join Scumint, same plaec.-Tumbler Brush.-Mareh 24, 1868.-The eylindrieal block is axially perforated, and the holes for the bristles lein at ain ineline into the central
bore. The handle and cap piece are secured to the block by their cylindrical ends entering the bore of the block.

Claim. -The perforated block $\Lambda$, provided with longitudinal bore $B$ and tongued cap $C$, said block secured to the handle E by ineans of the tongue F , substantially as herein set forth and specified, when said block and said handle are made in separate pieces.
75.941.-Isalac B. Mahon, Dunkirk. Ohio.Oultivator and Gang Plow.-March 24, 186s.-Improvement on his patent, September 17, 1867. The object is to adapt the previous invention to a gang plow.

Claim.-1. Constructing the frame A of a single bar. bent so as to form three sides of a quadrangle, and braced by the bars $F$ applied to the irame and axle, substantially in the manner as and for tho purposo set forth.
2. The constrnction of the plow beams $\mathrm{K} \mathrm{K}^{\prime}$, arranged with and applied to the main frame $i$ to operate in the manner as and for the purpose hereiu set forth.
3. The bar $W$, applied to the beams $K \mathrm{~K}^{\prime}$, substantially as and for the purpose specified.
4. The oblique draught or brace rods $\overline{\mathrm{X}} \mathrm{Y}^{\prime}$, applied to the carriage aud to the plow beams, substantially in the manuer as and for the purpose set forth.
5. The beam $O$, attached to the draught pole, and connceted with the plow beans, in the manner substantially as aud for the purpose herein set forth.

95, 042.-Joirn Marsiall, Martland, Mich.-Boiler.-March 24, 1863.-The communicating pipe between the annular heater and the water ressel hats a horizontal diaphramm dividing the said pipe into two passages, the lower one of which is turned downmard, and has discharge into tho heater below the mouth of the upper passage.

Claim.-1. The divided cireulation tube K, (whether the parts $m$ and $m^{\prime}$ are of equal length or not,) as a connection between a water or liquid heater and a Trater or liquid containing vessel 13 , substantially as described for the purposes set forth.
2. In combination with the dirided tube K. the heater A , constructed and arranged substantially as described for the purposes specified.

多5,94: - Mailion Matlack, Philadelphia, Pa. - Apparutus for the Manufacture of Lampblack:March 24, 1868. - Hook bolts descend from the wooden rafters and support bars upon which the plates or slats are placed. The smoke follows a devious course, and at the bottom of the dead-air chamber is a porous chamber, into which a current is passed from a fau blower.

Claim.-1. Suspending the slates or sheets which form the roof of a lampblack apparatus firom the wooden beams C C of the same, substantially as and for the purpose herein shown and deseribed.
2. Making the crown of the furnace low above the pan H, and gradually or suddenly raising it at some distance from the pan, as set forth.
3. Providing the hed $(\dot{t}$, which supports the pan II, with a gas channel $f$, substantially as and for the purpose herein shown ant doscribed.
4. The inelined plate $j$, arranmed across tho opening to the dead-air chamber E of a lampblack apparatus, substantially as and for the purpose herein shown and described.
5. The perforated damper $I$, when provided with a plate $l$, abore the perforation, as specified.
6. The combination with the dead-air ehamber E , having the damper I, of the horizontal flue $J$, having the alternate up and down shelves $m$, as set forth.
7. The arrancement of the fan L , or its equivalent, by which the gis is forced into a porons ressel or bag in which the lampblack is detained, as set farth

195,944. - Wilitam S. McNeil, Springficld, Rass., assignor to Thomas H. White and Warrex Johnson, same place-Culinary Steamer.-March 24, 1868. -The steamer has a pan to enter the stove hole and to contain water and a ball valve for eseape of stoam. The meats or regetables aro placed on
the perforated shelves, and aecess is had by a clothpacked door:

Claim.-1. A culinary steamer, consisting of the case A, haring the pan $k$ at the bottom, and valre at the top, with pipe I, the ressels containing the food beiner arranged one above the other, so that ther einl he remored throngh the door', substantially as deseribed.
2. The eloth packing N , arranged upon the roller 0 , substantially as and for tho purpose shown.
75.945.-Cifarles Merimay and Curtis O. Luce, Imandon, Vt., assignors to themselpes and Julies E. Migaiss, same place.-ITand Stamp. March 24, 1868.-The two trpe whecls carry numbers and letters to indicato respectively the month and the day of the month. The types are remorable. The type having the day number has outward movement by a cam to give it saliency.

Claim.-1. The double type wheel 1 A', constructed and operating in combination with the cum $m$, types $t$ t , pinion $p$, and spring catch $s$, substantially as set forth.
2. The cam $m$, in combination with the return cam $e$, when used for the purpose described.
3. The arrangement and conbination of the trpe Whechs A $\Lambda^{\prime}$, type wheel $M$, calp $C$, and case $E$, constructed and arranged substantially as and for the pirrpose set forth.

195,916.-D. L. Milier, Madison, N. J.-Pulley for IIoisting Apparatus. - March 24, 1868 ; antedated March 20, 1868.-The snpporting loop of the sustaining palley is hinged to the frame of tho hoisting pulleys so that while the load is beins raised the traveler rope is chated between the sustaining pulley and a small puller on the hoisting frame. When the load is sufficiently raised the traveler ropo is unelutehed by the tilting of the frame.

Cluim.-The pulley block, provided with the pulleys a af, and haring a loop d piroted to it, containing a pulley $e$, all being arranged and operating as described, for the purpose specified.
75.0ly.-James K. Milime, New York, N.Y.Post Hole Borer.-Mareh 24, 1868.-The square shaft of the auger is turned by a berel whed through which it slides, and has a rack into which the spur Wheel is messhed when the earth is to be raised. The said wheel is rotated by a hand erank.

Claim.-l. The weighted shaft II, provided with rack teeth $f$ at one side, and the borer K , scrrated at its lower end, in connection with the whecl $J$, placed loosely on the shaft, and the driving wheels G $G$, on the shafts $E$ E, one or more of the latter being used.
5. The pinion MI on the adjustable shaft L , in combination with the rack shalt $f$ on shaft H, all arranged substantially as and for the purpose set forth.
75, 018.-Join W. Minor and David P. Wame, New Bedford, Mass.-C'arriage IIub.-Mareh at, 1868. - The spokes are inclosed between a fixed and movable collar with interposed clastie disks. The moving collar has pins which project from its face and enter the spokes.

Claim.-'The collar $\Lambda^{\prime}$, provided with a series of pins upon its face, entering throngh the clastic disk $e$, and with the tenons formed in the spokes, when said collar is adapted to slide upon the spindle A, as herein described, for the purpose specified.
g.5, Da: (-Thomas S. Minniss, Meadville, PaSad fion ITandle.-Mrarch 24 , 1868.-The lower ends of the landles are turnod outward to engage the dovetail mortises in the base of the iron, when the horizontal bars are drawn together to form the hanille.

Claim.-The handle, in tro parts, hinged as deseribed, constructed and operated as and for the purpose set forth.

F5,950. - Edward Mollenhauet, Now York, N. Y., assignor to Tineodore Rifter, same place.Apparatus for legulating the I'ositions and Movements of the Arms of Violin Players.-Mareh 24, 1868.- The right arm is restrieted to certain movements by a bar coimected to the belt, preventing the
ontward motion of that clbow. The left elbow is ticd to the belt by a strap around the lower portion of the humerus.

Claim.-An apparatus for regulating the position and movement of the arms of violin players, constructed and operating substantially as herein described.

75,951.-JAMES F. MONROE and EDWIN P. MONRoe, Fitchburg, Mass.-Appie Parer.-March 24 , 1868.-Improvement on tho patent No. 15,683.-The knife at the end of its operative morement, in which it makes a partial rerolution around the rotating. apple, is thrown off from the same by a finger of the cutter arm, being thromu up by an incline and retained there during the retmrin movement.

Claim. - In combination with the rotary wheel $f$, and with the cutter arm actuated to effect the forward movement of the paring linife, (substantially as set forth,) the inclino or cam $m$ and finger $k$, arranged to operate substantially as described.

ク8,958.-GEORGE R. Moore, Lyons, Iowa.Talve for Water Pipes.-March 24, 1868. -The valve stem lias a fixed and removable disk. The former constitutes the valve, and the latter forms a bearins for one end of a spiral spring, the other end of which rests against a perforated disk fixed in the case. The Falve seat is of rubber. Tho water is admitted by depression of the stem.

Claim.-The solid head A, valre stem B, valve $F$, packing $G$, removable guide $E$, sprines $H$, and pipo connection $C$, all constructed and arranged as hercin shown and described.
\%5,953.-H. C. Moone, Springfield, Mass., assignor to himself and P. H. Derny, same place.Iee Carriage.-March 24, 1868. -The toothed wheel holds to the ice, and is turned by a small spur wheel, which is engaged by a larger wheel actuated by a donbe-ended parl lever. The brake consists of a pointed, vertically moving bar, which is ordinarily kept fiee from the ice by a spring.
claim.- 1 . The arrangement of the toothed whecl A with pinion $B$, and the gear-wheel $C$ operated by lever D in combination with the hand wheel F , with pinion $G$ and the rack II mpon the pivotad axle $O$, substantially as shown and for the purpose set forth.
2. The brake, consisting of tho rertical rod MI and spring $L$, constructed and arranged as described.

195,954.-A. F. Morey, Greenbush, Il.-Barrel Truck.-March 24, 1868.-The trunk is formed to enable its use as a skid. The barrel is rolled on so as to lie transversely, and is held on by the claw arms.

Claim.-1. The slides C, in combination with the truck frame, containing holes $P$ P $P$, constructed substantially as described and amranged, and for the purpose set forth.
2. The hooks $V$ V and $W$ W, constructed as described, and in combination with the stides $C \mathbb{C}$, and truck frame A A, constructed substantially as described and for the purpose set forth.
75.955 --John Mosley, New Haven, Conn.Pocket Knife. March 24, 1868. Tho lower end of the spring enter's a recess in the handle, and a rectamrular noteh in the back of the spring reccives a projection on the inner side of the back. The upper cud of the spring is held in by the blade. The back is cast with one or both sides of tho handre, or handle lining.

Claim. -The spring $i$, inserted in a knife handle havius its back cast with one or both of its sides, when said spring is provided at its back with a recess adapted to fit without rivets over a projection cast in the back of the handle, as herein described for the purpose specified.

75,956.-P. A. Mowers, Cleversburg, Pa.Horse May Fork.-March 24, 1868.-The semieircular tines have sectiomal racks which cngage together, and one of which is engaged by the rack on a lever by which the tines are operated.

Claim.-The pair of grasping prongs B C, operated in unison by moans of cogged segmonts $b$ e, in
combination with a lever to open or close them, substantially as and for the purposes explained.
k5,95\%.-Lewis Murr, Philadelphia, Pa., assignor to Joskph and Bersard Metz, same place.Printing and Embossing Cloth.-March 24, 1868.The engraved plate being placed upou the cloth is leated by the application of a hot plate thereto.

Claim.-The printing and embossing of cloth or other fabric at onc operation, by the employment of au engraved plate, applied directly to sueh fabric, and a heated plate, applied to the engrared plate, substantially as and for the purpose set forth.
\%5,958.-JOHN Nation, Portland, Oregon, assignor to himself and Ansalom B. Mallock, same plice.-Steam Engine Lubricator.-March 24, 1868. - The upper end of the oil cylinder has connection through cocks with the steam space of the valve chest, and with the oil cup. It has, also, a try cock. The lower end of the oil cylinder communicates, through a downwardly-opening valve, mith the valve chest. Oil may be allowed to enter the oil cylinder, and then the communication between the cylinder and the cup being eut off and the steam being turued on above the oil, it will flow into the valre eliest.

Claim.-1. The valve $D \mathrm{x}$, having corrugations $b$, the slotted seat $E$, constructed and arranged to eperate as described.
2. The arrangement of the oil cup A with the eocks $B \mathrm{D}$, cylinder C , steam-1 ipe $G$. cock $c$, cor rugated valve $D x$, upper seat $H$, and slotted lower seat E , as herein described.
75.959.-M. K. Needham, Titusville, Pa., assignor to himself and Rrceand E. HEARN, same place.-Lamp Burner.-March 24, 1868.-The wicks in the two curved tubes are raised simultaneously by two scrrated wheels, which mesh together. The ail passes upward both within and ontsile the wick tubes.

Olaim.-The described arrangement and combination of the wick tubes $c e$, base plate $d$, and diaphrarm $e$, the latter extending upward, and connecting the edges of the wich tulbes, so as to form scparate and distiuct internal and external air-passages $f$ and $b$, as shown, and the whole so constructed that it may be applied to an ordinary lamp collar, substantially as and for the purposes set forth.
\%5,960. - George Nerlson, Boston, Mass. Lamp Bumer.-Mareh 24, 1868.-The deflector is hinged to the eylinder by a small hook, the end of which is inserted into a slit of corresponding size in the side of the erlinder. Upon the opposite side of the deflector is a spring catch. The parts of the burner are made detachable, for convenienco in cleansiug.

Claim.-1. The combination, in a burner such as described, of the air-supply cylinder, with a deflector hinged to the said cylinder, substantially as and for the purposes herein shown and set forth.
2. The combination, with tho chimney-rest and wick tubo, of an air-supply cylinder, detachable or removable from its seat. and a deflector hinged to the air-supply eylinder, substantially as and for the purposes herein shown and set forth.
3. The combination, in a bumer such as described, of a chimmey rest, air-supply eylinder, and deflector, When the said parts are eapable of being remored from aud adjusted to the burner bodily and together, substautially as and for the purposes shown and specified.
4. The combination, with the base and wick tube of a lamp burner, of a chimney rest, air-supply erlinder, and deflector, when the same are detaehablo from the said base and wick tube, and from one another, substantially in the mamer and for the purposes shown and described.
5. The combination, with the ain smpply eylinder, of chimney supporting springs, attached to and projecting from said cylinder, substantially as herein shown and described.
aj5,391.-J. NETVBERGER and P. J. ILLIG. Buffalo, N. Y.-Die for Stamping Tinware.-March 24, 1868. - Tie primary die gives the periphery of the
blank the same circumference as that of the finished article. The finishing die has vertieal walls, within which the blank lits neatly, so that its edgo cannot spread or erack in the final pressuro.

Claim.-1. The primary or "eonxing" die A, when constructed and used for the purpose and substantially as herein deseribed.
2. The socondary or finishing dic $B$, having a shoulder $b^{\prime}$, for the purposo and substantially as herein set forth.
3. The secondary or finishing die $B$, having a shonder $b^{\prime}$, in combination with the primary or "eoaxing" die $A$, for the purposes and substautially as herein doscribod.
g.j.ed2.-Simon B. Parker, Springfied, Mass.Device for Fastening Shoe-strings.- March 24, 1868. -The locking plate is piroted to the baso plate, and the end of the lace is passed through the latter, around the serrated end of the former, and then through both.

Claim.-A norable binding and locking lever C, for the purpose of fasteninor shoe-strings, and prerenting the same from untying.

習5, ©63.-BENJAMIN M. Palrks, St. Lonis, Mo.Churn Dasher-March 24, 18bs.-The tubular dasher rod has a sprine valye at its lower end, and has two perforated, inverted, saucer-formed dasber dislis.

Claim.-The handle A, when combined with the two dashers B B', and tho valve C , as described and shown.

75,964.-Menty M. Penber, New Tork, N. Y. -Itanging liuilders.-March 24, 1868.- A vertical passage is made in the stern, through which the rudder may be drawn up.

Claim.-The eollar $G$, in conneetion with the flange $i$ on cap $h$ of rudder-post $C x$ and the lod $F$ attached to the keel, all armaced substantially in whe manner as and for the purpose set forth.
(95,965.-TOIN G. Perre, Kingston, T. I. Stusage Fillet.-Mareh 24, 1868.-One hali of the bisected nut of the follower serew is attached to an angular portion of the box end, and said portion is attached to the limged hid; so that, when the lid is raised, the follower and its operative serew may be remorad.

Olaim.-Construeting a sausage-filler with a serew and nut, the nut being divided into two parts, subsitantially as herein described, and for the purposes set forth.
\%5,966.-TOUN G. Perrx, Soutli Kingston, R. I. -Sausage Filler.-March 24, 1868.-The tro followers are mored longitudinally within the eylinder by a rioht and left hand serew. The sansage meat is foreed out of a radial spout at the mid-length of the crlinder.

Claim.-Onc or more of the followers 0 o. in combination with the screm $C$, all working within the case, substantially as described, and for tho purpose set forth.

75, $9 \mathrm{~S}^{\text {' }}$.-Oliver E. Pillard, New Britain, Coln., assignor to Frederick II. Nontu, same place.-Permutation Lock.-March 24, 1868.-The dog is kept from contact with the tumblers while they are being udjusted, to prevent any intimation of the combination being discorered thereby. The spindle cannot be mored into contaet with the tumblers until the bolt is fully projeeted.

Claim. - The stud 4 on the bolt, in combination with the dog $e$, for raising and holding up said dog and its arm clear of the tumblers when the bolt is projecterl.
\%5,96.-GEORGe Pine. Tronton, N. J., assignor to himsclf and E. R. Cook, same place.-Napkin Ring and Salt Cup Combined.-Miach 24, 1868.The covered salt cup is attached to one side of the napkin ring.

Claim.- 1 salt eup and napkin ring or holder combined, substantially as herein shown and described.
\%5, DGD.-S. II. Plumb, Davenport, Iowa.-Automatic Fecder and Cut-off for Cistorns.-March 24,
1868. - The float is arranged so as to tilt the lid of a bueket beneath the water pipe when the cistern is sufficiently filled. The increased weight of the bucket depresses the end of the lever from which it is suspended, and moves the ralve so as to cause the water to rum into the waste pipe.

Claim.-1. Tho water buckets $G G^{\prime}$ attached to the ralves $b$, substantially as and for the purpose specifiod.
2. The tilting lids $f$ of the buckets, formed substantially as deseribed, and for the purpose set forth.
3. The buoy or float II, so connected mith the lid $f$ as to change the position of said lid. when the water reaches a certain height, substantially as and for the purpose set forth.

75,970.-T. W. Porter, Boston, Mass.-Belt Clesp. - Mareh 24, 1868. -The fingers have each a erosshead at one end and an ere at the other. The cre enel is passed through both ends of the belt and a single rod is passed through all the eyes.

Claim.-1. A belt clasp, consisting of a phurality of fingers $a$, each with a separate bar $b$, and an ere, with the rod $A$ inserted therein, substantially as deseribed and shown.
2. Lis a new article of manufacture, the fingers $a$, mhen constructed with the bar $b$, and eye for rod A when construetel sulbstantially in the manuer as and for the purposes specified.
75.971.-T. W. Porter, Boston, JIass., assignor to himself and Cirarles L. Manston.- Sleigh. Marel 24,1868 . -This relates to virions connections of wrought and malleable iron described in the claims.

Claim.-l. The shaft bancer, constructorl with Wronght-iron stars and malloable-iron center, smbstantilly as described and shown in Figs. 1 and 2.
2. The tip socket $B$, formed separate from the center $A$, and to rerolve thereon, substantially as and for the purposes speeified.
3. The hollow nirot $d$, formed upon socket $B$, sub stantially as and for the pmposes specified.
4. The incline disk $b$, in combination with the center $A$ and socket $B$, substantially as and for the purposes specified.
5. The tip C, formed with a recess for the shaft $D$, and to reeeire the wrought-iron strip e. at the lower bolt hole, substantially in manncr as deseribed and shown.
6. Ihe foot rail, construetel with brackets, combined with insertablo foot bars, substantially in manner as ind for the purposes specified.
7. The coupling $C$, when constmeted with the recess for standard $B$, the cars $f f$, and the lip $g$, substantially as deseribed and sliown.
8. Combining, with the wronght-imenstar or bree $d$, the socketch malloable-iron strap on foot ( 1, sub stantially as doseriborl and shown in Figs. 5 and 6 .
9. The dash rail I3, formed to extend below the dash board A. sulstantially as described, and for the purposes spceitied.
75,97』.-T. W. Porter, Boston, Mass, assignol to himself and Cuarles I. Mahston.- Express Wagon.-March 24, 1868.-This relates to verions metallie connections, which are explatined by the claims and illustrations.

Claim.-1. 'The roeker and axle plates a and $h$, formed of malleable and white iron, substantially in manner as described and shown.
2. The removable disk or die a, in eonbination with the rocker plate and king bolt, substantiully as and for the purposes specified.
3. 'The combination of packing $g$, eap $f$, and king bolt $e$, substantially as described and shomm.
4. The lugs $j$, formed upon the axle and rocker plates, by which, in combination with wroumht-iron straps $k \%$, secme the plates to the axle and rocker.
5. The tnbe plate $n$, substantially as and for the purposes specified.
6. The pirots $l l$. or their equivalents formed npon the axle plate, for the purposes specified.
7. The pin $m$, or its equivalent, formed upon the axle plate, for the purposes specified.
8. The coupling o, substantially as deseribod and shown.
9. The combination of coupling $o$, strap $P$, bolt $t$,
and strap s, substantially as and for tho purposes specified.
10. The metallie corragated or cellular tail-board frame F, substantially as deseribed and slown.
11. The strip eyes $b b b$, formed upon the frame $F$. sabstantially in manner as deseribed and shown.
12. The chain eyes $f$, formed upon the frame $F$, substantially in manner as and for the purposes speeified.
13. The skid brackets $e$, formed upon the frame $F^{\text {, }}$, substantially in manner as doscribed and shown.
14. The tail-bourd adjusting deriee, consisting of chains $k^{\prime}$, ratehet drums $i^{\prime}$, parmls $o^{\prime}$, and the hand wheel $m^{\prime}$, or its equivalent, all arranged to operate in manner substantially as described and shown.
\% \%.7.2.-T. W. Ponter and II. K. Portele, Boston, Mass., assignor to themselves and Ciraremes I. Manston-Carriage. - Mareh 24, 1868.- The spring bar and "polectrab" are made hollow and of malleable iron. The former has cups to receive the ends of the body loops. 'The pereh coupling of the head-stock and the spring loop have iron frames eonnoeted to the woolwork.

Olaim.-1. A spring shackle, formed with the bed plate $A$ and the three-sided link B, united by tho wrought-iron rivet $\alpha$, substantially as described, and shown in Figs. 1 and 2.
2. The stude $c$ or its equivalent, formed mpon the bed plate, substantially as described, and shom in Fig. 2.
3. The sides $d$ d of link $B$, formed to extend beyond the bare, and cover the spring eye, snbstantially as and for the purposes speeified.
4. The rim a, formed upon bar end $B$, for the re ception of the hanging iron, substantially as described, and shown in Figes. 3 and 4.
5. The socket $B$, formed to receive the hanging iron a, and the bar A, Figs. 5 and 6, substantially as and for the purposes specifiod.
6. The hollow metallic hanging bar $A$, substantially as deseribed, and shown in Figs. 7 and 8.
7. The rims $a$, formed upou the metallie hanging bar A, substantially as described, and shown in Figs. 7 and 8.
8. Combining the malleable-iron Joke $\Delta$ with the wronght-iron stay $d$, substantially as described, and slown in Fig. 9.
9. The hollow metallic head block A, substantially as cleseribed, and shown in Figs. 10 and 11.
10. The pereh eouplinges a, formed upon the head block A, substantially as described, and shown in Figs. 10 and 11.
11. Forming the arms $a$ a of the pole-crab hollow, substantially as deseribed, and shown in Fig. 13.
12. Forming the pole-strap studs $b b$ hollow, substantially as cleseribed, and shown in Figs. 12 and 13.
 Window Shade.-Mareh 24, 1868. - The window shade is made of the usual, Woren material, and is strotched and sized. The ground ouly of the pattern is printed by rooden, stereotype, or electrotype bloeks, and the pattern itself left white or of the evlor of the fabric.

Olaim.-The window shade or window-shade material, made as deseribed, riz, with the woven fabrie in its original color, exposed to form the figure, in imitation of laee or embroidery, the groundwork being printed.
ry5, $975 .-N$. M. Ray, Ellsworth, Me.-Shoe Inife. Marel 24,1868 . The detachable eap is secured to the end of the blade, and prevents nicking the "rupper" in trimining the sole.

Claim. -In combination with a shoe knife, the detachable cap A, when attached to the knife by a hook, at one end of a slot, and fasteued by frietion at the other end of the slot, substantially as sliown and described, for the pmrposes specified.
 Fredenick F. Reaving, Dirmingham, England.Belt Clasp.-Mareli 24, 1868.-A spring bolt on one part of the elasp has side eatches, which engage similar eatches of the other part. The bolt is moved baekward by a thumb kuob, to release the catehes.

Claim.-1. The dress fastening or clasp, consist-
ing of a bolt or bolts $B^{\prime}$, operating within a case $B$, or its equivalent, and prorided with a eatel $01^{\circ}$ catches $i$, and a spring or springs $b$, each or all in combination with a eatch or eatches $e$, or the equiralent thereof, and all eonstructed and operating substantially as and for the purpose shown and doscribed.
2. The slot $r$, in combination with the case B and spring $b$ of a belt clasp or other fastening for dress appendages, for the purpose of holding and providing a point of resistance to the said spring $b$, and also serring as a stop to the pin $t$ of the bolt, all substantially as shown and described, and for the purpose specified.
3. The slotted bolt $B^{\prime}$ of a dress fastening, haring a tongue $\alpha$, or its equivalent, for the better holding of the spring $b$, all substantially as shown and doseribed, and for the purpose specified.
4. Forming the bolt $B^{\prime}$ of a dress elasp or fastening with projections $i$ and a tongme $a$, or their equivalents, all substantially as shown and described, and for the purpose specified.
5. The ease B, mado substantially as shown and described, for the purpose of scrving as a guide for the lonoritudinal movement of the bolt $B^{\prime}$, and for holding the same against the lateral traction of the belt when the same is on the wearer, and also for assisting in eatching and holding the eatches $e e$, all as set forth.
6. The spring tongrues $l$, in combination with the bolts $B^{\prime}$, for the purpose of aetuating the latter when the formation and employment of the case B render the thumb bit $m$ more or less inadmissible, all as set forth.

75, $9 \%$.-Samuel J. Reeves, Philadelphia, Pa. -Railway Rail Joint.-Marel 24, 1868.- The base flange of the rail is elamped to the ribbed base plate by the clamping plates, whose flanges take over both, and are secured by transverse bolts mhich pass through the longitudinal ribs of the base plate.

Claim.-A rail jeint, consisting of the ribbed bar $B$ and clamping bars $D$ and $D^{\prime}$, adapted to each other and to the rails, substantially as set forth, for the purpose speciifed.

名5, 9\%8.-E. B. Requa, South Bergen, N. J.Lamp Burner.-Mareh 24, 1868. - The cone and the perforated, eup-formed plate beneath it are supported on uprights arising from the base plate. A small passage is left between the edge of the burner and the elhimner.

Claim.-1. The perforated cup-shaped plate B, provided with an under concave surface $d$, through Which the wiek tube $c$ passes loosely, substantially as and for the purpose specified.
2. The lower rim A, with the wiek tube $c$ attached, in connection writh the perforated eup-shaped plate $B$ and cone or defleetor C, all arranged substantially in the manner as and for the purpose specified.

75,9\%9.-Elisha Robbins, Worcester, Mass.Railway Snov Plow.-March 24,1868 .-The tumeler is arranged to eut a way with vertical or flaring sides, and to serape the snow from the rails. The spiral borer is rotated by connection with the wheels, and couress the show baekward and upward, tho deflecting plates throwing it laterally to eath side.

Claim.-1. The eombination of the tnmeler $\Delta$, and the aurer or borer C, arranged as set forth.
2. The combination of the tumeler A , the anger or borer $\mathbb{C}$, and one or more deflector's $e e$, arranged so as to diseharge the snow laterally from the auger, as specifical.
3. The combination and arrangement of the auxiliary deflector or deffectors $f f$ of the top of the tunneler with the said tunneler, the rotary atroer, and the other deflector or deflectors $e e$, arranged as specified.
4. The combination and arrangement of the antir frietion tube D with the anger C , the tumeler, and one or more deflectors, arranged in the rear of the said tube.
5. The eombination of one or more supporting whecls $g$ with the auger tube D , the tumeler, and one or more deflectors $e$, as specified. sueh rollers being for supporting tho tube while in revo. lutiou.

フ5,939.-Louts S. Robmins, New York, N. Y. -Process of Cleaning Wool, de.-Marel 24, 1868.The wool is placed in a close chamber and treated first with the rapor from petroleum. and after proper cleansing is trented with the rapor from oil.
Claim.-1. The proeess herein deseribed for romoring the alkaline, oily, and gummy substances from mool, by the use of the light rapors obtained from petroletim, naphtha, and other similar substanees or componuds, substantially as deseribed.
2. The process of saturating wool, preparatory to its being manufaetured, br the application of oleaginous rapors, substantially as herein deseribed.
g5,981.-Leonilard Rodeninausen. Philadelphia, Pa.-Car Starter.-Mareh 24, 1868.-A lonp on the draw bar engages a rateliet upon the axle nearest thereto, so as to start the ear by forced rotation of the axle.

Claim. The eatch E, attached direetly to the tongue or draw bar D. and employed in combination with a ratchet wheel secured to the eenter of the asle, all arranged and constrieted to operato as herein described and represented.

75, 98 .-Charles Rowland, Washington, D. C.-Car Scat.-March 24, 1868.-The head rest is padded, and trarerses the seat baek so as to be dramn upward from cither side.

Claim.-The lead rest, consisting of the frame C, prorided with the sheet of rubber, or other flexible material, and arranged to slide within the back of the seat, and be protruled from either side thereof, substantially as shown and deseribod.
g5,933.-TV. W. Rowles and A. J. Russell, Baltimore, Mel.-Invalid Bedstead.-March 24, 186 . -The pat ent is raised on a supplementary bedstead, and the part upon which he is immediately supported is run out siderrays from the bed.

Claim.-1. The supplementary bedstead $\mathrm{C}^{\mathrm{C}} \mathrm{C}^{2}$, When used in combination with the bedstead $A \underset{A}{A}$, sabstantially as and for the purposes speeified.
2. The lateralls-shding frame, composed of the end picees $G$ G and vertically adjustable side pieces If I, supported upon the sliding standards E E and the posts D D running upon frucks $c c$, substantially as and for the purpose specified.
3. In combination with a laterally-sliding frame, as abore described, a roller I for the purpose ot holding and adjusting one side of the supporting. sheet $J$, substantially as described.
4. The sheet J, haring one serrated edge looped, as shown at $j j, n n$, substantially as and tor the purposes sot forth.
5. The formed lever O. having the hook 0 , substantially as and for the purposes shown.

75,984.-Jnines J. Ress, Worcester, Mass.-Wood-planing Machine. - March 24, 1868. - The frame of the feed rollers is made vertically adjustable, and the rollers made yiclding, to snit the thiekness of the stuff. The cutter spindle has lateral and rertical adjustment. The bed where the surface cutter head acts has a series of slots in the direetion of the feed, having bridge bars, to allow the enter to act upon the edges of the stuff without striking the bed.
Clain.-1. The atjastable frame G bearing tho foed rollers, and provided with the hars M $N$, in combination with the spring O , substantially as deseribed, for the purpose speeified.
2. The frame $V^{2}$ for the spindle $\mathbb{T}^{2}$, constructed as described, having the box bearing W' $W^{2}$ and the socket bearing $a^{2}$, and arranged to operate in comnection with the box $\mathrm{B}^{3}$, substantially as deseribed, for the purpose specified.
3. The har earrying the presser shoe to the machine, when arranged in a frame applied to the machine, for adjustment thereon and for its own actjustment through a spring, whether both be combined in one or used separately, substantially as and for the purposes described.
4. The elamp or holder for the presser block, provided with a spring arranged for operating, substantially as and for the purpose described.
5. The bridge plates or slides $\mathrm{D}^{3}$ for the openings $\mathrm{C}^{3}$ in bed plates to the machine, in combination with
the slidine box $\mathrm{B}^{3}$, substantially as and for the purposo described.

75,945.-Williay Sentiss Sidney, Ohio-Soldering Tin Cans.-Mareh 24, 186s.-The crlindricul shell equals in diameter that of the inside of the can, and has a surrounding lip to hold the top of the erlindrieal portion of the ean blank in place. The can bottom is placed mpon the cylindrical part amt the two pieces are then held firmly for soldering. The ease has a bail, and a knob upoin the latter' is plated in a holding fork when the can is drann off the case. Claim.-1. The holder, composed of the shell A, furrished with the annular lip $a$, substantially as and for the purpose licrein set forth.
2. The eombination, with the holder, construeted as described, of the knob C, substantially as and for the purpose specified.

25,986.-Fraycis E. Sessions, Woreoster. Mass., assignor to himself and Sanurl A. K:iox-Carbonizing and Mardening Iron and Sterl.-March id, 1868.-The iron or steel is earbonized by immersion in molten east iron, and is hardened by immediato immersion in water:

Claim. - The proeess above deseribed for earbonizing and hardening iron and stecl.
g5,987.-Josiall Semmour. Corentry, N. Y.Mold Roctd for Plows. March 24, 1868.-The face of the reversihle mold board has a single, flat surface for some distance backward from the point, and from that point gradually rises in the eenter, so ns to form two frees, whose edges. cut in section perpendicularly to the axis, will have straight lines.

Claim. - The formine of a mold board for plows, either single or rercrsible. in such a manner that the lines bounding the vertical sections of said mold boards slall be straight, substantially as herein doscribed and set forth.
\%.5.0S8.-MI. R. Smaltens and Sammit Rat, Allianee, Ohio. - Double-Shovel Plowo. - Mareh 24, 1868. The standards hare side arms adjustable iu the head of the T-shaped box, and clamped hy a setserew. The handle "round" is made in two portions, one of which slides within the other so as to admit of extension.

Claim.-1. The T-shaped box D, for forming the main frame of a double-shorel plow, substantially as herein set forth.
2. In combination with the box D, the braces C C and handles $A A$, substantially as and for the purpose specified.
3. The arrangement of the braees $\mathrm{FF}, \mathrm{C} C$, and the rod $H$ and tube $G$, with the handles, and heam for contracting and expanding the frame, substantially as herein set forth.
295,089.-TOIN Sileets, Columbia, Pa.-Sant Scoop.-Mirch 24,1868 . The staft rises perpenticularly from the rear end of the seoop, and has a collar to which the hoisting rope is attachef. The rope las a series of loops to engage orer a pin on tho boat, and the rope attachment to the staff forms a fulcrum in the use of the scoop.

Claim. - The arrangement of the socket, seoon, ant handle H, writh its shoulder D, ring E, haces FF, in combintion with the rope, or its equiralent, and'links. L, when made substantially in the manener and for the purposo specified.
75,050.-Sanuel D. Sueldon, Fitehburg, Mass., assighor to The Whiman and Miles Maviface turing Company.-Sichle Sections and the Method of Serrating Them.- Iarch 24, 1868. - The intil bloek has a depression formed like the toothed seetion, and a bereled edge upon which the edge of the section is bent down in forming the sermations. In subsernent grinding the lower side of the section is made llat.

Claim.-1. The bereled-faced anvil or block, for supporting the blank sections white the serrations or cuts are being made, substantially as and for the murnoses set forth.
2. The mode of forming the serrated eutting edre $e$ of the section, as and for the purposes set forth.
3. Tho scriated-olged sickile section, as an im-
proved article of mannfacturo, made as shown and dascribed, and for the purposes set forthl.
gey.D91.-A. M. Siluntuerf, Boston, Mass.Atomizing Apparatus for Nurgical Use. March 24, 1868.-The slicld has a faring and cylindrical portion and is hinged to the liquid ressel and adjustable in relation thereto. The shicld drains into the ressel. By means of the shield the atomized liquid is directed particularly to a certain spot.

Olaim.-1. The combiuation of the clastic bulb $f$, and its flexible eonnection, with the atomizing tubes, the vessel $a$, the atomizing tubes $b c$, and the shich $h$, substantially as described.
2. Constructing the shield $h$ with a mouth tube $k$, substantially as set forth.
3. Arranging the mouth of the shield to drip directly iuto the ressel $a$, substantially as shown and doscribed.
4. Making the stopper $d$ with an orifice $i$, for recoiving the edge of the shich, and conducting the cxcess of fluid back into the vesscl, substantially as described.
5. Supporting the shield by means of a ring or band encompassing the mouth tube, substantially as set forth.
6. Connecting the shicld directly to and supporting it by the liquid-containing vessel, substantially as described.
7. Applying the shield so as to swing up from and down into connection with the orifice $i$, substantially as set forth.
8. Applying the standard $m$ so as to be adjustable in height and in distance from the vessel $a$, substantially as and for the purpose set forth.
9. A stopper of rubber or rubber compound, when mode with a center hole forinsertion of the atomizing tube, and an orifice for return of the excess of fluid, gubstantially as set forth.

75, 997 - James C. Sickel, Philadchphia, Pa.Composition for Embalming.-March 24, 1868.- A mixture of glycerine asd alcohol in equal proportions has sulphurous acid gas passed throngh it and is flavored with acetic acid and essential oil of cloves. Themixture is iujected into the natmal passages and into the aorta. The body is mrapped in bandages saturated with the mixture and covered with Indiarubber.

Claim.-The combination of glyecrine, alcohol, and sulphurous acid, flarored with acetic acid and essential oils or flavors, for the preservation of dead bodies, in the manner deseribed.
\%5, 93 - Charles S. Sindons, Rochester, N. Y. - Fruit Jar.-March 24, 1868. - The neck is shouldered to sustain the clastic packing ring. The cover is stamped to form, and has an angular flange, which covers the packing on two sides. The cover is held down by atmospleric pressure and is raised by a ring.

Claim.-The fruit-jar cover, composed of a single shect-metal plate, having a vertical rim $B$, and projecting flange $P$, and used in combination with the ordinary packing ring $\Lambda$, and jar having an internal shoulder or projection, as and for the parposes set forth.
mb, 232.-A. D. SHITH and E. STOW, Townsend Station, Ohio.-Fence.-Mareh 24, 1868.-The horizontal, supporting wires are indented to receive the pickets.

Claion.-A fence, constructed with an indented wire or wires, in combination with the hooks $a$ and piekets $C$, as and for the purpose specified.
\%5,995.-S. W. SIITH, Addison, Vt.-Flat-Iron Heater.-March 24, 1868.-The head of the cylindrical heater has apertures to allow the passame of the irons, the haudles projecting. Above the head is a similanly perforated plate which turns on the head so as to close the whole of the apertures except that part in each which is traversed by the handle.
Claim.-1. The construction and arrangement of the plate $A$ with the flange or side wall $C$ and the plate $F$, combined and operating substantially as shown and described for the purpose set forth.
2. The chamber $A^{\prime}$, when formed by two open
plates, substantially as and for the purposo doscribed.
\%5.996. - Willitam E. Sparks, New Haren, Comn., assignor to SAligent \& Co., same placeDoor Button.-March 24, 1868.-The button has a spriug knob whieh enter's one of a serics of indentations in the pirot plate.

Claim.-I'ho lever B, provided with a spring point $d$, operated by the plate $A$, the said plate A provided with one or more indeutations to receire the pivot $a$, substantially as and for the purpose specified.
g5,99\%.-J. W. Summers, Sandy Hill. N: Y: Horse Hay Fork. - March 24, 1868.-The tine is hinged to one part of the shank and is operated by the other part so as to take its three positions, of entering, holding; aud diseharging, in which it is respectively raised, projected, and depressed.

Claim.-The shanks $A$ and $B$, the single tine $G$, bands D D, cam-loop II, catch-loop J, notehes $l$ and $m$, and cord I, all construeted and operating substantially as shown and described, and for the purposes sct forth.

75,998. - James Sutherland and Francis Moakley, Last Hainpton, Mass.-Steam Punp Eir gine.-Mareh 24, 1868; antedated February 18, 1868.Improvement on the "Rodier" steam pump, patentr cl Angust 14, 1866. The secondary valres are eylindrical picecs working in corresponding ralve seats, and lave stems mored by the piston head. Each of the secoudary valves performs tro functions-one in allowing steam fiesh from the main port to coter the valve chest to move the valre, and the other in allowing the escape of steam firom the other end of the valve chest.
Claim.-1. The secondary ralves a and $a^{\prime}$, with their respective ports $e$ and $e^{\prime}$ and of and $f^{\prime}$, whereby each performs the functions of exhansting steam from one end of the main valye, and supplying steam at the other, by their alternate movement respectirely, substantially as shown.
2. The arrangement of ports $e$ and $e^{\prime}$ and $f$ and $f^{\prime}$ with the sceondary valves $\alpha$ and $a^{\prime}$, substantially as shown and described.
3. The arranoement of the pieces $H$ and $\Pi$ in the main valve, and chanmels $g$ and $g$, in communication with them, substantially as shomn.
4. The arrangement of the piece $h$ in the secoudary valres, as showu.
ge.999.-W. W. Sutliff, Town Liuc, Pa.-Carringe Spring.-March 24,1868 . The Tooden springs are clipped at their ends to the middle of the perches, and at a variable distance therefrom rest upon fulcrum bars which are adjustably sccured to the perches. The body is secured to the euds of the springs.

Claim.-1. Spring bars F F, provided with metal plates $a$ a, perches $D \mathrm{D}$, arranged in combination with clips E E and bolts c c, as and for the purpose set forth.
2. The adjustable cross bars $G G$, in combination with spring-bars F F.
3. The emplorment of tie serew rods $K K$, in combination with the adjustable cross bars $G G$ and spriug bars $F^{r} F$, substantially as and for the pruspose specificd.
\%G9000. - JEROME B. SWEETLAND, Pontiac, Mich.-Harvester Rake.-Mareh 24, 1868.-The rake is piroted to a frame sliding on a bar at the rear of the platiorm. The frame is counceted to a belt whose ends are wound on tro pulleys. One of the two pulleys has an interior spring to cause the return movement of the rake, and the other pulley may be clutched to a rotating shaft to cause the effective stroke of the same. The belt has a stop collar which acts to uncluteh the pulley when the rake has progressed to the proper point. The rake is thrown into operation by a treadle which operates the clutch. The rake has a comnter-balaueing weighted amu which bas a catch by which it is held up in its return movement, beins raised to this position by an inclined plate at the beginuing of the return stroke, and the eatch released by another plate at the end of the stroke.

Claim.-1. The rod Q , with its weight and noteh, need with tho plate $n$ for holding up the rake, as is lerein fully set forth.
2. The pulleys M and $O$, and belt $N$, used Trith the rake $P$ for giring it motion, the pulley $O$ being prorided with a spring, which drarss tho rake back after it has been earried forward by the prlloy M, substantially as set forth.
3. The arrangement of pulley II and sleore $J^{\prime}$ upon shaft I, with tho lover $J$, spring $V$, and rod $K$, as and for the purpose herein specified.
4. The bars $e$ e, in combination with lever $J$ and trip bar $V^{\prime}$, which is operated upon ly the plato $h$ on belt $N$, as and for the purpose specified.
5. The bar $R$, in combination with the rod $Q$ upon the rake, used as and for the purbose described.
6. The rack or gaard $u$ upon the jeel standard, when used substantially as and for the purpose set forth.

76,001.-D. H. Thater, Lndlowrille, N. Y.-Harvester.-Mareh 24, 1868.- 'lhe ecocntric-faced cam plate is attached to the wheel hub, and turns in the chamber of the flanged disk which is sceured to the axle. When the machine is noving forward tho cam plate and flage are elutehed together through the medium of the roller.

Clam.- The plates D, on the wheels B, provided with enured eccentric edges $b$ and springs $E$, in eombination with the chambered disks C , secured permanently on the axle $A$, and the rollers $F$, plaeed in the chambers, between the curred edges $b$ of the plates and the rims or edges $d$ of the chambers $a$, substantially as and for the purposo set forth.
g6,002.-TV. R. Thomas and Tiomas Evans, Catasauqua, Pa.-Stcam Engine Piston Valve.March 24,1868 .-The piston rod trarerses both heads and has arms impinging against the bosses at the cuds of the valve rod.

Claim.-The ralyes $G G^{\prime}$, operated by the arms D $\mathrm{D}^{\prime}$, and by the exhanst steam, in combination with a steam engine mith steam and exhaust ports a a and c $c$, arranged as deseribed, the whole combined and operating substantially as shown and deseribed.

86,003.-I. MI. Thompson, Edinbure, Ind.Water Wheel.-Jareh 24, 1808.-The water is receired at the top and periphery, and aets on two series of buekets. The conncetions are sueh that the gutes are opened simultaneously.

Claim.-The eombination of tho two sets of buckets $c d$ with the two sets of gates $g$ and $F$, all constrineted and arrangod to operate in the manner substantially as and for the purpose set forth.

76,004.-T. P. Tirompson, Kirkille, Ioma.Washing Machine.-MLareh 24, 1868. -The rollers are ribbed, and are diawn together by clastic bands. They are supported on standards arising from the sides of the suds box.

Claim.-The combination of the corrugated rollors C C', slotted standards B, blocks E, clastie bands $F$, and boxes $G$, arranged to operate substantially as set forth.

76,005.-Ronent B. Thonpson, Ňew York, N. Y.-Buse Burning Stove.-Mareh 24, 1868.-At the lowor part of the reservoir is an annular air chamber receiving air by pipes passing through the flue space at the base of the stove. The air is discharged into the upper part of the Durning fuel, throngh holes in the bottom of the annular chamber. This chamber has downwardly projecting bars, altornating with the air holes.
Claim.-1. Supporting the raservoir E upon brackets $Q Q$, in eombination with the air pipes II, substantially as set forth.
2. The combination of the annular air chamber $F$ around the lower part of the reserroir E, with the vertical bars or fingers I, substantially as shown.
3. The combination of the annular air chamber $F$, formed around the lower part of reserroir E, with air pipes H H, when the latter extend downward through the base flnes $\mathrm{J} J$, substantially as shown.

6, 606.-Wilitam E. Twinine, Morrison, \#ll.-
Car Coupling.-Mareh 24, 1868.-The recessos are
intended to prerent uncoupling and dispense with the use of a conpling pin. The rear end of the link enters the lower recess and is hold horizontally for proper presentation to tho other drawhead.

Claim.-The dratrhead B, eonstrncted with tho hook $B^{1}$, and reecsises $B^{2}$ and $B^{3}$, arriuged substantially as deseribed.
g6,007.-Pimir Veriplanck, Jl., Binghampton, N. Y.-Dashboard and Rein Mrolder.-Marel D4, 1868.-The rail is bent inward to form reeesses at the top and sides, and the holders are arranged therein.

Claim.-1. The combination of the rein bolder $z$ with the dash board irons a B C, as shown.
2. So forming the side and top irons of the clashboards of carriages as to reecire, in an indentation in those irons, the rein holder, the top of which shall be but little abore the line of the iron, the ends' of the indentations being so shaperl as to be a stop or ghard to the rein, preventing it from being snatched or switehed out of the holder, as hereinabore set forth.

76,00S.-A IEXANDER W ARNER, Williamsburg, N. I.- Fruit Jar and Prescrving Fesscl.-March 24, 1868 ; antedated Mareh 18, 1868.-The lid and its seat have vertical perforations which may bo bronght into comncetion to allow of the exhaustion of the air in the ean therethrongli.

Claim.-1. A ressel, withits lid, eorer, or stopple, eonstrueted and combined substantially as herein described. whereby a vent is opened and closed by simply turning the lid, cover, or stopple, or the rest sel, the one relatively to the other, as herein set forth.
2. Likemise, in combination with the same, a perforated clastie paeking or gasket, interposed between the lid or corer and perforated portion of the jar, substantially as specified.

66,005.-ALEXANDER Warner, Williamsburg, N. Y.-Closing Ireserving Tessels.- Mareh 24, 180 antedated March 18, 1868 . - In the lid are two perforated disks the upper one of which may be tmened to allow passage to tho air while being exhansted. The air is removed throngla one or both of the tubular leg's of the operative key.

Claim.-1. A eover eomposed of tro principol perforated pieees, eombined to operate substantially as herein specitica.
2. The perforated gasket, in eombination mitli the perforated ralye and porforatod seat, substantially as hercin specificd.
3. The wrench eomposed of two conneeted prongs, one or both of which are made tubular, to form an air passarge communcating with the comesponding aperture or apertures in the eover of the vessel, substantiully as and for the purpose specitied.

6,010.-Joserif Watts, Birmingham, Great Britain.-Heating l'urnace.-Marlı こ4, 1868. -The air entering the air-tight fire chamber has it downward tendeney owing to its passage between the bent grate bars. Jhe caloric carrent has down ward escape into the flne leading to the smelting finmace where it is atilized. The lower pirt of the fire chamber is pyramidal, and formed of tire elay or of a series of angle bars. The steam from a boiler surroundino the fire chamber is eondincted to a eylinder, and on the pressure of the steam increasing cubove a eertain point the weighted piston rol is raised and the damper elosed.

Claim.-1. Arranging the grate bars or fire bars in snch a manner as to deflect the draught, or a portion thereof, in a downward direction, or in the direction in which the fuel is introdneed, substantially as and for the purpose set forth.
2. The grate bars $f$ b, bent in $A$-shape, substantially as and for the purposes deseribed.
3. In combination with the grate bans $f$, a conical hollow bed $d$, and the flue $i$, below the wrate and bed, forming a downward and outward passage for the heated air and prodncts of combustion, substantially as and for the purposes deseribed.
4. A grate formed of conscentive lings of $\Lambda$-shapec? grate bars, arranged above each other in any suitalle mannor, substantially as and for the purpose set forth.
geg,011.-NELson Werster, Plainfield, N. J.Weeding Tool.-Mareh 24, 1868.-The frame of the cutter supports rake teeth.

Claim.-1. Tho sluffing hoe and rake, constructed as deseribed, eonsisting of the eutter C, provided with uptnrned cutting ends $d$, aud sccured to the bow If carrying the teeth $D$, as herein shown and described, for the purpose specificd.
2. Making the tecth of the rake, when they are fitted into a bow B, longer towards the rear, substantially as and for the purpose herein shown and described.
 Tuofing Compound.-Mareh 24, 1868.-Composed of coul tar, 50 ; burnt clay, 5 ; lime, 20 ; magruesia, 15 ; and silien, 10 parts.

Claim.-The within-deseribed compound, when mixed and used, substantially as and for the purpose specified.

66, 01 13.-Franklin A. Wells, Brattlcboro, Vt., assignor to Jacob Estry \& Co., same plaec.Reed Organ.-March 24, 1868.-The swell has a stud whieh is engraged by an arm on a rock shaft which has another arm eonnected by a rod to the operative lever. The litter has a rertically adjustable picee by whiel it is operated by the knce of the performer. Claim.-The combination and arrangement of the frietion spring or brakc, with the adjustable knec piece and lever E of the mechanism for effecting the elevation of the swell.
gfon 0 是-W. C. Wendell, Albany, N. Y.Slate Frame.-March 24,1868 .-The fiane is sceured at the eorners by conver-headed studs.

Claim.-The elastie eushions $b b$, formed upon the ends of a contraeted neek $a$ and adapted for the protection of slates, substantially as deseribed.
 Dressing Mides and Furs.-Mareh 24, 1858.-After removing the hair. the hide is stretehed out, flesh sido up, and that side eoated $\frac{1}{3}$ of an inch deep with the following eomposition: new milk, 1 qt.; wheat flour, 1 qt.; barley meal, $\frac{1}{2}$ pt.; oat meal, $\frac{1}{2}$ pt.; corm meal, 1 pt.; sal soda, 1 oz.; cream tartar, 1 oz.; salt, 1 pt.; and oil of vitriol, 1 oz . When suffeiently dried, the hide is worked over a beam with a fleshing linifc.

Claim.-1. For tanning composite, the combination of the ingredients herein named, when applica substantially in the manner and for the purpose set forth.
2. The composition herein named for coloring furs and leather, substantially as shown and described.

G6, 1916: - Elonzo S. Wheeler, Westport, Conn., assignor to limself and J. E. Wheeler, same place.-Button.-March 24, 1868.-The stem of the button lias movement therein so that the button may be drawn outward from the face of the garment when engaged with the button-hole, and may be drawn to the garment to show a good appearance when disengaged.

Claim.-The arrangement of the button attaehment or rivet within the buttou, so that, while the button is secured by the attaehment to the garment, the button may be drawn from the garment, and return, substantially in the manner herein set forth.
\%6,017.-A. M. Winte, Thompsonville, and E. G. BURNHAM, Bridgeport, Comn.-Faucet for Soda Water Fountains.-Mareh 24, 1868. -The tubular stem is attached to the valre whieh closes the main passage and is arranced in the said passage in sueh manner that the liquid may be eansed to pass throngh the tubular stem in a small stream previous to the opening of the larger passage. The eontinued upward movement of the valve of the tubular stem serres to raise the larger valve and permits the larger stream to pass through the passage of the "bib."
claim.-1. The tubular stem $e$ of the valve $B$, arranged within tho passage $c$ of the bib $\Delta^{*}$, snbstantially as and for the purpose speeified.
2. The supplemental ralve $\mathrm{C}^{*}$, arranged, in combination with the valve $B$, on the tubular stem $e$, and
so construetcd that, after opening the said tubular stem, the continucd inovement of sneh supplemental valre shall lift the ralve $B$ to open the passage $c$ of the bib, substantially as and for the purpose specifica.
\%6,018.-JAMES Whitemill, Frederick, Med.Mot Air Furnace.-Maxeh 24, 1868. - Improrement on his patent of November 8, 1859. The cold and warm air tubes are so adjustable in relation to and with caeh othcr, and to a blower, that the air can be regulated in temperature and quantity.

Claim.-1. When used in connection with my furnace, as above deseribed, the attachment shown in Fig. 4, substantially as and for the purpose set forth.
2. The enmbination of a fan $S$, with a pipe $N$, leading fiom the lower part of the room to be warmed to the lower part of tho hot air chamber O, by which a eircuit of air ean be established that will exhaust the eold air from the room, pass it over the heater, and return it warm to the room again, substantially as and for the purpose set forth.
'g6, 2 IO.-D. S. Whittenhlall, St. Louis, Mo.Portable Building.-Mareh 24, 1868. - The floors are made fiom two side joists comneeted by a serics of cross joists mortised therein, traversed by girder rods. The sides are conneeted to the floors by angle irons. The gables aro seeured by metallic straps to the batteus of the sides.

Claim.-1. The combination of the rods $c c^{\prime} c^{\prime \prime}$, angle irons $h h^{1} h^{2}$, \&e., straps $p$, hinges $e e^{1} e^{2}$, \&c., with the sections and battens of a portable house, as and for the purpose speeifich.
2. The construetion of a portable or permanent building, substantially as shown and spceified.

196,020. - D. R. WIGHT, Sturbridge, MassAul Handle-Mareh 24, 1868.-The screw is eylindrieal and the end of the split cone and mut are alone inelined.

Claim.-The eonical nut $b$, in combination with the flat ended serew $a$ and split cone $c$, when construeted and arranged so that the split cone shali be made to close upon the awl by the aetion of the conieal nut alone when screwed mp as herein shown and described.

69,081.-C. Williams, New York, N. X.-Pavement.-Marel 24,1868 . The metallic bars are doretailed into the blocks to form keys of attachment and to add to their durability.

Olaim.-The arrangement of metal bars $b$, inserted into suitable grooves in the upper surfaces of the wooden parement blocks $A$, so as to produce a trearing surface, sabstantially as and for the purpose set forth.

G6, 02:-EDWIN Wrlliams, Rowlesburg, W. Va.-Wood Turning Lathe.-Mareh 24, 1868.-Improvement on the patent of Pcter Preseott, Octolser 8, 1861. The eutters are piroted at one end and the other ends have pins which trarerse the obliqne slots in the arms of the slidiug slecve by whose longitudinal movement the eutters are moved out or inward.
Claim.-The sliding eollar B, when provided with the arms $c$, passing through slots in the flange $a^{\prime}$ of the hollow spindle $A$, aud haring the diagonal slots for the reeeption of the pin d' npon opposite ends of the eutters $D$, which are also piroted at opposito cuds to the flange of the hollow spindle, all constructed and operating as described for the purpose specified.
y6, (1223.-Jesse Williams, Johr Forgie, and Janes Edwaidos, New York, N. Y. - Furnace Grate Bar.-March 24, 1868. - The bar has two side portions whieh are eounceted by several eross bars and a perforated coneave top.

Claim.-The eombination, in a furnaec grate bar, of troo thin areled webs $a$ a, transverse partitions $b$, and eoncave perforated top bar $c$, all constructed in the manner and for the purpose herein deseribed and represented.
g6.034.-Philip Wisdom, New York, N. Y.Machine for Opening Hair Rope.-MErch 24, 1868.The end of the rope is elamped between two jaws of a swircl mpon a sliding frame. The jows are drawn
together by a sliding sleere which is pushed baek as the jars come in contact with the untristing heads so as to release the rope. The rope is untwisted by passing through rotating tubes and around slools Which turn on bent arms at the front ends of the tubes. From the untwisting tubes the rope passes to the elastic rollers and is presented to the revolving beater rods.

Claim.-1. The rerolring tube E, operated by the disk D , and arranged eccentrieally within the tube $a$, having the handle $b$, said tube E having eccentrically mpon its face the arms $c$, bearing the roller $d$, whose revolutions are cansed by the passage of the rope, as and for the purpose herein shown and described.
2. The smooth heaters $\Pi$, in combination with the plate I, rollers F G, rollers $d$, tulees $a$ E, and clamp $J$, as herein deseribed for the purpose specified.
3. The loose conical roller $d$, when arranged in relation to aud combined with tube E , in the manner and for the purpose described.
4. The strivel clamp $J$, when made substantially as herein shown and deseribed, and when provided with the sliding plate or sleeve $h$, in combination with the tube E, substantially as herein specified.
5. The plate I, having curved upper and lower edges, arranged and combined with the rollers F ( F , and with the beaters H, as herein described for the purpose specified.
6. The arrancement and combination, with each other, of the rail L. block K , swirel clamp $J$, tube E , roller d rollers F G, plate $I$, and beaters $\Pi$, all made and operating substantially as herem shown and deseribed.
\% 6,025,-George L. Witsil, Philadelphia, Pa., assighor to Thomas E. Hauberger, same place- Composition for Sharpening Edge Tools.-March 24 , 1868. - The grinder is composed of a mixture of finely ground diut and potter's clay, which is baked to render it sufficiently hard and insoluble.

Claim.-A composition for sharpening tools, compounded and prepared substantially as set forth.
g6,0:G.-James E. Woonrufr, Buffalo, N. I. -Letter Box.-March 24, 1868.-The box is for attachment to a lamp post. The letter passage in the top has a cover whose cam projection operates a ferer inside, and the lever is connected to the free edge of the hinged plate so as to close the aperture between the plates when the lid is raised. When the lid is closed the letter slides off the plates through the aperture.

Claim.-The box A with statiouary plate G and hinged plate $F$, both of which extend obliquely below the lid A and form a V -shaped throat, which is opened or closed by the cam B attached to the cover A, lever D, and rod E, substantially in the manner hercin set forth.

96,02\%.-Willian Wrieitit, New York, N. Y -Cut-off Valve Gear.-March 24, 1868.-The adjustable eain is conneeted to the stem by a stud sliding in a somewhat spiral groove of the stem, so that longitudinal morement of the stem regulates the cutoff. The stem may be conneeted with the gorcrnor.

Claim.-The combination with the separate induction valres to opposite ends of the engine cylinder of the fixed cam $E$ and varizhle cam $G$, arranged for action in cither direction of the engine's travel, substantially as described, openiug and cut-off toes D $I I$ and ' $\mathrm{D}^{\prime} \mathrm{H}^{\prime}$, geared by levers $J \mathrm{~J}^{\prime}$, or their equivalents, for joint but independent action in opposite sides of the axes of the cams, and whereby not only are the valves opened and closed independently of each other, and each made capable of different cut-off strokes by the action of said eams on the toes, but whereby both the opering and elosing movement is given to either ralve, respectively, from the same side of the axes of the cams as that on which the valve lies, essentially as herein set forth.

M6,028.-ADOLPII Yorns and E. J. Smitir, New York, N. Y.-Kite.-March 24, 1868.-The frame supports a web somewhat in form of a man.

Claim.-The kite frame A when constructed of the downwardly converging rods $a$, cross bars $b$ of $f$, and ring or segment $c$, all combined and arranged to
produce a kite of substautially the figure herein shown and described.
g6,0:89.-Willlam Znmmemin, Colfax, Iowa. - Horse Hay Fork.-Marel 24, 18is. -The tines at the rear part are comected to the eross bar which is attached by a chain to the trip head. The upper ends of the tines conrerge and end in a ring which is engraged by the hook and hell thercon by the trip lever. The trip lever has a projection which is engaged by the yoke when the fork is in operation. To free the load, the yoke is raised by the trip cord and the ring eseapes from the hook. A plate may be attached to the upper side of the tines to render the fork applicable for raising earth.

Claim.-1. In a hay or manure elevator the combination of the hook C, latel D, roke D, chain B, and connecting bar G , arranged substantially as and for the purpose set forth.
2. 'The combination with a horse hay fork of the transterse bar $\mathrm{H}^{\prime}$, applied and operating in the manner and for the purpose set forth.
3. The combination with a horse har fork of the scoop or blade K, applied and operating substantially as described.
4. The detachable handle I and rod or brace $J$ in combination with a horse hay fork, substantially as and for the purpose set forth.
196,030.-August Zinsser, New York, N. Y.Tapping Piece for Barrels.- Narch 24, 1868.-The tube has a fiusto-conical screw threaded end for insertion into the bung hole, and has cars for engagement of the key or hands of the operator.
claim.-The cast-iron tapping piece A with a serew thread 13 and cars D D, substantially as shown.
g6,031.-Emil Zinssmanx, New York, N. Y., assignor to himself and Ciatress Rumpre, same place. -Compound of Aniline Colors-March 24 , 1868. Two to 6 lbs of glue are dissolved in ace ic acid, and of the aniline color, fincly pulverized, 1 lb . is added; the mass is then thoroughly worked and placed in a tight ressel, which is heated in a hot-water bath, and the mass constantly kneaded until the color is diissolved. For purple, glycerine may take place of the aectic acid, as the latter injures that color. When glyecrine is used the glue must be first dissolved in a sinall quantity of water.

Claim.-A componnd which is soluble in water, and made from such aniline colors which in themselves are not soluble in water, by treating saicl colors with glue or equivalent substances, either alone or mixed together, and with a liquid, such as acetie neid or glycerine, or their equiralents, either alone or mixed together, as herein set forth.
rg, 03.3-Willlam F. Collier and J. If. BigeLow, Worcester, Mass.-Broiler and Toaster:March 24, 1868.-The frame has lug's which are former upon it to secure the hars in position.
Claim.-The wirc frame A A wheri provided with a series of ears or projeetions D D, formed by pressing out part of the metal without bending the wire, in combination with the bars 13 B and handles, substantially as and for the purposes hereiu shown and described.

76,033-Levi Adams, Amherst, Mass.-Carriage Wheel.-Mareh 31, 1868.-The spokes are elipperd to a conical plate whose apex has a calp which turns on the end of the spindle.
Claim.-1. The metallic cone-shaped shich or deflector C , applied or attached to the hub and spokes of the wheel coneentric with the hub, substantially in the manner as and for the purpose set forth.
2. The combination of the metallic hub A with the box D , arranged substantially as shown and deseribed.

96,034.-Joun Adt. Wolcottrille, Conn., assignor by mesne assignments to William M. IAme and George S. Hulford.-Ilinge,-March 31, 1868. -The pintle is finished with two heads before insertion, and the tongues elosed upon the same.

Claim.-A hinge pin formed with a head at each end previous to being introduced into the liuge, in the manner set fortll.
66.0.35.-Abram Alexander, Pittsburg, Pa., assignor to Alexander BolT Manufacturing Company, same plaec.-Tool for Shearing Bolts.Mareh 31, 1868.-The bar is cut by rolling between two edges moring in different directions.

Claim.-1. In tools for entting round iron bars, tho eombination of the crank $D$, pitman I , lever F , cogs II H, with the picees K K', dies M and M', and suitable frame $A A^{\prime} A^{\prime} B$, arranged substantially in the manner and operating as set forth.
2. The sliding pieces $K$ and $K$, carrying sharpodged steel dies, constructed as deseribed, for indenting or grooving round iron rods for eutting the same, all arranged and operating substantially as specified.
3. The dies M and $\mathrm{M}^{\prime}$, haring sharp ridges $m \mathrm{~m}^{\prime}$, and the projection $V$ when used for grooving and breaking round iron, in the manmer substantially as described.
969036.-JOIN Bachelder and WIlLiAM II. BLiss, 2d, Norwieh, Conu., assignors to Jorin Bach-ELDER.-Harness Operating Mechanism for Looms. - Mareh 31, 1868. -The jack levers are eonstructed with a switch lever applied wholly above the axis on whiell the levers swing. A tubular sleere is fitted loosely upon the shaft earrying the eecentrics, and having the jack levers fitted loosely upon it, whereby eaeh jaek is allowed independent movement, and the shaft allowed to rotate independently of the jaeks.
claim. - 1. The vertieal jack $c$ and pivoted switeh lever $k$, both constrneted and eombined as shown, the switeh lever being attached above the axis of the jacks, and arranged with the pattern deviee, as and for the purpose set forth.
2. The componnd jaek lever $c 7$, eonstructed as deseribed, in eombination with the pattern deriee and with the meehanism, substantially as shown, Whieh aetuates the pattern, all for the purpose set forth.
3. The arrangement of the sleeve $d$, jaek levers $c$, shaft $e$, and eccentrics or cranks $f f$, substantially in the manner and for the purpose described.

76, $03 \%$-Daniel W. Bancrofr, Marshfield, Vt.- Washing Machine.- Mareh 31, 1868. - The beaters have two sets of arms, by one of which they are hinged to the lid, and by the other connected to the operative cranks. The suds box bottom slopes to the end where the beaters operate, and is lined with zine. The shallow end of the tub has a washboard.

Claim.-1. The swinging supports $h h$, provided with spiral springs $m m$, in eombination with slots $g g$ and shaft $E$, substantially for the purpose speeified.
2. The adjustable cross beam $B$, to whieh are hinged the beaters $d d$, in combination with hinged arms $f f$, shaft E, swinging supports $h h$, and spiral springs $m m$, all arranged substantially in tho manner herein set forth.

76, 038.- William Bantster and Albert H. Rowewt, Lawrence, Mass., assignor to themselves and IsAAC H. Butrrs, same plaee.-Lacing Boots and Shoes.- March 31, 1868. -The laee is passed through the hooks and the clasp at the top made fast when the lace is secured to the samo.

Claim.-l. The clasp for sceuring the lacings of boots and shoes, consisting of the plate B, having the turned-np lip $b$ attached to its lower portion, the tongue $b^{\prime}$ upon its upper edge, and the downward projecting lips $b^{\prime \prime}$ upon each side of said tongue, as herein shown and described.
2. A loop lying flat upon the surface of the leather and attached to a stnd, or its equivalent, said loop being allowed to swing with the motion of the shoe string, substantially as herein shown and described.
フほ, $939 .-$ Harvey Barton, Elylia, Ohio.Dumping Wagon. - March 31, 1868; antedated Mareh 25, 1868.-The reaehes are plaeed beneath the sides of the box so as to offer no impediment to the hinged sections of the box bottom when they are allowed to drop in dumping the load. The said seetions are hinged at the front edges, and the rear edges are sustained by a series of slide latches which are simultaneously retraeted by lerers.

Claim.-1. The levers iv Mt, links $O$, and slides
$J$, as arranged, in combination with the bottom $\Gamma^{\prime}$. in the manner as and for the purpose set forth.
2. The hound $D$, reach $G$, and yoke $F$, as arranged, in combination with the brackets E, for the purposo and in the manner set forth.
g6,040.-Henry L. Beacir, Netw Yoik, N. Y., assignor to Beaci Horse May Rare MandfacTURing Co., same place.-Horse Rake.-March 31, 1868.-The up ward, forward ends of the toothed bars of the rotating rake head rest, when the rake is in aetion, upon a bar whieh is slid forward to release the teeth and allow the rotation of the head when diseharging the gathered hay. The rake head is divided at mid-length and pivoted to a eonnceting piece extending to the cross board.

Claim.-1. The combination of the teeth heads E and teeth F with the jointed bar, rod, or head D, constructed and operating substantially as described.
2. The sliding bar M in combination with the spring $N$ and firane, when the same shall be construeted and operate substantially as deseribed.
3. In eombination with the jointed bar, rod, or head $D$, the conncetions $C$, constructed and operat. ing substantially as and for the purposes set forth.
4. Attaching the sliding bar $M$ to the firame, so that the same may be moved array from the teeth heads $E$, for the purposes set forth.
reg, 041.-Charles Bender, Hesse Darmstadt, Germany.-Wire Truss Bridge.-March 31, 1868. The upper chord may be formed straight, and is eon strneted of wood or iron. The lower ehord is downcurved and made of wire with suitable commections.

Claim.-1. A bottom eliord consisting of an unbroken main cable and side eables, the latter con sisting of as many pieees as there are panels, sub stantially as and for tho purpose specified.
2. The joints of the bottom chord, consisting of two side plates and a covering plate, as shomn in Figs. 1, 2, 3, 4, 5, the several parts being eonstrmeted and used as and for the purpose herein specified.
3. The saddle joining the bottom and upper chords in connection with bottom ehords of truss briclges eonstrueted of wire cables, substantially as set forth.
ge, 042.-Toun W. Bentley, Woonsocket, R. I. -Machine for Manufacturing Clouded Yarn.March 31, 1868. - Intermittingly operating rollers are attached to an ordinary spinning frame, by which a portion of the thread of one color is contimously spun, while roping of another color is combined with them in such manner as to produce changes in the color of the yarn at regular intervals.

Claim. -The combination of the additional rolls H I I, and the change gear G with a common spimning frame, arranged and operating substantially as and for the purposes herein shown and described.

F6, 043.-GEORGE Bradway and N. Bradley, Maquoketa, Towa-Reel.-Marelı 31, 1868.-Rcel heads are attaehed to the spokes of the main wheel and a worm gear to its lub, to cnable the recling and measuring of the yarn as spun.

Claim.-The combination and arrangement of stand D, spindle C , and wheel B , having hooks a and worm $h$, with wheel E , pin $i$, shaft $m$, nnt $p$, and spring $n$, as and for the purpose set forth.
gB, 14 - James Bramble and Hugit M. Deifil, For't Wayne, Ind.- Piano Stool.- March 31, 186s.The stool top is upon a planger which is packed at the foot and plays in a cylinder, into whose lower end the water is pumped by morement of a lever which is raised by a spring and depressed by the foot. The water may be allowed to flow from the cylinder by raising the lever to a eertain height. The water is contained in a case in the base of the stool.

Claim.-Controlling the height of the scat of a piano stool by hydrostatic pressure, substantially as described.
g6. $045 .-$ Tosepir W. Branhan, Franklin, Tnil. Draught Regulator.-ALareh 31, 1868 .-The damper frame is secured to the montin of the furnace by the hooks upon its sides, and its guillofine damper is
mored by a lever held to its adjustment by a pawl Whieh engeges a ratelet upon its upper side.

Clain.- The draught regulator, constructed as deseribed, consisting of the frame $A$, having the sheet B and the damper $C$, to which the imner end of the notehed lever $L$ is piroted, having its fulcrum upon the side of the frame $A$ at $a^{\prime}$, said damper being held in any desired position by means of the pawl dengaging with the notehes $h$ of the lever $H$, as herein deseribed for the purpose speeified.
 Y.-Saw Sct.-March 31, 1868.-The point of the tooth rests agrainst the adjustable grange, and is set by the action of the sliding tool, actuated by the wedge, which is foreed beneath its lower end.

Clam.-The wedge D, in combnation with the siding bar E , plate C , handle A B , and gange-serew L, all arranged as deseribed for the purpose specified

76, 94月.—Charles II. Buck, 2d, West Arling'ton' Vt.- Attachnent for Sewing Juachines.- ILarch 31, i868.- The guide has an adjustable, removable binder: whiel is set to genide bands of trimming to any required distance from the edge. A spring presser may be substituted for the binder. The hinder has an arm secured to the gauge, and carrying another arm which is remorable. The end of the upper arm ts bent down and toward the gange, and the end of the lower arm is bent up and turned toward the gauge. 'The eloth is laid between the ends of the arms; the upper, being a spring plate, adjusts itself to the thickness of the eloth. The binding hand is held between the ends and body of each arm, and! rests against the adjustable sliding plates.

Claim. -'The binder, constroneted as described, consisting of the plate B, having a tapering shank, and fiting in the dovetailed reeess in the bar a. its forward end bent down and forming a loop bearing the foljustable guide $e$, and its rear end provided with the jpening for the reception of the outer end of the plate C, which is held in place br the slide at, the forward part of said plate $C$ being bent down and forming a loop having guide $e$, and placed directly ubove the loop in the plate B as herein described for the pur pose specificed

76,048.-Challes BuFFUn, Lymm, Mnss.- $1 p$ plication of an Inner Sole to a Last. - Marel 31 1868. - Improrement on the patent of Charles Buffum and Joseph B. Johnson, Febrnary 7, 186\%. The last has a row of socket plates along the middle of its sole, and beneath the plates are rubber or metallie springs, which grasp the neckis of the pointed pins Which are passed through holes previonsly made in the sole.

Clam.-1. In combination with a last, derices substantially as deseribed, or their equiralents, for centralizing and holding it sole to the last, the same consisting of the soekets and their springs, and the pins therefor.
2. The arrangencent of the holding socket and its spring, at the toe of the bottom of a last, so as to enable a person by means of a pin, as described, to secure tre upper of a shoe to an insole by passing the pin throngh the upper and into the socket and spring, as set forth.
3. The mechanism or combination for holdins. the sole to the last, snch consisting of the groored and headed pin, the soclicted plate, and the plate of rul)ber or the jatred springo, the whole being substantialiy as set forth.

96,049.-Andrew Carner, New Tork, N. I.-Hose.-Mareh 31, 1868. - Whe cross joints are made spiral, and the main pieces being brought edge to edge are corered by a batten, which is riveted at both its edges.

Claim.- The constructing of hose for condueting. water, formed of leather or other material of suflicient strength and flexibility, joined substantially as shown and deseribed.
g6,050.-J. B. Case, Fletcher, Vt.-Lever Pur-chase.-March 31, 1868.-The fulerum block is recessed ecntrally to receive an acorn-shaped projection on the base block, and turns thereon.

Claim.-1. A universal joint lever purchase or
lever support, substantially as shown and described and for the purpose set forth.
2. The lever plate D, in combination with the the trumnions $a$, and bock $B$, and pivot $C$, substan tially as shown and deseribed and for the purpose set forth
3. The block B, in combination with the stand A and pirot C, and any lever arm D, substantially as shomn and deseribed and for the purposes set forth.
4. The combination of the set serews E E with the groore $F$, in the stand $A$, and with the block $B$ and lever D. all constracted and operating substantially as and for the purpose shown and described.
g6,0.51.-E. M. Chapin and Solon Rust, Pine Meadow, Comn.-C'umenter's I'lene.- Iareh31, 1868. -The guide picees and adjusting serew pass through the upper bir of the fence instead of through the stock, is msual.

Clam.-TMe joiner's' plow, constructed as described, and eonsisting of the stock $A$, herving slotted, langed guides $\mathbb{C}$ projecting from one side, the fence 13, serew D, formed with it tenon $d$, and fitted with a head $c$, and the thmmb serems $u^{\prime} b$, provided With collars $c$, all arranged and operating in the manner and for the purpose set forth.
\%6.05: - DILTON W. CLALK, WHecester, Mass., assignor to IR. BALL, \& Co., same place.-Cutter Hect for Tenoning Filind Slats.-Marel 31, 1.68.-The rotary head chrrics serrated cutters for the cross cutting, and plane cutters to form the sides of the cylindirical parts of the tenon and shoulder

Claim.-She combination with the head A of the cutters a $a^{\prime} b b$, and $c c^{\prime}$, arranged to oper"ate as described, so that, at the same time a tenon is formed by said eutters, an offiset may be cut in the shoulder of said tenon, substilntially as shown and set forth.

76,053.-JOHL H. Colnwela, Toughkeepsie, N. Y.-Taby Jumper.-Narel 3T, 18tis.-The seat is placed at one end of a lever which has an adjustable rulerum, and whose other end is held down by a spring.

Clain.-1. Making the sent bar of a baby jumper longitudinally adijnstable on its fulerum, substantially as herein shown and ilescribed.
2. Making a portion II of the pailing around the scat of a baby jumper detachable, or so that it can swing open, substantiully as and for the purpose herein shomn ind deseribed.
3. The arrangement and combination with caeh other of the base $A$, cill's 13 , seat har $C$, acljustable plate $E$, lug's b, spring $F$, and serew $d$, all made and operating sulbstantially ns herein shown and de scribed.
g6.6.54.-Franclis 13. CONTESSA, New Yorls, N Y.-Cortling Attcchment for swoing Mrachines.Marel 31, 1868.-'O the ordinary foot pad is attached a curredroller, and al!usted tixeroon is an elastie ring whereby the machine is adapted to eording and welting generally, and erpecially to seming the lace of shoulter streps.

Cleim.-1. The combination with the presser bar A of the brizelet I) and roller (', constructed, ar ranged, and operating with the sewing machine, as and for the purpose set forth.
2. The elistie thimble or band $\rho$, in combination with the roll C, substantially as and for the moposes set forth.
\%69.05\%,-FnEnemCK COUlon, Rockford, Ill.Kinife for Cuting straw 13ands.-March 31, 1808. The kinife has a sickle edge

Claim,-A knife having the hamble $B$ and blade A, the latter being provided with an incline sickleedge a, curved outwardly, or in a consex line, from the handle to the point of the blade, substantially ats and for the purpose specified.
 Mrule for Spinning.—Mareh 31, 1868. - The mechanism is such as to give an equal motion when runuing ont, but a quick return except at the end of the return stroke, when the speed is reduced to prevent rebound.

Claim.-The combination, for operating the car
riage, of a mule in manner as set forth, sueh consisting of the chain C, and its impelling and gnide-wheels, tho pinion $c$, toothed sector $d$, arm $g$, tho pin $h$, and the slotted plate $\%$, the whole being arranged substantially as specified.
gabejay.-M. S. Curtis and W. D. Teivisburx, New York, N. Y.-Hose and Pipe Coupling. - March 31, 1868; antedated March 16, 1868.-One end of the ring extends beyond the ear and passes beneath an outwardly-inelined portion of the other end.

Caim.-A split or divided and adjustable ring clamp, constructed with its one enid recessed, as at $n$, to receive within it a tongne or lip $m$, arranged to project from the opposite end, substantially as and for action or operation, as described.
g6,058.-Bentamin P. Cutler, Boston Mass.Safety Guarl for Fire-Arms.-March 31, 1868.-The end of a guard rod is presented at the side of and beyond the nipple to receive the impact of the hammer mutil such time as it is desired to fire the gun, when the rod is slid forward. The guard is thrust into position by a spring and is retracted by a spring lever which aets through the curved lever.
Claim.-1. The combination of the sliding rod $m$, haring projection $i$, the piroted plate $d \circ$, curved piroted lever $a$, and springs $s b$, all arranged within a recess in the stock $A$, to operate substantially in the manner and for the purpose set forth.
2. The nuxiliary spring $b$, or its equivalent, substantially as shoivn and described, in combination with plate $d$, rod $m$, and lever $a$, all as and for the purpose set forth.
g6,059.-S. S. Daxumls, Kendallville, Ind.Machine for Bending Carriage Circles. - March 31, 1868. The blank is clamped to the hollow "former" and bent around in the suitable groove thereof by the revolution of the follower wheel. The follower wheel is upon an adjustable lever and may be arranged to act with either of the grooves of the "former," Which contains water to prevent heating.

Claim. - The combination of the hollow former A, haring two or more shoulders $a^{3}$, formed upon its face, clamp C, cam-loter D, slotted and jointed piroted shaft $E$, adjustable lever $G$, and flanged and recessed followers If with each other, said parts being constructed and arranged substantially as herein shown and described, and for the purpose set forth.

76,0660- Jonn C. Delavigne, New Orleans, La. -Steam Plow.-March 31, 1858. - A gang of Terti-cally-adjustable cultirators or plows is attached to a frame monnted on wheels and driven by steam power. The machine is guided by a wheel journaled on a vertical shatt. The eultivators are flanked by fenders for protection of the plants which are under cultivation.
Olaim.-1. The construction and arrangement of the frame A, of any desired size, in combination with the traction wheels D, substantially as shown and deseribed.
2. In combination with the frame and wheels, the shaft II, formed substantially as described.
3. The arrangement and operation of the gangs of plows or cultivators D , and the manner in whicin the same are controlled, substantially as described.
4. The rertical protecting rods E, sabstantially as and for the purposes herein described.
ge, Did 1 .-Jenemair Deple, California, Mich.Combined Feed Trough and Rack.-March 31, 1888. -The derice may be used as a sheop rack, in which case the cover of the feed trongh prevents the entrance of seed or dust therein. When the troagh is nsed, the cover is turned up in front of the rack. When used for horses, the hinged roof is opened at the comb, and its two sections folded down at the side.
Claim.-The feed box Kind rack II, in combination with the rool A , slats C , button $f$, and board D, arranged substantially as herein shown and described, for the purpose set forth.
geq9er.-Arcule Elais, North Granvile, N. Y. -Railway Chair.-Mareh 31, 1868.-The chair is made in sections, each of whieh holds one side of the
rail, and the scetions hold together by counterpart catehes made in their base plate.

Claim.-Forming the chair for railroad rails in two parts, B and $\mathrm{B}^{\prime}$, whieh are drawn and herd together by their hooks $a$ a substantially as shown and deseribed, for the purpose of elamping and holding the rails A , all as set forth.

学9,063.-GEORGE ERTEL, Liberty, Inl-Compressing and Beater I'ress.-Marel 3i, 1868.-The beater is attached to a rope which is coiled on the driving wheel at the top of the sweep-shatt. The rope is tripped from the driving wheel, by an inclined arm, once for each rotation of the wheel, and allows the beater to descend upon the hay. The pressure is completed by toggle levers operated by a cord winding upon the eylindrical part of the sweep-shaft.

Clain.-1. The driving wheel H , formed with a slotted bar o and morable tongue u, rhen construeted substantially as shown and specified.
2. The levers $W W^{\prime}$, yokes P and $\mathrm{P}^{\prime}$, rope $x$, collai $z$, end pawl $d$, all in combination, when eonstrueted and arranged substantially as shown and specified.
3. The driving wheel II, lerers W W', platform M, rock-shaft $N$, lerers $s s^{\prime}$ and $t$, pawl $d$, and collar $z$, of a compressing and beater press, all construeted and arranged in relation to one another and the other parts of the machine, substantially as and for the purpose speeified.
gif,060 L-David H. Fannivg, Worcester, Mass. -Hoop Skirt.-Mareh 31, 1868.-The vertieal tapes are woven with pockets for the hoops on the inner side. The hoons are held in position by clasps which are made in a crucial form. Two of the arms of the clasps are bent around a portion of the hooi) which is exposed between the pockets, and the other arms lie over the edges of the pockets.

Claim. - In combination with the pockets C C and hoop $B$, the clasps $D$, prorided with lips $b b$ and $c c$, the former extending laterally upon and elasping the edges of the pockets, as shown in Fig. 2, the latter inclosing and clasping the hoop, as slown in Fig. 3.
296.065.-Jomin Flely, New York, N. Y.-Bookbinder's Roll.- March 31, 1868.-The amular type plate is removable from the turning disk, for substitution of one having another pattern.

Claim.-A bookbinder's roll, consisting of the handle $A$. which earries the revolving disk $C$, and of the annular or circular type plate D, secured to the face of the disk, all made and operating substantially as herein shown and deseribed.

76,066.-P. S. Felter, Cincimatus. N. Y.Door' Lock.-Mareh 31, 1868. - The flat key has curved edges which act on the tumblers, and allow the rotation of the barrel, which actuates the bolt thoongh the cam which turns therein, and is attached to the barrel. In operating from the ontside, the tumblers of the inside division of the loek serve to complete the connection by which the bolt is moved, so that when an inner key is in place the bolt camot be manipulated from the ontside.

Claim.-1. A serics of bent tumblers $a$ or $a^{\prime}$, in connection with a flat or silw-plato key IE, noteled at its sides or edges, an arbor 1 or $G$, and thimbles F' or H, arranged to operate conjointly, one arbor, D. with the other, G, wieal the lock is to be operated from both sides of a door, as shown, or to operate separatcly, cael arbor with its concomitant parts, when the lock has hat one key-hole, substantially as shotrin and described.
2. The combination of the cam or cecentrie C , with the arbor D or G and thimble Fr or H , and the sliding tumblers $a$ or $a^{\prime}$, all arranged substantially as and for the phrpose set forth.

Mg, 06 g--Eucexe Fontane, Fort Wayne, Ind. - Catile Car.-March 31, 1868. - The movable platform is snspended on chains, ruming over sheares at the upper corners of the car chamber, and the platform may be drawn up to the roor of the car by winding the elains upon a longitudinal shaft beneatli the center of the roof.

Claim.-1. The adjustable platform $B$, in combimation with the pivoted bars $h$, for supporting sail platform in the top of the car, and with the slotted hori-
zontal arm $e$, for holding the same in position when lowered to the center of the car, as herein shown and deseribed.
2. The platform $B$, having the piroted hars $h$, when adjusted by means of the single longitudinal shaft D and the chains C, as herein deseribed, for the purpose speciûed.
\%6,06S.-James II. Foote, Pitfsfield, Mass. Slate Frame. - Larel 31, 1368 . - The top of the mor. tise is held thereon by the spring, buf in sueh a manner that either end of the cap may be raised up) to gain necess to the eavity; the spring drawing it down agrain.

Claim.-The case $c$, in eombination with the double-ncting spring $e$ and mortised frame $a$, substantially as deseribed and for the purpose specified.

76,068.—Challes S. Fond, Philadelphia, Pa.Gas Bumer. - March 31, 1868. -The burner turns on a cylindrical extonsion of a piece which is supported on a firnsto-conical plug attached to the gas pipe. This plug las an axial, serew-threaded boie, in whieh is a thamb screw by whose position the passage of gas is lecrulated.

Claim.-1. The application to gas burners of a unirersal artieulated joint, composed of body A, nut $N$, and projection $P$, burner B $U$ and head of burner $3^{\prime} \mathrm{U}^{\prime}$, the whole constructed and operating in the manner and for the purpose set forth and described.
2. The pecnliar construction of borly A, combined with serem $s c$, for the purpose abore described and set forth.

76,970.-Mrs. John Forn, Salem, Oregon,Back and Audominal Supporter.- Nareh 31, 18is.The front part of the band is gathered by a eord at top and botton, so that its central position may take an outwartly conrex form.

Claim.-I'he abdominal supporter, constructed as described, consisting of the band B , provided with the shoulder straps $F$ and thigh straps $G$, and having a gathered eenter II, upon each side of whieh the eyeleted strips I . T are scenred, the ends of said band prorided with the eyeleted strips C and elasps C D, all arranged as deseribed, whereby the supporter can be eonrerted into a band, to be nsed after confinement, as herein set forth.
\%6, 9 \% 1.-Lhonarn T. Fuller, Providence, R. I.-Steam-Enyine Governor.-March 31, 1868 .- The barel turns with the spindle, but has turning morement independently thereof by the oseillation of the weighted governor arms. The arms are mpon a spinclle irhich earries a segmental bevel gear engaging a bevel gear on the barrel. The independent turning of the barrel eanses a similar morement of the tongue by which the valre rods are mored through the needium of the firme. The tongue is thus made to eut off carlicr or later according to speed.

Claim.-1. The disk MI and tongne I , in combination with the frame iv, substautially as herein deseribed, and for the purpose set forth.
2. The combination of the segment gear wheel $F$, gear wheel G , and burrel If, arranged substantially as specified, and for the purpose set forth.
3. The spring' $s$, collar $I$, and barrel $I$, arranged substantially as deseribed, and for the purpose set forth.
4. The spring I , with tongue $L$, sninstantially as described, and for the purpose set forth.
gh, og: -G. WV. Gardner and Oliver Thagins, Napolcon, Ohio.-Fump.-Marelı 31, 1868.-The submersed pump has open ends. The imer eylinders hare a limitel, rertieal movement communieated to them by the friction of the plungers and constitute the valres, by alternately opening and closing the ports througli the "barrel."

Claim.-1. The internal movable cylinder H, haring diaphragm $h$ and openings $m$ m $m^{i}$ a $a^{\prime}$, in combination with the pistons I I'and passage $g$, all as and for the purpose set forth.
2. The tube post $\Lambda$, in combination with the internal movable eplinder $H$, lerer C, barrel $G$, pump rod $D$, and pistons $I I^{\prime}$, as and for the purpose set forth.
 Combined Hay Spreader and Cocher.-Mareh 31, 1868. -The hay is taken from the rake by the endless earrier and diopped into the receiver. The latter las a swiuging baek and a drop bottom to afford means for depositing the load.

Claim.-1. An improred mathine for cocking and tedding hay, formed by the combination of the gatherer G II J K and carrier L, or their equiralents, with the reecirer box $N$, having an upper grate $S$, a lower grate Y , and a swinging door $n^{\prime}$, substantially as herein shown and described.
2. The receiver box $\bar{N}$, finmished with an upper grate S , a lower grate Y , mel a stringing door $n^{\prime}$, substantially as lerein shown and described.
3. 'The combination and arrangement of the arm $y^{\prime}$, connecting rod $Z$, lever $W$, eommecting rod $V$, and lever U with each other and with the grate $Y$, grate S, and swinging door $n^{\prime}$, substantially as lerein shom and deseribed, and for the purpose set forth.
g 3,0 gu. - Thomas Giliesme, Ji., Pamlding County, Ohio.-Sorghum Evaporator.-March 31, 1868.-The evilporating panstands in the tank which is orer the furnace, and has nues pasing thronrol it. The steam from the tank may pass into the chimney.

Ćlaim.-The combination of the furnace $\Lambda$, tubes T, and tank C, subsfantially as deseribed.
g6,075.-'I. L. Goble, Orance, N. T.-Wagon Jock-March 31, 1868. - The lifting bar is notehed to receive the axle, and is pivoted to the standard at one end, while the other end is pivoted to the end of the hand lerer. At a short distance from the end the lerer is pivoted to the top of the hinged standard.

Claion. - The combination of the base har $A$, stationary sfandand B , piroted notehen bar C , piroted eceentric lever 1 , and piroted standard $E$, with each other, substantially in the mamer herein shown and described, and for the purposes set forth.
 signor to himself and J. F. Sramk, same place.S'wing Machine.-Mareh 31, 1868.-The motions are all derived from a horizontal disk pulley immediately bencath the table. Tho end of tho eurved bar, which operates the needle bar, onters a cam groore in the pulley top, and the shattle earrice is pivoted to a wrist pin upon the lower side of the puller. The feeder is actnated by a larer which is piroted to the shattle carrier, and Whose fulcrum is arljustable to regulate tho feed.
Claim.-1. The driving wheel C, the shmettle cirrrier $e$, connceted therewith by the wrist a and the oseillating sluttle quide box $g$, pivoted by the tubu. lar pirot $k$, constreeted, irranged, and operating substantially as and for the purpose herein described.
2. The combination of the wheel C , the shuttle carrier $e$, the feed lever $m$, the stide gatge $n$, and the feed plate o, all arranged and operating substantially as and for the purpose herein deseribed.
m $6,07 \mathrm{~g} .-\mathrm{L} . \mathrm{K}$. Mawns, Whitewater, Wis.-Bed Pottom.-Mareh 31, 1868.-The shats are supported on clastie straps which are clamped to thoir ends by the serrated bars, athaehed by serews to the slats, and whose other ends are looped to staples, which mary be inserted in the rails and retained by buttons.

Claion.-1. Slat A, elastic strap 13, bent staple C, and clamn $D$ in combination, substantially is described.
$\stackrel{\sim}{\text {. Seembing strap }} 13$ to slat $\Lambda$ by the serrated elamp $D$, substanfially as described.
3. Stuple C, with button E, in combination. substantally as described.
\%6,0yg.-Albent S. Morson, Planview, Minn. assignor to bimself and S. C. Harlas, Red Wing, Minn.-Morse Shoe.-Mareh 31, 1868. -The calks are mate of angle pieces which are inserted in transverse slots and retained by a key.

Claim. - In combination with a horse shoe, having slots or openings at the toes and heel, the calks, when provided with a rib or projection, and secured by wederes or lieys, substantially as and for the purpose speéfied.

76,0\%9.-Alonzo J. F. Howard, Milford, Mass -Boot Crimper.-March 31,1868.-The shanks of the moving jarvs have lateral movement in the mortise through the top of the elasp. The moving jaws are forced outward, to clamp the leather, by the wedgeshaped nut upon the clamping serew whose point bears aganst the tree.

Claim.-The construetion of the movable jaws $f f$, that is, as made with the clongated shanks $g$, for the purpose of lowering the jaws $f f$ bclow the top of the clasp $\varepsilon$, and forming the spaces $h h^{\prime}$, as and for the purposes before deseribed.

196,080.-J. Huston, Jr., and O. W. Stanford, Sharonville, Ohio.-Fastèning for Carriage Curtains. -Marel 31, 1868; antedated March 23, 1868. -The spring catch-pin is attached by a plate to the curtain, and its somewhat spiral point entcrs the apcrture of the plate attached to the body. The pin turns in eutering the plate, and is returned by the spring so that its shoulders cugage the plate.

Claim.-The plates A and B, and thumb-nut C , in combination with spring-eatel, D, construetcd and operating substantially as and for the purpose dccribed.

76,081.-John L. Janeway, Flemington, N, J. -Gate.-Mareh 31,1868.-The upriglts are supported by rollcrs which track on the sill extcuding from post to post, and the rails rest on swivcled rollers turning in braekets on one of the gate posts. A lip on the said post prevents the raising of the gate.

Claim.-The employment, in combination with the sustaining post $A$ and gate, of the swivelling castcr-wheel stands $e d e d$, the whole arranged and operating as described, for the purpose set forth.
2. In combination with the above, the retaining lip $i$, as and for the purpose sot fortl.
76,082.-Frederick J. Jones, Detroit, Mich., assignor to himself and Adolen Drci, same placeBelt Hook.-March 31, 1868.-The transverse bars of the hooks are connceted by a slecere to form a joint between the connected ends of the belt.
claim.-The construetion of a double hook and slecve, snbstantially as and for the purposes herein set forth and described.
\%6,053. - Samuel Kime, McVeytown, Pa.Shaft Bearing or Millstone Bush.-March 31, 1868.The adjustable bushing consists of four anti-friction rollers which are carried at the ends of pivoted arms adjusted by set screcrs. The whole is coitained in a case.

Claim.-1. The arms D, hung at one end to studs $e$, and bearing at their opposite extremities the friction rollers $\bar{B}$, when said arms are provided with adjusting screws $g$ passing transverscly through them, and adapted to rest against the imncr face of the side of the box $A$, all construeted, arranged, and operating as and for the purpose specifica.
2. The stuffing-box $H$ and follower $G$, substantially as shown and deseribed, in combination with the box A coutaining the rollers $B$ and hinged arms $D$, all substantially as shown and described, and for the purpose of bcing used as a millstone bush, all as set forth.
3. The set screw $g$, in combination with the hinged arms D , rollers B , box A , and stud $e$, substantially as shown and described, for the purpose of adjusting the rollers $B$, all as set forth.
gaf,034.-J. Kirchfield and F. Hexl, Ricgelsville, Pa.-Match Box.-March 31, 1868.-The fusc is fed out by turning the wheel, and serves to hold the fire when a match would be blown out by the wind. The cnd of the cigar is inserted in a hole of the box end and the knife npon the inside of the lid is brought down upon the same by closing the lid.

Claim.-1. The whecl Dx, fitted in the box B, in conncetion with the opening in the end of the box, and the slide $g$, all arranged substantially as and for the purpose soceificd.
2. The cutter e, iettached to the lid D, in counection with the opening in the and of the compartment $c$, substantially as and tor the mirpose set Erth.
3. The combination of the bov $B$, binged tids A. D, whoel Dx, slide $g$, and cutter $e$, all arranged sabstantially as and for the purpose set forth.

G6,085. - William Lang, Brooklyn, N. X.-Uinbrella.-March 31, 1868. - The bent lever curves partially around the runncr, and has a projcetion at one end which enters earities in the staff; and a spring beneath the other end which forces the projection inward.

Claim.-The umbrella rumer, provided with a fastening device consisting of the channcl a and eatch or lever D, in combination with the projeetions B , sul)stantially as deseribed.
g6, 089.-William H. Leacit, Dorchester, Mass., assignor to himself and SAMuel I. Pressey, same place.-Scissors Sharpener--Maxch 31, 1868.-The file is held in oblique grooves in the faces of the guide bloeks, which are drawn inward by the set screws, and pressed outward at the lower side by the bent, metallic spring.
Claim.-The inelined file C , in combination with the parallel blocks A 13 , screw or screws D D, and spring d, all constructed, arranged, and operating substantially as and for the purpose set forth.

76,08\%.-Julus Lehmann, Bloomington, Ill.Compound for Welding and Refining Iron and Steel. -March 31, 1868.-Composed of dry sand, 384; sulphate of iron, 8 ; sulphate of magnesia, 4 ; prussiate of potassa, 2 ; rosin, 7 ; Venctian red, 1 ; fuid muriatic acid, 2; and muriate of ammonia, 4 parts.

Claim.- A composition for welding and refining stcel and iron, and for restoring burnt stcel, made substantially in the manner and of the ingredients herein set forth.

76,088.-E. T. Ligon, Demopolis, Ala.-Formation of Joints of Steel or Iron Plates.- March 31, 1868; antedated March 20, 1868. -The faces of the flanged edges of the plates which come in contact are eoated with copper.

Claim. - The applieation of the coating of copper to the bent-over cdges of stecl or iron plates, as described, for the purpose of forming a tight joint, less liable to oxidation than stcel or iron, as herein shown and ūeseribed.

76,089.-John Magee, Chelsea, Mass.-Lamp Bumer.-Mareh 31, 1868.-The chimney holder has bearing against the upper curved portion of the cone, and against the outward cxtension from its lower part. The holder and chimney may be frecly raised from the conc.

Claim.-A stationarye one B, in combination with a perforated chimuey holder E , all construeted and arranged substantially as and for the purpose set fortl.
g6,099.-Ezra P. Marble, Sutton, Mass.-Shuttle.-Marel 31, 1868. -The bearing of the serpentine spring is so plaecd on the spindle head as to hold the spindle up, when completcly raised for the substitution of the bobbins; but when the spindle is slightly depressed the spring acts to return it to working position, and with accumulative force.

Claim,-The spindle B and lead C, provided with the inclines, as shown, in eombination with the rolute spring D, arranged and operating as and for the purpose set forth.

## \%4,031.-Canceled.

\%T,092-Isaac D. Mathews, Worcester, Mass. -Tournal Box.-Mareh 31, 1868.-The box is surrounded by a shell whose lower portion contains the oil whieh is raised by inclined wires in the shoulders of the shaft. The oil is carried up to the points which depend from the upper portion of the shell, and it then drops into the oil holes of the box.

Claim.-1. The combination, with the inner box $I$, of the shell $F$, substantially as and for the purposes sct forth.
2. The combination, with the shell F and the points or projections $g g$, of the collaris $\mathrm{O} O$ and oilcrs 11 , substantially as and for the purposes set forth.
3. The combination, with the bearing or journal box of a shaft, of onc or more collars 0 and oilers 1 , substantially as and for the purposes set forth.
4. The combination of the points $g g$ with the eaps $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$ and the top part L, of the box I, substantially as and for the purpose set forth.
5. The combination of the oilcrs 11 with the collars $O$ O, as deseribed, whereby they draw against the points or projections $g g$, which scrape the oil from the oilers, as set forth.
6. 'The combination of the shell $F$ and caps $F^{\prime} F^{\prime}$ with the collars O O and oilers 11 and shaft $N$, substantially as and for the purposes set forth.

86,093.-Alexander McCleeicht, Tranquility, Ohio.-Carving Mfachine.-March 31,1868.-The stuff is clamped to a longitndinally-moving carriage, and passes beneath the grooving tools, which are secured in a beam that is oscillated by a lever whose cam groove receives the pins on the periphery of a rotating whecl. These pins are so placed as to cause the desired patterm.

Claim.-The pivoted lever I, having the curved slot L fitting upon the pin wheel $J$, said lever connected to the piroted tool stock 0 , by means of the adjustable bar M, all operating as described, whereby the curved slot in tho lever I, by the operation of the pin wheel imparts a vibrating inotion io the cutters $P$ to form the slots $U$, as liercin shown and deseribed.

76,094.-Artinur W. Mc.Millan, Chieago, Ill., assignor to himself and Alexander ADAMS, same place.-Cast Iron Chimney.-March 31, 1868. - The base sits upon the comb of the roof, and the lower part of the chimmey depends therefrom. The chimney is made of cast-iron sections sccured together by bayonet joints. At the lower end of the chimney is a soot box, to which access is gained by a door.
claim.-1. The cylindrical cast-iron chimney, consfructed substantially as described.
2. Constructing and connecting the several sections $B$, substantially as described.
3. Comecting and supporting the section A with and upon the base C , by means of the collar I , substantially as specified.
4. Commecting the section D with the base C , snbstantially as and for the purposes specified.
5 . The soot box F , with or without the opening H, in combination with the sections A B and base C, substantially as described.
(6. 'The adjustable shield or cap E, in combination with the sections A 13 D , and hase C.
7 . The guard $G$, in combination with the sections A B and base C .
\%995.-E. S. MIlleer, Baltimore, Ohio.-End Gate for Wagons.-March 31, 1868. - The two ends of the tail gate fold past the ends of the side boards, and when the gate is used as a trough, it is plaeed in a horizontal position, and front and back boards are slipped into place in the groores of the ends.

Ciaim.-The combined gate and foed trough, constructed as described, and consisting of the bottom $m^{\prime}$, having end pieces $B$ adapted to receive picecs $i$ $n$, and provided with buttons $g$ and hooks $h j$, when said pieces $B$ are notchod at $l$ to fit orer the projections $f^{\prime}$ of the slotted rest bar $f$, and are furnished with spring hooks $e$, which catch under pins d fixed in the sides A of the wagon body, all arranged and operating as described for the purpose set forth.

6,036.—Tames M. Osgond, J1., Boston, Mass.Window S'ash Frame.-March 31, 1868.-The rubber friction rollers bear strongly against the sashes when closed, to tighten the joints between the sashes and the parting strips. When the sashes are open the friction rollers enter grooves in the sashes so as to permit their easy movement.

Claim.-The combination with the sash or frame respectively of grooves $d$, constructed as described, and the rollers $e$ mounted on fixed bearings, and opcrating together as and for the purpose herein described.
g6,03\%.-TOIN PaAR, New York, N. Y.-Fire Escape-MTarch 31, 1868. - A three-sidod metallic box is attached to the outside of a tenement house. The box contains a ladder and has doors commnnicating with iron balconies conmecting with the windows of each story.

Claim. *The metallic or non-combustible box $f g$ $h$, door's $K$ K K' ladder $I$, and metallie balconies $L$, combined and arranged together substantially as and for the purposes described and set forth.

76,035.-Horace Pairk, Colmmbus, Ohio.-Iron ing T'able.-Mareh 31, 1868. -The board is made ot usual form and supported by the larger end. A rack bencath holds the portions of the article not under action.

Claim.- The combination of the top A , bridge C , braces $D$, rack 3 , and legs $F$, all arranged, as de scribed.
'86,099.-James Mr. Patterison, Glen's Falls, and HENRY B. Nontuup, Sandy Hill, N. Y.-Radiating Drum Stove.-March 31, 1868.-Improvement on his patent, January 30, 1866. The scmi-annular cham bers are placed at the back of the stove, and con nected by desconding flues. The caloric current passes into the upper chamber, and then descends into the lower one, from which it ascends by the cxit flne.

Ulaim. - The construction and arrangement of the semicircular drums D D' at the topr and hottom of the store, corresponding to its back $l$, and connected by means of the rertical pipes E and pipe F , the lattel cxtcnding through the diom D to the chimney, and said drum connected to the stove by the pipe $G$, as herein described for the purpose specified.

76,100.—TACON TeEse, Pittsburg, Pa., assignor to himself and Robert C. Totten, same place. - Ore Crusher-March 31, 1868.-The lower end of the moving jaw rests against the anti-friction rollcr, and its upper end receives motion by a cam turning in the rectangular opening. The concave faces of the jaws are thus made to roll together with a slight but powerful movement.

Claim.-1. The ernshing.jaw $c^{\prime}$, prorided with the square opening $d$, in combination with the cam $d^{\prime}$ friction roller $m$, and adjustable jaw $c$, all constructed substantially as shown and described.
2. A square head or $T$-head bolt $s^{\prime}$, in combination with a correspondingly shaped groove $s$ in a sta tionary jaw for adjusting the stationary jaw of an ore crusher, substantially as set forth.
m6,101.-Charles O. and Jamies H. Ritcilie, North Madison, Ind.-Press.-March 31, 1868.-Tho cam lever turns on a pin at the top of rertically adjustable standards by which tlic cam is brought into position to act on the follower at various heights.

Claim. - An improred press, composed of the matrix $\dot{G}$, provided with binding rods $c$ c, the follower $E$, the slotted nprights $B$ and $C$, with their set screws, and the can lever D, all combined and arranged substantially as and for the purposes shown and described.
\%6,102.-W. E. Roberts, North Curentry, Pa. - Portable Fence.-March 31, 1868.-The uprights have two pieces which are secured to a foundation block and connected by notched cleats which support the notched rails. A notehed block is placed above eacl rail and held in position by a button.

Claim.--1. The post, composed of the uprights B , cleats $C$, base 1), and pins $G$, for the purpose and substantially as herein specified.
2. The stop E and button F , for the purpose and substantially as herein described.
3. The combination of the rails $A$, mprights $B$, cleats C , base D , stops E , buttons F , pins G , and cleat II, when constructed in the manner and used for the purpose substantially as herein specificd.

96,193.-A LMON Roff, Southport, Comn.-Wood Boring Machine.-March 31, 1868.-The eutter is for hand use. It has a central serew for attachment to the work, and has rotating cutter arms.

Claim.-In combination witl a central stationary screw or shaft, the feed mut $K$, whether locked to the rotary arms, or operated by the crank L, constructed to operate substantially as set forth.

6,104.-G. W. Saraent, New York, N. Y.Nail Mrachine.-March 31, 1868.-The rod receives vertical compression between the adjustable anvil and hammer and side compression from two hammers which approach each other in a horizontal plane.

Claim.-The lovers C and D , connecting rods 12 345 , wheels $\mathrm{A}^{\prime}$ and E , with ecceutric pins $\mathrm{P} \mathrm{P}^{\prime} \mathrm{P}^{\prime \prime}$, arranged to operate the wooden shank and vertical
hammer $G$ ，adjustable anvil $H$ ，horizontal hammers F $\mathrm{F}^{\prime}$ ，and cut－off bar I，substantially in the manner and for the purpose set forth，and shown in the draw－ ings．

96，105．－Charles II．Sawyer，Buxton，Me．－ Steering Apparatus．－March 31，1868．－The seg－ ments of gear surrounding the slafit of the hand Wheel give rotation to the small wheels which cngage the inside gear whecl at the head of the rudder post．

Claim．－The stecring apparatus，as herein de－ scribed，having the wheel shaft B，with its right－and－ left serew $d$ ，and the two small double gears $a b$ ，the larger gear＇ D ，with the teeth on the inner periphery thorcof．as and for the deseribed purposes．
g6，10G．－C．Schultz and T．Warker，New York，N．Y．－Stop Cock．－Mareh 31，1868；antedated Mareh 18，1868．－The coek is intended for use with corrosive materiat，and when the eylindrieal valve is retraeted from the scat it still eloses the passage lead－ ing to the valve stem．

Claim．－The stop coek herein deseribed，the same having its body constructed of glass or other vitreons material，with a valve B，provided with reeess $h$ and lips $i$ ，for conuection to the opcrating stem，and with a lateral passage $d$ ，beyond the valve seat of the sup－ ply channel $a$ ，the same valve thus having two faces and two seats，aud closing the passage $a$ by its direet thrust，and the channcl $d$ by its lateral expansion， when all parts are constructed and operating sub－ stantially as deseribed．
ge， 107. Charles Seidel，New York，N．Y．－ Vegetable Coloring Matter．－March 31，1868．－Cash－ ew nut is taken during the season of vegctation and its pith being removed it is powdered in a mortar． Oil of turpentine is thell mixed with it and the liquid filtered．
Claim．－An indelible vegetable fluid，having for its basis the pigment of the cashow nut，as a new combination of matter，substantially as and for the purposes described and set forth．

196，168．－Simon 13．Simon，Washington，D．C．－ Watch for Uaries，Umbrella Handles，Lec．－Hareh 31， 1868．－The train of watch gearing is extended lon－ gitudinally to enable its insertion into the tubular part of the walking cane．
Claim．－The arrangement of the extension move－ ments $A, B, C, D, E, G, H, J, K, L$ ，and $M$ ，com－ bined and operating berween the plates $W$ and $T$ ，as hercin described and for the purpose set forth．
g6，109．－George Singleton，Patcrson，N．J． －Silk Cleaning Knife．－March 31，1868．－The knives are upon a fixed and a moring standard．The latter is secured to the trame by a serew which passes through a slot so as to allow the movement of the standard to regulate the distance of the scraping knives．

Claim．－The improved parallelly－acting silk kinifo， composad of the biade S，holder B，and plate A，the blade $\mathrm{S}^{\prime}$ ，holder E ，toot F ，slotted hole I，screw H， lugs K and L，and screw M，combincd and arranged in the manner and so as to operate substantially as set forth．
g6，110．－John D．Smedley，Chicago，M1．－Box and Bag for Packing Butter，dec．－Mareh 31，1868．－ The box is mate of paper，felt，or wood，and in cither case，after drying and heating，is immersed in a bath of melted stearinc at a high temperature．From the bath the vessel is removed to an oven．Thestearine may be combined with wax or gum．

Olaim．－1．The process of preparing paper boxes and paper bags，for the parpose of packing lard，but－ ter，or fluids of an olcous charaeter，in the manner as hercin described．

2．As a new artiele of manufacture，a paper box or bag，when constructed and prepared in the manner and for the purpose hercin deseribed，
3．Hermotically sealing paper boxes，when con－ structed and prepared as heroin described，by mans of creases $d$ and a misture of wax and stearine，sub－ stantially as herein set forth．

4．Lining a containing vessel，to hold packages of pcrishable substances，with a paper bag，when con－
structed and prepared in the manner herein set forth．

5．Packing butter，lard，\＆cc．，in containing vessels， cither in bulk or packages，when said containing vessels are lined with paper，or its equivalent，pre－ pared in the manner herein deseribed．

76，111．－E．L．Spiague，Leieester，Mass．，as signor to himself and Menry Eddy，same place．－ ILaking Hand and Othor Cards．－Mareh 31，1868．－ The teeth are inserted in a board composed of three thin layers of veneer cemented together．The grain in the outer sheets runs in the dircetion of the bends in the teeth，and the grain of the inner layer runs at right angles thereto．Leather may be substituted for either layer．

Claim．－1．A card sheet for supporting the teeth $a$ in hand and other eards made of three strips or veneers of wood，substantially as and for the pur－ poses sct forth．
2．A eard sleet made of one or more strips or ve－ ncers of wood，and one or more thieknesses of leather．
3．A eard shcet made of two or more vencers or strips of wool，so arranged and glued or cemented together as to have the grain of the wrood of the sep－ arate veneers cross each other at right angles，or nearly so，for the purposes stated．
g6，1卫12．Theophilus Steinhauer，Syracuse， N．X．－Car Coupling．－Mareh 31，1868．－The coup ling pin is sustained by a plate attaehed to tro spring pins which are pushed in by the approaching draw head and the pin is allowed to deseend to engage the link．

Claim．－An improved self－acting car coupling， formed by the eombination of the body A and hopper－ shaped mouth B，bars or rods C，springs D，plate E coupling pin $F$ ，eoupling link $G$ ，plate and pin guide $H$ ，and plug $I$ ，with eaeh other，and with the body of coupling，said parts A，B，C，D，E，F，G，H，I，being constructed and arranged substantially as herein shown and described，and for the purpose set forth．

76，118．－J．W．Strange，Bangor，Mo．－Thread and Twine Cuiter．－March 31，1868．－The knile and attaching screw are fixed in the mold and the stock is cast upon them．

Claim．－A thread and twine cutter，constructed with a metallic stock $A$ ，east upon and embracing the ends of eutting blade $B$ ，with the shields $a$ and screw $b$ ，all substantially as deseribed and shown．
\％6，114．－Tames Stratton，Philadelphia，Pa．－ Apparatus for Carburetting＇Air．－Mareh 31，1868． The air is blown through the tubular axis of a cylin－ der rotating within the cylindrical case containing the gasoline and passes through the perforations of the said axial pipe to the space within the cylinder． The sides of the cylinder have two foraminous plates， the space between whieh is stuffed with cotton batting．

Claim．－1．The combination of the tank A，cylin－ ders $B$ and $D$ ，and the interrening cotton batting $C$ ． substantially as and for the purpose set forth and de－ scriber．
2．The perforated pipe or hollow shaft E，in com－ bination with the eylinders B and D ，substantially as shown and deseribed，and for the purpose specified．
\％G，具具馬．－Tanes Stratton，Philadelphia，Pa．， assignor to himself，Willinar Wallace，aud Robert N．Wetherill，same place．－Hydrocarbon Burner． －March 31，1868．－Improvement on his patent， March 26，1866．The burner lias a elosed end and small ladial horizontal openings，aud is placed at the lower end of a pipe descending vertically from the stop cock in the supply pipe．
claim．－The downwad projecting straight burn－ er A，its lower end so perforated that the jets will flow in horizontal radial directions，in combination with the vertical pipe $B$ ，the said parts being eon－ structed and arranged to operate together，substan－ tially as and for the purpose described．
g6， 1 16．－Otto Edward Menry Sturcken，Sall Francisco，Cal．－Windour Frame．－Mareh 31，1868．－ The side strips are piroted to the frame at top and sccurcd by a pin at bottom．The pin may be taken
out and the strips swung out at the lower end. The sash is then diseonnected from the cord and removed. The cord is attached to the sash by a hook.

Claim.-1, A swing side strip B, combined with the adjustable eord fastening D and grooved sash E, all constructed and operating as deseribed.
2. The lock C , in combination with the sash E , strip 1 , fastening $D$, as deseribed, and for the purposes set forth.

76,117.--s. B. Terry, Waterbury. Conn., as signor to bionself and Waterbury Clock Company same place.-Clock:-Mareh 31, 1868.-The countwheel is placed on an axis separate from the main pinion shaft, to render umnceessary the fine gearing required in the "Firench" morenent, and to allow the use of the "American drilled pinion," and still to preserve the compactness of the "French" movement

Claim.-A elock novement in which the connt wheel is paced upon a shaft, or its equivalent, independent and separate from the main pinion shalt, but connected therewith through piniou and gear, substantially as deseribed for the purpose specified.
g6,118.-James H. Thomas, Lacon, Ill.- Rock Drill-Mareh 31, 1868.-The drill rod is operated by the eross head through intervention of the sleere, to which it is clamped hy arms which are hung to the ratchet wheel, and pressed inward at the bottom of each deseending stroke by the band against which the eams impinge. The ratehet wheel and the drill rod receire partial rotation each stroke by the pawl, which is reeiprocated by the inelined guide rod. The rod of the piston ralres is operated by the cross head.

Claim.-1. The tuba E, having the drill D, when secured to the eross head $F$, on one side, by means of the ratchet wheel $g$, fitting between the horizontal plates, the elamps min, npon the plate $\mathrm{H}_{\text {, and the }}$, band $\hbar$ upon the eylinder head, as herein described for the purpose speeified.
2. The combination, with the drill D and tube E, of the piates $e c$, cams $d d$, pieces $f f$, ratchet wheel $g$, spring pawl $i$, and inelined rod $J$ and band $h$, arranged and operating snbstantially as deseribed

96, 119.-Willian Thompson, Dnblin, Ireland. - Mouth Piece for Vigars, dec.-Marelı 31, 1863.-A picee of cotton wool for absorption of the essential oil is placed in the mouth piece between the month and the cigar. The said cotton may be placed in a chamber formed therefor, or may be placed in the rear of the eavity into which the cnd of the cigar is inserted.

Claim.-1. The provision, in mouth pieces for cigars and pipes, of a chamber containing cotton wool C, or its equivalent, throngh which the smoke has to pass on its way to the month, substantially as and for the purposes ihereinbefore set forth.
2. The employment of a ease for containing the cotton or other wool, constructed and operating sulsstantially in manner hereinbefore deseribed, with reference to Figs. 3, 4, and 5, on the accompanying dráwing.
g6,120.-Williair Veiser, Jr., Shingle Creek, N. Y.-Milk Shelf.-Marel 31, 1868.-The pans are set in cireular apertnres in the top of the shaft, throngh which a current of air passes to leep the milk at the proper temperature.

Claim.-Tho tubular shaft A, arranged with refer enee to the milk pans and the building or milk house, substantially as shown and described, for tho purposes set forth.
g6,121.-Join Wagner, Cumberland, Md.Dinner Iiettle.-March 31, 1868.-The bucket has a vertical series of trays set one within the other and held together by the bail, which is attached to the lower one. The trays are eapped with a close vessel to contain liquid.

Olaim.-A dimer kettle, composed of a series of cups or ressels, fitted one within the other, and conneeted together by the bail and suitable eatches, in the manner substantially as herein shown and described.
\%6, 122.-F. Walpert, Baltimore, Md.-Mchchine for Removing Bur's from Hair.-March 31,
1868. -The burry hair is passed between as spring board and the rotary beater.

Claim. The combination of the frame $A$, haring feed board $D$, the spring $e$, piroted board $C$, and rotating covered heater $\bar{B}$, all constructed, arranged, and operating as and for the purpose described.
MG, 183.-Whlimi C. Welds. Newark, N. S.Drill Garege-- Larel 31, 18 (iz.- 1 mprovement on his patent, Nor. 28, 1865 . The blacle is fixed to the angle of the enting edge of the drill, and the inclination of the sides mar lie made rqual, is well as the point made in the exact center, by testing ly the scale on the blate. A eenter may be made on the end of a erlindrical bar by making two scribe marks angularly to each other and taking the intersection.
diaim.-1. In a drill grange, the employment of a movable or rotating blade $A$, in combination with a $\checkmark$-shaped or concentric suide L , said blate being movable to or from the emid of the saide guide, abore whieh it is placed in a line parallel with the rertical plane of the sairl gnide $B$ for the purpose of enlarging or diminishing the area of the angle which it is intended to describe, substantially as herein specified.
2. The projection $c$ on the blade $A$, and projection $c^{\prime}$ on the supporter MI, in connection with the stud serew I, Fig. 3, which conjointly forms a pirot joint, when the sidid parts are attached to a concentric guicle, as and for the purpose shown and described.

子6, 1:24.-Danhel K. Whetman, Centralia, Pa.-Breast-Pad.-March 31, 1868.-The pads are attached to each side of the breast strap to fit the carities of the horse's collar.

Claim. -The breast pads A A, construeted as de seribed, and consisting of the plates ef, riveted together, the covering $a$ and filling $b$, when said pads are secured to the breast strap bly incans of parews $a$, all arrauged as described for the purpose specified.
g6,125.-Jobl, M. Wheeler, Oxford, Conil.Steam Jet Head for Cleaning Boiler Flues.-March 31,1868 - The reversible ring enables the throwing of in inclined, amular, steam jet in either direction, to cleanse the thues or tubes.
Claim.-1. The reversible ring L , with the stop $i$, substantially as deseribed.
2. The combination of the parts ABC with the pipe K , substantially as set forth.
76,126.-M. S. Whcox, Union Mills, Incl.-Setting Wheels on Axles.-March 31, 1868.-The wheels are elamped in a frame with the dependin! spokes vertical and the tread set to the proper distance; the boxes and axle are arranged aceordingly

Claim.-I. The bed piece 1 and tho standards B $\mathrm{B}^{\prime}$, in combination with the straight edge and seale I, constructed and operating substantially as and for the purposes deseribed.
2. The climp hooks $6 b$, in combination with tole perpendicular standards $131 B^{\prime}$, as and for the parpose set forth.

76, H.27.-MI. II. Wiley, Boston, Mass.-PPotato Digging Micchine.-March 31, 1868.-The potatoes are combed out, ind being raisel by the curved teeth of the rotary lifter, are thrown into the screen, which is reciprocated by a crank.
Claim.- The combination and arrangement of the reciprocating screen, the excavating eomb, and the rotary lifter, and the meehanism applied to cach for operating it, substantially in manner as described, the whole being supported by and applied to a frame $A$, and its whecls B C, so as to be operated thereloy, as and for the purpose explained.
\%6, 1is.-GUsan li. Windlas. Chillicothe, Ohio.Measure for Cutting Dresses.-March 31, 1868. - The pattern chart is formed with al series of inclined seales by which dresses of different sizes may be laid out.

Claim.-1. The chart, provided with scales of part on its edges and surfaces, and of the hereindescribed contour, for the purpose of facilitating the cutting of dress patterns, as specified.
2. The dart-point If and inner dart-point $\Pi^{\prime}$ of
smaller dimensions and seales upon their edges for the measuring of the parts of the patterm eut out， substantially as and for the purpose set forth．

196，193．－WILLIAM W．Winter and Theodore Mueller，Philadelphia，Pa．－Umbrella．－Mareh 31， 1868．－The drip eup is formed of impervious，flexiblo material，stretched upon ribs of spring wire and at－ tached to the handic．

Claim．－The expanding drip eup $C$ ，the ribs of Which form the loose ends $d$ of a series of spring＇s $a$ ， in combination with the closing ring $c$ ，substantially as shown．
g6， $180 .-A$ UBIN WOOD，Worcester，Mass．－En－ ginc Lathe for Turning Shafting．－Mareh 31，1868．－ The main rest earries two hinged tool holders，and the auxiliary rest carries an inverted tool whose tendeney is to countoract the strain of the other tools upor the shaft．

Claim．－1．The combination with the auxiliary rest E ，of the slide pieees $\mathrm{E}^{\prime}$ If，and hinged adjusta－ ble tool rests or supports $G \mathrm{G}^{\prime}$ and $\mathrm{E}^{\prime}$ ，substantially as and for the purposes set forth．

2．The combination，with the anxiliary rest E，of the linged adjustable rest $\mathrm{H}^{\prime}$ ，cup 3 ，and spring ${ }^{\circ}$ ， substantially as and for the purposes set forth．

皆解， $31 .-D E$ VOLSON WOOD and STILIMAN TV． Robinson，Aun Arbor，Mieh．－Steam Engine Valve Gear．－Mareh 31，1868．－The circular tappet upon the piston rod impinges against the shoulders of a sliding block which has shoulders upon the other side，impinging against a side projection of the valve stem．

Claim．－The combination and arrangement of the piece $C$ ，tappet $B$ ，and piston rod $A$ ，as and for the purposes described．

I6，1：38．－SAMUEL H．Yocum．Tipton，Ind．，as－ signol to himselt and Marion E．Clarik，same place． －Post Hole Hollow Auger．－March 31，1868．－The lower end of the shell of the tubular auger has eut－ ters similar to plane bits，and has a series of piroted blades which are moved inward to divide and sup－ port the core by reversing the rotation of the auger， which is then laised from the ground，drawing up the eore with it．

Claim．－1．Principal cutters $x$ a piroted on rim $P \mathrm{P}$ by pivots $n n$ ，in combination with hollow auger D．
2．The eutters $x^{2} x^{2}$ ，with slots $\mathrm{K} H$ ，in combina－ tion with pin K in principal cutters $x x$ ，substan－ tially as herein set forth and for the purposes speci－ fied．
 pound for Use in Safes and Powder Mlagazines．－ Mareli 31，1868．－Vials or tubes stoppered with fusi－ ble alloy，and containing sulphuric acid，are placed in immediate eontact with bi－earbonate of soda and carbonate of ammonia．In case the heat of the cham－ ber is raised to the fusing point of the stopper，the sulphuric acid runs out，aud carbonic acid gas is tormed，whieh fills the chamber．

Claim．－The salts or chemieal compounds herein deseribed，with or without liquid acids，or any other materials substantially the same，all as and for the purposes set forth．
 ning．－Mareh 31，1868．－The hides are placed in open－sided rotating cylinders，which are partly sub－ merged in vats containing tan liquor and have inwardly－projeeting pins to work the hides．

Claim．－The use of the revolring tanners E F G armed with pins，and working partially submerged in tan liquor，in the vats BCD ，for the purpose of tumbling hides and skins against the said pins，and forciug out the exhausted water from their centers， and working into them fresh tannin，substantially in the manner and for the purpose set forth．
ge9，135．－EDWard M．Allen，Darlington，Md．－ Harvester Cutter．－March 31，1868．－The recesses formed in the cutter bar for reception of the teeth have under－cut，angular ends，and the teeth are sprung into place．

Claim．－Seeuring knires to eutter－bars of reapers or morfers，by means of the elasticity of said knives， substantially as and for the purpose set forth．

学 6,136 －JONATHAN AMORY，West Roxbury． Mass．－Hot Air Furnace．－Marcl 31，1868．－Tm－ p：ovement on liis patont，April 5，1859．A series of Fertical heating pipes traverse the chamber，and are heated by the ealorie eurrents after they pass the eures，which are similar to those in the patent aforesaik．

Cadim．－The combination of the fire chamber $B$ ， the combustion chamber C ，the curves D and E ， and the heating tubes $F$ ，constructed and arranged substantially as described．

骨，187．－J．J．ANDREW，Saltilloville，Ind．－ Straw Cutter．－Mareh 31，1868．－One end of the lever is pivoted to a link whose other end turns on a fixed pin，and the other end of the knife receives the wrist pin of a crauk．The knife，eonsequently， has a rocking draw eut．The feed motion has a wheel driven by connection with a screw gear upon the crank shaft．

Claim．－The shaft B，provided with its balance wheel，screw thread，and crank，in combination with the linife E ，and bar or rod J ，as and for the purpose set torth．

76，县B．－Henbert L．Animews，Chicago．Ill．－ In7istand．－March 31，1868．－The flange at the top of the cup has one or more projections which pass through suitable cavitios in the grard plate，and are tumed bencath the latter to secure the cup in place．

Claim．－1．The reservoir B，provided with one or more projections $a$ ，in combination with the guard D，provided with corresponding indentations，and annular grooves beneath，substantially as specified．
2．Raising a ridge or border around the upper sur－ face of the lid or corer，so as to make it concare or dish form，to form a eup to hold loose pens，substan－ tially as described．
yd． 139. Natman Atherton，Philadelphia，Pa． －Steam Engine．Mareh 31，1868．－The dim of the wheel upon the main shaft has waring side－curres， and receives the impact of anti－friction wheels upon the cross head．In the reciprocation of the piston the anti－friction wheels bear alternately upon the sides of the curved rim of the wheel，and upon the main shaft，and canse the rotation of the latter．

Claim．－The curved ring $\mathrm{C} R$ ，beveled wheels B V and B $V^{\prime}$ ，cross liead $C I$ ，guide $G$ ，and piston rod $P R$ ，all arranged as herein described，for the purpose of changing reciprocating motion iuto ro－ tary，and producing a continuous motion at right angles，and overeoming firiction．
g6， 14 －C．W．Baldwne，Boston，assignor to Lafayette Huntoon，Milford，Mass．－Steam En－ gine．March 31，1868．Whe course of the steam is regulated by puppet ralres，which are placed so low that the water of condensation has free escape through them．

Olaim．－1．The arrangament of puppet ralres， with reference to that class of stemm engines in which two cylinders of different eapaeities，and ex－ hausting from oue to the other，are employed，sub－ stantially as heroin shown and described．

2．The arrangement of the valres，their easings， and the steam passages，in relation to each other， and operating essentially as before explained．
g6，旦直－TAMES W．Barnum，New Orleans，La． －Cotton Bale Tie．－March 31，1868．－The ends of the plate are turned into two cylindrical shells，and the web conneeting them is cut out eentrilly to form two lips，which are folded against the said shells．

Claim．－The deviee herein described，to wit，the plate $A$ ，when provided at its ends with eyliudrieal supports $B B^{\prime}$ ，the opening $C$ ，between said sup－ ports，and tongnes $\mathrm{D}^{\prime} \mathrm{D}^{\prime}$ ，for the strengthening of the supports $\mathrm{B} \mathrm{B}^{\prime}$ ，as and for the purpose set forth．
g，18．Th．Janes W．Banvun，New Orleans，La． －Cotton Bale Tie．－March 31，1868．－One end of the cord is passed around the grooves upon the surfaces of the head，and the other end is carried around the
groove in the said head, and brought back for attachment to the cross bar at the end of tho arm.
Claim. - The device herein described, consisting of the two supporting enrred surfaces $A B$, the projeeting arm C, provided with the head or shoulder D, the whole being construeted as described, and constituting a 110 w article of mannfacture, for the purpose set forth.
\%6, 14B.—Jhmes W. BarNum, New Orleans, La. -Cotton Bale Tie.-March 31, 1868.-'lie parallel bars are attached to the cylindrical part. The cords are attached to the arms, and are thon coiled around the eylinder until sufficiently tight. The frame is then placed bencath the rope to prevent the unwinding of the latter.

Olaim.-The combination of the bars $A A^{\prime}$, when provided with the notches a $a^{\prime}$, with the cylinder $B$, or its equivalent, as shown at Fig. 3, substantially as herein described, for the purpose set forth.
g6, 144.-James TV. Bannum, New Orleans, La. -Cotton Bale Tic.-March 31, 1868.-The cord is wound around the half cylinders between the plates; and unwinding is prerented by a pin which is passed through both plates, and lies upon the cords.

Claim. -The half crlinders $A^{\prime} A^{\prime}$, when placed in reIation to each other, as hercin described, and secured in position by the plates $B B^{\prime}$, when the latter are perforated so as to reccive the key C at one of their ends, as hercin described, for the purpose set forth.
\% 6, 145.-Tames W. Barnum, Netr Orleans, La. - Cotton Bale Tie.-March 31, 1868.-The crlindrical part has a diametric slot, through which the ends of the rope are passed. The ropes are then tiglitencd by turning the cylinder. The back rotation is prercuted by a key, which is passed though the side extensions of the plates upon the eylinder ends.

Claim.-The crlinder A, when provided with the aperture B , the flanches $\mathrm{C} \mathrm{C}^{\prime}$. in which are loles E $\mathrm{E}^{\prime}$, for the reception of the bolt or key F , the whole being constructed and operating as lescribed for the purpose set forth.
\%6, 146 - James W. Bannum, New Orleans, La. -Cotton Bale Tie.-March 31, 1868.-A eylindrical portion connects two plates, one of which has hooked ends, henenth which the rope is passed.

Claim.-The cylinder A, when provided with the two projecting plates $B B^{\prime}$, in which we cut the notches $C$, as herein described, for the purpose set forth.
\%6,147.-A. Bartholf, New Tork, N. Y. Saw Gumming or Toothing Machine.-March 31, 1868 ; antedated October 1, 1867. The feed motion is adjustable to admit of a regnlar or gradnated feed, so that the teeth may be cut of even size from end to end, or may be cut in regular gradation.

Claim.-1. The combination, with a reciprocating punch and suitable die, of an automatic graduating feed to the saw-plate, substantially as specified.
2. In combination with the level K of a friction feed or driving device to the saw-plate, the adjustable stop $I$, with its ratchet wheel $N$ and pawl $P$, or the equivalents of these devices, for giving at pleasure a gradnating or uniform feed to the pilate, essentially as herein set forth.
3. The adjustable antomatic feed, constructed and operating substantially as shown and described, in combination with a circular saw plate holder and driving mechanism, as set forth.
4. The adjustable spring presser $U$, in combination with a rerolving plate holder, and its driving mechanism, for operation in connection with a reciprocating punch, and relatively to the die thereof, essentially as shown and described, for tho purpose or purposes specifiod.
r6,145. - A. Jolin Bell, Cineinnati, Ohio.Folding Couch.- March 31, 1868.-The posts aro hinged to the side rails, and the head and foot boards are hinged at the midrle so as to admit of bending inward. The hed is held in its extended position by cross bars. The bottom is fornied of intertroven strips of flexible webbing.
Claim.-1. Tho hingred and folding bedstead $A A^{\prime}$.
$\mathrm{B} \mathrm{B}^{\prime}, \mathrm{C}, \mathrm{D}, \mathrm{E}, d d^{\prime}, e e^{\prime}$, capable of extension by means of the bars $E \mathrm{E}^{\prime \prime}$, G , all substantially as described.
2. The combination of hinged folding, and extensible bedstead, as abore claimed, with the bottom $I$, either with or without the permanent mattress $J$.
g6. 1 19.~Joun Bellerjeau, Philadelphia, Pa. -Sealing Cans and Jars.-March 31, 1868.- The lid has cross straps which cud in down-curred spring eatches taking orer the bereled shonlder at the top of the can. Tho strap may be loose, and a wedge driven between it and the lid.

Claim.-1. The cap or top C , having clasping springs D, and the body $A$ with the herel flange $B$, combined and operating substantially as deseribed.
2. The clasping springs D and hook or hinge F , in combination with the cap or top $C$ and the body A, laring flange $B$, and operating substantially as deseribed.
3. The combination of the wedse $\Pi$, hooked bar or strip G. and body $A$, having angular flange $B$, substantially as deseribed, for the purposo specified.

76, 150.-LYMAN R. Blake, Boston, and AsaS. IIBBY, Lawrence, Mass.-Nailing MLachine.-March 31, 1868. - The shoe is placed on the pivoted horn, and the presser-foot brought to bear upon the same. The height to which the said foot is raised ly the sole automatically governs the longth to which the pins are ent, and the position of the driving mechanism. This length may be adjusted 10 allow a little for clinching or spreading upon the metallic horn, or may be so adjusted that the pins will scarcely penctrate the whole thickness of the solc. The inclination at which the pins are inscrted may be adjusted. The pins may be inserted at varying or in opposite inclinations.

Claim.-1. A Work-supporting horn, substantially as described, in combination with a mechanism which operates to drive nails or pins by pressuro or percussion.
2. In the aforesaid combinafion, arranging the horn so that it can be rotated.
3. In the aforesaid combination, arranging the horn so that it can rield and more in a rertical direction, substantially as deseribed.
4. The combination, with the presser-foot, of mechanism which operates by reason of any change in height, at which the presscr-foot rests on the stock, to automatically cut nails or pins from material supplicd for that purposo, to a length proportioned to the thickness of the work at the place where the presser-foot operates.
5. In combination with mechanism by which nails are supplied to the action of a lail or pin-driving mechanism, means for antomatically driving the nails in a direction which is inclined in the general direction of the row of driven nails.
6. Means for antomatically driving each nail in an inclined direction opposito to the inclination of the driren mail preceding, substantially as deseribed.
7. Combining with the presser foot or other device resting on tho surface of the stock, and with the nail-driver, means for antomatically changing the position of the operative end of the driver, so that the point to which said end will descend at each stroke will depend upon the thickness of the stock at the point where operated upon, and will hare a definite relation to the surface of tho stock at ench descent of the driver.
\% $7,151 .-L o u i s$ W. Bosart, Ste. Marie, Ill.Portable Wire Fence.-March 31, 1868.-The wires are attached to the corner posts, and passed throush all the uprights, and the capstan blocks at the midlength of the fence. The panels have strut-bars at top, and a triangular trestle supports each corncr transpersely. The eapstan hlocks are separate, so as to allow the independent tightening of each wire ; and are turned by radial arms which are secured by wires to the ncarest post.

Claim.-1. In combination with the wires $C$, a comesponding number of capstans B, throngh the shafts of which the wires pass, and around which they may be wound, substantially as and for the purpose set forth.
2. The combination of the wiros $C$, corner posts

D, intermediate trianmular trestles, boards F, and strips E, construeted and arranged substantially as described.
3. The combination of the frame $A$, capstans $B$, wires $C$, and posts $D$, arranged substantially as described.

76, 156.-Peter H. Bowees, Brooklyn, N. Y.Printing Wall Paper:-March 31, 1868.-The printing blocks are inade of wood, whose surface has been thoroughly cleansed by an alkaline solution. The object is to transter the grain of the wood in some degree

Claim.-In the minting of wall papers, the use or employment of natural wood, properly prepared, as a type from which to print.
\%G, 15S.-GEORGE W. Bowlsby, Monroe, Mich. -Government Revonue Stamp.-March 31, 1868.The box is linod with the stamped paper, and the cigars are stuck thereto in such mamer that the paper will necessarily become destroyed in removing the cigars. One flap of the paper lies across the box half-vay down, and is destroyed in gaining access to the lower half of the cigars.

Claim.-1. Stamping the cigars themselyes, in bulk, substantially as deseribed, or any colorable modification of the same, in contradistinction to stamping the box as now done.
2. A stamp so made as to be adapted to said purpose, and substantially as deseribed.
3. The stamping of cigars directly upon the cut ends, to prevent damage to the body of the cigar.
g6. $\operatorname{tg}$ 4.-C. H. Brady, MontJoy, Pa., assignor to himself and William Braby.-Corn Sheller.March 31, 1868. -Improvement on his patent No. 68,941. A morc capacious passage is provided for the corn by a change in the semicircular shellers, by means of a broad dividing blade, whose beveled cut ting keel connects with a spirally curved blade on cach side. The frame is clamped to a horizontal support and the corn passed in, point foremost.

Olaime.-1. The arrangement of the semicircular shelling plates K with their dividing plate $k$, keel R , in combination with the spirally-inclined and curved blades $l$, centrally united at $P$ for a pin $p$, to support a coiled spring, construeted substantially in the manner shown for the purpose set forth.
2. In combination rith my semicircular plates K, arranged as aforesaid, the bearing plates $F$, for the pin $p$, said plate F being also provided with cross arms $E \mathrm{E}^{\prime}$, and bearings for the guide rods $h$, in combination with the annular handled rims C C, and their socket bearings, all arranged in the manner shown and speeified.
3. In combination with the foregoing revolring frame, the use of a stationary case A. A, with its standard, spout, and set screws, arranged in the manner shown for the purposo set forth.
\%6, $755 .-G e o r g e ~ C . ~ B e o w n, ~ P h i l a d e l p l i a, ~ P a . ~$ - Portable Derrick.-March 31, 1868.-The three supporting legs are pivoted at their upper ends to the head frames supporting the sheares.

Claim.-The portable derrick, composed of the head, with its cap and sheares, sockets and legs, the whole arranged as and for the purpose set forth.
g6, 156. -Franklin P. Bush, Cincinnati, Ohio, assignor to himself and Jeptha Garrard, same place.-Still.-Mareh 31, 1868.-A blast of cold nir is forced through an air-pipe surrounding the condensing pipe.

Claim.-The vapor-discharge pipe D , inclosed within the cold-blast pipe E, the whole being ar. ranged and adapted to operate in the manner and for the purpose set forth.
 -Telegraphic Indicator.-March 31, 1868 ; antedated March 23, 1868. -Over a disk marked with the signals is turried a lever pointer, which makes and breaks the circuit by contact with the undulating edge of a metallic ring. The receiving instrument is formed of a dial corresponding to the transmitting disk, and aetnated by cloekwork controlled by a let-off mechanism worked by the magnet. so that the receiving dials in the telegraphic cireuit are all brought to the
samo indicating point by pulsations from the transmitting instrument.

Claim.-1. The transmitting instrument, formed of a disk, in combination with the arm $e$ and undulating edge of the metallic ring, the parts being connected and operating as and for the purposes set forth.
2. The escapement and arm, constructed as speeified, in combination with the armature, magnet, clockwork, and dial, as and for the purposes specifed.
g6, $158 .-$ Finank Calvent, Lowell, Mass., assignor to himself and Stephen IV. Huse, same place. - Hair Pieker.-March 31, 1868. - The hair ropo is placed in the eylinder, and the end which has been passed throngh the nose is passed through the croteh and comes in contact with the middle, flated rollers, and then with the back fluted feed and draft rollers. The fibers are then caught by the radiating concentric toothed cylinder and carried under the pressure plates and over the eylinder, where the hair is discharged by a fan.

Claim.-1. Untreisting hair rope, by running it the reverse from the twist, so that the untwisted part may be operated upon continually and simulta. neous with the nntwisting, for the purposes substantially as described and set forth.
2. The radiating concentric toothed cylinder $g$, in combination with the can or hair receptacle $y$, for the purpose as deseribed and fully set forth.
3. The can or hair receptacle $y$, with its nose $a^{\prime}$ or their equivalents, when arranged to operate substantially as described and fully sct forth.
4. The application and arrangement of the fan and cleaner $q$, clearer or finisher $j$, radiating concentric toothed cylinder $g$, fluted dranght and feed rolls $r$ and $r^{\prime}, s$ and $s^{\prime}, t$ and $t^{\prime}$, and hair ${ }^{\circ}$ eceptacle $y$, when arranced to operate substantially as deseribed and fully set forth.
\%6,153.-R. W. Carpenter, Chicago, Ill.Coupler for Organs, de.-March 31, 186S.-The coupler is made of a single wire bent into the requisite form and acting as a simple lever. A block beneath each key may, by the action of a lever upon the coupler, be brought to act on the coupler when the key is depressed. The key sounds its own noto by the tracker pin, and its octare by the coupler.

Claim. - A simple lever coupling formed from a single rod, bent and applied substantially in the manner shown and described.
g6,160.-John F. Chanbens, Calistoga, Cal.Shingle JIachine.-MLareh 31, 1868.-The bolt is clamped to the carliage, and the shingles sefercd thereftom by the descending knife. The shingle is then carried to the roughened tilting table, and a clamping roller, followed by a shaving knife, is passed over it. The shingle may then be mverted and the other side shaved. The edges are shaved simultaneously mith the sides.
claim.-1. The combination and arrangement of the dog $b$, movable table $\bar{U}$, eccentric sliatt $\alpha$, and levers $W$, for clamping and holding the shingle while it is being shaved; and in combination with the parts above claimed, the sliding frame $h$ and knife $i$, for shaving the shingle.
2. The combination and arrangement of the flat shaft $c$, pinion $g$, wheel $f$, ratehet $e$, and pawl $d$, to altermately raise and lower the end of the table U , to shave the shingles tapering.
g6, 161.-Edwin Coburn, Jr., Lewiston, Me.Tooth Plugger-March 31, 1863.-One end of the plugerer stem is bent aronnd and has a face presenting in the same direction as that upon the straight end, so as to admit by the same hammer mechanism of giving a diaw blow upon the filling.

Claim.-1. The rod $c$, passing lonmitudinally through the cylinder C , and having its coils $d$ and $e$, for the parpose of making the tool donble in its operation, as herein set forth.
2. In connection with the rod $c$, the hammer $i$, with its hinged spring arm $k$, and the inclinel piece $o$, as and for the purposes set forth.
3. The means of making the rod stationary, as shown in Figs. 1 and 4, as described.
4. The method of stiffening the coil $d$, as shown in Figs. 1 and 3, as set forth.
5. Constructing a tooth plugger, as described, so that the blow of the hommer $i$ shall operate to compress the lilling of a tooth when either a pulling or pushing torce is applied, in the mamer and for the purposes herein deseribed.

G6, 162.-GEOMGE P. COLE, Hudson, Mich.Theg Bucklc.-March 31, 1868.-The attaching cross pin is made to screw into the frame, so as to allow the introduction of a new pin (in case of fracture) without cutting the stitching.

Claim-The plate A, as construeted in combination with a bolt F , made adjustable, as described, substantially as and for the purpose herein fally set forth.

76,163.-M. G. Cone, East Mampton, ComıSleigh Bell.-March 31, 1868.-The upper and lower cup-formed portions are connected by a stem, by whose upper end the bell is connected to the strap.

Claim.- The combination, with the two openmouthed bells 1 I3, of one or more loose or detached "jingles" $b$, substantially as and for the purposes hereill specified.
g6, 64. -William S. Cooper, Philadelphia, Pa. -Globe Falve.-Mareh 31, 1868.-The collar of tho stem has a steam-tight joiut with the cap, aud is kept to its seat by a spiral spring. The stem has a screw at the lower end which turns in the square valre and actuates the same. Between the ralve and its guide piece, and lapping over flanges on each, is stretched a piece of lubber pipe, by which the working parts are protected firom the liquid.

Claim.-1. The arrangement of the cap $C$, collar $n$ of the spindle $W$, the washer $r$, spring $K$, central guide piece G, and key P , with refcrence to the body B, substantially as spocified and described.
2. The combination and arrangement of the central guide piece $G$, ralve $v$, and tube $T$, with the body B , substantially as described and specified.

76, 165.-UOSEIH CORDUAN, Brooklyn, N. T.Lubricating Composition.-March 31, 1868.-Composed of plumbrgo, 1, and asbestos, 2 parts, with sufficient glue to make it plastic, but not liquid. The harchess may vary according to the purposo.

Claim.-1. The use of asbestos, substantially as and for the purpose deseribed.
2. The use of asbestos in combination with plunbago or other known Inbricating substances, being mixed with a glutinous material, substantially as and for the purpose described.

76, 164.-Joseril Corduan, Brookiyn, N. Y., assignor to himself and R. W. Potter, same place.Fluid Indicator.-March 31, 1868 : antedated March 17, 1868. -The spiral blades oecupy the whole space of the frusto-conieal chute through which the water passes, and are supported on a shaft which turns easily on its adjustable centers, and is connected to a registering device.

Claim.-1. A screw composed of blades, of a spiral tapering form, in combination with a conical-shaped vessel or surtace adapted to such serew, and a reg. istering meehanism, substantially as and for the purpose herein described.
2. The cmployment, in the ends of the spindle of said screw, of horned recesses, substantially as and for the purpose deseribed.
3. The arrangement of the registering mechanism around the spindle of the serew, and within the body of the indicator, substantially as and for the purpose described.
4. 'I'lie eonstruction of the registering mechanism, substantially as doscribed, so as to form an cndless screw throughout and thereby overcome friction and increase the facility of the indieator to register.
5. The arrangement of gauze wire work within the induction aperturo, substantially as described, in order to prevent substances from passing into the indicator.
6. The arrangement of gauze wire work within the eduction aperture, so as to destroy the circular motion that the fluid receives in passing through the indicator:
g6, ${ }^{\text {g67.-W. S. Connell, Neir York, N. Y.- }}$ IIxnufacture of Cheese.—March 31, 1869.-Seventy.
five per cent. of the water of the milk is eraporated in vacuo, at a temperature of $90^{\circ}$ or over. The rennet may then bo added and the process eontinued under vituum, or according to the usital way

Claim.-1. In the manufacture of checse, concentrating the milk by evaporation preparatory to introduction of the remet, or substitute therefor", substantially as specified.
". 'The formation in vecuo of the eurd from which the cheere is made, essentially as lerein sel forth.
3. In the manufacture of cheese, retainins tho butter usually lost in the whey, by evaporating the latter fiom the eurd, substantiully as specified.

763, 1.6s.-T. W. CLIBREr, Newbury, Vt.-Sap Bucket.-Maren 31, 1e68.-The bucket has a hole which reecites the head of the pin which is driven into the tree. A corer is secured by springs over the tul) and spile.

Claim.-The cover C, brovided with a bridere or support $D$, and springs E for attachment to a bucket, all arranged, eombined, and operating substantially as shown aud described, for the pirrpose set forth.

76,169.-A. B. Divis, Philadelphia, Pa.-Box or Case for Sicale Dicams.- Mareh 31, J868. -The boam has one or more graduated sliding bars mith marks lidden firom the operator, who is merely gorermed by the adjustable stop on the bar, drawing the latter as far as feasible.

Claim.-1. A box or caso, constructed substantially as deseribed, in combination with a seale beam contained within the box, and having one or more sliding bars which can be drawn through a slot in the box to an extent limited by a stop on tho said bar or bars, as set forth.
2. The within-described box having two doors, one on each side, in combinution with a seale bean gradmated on both sides, as set forth, for the purpose specified.

76,780.-Charles R. Doane, Williaushure, N. Y.- Window Shutter Holder.-Murch 31, 1868. - The fastener is forked and slightly bent down at one end to embrace the weh of the inner part of the limge, and its outer ond is turned up into t latch which allow's the opening blind to pass over it, but prerents its return until tho forked and hearier end is raised.

Olaim. -Tho fastener C, applie between tlo parts of the shutter hinge so as to vibrate on the pivot thercof, and constructed so as to oporato subsaattially as lerein described.

76,171.-Hugif Dool and P. Is. THifte, Duwagiac, Mich. - Boring Machine.-March 31, 1868.Either of the two bevel whoels upon tho spindle may be brought to engagement with the motive wheel hy adjustinent of the latter wheel upon its shaft and Fertical adjustment of tho spindle. Tho spindle wheels vary in diameter, and the derice gives means for adjusting the speed.

Claim.-The adjustable sluft K, provided with Wheels Is and $F$, of different diameters, in combination with the horizontal shaft $B$, proviled with an adjustable wheel D, when construeted and used substantially as aud for the purpose specified.
 -Ditching Machine.-Mareh 31, 1868.-The shovel has an inclined cutting edgo aud runs backirard in a chute which eonreys the earth to the converer, by which it is carried asido. The plow has forwardly and backwardly extending arms, which aro connected by ehains to the flanged rollers, by which they are arljnsted to regulato the inclination of the plow, and consequently the depth to which it runs.

Claim.-1. Whe shovel D, constructed as deseribed, With cutting edee $d d^{1}$, arms $d^{6}$, and shoo $d^{2}$, in combination with clevis $R$, lod $\gamma$, chains $d^{4}$, roller's $d^{3} d^{5}$, levers $u u^{1}$, and racks $u^{2} u^{3}$, substantially as described.
2. Tho frame A , constructed as described, frame B , buckets M , wheels K , and rofler L, when combincd and arranged as and for the purpose set forth.
3. The shaft $F$, shaft $G$, shaft $H$, wheel $H^{\prime}$, wheel I, with driving shaft and spur wheels, whon combined and operated in the manucr set forth.

76， 1 \％B．－G．Designoble and John Casthelaz， Franec．－Explosive Powder．－March 31，1868．－Car－ bazotate of potassa is used with azotate of potassa， to which chareoal and sulphur may be added．Analo－ gous substances may be used．For blasting purposes the compound may have earbazotate of potassa， 56.908 parts；with azotate of potassa， 43.092 parts．For sporting purposes，carbazotate of potassa， 12 to 28 ； charcoal， 20 to 10 ；and azotate of potassa， 62 to 68 parts，may be used．

Olaim．－The application and use，snbstantially as described，of picrate or carbazotate of potassa，as well as the salts formed from pieric or carbazotic acid，and also the derivatives from such acid，and the acid itself，in and to the manufacture of powder， under the reservations set forth．

196，174．－I．S．EASTMAN，Madison，Wis．－Ro－ tating Tan．－March 31，1868．－The fan shaft is tele－ scopically jointed and depends from the case con－ taining the works．The case is attached to the ceiling．

Claim．－The combination of the rotating shaft $B$ ， cylinders $C$ and $C^{\prime \prime}$ ，suspended from the ceiling above， and prorided with arms 1，2，3，so arranged as to be held at any adjusted height by means of cord E and clasp $F$ ，substantially as and for the purpose de－ scribed．

G6， 1 \％．－GEORGE W．EDDY，Watcriord，N．X．－ Warming Cars on Railways．－March 31，1868．－The steam pipes lave flexible conncction between the cars and pass beneath both lines of seats．Side bends from the main pipes pass bencath each seat，and the passage of stcam through the bends is regulated by valves．

Claim．－1．The combination of the main pipe $P$ ， for conveying a portion of the steam directly through the ear，and the auxiliary pipes $C$ ，for conveying a portion of the steam around under cach seat and back into the main pipe $P$ ，When said pipes are ar－ rancred substantially as describerl．
2．In combination with the pipes P and C ，the check or ralve $a$ ，arranged substantially as and for the purpose set forth．

76，176．－Matticw C．Edey，New York，N．Y．－ Medical Compound．－March 31，1868．－The carbolic acid and suझar，with an addition of water，if neces－ sary，is made into lozenges，drops，or pills．The ob－ ject is to render the earbolic acid less offensive．

Claim．－The medicinal eompound above described．
ryg．Heg．－William H．Elilot，New York，N．Y． －Brewing Beer and Other Malt Liquors．－March 31，1868．－The vapors of the boiling wort are con－ densed and returned to the boiling tank．The con－ tents of the said tank are afterward cooled by passing throngh an inclosed surface cooler as they are con－ ducted from the tank to the reserroir，

Claim．－1．Condensing the vapors of the boiling wort，and returning them to the boiling tank as fast as condensed，and afterward cooling the condensed vapors and the wort together by passing them through an inclosed surface cooler，as herein speci－ fied．

2．The combination of an inclosed surfaec cooler with a boiling tank，whien is provided with a con－ denser for condensing the vapors of the wort，and with a pipe for conducting the condensed vapors back to the boiling tank as fast as condensed，as herein speeified．
ge．179．－Whlian H．Elliot．New York，N．Y．， and IsAAC OSGOOD，Utica，N．Y．－Apparates for Dyeing and Bleaching Yarns and Thread．－March 31，1858．－Dycing，bleaching，and cleansing liqnids are forced through fibrous material when wound upon the corrugated and perforated bobbins or cop tubes．The liquid is foreed through by a pump， which may be also used to force air through to dry the yarn．
claim．－1．Groores，flates，or eorrugations $i$ and $i^{\prime}$ ，for conducting dye and other liquids to the inte－ rior of a cop of yarn，when employed substantially as herein described．

2．The grooved or fiuted bobbin $d$ ，when omployed substantially as and for the purpose herein specified．

3．Grooved or fluted skewer $g$ ，when employed sub stantially as and for the purpose herein set forth．
4．The cup－shaped receivers $c$ ，through which the liquids pass from the conducting pipes to the cops， substantially as specified．
5．The combination of the reeeiver $c$ with the bob－ bin $d$ ，when the receiver is made to cmbrace a por－ tion of the bobbin，substantially as and for the pur－ pose herein specified．
6．The combination of spring $n$ and $n^{\prime}$ with the upper receivers to adjust them to the length of the cop or bobbin，snbstantially as and for the purposes set forth．
7．The follower $m$ and spring $n$ ，in combination with bobbin $d$ ，substantially as and for the purposes specified．

8．The combination of an upper adjustable re． ceiver with a lower reccirer，when constructed sub－ stantially as specified．
9．Tho employment of a fluted or grooved skewer， in combination with a perforated cop tube or bob． bin，substantially as described．

10．The metallic bobbin or spool－head $e$ ，when struek up so as to form an inner and outer cylin der，in combination with corrugated or perforated body $d$ ，substantially as specified．

11．The combination of corrugations and periora tions in the same body，substantially as and for the purpose specified．

12．The employment of a skewer for supporting a bobbin，cop tube，or spool，in combination with the reccivers $c$ ，snbstantially as and for the purposo herein specificd．
g6，耳浆鸟．－HENRY J．ENGLAND，Delhi，N．Y．－ Dirt Scraper．－March 31，1868．－Whe shovel turns upon pirots in the frame and its rear end is engaged by spring catches which are retraeted by levers bo neath the handles．

Claim．－1．The lerer＇s $d d^{\prime}$ ，rods e $e^{\prime}$ ，springs $g g^{\prime}$ ， and catches $f f^{\prime}$ ，in combination with it shorel dirt scraper，when constructed in the manner and for tho purposes set forth．

2．The projecting pieces $\alpha \alpha^{\prime}$ and $\dot{z} i^{\prime}$ ，in combina tion with a shorel dirt scraper，when constructed in the manner and for the purposes set forth．

96，189－Alfned S．Foster，Indianapolis，Ind． －Steam Generator．－March 31，1868．－The steam cenerator consists of a vertical serics of cylindrical sections which commmnicate by outwardly－bowed pipes and are traversed by vertical flues．The flues of each section are placed out of line with those abore and below，and flue chambers are interposed between the sections．

Claim．－1．The arrangement of a flue boiler of seetions，whereby the bridges of one section are op－ posite the flues of the adjacent section，substantially as set forth．
2．The combination of all the sereral parts hercin in one deriee，when constructed and used substan tially as set forth．
\％6，181．－Harvix C．Fowler，Great Bend，Pa －Apparatus for Cooling Liquids．－March 31， 1868 －I＇lie water space is between two concentric metal lic spheres and has an upper and lower inlet and out－ let，respectively．The globes are surrounded with ice contained in a chest．The interior cold air space communieates with the ice chamber and has au np－ per pipe for the escape of air．

Olaim．－1．My improved apparatus for cooling liqnids，consisting substantially of a narrow refrig erating space，extendiug radially from aud bencath an upper inlet aperture，and communicating with an ontlet aperture，said space being inclosed between concentric or parallel walls surrounding a central cold－air chamber，which communicates with an outer inclosing ice chest．

2．The combination of diffusing flanges $s s$ with the inner surface of the upper or lower walls of the re－ frigerating space $e$ ，of $m y$ apparatus，substantially in the manner and for the purpose herein set forth．
＇6， $182 .-G e o k e n ~ P . ~ G A N s t e r, ~ N e w ~ K o r k, ~ N ~$ Y．－Apparatus for Generating Illuminating Gas．－ March 31，1868．－The compartments of the carburet－ ting wheel are packed with capillary material which，
by tho rotation of tho wheel, is kept satmrated with the lirdrocarbon. The air is received at the end, passing through a check valre, and has exit at the top of the chamber after passing through the satwratcd material.

Claim.-1. In an apparatus for generating gas from rolatile hydro-carbons, the combination of the air forcing and carburetting apparatus in the manner deseribed and shown.
2. Filling the compartments of the meter wheel with any suitable capillary material, for the purpose of enriching the air With the hydrocarbon with which the capillary matcrial is saturated.
3. A ralve, placed on the inlet pipe of the apparatus, so arranged as to closo the opening when not in operation.

76,183.-GEorge H. Gardner, Philadelphia, Pa.-Thill Coupling.-March 31, 1868.- The thill irons aro formed to be raised from the pins when the points of the thills are upon the ground, aud a block of rubber is attached to the elip to receive the pressure of the cam-ended iron when in working position.

Claim. -The thill iron C, having the eccentric head F and iuclined slot D, in combination with the elip B, united by the bolt $e$ and the rubber E , all constructed and arranged as described.

196,184.-John Glydon, Netr York, N. Y. Truss.-March 31, 1868. - The truss has double pads, one for each groin, and a supplemental pad is placed between the main pads.

Claim.-1. The combination of the rigid plate $a$ slotted to receire the spring $i$, with the spring $i$ and the swinging pad $e$, substantially as described.
2. The arrangement aud combination, in a truss for inguinal rupture, of two pads $e e$, for the purpose of securing stability of position, with or without the supplementary protecting pad $f$, substantially as described.
3. Making the body spring or band of the truss, which encircles the body of a patient, in two independent parts a a, connected and adjusted to cach other, substantially as above described.
g6, 1855 -E. T. Marlan, Star City, Ind.-Chum. -March 31, 1868. - Iwo diamond formed blocks are supported on a horizontal shaft beneath the disk. A spur wheel upon the shaft engages a vertical rack extending from the bottom to the lid.

Claim.-1. The combination of the perforated disk E and the paddles H, revolring in oppositedirections With the morement of the dasher, substantially as set forth.
2. The combination of the houdle, the rack har, the dasher, the pinion, and the paddles, amranged to operate substantially in the manner set forth.
\% ${ }^{6}, 156$ - William H. Mart, jr., Philadelphia' Pa.-Packing Neck Ties.-March 31, 1868.-The tray has a series of elastic loops to hold the cravats.

Claim.-1. Tho holder d, provided with the yield. ing tongnes $a$, for supporting and exhibiting the neek tie or cravat, substantially as described.
2. The combination, with a cravat holder or show card, of one or more bauds, cords, or other fastenings, whereby the cravats may be securely retained in position without protruding through the card, substantially as deseribed.
3. The construction of the box body or frame D with ledges or supports $d$, to ndapt the show eard or holder to be used as a bottom to the box, substintially as describod.
g6,157.-Nefiemiah L. Hatcii, Cape Elizabeth, Me., assignor to himself and J. W. Gavetr, same place.-Mfeat Clopper.-March 31, 1808. -The chopper is operatcd by a crank, and the crank shaft carries a pawl which actuates a ratchet wheel upon a slaft on which a cord is wound to move the frame gradually from end to end of the chopping tray.

Claim.-1. The sliding frame $a$, with the crank $f$ shaft $e$, gears $g h$, crank sliaft $i$, jointed driving rod $j$, balance wheel $n$, and handle $o$, in combination with the railed tray, substantially as described.
2. The sliding frame $a$, with the shafts $e$ and $i$, crank $f$, gears $h g$, knife $l$, and jointod rod $j$, in con-
junction with wheel $n$, pawl $r$, spring rod $s$, pawl $t$, ratchet $q$, shaft $p$, cord $u$, and post, all in combination with the railed tray, as and for the purposes set forth.
g6, 18S.-J. Wilson Heath, Memphis, 'Ienn-Earth-Boring Auger.-Mareli 31, 1868.-The lower end of the drill rod has lngs, which enter vertical slots extending from the sides of tho socket of the auger stem, and by a turn of the latter are made to cnter carities extending sideways from the slots. The stem is then prevented from turning by a key. The anger stem is tubular, and has side openings at the mpper end, leading into the axial bore, which is stopped at the lower end ly the sliding point, which descends as the auger is raised aud allows the air to pass in, to fill the space bencath the auger.
Claim.-1. The combination of the valve a with the slotted stem $b$, pin $f$, lollow shaft $s$, and inlets $t t$, all construeted, arranged, and employed substantially as and for the purposes specified.
2. The collar $g$, when used in combination with a doublo spiral earth auger, as and for the purposes stated.
3. The coupling $h i j j^{1} j^{2}$, constrmeted and arranged as described, and for the purpose specified.
\%6,189.-Levi Mermance, Mudson, N. Y. Stone-Drilling Machine. - March 31, 1868. - 'Lhe framo has acljustment on the crank shaft as a center, and is held in position by the side plates, which lave truniou bearings for the shaft and enrred slots as guide ways for the feet of the frame. 'The drill rod is raised by anti-friction rollers upon studs projecting from the lly wheels; and is adjustable by a serew sleeve, which is turned npon it by a hame wheel. The anti-1'iction rollers act upon the connecting bars, each of which is pivoted at one end to the sloere, and at the other end has a cross pin sliding in the horizontal slot of a fixed fiame.

Claim.-1. The arrangement of tho slotted plates u u, connceting bars ' $T$, and sleevo $J$, in combination with the wheels E E, having grooved pulleys is on their inner faces, the whole arranged and operating substantially us specified.
2. The combination of the frame A and its bolts wo with the plates C C , having trunion bearings, curred slots $D$, and recesses ece, whereby the frome A may be placed at an angle with the fímo b, as specified.
g6, $199 .-\mathrm{F} . \mathrm{M}$. MickMan, Rolling Prairic, [nd. -Gate.-Mrarel 31, 1868. -The "hook" part of the hinge is exteuderl upward the distane it is desired to raise tho gate, and the mpper "hook" has a chain leading beneath a sheave in the gate, ind connected to a lever, by whose movement the wate may bo raised sufficiently to allow passage to horss or sheep.

Claim. - The combination of the hinges C C, lever D, aud pulley E, respectively, construeted and arranged substantially is set forkh.

76, 191.-II. D. IInnternescir, Balimore, M[d.Saw Mill.- Marel 31, 1868- The ends of the san are commected by cords which pass orer tho sheaves to crank pins, by which the cords have reciprocal retsaction.

Cleim.-Bands or cords $S S^{\prime}$, when combined directly with cranks or eccentries upon a lerolving shaft K , and so arrauged us to commmieate therefrom a reciprocating movement to a scroll sary $A$, substantinlly in the manner herein set forth.
 ing Wagon.-March 31, 1868. -Tho box bottom consists of a series of trap doors, whose freo ends are supported by ledges on springs attached to the side of the box. The springs are drawn baek by the lerers to release tho traps, the pairs of levers being. counceted by transverse shafts.

Claim.- The arrangement of the lerers $G$, conncetions $F$, and springs $A$, with their offsets $C$, When coustructed, combinw, and operating as hercin described, and for the Impose set forth.

76, 1 13.-Calvin IMonton, Somervillo, Mass.-Trunk.-March 31, 1868.-The trunk is covered by thin reneers instead of leather, and tho joints of
the veneer are covered by wooden or metallic battens.

Claion.-A traveling trunk, the outer surface of the body of which is covered with strips of thin wood, the abutting edges of which strips are protected by the eleats or straps, substantially as deseribed.
\%6, 194.-GEORGe Mowell, Philadelphia, Pa.Filling Marshes.-Mareh 31, 1868.-Improvement on his patent Nov. 12, 1867.-The excavating and pumping apparatus is suspeuded boneath the soow, and "has vertical adjustment by geared conncetion with the driving slatit of a steam engine.

Claim.-1. The combination and arrangement of the case A with a seow or boat by means of the vertieal screw rods $N$, wheels $o$, pinions $o^{\prime}$, and shafts $\mathrm{O}, \mathrm{O}^{1}$, and $\mathrm{O}^{2}$, the said parts being arranged and operating substantially as deseribed.
2. The combination of the links $Y, Y^{1}$, and $Y^{2}$ with the case $A$ and scow $A^{\prime}$, for giving a parallol motion to the former, substantially as described.
3. The combination of the rertical rods $Z Z$ with the ease $A$ and scow $\Lambda^{\prime}$, substantially as deseribed.
4. The geared shifting lever $\mathbf{Q}$, arranged and operating in relation to tho driring shaft K and shaft $O^{1}$, substantially in the manner and for the purpose specified.
5. The combination of the chains $T$, pulleys $U$, standards $V$, and gripes W with the ease $A$ and scow $A^{\prime}$, for loolding the case in its altitudiual position, substantially as deseribed.
6. The combination of the coupling rods M and $M^{\prime}$ with the case $A$ and scow $A^{\prime}$, substantially as deseribed and for the purpose specified.
 Heater.-Marel 31, 1868.-A pressure of air is imposed upon the quantity of inflammable liquid contained in a tight ressel, and a jet of the liquid thrown in the manner of a blow pipe through the flame of a gas burner. The conducting pipes have the nocessary stop cocks.

Claim.-1. A burner, supplied by the force of compressed air, in combination with a timner's fire pot, for the purpose herein specified.
2. The chambered gasifying and superheating disk $G$, substantially as and for the purpose herein set forth.
3. 'The screw cap applied to the disk G. substantially as and for the purpose specified.
4. The enlarged passage $k$ in the burner head, for the purpose set forth.
5. The screw plugs $l l, m m$, substantially as and for the purpose herein specified.
6. The swell or dome $O$ in the top of the heater, substantially as and for the purpose hercin specified.

196, 1986. JACOB JAMESON, Philatelphia, PaProcess and Apparatus for the Manufacture of Iron and Steel.-March 31, 1868. -The reducing furnace reccives the fuel with the flux, and the desulphurizing chambers receive the ore with the accompanying flux. The blast of air is hoated by the passage of the pipes passing throngh the heated space above the desulphurizing chambers. The boiler contains Water, and is placed in a chamber above the furnace. It is to supply stcam to the current passing over the ore in the desulphurizing chambers. The molten ore runs down into the reducing furnace and the blast passes into the mass.

Claim.-1. The reducing furnace $B$, in combination with the chambers $D$ and chimney flue $F$, constructed and arranged for operation, substantially as described, and for the purposes set forth.
2. The clamber $G$, boilcr $H$, and pipes $h h^{\prime}$, in combination with the redueing furnaco 13 and chambers D, constructed and arranged for operation, substantially as described, for the manufacture or production of east iron direet from the ore.
3. Reducing the size and changing the form of the roducing furnace by blocks M, arranging the chamber $G$ for the prodnction of large quantities of carbon, aud introducing the carbon into the blast, and so iuto the reducing furmace $B$, substantially as deseribed, for the purpose of producing stool direct from the ore, as set forth.
4. The process of treating ores, for the purpose
of making cast iron or steel, in tho manner and by the incans substantially as herein deseribed.

76, $19 \%$ - Jesse Jounson, West Fallowfield Township, Pa.-Bolt Cutter.-March 31, 1868.-Jho levers have segmental racks, which engage the rack bar and foree it forward by a torgle aetion. The ond of the rack bar carries a knife, which operates with a linife in the frame. The levers also earry shear blades for light work.

Claim.-The compound tool herein described, consisting of the two levers I) D working in a rack B , with pinions; the steel knife E secured to the end of the rack 13 by serews or rivets, and made to slido in a slot or groove in the side of the frame $A$, whieh keeps it in lime; the stationary knife $F$, made rounding on the back side, and secured in the end of the frame by a tenon; the two steel plates C C adjusted near the cnd of the levers; the set screw $G$ whieh prevents the linives $S$ and $F$ from colliding, and on the end of which serew $G$ there is a punch, construeted to work in a die on tho opposite lever; the wholo arranged, constructed, and employed as shown in the draving.
\%6, $193 .-$ Pimneas Jones, Nowark, N. J.-Thill Coupling.-March 31, 1868.-An open ring bushing is placed around the bolt, and the loop of the thill iron is bent around the bushing, which may be of ramhide. The end of the iron is bent around and trarersed by a "temper bolt."

Claim.- The eombination of the metallic spring $b$ formed upon the thill iron, the sleeve E, and the tightening bolt C , when arranged and employed substantially as and for the purpose herein set forth.
 Machine for Rolling "Cots" on Drawing Rollers. March 31, 1868.-Tho machine operates by roller pressure to give a uniform surface to the top rolls of klrawing rolls of spinniug frames, cither when the same are merely elothed up or after the cons are drawn on. The lower rollers are driven in a like direction, and the upper and fiec roller is made to lise and fabll at interrals for reception and delivery of the work which is fedin at one side aud delivered at the opposite.

Claim. The combination of the rollers B C, feeding and delivering boards $J K$, and roller $D$, the latter having an intermitteut motion to and from the others, all arranged for operation substantially as and for the purpose specifiod.
\%R, $203 .-G E O R G E$ W. Kinta, West Henrietta, N. Y.-Potato Digger.-Mareh 31, 1868.-The rimos are cleared away by the barbed teeth on the inclined curved bar. and the potatoes are thrown out by the share to be deflected by the open mold board, and to foll mpon the sercen. This comsists of fixed and spiral bars which are swiveled and rest on the grouud so as to acquire a rotary motion by contact therewith.

Claim.-1. The combination and arangement of the rerolving spiral tines $q$ a and the angular teeth o of with the vibrating shakor I, operating in the manner and for the purpose herein set forth.
2. The angular vine puller $I$, jointed at one end, employed iu combination with the rod $I$, having a free end morement to diseharge the viues, and a stay chain $u$ which linits the back motion, the whole arranged and operating in the manner and for the purpose herein set forth.
3. The construction and armangement of the machine as a whole, consisting of the wheel D with cams $l l$, vine puller If with rod I and chain $u$, shakers E E with arms $m$, share $G$ with divider $r$ aud wings $s s$, truck frame $B$ with adjustable standard $b$, and the skeleton beam $A$, the whole operating as described.

6,391.-S. W. Kink, Coatesville, Pa.-Lock Nut.-March 31, 1868. - The threaded part of the bolt is flattened off upon one side, and a washer is made to slip thereon and conter a recess in the nut to prerent its turning.

Claim.-The within-deseribed nut retaiuer, consisting of the concaro-convex ring $D$, having a straight portion $y$ adapted to a flat place on the stem
of the bolt, and being arranged for fitting and being jammed in the recess of a nut, all substantially as set forth.
raf,adz.-GEotige KNELL, Moorentown, N. J.Chair and Lounge.-March 31, 1868.-The back of the jointed frame forms the lounge bottom when turned down into a horizontal position. The foot is extensible br means of a draw shelf, and is supported by additional legs.

Claim,-1. The frames $A$ and $B$ in combination with the legs $l$, the whole being arranged for adjustment, substantially as deseribed.
2. The combination of the above and a strap $q$, or its equivalent, for the purpose of regulating the inclination of the several parts, as described.
3. The frame D adapted to the frame B , and adjustable thereon, substantially as and for the purpose set forth.
4. The combination of the frame $B$ and a sliding frame C , substantially as and for the purpose described.
g6,203.-Andmew Kvobel, Monroc, Wis. Hot Air Furnace.-March 31, 1868. The ash pit contains water which evaporates and rises through the fire. From the combnstion chamber the caloric passes throngh radial flues, and ascending to the top descends and finds exit at the side. The air circulates around the fimnace and flnes.

Claim.-1. Providing the ash pit $\alpha$ and fire box $c$ with lined openings $a^{\prime} c^{\prime \prime}$ extendig. through the outer wall, substantially as specified.
2. The suspended gas bnrucr $e$, constructed and operating substantially as specified.
3. Constructiug the furnace in eylindrienl sections, so arranged that the middle sections $s^{\prime \prime}$ and $t^{\prime \prime \prime}$ may be remored or others added without changing the other seetions, substantially as specified.
4. Supporting the chambered and tlued portion of the furnace upon the pillars $m$ and the combustion portion upon the pedestals $a^{\prime \prime}$, as deseribed, so that the combustion portion a and $c$ may be removed or replaced without disturbing the heating portion.
5. The small central chamber $f$, located immediately above the gas burner e and fire box e, for burning the unconsumed prodncts of the fire below, and prorided with side openings at the top door $i$, and conical inverted plate 0 , substantially as specified.
6. The combination and arrangement of the fire box $c$ and gas burner $c$ with the celindrieal sections $t^{\prime} t^{\prime \prime} t^{\prime \prime \prime} t^{\prime \prime \prime \prime}$ and $s^{\prime} s^{\prime \prime}$, dividel and supported by the lorizontal plates $x^{\prime} x^{\prime \prime} x^{\prime \prime \prime} x^{\prime \prime \prime \prime \prime}$, substantially as and for the purposes specified.

76, 204. -Andhew Knobel, Monroe, Wis. Coul Stove-March 31, 1868. -The caloric current ascends a cylindrical flue to the top of the stove and then passes downward through a nearly semi-annular fiue which eommunientes at its lower ched with a similar flue commmicating with the ehinney.

Claim.-1. The combination of the vertical ammlar flues $f o^{\prime}$ and the flue between the cylinders $i$ and $k$ with the horizontal flues $m^{\prime}$ and $f^{\prime \prime}$ and fire box $d$, substantially as specified.
2. The removable cap $f^{\prime}$ in combination with the pipe or flue $f$ and register cap $r$, so that all of the flaes can be readily cleaned, snbstantially as speeified.
3. The open passage $e^{\prime}$, opening into the fire below the gas burner, in combination with the grated gas bunner $c$, fire box $d$, and opening $d^{\prime}$, substantially as and for the purposes specified.
g6,20.5.-Frederick Kraus, Philadelphia, Pa -Hollow Auger:-March 31, 1868.-The chtter and rest are moved in the head simultancously by the right and left hand sirew; so as to be heid at the same distance from the axis.

Claim. - 'the rest G and bit stock E when said rest and stock are operated by a right and left serem D , in the manner herein deseribed.
gG,906.-Peter C. Laub, Allentown, Pa., assignor to himself and Samuel, Shaffer, Williamsport, Pa.-Churn.-Warch 31, 1868. The wooden barrel has an imner metallic barrel, and one of the hads is common to both. The space between the
barrels is for introduction of water to temper the cream.

Claim. -The combination of the barrel-shaped churn 13 with its inner corresponding-shaped division B and chamber $G$ when constructed, arranged, and operated as herein described, and for tho pmrposes set forth.

76,20\%.-Richard C. Lamidert, Raynham, Mass, assignor to David Whittemore.-Heel Cut ting Machine.-March 31, 1868.-The shoe is clamped in an oscillating frame and is shaped on the side by the adjustable cutter.

Claim.-1. A heel cutting machine having: a stringing and sliding jack, construetel and operating substantially in the manner described.
2. The combination and arramement of the toothed segment E, driren as described, the sliding journal block $F$, and the jack frame $G$, constrneted and operating as specified.
3. The mode described of jacking the shoe or boot by means of the serew L, operated as described, which holds the heel against the pattern H, and the jaw clamp I I', which confines the toe, as set forth.
4. The manner of automatieally releasing and fixing the center of oscillation of the jack by means of the levers $Q$, operated by the pins $b b^{\prime}$, and raising and lowering the sliding stop 1 , as specified.
5. In combination with the linile stock, the guides $x y$, one running in the rand of the shoe, and the other in contact with the edge of the pattern II, as described.
6. In combination with the swinging jack frame, the wheel K, and serew L , constructed, arranged, and operating as specified.
7. In combination with the swinging and sliding jack $G$, the guide wars P, for guiding aud steadying the horizontal and oscillating novements of the jack, as set forth.
8. The combination of the lever T, pivoted and operated as described, with the ways W of the knifo stock, to give both horizontal aid rertical move ments to the knife, as specified.
9. The toe clamp I 1 ${ }^{\prime}$, constructed, arranged, and operating as deseribed.
 Mareh 31, 1868. The place in a steel plow where the lay is welded to a landside bar is protected hy a remorable slip point. A pin enter mary be made on the point.

Claim. - The particular form and construction of the slip point, as arranged, either with or without the flange $n$, and either with or without the pin chtter $m$, in combination with a lay and landside Weked together, as described and for the purpose shown.

26, 200 - Jomin Laughin, Gettysbure, PaStraw Cututer.-Marel 31, 1868. -The tro knives are mate to act as shears upon the hay. The operative lerers are connested together, and the fulerum of the uipper one is carried beneath its pirot, and has an anti-fiction roller which restis against the frame and keeps the laives in contact.

Claim.-1. The gotes C F phating in groores in the legs $B B$, and provided with $V$-shaped knives constructed as specified, and used in combination with the apron $P$, levor $G$, handle $J$, and bar $K$, all constructal and operating substantially as set forth.
2. The bar K, provided with a frietion roller, amd used with the handle and tirame of a straw euter for assisting in causing the cdres of the knives to bind against each other or against a cutting plate, as is herein fully set forth.
g6,210.-Wildinam J. Lewis, Pittshurg, Pa. Die for Meading Bolts. Whreh 31, 1868. - The bolt is headed in tro operations, between which it is turned $60^{\circ}$ to bring the action of the dies upon a freslı surface of the head.

Claim.-Constructing the dies B B and header A as hereinbefore described, so that said dies will embrace four sides of the bolt head, and leare two openings for the two remainings sides and space for the surplus iron, said dies and header being so ar. ranged with relation to each other that, by turning the bolt onc-sixth way ronnd, the surplus irou and
the "flash" or "fin" will be brought in contact with a solid portion of sadd dies and header, and thereby be driven into the head of the bolt, substantially as herein described and for the purpose set fortl.
 Waiter-March 31, 1868.-A iixed metallic waiter is raised on legs, and has a central turning post giving support to wire dish frames, and an apper waiter to whose sides the bail is attached.

Claim.-'The combination of the revolving aine waitcr $\Lambda$, center revolving post $\mathrm{F}^{\text {with }}$ its waiter C at top, and wire waiters E E projecting from cach side of the center post, when construeted, arranged, and operated as licrein described, and for the purposes set forth.

66,21².-Levi Liscom, Boston, Mass., assignor to himself, Rufus S. Mermill, and Wilutam Lin-TUN.- Bridge. - March 31, 1868.-Improvement on the patent of A. Cottrell June 14, 1864. An arched truss worie is combincd with the horizontal layers of the above, so as to constitute the upper layer the chord of the truss work.

Claim.-The combination with the double lever, constructed as hercin described, of truss work, united with the said lever by means of tie bolts or rods, as herein described, so that the said lerer shall in effect constituto the bottom chord of the truss, sulustantially as set forth.
g6,913.-G. W. Love, Jackson Comity, Mo.-Soap.-March 31, 1868.-Composed of spirits of turpentine, 1 pist; alcohol, 1 pint; aqua ammonia, 2 oz.; gum camphor, 1 oz ; sal soda, 1 oz ; salt of tartar, 2 drachms ; borax, 1 drachm; and soap, 1 lb.

Olaim.-The combination of the sereral parts, as above named, to be used in connection with soap, for the purpose set forth.
g6,214.-Thomas Lovelidge and Tohn GrindROD, Philadelphia, Pa.-Skate.-March 31, 1808.The stud heads pass through holes in plates attached to the sole, and the studs are moved into slots extending from the holes so that tive head is lield by the sides of the slot. The nose of the rear runner oceupies a vertical longitudinal groove in the upturned portion of the fore rumner, so as to gruide it in the sance line, but allow rertical flexion in the foot plate. The studs slide in the foot plate and are fixed by thumb nuts.

Claim.-1. A skate having an elastic foot plate and two rumers, arranged to move independently of each other in a vertical direction, but to guide each other laterally; all substantially as and for the purpose hercin set forth.
2. Securing a skate to a boot solely by studs on the slate, adapted to holes in plates on the solo and heel of the boot, substantially as described.
3. The sole plate $\Lambda$ and its runner $B$ in eombination with the heel plate $A^{\prime}$ and runner $B^{\prime}$ rinen the said plates and runners are rendered adjustable to suit boots of different sizes, substantially in the manner described.
4. The studs $n n^{\prime}$, cither fixed to or arranged to slide on the foot plate of the skate near the toe, in combination with the plate E on the boot, and holes so formed and arranged therein as to adrait and retain the said studs, substantially as specified.
5. The stud $m$ in conjunction with a plate $D$ on the heel of the boot, the said plate having a hole of the character deseribed, into which hole the head of the stud can be introduced, and in which it can be secured, cither by moving the plate to which the stud is attached backrard, or by moving the stud itself in a slot in the plate, all substantially as specificd.

子6,215.-OrRiN Luce, Virgil, N. Y., assignor to himself and Martin LUce, same place. Hay Raker and Loader.-March 31, 1868. The shaft of the lifter which raises the hay from the rake and deposits it on the elevator, is placed eccentrically; and the arms slide in blocks following a guide track concentric with the whecl, the blocks forcing the hay from the arms.

Claim.-1. The eccentric bar J, when supported as rescribed, and operating in connection with the
arms $m m m$, the revolving bars I I I, and the teeth D D, substantially as and for the purposes set forth. 2. The combination of the independent lever $d^{\prime}$ with the rocking shaft $d$, tecth D D, gauge E , and spring $e$, substantially as and for the purposes indi cated.
\% $6 .{ }^{2}$ 具6.-TIMOTHY LUCEY and James E. MURPHY, Salem, Mass.-Lining Boots and Shoes.-Mareh 31, 1868 .-The lining, having the cement applied thereto, is placed in a frame whose bottom fits the shoe, and is raised by a lever. The shoe is placed so as to envelope the case whose sides licep it from contact with the lining, and the lever being depressed, the lining is raised and forced into contact with the insole.

Olaim.-1. In combination with a jack or plate supported at its heel on a post or standard, an elastic or yiclding surface for holding a cement-applied lining, to be applicd to a shoo, substantially as set forth.
2. Combining the lining plate $e$ with the jacke and its flanges $d$, or the equiraleuts thereof, the plate $e$ being supported upon a rokl, and being raised and lowered substantially as described.

76,2] -GEORGE W. MaCK, Hamtramek, Mich. -Feed Water Heater for Steam Generators.-March 31, 1868.-The heater is between the cylinder and condenser, and has a coiled pipe through which passes the water to be heated. The exhaust steari in rushing through the exhaust pipe toward the condenser strikes the deflectoris attaehed to the valves opening into the heater, which admit a portion of the stam to the heater. 'I'he pressure of the steam within the heater eloses the valves as the steam is condensed.

Claim.-l. Tho valyes II and deflectors I, in connection with the exhaust pipe $G$, when operating substantially as and for the purposes described.
2. The combination of the above-named parts with the heater $\Delta$, the connection pipes $B$ and $F$, the chambers C and E , the coil pipes D , and the openings $J$, when constructed, arrarged, eonnected, and operating as and for the purposes herein set forth and shown.
geters. Toin W. Mansir, Oxford, Mass.-Combination Tool.-March 31, 1868.-Tho jaws, when bronght together form a conical reamer. The holder may be applied to the shank of a screvt driver: - The jams are clamped together upon a drill by the action of the thumb screws in the baskward arms, which, through the medium of the springs may be brourgt to bear on each other or on the intervening shank of the driver.
Claim.-1. The combination of the jars $A B$, provided with externally grooved conical ends F, with the springs D and set screws E, the said parts beine constructcal and arranged as herein deseribed, so as to constitute a combined didl-hokler and couniersink.
2. The combination, with the jams i I , whose ends, $F$, are provided interiorly with notches 1 , for receiving and holding the head of the serem of the springs D, with or without set serews E, by which the scrow-driver; placed beneath the jaws, is stoadice and held, the said parts being constructed and arranged for operation as lerein shomn and set forth.
 Creatina Draft in Chimneys by moans of Stcam.March 31, 1868.-The stean passes through an annular opening at tine verge of the top of the head within the chimney.
Claim.-In combination with a smole stack or chimncy, the blast-head a, construeted substantially as described, so as to deliver the steam in said stack in a circular volume or volumes, substantially as set forth.

YG,2\%0.-JOHN L. MAson, New Jorls, N. Y.Machine for Threading Screw Caps.-March 31 , 1868.-The sheet metal cap is placed upon a screwthreaded head upon the screv-thrended mandrel. Rotary and adrancing motion being communicated to the mandrel, the cap is brought under the action of the serew-thrcaded roll dies surrounding it and a thread formed thereon.

Claim.-The arrangement of one or more roller-
dics, $e$, sceured, and made adjustable in a disk or tace plate, C, in combination with the scret chuck D and longitudinally sliding mandrel $\mathbf{E}$, sabstantialls as and for the purpose shown and described.

76,221.-Join A. McClelland, Louistille, Ky. Mold for Artificial Teeth.-March 31, 1868. The metallic mold is constructed in sections within a metallic flask in such mamer that a rubber plate may be molded by pressure.

Claim.-1. A dental plate mold, formed in sections within a motal flask, substantially as described.
2. A metal clamp flask, A, for said sectional dental plate mold, constructed and operating substantially as herein deseribed.
3. The methor of forming a dental plate of plastic material within the said sectional mold, substantially as herein described.

76,2ฉ2.-Emory McClintock, New Brunswick, N. J.-Gas Fixture.-March 31, 1868.-The gas is turned on or off by turning the bracket, whose end constitutes the plug.

Claim.-As a new article of manufacture, a rerolring gas bracket for illuminating gas, constructed as described, in such a manner that when the bracket stands in one or more particular positions, the gas will flow through it, but when turned in all other positions the flow of gas will be cut off, as herein shown and described.

76,283.-Hugir McDonald, Allegheny, Pa.Treating Cinder for Fixing Furnaces.-March 31, 1868. -The cinder, slag, dross, or recrement of iron, (while in a molted state), is treated to a strong current of air, and so manipulated that all parts are acted on by the air. After this it is placed aromed the sides of the furnace.

Claim.-Subjecting melted cinder, slag, dross, or recrement of iron, and of furnaces used in the manufacture of iron and stecl, to an active current of air, sulstautially as hercin described, and for the purpose set forth.

76,284.-John K. McDonald, Nemark, N. J.Door and Package Holder.-March 31, 1868. The fastener "piece" has side pins which pierce the door casing, when the door is closed, and the loop being placed across the crack, the door cammot be opened. The link or "loop" has two hooks, one of which is sharp pointed for attachment to the seat back, and the other is for suspension of a package. The snap hook is for a hat. All the accompaniments of the link may be passed to its ends and turned intrard trhen it is placed in the pocket.

Claim.-The combination of the piece B, hooks D, $E$, and $G$, with the loop $A$, substantially as and for the purpose specified.

76,825.-S. D. McPiemson, Normal, Mll.-Com pound for making Pietures Transparent.-March 31, 1868.-Composed of fir balsam, 2 oz.; Demar Tarnisil, 1 . oz.; alcohol, $\frac{1}{2}$ oz.; and turpentine, 1 oz .

Claim.-The within-describel ingredients, compounded and used substantially as and for the purpose set forth.
g6,226.-Henry Meyer, Grafton, Wis,-Machine for Dressing Chair Seats.-March 31, 186\%. The chair-seat is elamped to the earriage and passed orer the rotary cutter. The guides are so formed that the seat receives the proper conformation from the cutter.
Claim. - The guides E F, the latter provided with the concare upper cdge, whereby, as the carriage G is reciprocated, a rising and falling motion is imparted to it, by which the depression in the ehair seat is cut. all arranged and operating as described.
6,23\%.-Alexander Miller and C. Mason, Chicago, Ill.-Wood Pavement-MLarch 31, 1868.The blocks are wedge-shaped and stand upon their broad ends which are allowed to toach. The angular space between the upper parts of the rows of blocks are filled with concrete.
Claim.-A parement, constructed of rredge-shaped blocks A, when laid so as to break joints with those of the opposite rows, in combination with a conerete
filiing, and in further combination with a continuous wood foundation, and so laid as to form continuous rows aciuss the street.
g6,92S.-Warien P. Miller, New Torls, N. Y -Attaching Cross-Cut Savs to their Mandles. Mareh 31, 1868. -The pins in the arms of the collars enter notches in the edges of the plate. The aitachments are secured by the curvod wedge blocks which are interposed betwecn the handles and plate.

Claim.-The collars $e c$, pins $l$, fitting in notches in satr, and the ecentrics $e e$, when constructed, applied, and operating for the purposes shown and described.

G6,2ヵ9.-David Miller, Allegheny City, PaPaint Can.-March 31, 1868.-The top of the can lias an inturned flange and a thread spun on the side beneath the top. The head has a thread uponits downturned flange, and screws down tightly upon the inturncl flange of the body.
Claim.-The combination of the flange $x$ and malc scres threads $x^{2}$, at the mouth of the body of the can, when used in connection with the feinale screm threads in the flange of the lid, substantially as herein described and for the purposo set forth.

76, ฉ30.-Josepil W. Moore, Cambridmeport, Mass.-P'aint Brush.-Marck 31, 18fiz. -The bristles are inserted into the socket from the upper side and a conical wedge being forced into the bristles, the top is screwed into the socket. The tubular end of the handle rests upon the shoulder of the wredge.
Claim.-The remorable screw-top $a$, and the handle C, with a screw thread, $b$, in combination with welgo $B$, with its shoulder $e$, all constructed and operating substantially as and for the purpose described.

Y6,231.-Francis Morandi, Malden, Mass.Culinary Apparatus.-March 31, 1868. -The bottom of each steamer, and the lid, hare each a downward amnlar lip which cuters a trough around the top of the vessel beneath, and makes a steam-tight water joint from thence the overplus of water escapes (to the boiler) through the orertlow tubes.

Clain.-Providing a compound steam cooking ap paratus, such as described, with water joints anic recturn tubes, substantially in the manner and for the purpose specifica.
g6,2B』-EDWard S. Morse, Salem, Mass., as signor to limself and Aaron Goldothwate, Ir:Shelf Jracket.-March 31, 1868.-The immer end or the horizontal bar of the bracket has a hook catch, and the lower end of the brace has a notch, which respectively take over or bear against the burs of the vertical series whichare placed in the back of the case.
Claim.-1. The method herein described of supporting shelves upon remorable brackets, constructed and operating as and for the purpose described.
2. The combination and arrangement of the bracket D, upright C , recess $r$, and pin $d$, in the manner and for the purpose specified.
3. The combination of the bracket D , eye $e$, and upright E , in the manner and for the purpose set torth.
g6,233.-TVilliam F. Mucimore, Astoria, N. X.-Glue Can.-March 31, 1868.-The prepared glue is kept in the inner can, and it is surrounded by another tin ressel in the manner of an ordinary glue pot, which gives means for heating the glue.
Claim. - A glue can, consisting of the water can A, from the ammlar cover $B$ of which the glue res erroir C is suspeuded, substantially as herein shom and des ribed.
76,234. - James Nealey, Jr., Bangor, Me. Lacing Device.-March 31, 1868.-The ends of the device hook into the eyelets and are tightened therein, and the middle is turncd into an cye through which the lace is passed.

Claim.-1. The hook B, as a new article of manufacture, when constructed within turaing eyes, and the lacing eye closed, substantially as described and shown.
2. Combining with shoe C , the lacing hooks I; when constructed and combined with the shoe, substantially as described and slown.

榤 $6,235$. Thomas Nevison, J1., Morgan, Ohio. -Hoe Seed Dropper.-March 31, 1868.-The seed slite is worked by a spring and by a cord which is attached to its upper end. The secd cavity is adjusted in size by the gauge block which slips within the slide.

Claim.-The sack I, chamber D, attached to the hoe handle $A$, in combination with the sleeve E , gange block $F$, brush $G$, and spring $f$, substantially as and for the purpose set forth.
\%386.-ABNER W. Newhall, Horse Heads, N. Y.-Machine for Sharpening and Gumming Saws. - March 31, 1868.-The leaves are jointed to the upper ends of the bifurcated support, which is adjustable vertically upon the standard, to regulate the inclination of the leaves; the latter have thus equal inclinations to present the saw to the emery wheel at an equal incline for both serics of tecth.

Claim.-A table for supporting saws in being ground and gummed, constructed with two folding leaves D D, so adjustably supported by the bifureated support $E$ as to maintain equal angles to the horizontal plane, substantially as and for the purpose set forth.

G6, 28: -W. A. Nichols, West Liberty, Iowa. -Ditching Maehine.-March 31, 1868.-A double mold board plow has cutting disks to share the sides of the diteh, and is followed by a similar but smaller plow eonnected to its rear end. The rear part of the share of the rear plow has upwardly-projecting cutters.

Claim.-1. The ditehing maehine, consisting of the formard plow C, attached to the beam B, the eutting disks $D^{1}$, in front of said plow, in line with its onter edges, the cutting disk D, in line with its point, the rear plow $\mathrm{C}^{\prime}$, having cuiters $a$, and secured to the beam E, bearing the eutting disk $\mathrm{D}^{2}$, and attached to the formard beam by the elevis and link, all eonstrueted and arranged to operate as heroin shown and described.
2. The rear plow $\mathrm{C}^{\prime}$, when provided with the rertical cutters $\alpha$, for shaping tho sides of the diteh, as heren shown and described.
3. The arrangement of the formard cutting disks D $\mathrm{D}^{1}$ with relation to the forward plow C , as deseribed, whereby the carth at the sides and center of the diteh is ent, to enable the plow to throw the dirt equally upon each side, as herein set forth.
\%6.238.-HENRY W. OLIVER, Jr., Pittsburg, Pa. -Band for Baling Cotton.-Mareh 31, 1868.-The baud has a single bolt holo in one end and a series in the other, and is secured by the said bolt and its nut. Claim. - The band $A$, bent around the head of the bolt $B$, as indieated at $x$, said band being used in combination with the bolt $B$ and nut $C$, construeted, arranged, and operating substantially as herein described, and for the purpose set forth.
769239.-TV. Onions and H. Roberts, St. Louis, IIo.-Lamp Chimney.- March 31, 1868. -The expansible, downwardly-laring, open ring is riveted at its middle to the bottom of the metallie eap, and has supporting pins which pass throagh slots in the cap, and rest upon the top of the glass portion.

Claim.-The elastic band $\mathbb{C}$, attached to the lower part of the upper metallic portion $B$ of the lamp ehimney, and cxtending down below the same, to fit into the upper end of the glass portion $A$ of the chimney, substantially in the manner as and for the parpose set forth.
\% $6,210$. Cilarles R. Otis, Yonkers, N. Y.Hoisting Apparatus.- Hareh 31, 1868. The drum is comnected with a valve in the steam pipo in sueh manner that when it is relieved from the tension of the hoisting rope the steam is shut from the engine.
Claim.-1. So combining the drum $B$ with the steam valre and friction brake, that when released from the tension of the suspending rope, it shall automatieally eut off the steam from the engine and tichten the brake against the wheel substantially as hercin set forth.
2. The studs $f f^{*}$ and spring $g$, in combination Tith the band wheel $a$ and drum $B$, whereby the drum is mored in advance of the band wheel when
released from the tension of the suspending rope, substantially as herein set forth.
3. The cam-facod, annular slicle $a^{*}$, furnishod with an arm $\vec{d}$, connceted with the drum B , in combination with the cam-faced enlargement $b$ of the shaft $A$, and the sliding rod $e$, whereby the turning of the aforesaid slide is eaused to operate the valve in the supply pipe $A^{*}$, substantially as hercin set forth.
4. The rod $m^{*}$ and lever $m$, so combined with the valre in the supply pipe $A^{*}$ and the loaded lerer $D$ of the frietion brake, that the said brake shall be held away from the friction wheel $b$ when the ralve is opened, substantially as hercin set forth.
g9,941.-Francis Parkerson, Philadelphia, Pa. - Wheel Barrow.-March 31, 1868.-The middle bottom board is made removable, and the axle is jointed bencath it so that the hand cart may be narrowed.

Claim.-A wheel barrow, composed of the aboredescribed parts, all arrangod, constructed, and operating in the manner above set forth and shown.

6,642.-Joseph Peevy. Orono, Mc.-Rock Drill.-Mareh 31, 1868. The walking heam has a spring ratchet bar extending from its free end, and the ratchet end of the spring impinges on the ratehet surface of the disk upon the drill rod, and not only raises it, but eauscs a partial, rotary motion in the drill rod. Tho spring presses against tho disk beneath it to increase the foreo of the down stroke.

Claim.-1. The adjustable and notehed collars $n$ $n^{\prime}$, in combination with the drill shank $m$ and the bifurcated and notched shaft $k$, as and for the purpose set forth.
2. The spring arm $k$, in combination with the walking beam $A$ and tho drill rod, as and for the purpose set forth.
6.243.-Mathias Penning, Learenworth City, Kan.-Plow.-March 31, 1868.-The colter has a horizontal extension by which it is connected to the land side.

Claim.-The combination and arrangement of the coltcr A, having a horizontal extension B bolted to the land side, tho rod $E$, ere bolt $n$, eye plate $e$, elip $b$, upright $d$, plow handle $G$, and plow beam II, all construetod and operating substantially as and for the purpose shown and described.
g6,244.-JOHN M. Peukins, Plainfield, N.J. assignor to R. R. Perkins, same plaeo.-Compound Fabric for Covering Walls, dec.-March 31, 1868. The lamina is turned from the eylindrical piece of wood, and is applied, with the grain transverse, to the paper pulp in a machine before passing through the rolls. The ealender roll on the side of the wood may be run at a higher speed to eause a polish.

Ólaim.-1. A compound fabrie, eomposed cither of lamina of wood and paper, or lamina of wood and paper pulp, or lamina of wood and some textile material, for covering and decorating walls or furniture, prepared, employed, and proserred from injary while being handled or transported, in the manuer and for the purposes herein set forth.
2. Preserving thin lamina of wood, or any compound thercof, from liability to injury, and securing easc and freedom in umolling the same, by forming the rolls in such a manner that the grain of the wood shall run in the dircetion of and around the roll, substantially as described.
-6.34.5.-David Pheteplace, Lewiston, Me.Varnish for the Surface of Rolls used in Textile Machinery.-March 31, 1868.-Composed of glue and cum tragaeanth in cqual parts, dissolved in vinegar. The mixture is applied while both the roll and it are warm, and in several successive eoats.

Olaim.-The described compound, consisting of the ingredients substantially as set forth.
g6,246.-CyRUs Powers, Greenwich Village, Mass.-Olamp for Holding Palm Leaf Warp.Nareh 31, 1868. -The two parts of the clamp are hinged together and one part has a longitudinal rib whieh enters a groove in the other part. The elamp is applied to the breast beam while the end of the leaf warp is passed over the grooved part. The
ribbed part is then brought down, and the parts held upon the warp by the clamping buttons, when it is disengaged from the breast beam of the loom, readr for weating.
Claim.-The remorable elamp for holding palm leaf warp, eonstrueted as described, eonsisting of the groored piece B and tongued piece A, hinged together at $\alpha$, and prorided with the notehes and eatelies $c$, as herein shown and described.

76,24\%. - E. L. Pratt, Boston, Mass. - Nut Cracker.-Mareh 31, 1868. - The short arm of the lerer is pivoted to the moring jatr, and it has fulerum bearing in shaekles which are piroted to the fixed jair, and curred baekward to give aecess to the jaws.

Claim.-1. In eombination with jointed jarrs a b, the lever $d$, jointed to one jaw $b$, and humg upon a swinging fulerum, substantially as deseribed.
2. Conneeting the lerer to the jaw a by the eurred link or links $e$, substantially as and for the purpose set fortli.
g6.24S.-William Richardson, Baltimore, Ifd. -Limb and Basket Holder.-Mareh 31, 1868.-The staff has a fixed hook engaging an upper limb; the lower hook shdes upon the stiff aud aets to engage a lower limb or support a basket.

Claim.-The instrument abore deseribed, consisting of the staff A, fixed hook H. sliding hook $\mathrm{H}^{\prime}$, and the knob $a$, or its equivalent, all the parts being eonstructed and arranged snbstantially in the manner and for the purpose specified.

76,249.-P. R. Ridemer, Iron Mountain, Mo. Wagon Wheel.-Mareh 31, 1868.-The spokes are strengthened by strips of metal which pass around the hub tenons, and hare their ends clinehed orer the felloes.

Claim.-The rib b, when eombined with the spoke $B$ and felloe $C$, in the manner herein shown, and for the purpose set forth.
g6,250.-D. W. Rocie, Roehester, N. Y., assignor to himselt and J. P. Rocie, same plaee.Shingle Ifachine.-Mareh 31, 1868; antedated February 25,1868 . The bolt is elamped between the jairs of the oseillating platform by a hand wheel through medium of a serem and spur wheels. When shingles are sawn, the inelination is given to the bolt allowing it to settle, when undogged, npon a tilting platform; and this platform is tilted by eonacction with an ececatrie, aetuated by a star wheel, turned by a pawl upon the earriage.

Claim:-The serew $l$, revolving nut $n$, and hand wheel $o$, geared to said nut, all arranged and operating in comection with the morements of the carriage, substantially as and for the purpose lerein speeified.

96,251.-Elias Roth, New Oxford, Pa.-Gate. - Mareh 31, 1868. - The latel is heariest at the lower and encaging end, so that when the weight of the piroted bean is removed from its upper cnd, the lateh is disengaged. The said lever is connected by a bar to the gate in sueh a manner, that when it is raised by the cords, it draws the gate open. The eords are earriced over sheares at the upper ends of posts beside the traek, so that riders mas open the gate without alighting.

Claim.-1. The eombination of the pivoted lever E and eonneeting rot or bar G with the gate A , substantially as herein shown and described, for the purpose of opening and elosing the gate.
2. The combination of the repe H, swiveled pulley I, troo or more ropes or wites K, and piroted pulleys L, with eaeh other and with the lever E and posts $\mathbf{F}$ and $\mathbf{M}$, or equiralent supports, substantially as bercin shown and deseribed, and for the purpose set forth.

76,252.-Lewis J. Schatefer, Philadelphia, Pa. -Curtain Fixture.-Mareh 31, 1868--The eurtain eord passes beneath the knob of the rod, and is stretched by the spring. The tension is regulated by projeetions on the rod whieh pass between the eoils of the spiral spring and may be turned upward or downward therein.

Clatim. - The eombination of the rod C with its projections $a a^{\prime}$, or their equivalent, and the spring 1). so arranged that the adjustment of the fixture is effected by turning the said projeetions between the coils of the spring, substantially as herein specified.

26,253.--Sanuel R. Scottron, Springificl, Miss.-Mirror.-Mareh 31, 1868. - The two mirrors are gimbal-jointed mpon the two frames which are hinged to the vertieally-adjustable staff of the stand. Intended for the toilet.
Claim.-1. An arrangement of mirrors $b c$, in frames el ef, and set into wings C and D , hinged together, substantially as and for the purpose shown.
2 . The eombination of the above with the rod B . having the shoulder a and set nut E, and arrmged in a stand, $A$, so as to be adjustable in height, substantially as shown.
76,254.-Jonathan Scribner, Franklin, N. H. -A nimal Tether.-Marel 31, 1868.-The fork of the pole is pivoted to a picee turning on the top of the post. The pole is weighted at the forked end so as to hare a hormontal position.
Claim.-The forked and eurved pole C, with weights $D$, in eombination with eross bar $B$ and stantard A, substantially as deseribed.

76,255.-Antony Siebanck, Cleveland, Ohio. -Itervester--March 31, 1868.-The drum turning loosely npon the axle is clutehed thereto to drive the eutter bar. This motion of the cutter is commmieated through eog wheels and a crank with its pitman rod. The gromed wheels are allowe fiee backward lotation but in their forward movement act nate the eutting mechanism.
Claim.-1. The drum K, plaeed loosele on the axle C , and provided with the internal teeth $j$, the pinion L , eomnceted with the fixed plate M . and the pinion N attached to the bevel wheel H, placerd loosely on the axle C, all arranged in conncetion with the elutel $O$, for the purpose of driving or operating the siekle $Y$, substantially as and for the purpose set forth.
2. The eollar $e$, provided with the eireular disks D, having two flanges $d d$, in eombination with the right-angular flanged hub $e$ and pawls $\mathrm{F}^{\mathrm{F}} \mathrm{F}$, whose guide rods $g$, surrounded by spiral springs, operate upon each side of the asle C, all eonstructed, arranged, and operating as herein deseribed for the purpose specified.
3. Tho rod $T$ applied to the finger bar $P$ and rod S, as shown, and eonnected with the bent lever U, arranged relatively with the lever V , to operate in the manner substantially as and for the purpose set forth.

76,956.-Thomas Sherhan, Dunkirk, N. Y.Process for Steelifying Iron.-March 31, 1868.-Mix water-siturated ehirroal, 200; muriate of sola, 30: sal soda, 12 ; "blaek" resin, 5 ; and black oxide of manganese. 5 parts. A cast-iron box reecites a layer of broken limestone $1 \frac{1}{3}$ inches thiek, covered by a perforated plate. A $\because$-inel layer of the mixture is put on the plate, and then a layer of iron, and the box filled with the alternate layers, finishing with the mixture. The eorer is then luted domn, and the box placed in a fmrnaee for about 7 hours. Immediately on remoral the iron is dropped into cold water. The mixture may be used again.

Olaim. -1 . The eombination of the ingredients composing the chareoal eompound, substantially as and for the purpose set forth.
2. The embination of the ehareoal eompound with the broken limestono, substantially as and for the purpose described.
3. The employment of a perforated plate, when used as and for the purpose speeified.

76,25\%-A. M. Siluntleff, Boston, Mass. Saliva Pump.-Mareh 31, 1868.-The deviee is attaelice to the upholstery work of the ehair by the points on the fixed and morable frame.

Claim.-1. Combining with the salira vessel or chamber, a deviee for attaehing it to a elair or other surface, substantially as deseribed.
2. In combination with the ressel $a$, and its tle:
ble pipes and mouth piece and pump bulb, tho let-off pipe $r^{\circ}$, substantially as described.
3. Combining with pipes $s$ and $b$ and vessel $a$, the reversable bulb $c$, or reversable ralves for drawing the saliva into vessel $a$, or for expelling it therefrom, substantially as set forth.
4. Covering an elastic pump bulb with a close moven or equivalent covering, substantially as shown and described.

6,258.-A. J. Smith and H. C. Reed, Decorah, Iowa.-Bee Aive. - March 31, 1868. - When the bees are hived a box containing small pieces of comb is placed on the top of the hive and in communication therewith. On the queen entering this box the communication is closed and the queen put in a gamze cage which is placed in the hive. The queen is fed by the bees, but laying no eggs, the cnergies of the bees are deroted to accumulation of honey.
claim.-The combination of the queen trap and cage with the hive, substantially as described for the purpose specified.

7 6,259.-OrRen M. Smith, Philadelphia, Pa., assignor to S. W. Evans and A. AGNEW, same place. -Runner for Umbrellas.-March 31, 1868.-The cylindrical part of the runner is of ordinary construction and the rib attachment is made of a single flat anmulus which is bent so as to form the necessary recesses and is fastoned to the cylindrical part.

Claim.-A "runner" or " notch," consisting of a tube $A$, and a bent plate or ring $a^{\prime}$, constructed and secured to the tube, substantially as described.
6.260.-Joel II. Soule, Georgetown, N. Y.Milk Stirrer.-March 31, 1868.-The stirrer is allowed to foat in the milk and is moved by a pendulous arm upon a beam which has a tilting box at one end and a rreight at the other. A stream of water flows into the box and cansing it to descend it is tilted and again raised by the weight.

Claim.-1. The stirrer 1 , constructed as described, resting upon the milk to be stirred, and operated by means of the arm II, from the beam A, having the weight I and bucket C , said stirrer being allowed to rise and fall with the milk in the vat, as herein shown and described.
2. The combination of one or more buckets $C$ and stop chain or chains $F$, or their equivalents, with the pivoted beam A, substantially as herein shown and described, and for the purpose set forth.
3. The combination of one or more spring catches Gr with the end or ends of the piroted beam A, substantially as herein shown and described, and for the purpose set forth.
\%6,261.-ALBERT H. Southwick, Oskaloosa, Iowa.- Wind Mill.-March 31, 1868.-The shutters are commeeted together and to the ball governor by Thich the apertures are regulated in size.

Claim. - The arrangement of the platforms B C and wheel $E$ with the shutters $G G$, connected together by the fastenings $q q$ and rods H H , and combined with a governor, substantially as and for the purposes set forth.

76, 862. - Albert H. Southwick, Mahaska County, Iowa.-Heel Protector.-March 31, $1868 .-$ The metallic plate which is attached beneath the heel has side flanges lying against the sides of the heel.

Claim. -The metallic rim $d$, for attaching to and around the entire under surface of the heel, when said rim is provided with the curred and bereled fiange A, to extend up the side of the heel and keep the same level, as and for the purposes described.
g6,263.-Alfred R. Stanley, Boston, Mass.Former for Hoop Skirts.-March 31, 1868. The frame slides upon the standard, and its head is attached to a cord which passes orer a sheave at the head of the standard, and is attached to a counterpoise treight. The tape clamps slide upon the bars.

Claim.-1. Combining the skirt-former framo with its standard, by a turning and sliding joint, and counterpoising mechanism, substantially as and for the purpose specified.
2. In combination with the skirt-former frame, the
sories of artjustable elamps, or equiralents therefor substantially as and for the purpose specified.

76,264.-Charles L. Stevens, Galesburg, Ill., assignor to himself, and Albert A. Denton, same pace.-Steam Water Elevator.-March 31, 1868.The vaeutum chamber is made of wooden stares and heads. It is hooped with iron, and has iron and stay bolts from head to head. The bolts hare wooden cases, which prevent contact between the metal and steam, and act as strots to prerent collapse. The steam acts upon the top of the water through the intervenins float, and forces the water into the tender tank. The tank is reflled by allowing the steam to condense therein.

Claim.--The construction of a wooden air-tight tank, strengthencd and supported with the iron bolts, battons, and wooden casings, substantially in the manner and for the purpose as herein set forth.

76,265.-Edgar M. Stevens, Chelsea, Mass., assignor to himself and W. N. ELY, tristees.-Compound Rubber Enameled Cloth for Boots and Shoes. -March 31, 1868. - A percentage of plastic rubber is mired with the other ingredients in enameling "American enameled cloth," and the material used for manufaeture of shoes.
Claim.-1. The use of the compound rubber enamel cloth, as described, in the manufaeture of boots and shoes.
2. As articles of manufacture, boots and shoes made, as to their uppers, of the compound rubber enamel cloth, substantially as described.

76,266.-GEORGE Storey, Wheeling, W. Va.Treating Malt and other Liquors.-March 31, 1868; antedated March 20, 1868.- The ale or beer is exposed in a shallow, extended tank to the action of frost to enable the removal with the ice, of the matters subject to decomposition.

Claim. - The process of treating malt liquors and the fermented extracts of cereals by freezing, substantially as herein described.

76,26\% - Albert Strasser, Montgomery, Ala. - Artificial Lieg.- March 31, 1868.-The sliding frame works in grooves of the leg frame, and its arms have rectangular ends which enter notches in the knee joint and prerent its flexion except when the foot is bent at the ankle. The said frame has a pendent bar sliding in a fixed cross bar and surrounded by a spiral spring, tending to keep the frame engaged with the notches. The sliding bar is connected by a strap to a temper bolt in the heel.

Claim. - The combination of the frames E F, hinged together with the stop-joint $G$, the sliding frame H, having arms I engaging with the notches 0 of the frame $E$, the cross bar K, stem J, spiral spring N, strap $I_{1}$, and adjustable eye-bolt ' $I$, all constructed aud arranged to operate as herein described for the purpose specified.

76,768.-TVAGER SWAYNE, U. S. Army.-Pis-ton.-March 31, 1868. -The anuular packing, or valve, has some end play in the piston head, and a space on each side of it is opened by its dragging somewhat in respect to the head. The space within the tubnlar piston rod communicates with the spaces at the sides of the valve, and conveys water thereto to lubricate the surfaees of the piston and cylinder on the exhaust side. The pistou rod receives water from a flexible hose.

Claim.-A piston, constructed substantially as described, so as to operate antomatically, during nearly the whole movement of the piston by its motor, to discharge water against the inner surface of the cylinder on the exhaust side of the piston, for the purposes specified.

196,269.-C. R. Taber and J. Oscar Taber, Salcm, Ohio.-Dropping Platform for Harresters.March 31, 1868. -The arm supporting the dropper is thrown upward and backward to deposit the grain from the dropper, whose slats are attached to a hori zontal arm oxtending outwardly firom the lower end of the oscillating arm.

Claim.-1. A vibrating or swinging dropper composed of slats supported at their rear ends only, in
combination with the ledge or rebate upon the finger bar, substantially as deseribed.
2. A slatted dropper suspended upon a single ribrating arm at its inner end, substantially as deseribed.
3. 'the combination of the vibrating clropper with the single standard or support of the o rerhnng reel, substantially as deseribed.
4. The links or arms $c e$, in which the reol slaft has its bearing, loy means of which the reel is adjusted upon its single staudard or support, as deseribed.
g6,270.-Jom Taggart, Roxbury, assignor to himself and Jerome A. Bacon, Bedford, Mass.-Machine for making Paper Pulp.- Nareh 31, 1868. - The rags are passed between the frusto-eonieal serewthreaded grinders. T'he inner frustum has a prismatio shank which has free rertical movement in its motire wheel, and has adjustment by morement of its step bar. The frustums are placed in an outer ease, and have an aperture beneath their lower ends, through which the polp eirculates. The serew threads upon the coneave and conrex faces the wind in eontrary directions.

Claim.-1. The combination of the male and female eyliuders or frusta, aud the helical threads thereof, arranged on them so that that or those of one eylinder or frustum shall be pitched in a direetion opposite to that or those of the other, as speeified, the same being for use in manner and for the purpose substantially as hereinbefore set fortl.
2. The redncing eylinders or finsta, made with helical threads, arranged with opposite pitches, as deseribed, and as haring teeth formed on the upper part of cither or cach eylinder or frustrum, as set forth.
3. The applieation of the shaft of the inner of the two firusta, made as deseribed, to the driring pinion and bearing of sueh shaft as to cnable the frustum to rise within its fellow under cireumstanees substantially as set forth.
4. In combination with the redueing frusta, so made with helieal threads, arranged to piteh in opposite directions, as set forth, means, substantially as described, or its equiralent, for supporting the inuer frustum, and adjusting it in altitude, as specified.
5. The arrangement or combination of the two frusta, made, as deseribed. With a tank or tub, substantially in manner as set forth, wherely the eontents redueed in a liquid, when in a tub, and the inner firustum may be in revolution, are made to flow radially and rertically with respect to the outer frustum, as specified, stiel eausing the pulp, in passiug into the redueing firustum, to conyerge toward a common center, and, in passing out of sneh frustnm, to direrge from the frustum tangentialls, or thereabonts, whereby the pulp will be mixed to great advantage.

76,271.-Jomin Blake Tarr, Fair Haten, Mass. - Ifanufacture of Spherical Shot and Shell.-Mareh 31, 1868. -The spherieal ball, hot from the molds, or from subsequent heating, is placed in the eups which are preferably eaused to rotate in opposite dircetions, and at different speeds. One of the eups is upon a spindle whiel has longitudimal motion ly a tail center, actuated by a hydraulie press or otherwiso, and serves to press the eups together. The eups are slaeked off at times, during the operation, to bring fresh surfaces of the ball uuder operation.
Claim.-1. A combination of meehanieal deriees, substantiall such, and operating essentially so, as that hereinbefore deseribed, for compressing and forming spherieal shot while in a plastie state from lieat.
${ }_{2}$. In a machine such as is hereinbefore deseribed, giving the outer edges of the retaining and forming dies an additional flare, in the manner and for the purpose above set forth.
3. In combination with a pair of coneare dies, arranged to compress or form spherieal bodies of heated metal, as above deseribed, meehanism for imparting to eaeh of said dies a different motion from that giren to the other, substantially as and for the purpose abore described.
4. In a machine for forming spherical bodies from heated metal, in the manner above shown, the con-
struction and use of a stop-gauge, construeted substantially as described, in combination with compressing and forming dies.
 Medical Compound. -Mareh 31, 1868.-To prevent abortion in cows. Composed of bone dust, 20 lbs ; and sulphate of iron, 1 lb .
Claim.-A medieal compound, composed of the ingredients hercin set forth, and for the purposes deseribel.
76.39: - Chamles E. Thompon, New March, Conll-Curtain Fixture for Carriuges, de.-March 31, 1868. -The tubular roller conceals a holical spring upon the jonrnal shaft by whieh the eurtain is rolled up, when the rubber tube upon the shaft is relieved from the pressure of the frietion lever.

Claim.-The combination of the metal soeket a and India-rubber tube $b$ with the binding lever e II and the springs dat $B$, when they are constructed arranced, and fitted for use, substantially as herein described and set forth.
g60.224.- Cilester Tuiner, Grand Rapicis, Mieh.-Water Meter or Motor.-Mareh 31, 186\%. The water enters each of the earities in the linl alternately, and passes through the radial opening communicating with the space behind the wing pis ton, which it earries around and causes the rotation of the hub.
Claim.-1. The piroted wings II $\mathrm{H}^{\prime}$, adapted to operate both as ralres and pistons, substantially as herein deseribed and represented.
2. The combination of the shell or easing i B, paeking I , ports $\mathrm{F}^{\mathrm{G}} \mathrm{G}$, rotary hab E , having chambers or apartments $\mathrm{E}^{1} \mathrm{E}^{1 *}$ and openings $\mathrm{E}^{2} \mathrm{E}^{3}$. Trith the ralres or wings $11 H^{\prime}$, all constructed ant arranged to operate in the manner and for the parpose set fortll.

26,295.-S. D. Tuttle, Eaton, Ohio- Sulusoil Plov. - Mareh 31, 1868-The share standard is adjustable in the clip whieh is attached to the side of the beam. The furrow is cleared before the plow by the lower forked end of a lever operated by a handle rod.

Claim.-1. The serew-elip C, furnished with the thumb-serew $c$, substantially as for the purpose set forth.
2: The serew-elip C, in eombination with the sul)soil attachment $s$, substantially in the manner and tor the purposes specified.
3. The brace T , in combination with said subsoil attachment, as and for the purpose deseribed.
4. The wreeding attachment E, substantially as and for the purpose set forth.
5. The eombination of the lever or rod $n$ with the guide N , as and for the purpose speeified.
6. The elip C', subsoil attachment S, brace T, hauales B B, wreding attachment E , rod or lever $n$, and guide N, the whole being constructed and arranged substantially in the manner and for the purpose set forth.
g6, 2g6.-W. P. Valevine.-Buffalo. N. Y.Roofing Compound.-Marelı 31, 1868.-Loam, (i0); and hydraulie cement, 40 parts; are saturated with coal tar and applied in a thin coat on a board finmdation, and compacted with an irou roller. Atter a time a second coat is added and sprinkled with sand.
Claim.- A rool', composed of the materials combined and applied in the manner herein described.

76,2g7.-Sailuel B. If. Vance, New Yohk, N. X., assignor to Mitchell, Vaxce \& Co, same placeCock for Gas Burners.-Mareh 31, 1868 .-The airpassage is made partially around the face of the plug, instead of diametrieally throngh it. The objeet is to aroid the whistling in the burners.

Claim.-The gas-burner cock, haring the rom edge port or passage $c$, construeted aronnd about two-thirds of the cneumference of the plus, snbstautially as shown and deseribed, and for the purpose herein specified.
g6,2g8.-A. C. Vavgitan, Philadelphia, Pa.-Augur.-Marel 31, 1868.-The shank is tubular from
end to end, and has a screw upon its outer face. Both the end of the serew and end of the tube hare eutters formed upon them. The clips pass partly up the tube, and are partially carried out by the screw. The tool is intended specially for boring out spikes or bolts.

Claim.-The metal tube A, with its external screw thread, $b$, extending to the lower end of the tube, when the latter, with the serew thread, is cut away, to form the cutting edges $i i^{1} i^{2}$, and when the onter edge of the serew thread is on a line with, or nearly on a line with, the outcr cutting edge $i$, for tho purpose described.
g6,999.-Willian Weiler, Washington, N.J.Portable Rock-Drilling Machine.-March 31, 1868.The mechanism may be driven by hand or otherwise. The drill has its downward impulsion by a monkey whieh is automatically tripped. The drill has partial yotation between the strokes.

Claim.-1. The drill-rod L, operated by a sliding weight H , and raised and partially turned between cach of the blows of the weight by the anti-friction roller's $f$ and dogs $g$ of the endless bands $d$ and $d$ ', through the medium of the levers and derices herein described, or their equivalents, all substantially as and for the purpose specified.
2. The drill-rod L, secured to the frame of the machine by plates $k$ and $l$ in such a manner as to be readily detached from the same, as describod.
3. The sliding weight II, and its spring eatch I, elerated by the platese of the endless bands $d$ and $d^{\prime}$, and released by the pin $j^{\prime}$ of the adjustable plate $K$, in the manner and for the purpose specified.
76.280.-James D. Whelpley and Jacoos J. Sroner, Boston, Mass. - Steam-Boiler Furnace.March 31, 1868.-The ealoric current circulates through flues above and beneath the boiler, and passes through longitudinal tubes in the same. The lo sser and upper flues are both of them arched on the sides opposite to the boiler, to radiate heat divectly uponit.

Claiin.-1. The inclined jambs $m$ and fire-brick arch I, arranged within the fire box, to secure an axial focus of radiation within the fire bos, substantially as described.
2. The arrangement of inclined jambs in the firebox. and coneave radiating flue beneath the boiler, to utilize the heat of radiation more perfectly, substantinly as deseribed.
3. The arrangement of the surrounding masonry flues of the setting surrounding the boiler, with concare interior surfaces toward the boiler, so curved that the axis of their radiation may fall within the water space of the boiler as a lincar focus, as and for the purpose described.
4. In the employment of pulverized fuel for heating purposes, the arrangement of a blast of carbon and air above the fire, introducing the air-floated coal among radiating surfaces, together with a blast of less power below the grate bars, to maintain the combustion of the lump coal, and prevent fusing the grate bars, as and for the purpose described.
g6,281.-Levi II. Whitner, Washington, D. C. - Wasling Machine.-Mareh 31, 1868.-The working crucial frame has pendent arms and an oscillatory motion. The suds box receives steam through the apertures in partitions which eut off the steam chambers from the rest of the stuls box.

Clctim.-A washing machine, combining in its construetion the following elements, viz: A boiler, A, and stean-pipe, D, a case, E , with perforated partitions, F and $(\mathrm{G}$, an oscillating firame, MI, with arms, $\mathrm{I}^{\prime}$. saild frame being attached diagonally to the shaft L. and receiving motion from the arm $I^{\prime}$ and berelwheels $I$ and $K$ and the balls $N$, said several parts being arranged substantially as described.
ge,983.-Thomas Th. Wible, Quincy, Ill-Oorn Fianter.-March 31, 1868. -The secd is dropped from the seal slide into the distributing pipe which direrges in four branches, each leading to a planting jatr; the jars are so connected together as to open simultaneously and are intended to deposit cach one of four seeds separately.
©iciom. - A hand planter, constructed and ar-
ranced substantially in the manuer described, so as to deposit four grains of corn or other seed in one hill, each in a scparate hole, and at fixed distances from each other, by one positive motion, as herein specified.
g6,283.-George F. Willey, Laconia, N. H.Plow Carriage.-March 31, 1868.-The earriage is mounted on caster wheels, and the plow is adjustably comnected to its side.
Claim.-The construction of the carriage A A A, with the plow $P$ and attachments, combined and adjusted as shown in the dramings.

6,284.-Daniel Wills, Camden, N. J.-Gill Net.-March 31, 1868.-Metallic rings are attached as sinkers to a portion of the lower course of meshes, and the lead line is dispensed with.

Claim. -The application of a series of open frames or rings to the meshes of the bottom of the net, substantially as described, for the purpose specified.
g6,285.-GEonge K. Wood, Morristown, N. J. -Refrigerating Car-March 31, 1868.-The car has a plurality of metallic chambers for the respective reception of "through" and "way" freight. An upper chamber contains ice.

Claim.-The pillars Ix, arranged or placed within the provision chambers, any or all of them communicating above and below the doad-air space, between said chambers and the sides of the car, substantially as and for the purpose set forth.
g6,286. - John E. Wootten, Reading, Pa.Packing for Joints. - March 31, 1868. - Ordinary woolen felt is immersed in a mixture composed of common brorrn oxide of iron, (called mineral paint, with paint oils and driers, to the consistence of cream. The felt is hung up to drip 48 hours and is then fit for use.

Clain.-A packing, composed of felt or other suitable fibrous material, prepared in the manner and for the purpose specificd.
g6,2s\%- D. W. Woodruff and GEORGE C. Grees, Washington, D. C.-Paper File.-March 31, 1868. -The elamping lever has two eross-bars, one of which is received in the side extension of the longitudinal, inrerted $T$-formed groore in the box bottom, and the other cross-bar rests upon the sides of the groove so as to form a clamp for the file board.
Claim.-1. The clamp lever D, provided with the lugs F F, G G, or their equivalents, combined with the base board A, substantially as described, so that no portion of said clamping derice shall project below the loाrer surface of said base board when the apparatus is in operative condition.
2. The clamp lever D, or its equivalent, and the file board E , combined and arranged so that the pressure derived from the elasticity of the paper shall always be applicd to the upper end of said lever, substantially as set forth, and to the effect described.
3. Making the file board E, or its equivalent, separate from and independent of the clamping device, for the purpose set forth.
4. The plate C , or its equivalent, extending lengthwise through the central portion, but not to the edges of the base board A, substantially as describcl, in combination with the elamping derice, so that the side-pieces B B may be applied without interfering with the operation of said clamping device.
g6,255.--IsaAC Pardee, Vineland, N. J., assignor to himself and Arial C. Cottos, same place. - Scuffe Hoe and Garden Trimmer.-ITarch 31, 1868. -The arms to which the angular blade is attached are piroted to a frame, and their rear ends are secured by a set-sereer to any required inclination.

Claim.-The combination of the angular plate A, arms B B , and piece $C$, substantially as shown and described, and for the purpose specified, and that Whether with the slot $e$ or a series of holes as described, in its stead, and whether with or without the radial serrations mentioned.

76,989.-WILLIAM L. Starr, Columbus, Ohio.Animal Trap.-March 31, 1868. -The single coil of
the wire is secured to the back of the raised endboard of the trap by a strap of rubber, and consti tutes a rolling falcrim as the upper end of the rire, having the bait, is drawn formard to retract the detent at the other end from bencath the falling end of the platform.

Claim. - The substitution, in a box-trap, 1 , of a single wire coil, E, retained by a yielding conneetion, $a$, and haring its two cuds free and pointing inward. one to hold and release the rerolring plattorm, and the other for the bait, in place of the ordinary piroted lever, and all operating together substantially as herein described.
\%6,'290.-James E. Woodruff, Buffalo, N. Y, Fare Box for Passenger Cars.-Mareh 31, 1868.The eylinder has dished or squared places to receire the faire, and is turned $90^{\circ}$ by a part-rod minder eontrol of the cliver. The pawl acts on a four-tooth ratchet wheel, and a square block at the other end of the eylinder receires the pressure of a flat spring to insure proper rotation.

Claim. - A box to receive passenger fare in combiuation with a revolring eylinder, or its equivalent, under control of the driver, to act as a cover to said box, so that the fares may be put in withont any opening of the box.
g G, BD1.-Alfred R. Stanley, Boston, Mass.Hoop Skirt.-March 31, 1868. - In making the joint the cuds are lapped and the clasp bent around them. The joint is then kinked to prerent the withdrawal of the ends, and is inserted into the tape pocket and stitched fast.

Claim.-1. The method of manufacturing hoop slirts herein described, that is to say, uniting the ends of the wires by means of the lock elasps herein deseribed, and inclosing said clasps in the pockets of the tapes or cquivalent corering, all while on the " former," sulstantially as set forth.
2. As a new manufacture, a hoop skirt with the ends of the wires united together by the lock clasps herein deseribed, and said clasps inclosed in the pockets of the tapes, or the equiralent thereof, all substantially as herein described.

76,292.-Gurdon G. Wolfe, Tros, N. T.-Cooking-Stove Tank. - March 31, 1868. - The reservoir is placed upon the back end ot the stove and has a portion descending below the level of the store top, The "upper bottom" forms part of the store top, aud the rertical plate depending fiom its back elge forms one side of a flue chamber througli which the caloric current may be forecd by dampers. The exit flue passes rertically through the upper bottom.

Clcim.-1. The reservoir or water tank $A$, constructed with an upper bottom $\mathrm{E}^{\prime}$, and a lower bottom $A^{\prime}$, and intermediate plate $K$, andi exit flue E , each being arranged and combined in the manner and for the purposes substantially as herein described and set forth.
2. The combination of the rescroir or water tank A, construeted substantially as herein deseribed, With a cooking stove, having a part or portion of the rear end of the top thereof remored, substantially as shown at Fig. 2 of the accompanring drawings, so as to receire and contain the upper part or bottom $F^{\prime \prime}$ of said reserroir, in the manner and for the purposes substantially as herein described and set forth
3. The employment of the damper $\mathrm{C}^{\prime}$ in the upper part of the rear and vertical end plate of the cooling stove, in combination with the vertical flues in tho rear end of the stove, and with that part or portion of said rescrroir extending below the top plate of said cooking store, as seen at Fig. I of aceompanying drawings, and in the manner and for the parposes substantially as herein described and set forth.
4. The employment of the flue opening $L$, flue plate $\mathrm{L}^{\prime}$, and flue chamber M , in combination with the rescruoir $A$, in the manner substantially as herein deseribed and set forth.
5. The employment and arrangement of a reserroir or water tank with a cooking stove, so that a part thereof shall be above the top plate of the store and over the vertical flue or flues in the rear end thereof, and a part below such top plate, in the manner substantially as shown at Fig. 1 of the accompanying drawings.
 signor to Mosely Ezehiel, Philadelphia, I't-Manufacture of Mard Ibuber.-March 31, 1868. -Improrement on lis patent, Feb. 12, 1867. The rubber, aftor washing, is rolled into sheets 1-16 of an inch thick and immediately placed in the sulphnr bath ressel in a horizontal position. The sulphur is liept at a temperature of $200^{\circ} \mathrm{F}$. until foam has ceased to rise. At the expiration of the first hour the heat is raised to from 30 to 40 pounds pressure, and contimued for a second hour, after whieh it mas be al lowed to rise to 80 pounds. Tho whole process takes from 5 to 10 hours. The sulphur used is known as "pere sulphur." Iwenty or thirty inimntes is snflicient for one immersion, atter which the sheets are torn apart, rekneaded, and rolled into sheets.

Olaim.-The abore-described process of producing a prime article of hard rubber, by combining rubber and sulphur, as above described, and treating them substantially in the manner abore set forth.
89.294.-Thomas A. Bisbee, Dajton, Ohio, as signor to himselt and EDWN R. Stillwelal, same place.-Steam-engine Slide Tralve.-April 7, 1868.Two or more packing rings are placed at opposite culs of the valre to balance the rolve and prerent tilting. A pling breaks tho joint of the ling.

Ulaim.-1. The arrangement of two balanee chambers with packing lings, one being combined with each end of the ralre, whereby to obviate the tencleney to a focking motion, cansed by one large ling, or one scries of rings.
2. The described irrangement of the joint plug I, paekiner ring $G$, and ralve $A$, for the purposes deseribed.
3. The combination, in a valre-box corer, of the steam passages and strengthening ribs, as described 4. The combination of ling G, joint plus I, valrebox corer D, and steam passages E E E E, substantially as described.

196,295.-Thomas A. Bisibee, Dayton, Ohio, as. signor to himself and EdWiN R. Strleweld, same place.-Piston Packing.-April 7, 1868.-The ring occupies a circumferential groose in the piston liead, and its ends lie in a diametric groore in the plug. The steam is allowed, by small holes in the head, to reach the inner sides of the ring and plos, and canse the expansion of the ring against the cylinder. The ring is made tapering from its mid-length to its ends to cause equal expansion at all parts.

Claim.-1. The eylindrical plng E, snbstantially as and for the purposes described.
2. The combination ot the plug E and eccentric ring A, substantially as described.

76,996.-Lewis R. Bradbury, Charlestotrn, Mass.-Spring Bed Bottom.-April 7, 1868.-The ends of the springs which support the ends of the slats are attached to a cross-bar, and are fulcrumed upon a rubber bar or other springs which are secured to the upper side of the cross-bar.

Claim.-The combination of the spring $C$, mate substantially as shown, with the spring $I$, placed under it, the two springs operating together, for the purpose smbstantially as set forth.

176,297.-John Brosius, Rauch's Gap, Pa,Safcty Pocket Attachment. - April 7, 1868. - The pocket book is attached by a chain to the spring claw which is secured to the pocket.

Olaim. -The safety attachment, composed of the jaws $A$ and $B$, pins $D$, spring $E$, levers $F^{i}$ and $G$, and chain II, tor the purpose and substantially as herein specified.

196,29S.- 1. C. Brownell, Brooklyn, N. Y.Bath Tub.-April 7, 1868.-The wooden portion of he tub is made of mamorr tongued and grooved oards, and the bottom has an even, latcral curve.

Claim.-As a new artiele of mannfacture, the bath tub, constructed as described, consisting of the tongued and grooved bottom and cnd slats e c , the curved sides $d$, onter frame $b$, and curved supporting brackets $B$, all arranged as described, for the purpose specified.
g(6,939.-J. E. Burdae, Cincinnati, Ohio, assignor to A. C. Bhown.-Spinning Machine.-A pril 7, 1868.- A fluted roller is placed in the inner and upper eurre of the gin ribs so that the lowrer periphery of the roller will come about even with the upper trunnions of the slots throngh which the saws Work. The roller has adjustable rotation in the same direction as the gin eylinder and is to prevent the cotton from clogging at the mpper ends of the slots, and eause it to be kept regularly rolling on the breast of the eylinder.

Claim. - The combination and arrangement of the fluted roller P , crlinder B , and earding cylinders $\mathrm{E}^{2}$ $\mathbf{E}^{3} \mathrm{E}^{1}$, as and for the purpose set forth.

In combination with the above, the spindles $G$, as and for the purpose set forth.
 Cal.-Combination Loek for Doors.-A pril 7, 1868.Improvement on his patent, Sept. 5, 1865. The ends of the "bars," when in the locked position, stand in the course of the bolt. When the tumblers are all in the mulocking position, the eross-bar of the said bars is mored into the notehes in the tumblers by action of the springs, and the bolt may then be retracted.

Claim.-The bars D D and the lugs a a, for retaining the bolt, together with the plate F , bar $d$, and spring $G$, in combination with the grooved annular tumblers, the whole construeted and operating substantially as and for the purpose deseribed.
g6,301.-E. O. Carrington and EdVIN CarIINGTON, West Meriden, Conn.- ITachine for Grind. ing and Cutting Down Augurs.-April 7, 1868. -Improvement on their patent, July $2,186 \%$. A grinding apparatus is combincd with the previous patent which relates to forming the cutting lip.

Claim. - The arrangement of the swinging bar E , carrying one mandrel $\Pi$, and the other mandrel $d$, the said mandrel d provided with a self-adjusting head $f$, and combined with the grinding eylinder $C$, the whole operating in the manner substantially as set forth.
\%6,302.-Gardiner Citlison, Boston, Mass.Stove Grate.-April 7, 1868.-The grate is supported on a fork at its center with sufficient frcedom to allow it a tilting or horizontal reciprocation. The axis of the grate extends in a handle to the outside of the store, passing through a sliding plate which serves to close the slot in the shell traversed by the handle.
Claim.-1. The fureated arm D, for supporting the grate, arranged so as to allow both the tilting and lateral vibration thereof, substantially as herein specified.
2. The grate-shaft head and handle, made substantially as represented and as hereinbefore described.
m,303.-Richard S. Clark, Great Bend, Pa.-Envelope.-April 7, 1868.-A flap is formed on the back part, which folds over.and is gummed to the front.

Claim.-The flap A, so placed npon the envelope as to fold over on to the face of the curclope, subbstantially as and for the purpose deseribed.
geg.304.-JUSTIN L. Colburn, West Burke, Vt. -Butter Worker. - April 7, 1868.-The box contains the butter, which is worked by the wheol.

Claim.-The wheel C , construeted as deseribed, operated by the crank D , in combination with the box $B$, when the same are construeted as deseribed in the aforesaid combination.
g6,305.-Henry P. Grouse, Martland, Mich.Clothes Drier.-A pril $\dot{7}, 1868$. - The frame tims upon the tilting staff, and may be removed therefrom and folded together.

Claim. -The combination of the pasts $A$ ind $B$, the pins $C$ and $D$, the wedge $E$, stop $F$, the collars $G$ and $K$, the arms If and $I$, tho lines $J$, and pin $L$, When constructed, arranged, and operating substantially as and for the purposes designed and herein described.
g6.3069.-Cuarles G. Curtis, Plano, Ml.-Seed Sower and Cultivator.-April $7,1868$. - A spirally-
grooved eylinder in the lopper, at the front of the machine, distribates the secd upon the ground. Tho cultivator is adjusted vertically by levers, which are pivoted on the axle, and extend to the rear of tho machine for support of a two-part roller, worling on a single journal, and having cutter tceth acting as seed eovercrs and pulverizers.

Claim.-1. The cylinder B, arranged with spiral groores a for distributing seed, substantially as and for the purpose set forth.
2. The tooth $c$, haring a eurved edge $e$, conrex back $g$, and concaved sides $e c$, substantially as described.
3. The combination of the levers C E with the tropart roller $P$, arranged substantially as set forth.

W6930\%-GEORGE DEAL, Wilmot, Ohio.-Horse Rake.-A pril 7, 1868.- The rail tceth are attrehed to a bar which, in the working position, is directly above the axle, and which is connected by hinges, so as to allow the turning up of the rake. The rpper and forward ends of the teeth are secured to a bar which stands before the axle and balances the rear ends of the teeth. When the rake is tilted the latter bar occupies a position nearly beneath the axle.

Claim.-1. The angle irons G G and the standards H II and bearing arms I I, to which the bar $S$ is hinged, mounted on said angle irons, construeted and ar'anged and applied to the rake substantially as and for the purposes herein specified.
2. The combination and alrangement of the hinged bar S , rake teeth $\mathrm{L}, \mathrm{L}$, and roller D , so that the said roller balances or nearly balanees the rake teeth, substantially as speeificd.

G6,308.-BENJAMIN W. DONALDSON, Dixficld, Mo.-Mcdicine. - April 7, 1S68.-Balm of Gilcad buds are immersed in whisky, 1 pt.; water, 1 pt.; and after 12 hours, stecped, but not boiled, for' 1 Lour; add molasses, $\frac{1}{2}$ pt. ; stecp 1 hour and strain.

Claim.-The above-described compond of medicine, prepared substantially in the manner set forth.

66,309.-GEORGE Dowling, Fair Haven, Conn -Spritsail Boom Sling.-April 7, 1868.-The sling is adjustably gimbal-jointed to the mast band, so as to be reculated to the shrinking or swelling of the sail, and to move freely without chafing the mast.

Claim. -The sling D, constructed so as to leceive the boom C , and provided with ears $f$, and combined with the swivel $d$ on the mast's strap $A$, and the whole constructed so as to be adjustable and operate substantially in the manner herein set forth.
\%6,910.-Horace L. Dunirlee, Boston, Mass. Culinary Vessel.-April 7, 1868.-Tmprovement on the patent of J. Zimmerman, No. 47,675. The vessels are made separatcly, resting together by their shoulders, and are thus easily taken apart for cleansing. Claim. - In a culinary apparatns, made in sections, as described, tho combination, in cach section, of the steaming' vessel with its surrounding case, undel the arrangement specified, so that the said vessel shall be hung or suspended within its ease by means of flanges or bearings a $b$, formed npon both the ressel and ease, in the manner set forth.
 celing Railroad Tieket.-April 7, 1868.-The corer is made to contain the proper number of checks, which are graduatcal in length and consecutively numbered. They are firmly fastemed together, the shortest check being lowest in number, and placed at the bottom.

Claim.- I self-canceling ticket, composed of any number of checks, firmly fastencd in a flexible corer, containing a part of the contract, and which cheeks are graduated in length, and consecutirely numbered, or otherwise designated and mranged, and which, When detached from the corer, effectmally cancel all obligation represented by them when fastened to the cover, for the purpose and substantially as herein set forth.
of 312.-George R. Enarer, East Boston, Mass. -Neck-Tie Supporter.-April 7, 1868; antedated Marelı 21,1868 . -The triangular part is placed on the button, and then the whole pulled down, so that the supporter at the bend shall rest mpon the apper
edge of the button, and the thread ere of the button enter into and be held by the elastic, conrex opening. Claim.-1. The neck-tio supporter, consisting of the parts $b c, d b^{\prime}, c^{\prime} d^{\prime}$, to engrige with, and the saddle or bend a $a^{\prime}$, to rest upon the button, and the attaching part $y$, all formed and operating as herein described and represented, for the purposes set forth.
2. The combination, with the abore, of the clastic band C, applied in tho manner and for the purpose specified.

76,313.-Nathaniel T. Edson, New Orleans, La.-Tashing Machine.-April 7, 1868; antedated March 28,1868 .-The transverse rounds of the apron are placed obliquely to prevent the janming of the clothes between them and the oscillating, semi-erlindrieal rubber basket. The corncrs of the apron hate elastic loops by which they are secured to the suds box.

Claim.-1. The eombination of the apron, Fig. 4, with the clastic straps $c$, the clamp $e$, and screw $d$, as specified.
2. The lock $g$, in combination with the apron, as specified.
3. The combination of tho rubber or basket trith the double crank $a c a$ and collar $h$, as and for the purpose specifica.
g6,314. Mary E. A. W. Efard, Leesburg, Va. -Boiling Apparatus.-April 7, 1868.-The meal is supported on a rire frame or upon spits suspended in a reffector before the fire, and haring eapaeity for rotary or longitudinal adjustment.

Claim. - 1 . The combination of the pivoted frame G $\mathrm{G}^{1} \mathrm{G}^{2}$ and hinged notched plate MI , for supporting the revolving broiler or spit at ant desired distance from the fire, substantially as deseribed.
2. The combined arrangement, in conncetion with the foregoing, of the oven $B$, ot the flap $C$, and doors $D D^{\prime}$, and $E$, substantially as and for tho purposes set forth.

76,315.-MAriy E. A. W. Evard, Leesburg, Ta. -Cooking Stove.-April 7, 1868.-Ribs are cast upon the oren plates to receive the edges of partitions, by which the oren may be dirided into compartments. The lowere ends of the grate bars merge into the bottom plate of the grate. The movable shelf rests on eleats cast upon the inner faees of the doors, and is intended to sustain a dish before the fire. The supplemental heater is a short, flaring-ended tube, which is placed upon a store lole, and supports a cooking or' eraporating ressel. Within the flues, above the oven, are rertical, foraminous crlinders having commnuication with the outer air through registers at their upper ends. They aro intended to furnish air for conversion of gases.

Claim.-1. The plate $A^{1}$, employed in conjunction with the grate bars $a$ to form the bottom of the fire box, substantially as and for the purpose set forth.
2. The morable shelf $\mathrm{O}^{\prime}$, adapted to be supported upon the front doors $O$, substantially as and for the purpose set forth.
3. The removable supplemental heater $P$, provided with a damper $P^{2}$, and cmployed in tho mamer and for the purpose set forth.
4. The foraminated air distributers N , when provided with registers $n n^{\prime}$, and construeted and arranged substantially as and for the purpose deseribed.
5. The grooved ridges $c$ and $f$, cast on the top and bottom plates of the oren, serving to impart strength aud rigidity to saill plates, (withont obstructing the flues, ) and also to guide and snpport removable partitions $\mathrm{F} \mathrm{F}^{1}$ for dividing the oren into a plurality of compartments, substantially as deseribel, in combination with the opening $I_{1}$ in the rear of the oren.
\%6,316.-Mtary E. A. W. Evard, Leesburg, Va. -Toaster.-April 7, 1868.-The rack admits of screwing on the standird in a horizontal or perpendicular position and at any desired height.

Claim.-1. The rack C, adapted to be turned upon the standard $B$, substantially as and for the purpose described.
2. The nat D, formed with threaded perforations $d d^{\prime}$ at right angles, to adapt the rack to be supported either vertieally or horizontally, substantially as set forth.
g6,31 \%-Joun A. Evalits, West Meriden, Conn., assignor to Branley \& Ifubbard, samo place.Suspension Spring for Lamps. - April 7, 1868. The ehain to which the chandelier is attached passes orer two frietion rollers aud arouud the eylinder. The latter contains a spiral spring that is wound up sufficiontly to counterpoiso tho chandelier, and is held by a ratchet wheel and pawl.

Claim.-1. The combination of the coil spring F with tho band $G$ and lower friction roll D, substantially as specified.
2. The combination of the coil spring F , the band G , and the ratehet, whether the ratehet be applied direetly to the eylinder A or to the frietion roll, substantially as described.
3. The combination of the eoil spring $F$, the band G, and the upper and lower friction rolls $I I$ and D, substantially as described.
4. The combination of the coil spring F , the band $G$, the two rolls II and $D$, with the ratehet and pawl, construeted and arranged substantially as set forth.

76,318. - Alfied Fisifer, Nashпa, N. II.Pump. - A pril 7, 1808. - The packing leather is clamped between the flanged cap and seat disk. The ralves are held betreen the said disk and the independent bail. The different parts of the bucket aro held together by the rod whiell serews into the flange cap.
C'laim.-The deseribed arrangement and combination of the rod $A$, independent bail $B$, the flange cap C, fastening rods M M ${ }^{\prime}$, and neek picce D.
76.319. - Joserit IV. Fowle, Boston, Mass., assighor to Whilma Cablton, RuFls s. Membile, and Chables E. Abiotit - Lamp Extinguisher:April 7, 1868.-The slithes are mored upward by a lever to meet above the flame and form an extin guisher.

Chaim.-A lamp extinguisher, consisting of in elined slides, whieh, when brought into contact, form a close chamber orer the month of the wick tube substantially in the manner described.
g6,3:0.-C. W. Gauge, Homer. N. Y.-Fruit Gatherer-April 7, 1808. - The hoon has a number of straight scetions which are jointed so as to fold together. The hoop is conneeted to the tree by diametric eenter pieces, and supported on aljustable legs. The sheet is stretehed by pins, and has spouts for eseape of the fruit. The device is applicable to collection of good fruit or that stung by the eurculio.
Ciaim.-The polygonal hoop B, when eonstracted in such manner as to fold separately from the eloth table $\mathrm{F}^{\mathrm{r}}$ and center pieces C , as shown in Fig. 3, as and for the purpose set forth.

96,321. - Micilael Germann, Cincinnati, Ohio. - Cias Cooking Apparatus. - April 7, 1868. - The metallic bracket has a pot stand, and is hung to a nail or screw head. A circular upwardly flaring case surrounds the burner, and at its top is an upwardy consex perforated plate, and a flat deflector disk above it.

Claim. - Is an article of manufacture, tho gas cooking apparatus, as deseribed, cousisting of an iron bracket, pot stand, and gas burner combined, substantially as and for the purposes set forth.
g6,3:2.2.-Tosepil W. Girar, Clermont Connty, Ohio, assighor to Salahee, Fee \& Co.-Stcam Engine Governor.-April 7, 1868.-A lever having one end comneetal to the governor valve has a rack upon the other end engaging a spur wheel upon the ar'bor of the index finger. The rack end of the lever is connected to a piston-rod, whose eylinder is open to the steam space, and has also a spriag tending to hold the piston down.
Clain.-Tla combination of a stcam gauge and governor, so constructed and arranged that the pressure of the steam in the boiler shall govern the engine, substantially as shown and deseribed.
76,32: - M. C. Gritzner, Bruchsal, Grand Duchy of Baden. - Sewing Machine for Working Button Holes.-A pril 7, 186i8.-For attachment to a
scwing machine for maling button holes, zigzag and other embroidery, \&c.

Claim.-1. The combination, with the needlo of a setring machine of ordinary or suitable construction, of a laterally reciprocating tongue plate, substantially as specified, and meehanism for imparting said movement to the tongue under the arrangement described, so that the said tongne will be placed close to and alternately to the right and left of the needle during each two suecessivestitches the needle makes, and so impart a zigzag motion to the eloth to be sewed, substantially as shown and specified.
2. The laterally reciprocating plate having two slots, one on each side of the tongue, through which the needle alternately stitehes, the metal around said slots serving as a firm support to the eloth, ant preventing the latter from being dragged down when penetrated by the needle.
3. The mechanism herein deseribed for moving the material for button hole sewing, \&e., combined witll gearing and it eam, or its equivalent, substantially as speeified, applied to a sewing machine in such manner that the said mechanism, when engeged with said gearing and cam, will more laterally in one direetion while the needle makes one stitch, and in the opposite direetion during the next sueceeding stitch, as shown and set forth.
4. The combination of the laterally reciprocating tongue or plate witl a feed piece adapted to engage with the ordinary feed dog of a sewing machine, and so arranged that the sait feed pieee, While moring laterally with the reciprocating tongue, shall have an independent formard and backward and up and down movement for the purpose of effecting the feed of the eloth, as set forth.
5. The combination and arrangement of the plates $a b$ and the plate $c$ with its appurtenances, the whole constituting a device or mechanism for button-hole seming, \&c., capable of being applied either temporurily or permanently to any suitable sewing machine in the manner herein shown and deseribed.
76.374-M. C. Maight, Geneva, N. I.-Skate. -April r, 1868. - The heel and toe plates are fastened upon serews which are formed from the ends of the sumner.

Claim.-Combining the foot and heel plates B C directly with the rumner A by means of the solid seretrs $a a^{\prime}$, forming a part of the runner itself, and making the serews $b b$ that attach the straps to the foot plate sharp pointed, to serve as the brads for holding the foot, the whole arranged as described, and operating in the manner and for the purpose speeified.
 assighor to himself and Wrlliam A. Newton, same place.-Car Scat.-April 7, ]868.-Improvement on his patent, August 25, 1863. The seat is connected to the stand by piroted bars which extend from near the floor to the bottom of the seat. The scat is also connected to the stand by rubber springs ithich cheek its morement. Rubber bloek springs are secured to the frame and serve as stops to the seat.

Claim.-1. The combination of the rubber or cquiralent springs $F$ with the seat frame $D$, and with the longitudinal bar $b^{2}$ of the stand $B$. substantially as herein shown and deseribed, and for the purpose set forth.
2. The rubber block springs H, in combination With the longitudinal bar $b^{2}$ ot the stand $E$, substantially as herein shown and deseribed, and for the purpose set forth.
76.326. - Albert Holmes, Detroit, Mich. Base Burning Stove.-April 7, 1868.-The dampers cover passages which lead from the open air respectively into the fire chamber and the combustion ehamber in the base. The calorie eurrent passes through an annular space traversed by rertical air-heating pipes.

Claim.-The combination and arrangement of the dampers E , I , and K , and flues $\mathrm{D}, \mathrm{O}$, $L$, and $P$, to produce either a downward or a direct draught, substantially as deseribed.

76,327.-S. S. Huguson. Newark, N.J.-Sifter. -April 7, 1868. -The eylindrical sifter has a horizon-
tal sieve separating it into two ehambers, to whieh aceess is gained by sliding doors.

Claim.-The construetion of the eplindrieal sitter with the sieve $C$ in the center, the sliding lid $G$ and handles I IN on the top of the sifter, door M at the side, substantially as and for the purpose specified.
g6.328.—James B. Johnson and William II. Bircir, San Franciseo, Cal.- Friction Clutch.April 7, 1868.- The inelines of the shell foree the rollers against the periphery of the tight pulley when it is rotated in one direction. The springs insure prompt aetion by foreing the rollers along the inclines.

Claim. - 1. The nxle $A$ with its fast palley $B$, and inclosing ease $C$ with its inclined planes $c^{\prime} c^{\prime}$, together with the rollers a a a, the whole constructed and operating substantially as and for the purpose deseribed.
2. The spring d attached to projection $U$, or its equivalent, when used in the eluteh for insuring a prompt aetion of the rollers $a$ a, substantially as described.

76,329.-John Johnson, Saco, Me.-Heating Apparatus.-A pril 7, 1868. -The vessel contains only sufficient water to fill it with steam when evaporated and is traversed by vertical open-ended air pumps which may communicate with pipes leading to other apartments.

Claim.-The method of obtaining and transmitting heat, by the use ot a small and definite quantity of water or other liquid contained in an air tight vessel, substantially as herein deseribed.
g6,330.-Thomas Kerr and Johy C. Kelif, Edinburg, Ind.- ILolding Cans while being Soldered. -April 7, 1868 . - The nuts upon the right and left hand serew shaft are attached to the ends of the springs whose middle portions are attached to the stares. The latter are foreed against the inner side of the can by the approach of the nuts.

Claim.- The sleeve E , serer shatt D , springs II, nuts F II, stares K, arm MI, plate N, and lerer L, all construeted and arranged substantially as and for tho purpose herein set forth.
g6,3B1.-STEPHEN R. KROM, New York, N. Y. - Apparatus for Separating Ores and Hinerals. April 7, 1868. - The disintegrated ore'passes over a perforated plate through which intermittent jets of air or other flnid are thrown to stir up the mass and eanse the larger partieles to take the lower position. The coarser and finer partieles are earried out through different chutes. Valres in the bellows allow the eseape of air when at too great pressure. The bellows are worked with a cam motion so as to open slowly and exhanst quickly.

Olaim.-1. In machines for separating granular materials of different densities by the aid of intermittent jets of air or other fluid, the passage $F$, to discharge the lower stratum, either from an inelined or lerel bed of a double or single machine, as herein deseribed.
2. In such machine, the small apron $G$, at the lower discharge, as deseribed.
3. In such machine, the shoe $\mathrm{F}^{\prime}$, at the lower end of the lower discharge, as described.
4. In such machine, the escape valres $c$ c, for the purpose described.

5 . In such machine, the blowing means, or its equiralents, situated close to the material, in combination with the within-deseribed manner of maintaining its proximity under various changes of stroke, for the purpose deseribed.
6. The bellows C , having a series of flaps $\mathrm{C}^{2}$, corering nearly the whole open-work or perforated surface, as shown in Figs. 1, 5, and 7.
7. In sueh machine, the cam wheel D, construeted and arranged relatively to the lever $\mathrm{D}^{2}$ and its connections, as and for the purpose deseribed.
8. In such machine, the closed box $H$, constructed and arranged relatirely to the inelosed and conneeted parts, substantially as and for the purpose herein described.

86,389.-Isaac W. Little, Newbury, Mass.Ox Toke.-April 7, 1868. -The bow holes are length-
ened longitudinally and are adjusted by the sliders to suit the size of the animal or to apportion tho draft unequally between tro animals.

Cleim. - The arrangement and combination of the slideris $b$, and their clamping serews or devices, with ench of the bows $B B$, and with slots $a$ a, formed in the Joke, as set forth.
76.333.-Ricimand B. L, OChe, New York, N. Y., assignor to Self Lightió Gas Buiner Conidiny, same place.-Gas Burner.-April 7,1868.-The main burner projeets a shore distanee above a cone that incloses the sceondary burner, which receives a sinall quantity of gas when it is turned off fiom the main burner, and Feeps a small flame burning to light the main bumer at any time. The passarge leading to tho secondary burner is regulated by a serew aecording to tho pressure of gas at that point.

Clam.-The sererr $l$, in combination with a supplementary burner, when the sime is constructed and arranged substantially as deseribed.
g6,334.-Thomas T. Markland, Jr., Pliladelplia, Pil-Name Plate for Strcet Lamps.- April T, 1868.-The name plates hare bloek letters which may be perforated and are placed beneath the shoulders of the lamp.

Claim.-The namo plates $B$, in eombination With street lamps, construeted and arranged substantially as deseribed.

6, 8 ,335.-Thomas T. Markland, Jr., Philadelphia, Pa.-Street Lamp.-April 7, 1868.-The lamp has name plates disconneeted from the main frames so that thes are minflueneed by fracture of the lattel: The name plates are perforated and baeked with glass. The neek of the lamp beneat the crown lias mame plates whose letters show by reflected light.

Claim.-1. The combination of the name plates C with the frame of the lamp, sepmate from the main panes of glass or the body of the lamp, Whether of square or other form, snbstantially in the manner abore described and for the purpose set forth.
2. The combination of the name plates $G$ with the neek $F$ of the lamp, substantially as deseribed and for the purpose specificd.
3. The combiuation of a glass neek with a street lamp, the said neek being construeted either with or without name plates, substantially as and for the purposes above deseribed.
4. The combination of the slot $l$ of the tube $N$ on the bottom plate $E$, with a corresponding lnes on the lamp-post. substantially as deseribed and for the purpose set forth.
5. A sectional lamp, construeter substantially as described and for the purposes specified.

96,336.-Mary E. J ManR, Jefferson, La.Child's Bed.-A pril 7, 1868.-The bed reecptacle is hinged to the frame at the foot and its lead conneeted by a cord to the arched framo overhead by which it is hekl at any requred inclination.

Claim.-The bedstead proper, herein deseribed, consisting of the horizontal picces $\Lambda \Lambda^{\prime} \Lambda^{\prime \prime} \Lambda^{\prime \prime \prime}$, posts B , and arehed frame $\mathrm{C} \mathrm{C}^{\prime} \mathrm{D}$, in combination with the fiame E, when the latter is construeted as herein deseribed, and provided with a cloth bottom $G$, and cloth sides and ends $\mathcal{F}$, and transperso cross band H, and is hinged to the bodstead proper, substantially as and for the purpose set forth.
\%6. 3337 -IGnace Martin, Newark, N. J. Brick Machine.-April 7, 1868.-'The clay is forced into the molds in the periphery of the main wheel and is first compressed and then ejected by the plumgers which are actuated by eams. The bricks are pressed uprarl against a hoard whieh is depressed by the rocking, eccentric rollers and raised by hooks which take under pins projecting from the ends of the board. A spring catch enters one of a series of notches in the wheel and hokls the same during the process of pressing to prevent any rotary morement. The plunger tops are cleancl and are lnbrieated by a brush after the bricks are diseharged. The brush rotates in an oil receptacle.

Claim.-1. The board or plate $G$, in combination with tho eecentric shafts $\Pi H$, hooks $m$, and pins $n$,
all made and operating substantially as herein showll and deseribed.
2. The mold wheel $A$, when provided with notehes $s s$, in combination with the spring eateh $r$ aud cam $t$, all made and operating substantially as and for the purpose herein shown and deseribed.
3. The trough N, as a rcecptacle for oil, and a brush $M$, arranged to rerolve therein, and eontiguous with the plungers. to hubricate them, as speeified, when arranged beweath and operating in combination with the rerolving mold wheel $A$, and secured to the base plate $C$, substantially as described and shown.
4. The combination, with the wheel $A$, of the plate $G$ and cecentries $H$, of the plunger's $j$, stems $k$, and eam $p$, all made and operating as set forth.
76.3:39.-James McGeary, Salem, Mass.-Proecss for Making Gas.- I pril 7, 1868.-The retorts are connceted with cach other so that the gas may be driven from one to another, or superheated steam may be blown through a partially exhausted retort and into a fiesh one.

Claim.-1. The use of partially spent eoal, in one retort, to quicken and intensify the heat in another retort or chamber, alterinately, as set forth.
2. The use of partially spent coal for decomposing supcrlieated stcam, substantially as set forth.
3. The use of superheated steam, produced as doseribed, as aud for the purpose set forth.
76.339.- D. Mendenhali, Fairfield, Iowa. Mervester Iiake.-April 7, 1868. -The rake is attached to one of a series of lovers whieh are operated as a lazy tongs to gride and support the rabo whilo sweeping the grain from the platform.

Claim.-1. A reciproeating rake, and a hinged platform section, combined in suelm manner that after the rake mores across said platform, ant delivers a garel from the immer side thereof, it shall then retmon beneath said section to the outer end of the platform, substantially as deseribed.
2. A platform, having a location behind the eut ting apparatus during the receiving and delirery operation, and a fender or guard $J$, hetween the entting apparatus and the rear of the platform, in eombination with a reiprocating rake, which takes the frain which has been cut from the platiom, and deirers it at one side of the platform out of the path of the team, such rake being guided by maehinery, the whole substantially as herein set forth,
3. A rake or elearer, which is controlled in its morements by extension joints L , and a pitman rod N , and which is pivoted on top of the platform, in combination with a hinged grain guard $J$, whieh will protect the elearer from falling grain during its return stroke, substantially as described.
4. The combination of a reciprocating rake, a side delivery platform, a hinged guard J, and an outer guard $b$, substantially as deseribed.
g6,340,-TOIN A. Minor, Middlotornn, Comn.Fecding Mechanism for Sewing Machines.-April r, 1868. -The eam lever has a certain free movement between the lugs through which it eauses the longitudinal movement of the feed bar, so that before commencing the forward movement the dog is raised and betore the back movement it is allomed to drop.

Claim.-The arrangement, on the independent adjustable plate $K$, of the lever $S$ and the feed dog $L$, substantially as deseribed and for tho purpose specified.

76, 31. -TAMES W. OSGOOD, Columbus, Ohio, assignor to himself and S.V.R. CARPENTER, same place.-Brick MIachine.-A pril T, 1868.-A horizontal pug mill is uscel in conjunction with a polygonal drum, having rectangular molds in its perimeter, whith receive the elay at one point and discharge it at another, in the form of compressed brieks.

Claim.-1. A revolving feeding eam $\mathrm{B}^{1}$, appliced within a filling box 13 , and interposed between a pug mill and a rotary mold drum, substantially as and for the purpose deseribed.
2. A reciprocating knife C , arranged in combination with the filler $1^{1}$ and the movable mold wheel, substantially as and for the purpose deseribed.
3. A wiper or scraper $\mathrm{B}^{2}$ in combination with a filler ${ }^{1}$, operating substantially as deseribed.
4. The guard or division plate $a^{1}$, in combination with a horizontal cylindric pug mill and filling box, arranged substantially in the manner and for the purpose described.
5. Sceuring the central follower $\mathrm{D}^{1}$ of each gang or sories of mold cells d rigidly to bar $\mathrm{D}^{2}$, and having the otlier followers of the same gang attached loosely to said bar, for the purpose of prerenting the follow. ers from working hard or binding in their mold eclls, substantially as described.
6. A platen, F , hong by means of arms $\mathrm{F}^{2}$ which are piroted to the frame $A$, and jointed, as at $f^{8}$, to arms $F^{1}$ of the platen, so that the face of this platen shall fit squarely against the mold drum $D$, notwithstanding that the platen swings ou a pivot or pivots, substantially as deseribed.
7. Providing the platen $F$ with cloth rollers $f^{1}$, ratchet wheel $f^{2}$, and parls $f^{3}$, substantially as described.
8. Effecting the compression and coudensation of the clay in the mold cells, by means of reciprocating hooked press rods $I I$ aeting upon the extremitios of the follower bars $\mathrm{D}^{2}$, in combination with a platen F, said bars II and platen $F$ being operated by means of cams upon a crank shaft $G$, substantially as described.
9. The arrangement of the expelling hooks $i$, and the speeificd inechanism for operating these hooks, to wit, the cam $k$, yoke $K$, and bell crank $I^{1} I^{2}$, substantially as described.
10. The eombination and arrangement of devices specified, whereby the mold drum D, the platen $F$, the press bars $H$, and the expolling hooks are operated from a single shaft $G$, substantially as de. seribed.
11. The combination and arrangement of the cam Hx and $f^{5}$, the crank shaft G , leror $\mathrm{G}^{3}$, press rods H , mold drum D, and platen $F$, substantially as and for the purpose described.
12. The adjustable cross head $g^{1}$ and adjusting pin $j$, applicd to the yoke of eaeh one of the pressing rods IH, substantially as described.
13. A yielding recciving platform E , constructed and arranged beneath the mold drum $D$, and supported in such a manncr' as to receive the brieks as they are expolled from said drum, and deseend and yield under the weight of the bricks, substantially as described.

G6:342.-Joinn M. Perkins, Plainfield, N. J.Aromatic Lining for Carpets, Chests, Dravecrs, Wardrobes, dec.-A pril 7, 1868.-Thin reneer of aromatie wood is backed with paper or eloth. In lieu of the aromatic Trood, other wood may be saturated with extracts or infusions of aromatic gruas.

Claim.-An aromatic lining, when eonstrueted sulustantially as described, for carpets, wardrobes, chests and the like, for the purpose of proteeting said carpets, and the contents of said wardrobes, ehests, aud the like, from the ravages of moths and other destruetive inscets.
\%6,348.-JOHN C. PFEIL, Ar'gonzville, Ml.-Rotary Cutter for Plows.- April 7, 1868. The collarbearing, jonrnal arms of the entter disk are pivoted on the Fcritienl adjustable cutter arm so as to turn freely thercon in manner of a easter.
claim.-1. The peenliar arrangement and eombination of the spindle $B$ on eutter arm $A$, and eollar M with hole B therein, for the purpose of forming a easter joint for eutter E , substantially in the manner and for the purpose herein speeificd.
2. The slots LL in the eutter arm A, whether said arm be for a rotary or any other kind of entter, where said slots are uscd to allow of vertieal adjustmonts of said eutter, substantially in the manner and for the purpose herein speeified.
3. The pin C , when said pin serves both to sceure the collar M on the spindle A , and to limit the rotary or caster motion of the cutter E , in the manner and for the purpose herein specified.
g6, 344.-COLLINS Potter, Pawlet, Vt., and Eleazer Jones, Middle Granville, N. Y.-Coffin.April 7, 1868. The scetions of slate or other slabs Aprily, 1868.-The seetions of slate or other slabs
lic corner picees and bolts. The latter are inserted from the outside and have sockets that reecive screws which traverse the plates from the inside.

Claim.-As a new and improred article of manufacture, a coffin, constructod substantially as herein described.
g. 6, 345.-Stephen Purdy, Whitestown, N. Y., assignor to himself and Eluis Elids, same place.Cheese Hoop.-A pril 7, 1868.-The hoop opens at the side and each side of the opening is a wedge-shaped flange. The clamp takes oror the flanges and holds the hoop until the chcose is ready for removal.

Claim.-I. Constructing cheese hoops with a side opening, or openings, with a flange on each side, and a elamp or clamps to hold thom together, in the manner substantially as described, and for the uses and purposes mentioned.
2. The said hoop, with openings, flanges, and elams, in combination with the plate $\Lambda^{\prime}$, eonstructed and operating as described, and for the uses and purposes mentioned.
3. The said hoop, with the openines, flanges, and clamps, in combination with the spring or catch $D$, and the cross openines $13^{4}$ and $B^{5}$, constructed and operating smbstantially as deseribed, and for the uses and purposes mentioned.

76,346.-GEORGE P. Read, Boston, Mass.Chronometer Escapement.-April 7, 1868.-The lifting spring to the detent lever is made of a piece of eommon hair spring. A narrow slot is made in the upper face of the free end of the detent lerer. The slot has sufficient depth to nearly receive the width of the spring. A screw is placed immediately eontiguous to tho slot; so that the head of the screw shall bear upon the upper cdge of the spring, and hold it in place while giving means for longitudinal adjustment.

Claim.-The mode, substantially as herein shomn and described, of applying the feather or the hair spring of a ehronometer or watch escapement, that is, by means of the saw kerf $e$ and screw $f$, substantially in manner and for the purpose as beforc explained.
\%9934\%.-William C. Reeves, Boston, and Lovis L. Solomon, Charlestown, Mass.-Button Hole for Paper Articles of Wearing Apparel.-April 7,1868 . - A hole of suffieient size is punehed out, and slits run therefrom to form flaps which will spring into placc beneath the button.

Olaim. The button hole, as emposed of a close straight slit $a$, and a hole $B$, arranged together, substantially as represented in Fig. I of the aborementioned dratrings.
g6,348.-Elisha Robbins, Worcestor, Mass.-Railway.-April 7, 1868.-The continuous supports are retained by ehains whieh run from rail to rail and have inturned lips or flanges embracing the supports.

Ulaim.-1. In combination with an iron rail, a metaliie chair or supporter C, to receive it, and extend longitudinally and continuouslj under sueh rail, and from end to end of it, and upon a scries of ties, or their cquivalent, and lap on either or both flanges of the base of the rail, as speeified.
2. Such a ehair, as made or divided lengthwise in two parts, with a lip or flange to each, to grasp and cxtend over the base of a rail, as specified.
3. In combination wish two parallel rails A A of a railway, the cross or duplex ehair $D$, made with lips to grasp the bases of the opposite rails, or two longitudinal chairs or supporters C C, applied thereto in manner as specified.
4. The combination of the metallic braee E with the parallel rails A A, and the transverse or duplex chair D, applied to such rails, or to their longitudinal metallie supports or ehairs $C \mathrm{C}$, as cx plained.

176,319.-Elisha Robbins, Worecster, Mass.Scroll Saw Mill.-A pril 7, 1868 .-An arm extending aeross the line of the axis of the motive shaft is seenred to the outer end of the wrist pin of the crank pitman. At the onter cnd of the arm is a wrist pin which carries a pitman rod connected to a sliding

Weiglit which counterpoises the sash in all positions.
('aim. - The combination of the sliding counterbalance weight, its connecting rod and operative crank, with a sair and frame, and tle connecting rod and crank thereof, the whole being constructed and arranged to operate substantially as specified.
96.350.-Thotiry Rosr, Cortlandville, N. I. -Churn.-April 7,1868.-The clumin stands on voluto curred roekers, and a seat beside the churn receives the operator: The roar ends of the rockers have spherical rubber springs which serve to render the motion imegular, and to assist the return movement. Air enters throngh a tube near the lid, and the tube has an invardly opening flap ralve.

Claim.-l. The solid divider, when of less height than the depth of the cream chamber, in combination with a rocking churn, for the purpose lerein deseribed.
2. The double wedge-shaped divider $G$, having an antomatic rising and falling motion, derived fiom the combined action of the churn and cream, for the purpose of opening a passare beneath it from cud to end of the clamber, as herein deseribed.
3. The fixed beaters, made concare on their under sides, forming a series of air elhambers, as herein described.
4. The rockers, laving their front ends mato of curves, whose radii are less than the curres of their rear ends, and proriding the latter with springs, for the parpose herein described.
5. Thie arrangement of the sent D, platform E, and rertical liand lever $F$, in combination with a rocking churu, as lerein deseribed.
6. The air tube $J$, haring a hood, $K$, at its outer end, and a valve, $i$, within its inner end. when applied to a roeking churn, as herein described.

26,351.-Edwatid Roron, Piqua, Ohio.-Screw Cutting Machine.- April 7, 1868. - The die blocks are made in disk form, are capablo of rotation together, and of morement to and from each other, by turnin! one part of the chnck npon tho other ; the ceeentric inclines on the annulus of the chuck acting on the jaws holding the die blocks. The peripheries of the dic bloeks have a series of dies of rarious sizes.

Claim.-1. As herein arranged and for tho purpose explained, the hollor die-chuck E, having the permaneat head $F$, clip $G$, with opposite cccentric ares $9 g^{\prime}$, sliding jaits IT, noteled revolving ring I, eccentric $i^{\prime} i^{\prime \prime}$, and plate J.
2. The combination of the lollow shaft $B$, die-chuck E, jaws II, adjustable dies K, and bolts I.
3. The notclied and adjustable plate MI, and tiehtening screw $N$, in combination with the tambler $l$, ring I , and spring Q .
4. In combination with the sererr-threading machine herein described, the right and left screws $t t^{\prime}$, jairs $t^{\prime \prime} t^{\prime \prime \prime}$, socket $W$, aud nut $\Sigma$, all arranged as set forth.
-7,352.-Peter Scirwitzer, Robeson Tomnship, Pa.-Horse Hay Fork.-April 7, 1868.-The stock is sloted to receive the lever to which tho claw is jointed. This lerer is operated by a compound lever to which the tripping cord is attached.

Claim. - The arrangenent of the slotted frame D , double jointed levers E E , and connecting rod F , as herein described, and for the purposes set forth.
g6,353.-SAMUEL B. Silerer, Aurora, Ill.Ankle Brace-A pril 7, 1868.-The supporter is laced in front, and has straps at the back part aud beneatl the instep.

Claim.-The supporter $A$, in combination with the straps B and D , and lacing C , or theirequiralent, for the purpose and substantially as herein specified.
g6,354.-MLARTHA B. Solomon, Charlestown, assignor to Lours L. Solomon, Charlestomn, and Wrimatar C. Reeves, Boston, Mass.-Children's Corset.- April 7, 1868.-The corset is extended below the waist, and has buttons for support of underclothing. The whalebone pockets diminish in size within 2 inches of the top, and the diminished part is filled with wicking, which forms a continuation of the whalebone.

Claim.- Is a new nrticle of manufacture, a child's corset ank underelothes supporter, with two series of bone and wicking receptacles or pockets, combined with the bodt, as set forth, such body being provided, as described, with rows of buttons for supporting* skirts and drawers, arranged and operating in the mamer as shown and described.

76,355.-LEVT B. Soutimorth, Deep River, Coml.-Carpet Stretcher.-April 7, 1868.-The serrated bar at one end of the jointed staff engeges the carpet, and the point at the other end extends through to the floor. A ratehet bar is pivoted to one leg, and passing through a staple upon the other engages ono side thereof to keep the leges spread.

Claim. - The joint B, one or more points C , and brace $F$, in combination with the head $J$, as and for the purpose specified.

76,356.-Josepli A. Stansbumy, Marion, Ioma. -Hames Lock.-A pril 7,1868 .-One of the liook plates has a series of rectangular apertures for reception of a hur upon the other hook plate. The lug is longritudinally slotted for reception of the slotted lever whieh is passed endmays through the aperture, and then, after heing turned down on the plate, is slipped endrars to prevent return.

Claim.-1. The slotted lever C, when used as and for the purpose specified and set forth.
2. In combination witl the manner of binding the lefer C in its proper position, by the tendency of the two curred plates $\Delta$ and $E$ to straighten when under lengthwise strain, as within substantially described.
76, 357.-SmituThompson, Montgomery County, Mcl., assighor to S. S. İanNestock, Washington, D. C.-Attaching Shafts to Tehicles.-April 7, 1868. - The coupling pins are attached to toggle lerers, by whose extension they aro forced through the clip cars and thill irons.

Claim.-The jointed bar C, constructed and operated in the manner substantially as shown and do scribed, and for the purpose set forth.

76,35S.-CrOMWELL EleETWOON VARLEY, New York, N. Y.-Electric Telegraph.- April 7, 1868.The insulator has an outcr coat of porcelain and an inner coat of gutta-pereha. Its onter side beneath the holding groore is glazed, to prevent adherence of water; but above the groove is unglazed, so as to emable its test, by dilute sulphurie acid, without trusting to the glazing, which is liable to become tiractured by the elements. Claw lugs above and below the groove serve to secure the wire therein.

Claim.-1. Making insulators for telegraph Tires of two or more insulating caps, exclusive of the cement which unites them, cacli cap being a completo insulator in itself, so that if one of the caps be dofoctire the other or others shall arrest the electric current, as set forth.
2. The use of a non-condueting pin inside an insulating cap, such pin being constructal of iron or steel covel'ed with hard rubber, or being formed of stouewaro or poreclain, substantially as described.
3. Glazing the lower part of poreclain or stoncrare or carthenwaro eaps, and leaving the mper part unglazed, substantially as and tor the purposes set forth. 4. Making the lower edge of the insulator cap externally sharp, but internally rounded, so that drops of rain, when blomm outward, shall fall off, and when blown intrard shall not break off, but run, by capillary at traction, up the rounded surface out of the rind, substantially as set forth.
5. Miking porcelain or stoneware or earthenware caps with two or more projecting cars, in combination with and arranged above and below the sroore for the Trire, so that when the insulator is inelined to the wire the latter can be inserted, but when at right angles to it the latter cannot be gotten out, as set forth.
196.359.-JOHN VAUGHN, Miami Comnty, and Eli Cinamness, Grant County, Ind.-Ditching Ma-chine.-April 7, 1808. -The frame rests upon the exearating wheel and upon tro striding feet. As the machine is drawn formard the earth is raised by the cursed spades at the periphery of the exearator wheel, and is dropped on the inelined "dash boards."

Any dirt remaining is scraped off by the cleaner wheel.

Claim. - The combination and arrangement of the wheel B , jack or cleaner C , framing $A$, dash board $g$, feet $d$, and handles $e$, substantially in the manner and for the purposes as hercin set forth.
76,360. - Wilitam C. Vosburgh, Brooklyn, N. Y.-Drop-light for Chandeliers.-April 7, 1868.The drop-light receives gas through a flexible tube, Thich is contained in a case attached to the fixed part, and which also contains a falling hlock carrying a shcaye, beneath which the fiexible tube is passed.
Claim.-1. The case B, having the longitudinal slot and uotches I I, to cateh and retain the pin $N$, so that the drop-light may be retained at any desired height.
~ The case B, made as described, in combination with the flexible tube C, pulley P, and Treighted disk $D$, substantially as and for thic purposes herein set forth and described.
g6,361.-Thomas Walker and Thomas Ferdivavd Walker, Birmingham, England.-Apparatus for Taking Soundings.-April 7, 1868; patented in England December 20, 1866. -The spiral wheel is caused to rotate by the downward passage of the lead, and its rotation is indicated on a register.

Claim.-1. The combination and arrangement of the disk plate $e$, provided with numbers to correspond with the movements of one of the indieating wheels, and connected by spring pressure, so as to move with such wheel, when geared to give motion to another iudieating wheel, so that any movement given to said plate may simultancously effect the corresponding morement of such other indicating wheel, substantially as set forth.
2. The application of the spring click $l$ and stop $k$ to the disk plate $e$, to indicate the point of starting, substantially as shorm and deseribed.
3. The application of the notches $j j$, or equivalent, in combination with the stop $l$, to the disk plate $e$, in order that the distance of its partial rotation may be aseertained by feeling the same after use, substantially as set forth.
4. The applieation of a rope $s$, or equivalent conneetion, between the sounding machine and the weight used to aid the deseent of such nachine, for preventing the action of the indicating derices from being impeded by the "rake" of such meight, as set forth.
g6,362.-L. A. WARNER, Freeport, Ill.-Corn Popper and Coffee Roaster.-April 7, 1868. The ganze cylinder has a lengthencd erank shaft by whieh it is turned, and a sleeve handle and screen plate for aceommodation of the supportiug hand. The fixed ends of the eylinder have holes for viewing, and for ingress and egress of the corn or coffee, and the eylinder has a surrounding case for use when roasting the latter.
Claim.-1. The outer morable cylinder or jacket, (constructed so as to be removed at pleasure,) when used to inclose a mire-eloth eylinder, with a space between. in the manner substantially as described aud for the purposes set forth.
2. The eylinders $A$ and $X$, combined so as to be convertible into an open popper or a tight roaster, in the manner described, and eombined with the holes $d$ and $i$ and plate $g$, the holes $e$, caps $f$, axle B , and handle C , in the manner substantially as described, and for the purposes set forth.

76,363.-William J. Watson, Benton Center, N. Y.-Tood-Turning Lathe.-April 7, 1868.-The shank of the center bar is square, and it is beld betrween the two pairs of jaws which are clamped upon it by a system of toggle levers, whieh also serve to seeure the stoek upon the shears.
Claiut.-A tail block having a pair of movable centre-holding jarrs $e$, when the securing derices for the tail block and the operating derices for the said jars act in conjunction, substantially as and for the purpose set forth.
76,364.-David P. Webster, New York, N. Y. -Furnace for Smelting Lead Ore.-April 7, 1868.The tray of boiler iron supports an outer wall of
briek, inside which is tamped a mixture of fire-clay, 1, and rect sand, 2 parts. The furnace bottom is formed of this, and rertical brick walls are built up, between which the sides of the furnace are built of the same material. A brick arch is then built, and an arch of the same material formed thereon. The surfaces are covered with a few inches of dry sand. The whole is then raised to and maintained at a light heat for 4 days, and then at a red heat for 2 days. The bricks are then removed from the inside and the furnace raised to a white heat. Any cracks are filled with dry silica.
claim.-1. The method herein described of forming the interior or lining of furnaces, that is to say, by building the bed, walls, and arch of the plastie material herein described, or the substantial equiralent thereof, in the manuer shown and specificd, and subjecting the same, when formed into shape, to heat, as herein set forth.
2. The use and employment of the ingredients herein described, for repairing cracks or other injuries, or parts worn by the action of fluxes, substantially as herein set forth.
3. The combination, $\pi$ rith the furnace, of an iron easing or pan under the arrangement herein shomn and described, so as to support the plastie structure of the furnace, and also allow free passage of air under and around the same, as and for the purposes set forth.
g6,365.-George TVestinghouse, Jr., Sehenec tady, N. Y.-Railway Frog.-A pril 7, 1868.--The end of the frog is dovetailed to receive the neeks of the rails, and a chair is placed under the doretailed end. The chair has one or troo recesses to support the rails, and suitable holes to receive the bolts.
Claim.-The arraugement of a chair $c$, under one or both ends of the frog $A$, substantially as and for the purpose described.
g6,366.-William TVestlake. Brooklyn. N. X. -Lantern.-A pril 7, 1868.-The guard and base are made of a single wire frame, whieh has a spirally ribbed case attached to its waist, into whieh screms a circumferential, spiral rib upon the lamp.

Claim.-1. Constructing the base or support of a lantern entircly of wire, or open, so as not to materially obstruct the passage of the light downTrard, substantially as specified.
2. Connecting the open or wire base $F \mathrm{~L}$ and the guard to the band C, substantially as specified.
3. The ledge $\mathrm{H}^{\prime} \mathrm{H}^{\prime}$, bead or wire G , in combination with the band C and lamp I, substantially as and for the purposes specified.
4. The eyes or loops $J$, for seeuriug the guard and base to the band C , substantially as speeified.
5. Making the rertical guard wires E and the base wires F of the same picce of wire, substantially as specified.

76,367.-William Westlake, Brooklyn, N. Y. -Manufacture of Spouts for Tea-Pots.-April 7 1868.-The shect-metal blank is cut in form to bend into a spout.

Claim.-The method herein described of forming eurred or bent spouts of a single piece of sheet metal, substantially as spceified.
g6,368.-EdWin R. Whitwey, Plattsburg, N.Y. assignor to himself and Josepif Frazer, same place -Car Coupling.-April 7, 1868.-The entering link strikes against an arm of the erucial tumbler and is engaged by the next arm. The tumbler is prevented from rolling backward by the spring pawl, but the pawl may be depressed to allow uncoupling by a compound lever which is retained, then raised, by a pawl.

Claim.-1. The construetion of the revolring fourarmed cross $C$, piroted $\operatorname{dog} D$, bent spring $E$, lerer F , and bar $b$, all arranged and operating as icscribed, for the purpose speeificd.
2. The above, in combination with the pawl $c$, fitting into a reeess in a lug $d$, projecting from the lever F , as set forth.

76,369.-William S. Wood, Hatborough, Pa.-Harness.-April 7, 1868. The collar is hinged at top and open at bottom where it is held by a spring
eateh. The hames are attaehed to the collar. The spring eatch has an arm to which a cord is attached whieh passes to the rider and by whieh the eateh may be released, thereby releasing the harness.

Claim.-A harness eomposed of open eollar, with permanent hames If $\mathrm{H}^{\prime}$, rope or strap a $b$, spring hook $k$, all combined and eonstructed and operating in the manner and for the purpose abore set forth and described.

96,3\%0.-Robert Woolworth, New Haren, Comn.-Clock:-April 7, 1egz.-The count wheel has spokes upon it whieh mesh with a lantcrn wheel upon the strike-wheel shaft. The spokes of the count wheel take up one-third the length of the pitch, and the interdental spaees tro-thirds. The proportion of teeth upon the lantern whecl and count wheel are such that the count wheel will take a eertain number of rotations in 12 hours, tho spaces being notched out to reecire the point of the count hook.

Claim.-1. The eount-wheel D, divided substantially in the manner deseribed, so that in the revolution of the said wheel, the eount hook will fall into the proper slot to arrest the morement of the wheel at the proper tinc, and so that the given number of revolutions more than one of the said wheel will complete the strokes required for caehtrelre hours, the said wheel at the completion of such number of recolntions arriving at the point of starting, as herein set forth.
2. The combination of the count whecl D and pinion I, each bearing to the other the relative proportion, and so as to operate substantially as specified.
3. The arrangement of the strike wheel F with the eount hook. and eombined with the count wheel D, so as to operate sulsstantially as set forth.
76.391.-Benjamin P. Whight, San Franciseo, Cal.-Potato Digger.-April 7, 1868.-The potatoes are carricd from the seoop, and orer the clevator to the separating serew. The elerator is liauked by endless aprons.

Claim.-A potato digger, having the spade D F, the inclined carrying or elerating belt $G$, and the belts J J, together with the cleaning sieve K , the whole construeted and operating sulbstantially as and for the purposes herein described.

76,3giz.-David L. Allex, Williamsport, Pa.Expanding Mandrel.-April 7, 1868.-The shell of the mandrel is made in sections whieh are expanded by foreing the cones into the central aperture. The cones are actuated br axial sereirs.

Claim.-The eombination and arrangement of the chuek, aumular plates C, set-screws and springs D, counceting screw P , with the arbors A and B , and cones $A \mathcal{A}$ and $B B$, sulstantially in the manner and for the purposes as herein set forth.
g6.373.-J. Lathrop Allen, New York, N. Y., assignor to himself and Mcarsiall Lefferts, same place.-Paper Cutting ITachine-April7, 1868.-The shear has reciprocating longitudinal motion, moving forward with the paper when closed upon it, aud returning when opened.

Claim.-Proriding the reeiproeating shear, having fixed inciines for closing the shcar, with adjustable links and cranks for reciproeating said shcar, substantially as set forth.
g6,374. - Charles H. Alsor, Middletornn, Coml, assignor to Joserfi W. Alsor, New York, N. Y.-Breech-Loading Fire-Arm.-A pril 7, 1868.The breech block slicles backward from the breech, being freed from the latter by retraction of the spring catch. This eateh is withrliawn by a le ver operated by a thumb knob. The breech-block is thrown back by a spiral spring when the catch is relcased.

Claim.-1. The spiral spring $e$, in combination with the groore $a$ in the plate B , the rib $U$, upon the under side of the barrels, the perforated lip D , and the Tertical pin E, having a bercled end, all arranged as described, whereby as the pin E is raised by the spring lever $F$, the spring $c$ throws the barrels formard, for the insertion of the cartridge, as herein shown and deseribed.
2. The eatch or fastening, eomposed of the vertieal pin or bolt E , fitted in the breeeh, aud piroted
to the spriug lever F , in combination with the perforated lip D , at the under side of the rear of the barrel or barrels, and the recess $e$ in the brecch, to rcceive the lip, all arranged substantially as aud for the purpose specified.

96,3\%5. - Edward Atkinson, Wrightstown, Pa.-Roof.-April 7, 1868.-Upon the lathing is laid a eoat of ecment, and upon that a eoat of felt, which is eorered by another coat of eement.
Claim.-A roof, eonsisting of slats eovered with layers of coment, betwceu which is interposed a slieet of felt, substantially as deseribed.
g6,376.-Samuel Avery and Lewis Delill, Phouix, N. Y.-Cofin.-April 7, 1868.-The rails of the sides are sawn to shape, and pancls introduced betreen them. The coffin is tongued together and may be taken apart and paeked in small eompass for transportation.

Claim.-As a new artiele of manufacture, a wooden eoffin, haring its parallel sides formed without bending the timber, substautially as and for the purpose sct forth.
76.377 - Charles A. Babcock, Frankfort, N. Y., assignor to himself and D. MI. GOLDEA, Franlifort, and B. G. Eator, Mexieo, N. Y. - Whiffetree Hook: -April 7, 1868. The ring of the hook turns on the end of the ferrule, being secured thereto by a staple, and its point takes orer the circumferential rib of the same. A lug upon the crlinder stands outside the ring and prevents the flying out of the hook to relcase the trace, when in Torling position. By turning the hook $90^{\circ}$ the point is brought to a slot in the rib, and the lug to a slot in the hook, whieh movement allows the latter to be swung outward.

Claim.-l. The eylinder A, provided with projeetions $a$ and $b$ and groove or slot $c$, substantially as and for the purpose set forth.
2. In combination with the ahove, the hook $B$, substantially as and for the purpose specified

76,37S.-Jacob B. Baley, New Tork, N. Y., assignor to the Bailey Manufactuming Company, same place.-Construction of Icc-Pitchers.-A pril 7, 1868. - The tro bottoms of the pitcher have eentral, erlindrical depressions by which they hare firm betrring on the table, and gire bearing to a block whose foot fills the depression and whose spreading top receires the blow of a bloek of ice when thrown into the pitcher.
Claim.-1. The foot or socket $e$ of the inner bottom plate $c$, extending downwards into the projeetion $g$ of the bottom d, substantially as set forth.
2. The protecting plate $f$, in combination with the double bottom of the icc-piteher or water-eooler, said protecting plate being introduced within tho piteher, and secured sulbstantially as sct forth.
g6.3g9.-Henty O. Baker, New York, N. Y. Mucilage Bottle.- $\Delta$ pril 7, 1868.- $A$ scraping wire is placed across the mouth.
Claim.-The wire, or its equiralent, in eombination with the groore at the base or in the neck of the bottle, substantially as and for tho purposes as herein set forth.
g6,380.-Janes Baldwin, Manehester, N. II. Nut for Joint-Bolt.-April 7, 1868.-The inncr side of a nut is made coneare in a transverse direction, so as to draw in the fibers of the wood to preerent unscrewing and splitting. The deviee is intended specially for use in mortises Where the nut must be kept from rotation while the bolt is scremed in.

Ulaim.-A joint-bolt nut, haring a eoncare faee, cssentially in mamer and for the purposo as herein shown and described.
g6,3S1.-Willian Ball, Chickopee, Mass. Steam Generator:-A pril 7, 1868. - The crown of the firc-box consists of a scries of horizontal water pipes which communicate with the water spaces and support a floor of fire briek

Claim.-1. In a stationary horizoutal flue boiler, a fire box, made open from bottom to top, and without a eroirn shect.
2. The water tubes $c$ c, extending aeross the upper
part of the fire box, and entering the water spaees at the sides or ends of the fire box, as described, in combination with a corering of fire brick, or other like material, the whole arranger and operating substantially as deseribed, and constituting a substitute for the crown sheet used over the fire box of stationary steam boilers.
g6,388.-Elizur H. Barnes, Marathon, N. Y.Apparatus for Treating Fractures and Dislocations. -April 7, 1868. -The curved forms are made to rest upou various parts of the body as bearings for the adjustable splint bar. The bar is formed of sections whieh slide together, and are adjusted at one place by a spur wheel that engages a rack upon a scetion of the bar, and is turned by a winch.

Claim.-1. The curved torms or rests $K$ and C , when used, respectively, upon the leg or arm, in combination with the parts $I, F$, and $G$.
2. The rod $D$, when bent as represented at its upper end, in combination with the said parts $I, F$, and $G$, for the pnrposes set forth.
3. The rod B and rest A , in combination with the parts D, I, F, and L, for the uses and purposes set forth.

76,383.-E. H. Barney, Springfield, Mass.-Skate.-April 7, 1868. The lower edge of the fastening on each side is sharp, so as to act as a rumner when the skate is suffieiently inelined.

Claim.-A skate fastening, haring the sharp or safety-edge $d$ formed upon the onter and lower portion of the elamp, when constructed and operating substantially as lierein described, and for the purposes specificd.

76,384.-DAVID B. Bartholomew, Lancaster, Pa.-Scw Mill. - A pril 7, 1868. - The feed rollers are so arranged in the frame that the stuff may bo split of even or uneven thiekness, or beveled. The split material is so guided as to remain rertical, and is restrained from binding the sav.

Claim.-1. The combination of the morable frame I' II', carrying the feed rollers I I and H H, with the slotted post $h h$, raek $\nabla$, pinion $W$, weighted prilley $Q$, hand-serew $U$, and lateh $x x$, when constrneted, arranged, and operated in the manuer and for the purposes deseribed.
2. The linged slotted bar E , upon Thich are sawguard $D$, pins $p p$, and wedge roller $P$, all eonstrmeted and operating substantially as described.
3. The deflecting deviee, when eonstrueted with the rollers $n n$ and o 0 , and operating substantially as set forth.

76,385.-Josepil W. Bartlett, New Tork, N. Y.-Sewing Mrachine.-April 7, 1868. -The driving Wheel has an inside gear which engages a pinion upon the main driving shaft. This shaft has an eeeentrie Whose rod turns the shaft, operating the looper and feed mechanism.

Olaim.-1. In eombination with the rods C and F , the internally toothed gear wheel B , pinion R , eecentric $D$, rod $E$, and hook $G$, construeted, arraaged, and operating substantially as and for the purposes set forth.
2. In combination with the rods C and F , the eceentrie D, rod E, cam II, hook G, spring L, feeddog $J$, and serew K, construeted and operating substantially as and for the purposes set forth.
76,356.-Charles Belcher, Newrark, N. J.Paint Mill.-April 7, 1868.-The larger grinder has a flanged edge to hold the paint, and has rotation by a belt from the comntershaft. The upper grinder is eeeentric with the lower grinder, and its lower plane surface rests on the upper side of the latter, and has, also, rotation from the eomutershaft.

Claim.-The two revolving griuders, $A$ and $B$, the one about halt the size of the other, when eombined with the seraper C , arranged and operated relatively to eath other, as above described, and for the purpose set torth.

76,357.-Thomas Bell, Bollport, N. Y.-Fishing Attachment for Vessels.-April 7, 1868.-A flaring net frame is hinged to the square bow of the
boat, and may be let into the water, or drawn upward to discharge the eontents upon the deek.

Claim.-A deriee for eatching fish, construeted and applied to a ressel substantially in the manner as herein set forth.
g6,388.-Karl Bender and Charles Frederic Teller, Banhofe Offenbach, A. M., Grand Duchy ot Hessen, assignors to Martin Lochner, Nerrark, N. J.-Thermastats.-April 7, 1868.-The coiled plate is connceted to the register, so that, as the metal is expanded by heat, the register is partially closer. The expanding plate acts through an angular bar, which is aujusted by the serew-threaded axis of the pointer.
Claim.- I. The coiled plate F , in combination with a register, B , and the arm or lever D , or its cquivalent, all arranged substantially in the manner as and for the purpose set forth.
2. The serew rod I and bent arm $I$, for adjusting the arm or lerer D , to regulate the temperature of the room, substantially as shown and deseribed.
3. The index erank $J$ on serew rod $I$, iu conncetion with the graduated dial-plate K, bent arm L, and the arm or lever $D$, all arranged substantially as and for the purpose set forth.
g6,3S9.-Theodore Berteling, New Yorlk, N. Y.-Flute.-April 7, 1868.-The play of the keys is adjusted by temper seretrs.

Clain.-The adjustable set-scretrs C, in connection with the keys $\bar{B}$ of a dnite, operating in the manner and for the purpose substantially as deseribed.

76,390.-EEWARD BEVAN, Birkenhead, for himself and Margaret Fleming, Shipston-on-Stour, England, administratrix ot the estate ot Abel Fleming, deceased, assignors to Edward Beran- - Device for Keeping Food Warm.-A pril 7, 1868. -The outer ressel has an air jacket as a non-eonductor of heat, and has a space for hot water, which surrounds a eylindrical reeess covered by a ehambered lid, and into wheh the food vessel is placed.

Olaim.-The within deseribed means or apparatus tor warming, and keeping warm, artieles of food, eonsisting substantially of the remorable ressel $b$, heating agent, space, and vessel $a d e$, air spaee and ressel $i g$, or its equiralent, and a non-condueting cover, combined in the manner set forth.
g6,391.-John B. Blanchard, Marlboro, Mass. -Edge Finishing Tool.-April 7, 1868.-The spring grange presses against the bottom of the sole with suffieient foree to finish the edge thereot, and also holds the cutter to proper position for trimming the upper edge of the sole.
Claim.-Combining with the flanged body of an edge-finishing tool a spring-worked gange, sulstantially as and for the purpose deseribed.
'g『,392.-Tmébence Boutté, New Iberia, La.Apparatus for Evaporating Cane Juice.-Aprll 7, 1868.-The kettles are set in a erlindrieal metallic furnace, whieh may be made from a worn-out stean boiler. The return ealorie eurrent passes through flues enreloping the upper part of the kettles.

Claim. - The furnace A and flue E , when these parts are severally eonstrueted, united, and operate as herein deseribed, in eombination with the liettles D, when the whole constitutes a portable eane juiee evaporating apparatus, as and for the purpose set forth.
V6,393.-Elujaif Y. Boyce, Middlebury, Vt.Washing Machine.-April 7, 1868. - The suds box is pendulous, and is swung by a hand staff. The dasher is vertieal and fixed.

Claim.-An improved washing machine, eonsisting of the trame $B$, stationary dasher $C D$, box $A$, bar $a$, rod $b$, cye $F$, and lever or rod $G$, all construeted, arranged, and operating as deseribed and specified.

76,394.--W. E. Brock, New York, N. T.Dummy for Displaying Clothing.-A pril 7, 1868.The papier-maehe shell is attaehed to a rooden neek. supported upon the top of the shaft.
Claim.-The dummy composed of the paper or
papier-maché shell A, head piece $a$, supporting shaft B , base C , and braces $b$. the whole arrangel substantially as and for the purpose specified, as a new article of manufacture.
\%6,395.-TraS. Brown and Ciharles N. Brown, Providence, R. I., assignors to themselves and J. Mason Gross, same place.-Stew.-April 7. 1868; antedated January 3, 1868. -The tooth is inserted into a recess in the sam plate, and its shank is straged to one side to form a planer.

Claim.-The combination of a cutting and a planing tooth in one and the same piece of metal, constructed and operating substantially as above specified.

76,396.-Joms Burke, Brooklyn, N. Y.-Musical Return Ball.-A pril 7, 1868.-The passage of the return ball through the air causes the reed thereon to sound.

Claim.-As a new article of manufacture, a return ball, A B, laving a perforation, $a^{\prime}$, in which a musical reed, C, is placed, as described.

76,39\%.-H. (x. Burr, Minneapolis, Minn.Hot Air Furnace.-April 7, 1868. -The calorie current passes into the combustion chamber abore the fire space, which extends horizontally. From this chamber the said current passes through annular diving flues, surronnding air-heating pipes, leading upward from the air chamber in the base, to tur air chamber at the top. This latter chamber is traversed by a perforated water pipe. From the lower flue chamber the caloric current passes up annular flues surrounding air pipes, and discharges into two chambers commmincating with the exit flue.

Claim.-1. The arrangement and combination of the chambers G, H, J, and K, in a hot air furnace, substantially as shown and described.
2. The annular flues $a$ and $a^{i}$, in combination with the chambers $\mathbf{H}$ and $\mathbf{K}$, as and for the purposes set forth.
\%6,398.- William S. Carr, New York, N. Y.Water Closet.-April 7, 1868.-The orerfiow cup is fixed, and its bottom has a valve which is opened to discharge the contents by raising the handle. The ralve seat consists of an annulus of India-rubber, which is sprong npon the out-turned flange at the bottom of the overflow cup.

Claim.-1. The stationary orerflow vessel $c$, introduced within the upper end of the hopper $d$, and receiring the lotrer end of the basin $f$, in combination with the valre $k$ on the spindle $l$, and the flexible packing $h$ applied to the lower end of the overflow ressel $c$, in the minner and for the purposes set forth.
2. The valre $k$, attached to a plate, and connected by the arms 2 and 3 to the spindle $l$, in combination with the flexible ring, forming a packing and seat for said ralve, substantially as set forth.
3. The spindle $l$ for the ralve, haring a close bearing at one end, and formed with an arm, $m$, at the other end, and connected to and combined with the ralve in the manner specified, so that the spindle can be inserted endwise, and connected with the valve, withont discomnecting any of the parts of the hopper.
4. The reversible screw-bridge $t$, formed as specified, in combination with the cup or socket $q$, whereby the said cap, or socket can be firmly seemred to the varying thicknesses of wood-work of the seat, as set forth.
5. An elastic paeking or seat for the valre $k$, composed of a eylinder of rulcanized rubber, stretched upon the bottom flange of the orerflow ressel $e$, and forming a loose or free inner edge to receire the pressure of the superincumbent water in the overHow vessel, and forms, with the valve, a water-tight joint, as specified.

76,399.-Josepil M. Cifaplin, Morrisville, Vt., assignor to himself, E. E. Allex, and F. M. Love-lavd.-Potato Washer and Pan Combincd.-April 7, 1868. -The crank end of the journal is fast to the head. The arbor of the other end is forked to encare the side of the pan, and is passed into a socket in the middle bar of the cylinder bottom.

Claim.-The cylindrical potato washer A with its
bars C C and morable hooked journal II in the one end, and lid B and crank E at the other end, when constructed and combined with the tin pan $G$, as herein described and for the purpose set forth.

76,400.-Josepit Collins ant John Knox, Conshohocken. Pii.-Stove.-A pril 7, 1868.-The air passes through holes in the sides and back of the fire place and finds exit into a chamber beneath the raised oren and hehind the fire place. From this chamber the heated air may pass through pipes to another apartment.

Claim.-The stove constructed as described, and consisting of the air chamber C, fire back D, haring spaces $b$, tubular sides F , grate composed of single bars E , bar I , oven B , and flues $f \mathrm{G} h$, all arranged as described.

76,401. -Samull F. Conant, Skowhegan, Me. -Hair Crimper.-A pril 7, 1868.-The plates are piroted together at one end, and the upper and lower plates are arranged to catch together at the other end. The band of hair is passed backward and forward between these plates and allowed to remain until crimped.

Claim.-The series of spring plates A A piroted together, substantially as described.
76,402.-Williston Conaer, Rensselacrville, N. Y.-Sap Spile-April 7, 1868.-The flange fits the mouth of the lole and the horns engage the top and bottom of the hole. The bueket bail rests npon the notched bar at the top of the spile.

Claim.-1. An improved sap spile, cast hollow, and with a circular flange $B$ cast upon its inner end, sail flange haring its edge bereled, and having two prongs C cast upon its inner side, substantially as herein shown and described, and for the purposes set forth.
2. The combination of the inclined and notched arm or flange D with the body or stem A of the spile, substantially as herein shown and described, and for the purpose set forth.

96,403.-Hugit H. Craigie, New York, N. Y. -Water Closet.-April 7, 1868; antedated April 1, 1868. -The pan is made in a segment of a hollor sphere, and is lung by both sides so as to more in the line of its currature.

Claim.-1. A pan formed as a section of a globe or nearly so, and mounted substantially as specified, so as to move nearly in the line of its own curvature in combination with a water closet basin.
2. A hollow arm extending ont on one side of the hopper in combination with the pan fitted to be mored. as specified, by mechanism introduced within said arm, substantially ats set forth.
3. The combination of a pan, made and moring as speeified, with a water closet hasin and metallic hopper extending up around said basin, as and for the purposes set forth.
4. The ammur water way $s$, in combination with the deflector $u$, with an opening through it, in the manner and for the purposes set forth.

76,404.-Elisila Ckane, Elkhart, M1.-Scarifying the Soil Preparatory to Plowing.-April 7, 1868. -The wheel has a fiame whose standards form guides for a vertically adjustable frame which carries a number of transverse shafts, each of which hats a series of cutting disks.

Claim.-1. The truck frame B B where the same is provided with a series of parallel rods or axles $\mathrm{B}^{\prime} \mathrm{B}^{\prime}$, when the same are provided with a series of cutting blades or disks $b b$, and the whole is constructed and arranged so as to operate substantially as described and for the purposes specified.
2. The truck $B$ when tho same is in combination With the uprights $a a$ and wheel $a^{\prime} a^{\prime}$, and the whole is so constructed as to operate substantially as deseribed and for the purposes specificd.
3. The truck 13 , rods or axles $B^{\prime}$, cntting blades or disks $b$ when the same is in combination with the Windlass rollers $c c$, and its operating mechanism, and the whole is so consirncted and arranged as to operate substantially as deseribed and for the purpose specified.
4. Arranging above the truck $B$ when the same
is provided with parallel rods or axles $\mathrm{B}^{\prime} \mathrm{B}^{\prime}$, and cutting blarles or disks $b b$ of the platiorm $H$ and driver's seat $g$ when the whole is so constructed and arranged as to operate substantially as deseribed and for the purposes specified.
76.405.-William Cirigiton and Henry Roesler, Fort Wayne, Ind-Brich Machine.April 7, 1868. -The molds reciprocate beneath the pug mill. Tho plunger roller runs over the elevation of the track to press the briek; as the mold emerges it strikes the adjustable "slide" and operates the rock shaft, whose lifting arm raises the plunger and ejects the brick from the mold.

Claim.-1. The rocking shafts F F in combination with bar $G$, as and for the purpose described.
2. The lifters 0 O, operating as and for the purpose set forth.
3. The combination of rocking shafts $F$ F with lifters O O , bar G , and spring $q$, substantially as set forth.
4. The plangers $P$ P provided with rollers $x x$, rail W, slides $p p$, rocking shafts F F , and lifters O O , all combined and arranged as and for the purpose set forth.

76, 406 .-George Crompton, Worcester, Mass. -Harness Operating Mechanism for Looms.-April 7, 1868.- The vertical jacks are piroted to the side of the loom, and are operated by the tappet wheels, the said wheels having cam grooves traversed by anti-friction rollers upon side arms of the jacks.

Claim. - The combination and arrangement in a loom for weaving fancy or other goods of a series of cams when made as shown in Fig. 5 of the drawings, with a series of jacks, G, having a series of notches, 6 , substantially as and for the purposes set forth.

6, 40\%.-DAVID CUMMing, Jr., New York, N. Y., assignor to himself and J. C. Cameron.-Baling Press.-A pril 7, 1868. - The follower has two ratehet bars whicl receive motion from pawls on a longitudinally sliding block, cccentrically pivoted to a spur wheel receiving rotation by a spur wheel on the motive shaft. Catch parls hold the movement gained.

Claim. - The combination of the eccentric wheel F in its movable bearings $G$ G with driving wheel I, stud $N$, follower C, racks E E, and pawls H H and L L , all arranged and operating substantially as set forth.
g6, A0S.-TIMOTHY A. Cuntis, Brookfield, Mass. -Sole Cutiong Machine.-April 7, 1868, -The linires are clamped to the head by T-headed bolts adjusted by racks and a spur wheel.

Claim.-1. Sceuring the knife to the head by means of the bolts, in connection with the racks and pinion, or other means of adjusting them, substantially the same when constructed in the manner and for the purposes and operating substantially the same as above set forth and described.
2. The adjustable gauges attached to the head C , substantially as described.
r6, 109.-Samuel Daililiga, Bangor, Me.-Ink-stand.-April 7, 1868. - The flexible reserroir rests upon the follower whose pins traverse spiral slots in the case, so that by turning the follower the reservoir is pressed between the said follomer and the top, and the ink caused to rise in the dip hole.

Claim.-1. An inkstand haring an elastic ink rescroir $C$, a dipping eup $K$, and a presser $F$, constructed and operating substantially as described.
2. An inkstand having, in combination, an elastic or flexible ink rescroir, a pen dipping cup, and an intermediate ink chamber, arranged and operating substantially as described.
3. An inkstand having, in combination, an elastic ink reservoir, a follower, an intermediate ink chamber, and a pen dipping cup, substantially as described.
g6, $110 .-$ SaMuel Darling, Bangor, Mre.-Vises.- 1 pril 7, 1868.-The holder is applied to the lever to prerent its slipping in the socket.

Claim.-A vise handle holder construeted and to
be applied to the handle, substantially as and for tho purpose described.
g6, 4 11.-EiiJAII W. Dennis, Peoria, Ill-Cul-tivator.-April 7, 1868; intedated March 25, 1868. -The sides of the frame are connected by a series of arches which give support to the tongue and seat. The tongue is piroted to the front arch and its rear end slides transversely upon the second arch. The lear end of tho tongue has a spring detent which enters a notch in the guide bar. The spring is released from the notch and the rear end of the tongue mored transrersely by the treadles, or by the hand levers to whose lower lever ends the plows are secured.
Claim.-1. The arrangement of the levers I I and cord $z$ with spring $h$ on the pole M, substantially as and for the purpose specifled.
2. The arrangement of the levers, handles H H With the cord $x$ and the pole M, substantially as and for the purpose specified.
3. The arrangement of the plates $s$ and $t$, as constructed, with the shovel $y$ and bolt $w$, for securing the shovel to the beam, substantially as and for the purpose set forth.
(96, H12.-G. W. Deweesis, Lima, Ohio.- Culti-vator.-A pril 7, 1868. -The ends of the handles have anch a cross-bar having a series of adjusting bolt holes by which, in combination with a pirot bolt, the handles are rertically adjusted.

Claim.-The adjustable arms $C$ and handles a combined with the draught beams of a cultivator, substantially as and for the purpose set forth.

76,413.-Rudolph D'Heureuse, San Francisco, Cal.-Extracting Gold from its Ores.-A pril 7, 1868. -The ore is reduced to impalpable powder and discharged into the bottom of a bath of melted zinc. The gold unites with the zinc, the refuse being skimmed from the top.

Olaim.-The process herein described for extracting gold by passing gold-bearing substances, reduced to a fine powder, without previous alloy, through melted zinc, by introducing said substances below the surface of the melted zinc, as sct forth.
g6,414.—Tosiah S. Dickinson, Essex, Conn.-Comb.-April 7, 1868.- The back of the comb rests in a groore of the holder, and is retained by a longitudinal pin which is half buried in both the side of the groove and the comb back.

Claim.-As a new article of manufacture, a comb holder A, constructed substantially as described.
66, 垂15. - Lewis Dietminicir, Sandwich, MlBrich Machine.-A pril, 7,1868 . - The remorable hopper is filled with the prepared clay, the corer is then slid back and the hopper placed over the molds. The bottom is then drawn ont and the clay falls into the molds. The corer is then pushed on, and the follower laised to gire the required pressure. The pressure may then be relaxed to allow removal of the cover, after which the bricks may be raised by the follower to the top of the machine from whence they are remored by a pair of tongs. Four, more or less, may be made at each operation.

Claim.-1. The followers, composed of the parts D, $E$, and $F$, in combination with the beams $H$, guides $\cdot \mathrm{Z}$ and S , and lcrer P , substantially as specified.
2. The arrangement of the bar D , beam $H$, pendants $I$, and rock shaft $J$, with the single slotted or groored bars S, so that the operating parts can all be readily removed, substantially as herein described.
3. The combination and arrangement of the lever O, roek shaft $J$, provided with the eccentries $k$, the remorable standards $M$, and pendants $I$, guide bars $S$. and followers D E F with frame A B, all constructed and operating substantially as specified.

76,416.-Count Artilun Dillon, Paris, France. - Apparatus for Raising Sunken Fessels.-April 7, 1868.-Each pontoon has a longitudinal cylinder which is open-ended, and contains pistons which are forced apart by introduction of air between them to increase the flotation of the pontoon. The pontoon has trap-bottomed ballast compartments.

Claim.-1. The ballast compartments B, with the hinged traps D , for diseharging the ballast from a submergoal pontoon, substantially as aucl for the purpose shown and deseribed.
2. The apparadus, as shown and deseribod, consisting of a cylincler, with pistons and generating chamber, for employing the buoyant forec for raising the pontoon after it has been earried down in a latent state, all substantially as shown and deseribed.
76.417. - GEORGF EDhLND DONisthorpe, Leeds, England.-Coal Mining AKachine.-April T, 1868; patented in England Oetober 28, 1863.-The wodges are point first, and aro drawn formard by springs so as to engage tightly between the rail and curriage frame on any backward motion of the latter. The wedges are easod by forwurd movement of the carriage. The cleares follow tho picks in their forward movement and serro to remove the detritus when they are simultancousky retraeted.

Claim.-1. The applieation of wedges to sceure or hold the earriage to the rails, substantially as herein deseribed.
2. The application of elcarers or elcaring instruments to the picks or cutting tools, substantially as hereiu deseribed.

76,418.-GEORGE EDMUND DONISTIORPE, Leods, England.-Coal Mining Machine.-April 7, 1868; patented in England March 8, 1866.-Tho iron slecpers of the track aro extended siderrays, and secured by adjustable posts and wedges to tho floor and ceiling of the shaft or mine.

Claim.-The lolding in position the rails (upon which machines used in getting coal and other minerals run) by posts on pillars wedged or held between the floor and roof of the mine, snbstantially is herein deseribed.
6.419. - GEORGE EDMUND DONisthorpe, Leots, Englancl.-Coal Mining Machine.-April 7, 1868 ; patented in England Mareh 8, 1866.-The cutting mechanism is supported on a frame which is guided by the eciling through means of rollers which track along the eciling and are pressed thero against by air or metallic springs. The whole apparatus is mounted on a truek which runs upon a rail track laid on the floor of the mine.

Glaim.-1. The so mounting the eutting apparatus of machinery employed in getting coal or other mineral, that the outting apparatus may, whilst at work, rise or fall independently of the truck or carriare of tho machine, substantially as herein described.
2. The carrying the cutting apparatus on the top of the plunger of an air cylinder, carried by the truek of the machine, so that the eutting apparatus may cut a groore close up to the roof of the mine, substantiaily as herein deseribed.
(76,420.-Julius Dorn, New York, N. Y.-Eye-Glass Attachment.-April 7, 1868.-The ends of the nose spring are connected to the bows by spring hingos. 'The bows hare bearing picees of a slower eurvature and greater lateral extension than the edge of the bow; the object is to give a better bearing on the nose.

Claim.-The combination of the springs $B$ d and rigid nose piece $m$, with. the cyo-glasses, as lierein describod, for the purpose specitiod.

然6,421.—Joserh Douglass, MoConnollstovm, Pa.-Device for ILoving Cars.-April 7, 1868.-The fulerum base slides along the rail and has suflicient hold thereon to prerent slipping.

Claim.-l. The combination of the lever $G$, cap $C$, aud sliding chock II, when arranged so as to operate together, substantially in the manner and for the purposes specified.
2. The combination of the eap $C$, spring $D$, and blade E, for the purpose of supporting and holding the other parts of the instrument in position, substantially as specified.

76,422.-GEORGE DUMBOLTON, Baltimore, Ml., assignor to himself and C. H. Surcers, same place.Double Acting Hing.-April 7. 1868.- The end of one spring is attached to the door frame and the
other end is attached to the swinging leaf, by means of a pirot. The other spring is upon the reverse side of the door and has one end whiel operates the opposite pivot of the same hinge, but the other end is uttached directly to the door.

Claim.-The applying of two torsion springs to the swinging leares or straps of a double-action hinge, substantially as and for the purpose describal.
76.498.-Willasy H. Dutton, Miladelphia, Pa.-C'abinet Wedstead.-April 7, 1868.-The curred bars are attached to the liead ends of the side rails, and give bearing to flexiblo straps attached to the posts, to form a sort of rolling hinge to the head of the bedstead, when it is changed from a perpendieular to a horizontal position. Ropes attached to the ease, and to the turning head of tho foot legs, operate automatically to fold tho leg's up to the foot board as the bod is turued up.

Claim.-1. The straps D and curred bars C , in combination with the parts $A B$ of the bedstoad, arranged and operating substantially as and for the purpose set forth.
2. The adjusting or moring of the $\operatorname{logs} \mathrm{E} E$ auto matically, by the raising or lowering of the bedstead, through the media of the coil springs and cords, arranged substantially as shown and deseribed.
g6,494.-DAvid Edwands, New York, N. K.Car lieplacer.-April 7, 1868.- Each end of the street car has a rheel standing transversely, and whosb journal framo may be depressed by a serew so as to sustain the end of the car while it is drawn around to the track.

Olaim.-1. The combination, with the ear, at or near either or both of its ends, of a transterse intermediate ground-rest or bearing, capable of being raised or lowered, substantially as and for the purpose specified.
2. The combination, with a street or other railroad car, of the serew E, serew box $G$, and wheel or roller $\Pi$, the latter haring its axis armanged transversely, or thereabouts, to that of tho ruming whecls, also, intermediately of the same, and capable of being raised or lowerod, essentially as herein set forth.

76, 485.-B. C. English and Francis Fraps, Springficld, Mass.-Spring-Bed Bottom.-April 7, 1868.-The mpper ant more pliable slat rests upon an under one, through the medium of springs. The slats are stayed together by serums passing through blocks at the onds. The bloeks are strung upon round rods, and leeld to their adjustment by set seretrs.

Claim.-1. The clouble slat or frame $\mathbf{A}$, consisting of top and bottom slats $C$ and D, with springs E between them, and connected at their ends by means of the blocks $G$, screws $a$, and washers $b$, substantially as cescribed.
$\underset{\sim}{2}$. The arrangement of the firames $A$ upon eross rods 13 anil 13 , so as to be adjustable by set serews $f$ in the manner' shown.

710,126.-Luther Enving, Brooklyn, N. Y.Lamp Burner.-April 7, 1868. -The top of the wick tube is flush with a liorizontal perforated plate which forms the top to a foraminous cup constituting the base of the burner. Abore the horizontal plate is a flat-sided deflector which is inelosed by the trun-cato-conical, foraminous casc.

Claim.-The turangement of the foraminous ease C, cap D, and perforated plate $b$, with relation to the wiek tube and base, all combinad substantially as shown and deseribed.

196,427.-Levis Fincir, Vienna, Va. - Potato Digger.-A pril 7, 1868.-Tlic vines and surface earth are removed fiom above the potatoes, and the latter, With the earth surrounding them, taken up hy the following double mold-board plow, are passed over the sercen and then beneatl tho rako.

Claim.-1. The donble mold-board F, adjustable on the beam B , and provided with horizontal and rertical cutting edges, as shown and described, and for the purposes specifica.
2. The combined arrancement of the donble mold board $F F^{\prime}$, conrex share $C$, and screen $D$, all con
structed and operating as and for the purposes sipecified.
3. In combination with the abore, the pivoted rake H, for finally separating the potatoes from the earth as leseribed.

M6, 4ix.-Janes Fleming, Philadelphia, Pa., assighor to Galdaer and Fleming, same place. Adjustable Seat for Carriages.-A pril 7, 1868.-The front seat is arranged to oceupy is suitable position for the dreer or to swing orer against the dashboard when but one seat is required.

Claim.-'The seat G, hung to arms E E hinged to the body of a vehiele, in combination with guides or plates having stops $e e^{\prime}, e e^{\prime}$, and secured to the body of the vehiele and to the seat, so that the seat is retained in its horizontal position both when adjusted to aecommodate the driver and when adjacent to the dash-board, as deseribed.

76,429.-M. M. Follett, Westboro, Mass.Converting Motion.-April 7, 1868.-The spur wheel on the rotary shaft engrages a double-faeed raek whieh revolves aronnd it and is attached to a pitman whose ends are graided so as to keep the rack in contact with the spur wheel.

Claim. -The eombination and arrangement of the deviees, substantially as and for the purpose herein described.

76,430.-M. M. Folletr, Westboro, Mass.Mop Wringer.-April 7, 1868.-The frame is disjointed in one place and the serub bucket placed within it. The mop is placed between the fixed and movable roller and the latter brought against it by the treade through medium of the cords. When the treadle is freed the roller is earried baek by the elastie springs.

Claim.-The squeezing roller frame, hinged to the oscillating post, and conneeted at its opposite end to the platform by the adjustable conneetion described, all substantially as and for the purpose set forth.
g6,431.-William Fredericis, Pottsville, Pa.Boot and Shoe Streteher.-A pril 7, 1868.-The last is divided into an upper and under seetion whieh are conneeted by a lever. The fore end of the upper section is pivoted to the fore end of the lerer, and the middle end of the lever is fulerumed at the mid length of the lower section. The serews operate to raise the rear end of the npper section immediately, and its fore end through medinm of the lever. The apper surface of the last has changeable knobs to streteh the leather in partienlar places.
Claim. - The combination of the lever C and screw E with the parts A and B of the last, substantially as herein shown and described, and tor the purpose set forth.
g6,439. - Carlos Frencit, Seymour, Conu.Bending Ifandrel.-April 7, 1868. -The mandrel has aut inner grooved or reeessed shaft having an exterior sleere or elasp which is free to turn upon the shaft to fasten or nnfasten the end of the metal to be bent or wound thereon.
Claim.-A mandrel, composed of an interior shaft, with a shoulder or recess therein, and an cecentrie slotted elasp or sleeve on its perimeter, that ean move over or past sail shoulder, to eateh and hold or release the end of the metal bent or wound therein, sulustantially as deseribed and represented.
g6, 133.-John C. Gajther, Somerset, Pa.Machine for Printing Addresses on Newspapers, de. -A pril 7,1868 . -The types are set up upon the periphery of the wheel and pass beneath the inking rollers. As each direction form comes to the top, and beneath the aperture in the table, the pressure deseends and bends down the package so as to briug it in eontaet with the type.
Claim.-The combinations of the following clements, viz, the treadle I, the lerer $L$, and press rod MI, having an elastie faced point $\mathrm{M}^{\prime}$, the feed finger O , the whecl C , with an adjustable side plate $\mathrm{C}^{\prime}$, seetor plates G, type D, wedges $E_{1}$, and partitions' $F$, and the plate $N$, with opening $\mathrm{N}^{\prime}$, said parts being arranced in relation to one another substantially as and for the purpose set forth.

76, 434.-LEWIS Gimis, Canton, Ohio--Bracket Shelf and Drawer.-A pril 7, 1868.-The shelf is made as stated, ready for attachment to the wall of an offiee or other room.

Claim.-A bracketed shelf, with ornamented or plain railing or guard around its neargins or edges, mad witlo a drawer, substantially in the manner and for the purpose herein described and represented.
ge, 136.-Harlow Gilibert, New York, N. Y. -Register.-April 7, 1808.-The thumb is placed in a spring sooket and the instrument placed upon the goods to be measured. The goods are then drawn beneath the milled roller which conneets with the register.

Claim.-1. The eombination of the side plate $A$, dial plate $B$, thumb pieee $C$, milled or roughened roller D, having one or more teeth formed upon it, gear wheels F GHI, or their equivalents, horizontal gear wheel $J$, and index finger K, with each other, substantially as herein shown and deseribed, and for the purpose set forth.
2. In eombination with the above, the tooth $L$, on wheel $J$, and the horizontal toathed wheel M, ar ranged and operating snbstantially as deseribed, and for the purpose specified.

76,436.-Alvaro B. Graham, Wankegan, 111 . -Harvester.-April 7, 1868.-The shoe of the finger beam is snrrounded by a flanged tire or track ring whieh runs upon the ground revolving npon antifrietion rollers journaled to the shoe. One of the said rollers is journaled upon an arm to give means for removal of the track ring. The conneeting pin be tween the pitman and the cutter bar may be split tubular, or solid, and is hold in by a spring.

Claim.-1. The combination of the finger beam of a harrester with a rerolring shoe, through the in terrention of frietion wheels, substantially as before set forth.
2. The combination of the finger beam, revolving shoe, and sliding arm of the bearing that holds the revolving shoe in place, substantially as before set forth.
3. The combination of the members of a hinge joint with a split tufbular joint pin, substantially as before set forth
4. The eombination of the joint pin of a hinge joint with a spring holder and teat, substantially as before set forth.
5. The combination of the bolt head or nut with the spring lateh and ratchet teeth, substantially as before set forth.
vg. 437. - William H. Graham, La Crosse, Wis.-Cooking Range-April 7. 1868.-The courso of the ealorie current is orer the orens, outside them, and along their bottoms, to rise in the spaces between the orens and fire space. The eurrent can be cut oft by dampers fiom either or both orens.

Claim. - 1 . The adjustable fire-box top F , constrneted with a eoneavity on the under side of plate $h$, for the pnrpose of allowing the produets of combustion to pass from the ehambers around the orens to the pipe, substantially as deseribed.
2. The eirenlar lid $\bar{P}$, provided With reeeptacles for cooking utensils, arranged in combination with fire box F of a cooking range, substantially as set forth.
m, $138 .-$ Alvah Graves, Marecllus Falls, N. Y.-Yotato Digger.-April 7, 1868. -The edges of the shovel plow are turned npward, forming chutes to convey the earth and potatoes to the sereen at tho rear part of the plow. The sereen is shaken by a spur wheel bencath the plow whieh turns by the action of the earth upon it and whose tecth impinge against a projection of the serew.

Claim.-1. The serrated whecl D, when so eon strueted with relation to the riddle C , that the lower pertions of its teeth engrge with the gronnd, to propel the wheel, while the upper portions engage in tossing the riddle, snbstantially in the manner and for the purpose set forth.
2. The shovel plow A a B F, hinged riddle C e, and serrated wheel D, all construeted, combined, and operating in the manner shown and for the purpose described.

96,439.-Joun Groves and Exocir B. Turaer, Providence, R. I.-Whirligig Toy.-April 7, 18c: The shaft has reciproeating rotation by means of the elastic cord which is round around it and passes throngl the handle. Any object desired may be placed upon the end of the shatt.

Claim.-The combination of a shaft with a piece of clastic, passing longitulimally through the handle of the tor, and operated substaitially as described.
g6,140.-Frascisque T. MI. A. Ceyon, St. Brieux, France-Printer's' Furniture - April 7, 1868.-The extensible piece is in two seetions which mar be laid together to rarious lengths and which are clamped firmly between the side of the bed and chase by a set screw.

Claim.-1. The part K $\mathrm{K}^{\prime}$, and the part J $j$, arranged to operate relatively to ench other and to the bed of a priuting press, as and for the purpose herein speeified.
2 . The tenons or spurs $k k$, and screw $\nabla$, in combination with the readily-adjustable frame $\mathrm{K} \mathrm{K}^{\prime}, ~ J j$, or its equiralent, the several parts being all arranged for joint operation, as and for the purpose herein specified.

76,44.-E. R. Mall, Utica, assignor to himself, D. M. Golden, Framkfort, and B. G. Eaton, Mexico, N. Y.-Clothes Drier:-April 7, 1868.-The arms are hinged to a block which slides in a vertical tubular stock, the arms issuing from the top thereof and falling into a horizontal positiou on the raising of the block. The block is raised by helts which pass over pulleys, and are wound on a barrel rotated by a hand crank.

Claim.-1. The springs $s s s s$, for throwing ont the arms $h h$, substantially in the manner specified.
2. The combination of the elevator C , springs $\varepsilon s s \in$, and arms $h h$, substantially as and for the purpose set forth.
3. Arms $h h$, springss $s s$, elevator C , spools $e e$, and tape or cords $f$, all combined and arranged substantially in the manner and for the purpose described.

76,442.-B. A. Marcock, Richland, Iowa, Lining of Furnaces-A April 7, 1868.-When the boiler is supported in rosition by the face plate. stand pipe, and outcr walls, and the grate is set, the fire space is cased with wood, and clay tamped between the case and the walls. The wooden casing is burne out when the clay is sufficiently dried. It is intended as a substitnte for fire brick where it is hard to be obtained.

Claim.-A furnace or fire-place lining for steam boilers, formed of clay, substantially in the manner herein shown and described.

76,443.-Tosepil Heckel and Michael Eictiinger, Decatur, Mll.-Composition for Covering Wooden Bridges, Buildings, de.-April 7, 1868Improvement on the patent of Joseph Heckel, December 3, 1867. Composed of pulverized China clay, burnt, 20 ; air-slaked, oyster-shell lime, reburnt, 30 ; litharge, 10, and plaster of Paris, 40 parts. The whole is firmly pulverized and ground with linseed oil.

Claim.-The composition abore described, when compounded and used as and for the purposes specified.

76, 144.-Josepil T. Heindl, New York, N. Y. -Basket Grate for Furnaces.-April 7, 1868.-Inprovement on patent No. 42,816. The inelined sides of the grate, instead of being perforated, are partially or wholly closed, and made of a non-conducting substance. The carbonic oxide produced passes off into the arch, where it is mingled with air to cause flame at that point.

Claim.-The basket grate C , having its sides a a constructed of inclined plates, partially or wholly closer, substantially as described.

学6,445.-Canceled.
76,446.-R. W. Heywood, Baltimore, Md.Portable Head Rest for Car Scats.-April 7, 1868.The jars of the elamp embrace the top of the back,
and it is held in place by a strap vhieh is passed around the back. The pad is adjustable on the bar, which is hinged to the clamp.
Claim.-The combination of the regulating screw D witl the hinged adjnstable standard B , whieh supports the head rest, and the clamp A and straps G G, by which the apparatus is attached to the back of a car seat, when the parts are construeted and combined so as to operate together, substantially as and for the purpose speceified.

76,447.-TV. F. Higans and Jerone Periy, Watsonrille, Cal,-Gang Plow.-A pril 7, 1868.-The fore ends of the plow beams are connected to arms which are transversely adjustable on the square axle, and the axle is connected by an arm and link to a lever by which it is rocked to alljust the height of the fore ends of the plow beams. 1 cross bar, comect ing the beams near to their rear ends, is connected by an upwardly inclined beam and by pivoted bars to a connecting bar between the fore ends of the beams, and a fixed pirot in the frame.

Claim.-1. The combination of the inclined beams I and K, braces or supporting bars J and L, adjust able piroted bar M, and piroted bars H, with each other, with the plow frame $F$, sulky or wagon frame A, and axle B, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the lever P , connecting bar $O$, and arm N , with each other, with the axle 13 and frumerrork of the sulky or wagon, substantially as herein shown and described, and for the purpose set forth.

96,448.-Justine Mints, Salem, and Giles Hexry Lodge, Strampseott, MIass.-Steam Engine I'iston.-April 7, 1868. - Improrement on the patent of W. C. Hicks, February 21,1865 . Instead of the comnecting rod being piroted to a cross pin traversing the piston diametrically, which connection checks the expansion of the piston by the longitudinal Wedge; the said connecting rod is piroted to the piston head, resting against a brass block occupring a recess therein, and pivoted to a ring boit passing axially through the head.
Claim.-1. In combination with an expansible cylindrical piston, as described, the detachable head J', with elongated bolt holes, as described, or their equivalents, and connecting rod jointed to said piston head, substantially as set forth.
2. In combination with the piston head and connecting rod, the tubular nut C , lining plate $e$, and eye bolt $d$, screwing into the nut C , and all arranged substantially as describod.

76,449.-Warier Hinns, Worcester, Mass.-Horseshoc.-April 7, 18iz.-The arms have spurs on their inner sides which are forced into the outer side of the hoof.

Claim. -The lorseshoo, complete in onc piece, formed by the combination of the sole $A$, with or without ealks, the arms 1313 and clinches $i i$, when constructed and operating in the manner and for the purposes above set forth and described.

76,450.-Rohert Hoadley and Menry 4. Shemas, Ansonia, Conn.-Lamp Burner.-April 7, 1868.-The horizontal, perforated plate is supported on arms extending uprard from the base, and has upward and downward arms at its periphery which give support to the chimney and to the side of the conc.
Claim.--The perforated plate D , in combination with the deflector II and the base B, when the said plate is arranged in the manner described, and constructed in one and the samo piece with the vertical springs E and the chimney supporters F , substartially is set forth.

96,451.-Erast Hoffstaetter, New York, N. X.-IIachine for Piching IIair.-A pril 7, 1868.-The feed box has an aperture through which the matted hair is allowed to pass the first time it is run through the machine, and which is covered the second time to allow the hair to pass orer it, and betreen the fooder and picker. The dirt drops through holes in the toothed concave.
Claim.-The arrangement of the toothed cylinder

C, corrugated fecder E , and removable picker D , with the hiuged feed box $B$, when the latter is provided with the springs $d h$, whereby the hair is fed, cither between the feeder E and pieker D to the cylinder C , or upon one side of the feeder E , to the cylinder, without coning in contact with the picker D, all coustructed and operating as herein described, for the purpose specified.
g6,45\%.-Augustus R. Hobbs and Nathaniel F. Wright, Elizabethport, N. J.-Fanning Chair. -April 7, 1868.-The seat is eomeeted to a rock shaft whose motion is influenced by a spring. The seat may be connected to the base so as to form a fixed chair. A fan shaft receives reciproeal rotation by a spur whecl which engages a raek on the frame.
Claim.-1. A rocking chair, operating the fans $G$, substantially as shown and described, and for the purposes set forth.
2. The back B and seat $C$, in combination with the arms $D$, and rock shaft $a$, and spring $S$, and frame $\Lambda$, substantially as shown and described, and for the purposes set forth.
3. The arms D, in eombination with the notches $e$, and pins $e^{\prime}$, and seat $C$, substantially as shown and described, and for the purposes set forth.
4. The curved rack D' and frame A, in combination with the pinion $F$, and shaft $E$, and fans $G$, and the scat C, substantially as shown and described, and for the purposes sct forth.
gh, 453.-James Holiand, Brooklyn, N. Y.-Sliate.-A pril 7, 1868. - The heel is held between two fixed side dogs, and a movable dog. The latter engages the front of the hecl aud is mored lougitndimally by means of a pin whieh traverses an eccentrie slot in a lever trlose fulcrum is morable longitudinally to suit the size of the heel. The free end of the lever is connceted by a strap to any suitable attachment on the foot.

Claim.-l. The lever $e$ and movable doge $h$, in combination with the morable fulcrum $f$, substantially as described.
2. The movable dog $h$ and morable fulerum plate $f$, in combination with the slot $c$, substantially as shown.
3. The ridge $i$ on the lerer $e$, arranged substantially as shown, to draw the fulcrum plate down on the foot plate, substantially as deseribed.
4. The eombination, sulstantially as described, of the lever $e$, the movable $\operatorname{dog} h$, and trap $o$.
5. The arms $p$, arranged on screw or fulerum pin $m$, for the purpose of raising the plate $f$ free from contaet with the foot plate, substantially as described.
ge, 454 .- John H. Holland, Hancock, Mieh.-Pen.-April 7, 1868.-The additional holder is adjustable on an arm projeeting siderays from the other.
Claim.-1. The barrel B, formed with holding lips $b^{\prime}$ on the outside of its baek, when prorided with a projecting guide plate $C$, adapted to reccire the holder D , whieh is adjustel by means of the serew E passing throughl a lug, $d^{\prime}$, attached to the holder D , said screrr being swiveled in the fixed projeetion $c^{\prime}$, all construeted and operating as deseribed for the purpose specified.
2. In eombination with the holders B D , having lips $b^{\prime}$, the pens $F$ G, when their lowrer end. are turned up, as deseribed for the purpose set forth.
g6,455.-Elihu Hosford, Chicago, Ill.-Coal Stove.-April 7, 1868.-The grate bottom has a conical top whieh is radially ribbed and admits of oseillation by a lever beneath. The calorie eurrent may be allowed to pass directly upward, or may have downward exit from the edge of the grate, to mingle with the rital air in the combustlon elamber in the base. The latter ehamber eommunieates by side pipes with the ruper chamber, from whiel the exit pipe cmanates.
Claim.-The grate B or its equivalent, for the purpose and substantially as herein dsscribed.
2. The eombination of the eylinder A, grate B, ash box E, air-spaee H, columns F F, and hot air ehanber $G$, for the purpose and substantially as berein set forth.
g6, AEG6.-Ira Houghtinis, Moughton, Mich.Morse Collar.- $\Lambda$ pril 7, 1868.-The collar is made of India rubber or wood and in the latter ease is lined with leather. The perforations run through the body and are to keep the immer surfaec cool.
Claim.-Constructing a horse collar, perforated and lined with leatlicr, as described.
'96,45\%.-Thomas P. Howe, Brooklyn, N. Y.Copying Press.-April 7, 1868.-A piece of metallie pipe is coated with rubber tubiug whieh is cemented thereto. Attached to the rubber coat is a thin rubber apron. When used the shect of copying and of manuscript paper are laid upon the apron and the Whole rolled together and allowed to remain for a fer minutes.

Claim.-As an article of manufacture, the improved copying press, herein-before deseribcd, made by combining the rigid cylinder A, the elastic tubing $B$, and the blanket or eloth $C$, substantially as hereinbefore sct forth.

F6,458.-Orrin P. Howe, Augusta, Mc.-Photographic Iransfer.-A pril 7, 1868.-A starting place between the iron and enamel is made at one corner and alcohol or chloroform dropped into the seam to loosen the layers. The enamel and collodiou coat are remored for mounting upon cards.
Claim.-Removing from the iron plate its japanned or cnamel surface coutaining the picture, using for that purpose strong alcolol or chloroform, or any other artiele equivalent thereto, and mounting the same upon cards in the manuer and for the purpose set forth.

76,459.-L. D. Hubbard, Worcester, Mass.Bench or Table.-A pril 7, 1868.-The legs at eaeh end are connected by a eross piece and are hinged to the transrerse batten beneath the table top, in such a mauner that they cannot be forced out much beyond the perpendicular by the spreader bar which fits in notehes of the eross pieces.

Claim.-A Tash bench or table, in which the cross picces $B$, hinged legs $C$, remorable extending arm $E$, and hook and eye, or equivalent means for holding the said legs in a folded position, are combined and arranged relatitely to each other in the manner and for thic purposes herein shown and specified.

76,460.-THonas S. Hudson, East Cambridge, Mass.-Die for Forming Letters and Figures on the Edges of Type Blocks.-April 7, 1868.-The type block is spread outward against the segmental dies by the deseent of the cylindrical compressor, and is raised from its bed by the lifting bottom which is elerated by a lever.

Claim.-The combination of the seetional dies $b b$ $b b$ and block $A$, spindle $c$, sererv nut D , and compresscr or piston $E$, and lever L, the whole eonstrueted and arranged substantially as and for the purpose set forth.
76,461.-Sermour Hughes, san Francisco, Cal. -Ore Crusher and Grinder.-April 7, 1868.-Abore a circular base are a series of four or more inelined planes, eaeh having a die at its lower end. Heary stamps, cach haring a stem and stamp-head, (as in the straight batteries), are connceted with a ecintral, driving shaft, and are thus mored up these inclines, from the top of which they fall upon the dies. The stamp stems move in a frame haring anti-firiction rollers. Sereens are placed around the eireumferenee of the apparatus. The inelined planes are adjustable by wedges and serews, and are removable for replacement when worn out.

Claim.-1. An ore erusher, having the spiral inelined planes B B, together "with the stamps N and dies E , the whole eonstrueted and operating substantially as and for the purpose herein deseribcd.
2. In a eirenlar erusher and grinder, the inclined planes, eonsisting of the remorable grinding plates $\bar{b}$ and the adjusting plates $a a a$, substantially as and for the purpose described.
g6,462.-S. TV. Huntivgron, Augusta, MeLamp sh:ide.-April 7, 1868.- $A$ sheet of thin reueer
and a sheet of miea are secured together by a metal. lie rim.

Claim.-As a new article of manufacture, a lann shade eomposed of a sheet of wood or rencer, with a backing of miea, the two sheets being held together as lerein deseribed, with or withont an interposed layer of paper between then.
\%G, 463.-Joun Jonnson, Saco, Me.-Obtaining Heat.-April 7, 1868.-The vescl or pipe contains a sufticient quantity of liquid to fill it with vayor, which aets as a medium for eommunication of heat.

Claim.-The applieation and use of a small but proper quantity of any licquid or solid, when inclosed within an air tight ease or form, for the purpose of receiving heat sufficient to conrert it to steam or rapor, and in this state to act as a conveyer and transmitter of heat to other bodies for needed change, and by which transferenee the agent sliall reform to liquid, to be again and again converted to rapor, carrying with it latent heat for transmission.

86,464.-Lmman H. Jomnson, Branford, Comn., assignor to himsclf and Cilatncer Johison, sume place.-Corn Husker.-April T, 1868.-The handle has two liorns which embraee the fingers, and has a point which pierees the husk.

Claim.-The herein-described corn husker, consisting of the hook A upon the handle B, provided with the rests C and D, substantially as herein deseribed, as a new article of manufacture.
g6, 465.-William Jordan, Galena, Ill.-Stilt Slate.-April 7, 1868.-The skate runners are attached to stilt bars, one of which is forked on cach side of the leg and gartered thereto.

Claim.-1. A skate, haring the runner and foot piece united by a jointed connection, substantially as and for the purpose specified.
2. The combination of the rmmer $a$, supports $b$ and $c$, and foot piece $c$, substantially as and for the purpose described.
3. The eombination of the runner $a$, supports $b$ and $d$, foot picce $c$, and vertical cxtensions $b^{\prime} b^{\prime}$ of supports $b$, and strap $f$, as deseribed.

76,466 . 7 Ronert F. Judson, Kilamazoo, Mich. -Draught Equalizer for Doubletrecs.—April 7, 186 . -The singletrees are attaehed to the outer ends of the loent lerers, and the other ends of the latter are hooked to the stay chains whose ends are attached to the hooks of the drauglit bar attached to the tongue.

Claim. - The combination of the stay chains, or wood or leather braces, the curred lerers, crossing cach other, and united by a bolt forming a joint, the iron clevis, with hoolss on each side, and near cach end of the same, the staple in the cleris, tine king bolt, the staple attaching rear end of eleris to the wagon pole, the small whifletree, with the wagon pole, for the purposes set forth and described.
 - Machine for Boring Wagon IIubs.-April 7, 1868. -The hub is clamped in the ecntering ctutch upon a rertical shaft and rotated bencath the eutter which is lapidly rotated at the end of an arm having oseillatory morement on a vertically moving carriage. The lateral position of the cutter is determined by a pattern remorably sceured to the frame and against which the gauge arms are forced by a spring.

Claim.-1. The guide $h^{\prime}$, in combination with the gauge arms $c$ and $e^{\prime}$, the set screws $f$ and $f^{\prime}$, the metallic frame work $c^{\prime}$, and the spring $g$, substantially as described.
2. 'Ihe revolving table $k$, with the arms or levers $p p p$, and chucks $r$, and ratelict wheel $n$, and clamp $s^{\prime \prime}$, combined and operated as described.
'96, 968. W. Jay Ketcham, Washington, D. C., assignor to himself and George S. Prindle, Aurora, Ill.-Retainer for Neek Ties.-April 7, 1868. -The points of the catehes are separated by straiolltening the plate, and, when the plate is allowed to spring into a bent form, the catches close in belind the button.

Claim.-The within-deseribed retainer for neek ties, consisting of the spring base or plate $A$ and catehes $B \mathrm{~B}$, the latter provided with slots D , and
its ends meeting or orerlapping each othel. the whole arranged substantially as shown und described.

76, 169.-Siutuel II. King, Laneaster, Pa.Sawing Machine.- April 7, 1868.-The saw is piroted to the cross head of the piston rod, and is operated by the direet action of the lattor. The slide ralye rod is adjustably connectel to an arm oscillaterl ly the cross head.

Claim.-The eonstruction of the rock shaft $J$, with its adjustable serews M, and regulating lerer N. as herein deseribed, and for the purposes set forth.
76.170.-Cilafles M. Kinsel, Columbus, Gr.-Bracelet.-April 7, 1868.-The bracelet is formed of a number of lings jointed together, and which may be folded side by side for use as a finger ring.

C'laim.-A bracelet, so constructed as to be ad justed for weax as a finger ring, substantially as deseribed.

76,471.-John L. Kyowlion, Philadelphia, Pa. Sow Mill.-A pril 7, 1868.-The saw guides and operating mechanism have rotary adjustment around the point where the saw passes through the table so as to sam to a berel.

Claim.-l. The gnides F, slides $G$, comnecting links $i^{\prime} i^{\prime}$, pivoted levers I I, and connceting rod $J$, in combination with the saw II, all arranged and operating as described, for the purpose speeified.
2. The construction and arrugement of the seg nents C D, the former laving the opening ax for the purpose, substantially as deseribed.
3. 'Ile rack $l$, and pinion If, in combination with the sleere $\bar{N}$, Joke M, and feed-rollers Jx, as herein deseribed, for the purpose specified.
 Stereascope.-A pril 7, 1868.-The lenses have inmiard adjustment by jointed levers which gire a parailel morement by the operation of a single, temper serew The tubes have morement to and from cach other by a right and left hand serew. The pietures are held by spring clamps which are strung upon cords and brought up to ricw by turning a shaft in the usual mauncr.

Claim.-1. The combination of the bent rod $j$ serew $m$, and pivoted levers $0 O^{\prime}$, with the plate I and lens-tubes $J$, all construeted, arrauged, and operating substantially as described for the purpose set forth.
2. In eombination with the aboro, the riglit and left hand serew ${ }^{3}$, havingheado, and passing throu wh lugs $n$ attached to sockets $K$ K, as deseribed for the purpose specified.
3. The spring clamps $G$ attached to the bars $g$ of the picture holder, and construeted in the mamer substantially as and for the purpose specified.
76.193.-A. Komp, New York, N. Y.-Machine for Attaching Spangles to Hoops of Skirts.-A pril 7, 1868. - Improvement on his putent May 7, 1867. 'The spangles are placed in a hopper, and are carried ont over the floor, from which they are tumbled into the trough if in an improper position, and from the trough drop into a leceircr, from which they mas be emptice again into the hopper. Those in a proper position pass throngh the channel and are carried by the antomatic nipper arm, or spangle carrice to the anvil, where they are elinched by the automatie hammer.

Ctaim.-1. Providing the edge of the rib $b$ of the spangle guide with one or more projections $c$, substantially as and for the purpose sot forth.
2. The arrangement of indentations or ridges $d$ in the floor a of the spangle guide, substantially as and for the purpose deseribed.
3. The slotted rod $x$ and pin $v$, in combination with the slide $q$, which carries the spring jaw $h$ of the spanmle carrier, substantially as and for the purpose described.
4. The lateh $y$, in combination with the morable jaw $h$ of the spangle carrier, substantially as and for the purpose set forth.
5. The curved slot $m$, stud $l$, pin $o$, and standard $p$, in combination with the arin $k$, and with the spangle carricr, substantially as and for the purposo deseribed.
6. The stops $c^{\prime} d^{\prime}$, to retain the spangle carrier at the extreme ends of its stroke, substantially as set forth.

7 . The secondary arm $k^{*}$ and spring $e^{\prime}$, in combination witl the main arm $k$ of the lever $L$, and with the hammer II and spangle-carrier $D$, substantially as and for the purposes described.

G6,174.-Joinn D. Lane, New York, N. Y., assignor to Horace Everett, Philadelphia, Pa.Manufacture of Tin Boxes.-A pril 7, 1868.-The lower portion of the box is swaged from a disk in a similar way to the lid, and its flange is then rolled to give it the beading and sinoothness.
claim.-The lower portion of a blaeking box, haring a flange turned up from and forming a part of the bottom, and that flange rolled and indented, all as deseribed for the purpose specified.

76,475.-Cilarles Lee, Sandy Post Office, Ohio. -Fence-April 7, 1868.-The ports have each two rertical uprights connected by eross pieces. The ends of the panels are inserted between the upriohts and secured to the eross pieces by wedge bloclis.

Claim.-The uprights $b$, horizontal bars a $a a^{\prime}$ braces $J J$, and pins $f$, when arranged and combined with the panels, as set forth.

76, 17 6.-IsAAC Lindsley, Pawtucket, R. I.Hair Cloth.-A pril 7, 1868.-The two pieces of eloth are stitehed through to make a seam, and the same flattened between heated pressure plates while in a soft, saturated condition.

Claim.-1. The method herein deseribed of uniting moven fabries having a face of liair with an imperceptrble joint, by stitching the fabric through and through where $i^{\prime}$, is to be united, and while the hair face is in a semi-plastic eondition produced by saturation, flattening out and pressing, with protraeted pressure, this sewn joint between metal or like surfaces while subjected to a suitable degree of heat to mold and set the hair face at the joint permanently, so as to produce an unyielding joint and an unbroken hair face at the joint, substantially as specified.
3. As a new manufacture, a continuous web of hair eloth, composed of two or more narrow webs, such as are usually woven from short hair weft, minted after the sewing, moistening, and pressing proeess hercin deseribed, and in which a portion of the warp threads are removed before pressing, and the bights in the weft hairs of the united joint are bent and molded at right angles to the faee of the fabrie, and into or against each other, to conceal the joint, substantially as specified.

76,477.-Thomas D. Littue, Salisbury, N. H.Attachment for Heads of Rakes.-April 7, 1868.The inclination of the teeth to the liandle is adjusted by the braee bars and set serews, in connection with the sockets which receive the lower ends of the handle.

Claim. - The adjustable attaelment for heads of drag rakes composed of the socket $a$, brace $d$, bolt and nut $b$, and thumb serews $e$, combined, construeted and applied as above described.

76, $478 .-\mathrm{G}$. W. Lockhart, Charlestomn, Ind.Hay Prass.-April 7, 1868.-The lower follower receives motion from two levers whiel rest by their moring fulerum rollers on a horizontal beam. The motive cord is passed around pulleys in the lower ends of the levers.

Claim. - The levers H H piroted to the follower G, when provided with the fulermm rollers $a$ a, at about the center of their lengths, adapted to trarel upon the horizontal platform $c$, while their lower ends bearing the pulleys $c$ are below said platform, all operating as deseribed, for the purpose specified.
g6, 179.-J. Augustus Linch, Boston, Mass.Paper Dampener.-A pril 7, 1868.-Improvement on his patent, April 27, 1858. - It differs in having no roller to remove the surplus moisture. The previous patent has no eover, nor eireumterential grooves in the perforated eylinder. The funnel ordinarily rides on the eover but is connected to the frame by a link

Which allows it to be thrown aronnd to conncet with tho filling loole when the roller is turned on end and the serew tap is removed.

Claim.-1. The eombination of the filling tumel with the eylinder and its cover by means of the link or arm d, hinged to them, and so as to operate therewith, substantially as deseribed.
2. The arrangement of the stand with the eover and the eylinder, in manner as deseribed and represented.
3. The combination of the filling tunnel with the cylinder and its cover.
g6, 480.-Milion Alden, Auburn, N. X.-Horse Rave. - A pril 7,1868 . - The small end of the key is curved to prerent its falling ont.

Claim.-The keys B, in eombination with the tooth C and the holder A, as set forth for the purposes described, whether used transversely, longitudinally, or otherwise, for said purpose.

66,481.-Francis E. Maberry, Harcrlill, Mass. - Wash Board.-A pril 7, 1868. -The soft soap is contained in a receptaele beneath the upper end of the board, and communieating with the upper surfaee through a series of slots, which are elosed simultaneously by a semi-eylindrical ralve.

Claim.-The soap reserroir, as above deseribed, with the valve $I[$ and spring $f$, in combination with a corrugated wash board with openings $c$, when arranged substantially in the manner and for the purpose specified.
(76,48卫.-Join J. Marcy, West Meriden, Conn. -Lamp Burner.-April 7, 1868.-The backward morement of the cone upon its hinge is limited by a wire which is hinged to the cone, and traverses the bottom plate of the burner. A head on the lower end of the wire comes in contact with the said plate when the cone is thrown back.

Claim. -The combination and arrangement of the straight rod $f$ with the cone $C$ and eap $A$. When the said straight rod $f$ is hinged directly or indirectly to the cone, substantially as and for the purpose speeified.

66, 48B.-JJ. J. Marcy, West Meriden, Conn., assignor to E. Miller \& Co., same place. - Oil Can. - April 7,1868 . - The thimble turns on the end of the spont and forms a cock theremith, the spout having an aperture in the side which eomes in connection with the nozzle of the thimble, only when it projeets ontrrard.

Claim.-The thimble C, with it: nozzle D arranged upon the spout B, so as to turn thereon, and operate in the manner deseribed, in combination with the vent valve $h$ in the eover or ean, all constructed so as to operate in the manner deseribed.

6,484.-Mary E. J. Mari, Jefferson, La.Churn Dasher.-April 7, 1868. -The step bar of the rotating dasher is seeured to the ehurn bottom by wooden serews or by pins.

Claim.-The combination of a rerolving dasher, as herein deseribed, consisting of the spindle $\lambda$ and arms C, provided with apertures or perforations $a$, in combination with the removable socket block $B$, when provided with wooden serews $b$, or their equir: alents, when each and all the conneeted parts are of wood, and are construeted, arranged, and operate substantially as and for the purposes herein set forth.
g 6, 4S5. William Martin, Tart Farm, Pa.Well Tube.-April 7, 1868.-The rivets extending iuward from the upper ends of the ears enter the longitudinal slots in the pipe. The end of the pipe rests in the socket of the point, and the ears eover the slots when driving; but when driven, the pipe is raised, whiel uncovers the upper ends of the slots and raises the en'l of the pipe from the soeket, allowing the water to llow through the slots and the lower end of the pipe

Claim.-The point $A$, having the sockets $S$, the ears E E , and the broad shoulders a a, in eombination with the tube $B$, having the longitudinal slots $i i$, and with the rirets $r r$,operating in the slots $i i$, substantially as and for the purpose deseribed.

76, 196.- P. H. Masser; South Mend, Ind. Grain Scouring Apparatus.-April 7. 1868.-The grain in passing through the vertical chute beneath the hopper is snbjected to the action of the scouring disks, and according to its grarity, may either pass directly to the stones or to the spout from which the air is exhausted to carry off the impurities.
Claim. -1 . The combination of the hopper H , shaft $h$, providel with the scoming disks $n$, spout E, chamber C , with the inclinel partition $b$, and fan B , when said parts are constructed and arranged for joint operation, substantinlly as described.
2. The use, in the apparatus constructed substantially as described, of the detachable inclined bottom ${ }^{\circ}$, and the remorable tubes $v$ and $v^{\prime}$, for the purpose as herein described.

96,48\%.-E. G. Mattiews, Bouthbay, Me. -Dory-Boat Knee.-April 7, 1868. -The side plates are let into the pieces of timber and bolted thereto. The flanges lap around the edges. The guard flanges act as braces and serve to protect the joint but allow circulation of air to keep the wood dry.

Claim.-A dor-boat knee in which the wooden parts A A, are combined with the metal supporting plates B B, provided with the flanges and guard c cle, under the arrangement and for operation as herein shown and specified.

76,488. - Thomas B. McCaughay, Moscow, Teun.--Lead and Slate-Pencil Casc.-A pril 7, 1868. -The spring bar is attached to the sliding ring and lies in a slot beneath the eonical ferrule. The bar is foreed between the ferrule and the lead or pencil, to clamp the latter in position.

Claim.-The combination of the case $A$, ferrule C. and rod E, attached to the sliding band D, all arranged substantially as and for the purpose speeified.

76,489.-Thomas B. McCalghan, Moscow Tent.-Fish Trap.-April 7, 1868. -The line is passet upsrard over a sheare on the end of the bent pole and through the loop at the end of the weighted lever. From the loop it passes to the bent rod which is engaged on the piu. from which it is tripped by tho jerking of the bait. The descent of the weight throws up the outer end of the lerer and jerks the hook mpward, to secure the fish.

Claim.-The loaded or weighted lever D at the upper end of the upright $A$, in connection with the horizontal pole B, line E, and the bent rod $g$ and pin $f$, or their equivalents, all arranged substantially as and for the purpose herein set forth.

96,490.-Mark Thomas McCommick, Meadville, Pa.-Tool for Opening Cans.-April 7, 1868.The shaft is turned by a eross bar, and its point has a screw thread which engages the disk, which is ent from the can hear by the linife upon the radially adjustable arm. The disk may thus be raised upon withdrawing the point.

Claim.-The shaft B, in combination with the arm $G$, the knife $H$, and the set serers D D, when the same are constructed in the aforesaid combination, for the purposes set fortl.

96,491.-William McFarland, New York, N. Y., assignor to himself and Join II. Canpbed, Tenon for Blind Slats.-A April 7, 1868.-The metallic tenon is for attachment to a slat from which the tenon has been broken, and allows repair of the blind without taking the frame asunder.

Claim.-The cenon C, constructed with a bereled shoulder $E$ and fastening plate $D$, substantially as and for the pmposes set forth.
g6,492.-Jnhn TV. Meakere, Chicago, Ml.-Apparatus for Assorting Coin.-A April 7, 1868.-The coins are put singly into a hopper and are fed edgeways to the inclined way, in which they roll upon their elges and lean toward the open side of the way, so as to drop out on arriving at an aperture large enough therefor. The distanee between the holding lips of the guides constantly increases, so that the coins will drop out at different places, cach into its appropriate tube. The tubes are marked by a seale, to indicate the number of coins by the depth of the
pile. The eoins may be delisered at bottom by a pawl, which thrusts out one or the required number at each morement; or mar be delivered at the top, a follower beneath the pile haring an armextending through a slot in the side of the tube and being connected to a rubber spring, to keep the top coin flush with the upper end of the tube.

Claim.-1. The assorter B, with an open front, and provided on its interior rear side with the ghides $g$ and $h$, forming an inclined way, constructed and arranged for nse: substantially as shown and described.
2. Operating the follower $b$ br means of a spring C, applied externally, substantially as described, and for the purposes set forth.
3. The slide E, prorided with the end piece $k$ and pawl $m$, constructed and arranged to operate substantially as deseribed, and for the purposes set forth.
4. Proriding the slides E with springs, so that one or more of the slides may be operated antomatically at the same time, substantially as described, and for the purpose set forth.

76,493.-J. W. Meaker, Chicago, M1.-Apparatus for Assorting Coin.-A pril 7, 1868.-The coins run duwn an inclined way, which las apertures just sufficiently wide and at a proper distance from the lower edge of the way for each coin to drop into its appropriate tube, where the momber is indicated by a scale.

Claim.-1. The drawer B, with tube I, having flanges $e$, in combiuation with the arm $B$, spring $d$, and tollower $a$, coustructed and arranged to operate substantially as described, and for the purpose set forth.
2. The stationary post E, in combination with the sliding tube C, with flanges $e$, slot $o$, and register, constructed and arranger to operate substantially as described, and for the purpose set forth.
3. The form F , in combination with the sliding corer 9, constrincted substantially as described, and for the purpose set forth.
4. In a coin assorter, an inclined way G, having the sides of the openings $j$ forming the angle $l$ inclined so as to deliver the coin below the upper line of the next opening, substantially as deseribed.
5. In a coin assorter, the inclined way $G$, having the openings $j$ so arranged that the gravity of the coin will tilt them, and provided with a slit or lip $q$, bent upward, for the coin to rum under, and secure their tilting and delivery, substantially as described.

76,404.-JJonn W. Melcher, Oshkosh, Wis.Car Coupling.-April $\overline{7}$, 1868.-The compling pin is sustained by a cylindrical roller, which is iniven back by the entering link and rolls up an incline, down which it returns when the cars are uncoupled. The link passes in between two spring guides.

Claim.-The disk $c$, in combination with the groore $g$, guides $d d$, and springs S S, in connection with the pin $e$, draw head $a$, and link $f$, when arrangred and constructed substantially as described.
76,495.-Wileiam H. Merieick, Philadelphia, Pa.-Apparatus for Filtering S'ugar.-April $\boldsymbol{\tau}, 186 z^{2}$. --The filtering bag is attached to a flaring nipple Whose top closes an aperture in the horizontal partition sufficiently large to allow the passage of the bag which is withdrawn through it.

Claim.-The nipple B, constructed substantially as deseribed, for adaptation to an opening (in the partition A) large enough to admit of the passage through it of the bag attached to the nipple, all subbstantially as and for the purpose herein set forth.

76,496.-V. N. Mitciell, Concord, N. C.Carriage Pole--A pril 7, 1868. - The pole is made of two pieces which are eomnectel together at the point and carried baek side by side to the donbletree, and from thence they are turned apart and downward to their comncetion with the axle.

Claim.-The improved carviage pole, formed of two pieces of timber a a firmly secured together at the front end, and spread and curved downward at the hind ends, to prevent said pole from coming in contact with the elliptic springs C, when the vebicle is turned, as hereenn.shown and described.

76, 49\%.-E. J. Moore, Westfield, N. Y.Churning Apparatus.-April 7, 1868...The hand lever is eomected to the dasher rod by means of bars arranged iu snch manner as to give a reetilinear motion to the dasher rod.
Claim.-1. The combination of the bars $G$ and $H$, adjustable lerer D, and adjustable dasher handle B, with eael other, substantially in the mamer herein shown and described, and for the purpose set forth.
2. The combination of the adjustable balance weight I with the lerer D, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the weighted lever $J$, or its equivalent, with the bars $H$ or forward part of the lever $D$, substantially as herein shown and deseribed, and for the purpose set forth.
g6, 498.-J. C. Moore, Madison, Ind.-Sleigh Runners and mode of attaching them to Axles of $\sqrt{8}$ -hicles.-April 7, 1868.-The rumner standards have eyes to embrace the axles. Step plates are also clipped to the axles.

Claim.-1. The forked standards D D, with the eyes $a a$, in the upper ends, when used for the purposes and in the manner as specified.
2. The stei) C , when used in combination with the runner $A$, for the purposes and in the manner set forth.
getere9.-George M. Mowbray, Titusville, Pa. -Manafacture of Nytro Glycerine.-April 7, 1868.A eurrent of eold, dry air is passed through the vessel used in the manufacture of nitro-glyecrinc to earry off hypo-nitrous acid therefrom, to cool the mixture by eonduction, and to agitate the mixture mechanically. The contaet of the dry, cold air admits the use of glass surfaces to the vessels, as the heat crolveil may be carried off otherwise than through the side of the vessel.

Claim. -The process of manufaeturing nitro-glyecrine by the use of compressed air, artificially dried and cooled, nitric acid, sulphurie acid, and glycerine, substantially as deseribed.

96,500.-William Mulins, Pittsbure, Pa. Locking Nuts.-A pril 7, 1868. The face of the fish plate has a rectangular longitudinal groore, and the ends of a wire lying in the groove beneath the nut are turned up into slots in the sides of the same.
claim.-The improved derice for loeking nuts, consisting of a metallie pin placed under the nut, in a groove in the surface, against which the nut is screwed, and turned up so as to embraee the nnt, substantially as hereinbefore deseribed.
\%6,501.-Patrick Murray, East Morrisania, N. Y.-Horse Shoe-April 7. 1868.-Two parallel ribs run around the lower surface of the shoe. The inner rib is the more prominent.
Claim.-A steel horse shoe with two continuous, or nearly so, calks 1 and 2, the former more prominent or projecting, and with more bearing surface than the latter, so as take the main support and wear, whilst the latter continues sharp and efficient as an auxiliary ealk to prevent slipping, substantially in the manner deseribed.

76,509.-A. F. Nagle, Protidence, R. I.-Passenger Register.-April 7, 1868.-The spring step is connected by the stated, mechanical deriees with an cndless, numbered belt, which exhibits through an aperture the number of times the step has been depressed.
Claim.-The step A, in combination with the pawl $G$ G, ratchet wheel $G$, the shatt $F$, the cogwheel H , the rollers I I I, and the band K K, or their separate equivalents, arranged substantially as deseribed, and for the purpose specified.
g6,503.-Perer M. Niles, Boston, Mass.-Hose Coupling.-April 7, 1868. The end of the hose has apertures cut therein to receive the screw-threaded segments of the nut inclosing the end of the hose. The end of the coupling shank is tapering like the inside of the nut and serews thereinto.

Claim.-1. A segment nut, in combination with the perforated hose, substantinlly as described.
2. A segment nut, and the perforated hose in posi-
tion, in combination with the shank of the coupling, in the mamer and for the purpose snbstantially as deseribed.
g6,504.-Clinton Nolan, Niles, Mieh.-Brick Machine.-April 7, 1868. - The upper cnd of the pug. mill shaft is journaled in a box whieh is piroted to a lever conneeted to a weighted lever. This arrangement allows the pressure to be graduated aceording to the eonsisteney of the elay, and allows the rielding of the shaft when a stone comes beneath the paeking arms.
Claim.-The combination of the parallel hinged arms E, pivoted nut D, straps H, weighted lerer I, and standards $J$, with the shaft $\mathcal{B}$, arranged substantially as deseribed for the purpose specified.
g6,505.-F. B. Norton and F. Hazcock, Woreester, Mass. - Combined Clay Grinding and Separating Mill. $\frac{-}{2}$ A pril 7, 1868.-The lower end of the mixing eylinder is perforated, and surrounded by a jointed collar containing sieves.
claim.-1. The eombination, with a perforated potters' elay-grinding eslinder, of a separating sieve and siere holder, substantially as and for the purposes set forth.
2. The combination with the perforated claygrinding eylinder B , separating sieve $b$, and sicve holder $\mathbb{C}$, of the rotary grinding arms $\mathbf{E}$, provided with one or more lips $e$, substantially as and for the purposes set forth.
\%6,506. -Joserf F. Nugent, Cannonsburg, Mieh.-Hay Elevating Apparatus.-A pril 7, 1868.The knot, or other stop, on the hoisting cord eomes in contaet with, and frees the detent eateh of the carriage when the load is suffieiently elerated, and allows the lateral morement of the carriage to conrey the load to the point of diseharge over the mow. Thie hoisting rope is passed around three pulleys journaled in the earriage and haring ratchet wheels and pawls, the latter of which are simultancously raised by the striking of a lever against a pin then the earriage arrives at the hoisting point and raises the pawls, allowing the cord to run down.
claim.-1. The stop $e$ of the draught rope $\mathbf{C}$, in combination with the earriage $B$, and the traek $A$, operating substantially as and for the pnrpose specified.
2. The arrangement of the three pulleys with their aceompanying pawls and ratchets upon the carriage B , and in relation with the dranglit rope, smbstantially as and for the purpose specificd.
3. The combination of the lever arm $n$, crank arms $n^{\prime}, n^{*}$, connecting rod F , and stud $s$, with the parrls and ratchets of the pulleys $a b c$ of the carriage $B$, substantially as and for the purpose specified.
g6,507.-ROBERT O'BRIEN, Towlesrille, N. Y.-Harness.-April 7, 1868.-The sercral parts of the hamess are so arranged that, by the puiling of a single strap, the harncss can be opened, and thus set free from the animal.

Claim. - The combination of the bridle C , plates $D$ and $G$, hames straps $O$, bars $Q$, and saddle $R$, with the looped pintles E K T and straps $I$ Z, all arranged and operating as hercin deseribed, for the purpose specified.
ge,50G.-Chitstian Oefinger and Sebastian Grupr, San Franciseo, Cal., assignors to themselves and Hexry Stempleatan, same place. - Kiln for Drying Malt. - April 7, 1868.- The furnace is eovered by an areh of briek-work or metal, forming an air chamber around the furnace from which the air is conveyed to the foraminous bottom of the kiln. Claim.-The openings D D, for the passace of cold air to the chambers C , in which the eold and hot air are combined, and the pipes E E E, provided with eaps or valres $\mathbf{E}^{\prime}$, for conreying it to different parts of the perforated plate, the whole construeted and arranged substantially as and for the purpose specified.
ge,509.-Jayes OFriel, Blair County. Pa.Vitrified Compound.- $\Delta$ pril 7,1868 ; antedated Marel 28, 1868.-Composed of silex, 12 oz ; mmiate of soda, 10 oz ; sulphate of iron, 8 oz ; sulphate of
copper, $1 \frac{1}{2} \mathrm{OZ}$; alum. 3 oz ; and suflieient water. It is mixed to a plastic state, molded, dried. and baked.

Claim.-The composition herein described, prepared in the manuer set forth.
86.513.-PaUl A. Oliver, Norr York, N. Y.Machinery for the Manufacture of Gumpowder. April 7, 1868.--The dampered ingredients are placed in the hopper, and are passed botween the rollers. Oue roller in each pair moves at a higher speed than the other, whieh sorves to mix the ingre dicuts. The flakes are torm to pieces by the toothed rollers at the bottom of the series.

Claim.-A maehine for crushing, grinding, and incorporating together the ingredients for the mannfacture of ennpowder, composed of a series of rollers, placed in pairs, one pair abore another, and ib lower patir, one or inore, of toothed rollers, all ar ranged to operate substantially as shown and de seribed.

66,511. Janis O'ROUREE, Columbiana, Ohio. Horsc Ifar Fork.-April 7,1868 .-Tho eross prong has two jointed parts and is so arranged that the position of the point part governs that of the other. The lever operating the sliding rod eonsists of two hars, one of which is engaged by the detent when the hay is engaged.

Claim.-Handle g. lever $h$, and bax $C$, combined and operatod as aud for the purpose specified.
g6,513.-E. N. Parkier, Esscx, Conter Brook P. O., Comn.-Tatting Shuttle.-A pril 7, 1868.-The thread is wound upon a spool in the tattiug shuttle. The spool is turned by a winch key introdneed at the side.

Claim.-As a new article of maunfacture, a tatting sbuttle, haring its sides inclosing the revolving tube $c$ aud spool $d$, and its perforated ends riveted together, and to the bloeks having the tousion holos $g$ $h$, all constructed as herein shown and deseribert.
26.51:3. William Parker, Washiugtou, Ohio -Straw Camicr. - April 7, 1868. - The bars hare scrics of backwardly-projecting horns, and havo longitudinal, reeiprocal movemont by a compound crank shaft.

Claim.-1. A sorios of open or riddle-liko bars, substantially as and for the pmpose sot forth
2. A series of bars, operated with one erank shaft only, substantially as and for the pmpose sot fortly.
3. A scries of bars curved, substantially as and for the purpose set fortlı.
4. I series of bars, provided with horms, substantially as and for the purpose set forth.

76, 51 - James Willard Patteison and Joseph Stacy Hill, Cincinnati, Ohio.-Coffec Pot.April 7, 1868.-The vessel contains compartmonts for water, eoffee, and milk, neither of the two latter exteuding to the boitom. The water flows through a coil of pipe boneath the bottom, and may be made to discharge into oither eompartment throngh a pipe whieh ascends rertieally, and has a horizontal pipe at its top which may be turned around thereon for that purpose.

Claim.-The eombination of the ressels $\Lambda$ and $B$ and eoil E when so arranged that the pipe may be made to cliseharge into either vessol at will, substantially as and for tho purpose set forth.

76,515.-Gairret R. Patron, Jnda, Wis.Fence Post.-April 7, 1868.-The base has a eross plate from whose arms extend the inelined logs sup)porting the soeket.

Claim.- A metallie base or support for posts eonsisting of the socket $B$, spreading logs C , and erossbars D, arranged and constructed substantially as harein described.
\%6,516.-Chester M. Pease. Monson, Mass.Roof Staring.-April 7, 1868.- The barbed rod is thrnst up bencath a course of shingles, and the barbs hold in the eourse both above and below. The elaw plate holds to the top of the roof and serves, with the barbed rod, to hokl the plank to which the bracket is hinged and braced.

Claim.-The plank $\Delta$ provided with the claw C ,
holdfust D , and rack B, in combination with the bar E eonnected to $A$ loy a joiut $f$, and laving a support F attached to it by a joint $g$, the lowor ond of F being provided with a forked plate $G$, to eateh into the rack, and all arranged substantially in the manner as aud for the purpose set forth.
 Conn.-Connecting Link.-A pril 7, 1868.-The link has a piroted section on one side. Its onds interloek with the body of the link and aro secured by cross pins.

Claim.- A connecting link consisting of the body A and of the bar B piroted to the same, all made and operating substantially as described for the purpose specified.
ry 6,51 G.-Ciarles B. Perkins, Kenduskeag, as signor to himself and Barnabas Burselery, Sanger ville, Mc.-Uorse Rake.-April 7, 1868.--The teetl are on a set of fingers which are independently piroted, and are held down by their own grarity and by a bar which rests upon them, and may be raised or held down by a lever. Tho tecth are raised by : roller which lies under the fingers, and is connected irith an operatire lever by knees whieh rmn on the anti-fiction rollor.

Claim.-Lever $G$, kuees L, friction rollors $\overline{\mathrm{K}}$, and lifting roller II, eonstrueted, combined, and arranged substantially as describect.

76,519.- 1. S. Petrie, Mudson City, N. J.Wrench. -The sliding key and shank are obliquely grooved, and the side motion of the liey is applied to tighten the moving jaw amanst the nut or to case it therefom. Tho key is kept in engagement with the shank by a spiral spring, but may bo forecd therefiom when movilng the jaw.

Claim.-The obliquely grooved or ribbed sliding liey C in combination with the movable jaw $B$ and obliquely groored or ribbed shank $A$, substantially as and for the purpose specified.

66,520.-Natilaniel Pullahan, New Oregom, Iowa.-Car Replacer.-A pril 7, 1868.-The replacing rails are piroted to shoes, the upper one of which is elamper to the main rail.

Claim.-1. The shoe E , constructed in tro parts, with parallel and diverging slido, and having clamps $b^{3}$ and bolt $b$, substantially as deseribod.
2. The shoo $C$, constructed with parallel aud diverging sides, the outer of whieh is higher than the inner, as and for the purpose deseribed.
3. The combination of shoes B C , rails $\mathrm{D} \mathrm{D}^{\prime} \mathrm{I}$ when eonstrueted as deseribed, adapted to the rails $\Delta \Delta$, and operatod substantially as set forth.

G6,521.-W. I. Reid, Brooklyn, N. Y.-Elcetro Magnetic Log.- Lpril 7, 1868. - The instrument is drawn through the water and its spindle is cansed to rotate by the spiral wings upon it. The spindle is combined with a mechanism for breaking galvanic eircuit upon a certain number of rotations of the spindle. The armature operates a registcring mechanism

Claim.-The log provided with a break for elosing and breaking the clectric circuit, substantially as deseribed, in eombiuatiou with the registering in strument connected therowith by an oleetric eonduetor, the said resistering iustrmment being prorided with an escapement operated by an electro magnet, and witl the means deseribed, or equiralent means for registering, all substantially as specified and for the purpose set forth.

260,522.-STEPIIEN REX, Oreficld, Pa-Har vester.-April 7, 1868. - The toothod pawl is kopt by the spring in engagement with a spur wheel upon the main shaft, but is raised therefrom by the foot of the driver upou the treadle, so that when the drivor's foot is romored from the treadle the meelianism comes to a stand.

Claim.-The locking pawl $c$, lifting lever $a$, and spring $f$, substantially as shown and deseribed, when combined with any toothed wheel of the goaring, operating the cntters or knives of a reaping or mowing maehine, all as and for the purposo set forth.
g6,5x3.-William W. Reynolins, Brandon, Vt., assighor to Howe Scale Compaxy, same place.Platform Secte.-April 7, 1868.-The caster wheols are sceured to the levers of a frame, and may be brought in contact with the floor to enable the moring of the seale from place to place.

Claim. - The combination of the two yoke levers and their wheels and caster, or the equivalent of the latter, with the platform seale, the whole being arranged and to operato substantially as deseribed.
g 6,524 .-PPamis Richardinon, Jr., Warren Comntr, Ill.-Tragon Wheel.-A pril 7, 1868.-The felloe is made of a single ring of metal. The hab is made of two picees, one of which has the mortises for the spokes which are forced through the open side of the mortises and retained by an annular plate secured by serews to the other part of the hub.
Claim.-A wagon wheel having a felloe B east of one piece of metal, and a hub composed of the metal part F, and cap D, with grooves $l$, and wedge spindie $G$, all connected and arranged, substantially as and for the purposes set forth.
196,525.-Matthias Rikert, Oneida, Mil.-Rotary Stecom Engine.-A pril 7, 1868.-The pistons are governed in their radial movements by trams or cam grooves. The contral part of the hub is open, the steam being confined to an annular space between the hub and the case.

Claim.-The arrangement of the stop or partition block $O$, pistons E E E, trams G G, and cams II II, and standards I I, substantially in the manner and for the purpose as herein shown and deseribed.
76,526.-John Robertson, Quincy, Ill.-Valve Rod Connection.-April 7, 1868.- Whe eceentric rod screws into a sleeve nut rotatable in the sucket attached to the band of the eccentric. The nut is prerented from and play by a circumferential groove which receives the point of the set screw.

Claim.-The sleeve nut $B$, arranged substantially as shown, whereby a valve rod or comecting roil mar be adjusted without turning the same, substantially as described.
b6,527.-Azaminil Rominson, Nem York, N.Y. -Fire Escape.-April 7, 1868.-The chair is slung from an eye at the end of the rope, and the rope being passed throngl the pulley block a hook upon the eye embraces the hatuling side of the cord, and sliding down it, keeps the chair in its deseent from contact with the buillding.

Claim. -The arrangement of the chair C with relation to the rope $\overline{3}$ and crane $A$, whereby the chair by its hook $d$ is adapted to be kopt free from contact with the flames escaping througli the lower windows of a burning building, as legrein deseribed for the purpose specified.
g6,528.-Williait B. Roblinson, Detroit, Mich. -Balaneed Slide Valve.-A pril 7, 1868.-The npper side of the valve has recesses in whicle the soft metal backing bars are contained. These bars are raised by springs so as to come in contact with the cap plate of the steam chest, and the steam is also allowed access beneath them to press them against the plate and prevent leakage of steam around their edges.

Claim.-The balanced slide valre, constructed as described, having the perforated side recesses $B$ adapted to receive the single packing strip C, having differential surfaces forming recesses, the inner recess communicating with the interior of the valve through the openings $e$, and the ends of said valre having perforated recesses D , containing the donble packing strips, the inner one F , of whieln is formed in one piece, and the outer one $E$, of two picces, held apart by the spiral spring, the recesses in the ring F also communicating with the interior of the ralve through the openings $c$, all constructed, arranged, and operating as herein described for the purpose specified.

76,529.-J. M. IRLsh, Marengo, Iowa-Grain Conveyer.-A pril 7, 1868.-The inclination of the "flights" is adjustable to regulate the rate of feed.
Claim.-The sliding frame, combined with the
disk $d$ and the fights $a$ a on the shaft $B$, arranged and operating substantially as and for the purpose hercin described.

96,530.-J. B. Sargext, New Haren, ComnSap Spout.-A pril 7, 1868. - The spout has, betwreen the holding serew and the collar, a perforated neek which gives free commmication with the outer layer of the alburnum. A hook gives means of suspension for the bueket.
Claim.-l. A sap spout constructed with the hol low serew shank B, having formed in the shank, between the screw and the base of the spont, the chamber C C, in the manner and for the purpose set forth.
2. A sap spont prorided with the packing $a$ around the shank, in the manner and for the purpose sub stantially as hercin set forth.
ga,531.-Anson Searls, Nem York, N. Y.Shaft Corepling.-April 7, 186S.-A hook on the end of the thill iron takes orer the pin of the clip; and the space through which the pin passes is made up with a peculiarly shaped washer, having a recess to contain an annular rubber block, held in place by a nut.

Claim.-1. A shaft hook, made cocentric in form, with a bolt hole through it, and the recess B in the front side, as shown.
2. An eceentric cap, C , with the recess D , for the purposes set forth,
3. The cap C , spring E , cap H, nut F , and bolt $i$, in combination, and in combination with the hook A and pin K, snbstantially as described, and all for the purposes set forth.

76,532.-II. A. inerard, Bridgeport, Ill.Fruit Drier.-April 7, 1868.-The furnace is made of sheet iron, and is contained in a wooden case Whieh has sliding trays to contain the drying fruit.
Claim.-The furnace B, when construeted as described, and hot air chamber $\mathrm{D}^{\prime}$, arranged as described, in combination with the safe $A$, the whole being so construeted that the two latter can be readily detached from the furnace when desired and used for other purposes, as set fortli.
g6, $\mathbf{2 3 3}$.-Joserin H. Smmots, Philadelphia, Pa. -Spool Stand.-April 7, 1868. -The case is supported by the pins at the upper ends of the semi-cireular spring and has an ellipsoidal form. It is made of a number of gores sewn together, but learing one open seam, which gapes as the apexes are pressed inward.

Claim.-1. The combination of the body D, spool spindles $F$, arms C, and support A B, substantially as described, for the pmpose specified.
2. The spring C, supporting the closed body A, when constructed and operating substantially as described, for the purpose specified.
g6,534.-William Simpson, Rosherville, and Willian Howitr, Notting Hill, England.-Steam Heater.-April 7, 1868.-The frame of the roof is construeted of sections of piping comnected by crucial and other couplings. The arrangement admits the passage of warm water through the pipes.

Claim.-Construeting arehed or curved frames for the roof's of horticultural and other buildings, wholly or in part of metallic tubes $D$, minited br curved sockets $\mathrm{E} \mathrm{E}^{\prime}$, and so connected and arranged as to permit and facilitate a circulation of hot water through tho same, all substantially in the mamer and for the purpose hercin set forth.

76,535.-Willinm M. Sloan, Buffalo, N. Y., as signor to Car Canpexter.- - Apparatus for Generating Gas.-April 7, 1868.-The steam or air is passed beneath a dome of felt, whose edges are secured to the bottom of the ressel containing the carburetting liquid. After passing through the felt and the liquill, it passes into a chamber above the fire space and through the erlindrical vessels surrounding the said space. The earburetted air or steam is heated to fix it as a gas.

Claim.-The combination of the carburetting apparatus A B D, when construeted and operating as described, with the fire chamber I, erlindrical retorts $\mathrm{L} \mathrm{L}^{1} \mathrm{~L}^{2}$, \&c., and pipe E, when the parts last men-
tioned wre arranged in the manner set forth, the whole operating together substantially as and for the purpose specified.

76,536.-E. A. Smead, Tioga, Pa.-Treneh.April 7,1868 . - The ratchet teeth of the slecere of the sliding jaw are liept in engagement with the ratchet tecth of the shank by the spring cam, which is piroted to the slecre, and may be drawn back by the thumb piece.

Claim.-The cam $e$, for holding the sliding jaw C , as herein specified.

Fsi, $53 \%$.-Cilatles F. Smitir, Springfield, Mass., -Implement for Cutting, Perforating, and Lighting Cigars.-A pril 7, 1868. -The hase is hollow, and may contain kerosenc. A standard between the match safe and burner has a pertorated plate, through which the tip of the cigar is thrust to be sheared off. The shearing blade carries a perforating point.

Claim.-As a new article of mannlacture, the stand 1 , with match box C , burner $A$, and cutting derice D I $d$, the whole constructed and arranged substantially as and for the purposes set forth.
g6,53S.-Robert Syith and William T. Suithe, Carondelet, Mo.-Amalgamator:-April 7. 1868.Thic amalgam troughs have their bottoms inclined toward the back ends, which are set at an acute angle to the bottom. The amalgan collects in the acute angle at the back che of the trough.

Claim.-1. The amalganating tronglis $\mathrm{B} \mathrm{B}^{\prime}$, when their bottoms are seriated, and acute angles $b^{\prime}$, formed at the back end of each serration, as deseribed and set fortl.
2. The combination of two or more sets of amalgamating troughs $\mathrm{BB}^{\prime}$, with the delirery flume C and distributing aprons D' E, substantially in the manner and for the purpose herein shown and described.
3. The swivel guide blocks $c$ and $d$, when applied to the flnme C and apron D, as described and set forth.
4. The arrangement of the shafts I, with their handles $i$ and levers or arms $i^{\prime}$, when employed as herein described and shown.

76,539.-Thomas C. Smith, Nev Tork, N. Y. Lemon Squeczer.-April 7, 1868.-The India-rubber ring beneath the edge of the cup allows a limited accommodation to the size of the lemon.

Claim.-1. Providing the interior of the cun B with a shoulder $a$, to receise a ring $f \dot{f}$, of India-rubber or other snitable clastic material, on which the tlange $c$ of the concare Grests or bears, in connection with the lips $g . g$, ai thie upper part of the cup $B$, and the notel $h$, in the flange $e$ of the coneare, all arranged snbstantially as shown and deseribed, for the purpose of seeuring sund packing the concare in the cup.
2. The combination of tho cast-metal handles $A \Lambda^{\prime}$, plate $E$, and cup $1 B$ with the porcelain compress $F^{\text {b }}$ and concare G, the two cast-metal parts being connected by a hinge or joint, and the porcelain parts attached to the cast-metal parts, substantially as shown, for the purpose set forth.

76,540.-Whight Smitil, St. Louis, Mo.-Brick for Duilding Purposes.-April 7, 1868.-The cavitics in the sides of the brieks are intended specially to receive clinches of outside plaster or cement.

Claim. -The brick A, when prorided with the doretailed mortar cavities $\alpha$, extending across a portion only of the depth of the brick, the same being in shape fluring at the bottom and narrower at the top, substantially as and for the purpose described.

76,541.-Jacob L. Sorber, Chillicothe, Ohio.Lubricating Axles.-April 7, 1868.-The spindle is tubular, and fiom its bore extend oil passages through which the oil passes upward to the box. The oil is contained in a raised cup, which has a stop-cock. The eup is placed upon a block which is attached upon the axle to strengthen its weakest point. The outer end of the bore is stopped by the serew tap.

Claim.-1. The combination of the tubular spindle B C, elevated oil reserroir D , taps E , ducts $\mathrm{F}^{\mathrm{F}} \mathrm{F}^{\text {, and }}$ annuiar oil chambers $J J^{\prime}$, as and for the purposes specified.
2. Providing the inner end of a wheel hab with the
outwardle-flaring sand and mud guard I, for the purpose discribed.
3. Attaching the bar or block M to the axle in the rear of the collar $a$, for the objeet explained and set forth.
m6,542.-Thomas S. Seleakman, Camden, N. J. -Drav Dridge.-April 7 , 1868.-'The two draws gire means for kecping the bridge continually open for passage of velicles.
Claim.-A bridge, constructel with the widened parts $\mathrm{D} \mathrm{D}^{\prime}$, with the chamel C between them, and having two comecting dratrs $\mathrm{G}_{\mathrm{G}} \mathrm{G}^{\prime}$, that span the chamel, one at the upper and the other at the lower side of the bridge, substantially as and for the purpose specified.
 chine for Polishing the IIecl of Boots and Shoes.April'7, 1868.-Improvement on his patent, December 10, 1867. The boot, when containing a last, is clamped between the adjustable point and the toothed plate, so as to allow of its morements in presentation to the polishing tools. When there is no last the button is substituted for the point on the clamping serew.
Claim.-1. In combination with the boot-holding bracket, mounted on a sliding hase plate, the lever $f$, With ratchet, parsl, and connecting rod I, snbstantially as and for the purpose described.
2. In combination witl the sliding bracket, lever G, comecting rod I, and latehet and pawl, the forked lever L, spring $l$, and connecting rod $j$, substantially as and for the purpose set forths.
3. In combination with the boot-holding bracket and polisher, as described, the cluteh I , with the central point $r$ and flange $r^{\prime}$, snbstantially as and for the purpose specified.
4. In combination with the bracket and polisher, the attachable and detachable button $q$, as and for the purpose described.
76.544.-Williasi II. St. Join and Peter Caliwhight, New York, N. Y.-Composition for P'urifying Illuminating Gas.-A pril 7, 1868.-Gray east-iron turnings or filings are mixed with pulverized hematite or hydrated iron ore in proportion to make 80 per cent. of pure metal. It is then saturated with ammoniacal liguor and thrown into a heap to heat, and stirred to dry; 5 per cent. of pulverized charcoal is then added. Before the mixture is placed in the purifiers it is moistened with water. It is placed therein 2 or 3 feet deep on a layer of perforated boards.

Claim.-The process of purifying illuminating gas, made from bituminous coals, by transmitting it through a composition of pulverized iron ore, strengthencel to about 80 per cent. of pure metal, moistened with amnoniacal liquor, and mixed with about 5 per ecnt. of pulverized chareoal, and prepared as more fully set forth above.

76,545.-Jerome Stocking and Edwatid $P$. Shafeer, Fochester, N. Y.-Steam-Engine stide Yalve.- April 7, 1863. -The valve has opposite, rertical faces, which slide between the faces of raised steam chests upon cach side, so as to be balanced. The sides of the valve are set out by temper screws.
Claim.-The combination of the fixed nut $g$, serew head $h$, with the double-seated valves E and F , Whereby the seats of the valves are allowed to worls frecly, irrespective of expansion and contraction of the steam chest, substantially mon the principle as herein set forth.

76,546.-Janes Strawn, Plymonth, Mich.Carriage Bolt.-A pril 7, 1868. -The bolt is combined with an axle clip, and is for insertion in a carriage rocker, for the purpose of counecting the carriage with the axle.

Claim.-The combination of the clip $c$ with the bolt d, the latter being loose in the former, as and for the purpose described.
76.54\%-A. L. Tayloi, Springfield, Vt. Clothes Pin.-April 7, 1868. - The fork is rigid and carries a spring hook, which has pressure against the clothes.

Claim.-The combination of the hook or fastening

B with an ordinary elothes pin $\Delta$, when the fastening is construeted and applied to the outer side of the pin, substantially as herein shown and described.

76,548.-ENOCM TaILOR, Memphis, Tonn.Baling Press.-A pril 7, 1868.-The lower platiorm is linked to wrist pins of the pivoted sectors, whose ares are serew genred to a vertical shaft.
claim. -The arrangement of the upper platform B , lower platform N , working upon the posts O , connecting bars M., toothed segments K, Worm K, and the gearing D E G H, and crank wheel $J$, all operating as described, for the purpose specified.
g6,549. - Georae G. Taylor, Charlestown, Mass.-Match Stand.-April 7, 1868.-The drawer is metal-lined and covered, and forms a reserfoir for matches, which are placed end up. Beneath the cover are two trays for the unused matches and remnants respectively.

Claim.-As an articlo of manufacture, a safe for matehes, containing the drawer II H and the morable pan I I, with the two chambers formed therein, and either made of or lined with metal, together with an ignitug surface $N$ N on one side thercof, the whole constructed in the manner and for the purposes substantially as abore set forth.

76,550.-Truman H. Teans, Le Roy, Pa.Horse Hay Fork.-April $7,1868 .-T h e$ guide pin occupies such a position in the link when the jaws of the fork are elosed that its ontward pressure has no effect toward raising the link and allowing the dis charge of hay. The limk is raised by a cord.

Claim.-1. The arms A B, when constructed in the manner and for the purpose substantially as hercin set forth.
2. The combination of the arms $A$ and $B, \operatorname{link} D$, pulley $F$, and pin $H$, for the purpose and substantially as herein deseribed.

96,551.-GEORGE TeFFT, Salem, N. Y.-Music Rack.-April 7, 1868. -The concentrie eylinders are each one attached to a frame which turns with it and folds over the leaf of music. Each eylinder has a cog-wheel which is turned by the rack at the end of the spring lever, when the lever is released from the spriug detent by depression of the appropriato thumb knob.

Claim.-1. An improved music rack or machine for turning music, constructed in the manner and for the purposes substantially as herein described and set fortli.
2. The notched levers $\mathrm{C}, \mathrm{C}^{\prime}$, and $\mathrm{C}^{\prime \prime}$, and the $\operatorname{cog}^{\circ}$. wheels II, $\mathrm{H}^{\prime}$, and $\mathrm{I}^{\prime \prime}$, and the eylinders $\mathrm{D}, \mathrm{D}^{\prime}$, and $\mathrm{D}^{\prime \prime}$, in combination with and operating the leaves or folks $O$ of a music rack or frame, substantially as hereinbefore fully deseribed and set forth.
3. The upricht or bar B , and the eylinders $\mathrm{D}, \mathrm{D}^{\prime}$, and $\mathrm{D}^{\prime \prime}$, and levers $\mathrm{C}, \mathrm{C}^{\prime}$, and $\mathrm{C}^{\prime \prime}$, in combination with a musie rack or frame, substantially as herein fully described and set forth.
4. The combination of the levers $\mathrm{C}, \mathrm{C}^{\prime}$, and $\mathrm{C}^{\prime \prime}$, operated by the springs $E$, $\mathrm{E}^{\prime}$, and $\mathrm{E}^{\prime \prime}$, and $\mathrm{F}, \mathrm{F}^{\prime}$, and $\mathrm{F}^{\prime \prime}$, with the cog-wheels H , $\mathrm{H}^{\prime}$, and $\mathrm{H}^{\prime \prime}$, cylinders $\mathrm{D}, \mathrm{D}^{\prime}$, and $\mathrm{D}^{\prime \prime}$, and upright or bar B , each being constructed and operated in the manner and for the purposes substantially as herein fully doscribod and set forth.

76,552.-Erederic Willian Thayer, Boston, Mass.-Hyarocarbon Burner.-April 7, 180s.- The hydrocarbon is placed in retorts, and a series of jet pipes projeet from the retorts toward the surface to be heated. Air is furnished in any desired quantity within the mixing chamber. The air is heated in a ehamber by the outside heat of the furnace before catering the mixing chamber.

Claim.-1. Tho combmation of one or more clongated projecting jet pipes with the evaporator or retort, when they are so proportioned to each other that, by means of the evaporation alone, the vapor will be liseharged from said pipes with foree, so as to prodinee an elongated jet of flame, similar to that of the blow pipe; substantially as deseribed.
2. The jet pipe, supplied with gas or rapor, as deseribed, in combination with the adjustable mixing pipe or chimney, by which a current of air is drawn
into the same, and mixed with the jets of rapor, substantinlly as deseribed.
3. Combining with the retort or ovaporating vessel the air chamber, for heating the air supplied to the jets and protecting the vessel, substantially as deseribor.
4. So combining the chimney with the heating chamber and jet pipe that it is supported by the upper wall of the eliamber in proper relation to the jet pipe, so as to receive from the chamber the proper amount of air to supply the jet, substantially as described.
5. Adjusting the chimney and jet pipe by means of the nuts $a$, in combination with the air chamber, substantially as described.
6. The employment of two or more retorts, one over the other, and the heating of the uppermost retort by jets supplied by the retort bencath it, substantially as described.
76,553. - William L. THomas, Middlebury, Ohio.-Bedstead.-April 7, 1868.-The jointed portion at the head of the bed bottom has a downwardly projecting frame which is comnceted by straps to a roller that is rotated to raise the said portion.

Claim.-The bedstead, constructed as describod, and consisting of the side rails 13 , strips $D$, end rails $C$, posts $A$, slats $F$, having pins $G$, springs $E$, hinged section $P$, $H$; also provided with spring slats $F$, E , $G$, arms I, straps J, shaft K, ratchet and pawl M, $N$, and crank L, when said side rails $B$ are provided on the inner face with guides for the ends of the spring slats $I$, all arranged and operating as set fortl.
\%6,554.-John Thorniley, Fallston, Pa.-Attachment to Cooling Stoves.- April 7, 1868.-The extension is placed on the rear end of the stove, and has a pot hole immediately over the fiue hole of the latier. It may discharge directly into the chimney or communicate therewith by a stove pipe.

Clairn.-As an article of manufacture, a cast or sheet iron drum box, so made as to form ann extension of the top of a cook stove, and provided with shelves at the sides, a boiler hole on the top, and adjustable wing grates in the fue chamber, and connceting a cook-stove flue with a chimney, substantially in the manner and for tho purpose described.

76,555.-William P. Thunber, Chicago, IllMedical Compound.-April 7, 1868. - For treatment of conghs, do. Prepared sugar syrup, 1 quart; tincture of lobelia, 6 oz ; paregoric, 2 oz . ; cxtract of hoarhound, 2 drachms; and tartar emetic, 30 grs.

Claim.-The improved medicine prepared of the material and substantially as herein set forth.
g6,556. - Thomas Tostevin, Council Blufis, Iowa.-Cutter Head for Wood Planing Machines.April 7, 1868.-The flange upon the rear edge of the eutter enters one of the longitudinal groores in the eap plate, which holds it firmly to aljustment. The device allows of adrancement to compensato for wear.

Claim.-The cutters B, haring an outwardly projecting flange upon their rear edges, and caps $C$, provided with a scries of parallel longitudinal grooves in their under sides, constructed to operate substantially as clescribed.
\%6,55\%.-Joseph Trent, Millerton, N. Y.-Vo. lute Spring.-April 7, 1868.-The spring is formed by rolling up a plate of metal having four arms, two at each ond, the said arms being separated by $V$-ended slots which are formed by punching ont the metal, and not by splitting and spreading, as in the Frecland \& Ward patent, NTarch 7, 1865.

Claim.-1. As a new artiele of manufacture, the quadruple volute spring, constructed in the manner herein set forth.
2. The improved method herein deseribed of manufacturing doublo or quadruple volute springs.

76,558.-L. E. TRUESDALE, Chicago, I11. -Bridge.-A pril 7, 1868. - The ends of the rods are corrugated and passed into the eaps, where they are clamped upon each other, and between corrugated surfaces within the caps at the upper and lower ends of the posts.

Claim.-1. The construction and arrangement of
the corrugated clamp plates H , in combination with the tie rods $S^{\prime \prime}$, in the manner and for the purpose herein described.
2. The construction and arrangement of the caps $A$ and $A^{\prime \prime}$ and posts $B$ of a bridge so that the suspension rods may be clamped together by meins of the corrugations upon the ends of the same, and held firmly in position by means of clamp E and wedge or liey $i$, substantially in the manner and for the purpose hercin deseribed.

96,559.-Alexander C. Twining, New Haven, Conn.-Railway Signal and Alarm.-April 7, 1868. - When the switch is in the unlocked or open position tho bars act upon the handle of mechanisin upon a passing locomotive by whiel the brakes may be applied and an alarm sounded.

Claim.-1. In a railroad draw or other opening, the locking apparatus, constructed and operating sul)stantially as described, when eomnected with the described derices for actuating the brake, bell, or whistle upon the engine of a moving train, all substantially as set forth.
2 . In combination with the abore, also the handle $h$, connected and arranged as described, to strike on the successive inelines, substantially as and for tho purpose set forth.
96,560.-John B. Valliquette, Chicago, M1.-Bridge.-April 7, 1868. The gate is attached to a truck made to run transrersely below the road bed.
Clain.-The gates G G, arranged to run in slots II II, in combination with the trueks $J J$, projections $e e$, and rubber blocks $X \bar{X}$, substantially as and for the purpose set forth.

76,561.-James H. Van Nortwick, Sturgis, Mieh,-Wind Mill.-April 7, 1868.-The "wings", or gates are upon shafts having segmentally geared Wheels which engage a common wheel turned by a lever to regulate the amount of air passing through.
Claim. - The combination and arrangement of wind wheel $m$, wings $n n$, pinions $s s$, wheel H , lever E , spring $a$, and plato $p$, or its equiralent, substantially for the purpose described.
g6,562.-Samuel Vaistone, Providence, R. I., assignor to himself and JOHX Stewart, samo place. -Gfain Link.-April 7, 1868.-Improrement on the patent of Vanstone and Sterrart, Oetober 29, 1867. The sections are united together with dovetail scarts and secured by the sectional bar whose ends are overlapped and brought together by the blow of a hammer.

Claim.-Constructing the two divisions of a connecting link, in tho manner substantially as described, for the purpose specified.
96.563. - Michael Verhoevfy Rochester, N. Y.-Lime Kiln.-April 7, 1868.-The ash pits have wrater trays. The bars are loose and may be drawn outward to loosen elinkers. The furnace flures in ward and has deflectors to equalize the heat around the inside of the kiln. Passages on each side of the furnaces communicate betreen the cupola and the open air, and are for removal of ashes. Sido flues from the furnace enter these passages.

Claim. - The construction and arrangement of the furnaces with the removable grate bars $d$, angular diffusing sides $g$ g $g^{\prime}$, lateral passages $\mathrm{C} i$, and clouble arches $k h^{\prime}$, with intervening air space $l$, the whole operating in the manner and for the purpose herein set forth.

76,564.-Jacob Voegtle, Indianapolis, Ind.Stove Drum-A pril 7, 1868. -The drun has an inner, cylindrical fluc, an anmlar tlue, and outer, concentric scries of cylindrical flues. A disk damper regulates the direet current through the central flue, and annular register dampers regulato the upward passage through the annular flue spaco and communications between the various flues.

Claim.-A heat regulator, having cylinders $\mathrm{F}, \mathrm{E}$, and $D$, damper $a$, rings $B$ and $I$, and plates $C$, $G$, and $K$, constructed, arranged, and combined snbstantially as and for the purposes herein specified.
g6,565. - Felix Walker, Memphis, Teni. Coal Stove.-A pril 7, 1868.-The ashes drop through
the open bottom into a receptacle bencath the floor lerel, and are reached br raising' a hinged bed plate.

Claim.-The egg shaped stove A, having an open bottom, the bed plate B, and chamber C, in combination with the semi-clliptical refleeting niche F , all arranged as described, for the purpose speeified.

76, 566 - William H. Walkel, Fond du Lac, Wis.-Shingle Machine.-A pril 7, 1868.-The reeiprocating carriage has two openings for the bolts of wood which are brought alternately under the aetion of the saw. A horizoutally-rcpolving eccentric eam acts against anti-friction rollers upon the carriage to cause its reciprocation. The bolts are raised from contact with the saw by an automatic forked lever.

Claim.-1. The combination of the wheel G, provided with the cam $n$, and the sliding carriage, provided with the friction rollers $i$, or equiralents, all constructed and arranged to operate substantially as described.
2. Operating tho dogs $p$ by means of the inelined bar $b^{\prime}$, sliding box N , and lever $u$, operated by eam P , substantially as set forth.
3. The forked lever $T$, piroted upon tho main frame $A$, and arranged to be operated by the carriage L , for the purpose of raising the bloeks from contact with the saw, substantially as described.
4. Locating and carrying tho tip-tables O , with their eam shafts, on the saw earriago L, substantially as shomn and deseribed.
5. The metal dogs $f^{\prime}$, secured to the wooden head blocks $l^{\prime}$, when arranged in tho metal frames D , as set forth.

96,567.-Cilarles II. Warner, New Haten, Conn-Clock Alarm.-April 7, 1868.-The alarm morement is applied to an cight-day clock, and is arranged to sound the alarm each day, but only requires winding when the other works are wound.

Claim.-1. The can $F$ and lever $G$, with the dial $B$, when tho said cam is arranged to operate the lever G once only during tro revolutions of the dial B.
2. The combination of the lever $G$ and the hammer $\overline{\mathrm{X}}$ with the lever $g$, when arranged so that the hammer X operates the lever $g$, in the manner and for the purpose described.
3. The combination of the cam $U$, and the eam or pins upon the shatt $a$, with the lever $g$ and its arm $h$, arranged so as to operato in the manner described.
g6,568. -Joserii S. Waterman, Roxbury, Mass. Corpse Preserving Case-A pril 7, 1868. - Improvement on his patent, $\Delta$ pril 23,1867 . The adjustable ice box has hooks at each eud which engage notehes in the bars. The bars stand rertically in action, but are hinged at their lower ends to allow of folding down tifhen unusel.
Claim.-Making the ice box 13 adjustable within the casc $\Lambda$, so that it can be raised or lowered to increase or diminish the size of the corpse chamber, for the purposes deseribed.
Also corering the conductors $k o$, with wood or its equiralent, for the purpose hercin set forth.
g6,569.-G. A. Watson, Proctorsville, Vt.Chair Seat.-April 7, 1868. The cnds of the rattan enter the grooves made iu the top rail of the chair, and are clamped by strips fitted therein.

Claim.-The securing of bottoms in chairs by har. ing grooves a made in the upper surfaco of each rail $b$ of the seat frame, and having strips 13 to fit in said grooves to clamp and firmly hold the edges of the bottom in the grooves, the strips being draven into the grooves, and firmly secured in position by screws d or other means, substantially as set forth.
76,570.-Julius Werner, New York, N. Y.Sofa Bedstead.-A pril 7, 1868. -The frame of the solit is laterally extensibie and the seat and back are jointed together. The hind side of the back and the under side of the seat are finished as a mattrass and are turned upward on the extended frame to form a bed.
Claim.-1. The combination of the baek D , upholstered upon both sides, and hinged at the base, with the seat C. upholstered upon both sides and hinged at the front edge, and adapted to be folded
out to give plaee to the baek D , when folded down, substantially as deseribed and specitied.
3. In eombination with the frames $C$ and $D$, arranced as abore, the extension head and foot rests E E, all made and operating substantially as hercin shown and deseribed.
3. The firame A, double-eushioned seat $C$, and foldine back $D$, and the extension head and foot rests $\mathscr{E}$, in eombination with the covering eushions $F$, as herein described, for the purpose speeificd.

76,571.-CyRenus Wheeler, Jr., Auburn, N. Y.-Harvester.-April 7, 1868.-The rake receives motion from an endless ehain passing over a chain wheel on the axle. The ehain after passing around two idler pulleys engages around an annulus whieh may at will be eonneeted by a pawl to a hub around which it turns. The hub has a crank whieh actuates the rake by means of a conneeting rod.

Claim.-1. The combination of the endless and continuously-moving ehain, as the machine advanees, the rim $G$, and its interior whecl $J$, with ratehet, pawl, and spring bolt attaehment, for the purpose of setting in motion and driving a rake, at the will of the operator, whiel rake is automatically thrown out of action at the complction of evcry sweeping operation, substantially as deseribed.
2. In combination with a rising and folling and swecping rake, she tro pivots or eenters of motion $i \mathrm{~m}$, the latter being oblique to and in a different plane from the former, so that, as the rake drops upon the platform, it will eut or shear in under the reel, and fall more nearly to the eutting-point, and thus reach all the straw, however short it may be, substantially as deseribed.
3. In combination with a rising and falling and sweeping rake, the armed lever $q$, cam $s$, and notehes at or near the parts $n p$, for the purpose of connecting and diseonnecting the two parts, substantially as and for the purpose deseribed.
4. In combination with the endless chain for driting the reel, the swinging and adjustable arm 6 , with its pulleys, one in each end thereof, for taking up the slaek of or letting out the chain, as the reel is lowered or raiscd on its post, substantially as deseribed.
76.5\%马.-David Wight, New London, Conn.Top Game Board.-April 7, 1868.-The score made by the top is indieated by the eounters which slide on trires in the box.

Claim.-A board or box, construeted with eompartments, and provided with counters arranged to slide upon wires or rods, substantially as and for the purpose deseribed.

76,593--J. II. WILDER, Farmington, Ohio.Horse Hay-Fork.-April 7, 1868. -The hooked teeth are seeured in a bar which is hinged to the bail. The post extending upmard from the bar is engaged by the spring-eateh turning in a slot in the bail, and having' a releasing eord attached to its end.
Claim.-The bail D , having slotted end $a$, in Whieh the horizontal cateh $c$ is piroted eentrally, said cateh notehed at its formard end, and held engaged with the upper end of the post $B$, by the rearward-projeeting spring attaehed to the rear end of the eateh $c$, and released by the rope $e$, seeured to the same end of the catel, and hanging downward through the head A , all construeted and arranged to operate as herein shown and deseribed.

76,574.-Solomon H. WOOD, East Berlin, Conn. -Die for Making Pliers.-April 7, 1868. -Each part of the pliers is swaged out and the slot punched. The jaw of one part is then driven through the slot of the other, and the instrument finished.
Claim.-The dies represented in Figs. 5 and 7, eonstrueted and used in the manuer and for the purpose substantially as set forth.
76.5\%5. - ABRAM WALLACE WRIGHT, Bunker Bill, Ill.-Spring Bed Bottom.-April 7, 1868. -The double helieal springs are looped on the ends of the slats and have side hooks supported on serews in the slats.

Claim.-1. The spring $\mathbf{C}$, made substantially as deseribed. viz: of the two helix coils, the junetion
loop, and the arms projecting from such coils, the whole being arranged as specified.
2. The pin $k$, in the slat, in eombination witl the spring C , made and applied to the slat, as specified.
3. The combnation of the two supporting serews $e e$ and loops $f f$, with each spring U' made and applied to the slat, as specitied.
76.5\%6.-RICIIARD A. Yonk, Reading, Mich.Crimping Mrachine.-April 7, 1868.-The dampened leather is confined beneath the straps, and the foot being plaeed upon the treadle the leather is erimped by the spring jaws operated by the hand lever. The corners are plaecd in the jaws of the draw block, and the edges elamped by the hinged extension plates.

Claim.-1. The combination of the form $\mathrm{H}^{\prime}$, springhinged extension blocks $G \mathrm{G}$, having groores K , hinged cxtension plates $H$, adjustable gripes I, ad? justable draw bloek $L$, having flanges $N$ N $N$ and jaw $V$, substantially as and for the purpose speeificd.
2. The rubbers A, eonstructed as deseribed, in combination with the spring D , substantially as and for the purpose specified.
3. The rubbers A, in combination with the slotted arm 5, roller 2, and form T, as hercin deseribed, for the purpose speeified.
4. The combination of the rubbers A, form F, slotted and grooved $V$-shaped stock F , straps R , rollers, and treadle, substantially as described, for the purpose speeifierl.
5. The device for erimping leather, eonstructed and combined to operate substantially in the manner and for the purpose deseribed.

76,5\%g.-BERNIIARD B. Zinn, Now York, N. Y.Extension Chair.-April 7, 1868.-The seat and back have an extensible apron whose upper end is wound upon a roller at the top of the baek. The $X$-frame is adjustable; an extension forming the chair into a eouelis folded beneath the seat, and has an adjustable support at the foot.

Claim.-1. The links $a$ and $b$, and cateh $d$, substan tially as shown and deseribed, in combination with the parts A and B of an $X$-chair, all as and for the purpose set forth.
2. The extension legs $\mathrm{L} \mathrm{L} K$, ratchet legs $J J$, and spring lever $h h$, substantially as and for the purpose shown and deseribed, in combination with the hinged foot-rest $G H$ and parts $A B$ of an $X$-chair, all as set forth.
\%6,598.-Simon Connad, Petaluma, Cal.-Cultivator and Harrow.-A pril 7, 1868. -The wheel frame has attaehments for a harrotr, a cultivator, and gang-plow. The wheel spindles admit of rertieal or lateral adjustment either to inerease or diminish the tread, so as to mive the necessary space for the implement or to allor one wheel to run in the furrow without affecting the horizontality of the axle.

Claim.-1. The eonnecting derices, by which I attach, at pleasure, the enltirator or the harrow alternately to tho truek or earriage, all as shown and described.
2. In combination with the above, the construction of the spindles on which the whecls of the truek are placed, so that they may be so plaeed on the axle as to increase or decrease the distance between the Wheels, as may be desired, all as and for the purposes shown and deseribed.
 Hose-Coupling Wrench.-A pril 14, 1868.-At the end of the handle, between the horms, is a socket to receire the stud upon the coupling.

Claim.-The signal hose Wrench, construeted substantially as herein deseribed, with a socket D, the spanning horns $B$, and liandle $I$, for the purposes set forth.

176,580.-John F. Allen, Tremont, N. Y.-Steam Generator.-April 14, 1868.-A series of inelined, transversely communieating pipes are east together and are arranged so as to slope gradnally toward and extend through the rear wali of the furnaee. From the lower sides of this easting extend series of pipes which gradually lengthen from the bridge wall backward. Near each end of the boiler is a steam drum. and the drums are connected by a
pine. The mind drum and feed-water pipe are to the reur of the rear wall.

Claim.-l. The arrangement of a number of chambers A, of an oral or circular section, with cireular forward end, and strengthened by braces or divisiou plates $b$, inclined upward, for the purpose described, in combination with hanging tubes or pipes D , the whole being constructed in the manner and for the purpose substantially as set forth.
2. The combination of the abore deseribed chambers A, with hanging pipes $D$, water chamber $K$, stean chamber J, and connecting pipe M, when construeted and arranged sulsstantially as deseribed and specified.

26,581.-Jonn F. Allex, Tremont, N. Y.Decarbonizing Iron.-April 14, 1868.-The molten iron is placed iu a cylinder whose refractory lining contains numerons inclined earities which raise the iron as the crlinder rotates, and pouring it out in fine stream expose it to the current of air or other vapor passing through.

Claim.-1. Puritring iron from its carbon and other impurities, by cansing the molten iron, coutained in a revolving cylinder, to pass in the shape of a shower of spray through atmosplecric air or other oxygen-hearing gas or vapor passing or being foreed through the revolving cylinder containing the iron, substantially in the manner as set forth and described.
2. The construction of the revolving cylinder A. with suitable lining C, prorided with holes or cavities $n$ on the inner cireumference, in the manner and for the purpose substantially as set forth and specified.
g6,582. - Franklin Balf, Wilton Junction, Iowa.-Windorv Sash Stop.-A prill4, 1868.-A semicircular, eccentrically-journaled, serrated block is placed in the frame, and its faces brought against the side of the sash to sustain it, or to hold it shant. The shaft by which the eateh block is operated has a projection which enters a rack upon the frame to hold it in the required position.
Claim.-The combination of notches HII with the face plate and thumb piece $K$ of a shaft $D$ and catch A of a window fastener, all substantially in the manner and for the purpose herein set forth.

76,583.-George E. Banner, Newark, N. J.Floor Olamp.-April 14, 1868; antedated April 7, 1868. -The bed piece has adjustable bearing upon one side of the beam, and has automatic bearing upon the other side by means of a jaw which is mpon a lever operated by the pressure stem, so as to champ the beam in the forward morement of the stem. The stem is actuated ly a lever.

Clain.-The jaw J. the sliding bar L, and screws K , in combination with the lerer D , ratehet F , joint bar C , main stem $B$, with its foot $\mathbb{K}$, the whole ljeing constructed and arranged to operate substantially in the manner aud for the purposes specified.

76,584.-Cilarles Barnes, Cincinnati, Ohio.--Vise.-A pril 14, 1868.-The inner tulbular stem has end movernent in the outer stem, which may be turned in the yoke. The yoke is clamped nuon the outer stem by a screw aud is itself swiveled to the bench:
Claim.-1. A bench vise, adjustable around two centers, at right angles to each other, substantially as set forth.
2. The arrangement of the cheeks $G$ and $I$. with tubular stems $\mathrm{F}^{\prime}$ and II, capable of being slid one within the other, and secured within the divided yoke $C$, vibrating about a vertical stem 1 , in combination with the nut $b$ and serews $\mathbf{E}$ and $J$ for regulating and fixing the adjustments:
g6,585.-Samuel, P. Bartley, Columbus, Ohio. -Steam Boiler Furnace.-April 14, 1868. -The fun-nel-shaped passage is immediately to the rear of the grate, and at the rear of the said passage is a transverse pipe whose upper side has a longitudinal opening through which air passes to assist combustion. Tise rear end of the combustion chanber is curred to give the caloric current the right presentation to the return flues.
Claim.-The funnel-shaped chamber or passage D,
in combinatiou with circular or curve in rear of chamber O, and the cold-air pipe E, constructed and operating substantially as and for the purpose described.

76,586.-Peter R. Beaupie, Metropolis, Ml.-Breech-loading Ordnance. - April 14, 1868. - The breech block swings on trumions which are abore the level of the center of the bore. The breech joint has a cycloidal form below the center of the bore and is straight above that point. The expansion caused by heat is provided for by serews by which the lreech strap is adjusted longitudinally: The breceln block is held in firing position by a serew.

Claim. - 1. The construction of breech-loading cannon, with the joint betreen the breech and bar rel formed as deseribed, with the center of the trunnions of the breech piece placed above the center of the bore, for the purposes specified.
2. The breech strap C, in combiuation with the expansion serews F , provided with the clutch pin T , sulistantially as aud for the purposes set forth.
76.587.-Salaion Belden and Join Frankling Crabthee, Visalia, Cal.-Gun Lock.-April 14, $18 \mathrm{ti}_{8}$ - A notel in the triggrer head engages the fice end of a lever whose other end is counected by a liuk to the tumbler, and when the trigger is drawn it allows the escape of the lever and consequent descent of the hammer. Iiveted to the tumbler is a safety catch whose point enters a notel in the lock plate when the hammer is raised slightly above the nipple. When the hammer is raised to full cock the catch is placed in such position that its point will not enter the notch

Claim.-1. The lever F, having a short arm connected with the tumbler by a link, and a long arm, to be held by fhe trigerer, when at full cock, and released when the trigger is drawn for discharge, substantially as described.
2. The safety eateh, consisting of the lever $n$, spring $p$, and lever $r$, together with the noteh $o$, shoulder $u$, and the pin $v$, the whole combined ancl operating sub stantially as and for the purpose clescribed.

76,588.-C. C. Blodaetr, Watertomn, N. Y.Clutch for Elevating.-April 14, 1868.—Designed to attach a clutch to an elevated beam in a barn as a means of suspension of the tackle of a horse hily fork and to detach the clutel therefrom when required. It has two arms attached to a handle of any suitable length and arranged to engage with the jaws of the clutch to hold them open until the beam is grasped or to unclose them when required.

Claim.-The clutch elevating and operating device herein described, of the aceompanying drawings, arranged to operate in combination with a clutch or grapple, substantially in the manner and for the parposes shown and set forth.
g6,5S9.-H. Stomes Boynton, Cortlaud, N. Y. - Adjustable Clothes Drier.-April 14, 1868. -The line is coiled upon two pulleys which may be separated by a space that caunot be reached by ordinary meaus, such as that between the upper storics of buildings. The line is stretched by weighted cords which are wound upon the shafts in an opposite direction to that of the line upon the pulleys.

Claim.-The modo of construeting and operating an adjustable clothes line upon wheels or pulleys, and regulatod hy weights, cousisting of the line 1 , in combination with the wheels $\mathrm{S}_{\mathrm{S}} \mathrm{S}^{\prime}$, and the weights O X and axles $\mathrm{E} \mathrm{E}^{\prime}$, with the posts $\mathrm{P} \mathrm{P}^{\prime}$ and timmework $13 B^{\prime}$, all constructed and operated substantially as set forth.

76,599. - Edward Brady and John Sloan, Philadclphia, Pa., assignors to Edward Brady.Hot Air Jurnace.-April 14, 1868.-The furnace is surrounded ly a water jacket throngl a portion of which the air-heating pipes pass. The calorie current fiom the furnaec ascends into a dome which is surrounded by an air-heating chamber into which steam passes from an upper chamber in commumcation with the water space. The water is kept at a celtain level by a cistern with which the water space communicates.

Claim.-Furnace $\bar{F}$, compartments W W', dome

D, heating chamber H C, air pipes A P, morable top T, cistern and evaporation bozes R and $\mathrm{R}^{\prime}$, connecting pipes $\mathrm{SP}, \mathrm{S} \mathrm{P}^{\prime}, \mathrm{SP}^{\prime \prime}$, and C P , evaporation boxes $W 13$, smoke and gas cseape apertures $O$, all construeted and combined and operating in the manner and for the purposes above set forth and deseribed.

76,591.- Josepir Brafieley, Bordentown, N. J. -Lumber Drier.-A April 14, 1868.-The steam passes into the chamber surrounding the drying chamber through a nozzle which may be made to act as an injector to draw the steam from the drying chamber.
Claim.-1. The chamber A and case B, used in combination with the pipes $\mathbb{H}, \mathrm{E}$, and G , whereby I am cnabled to apply heat to the chamber by means of steam, and at the same time draw off and utilize the rapor from chamber $A$, as and for the purpose set forth.
2. The use of a pipe leading from the lumber chamber into the pipe which supplies steam for heating said chamber, for the purpose of drawing away and utiliziug the hot rapor from tho lumber, substantially as hercin set forth.
g6,592.-John W. Brimblecom, Lynn, assignor to William Carleton, Charlestown, Mass.-Lamp Burner.-April 14, 1868.-The cone is adjustable horizontally to aceommodate it to irregularities in the wick.
Claim.-A lamp burner, in which the deflector is capable of being adjusted, with respect to the wick tube, laterally, or in the direction of the length of the slot iu the said deflector, substantially as and for the purposes herein shown and described.
g6,593.-R. M. Brooks, Woodbury, Ga.-Cotton Press.-A pril 14, 1868.-The press box is stcpped in the frame and its upper ent is supported by the screw which turns in a socket in the top beam of the frame. The sererr is fast to the follower, and as the press box is notehed the serew turns in the fixed nut and forces the follower downward.

Claim.-1. The metal pieces G G and J, having flanges $e e$ and $d d$ and used with the cross head $F$, all constrncted and used as specified.
2. The straps $P P$ and $N \mathrm{~N}$, used in combination with the metal pieces $G G$ and straps $E$, all constructed as and for the purposes specitied.

76,594.-R. M. Brooks, Woodbury, Ga.-Cot ton Gin.-April 14, 1868.-The inclined guides on the bottom of the cotton box or hopper turn the cotton to cach side as it is drawn downwarl so as to present fresh material to the saws.

Claim. - The guide boards D D, used in the chamber B of the roll box of a cotton gin, and operating as and for the purpose set forth.
\%99,595.-JOHN Brougition, New York, N. Y. -Breech-loading Fire-arm.-April 14, 1868; antedated Oetober 14, 1867.
Claim.-1. The combination of the swinging brecech piece 13 , which, in opening, swings down through the open bottom of the breech receiver; the swingiug recoil brace $H$, working upon an axis, $h$, arranged, relatirely to the axis of the breech piece, in or nearly in the same plane, perpendicular to the face of the closed breceh piece; the lever $E$, pivoted to the lower and rear portion of the swinging breech picee, and acting centrally upon the front of the brace $\Pi$, and through it upon the hammer; the spring or springs $m$, held in place by the trigger pin $n$, and acting on the rear of the brace H; the hammer $G$, vibrating on the axis $h$, independent of the brace $H$, and with its head workiug, relatively to the breech receiver, in such a manner that the slot in the upper surface of the receiver, through which the comb of the hammer projects, is filled by the said head both at the "down" and "full cock" positions of the hammer, the whole arranged and constructed to operate together, substautially as herein shown and described.
2. The firing pin D , eonstructed in the form of a hamincr, and swinging within, but suffieicntly independent of, the swinging breceh pieee, upon the same shait or axis as the breech piece itself swings upon, as herein daseribed.
3. The hook K, spring L, and seetor J, in combination with each other and with the swinging breeeh piece and extractor, substantially as and for the pur. pose herein specified.

Y6,519.-George A. Brown, Kalamazoo, Mich. - Car Stake Holder.-April 14, 1868.-The sides of the car, at given distanees, have two cireular metallie plates, of which the one nest the car beam has a rim, on which is fixed the outer plate to which the stake soeket is attached. The parts are sceured by a bolt from the inside, which is secured by a nut. A graritating bolt, between the two plates, falls into plaee when the stake is raised from a horizontal to a perpendicular position.
Claim.-The combination of the plates L , catches $J$, cireular projection E , arms $d$, and gravitating bolt D, wheu construeted and arranged substantially as deseribed and for the purpose set forth.
g6,59\%- Nathaniel H. Brown, Derry, N. H., assignor to himself and Joserf $A$. Veazie, Boston, Mass.-Horse IRake.-A pril 14, 1868.-The heads of the rake tecth vibrate between two bars of the rake head, and are each held down by a spiral spring bearing against the upper bar.

Claim.-1. The teeth $\alpha$, with their wooden heads $b$, in combination with the bars D E, and the springs $m$, constructed, arranged, and operating substantially as described.
2. The deviee for elevating the teeth $a$, consisting essentially of the arm or lever $G$, in combination with the erank H, operated substantially as set forth.

学6,598.-Allen Burton, Chicago, M1.-Post Hole Auger.-April 14, 1868.-The hollow in the stem allows the passage of air to the space beneath the auger when withdrawing the same, and the cylindrical head of the rod prerents the passage of carth into the side perforations when boring.
Claim. - In combination with the hollow handle A, the rod C , arranged within said handle, and operating in the manner and for the purposes set forth.
\%6,599-Henry L. Butts, Norwich, Conn.File for Grooving Rolls.-April 14, 1868; antedated March 28, 1868.-One portion of the file is rectangtrlar and smooth, and the opposite edge has a double berel, and is finished as a file.

Claim.-The within described tool, as an artiele of manufacture, constructed and used as and for the purpose herein specified.
g6,600.-George J. Capentell, West Cheshire, Conn.-Machine for Attaching Buttons to Fabrics.April 14, 1868; antedated 4 pril 9,1868 .-Devices for holding the button and bodkin, and for pinching the cloth, are combined with the parts that hold and flange the eyclet.
Claim.-The bent lever A, with elbow and jomrnal formed of one piece, the conical-formed, adjustable set screw $d$, and spring $e$, when combined and ar ranged substantially in the manner and for the purposes specified.
g6,601.-Pathick P. Carroll, Washington, D. C.-Swing Cradle-April 14, 1868.-The eradle is arranged to act as the pendulum to a train of clock work moved by a weight.
Claim.-The spring arm F, connecting rod $G$, and wrist crank $R$, as arranged and combined with gear merhanism for swinging a ear or cradle, substantially as and for the purposes herein set forth.
g6, 602.-John I. Cassel and Williajr Quin Eaton, Ohio-Bes-IIive.-April 14, 1868. The bot tom of the hire is hinged to give it any desired inclination. The entrances to the honey bozes are through their bottoms in order to eut off aceess of the worms

Claim.-The hinged bottom C , in combination with the perforated bottom of the honey box B , all construeted substantially as and for the purpose set forth.
76. $003 .-J$ ames Cimarltor, Allegheny City, Pa -liubber for Washing Clothes.-A pril 14, 1868; an-
teriated April 1, 1868.-The parts of the clamp are hinged together, and are gripped upon the elothes by grasping the hanclles; the tool has a corrugated face to assist its action, as the clothes are drawn to ank fro over the ridges of the wash board.

Claim.-A rubber for washing clothes, said rubber consisting of parts $A$ and $A^{\prime}$, provided with handles $B$, and corrugated face $f$, and linged together as herein described, and for the purpose set forth.

G9,604.-Silas E. Cimase, Boston, Mass.-Shuttle for Looms.-April 14, 1863. -The bobbin carrier. or spindle, is piroted to a morable base or plug, inserted into a hole bored longitudinally within the bode of the sluttle, and leading out of its bobbin chamber.

Claim.-The combination, with the body of the shuttle. of the pluge or base $f$, and the bobbin spindle, with its appurtenances, hinged to said base, substantially in the mamer and for the purposes herein shown and set forth.

76,605.-A. O. Coleburn and H. T. Stanard, Wayne, Mich.-Sand Cap for Carriages.-April 14, 1868. -The elastic metallic collar is placed upon the neck of the spindle, so as to intereept gravel or sand which would onter at the point and be ground between the spindle and the base of the hub.

Claim.-Tlie adjustable sand caps c $h$ applied in connection with an axle and hub, as and for the purpose described.
g6,606.-ANDHEW J. CONNER, Louisville, KJ.-Churn.-April 14, 1868. -The barrel has two revolr. ing vertical shafts, armed with scetions of scierrs on collars, Which may be slipped from the shatt for cleansing. The blades are about six on each shaft, and are disposed at different angles.

Claim.-The combination of the chum $M$, the sliafts or double dashers K K, with the winges or blades L L, and the lid or cover' $I$, When constructed, arranged, and operating in the manner set forth.
\%6,60\%-BENJAMN CRAWFORD, Pittsburg, Pa. -Steam Generator.-April 14, 1868.-The mouth of the passage from the boiler into the drum is protected by a grating or perforated plate, so that if the float or other objeet become loose in the boiler it cannot stop the said passage.

Claim. -The arrangement of a perforated plate, $m$, orer the mouth of the steam-pipe $g$, inside of the boiler, in combination with the pipe $g$, for the purposes hereiubefore described.

76,608.-Lewis P. Cuntis, Marlboro, Mass., assignor to himself and Justin D. Barker, same place.-Leather Trimmer.- 1 pril 14, 1868. -The cutter is attached to the needle bar, so as to trim the cdges of the leather as the sewing progresses.

Claim. The knife or entter E, attached to the awl or needle-carricr of a machine for sewing leather, and operating substantially as and for the purpose specified.
g6,609.-Albro S. Dow and EliJair W. TruCox, Cedarville, N. Y.-Neck Foke.- April 14, 1868. -The bearing part of the ring, which surrounds the tongue, is formed of leather secured in a metallic case. The ring is swiveled to the metallie strap surrounding the yoke.

Claim-1. Constructing the attachment, which counects the neck yoke to the tongue or pole, with a swirel joint, formed as described, that is to say, by the combination of the soeket B , projection E , and bolt F , substantially as hereinbefore set forth.
2. The combination of the metallie strap or case C and the leather ring, or its equivalent D , said case C beiug so constructod as to support the said ring $D$ in front and at its edges, or beneath the pole, as describer, said riug D being secured in position by screws, or other equivaleut device, and the space behind said ring D being left open, substantially as described.
3. The combination of the pad $K$ with the metallic ring, which embraees the pole or tongue, in such a mamner as to interpose the said pad between the tongue and that portion of the case C which lies directly between the said tongne and the under side of
the neck roke substantially as and for the parpose setforth.
 ber.-April 14, 1868.-The head is hollow, and contains water. It has an air ralve operated by a spring lever actuated by a cord. A perforated gra-ter-harred plate corers one end, and the other has a groored strip of rubber or leather, above which is a low of small water holes.

Claim.--1. The combination and arrangement of a series of fine holes made in the reservoir, as described, with such reservoir, the strip of rubber and the valre and valre opening applied to the rescrroir, as set forth.
2. The arrangement and combination of the burred plate with the reservoir, when the latter is provided with a ralte $D$, and a strip of rubber arranged as set forth.
3. The eombination and arramgement of the guide tube $e^{\prime}$ with the reservoir, provided with a cleanine strip, and a rialre and valve-operating lever, and holes of admission and cmission, arianged as set forth.
66. 511 - Whlliam II. Elliot, New York, N. Y.- Mortise and Tenon for Bedsteads.-A pril 14, 1868.-The inclined tenon, or the stay-bearing shoulders thereof, are made of hard wood, which is attached to the sof't mood of the rail.

Claim.-1. Cutting the shoukder $d$ on one piece of wood, and tho shoulder $e$ ou another piece of the same material, aud fistening the two together, substantinlly as described, when said shoulders so operate upon each other and upon the post as to make the fastening self tiglitening, as hercin set forth.
2. Tlie double tenon $c$ and $c^{\prime}$, when so eonstructed and applied that it shall become self tightening when in use, and at the same time serve the purpose of a cleat to prevent warping or checking, snbstautially as herein shown and described.
3. The combination of pin $g$, double tenon $c$ and $c^{\prime}$, side rail $b$, mortise $h$, with its depressions $h^{\prime}$ cut in the material of the post, all being constructed and operating snbstantially as described.

76,612.-Cilarles Ellis, Canton, Miss.-Serew Cutting Lathe.-April 14, 1868.-Tho spindle of the axle is held between two self-centering chucks, and the square part of the axle is held by another chack on the same tubular spindle. The dio holder is rotatable in a horizontal plane.

Cluim.-1. The holding chuck I, in combination withi the solf-centering chucks, substantially as described.
2. The combination of the self-centering chucts $D$ and $D^{\prime}$, the holding chuck $I$, and the revolving die lolder M, substantially as described.
3. The combination of the chucks $D$ and $D^{\prime}$ and $I$, the revolving die holder $M$, and the tool carriage $\bar{U}$, when made substantially as described and for the purpose specified.
4. The idjustins collars $a$ and $b$ and right and left screws $G G^{\prime}$, in combination with the sliding jarrs of a chuck, so that the said jaws shall always hare their comesponding fuces at an equal distance from the center of revolution.
5. The employment, in combination with the risint and left screws $\mathrm{GG} \mathrm{G}^{\prime}$, of the adjustable collars a $己$, by which the jaws are centered, substantially as zlescribed.
\%6,613.-JTOMN M. Enos, St. Josepli, assignor to himself and Thomas Swartwout, Kalamazoo, Mich. -Brick Press.- April 14, 1868.-The follower is opcrated by tosgle lerers and is forced down upon the contents of the mold, which, after the follower is again raised, is withdrawn upon a slide board and another inscrted in its place.

Claim. - The combination of the frame D $\mathrm{D}^{\prime}$. leter L, arms G II, plunger $F$, platform $A$, slide $B$, mold box $C$, spring $S$, and rod $I$, arranged to operate substantially in the manner and for the purposes set forth.
g6, 614.-Oliver Faurot and William Poxd Marirs, Brooklyn, N. I.-Curb for Streets, Rociss, dec.-April 14, 1868. -The curb is made of cast ion
plates having an intmmed flange at the top and a forizontal conble flange at the base. The seetions are eonnected together by bolts whieh pass through their inturned end flanges.

Olaim. -The construction and arrangement of the curb, as shown by the neeompanying dramings, with the lorackets, fanges, bolts, lugs, conneeting blocks, bearings, supporters, \&e., in the manner and for the purpose herein deseribed.

76, $1 \mathbf{1 5}$.-Luther W. Felt, Kceno, N. H.-Machinc for Cutting Corks.-April 14, 1868.-Improvement on his patent, June 26, 1867. The amount of taper is regulated by the vertieal movement of the sliding, rotary cutters. The diameter of the cork is regulated by substitution of the cutter guide bloeks. The collar niay be disconneeted when a cylindrieal block is to be eut, A current of cold air is introduced up through the table to cool the cutters. The corks are freed to be driven up the tube when the pianger is moving them, and automatieally cauglat by a spring when the plunger descends.

Claim.-1. Giving the required degree of taper to the eork to be cut by regulating the amount of vertical play of the collar $Q$ apon the revolving sliaft K, substantially as describod.
2. Regralating the amount of vertieal play of the collar Q, and consequently the degroe of taper to be gisen the cork, by the rod S , in combination with the post 3 , lever 36 , link 40 , and yoked bar R with its ring 27 , operating substantially in the manner set forth.
3. The blocks 0 O, made removable for regulating the diameter of the cork to be eut, substantially as set forth.
4. The groored bloeks O O, in combination with the cutters $P$ P substantially as and for the purpose set forth.
5. Introducing a emrrent of cold air within the center of the table $b$, so as to impinge upon the elges of the eutters immediately after a cork has been ent, substantially as deseribed.
6. The "spring eatch" $H$, operated by mechanism, substantially as deseribed, to allow of the rod $J$ being thrown up, as and for the purpose set forth.
g6,616.-Charles Ferger, New York, N. X.Oil Cup.-April 14, 1868. -The valre is opened by the motion of the crank, and kept close to save the oil when the same is at rest.

Claim.-As my invention the combination, with an oil reservoir or oil cup for oiling the bearings, of a valve closed by spring $K$, and raised at intervals by a positire motion eommmicated by the pin $Q$, or its equivalent, the parts being constrmeted as herein set fortli.
g6,61\%.-George B. Fisher, Chicago, Ml.Brick Mlachine.-April 14, 1868.-The pressiroblocks are in an endless chain, which is supported by rollors upon concavo-convex traeks. The mold wheel has a polygonal periphery, having a flat place for each mold. The cams whieh operate the plingers are removable to cnable the working of rarions materials.

Claim.-1. The combination of a series or chain of blocks E, with a polygonal mold wheel B, arranged and operating substantially in the manner and for the purposes set forth and shown.
2. In ccmbination with a rerolving mold wheel $B$, provided with plungers operating as deseribed, the arrangement of the remorable eams $D$, and their supports $F$, substantially in the manner and for the purposes described.

76,618.-Isanc Fismer, St. Louis, Mo.-Rasp. - April 14, 1868.-The alternate thin plates have a certain longitndinal movement to bring their seriations into transverse or oblique lines to admit of sharpening or cleansing.

Claim.-1. A rasp, formed of thin blades of steel a, haring one or both of their edges serrated, and held together by means of sciew bolts $a^{\prime}$, substantrally as herein shown and described.
2. The arrangement of the plates $a$, when their alternate numbers are construeted so as to slide on the connecting bolts $a^{\prime}$ at a distance sufficient to place the serrations in transrerse rows for the purpose of sharpening, as described and set forth.

96,619.-Tidward Fitzuenex, Bostom, Mass.Machine for Dressing and Scouring Leather.-A pril 14, 1868.-Improvement on his patent, Febraary 20 , 1867. Casters are substituted for the balls used in supporting the tablet.

Claim.-1. The eombination of a series of casters IE E, \&e., in manner sulostantially as set forth, with the tablet $A$ and its supporting frame, the whole being substantially as deseribed.
2. In combination with a scries of casters, a tahlet and a supporting frame, arranged and composing parts of a machine, as and for the purpose deseribed, an adjustable serew, or its equivalent, applied to eneh or any of such easters for the purpose of cffectine the adjustment of the easter wheel, or the same and its spindle, with referenee to the tablet, in manner as explained.

76,620.-Jedediall I. Fogg, Chicago, Ill.Hingc for Sleeping Car Berths.-April 14, 1868.The berths are hinged to the partitions between the eontiguous compartments, while at the same time they are folded up against the side of the car.

Claim. - The combination of the boxes $b$ and the spindles $d$, when arranged, with respeet to the partitions B and berths C, so as to operate substantially as and for the purposes specified.
g6,621.-Newton Foster, Palmyra, N. Y.Gucno Distributor.-April 14, 18C8.-The hopper has a discharge slot at the lower edge, which is regulated by a plate that is connected by links to one side of the hopper. The otlier side has a saw plate having end reeiprocation, to disintegrate the guano and eject it from the slot.

Claim.-As an improrement in machines for sowing fertilizers, the serrated-edged distributing bar I, construeted as shown and described, and so arranged that the $V$-shaped teeth only of said bar shall be exposed to the material to be sown, substantially in the manner and for the purposes set forth.

196,622.-Ronent John Gaines, Portland, Conn. -Hose Coupling.-A pril 14, 1868.-The ontside or one part of the conpling has two ribs, at whose ontel ends are the catches. The catches are passed into slots of the outer part of the eoupling, and retained by turning the ring which moves the slotted parts from before the catches.

Claim.-l. A hose conpling, the malo and female parts or butts of which arc construeted substantially as hercinbefore deseribed, and having a movable band or ring fitted upon the female part or butt of the coupling itself, and construeted substantially as lereinbefore, to be used in conuection with the catches K K of Fig. 1, and the flange upon the inner end of the female part or butt.
2. As a part of my derice, the small serews passing through said ring, and cxtending into the grooves under said ring, apon the body of the female part, for the purpose of indicating when the Erooves or slots in the said ring are on a line with the slots in the female part or butt, all of whieh is constructed substantially as hercinbefore deseribed, substantially as and for the purposes herein set forth.

76,62\%.-Jolin Gardner, New Haven, Conn., assignor to Samuel Peck \& Co.-Mranufacturc of IIclodcon Stops and Other Articles.-April 14, 1868. -Composed of gum shellac and irory dust in equal proportions, with any required coloring matter. ' ' he pulverized ingredients are placed in a mold and aggregated by heat. Intended for melodcon stops, knobs, \&c.

Claim. - The above-deseribed composition of matter for melodeon stops and other knobs, substantially as specified.
 ratus for Sprouting Malt.-A pril 14, 1868.- The lower chamber of the apparatus eontains a water tray, having a stcam coil within it. The air is moistened by rose jets of Water. This chamber has a sloping top to convey the sprouted grain outside. The grain is placed upon an upper platform, and in abont six hours the slat floor of the platform is opened, and the grain falls upon a similar platform bencath. The platforms are made in sufficient numbersto in-
sure the proper sprouting of the arain by the time it has reached the inelined top of the Lower chamber, orer whieh it is diseharged.

Claim.-l. In combination with a water chamber Ls and chute E , the arrangement of a series of floors, constructed substantially as and for the purposes set forth.
2. The eombination of a series of floors, eonstrueted as deseribed, with a ehamber L and fonntain S , substantially as and for the purloses deseribed.
 metric Steam Gauge.- A pril 14, 1868.-The eoppercoated bulb of the thermometer is mithin a steam chamber attached to the boiler, and eommmicating therewith. Tho steam chamber has a small orifice to allow eirenlation of steam, and a try eock by whiel the eontents of the ehamber may be discharged.

Claim.-1. The emmbination of the reservoir $B$, and the extcrior steam chamber $I$, the glass tube E , and a pressure-gange seale attaehed thereto, determined by the expansion of the mereury or other tludd, by the heat of the steam eondueted from the boiler to the steam chamber I.
2. The combination of the reservoir $B$, the exterior steam ehamber I, the graduated glass tube E, placed outside of a boiler haring a steam conneetion therewith by a tube or flance.
3. The drip tube, attached to the steam chamber $I$.
4. A coating of eopper or other suitable material, When applied to the surface of the mereury eup, sulustantially as and for the purpose set forth.
5. The flexible bag $n$, sceured to the end of the tube E , substantially as and for the purpose set forth.
6. The process of gradunting the gauge by applying steam to the steam chamber at a series of pressis ures, determined by a standard gauge, and marking the position of the mereury, or other fluid corresponding thereto.

26,626.-Theopillus Hammond, Petersburg, Ind.-Marness for Breaking Morses.- April 14, 186 . - Ittached to the belly band is a pulley, around Whieh passes a strap, whose ends are scenred to the hind legs, so that they may be moved forward, one at a time, but cannot be thrown baekward simultaneously. The pulley may be prevented trom turning by a spring pin, which is operated by a cord or strap pissing between the horse's logs and to the driter. The pin is made to eatell ill a series of holes in the flanged side of the pulley.
claim.-The arrangenent of the forked bar C , With its perforated disk. and pulley $D$, lever F , and spring, in combination with the straps E and 'I IR and harmess, as herein deseribed, all constructed and operating substantially as set forth.

76,627. - Charles R. Haftman, Vincennes, Ind.-Subsoil Plow.-April 14, 18G8.- The share is attaehed to the lower end of the eolter, which is vertically adjustable in a box that is intended to be adjustably attaehed to a baekward extension of the surface plow beam.

Claim.-1. The conearo-eonvex and triangular shovel D, secured to an extended heel picee of of the eolter C, and abutting against the shoulder $e$ of said eolter, substantially as deseribed.
$\underset{\sim}{2}$. The eonstruction of the coulter C upon the standard $\mathrm{C}^{\prime}$, so that the upper portion of tho eutting edge of this eolter shall form an obtuse angle with the front edge of the standard C , in combination with the shorel D, applied substantially as deseribed.

76,628.-H. M. Hervey, Madison, Ohio.-Jack Scale.-A pril 14, 1868. - The bean has a reeessed end to plaee beneath the object and an extensible standard by whieh it is raised to the proper position.

Claim.-The pedestal A, serew B, nut C, and standard $E$, as arranged in combination with the weigh beain $F$, for the purpose and in the manner as set forth.

76,629.-William Hewett, Trenton, N. J.Swing Cosriage-April 14, 1868. - The treadles are between the seats, and are connected by rods, whoso upper ends are piroted on eael side of the point of snspension. The rods at each end are eomected by a cross tie, whieh plays in slots in the sides beneath
the seat and is moved by the treadle to cause the oscillation of the spring.

Claim.-The lever's D D, connecting the rods B B and the treadles $f f$, and seemred to the earriage ly bolts $e$ e, substantially as and for tho purpose deseriber.

76,630.-SAMUEL S. Hickok, Methuen, and Daniel B. Clement, Boston, Mass.-Ball Caster. - April 14,1868 .-The ball is held in a ease, from whieh only its lower side projeets, and turns upon anti-frietion rollers set radially in the stoek.

Clcim.-The ball easter, made in two scetions, as herein deseribed, the one section eonsisting of the base $c$, eonstructed with the slotted legs $h$, in which the axles of rollers $e$ are held, and the other of the enp $b$. with the easter ball whieh it holds, attached to said base, in the manner and for the purposes shown and specified.
g6,631.-Charles John Mill, Regent's Park. England, assignor to Josepil SuEpHERD W Yon and AlfRen Bendamin Wron.-Machine for Producing Feduced Copies of IIedals, de.-April 14, 1868 ; patented in England April 5, 1867.

Claim.-1. The peculiar system or mode of an apparatus for asecrtaining the comeet length or depth of the eutter in relation to the traeer point, substantially as hercinbefore deseribed, and illustrated by the drawings.
2. The peculiar system or mode of and apparatus for determininer the eorrect size of eutter to be used in relation to the size of the traeer point, substantially as hereinbefore deseribed, and illustrated by the drawings.
3. The employment, in this class of maehinery, of remorable mandrels, of different sizes, adapted to the rarious-sized cutters required, as hereinbefore deseribed, and illustrated by the drawings.
4. The employment, in this class of miehinery, of an arm, working on a universal joint at one end and actuated by hand at the opposite end, sueh arm carrying an adjustable fiame, with eutter mandrel and lotary entter, and a fixed frame, with vertically-atjustable traecr, the whole being arranged and opernting substantially as hereinbefore described, and illustrated by the drawings.
5. The peculiar eonstrnetion of rose eutters, as hereinbefore described, and illustrated by the drawings.
i. The peculiar construetion of finishing cutter, as illustrated by the drawinges.

6,632.-S. B. Milm, Chieopee, Mass., assignor to himself and Levi B. Taylor, same place.-Brace for Bits.-April 14, 1868.-The bit is held in the soeket by a sliding yoke, whieh embraces it beneath the shoulder.

Claim.-The slide $a$, in combination with the serew jacket $b$, both constructed, arranged, and operating substantially as herein deseribed.
-6,633.-Beeciner Hitcncock, Waukegan, Ill. -Bed Bottom.-April 14, 1868.-The sides of the frames are eonnected together by springs, so arranged that the head will be sustained at a greater height than the foot.

Claim.-The arrangement of a long spring I for the foot of frames 1 I , and a short spring II for their heads, in eombination with side springs, laving long arms C and short arms $G$, substantially as and for the purpose set forth.

76,631.-Lewis Mr. Holland, Galesburg, H1.-Cultivator.-April 14, 1848.-The beams are eonpled to the frame by serew pirots whiel are adjustable laterally on the metallic eross bars.

Claim-Coupling the shovel beams $B$ with the axle of the eultivator by means of the serew pirots $b$, with eross pieees e fitting in the soeliets of the plates a, substantinlly in the manner and for the purpose as lierein set forth.
g6,635.-Henry S. Mopkins, Boston, ATassPump Piston.-April 14, 1868.-The segmental packing is foreed outward by rabber ling's whose sides enter receesses in the baek of the packing.

Claim.-1. In eombination with the flanges $b b$,
the segmental packing picces $g$ pressed outwardly by springs, and the joint blocks $h$, constructed and ar rauged to operate substantially as set fortl.
2. In combination with the segments $g$, the rubber springs $k$ placed loosely in the recesses $i$, and pressing the scgments outward, substantially as set forth.

96,636.-Daniel Hussey, Nashmn, N. H.--Let off Mechanism for Looms.-A pril 14, 1868.-Overstrain of the yain upon the whip roll canses the depression of the spring rod and paml elevator and allows the reciprocating parl to act on the ratchet of the disk turning on the shaft of the yarn roll. This revolves the pinion which engages the differential gears, one of which is held rigidly by a pawl, but allows the yarn-roll shaft to thrn in it, the other being fast on the said shaft.

Claim.-The combination of the differential gears $r$ \& $t$, their ratchets $g v$, and holding and impelling pawls $h v$, with the shaft $k$ of the yarn-beam gearing, and with the whip roller or depresser D, and incchanisms for actuating the inpelling pawl $h$, snbstantially in the ways as hereinbefore described.
g6,637.-Martin Krumi, $\mathrm{Jl}^{\mathrm{g}}$., Columbus, Ohio. -Gonstruction of Fénce Posts.-A pril 14, 1868.-The posts are cach made of a single bar bent over the top and forming two standards to which the panels arc attached, thereby allowing of longitudinal expansion and contraction without straining the serews.

Claim.-A transversely-expansible post $A$, haring its vertical portions united at the top by one or more springs $A^{\prime}$, snbstantially as shown and described.

76,938.-George Lane, New York, N. Y., assimnor to himself and Benjamin W. Hicks, same place.-Icc Pitchcr.-A pril 14, 1868. -The pitcher is supportcd on trunnions and has sponts on opposite sides.

Claim.-Constrncting a piteher for containing ice water, with spouts F F, trumnions $G G$, stand $A$, and float E, substantially as and for tho purposes set forth.

76,639.-Nathan Lawrence, Taunton, Mass., assignor to Reed and Barton, samo place.-Butter Dish.-April 14, 1868.-Improvement on his patent mranted to Rced and Barton, Dec. 10, 1867. Spring lathches are used in lieu of the pins to support the box or bearing of the dish, clasp it on opposite sides, and hold it down and in place.

Claim.-The combination and arrangement of the spring latches $g g$ with the rase, and for the purpose of recciving and holding the bearings or boxes of the journals of the cover, and admitting of their removal, in manner substantially as specified.

176,640.-A. H. Lewis, North Greenbusli, N. Y. ——rettering Morscs.-April 14, 1868. -Intended to provent the raising of the fore legs. The leg straps connect with the snreingle and limit the forward motion of the legs, to restrict the pace of the horse and prevent jumping.

Claim. -The strap $a$, in combination with strap $b$ and the loops $c c^{\prime}$, as and for the purpose set forth.

76,641. TERRY LEWIS, Albion, N. Y.-Stove Polish, or Blacking.-April 14, 1868.-Gelatin, 32 lbs., is dissolved in water, 32 lbs.; then add nitric acid, $1^{\frac{1}{2}} \mathrm{lb} . ;$ black lead, 20 lbs.; watcr, 12 galls. ; ale, 5 galls. ; and molasses, 2 quarts.

Claim.-A mixture, of the ingredients above mentioned, in abont the proportions specified, for the purpose sct forth.

76,642.-Pimlo Lull, Normich, N. Y.-Apparatus for Removing Hides from Animals.-April 14, 1868. -The bar has two joints and has a crank at each end. It is engrgred with the hide after it is started and the same is torn off by turning the cranks.

Claim.-The rod orits eqnivalent, constrncted and operated for the pnrpose and snbstantially as herein set forth.

76,643.-Sylvester G. Mason, Rochoster, N. I.-Pump Piston.-April 14, 1868.-The piston is git around the middle with two semicircular pack-
ing seetions, and within the sections play two seg mental valves which admit the water to the tubular pump rod alternately from the upper and lower end of the piston. The upper end of the piston is supplied from the side chamber.

Claim.-The combination of the segmental openinges c c, formed as abore described, and the ralves $G \in$, resting in said openings, with the segmental packing rings II I, so arranged as to inclose said valvos and to act as packings, and retain the water in the piston, as licrein sct forth.
\%6,644.-PETER McCarthy, Rochester, N. Y. Clamp for Holding Piclects.-A pril 14, 1868.-The palings are clamped side by side betwecn the bars confined by the screw-hcad bloeks while pointing and dressing the ends.

Claim.-The head blocks B and $\mathrm{B}^{\prime}$, when constrncted with projections $c$, and arranged in relation to a clamp, snbstantially in the manner and for the purpose described.
g6,635.-William C. McGill, Cincinnati, Ohio. -Lamp Burncr.-April 14, 1868. -The socket of the oil receptacle is devoid of a serew thread, the stem being smooth and slotted so as to spring outward in the socket. The stem has side openings, one to allow tilting the burner when drawn somewhat npward, and the other furnishing an aperture through which the oil is poured. The chimney fits npon a cylindrical collar which has a bottom flange and side springs to steady the chimney. The top of the rick tube has points extending np into the flame to canse the heating of the oil.

Claim.-1. The elastic, tnbular, and periorated stem C, snbstantially as described and shown, for the pnrposes set forth.
2. The combination of the collar $D$, tube $G$, ring F, with clastic wings $f$, all constructed and arranged snbstantially as shown, and for the purposes herein set forth.
3. The condictor E, formed and arranged as and for the pmrpose set forth.
4. The combination of ring $F$ and clastic wings $f f$ and air conductor E , when constructed and arranged as herein shomn and deseribed, and for the parposes heretofore set forth.

196,646.-William C. McGill, Cincinnati, Ohio. -Conductor's Register.-April 14, 1868.-The case is carried by a conductor, and a single morement of the knob registers " 1 " on the dial and also rings a bell, giving notice to the passengers that the charge is madc.

Oldim.-1. The actuating knob H and tceth $G \mathrm{G}^{\prime}$, in the described combination, with the recording and striking deriees, substantially as set forth.
2. In the described combination, the half fare register slide $P$ and ticket receptacle or pocket $Q$, upon or within a conductor's register, snbstantially as described.
3. The double romister for recording full and half faros, construeted and adapted to operate snbstantially in the manner set forth.

G6,64\%-Aleert G. Mead and Charles J. Avdy, Boston, Mass.-Stamping Press.-April 14, 1868.-A swicel step is seated in the annular base, and a swivel die chuck connected with the lower end of the slide, or to the stem thereof. A spring clog is applicd to the chuck by means of a screw to engage with the stem of the slide, the hook end entcring a socket made in cach side of the stem to prevent the slide tnrning when set for operation. A similar dog holds the swivel step.

Claim.-1. The reversible swivel step $a$, in combination with the reversible or smivel chuek il, for the purpose and substantially as described.
2. The slide $A$ and screw D, and spiral spring E , or cquivalent, when combined with the head C of the stand, for the purpose and snbstantially as described.
g6,648.-Henry Miller, Cranston, assignor to himself and George O. Miller, Johnston, R. I.MIEtallic Bird Housc.-April 14, 1868. - The bird house is made of cast-iron plates which are held together by a single axial, rertical bolt, by which the
sociset reeeiving the top of the pole may be attached.

Claim.-The metallie bird house, coustrueted substantially as described, as a new article of mauufacture.

76,649.-Marshal Morse and P. W. Saifyer, Gray, Me.-Churn-April 14, 1868.-The operative mechanism is detachable from the churn lid and dasher. The balance whee' is weighted on one side, to connterpoise the dasher.

Claim.-The single dash ehuru as deseribed, said dash being operated by erank $g$, gear $f$, pinion $e$, crank shait $d$. irregular balance wheel $h$, driving rod $i$, haring the spring eatel $k$, said churn also haring the slides $b$, sockets $c$, and slides o moring in grooves $n$ on divided corer $m$; the said driving deriees also being intended to be remorable, as deseribed, for the purpose of being attached to any common eylindrieal chum, and all as set forth.

76,650.-Josevi P. Nores, Binghampton, N. Y.-Toilet Comb.-April 14, 1868. Whe back is metallie and is turned down to form the end teeth.

Claim.-As a nerr article of mannfacture, a comb provided with a metallie back, extended orer the ends thereof, so as to form the end tooth or corering therefor, as represented and deseribed, for the purpose set forth.

76,651.-Charles M. O'Mara, New Yorl, N. Y.-Propeller.-April 14, 1868.-Timprovement on his patent, Norember 5, 1867. The propeller is reeiprocated by a horizoutal engine. It is cureloped at the sides and before so that the water does not impinge against its forward side. The propeller is made sufficiently buorant to raise it to position for making the effective stroke.

Claim. - The reversible buoyant propeller, constructed and arranged to operate as herein described.

96,652.-Jhies Oliven, South Bend, Ind.Lold Board for I'lows.-A pril 14, 1868. -The chill plate is cooled by a water chamber in its rear. The mold is filled from the bottom to prevent "blows."

Claim.-The mold board IB, annealed as set forth, as a new article of manufacture.
g6,653.-Geonge Ir. Osbonx, Brooklyn, N. X. -Lamp Bumer.-April 14, letie.-A portion is remored from the wiek tube, which is surrounded by a larger tulse which is open at the bottoun, and the space between the tubes communicates br side ducts with the flame. Tle liatus in the tube prevents - metallic induction of the head of the flame to the oil rescrvoir.

Claim.-The combination of the jacket $B$, surFounding the wiek tube A, the tube C placed it little above the wick tube A , and the passages D D, run--ning from the bottom to the top of the tube C , all arranged as and for the purposes specified.
g6,6054.-Chiarles Grafton Page, Washing. ton, D. C.-Induction Coil Apparatus and Circuit Breaker.-A pril 14, 1868.-This is an instrument for converting dynamic into static electricity, producing from the current of a battery shocks and spmrks. For the purpose of breaking the circuits of the primary or secondary coils mechanical or automatic circuit breakers are used, as represented in the figures. The invention is substantially the same as the Ruhmkorf coil. The patent embraces mventions made as far back as 1837-38, but owing to the disqualification of the late Dr. Page, as an official in the Jatent Office, he was unable to obtain a patent until this disqualification was removed by act of Congress, March 19, 1868.

Claim.-1. An induction-coil apparatus, consisting ot a primary and secondary circuit, When said secondary cirenit is many times, that is to say, two, three, or more times the length of the primary circuit, having the connections so arranged that shocks, sparks, and electrostatic results may be obtained from the secondary circuit alone, or from the combined primary and secondary cireuits, or from the primary alone, or from portions of either eircuit, substantially as set forth.
2. The combination of an automatic circuit breakor
with either a primary coil ulone, or a primary and secondary eoil combined, substantially as set forth.
3. The combination of a mechanical cireuit breaker with a primary aud secondary coil combined, substantially as set forth.
4. The combinatiou of both a meehanical and automatic cirenit breaker with a primary and secondary coil combined, sulustantially as set forth.
5. The combination of a primary and secondary coil, inelosing an clectro magnet, with an automatic cireuit breaker, substantially as set forth.
6. The combination of a primary and sceondary eoil, inelosing a compound or divided electro magnet, with anl adjustable automatic circuit breaker, sulbstimtially as set forth.
7. The combination of a mimary and secondary coil, inclosing a compound electro magnet, with an attached hammer eircuit breaker, substantially as set forth.
8. The spark-arresting circuit breaker, whether used with a primary coil alone or a primary and seeondary comlined, substantially as set forth.
9. The spark-arresting circuit breaker, whether used with a coil or coils, inelosing an electro magnet, substantially as set forth.
10. The spark-arresting eirenit breaker, whether attached to or independent of the primary or primary and secoudary coils, substantially as set forth.
11. The aljustment of the retractile foree of an automatic circuit breaker, substantially as set forth.
12. In combination with such adjustment, adjusting the distance of the hammer or the armature from the pole or poles of the electro magnet which actuates them, as set forth.
13. Adjusting or regulating the length of vibration of the cireuit-breaking bar by means of a set serers, or any mechanical equiralent for substantially the same purpose, substantially as herein set forth.
14. The employment of ouc electro-magnetic instrument to open and close the cirenit of another electro-magnetic instrument, using either one battery for both, or separate batteries for each, substantially as set forth.
15. The employment of separate and independent batterics to operate an electro-magnetic circuit breaker, and the circuit which is broken by it, substantially as set forth.
g6,655.- Wilhtam Pilelan, Peoria, M1.-Con denser.-April 14, 1868.-The steam passes iuto the lower part of the condenser, and up the spiral passage between the onter and inner cones, being condensed on their surfaces, and running down to the bottom of the coudenser, from thence it is pumped into the boiler. There is a gradual circulation of water within the inner cone, the same having discharge into the outer chamber. A pipe hariug a valve allows the passage of water from the onter water chamber to the condenser, to supply any loss to the boiler.
Claim.-1. The two cones A B, the space between these provided with a spiral partition, thas forming a spiral chamber, surrounded by cold water, for tho purpose of coudeusing steam or vapor, in the mauner indicated.
2. The supply pipe and ralve $l n k$, in conncetion with a condenser, of the constrnction indicated, to supply the incidental waste of water.
g6,656.-Bellyifle L. Randall, Roxbuy, Mass. -Vise.-April 14, 1868.-One of the jaws is striveled, so that its face may assume a position oblique to that of the other, when a tapering object is placed hetweon them. Thoswiveled jaw may be made rigid by a ker-pin when desired.
Claim.-The combination of the jaw $b^{\prime}$ and amu-larly-grooved tenon $f$ with the base $e$ and pin $g$, tho said parts being constructed and arranged as herein described, and both base and tenon being perforated to receive a pin or bolt for rendering the said jarm immorable when desired, as and for the purposes shown and set forth.
g6,65\%.-Benjamin Randall, Adams, N. Y.Sulky IIarrow.- A pril 14, 1868.- Improvement on his patent, November 12, 186\%. The fore part of the harrow rests upon an adjustable caster, and is connected to the front oud of a flexible bar attached
to the sulky hounds. The draught hook is at this point.

Claim.-1. The connecting of the sulley to the harrow by means of an elastic bar C attached to the front cuds of the thills $B$ B aud to an upright $E$ on the fiont part of the harrow, substantially as shown and described.
2. The upright E , attached to the front end of the harrow, and liaving the whiffletrec and clastic bar C conncetcd to it, substantially as and for the purpose specificd.
3. The adjustable castcr $d$, attached to the front end of the harrow, when the same is constructed and arranged so as to operate substantially as described.
4. The combination of the npright E and draught hook $b$, when the same are constrneted and arrangod so as to operate substantially as describect.
5. Attaching the rope II to the harrow, substantially as and for the purpose specified.
g6,658.-BenJamin Randall, Adams, N. Y.Corn Planter.-April 14, 1868.-The sced. slide is opcrated by a spring and a cam turning with the whecl. It may be held out of operation by a lever. The furrows are opened by flexible burs, which are held back in operative position by a ehain attached to the covering and rolling mechanism, so that when the latter is raised from the ground by its lever the opening bar is raised also.

Claim. -1 . The seed slide $F$ and the springs $d d$, When the latter are arranged within the sced box E, and the whole so combined as to operate substantially as described and for the purpose specified.
2. The seed slide $F$, when arranged in relation with the spring $d$, eam H, and the lever M, substantially in the manner as and for the purpose set forth.
3. The elastic furrow openers I, arranged and applied in comnection with the shaft $J$, substantially as shown and described.
4. The tube $G$ and bar $I$, in combination with the corcring shares $f$ and roller $g$, when the same are coustructed and arranged substantially as described.
5. The bar I, attached to the lower end of the seed tube $G$, and provided with the covcring shares $f$ and roller $g$, in combination witin the shaft $J$, arm $i$, and chain $h$, all arrauged to operate in the manner substuntially as and for the purpose set forth.

76,659. - Benjamin Reibd, Allegheny, Pa.Clothes Wringer.-April 14, 1868.-The rollers are journaled in the ends of the spring yokes, whose tension is adjusted by the thumb serew.

Claim.-The spring jokes A and B, in combination with the rollers C and D, constructed, arranged, and operating substantially as herein described, aud for the purpose set forth.
g6,660.--Tsanc Rehn, Philadelphia, Pa.-Printing Photographic Pictures.-April 14, 1868.-The canvas is prepared by a compound of ziuc white, 1 oz.; albumen, (from eggs,) ${ }^{\frac{1}{3}} \mathrm{oz}$; salt, 20 grs.; solntion of ammonio-nitrate of silver, 4 dr., (each drachm containing $30 \mathrm{grs}$. nitrate of silver.) The albumen, salt, and zinc are ground together, and then triturated with the solution in a dark room, aud the canvas coated with a brush.

Claim.-The combination of the pigment, with the salted albumen and silver solntion, for the purposes sct forth in the above specifications.

76,681.-ANDREW REynOLDS, Rock Springs, Md.-Horse Hay Fork.-April 14, 1868.-The fork is throst straight into the hay, the spiral fork causing the rotation of the central fork to which it is attached. The side fork prevents the rotation of the load to free itself from the spiral, and the latter is presented from backward rotation, to allow the hay to fall, until the pawl is raised.

Claim.-A single spiral tine E securcd to a central straight tine $F$, so that they both turn while the instrumeut is being forced into the hay and liberated fiom it, substautially as herein describod.
\%6,662. - Alexander Ross, Frecport, Ill.Wagon Jack.-April 14, 1868.-The lever is passed throngh a loop which is adjustable on the ratchetnutched upright. 'tho upper sido of the lever is
ratcheted, and it is held by a pawl when sustaining the axlc.
Claim.-A wagon jack having a lock arranged witli a loop $F$, arm $E$, and lug $G$, in combination with lever C , notched staudard $B$, and catch $D$, substantially as and for the purposo set fortl.
 -Spring Mattress.-April 14, 1868.-The webbing passes diagonally, so as to cross at the central point betwech each four springs.

Claim.-I'he combiuation of the springs $E$ and the diagonal webbing C and the crossing D with a proper frame, as specified.
gG,6G4.-TDIVIN ShackFord and DERK AR Naud, Boston, Miass.-Burecuu Bedstead.-April 14, 1868.-The bedstead has a transverse joint at midlength, and is doubled together and folded up into the case. The crib unfolds from the side of the case.

Claim.-1. A bedstead, made in two parts, hinged together, when arranged with the case and its door, so that the bedstead when in use shall be outside of and parallel with the firont of the casc, all substantially as and for the purpose specified.
2. 'The arrangement of the bedstcad A B and crib E, with the casc and its doors D G, all substantially as and for the purpose specified.
g6.665.-Amory F. Sherman, Rozbury, Mass. -See-Saw, or Tilting Apparatus.-April 14, 1868.The seats are pivoted to two tilting frumes in such manner as to insure the perpeudicularity of the seats at all times.
Claim.-1. The combination of the tilt seats or chairs, and a ncans, substantidlly as described, of maintaining them in horizontal positions, while the tilt may be in action.
2. The parallel tilting bars, as made with notches, or equiralents, in their lower edges, as and for tho purpose described.
3. The arrangement and combination of the actjustable double-inclined plane foot rest, with the scats or chairs, and the tilting parallel-motion bars and boards applicd to such chair's and standards, as cxplained.
4. The combination and arpangement of the anticoncussion buffers with the tilt, as deseribed.

㘶6,666.-GEORGE C. Smitit and Roswell Judson, Mattcawan, N. Y.-Thill Coupling.-April 14, 1868. -The conncetion betwcen the elip and the thills consists of a roll of duck coatcd with rubber and galvanized.
Claim.-The coupling strap B, when constimeted and used substantially as and for the purpose specificd.

学6, 66\%-Simon B. Smitir, Salcm, N. J., assignor to himself and Joseph K. CHev, same place. -Bearing for Fifth Wheel of Carriages-April 14, 1868; antedated March 31, 1868.-The head block, pereh bearings, and the disk of the fifth wheel are made in a single piece of easting. The king bolt has a larger diameter in its central positiou, and the shoulder at the upper end of this enlarged part is received in an enlarged part of the king bolt hole in the said casting.

Claim.-1. The head block $a^{\prime \prime}$, the perch bearing $a^{\prime \prime \prime}$, and the disk $a^{\prime}$, when cast together in one pieee of metal, substantially as and for the purpose described.
2. In combination with the combined mechanical derices of the preceding claim, the ling bolt E , when constructed and appliod as described and showri, for the purpose specified.
\%6.6.6. - L. C. Stiles and R. P. Jacirmar, Elgin, Ill.-Stove Pipe Shelf.-April 14, 1868.-The stove pipe passes through the horizontal frame, and it is sustaincd thereon by the clasp block pressed against the pipe by the thumb screw. The turning frame has rartial arms on which clothes may be huug.
Claim. - The combination of disk B, clasp H, and set screw L , together with a rotating disk C , at tached to disk B , all eonstructed and arranged subatantially as and for the purpose describod.

76,669.-Natmaniel F. Stone, Chicago, Ml.Can Opener.-April 14, 1868; antedated April 1, 1868. -The point is thrust into the can top and a clisk cut therefrom by a sweep of the adjustable blade.

Claim.-The plate $b$ provided at one end with a entter blade $d$, at the opposite end with a projection or heel $a$, in combination with the screw $e$ e and the plate or slotted bar I 3 , substantially as specified.
m6,690.-CONRAD C. STremme, Austin, Texas. -Bung.-April 14, 1868. -The bung has tro lugs which turn in spiral grooresin the socket. A ralle in the bung allows the entrance of air when drawing the coutents or the escape of gases in fermentation.

Claim.-1. The combination of the bung with tho socket, the bume being secured by means of the teeth d $d$, working in inelined slits inside the socket, thereby making a water-tight lock for a barrel, withont shouldering or the use of packing.
2. The rent or air ralve, construeted as shown, in combination with the bung, as substintially set forth.
\%6,691.-Charles Sulzman, Waterford, N. Y. -Door Bolt and Lock.-April 14, 1868. -The bolt is thrown by a tongued arbor operated by a crunk ontside the lock. At the baek end of the bolt is a spring at whose free end is a locking pin which falls into one of a scries of holes in the tumbler disk and pree rents unlocking. A bridge piece may be placed across one of these holes and when the tumbler is sot in the proper position the loeking pin may be curried orer the bridge and the bolt withdrawn.

Claim.-1. The combination of the sliding bolt and locking pin, and its actuating spring, of the grooved Theel or disk, and bridge which it carries, arramged to operate in connection with the bolt, substantially in the manner and for the purposes shown and set forth.
2. In abolt or loek, such as deseribed, providing the groored wheel or disk with a bridge or stud, cupable of being remored fiom and adjusted to anr one of the sockets formed in the ammar groore of the said wheel, substantially as and for the purposes herein shown and specified.
\%6,67R.-J AMES A. SOUTIIERLAND, Elmwood, Ill. - Machine for Curbing Wells.-April 14, 1868.-The staves are jointed together so as to allow turning inward or opening out into a eylindrical curb.

Claim.-1. The eombination and arrangement of stares A B with iron straps a $a, b b b b$, and hinge ioints $c$, as shown in Fig. 5, in the manner and for the purnose hercin described.
2. The combination and arrangement of the straps $c e$ and pin $f$ with the staves $A 13$, in the manner and for the purpose herein described.

76, 693.-Geonge J. Sifingle, Knoxville, Ill.Fly Trap.-April 14, 1808.-The rollers ire baited and turned bs elock work so as to eradually earry the flies around into the gauze trap or to a position from whence thes drop into the drowning tray.

Claim.- The arrangement of the receptacle or mison $A$, gauze door $v$, trap cover $B$, with prongs $\AA$, eloth sercens $b b$, triap (loor C, rollers I) I), with prongs or eurred pins Z, rod a, pan E, and rods OO, the whole combined and operating substantially in the manner and for the purpose as herein set forth.
g6,6y4.- William IT. Tambling, Mazo Manie, Wis.-Bed Bottom.-A pril 14, 1868.-The slats aro laik on clastic bands which are lad upon pins projecting from the side rails. The slats are guided by vertical grooves in boards attached to the side rails.

Claim.- The arrangement of the groored boards S , angular wires D, bands E, slats $h$, and morable bars I', all construeted and used substantially as set forth.

76,675.-Gottriried Tennie, Pittsburg, Pa., assienor to Fravk S. Bissell.- Hot Water Tank for Stoves.-April 14, 1868.-The smok'c passes into a box which is plaeed upon the rear end of the stove and supports a vertical flue boiler.

Claim.-The flue box $\Lambda$, made separate from a boiler and applied around the flue collar of a stove, so that it serres as a means whereby to support a flue boiler above said collar of the stove, all substantially as and for the purposes deseribed.

76,6786.-Flavius J. VaN Tonims and Thomas C. WonkMan, Stockwell, Ind.-Rotary Nicam En-gine.-April 14, 1868. -The piston carries two wings which trimerse separate courses, and there are two systems of slide valres and passages which aro operated by eam groores in the piston. The piston admits of reversal by moving a valve slide.

Claim.-1. The construction of the case $A$, substantially as set forth.
2. The construction and arrangement of the piston I) and ralves I), substantially as set forth.
3. The arrangement of the ralres D, with the piston B and cam groores C , substantially as set forth.
4. The arrangement of the steam passages $i$ i $i$, with the ralres D, and the carities I, substantially as set fortli.
5. The arrangement of the ralves D , with the passages II and ports E , substantially as set forth.
6. The arrangement of the reversing valre $e$, tho steam induetion ports E , and exhaust ports L , substimtially as set forth.
\% G, 6 g\%.-Londus B. Walker, Chicago, Ill. Saw Mill.-April 14, 1868.-The frame earrsing tho feed mechanism is pivoted to the main frame and is acljusted to resam the bonrds to any desired berel.

Claim.-1. The firame B, pivoted as deseribed, and constructed to sustain the feed rollers and their driving wheels, with slots and bolts, or their equiralents, to admit of the ribration of the frame, sulostantially in the manner and for the purposes specified.
2. The slides C C, which earry the feed rollers and gear wheols, in combination with the lerer L, rocis $r$ and $t$, connceting link and adjusting nnts, all arranged aud operating in the manner and for the purposes set forth and described.

76, 6\%8.-David P. Webster, N゙c川 Tork, N. Y. - Bottle for Holding Mydrofluoric Acid.- I pril 14, 1868.-The bottle is made of wood in two parts, rabbeted torether, and eoated inside and outside with a snbstance impervious to liydrofluoric aed.

Claim.-1. The preparation of bottles for receiving hydrofluoric acid, by coating them intermally and externally with asphalt of coal tar, or the herein-deseribed eumposition of gum shellac and Iudia-rubber, as set forth.
2. As an article of manufacture, a bottle, made of rood, papier maché, or like unaterial, coated externally and intcrnally with a composition of rarmish not affected by hydrofluoric acid, substantially as herein shown and set forth.
3. Making the bottle for holding lysdrofluorie acid of rood, and in two parts or sections, united substantially in the manner and for the purposes shown and described.
\%6,6\%9.-David P. Webster, New York, N. Y. -S'melting Lead Ore.-April 14, 1868.-Serap tin, 250 lbs , is spread orer the bed of a reverberatory furnaee and brought to a bright-red heat. Pulrerized phosphate or phosphnret of lead 2,000 lbs. is then spread on and bronght to a dull red. Scrap tin 250 los. is then spread evenly over the mass, whieh is brought to a bright-red heat. The mass is raked and stirred evers 15 minntes for 2 honrs, or until fused.

Claim.-The improved process herein deseribed for smelting or reducing phosphurets or phospliates of lead.
196.680.-SETH Wineeler, Albany, N. Y.-Pulley and Gearing for DLachinery.- $\Lambda$ pril 14, 1868. The pulley has a removable portion to allow tho placing of it in an inner position without removing other pulleys from outcr positions on a section of shafting. The remorable portion is fixed in place by guiding grooves and by a key and set serew.
daim.-1. The mode, substantially as herein de scribed, of constructing a pulley or gear wheel, so that a portion of its rim, and of the metal forming its lub or eye, may be readily removed for the purpose of getting it on and off of a shaft or axle.
2. The construction of a pulley or gear wheel in sueh a manner that its detachable part or parts aro held in their proper relation, and the pulley held on the shaft by the action of the same key or selew, or keys or serews, substantially as described.
3. Tho jogs $g g^{\prime}$, in eombination with key, or
screw and ley, in che construction of a two-part pulley or gear wheel, substantially as and for the purpose doscribed.
4. The construction of the arm $B^{1}$ of a pulley or gear wheel, snbstantially in the manner and for the purpose described.
5. The pulley or gear whoel, made in two parts, one of which parts constitutes more than half of the pulley, and the other part less than half, the parts being united and hold together, substantially as described.
6. The construction of the part $B^{2}$ of the pulley or gear wheel, substantially as and for the purpose described.
ryfis91. - Cornelius Wilkin, Dundas, Ill. -Plow.-April 14, 1868. - The standard is attached to the beam by a strap which is bolted to the side of the standard and ends in a serew-bolt whiel passes through the beam.

Clatim.-1. In combination with the standard $b$ of a steel or other similar plow, the bar $C$, secured to said standard by bolts or rivets $c$, and having a threaded or slotted portion, $c^{\prime}$, for uniting said standard to the beam, substantially as described.
2. Sceuring the colter E by passing it through an opening $b^{5}$, in the breast of the plow, and fastening it with a bolt or rivet, $e$, on the inside, substantially as and for the purpose specifiod.

76,682-ENOS D. WOOD, Utica, N. Y.-Rotary Falve. - A pril 14, 1868. -The valve casing is nearly cylindrical, being slightly tapering, and the openwork ralve is made so as to oscillate therein. The casing is cut back between the valve seats to recluce the friction. The ralve is mado of open Tork for lightness and clasticity.

Claim. -The valves $G$, with the openings $H$ betreen them and the hub E, constructed substantially as described.

96,653.-GEORGE W. WOOD, Philadelphia, Pa.Hair Crimper. - April 14, 1868. -The lair is turned alternately around each horn of the fork and is confined by the sliding block which spreads the tines.

Claim. - Two-tined hair crimper A, with out-wardly-curving ends, in combination with the expanding and fastening slide $B$, as a new article of manufacture, substantially as shown.
g6,684. - DOUGLas B. WOODWORTH, Cincinnati, Ohio, assignor to the Cincinnati Britanina Company,-Construction of Tea and Coffee Pots.April 14, 1868.-The sole plate is placed beneath the Britannia metal to prevent injury to the latter by heat.

Claim. - The sheath or sole plate C , of lefractory metal, secured bencath the bottom of a Britamia tea or coifee pot, in the manner and for the purpose explained.
re6,685. - William P. Wright, Philadelphia, Pa., assignor to himself and Collins W. Waiton, same place.-Treating HKuslin for Sweat Linings, dec., for IIats.-April 14, 1868.-Ordinary muslin is slightly stiffoned with size and then passod through a calender. The oil is then applied.

Claim.-The within-described process for treating muslin for hat sweats, \&c., so as to give it clasticity and pliability, as herein set forth and described.
r6,696.-Jacob and Tobias R. YagGy, Piainficld, Ill., assiguor to Toblas R. Yaggy. - Bag Holder.-April 14, 1868.-The bag top is held between the two rings which are hinged at the rear side and held by a clasp at the fore side.

Claim-The combination of the post $\Lambda$, the leg's $\mathrm{C} C$, the rim D , the hinged rim F , and clasp $\mathrm{G} h$, arranged and operating substantially as and for the purposes specified.

76,63\%.-Groirae TV. Zeigler, Maumec, Ohio.Land Tiller.-A pril 14, 1868. -The plows or cultivators are adjustably connected to the beam, and the beam may be so adjusted in lelation to the draught attachments and handles as to plow a wider or narrower furrow.

Claim.-1. Proriding a single beam A, carrying
a gang of plows or shorels, with a draught rod D, which is piroted at or near the midale of the length of said beam, and supportcd at or near its front end by means of a laterally-vibrating beam $L$, substantially as described.
2. Supporting the front end of a draught rod $D$, which is pivoted to the eye $h$ of the intermediate stock $B$, by means of a laterally and vertically-adjustable sepmental clevis $N$, applied to the beam L, substantially as described.
3. The adjustable casting $G$, provided with the standard $j$ and adjustable standards $l l$ for sustaining the handles $J$, and allowing these handles to be sceured at their front onds by means of a clamping bolt $j$, substantially as described.
4. Providiug for adjusting the handles $J$ of a sin-glc-beam plow in line with a draught rod D , by means of devices $G$ and $L$, which are arranged to operate substantially as described.
5. A metallic standard stock and holder B, constructed with a curved front edge $b$, a swelled corrugated surface head $e$, and a slot $g$, substantially as described.
6. The wooden shovel carrying standard $C$ applied to a stock $B$, substantially as described.
7. The construction of the clevis $N$ of a segment form, with a notched flange $p$, and also with perforations through it for receiving the draught rod $D$, substantially as deseribed.
8. A single-beam grang plow whiel is provided witll laterially-adjustable shovel standards B C, lat-erally-adjustable handles $J, ~ a ~$ rertically and laterallyadjustable clevis N , a laterally-adjustable arm or beam $I$, all arranged substantially as described.

97,688. - Albert Alden, East Cambridge, Mass.-Broom Head.-April 14, 1868. -The butts of the broom straw are held between the bars which are bolted together, and the corn, being bent down over the lower bar, is secured by wires.

Claim.-1. The manner of securing the corn or broom material to the head, by clamping its stub ends between the bars B and C , and tying it by a string, $F$, and confining it in position by a band, E, or its equivalent, substantially as herein shown and described.
2. The broom head, formed by combining the cross hoad $B$, slotted or perforated bar C, bolts a, band E, or its equivalent, and spring $F$. with each other, substantially as and for the purpose set forth.

6,689.-E. W. Allen, Auburn, N. Y.-Corr Planter.-April 14, 1868.-The seed is carried from the hopper in the cavitics of the seed wheel and dropped into the spout, falling upon the sliding plate at the bottom thercof. The plates in both spouts are connceted to ievcrs which orerlap each other, and are actuated by arms extending radially from the axle to draw the slides outward, the said slides being drawn back by a spring depending from the frame.

Claim.-1. Operating the morable plates $z z$ by means of the rerolving arms $\mathrm{S} S$, lerers $h h$, and spring $L$, with its connecting rod $j$, the screral parts being constructed and arranged substautially as and for the purposes herein set forth.
2. The combination of the plows $R$, double coverers JJ, rollers K, spouts F, and movable plates $z$, operated by the reel arms $\mathcal{S} \dot{S}$, springs $L$, and rod $j$, the whole constructed and used substantially as specified.
rg,690.-J. G. Allen, Philadelphin, Pa.-Spirit Meter.-A pril 14, 1868.-The liquor 1lows through a series of cells, to the bottom of which any heary matter sinks. The liquor is measured in a tilting meter, and when it is empticd therefrom a small portion of it fills into a trough which empties into one of a circular series of transparent sample tubes. The spout is caused to move around by a horizontal ratchet wheel actuated by a parl piroted to the tilting measurer so as to empty into the tubes in succession. Self-registering thermometers are attached to the sample tubes to show any tampering with the samples by heat. Inclincd tubes are arranged so that tiltnge of the machine will cause an outflow of liquor into traps connected therewith.

Claim.-l. Delivering the spirits into a series of cells, $P^{\prime}$, provided with strainers at their outlets, sub-
stantially as described, to prevent the entrance into the meter of any foreign substances.
2. The tilting measuring cells C', provicled with the sample sponts $E$, arranged to deliver the samples into the fumel $G$, substantially as described.
3. A series of samplo chambers or tubes, $\mathrm{L}^{\prime}$, arranged to receive the samples as they are delivered from the funnel $G$ throngh the spont $d$, or equivalent means.
4. Providing a meter with the rotating spout $d$, arlanged to be operated by the movements of the measming apparatus, so as to deliver the samples to the sample tubes in successiou, substantially as set forth.
5. Making the sample tubes $\mathrm{L}^{\prime}$ with double crlass Walls, as described, for the purpose of preventing the craporation of the samples by heat.
6. Providing the sample tubes with a ralre, $i$, arranged to be opened br the morements of the arme $e$ or other part of the meter, to permit the entrance of the sample, and be closed again when the sample is in, to prevent craporation.
7. Proriding the sample tubes with a valre or cock at their bottom, to be opened by the incline $r$ on the arm K, attached to and operated by the disk II, or equiralent means, to draw off the samples as de. seribed.
8. Providing a spirit meter with a series of radial tubes 'I', so arranged that any material morement of the meter will cituse the contents of said tubes to flow out into and be retained in the vertical cups $R$, substantially as and for the purpose set forth.
9. The use of a measuring wheel, composed of a series of cells or compartments $C$, arranged as represented in Fig. 2, and herein described.
10. Constructing and aranging the measuring cups or cells of meters, as herein described, so that the leverage shall be uniform, whatever the quantity or specific gravity of the fluid being measmred.
11. Making the pipes leading to or from the meter double, or encasing them within a sceond tube, fo prevent lapping them or artificially cooling or heating then, or abstracting liquor therefiom by capillary holes, substantially as deseribed.
g6,691.-Janies E. Austin, Ostrego, N. Y.Shingle Machine.-April 14, 1868. - The bolts at the cnds of their morement settle down upon a tilting table, which is actuated by the sliding block on the inclined surfaces of the ends of the table rest. This mechanism may be disconnected, when parallel sided boards may be sawn.

Claim.-The combination of the piroted tables L L with the sliding blocks $\bar{M}$ M, having the shoulders $m m$, and operating the tables, substantially in the mauncr and for the purposes specified.

76,692.-Janes S. Baldwin, Newark, N. J.-Elevator.-A pril 14, 1868.- A portion of the platform is made to slide inward when an ohjest is interposed between the edge of the platform and the landing. This may be accomplished by the direct pressure of the object, or the pressure of the object may act upon other mechanism.

Claim.-The withdrawal of the yielding platform or cdge $B$ by the action of an interposed body, by means and in the manner described.

76,693.-James S. Baldwin, Newark, N. J.-Elevator- - April 14, 1868.- 4 morable bar is secured to the side of the platform, and when any object is interposed between the said bar and the landing, the bar is moved and puts in operation the brakes or other stop mechanisin.

Claim.-The checking or stopping of the elevator by the pressure of an interposed body upon the bar D, or its equiralent, said pressure being transmitted and applied by the means nud substantially in the manner described.

196,694.-Janes S. Baldwin, Newark, N.J.Elevator for Transporting Passengers.- April 14, 1868. -The style of clevator in which the platforms all have a reciprocation, from landing to landing, is applied to buikdings in which the stories vary in height, by passing the hoisting rope from a common barrel, or drmm, over differential pulleys bearing proportion to the height of stories.

Claim.-The elevator for building's having floors
of varying height, constructed sulbstantially in the manner set forth.

7 $\mathbf{7 , 6 9 5}$. JOHN BARCLAY, Attleborongh, Mass., assignor to himself, Rurus D. Caise, Janes BarChay, and Daniel Bing, New York, N. Y.-Button Hole Lining for Carriage Curtains.- April 14, 1868. -The efelet is surnoundeal by three washers which extend its hold upon the eloth.

Claim.- A carriage-curtain buttonhole lining, consisting of the three anmular plates $B, C$, and $D$, and of the esclet E , all made and operating substantially as herein shom and deseribed.

76,693.-ALFRED BalnNES, Nemark, N. J.Printing IIat Body.-April 14, 1868.-The block having the hat body thereon, and, after pouncing, is serewed upon the end of a slaft which is made to rotate the said body, in conjunction with a printing roller, which may hare more or less rapid feed giren to it.

Claim.-The die $a$, operated by the screw-slaft $b$, whereby a continmous spiral line is printed upon the body of the hat 13 while on the cone, as hercin described, for the purpose specified.

76,90\% - - Asa Barriett, Baltimore, IId., assignor to hinself and Mleton D. Meftee, same place.-Oyster liake.-April 14, 1868.- The grappling arms are held in extended position by a spring, and brought torether by the action of raising, through means of the togerle rots. The head is sunk by a longitudinal bar to which the jaws are hinged.

Claim. - 'the instrument above described, consisting of the rake-heads A A, teeth a $a$, spring $S$, and weight B , in combination with the crossed rods or arms C C', and the connecting rods D D, and link E, substantially as and for the purpose specified.

76,699.-Willian C. Bartiit, Aledo, and Josepir M. Mermaman, Moline, Ill.-Grading Machine. - April 14, 1868.-The seriaper is so attached to a sulky that it can be adjusted to any desired inclination, or can be tilted by the driver.

Claim.-1. The arms H, when so connected with the frame $A$ and scraper $E$ as to swing vertically, when the scraper revolves, substantially as herein set forth.
2. The lock levers $U$ and $V$, in combination with the arms $I$, and scraper E, when arranged to lock the arms and keep the seraper from revolving, and at the same time admit of the front of the seritper being elerated or depressed to receire its load, substantially as herein described.
3. The shaft $K$, and arms $L$, when arranged in connection with the front of the scraper E , with the lug's $M$, and lever $N$, or their equivalents, so that tho operator can raise or lower the front of the seraper at pleasure, substantially as and for the purposes specified.

69,699.-Call Baumann, Poughkcepsic, N. Y. - Watch Protector.-April 14, 1868.-Tho watch is hold between a ring and a C-shaped plate, to whiel its lower side is attached, and can only be taken from the pocket after the upper side of the ring has been drawn from the plate.

Claim.-1. A watch-protector, consisting of a spring plate $A$, and ot tho bent rod $B$, which is fastened to the plate, and between the upper part of which plate and rod the stom of the wateli is clamped, substantiully as herein shown and described.
2. Forming a hook, $b$, on the lower end of the spring plate a of a wateh protector, substantially as and for the purpese herein shown and describerl.
geg, 900. RICHARD BEEN, Antrim, Ohio.-Rat Trap.-A pril 14, 1868.-The bait is fixed upon one end of a lever, whose other end las a catch which engages a serrated arm upon a spring shaft. When the bait is raised, the arm makes one revolution in a horizontal plane and dispatches the rat. The arm is checked by the brake, and is arrested by the trigger.

Olaim.-1. Arm F , with its serrated arms $f$ and $f^{\prime}$. catch $c$, and knob $i$, in combination with main-spring B and shaft E, when construeted and operatiny smb. stantially in the manner and for the purposes set forth.
2. Spring I. when constructod and operating sub.
stantially in the manner and for the purposes set forth.
3. Trigger T, with its guide $C$, when construeted and operating with lever $L$ and bait-arm $n$, substantially in the manner and for the purposes set forth.
4. Arm F, shaft E, spring B, when constructed and operating in combination with spring I, trigeer Is, guide G, lever I, bait-arm $n$, body $A A^{\prime}$, and bottom $a$, substantially in the manner and for the purposes set forth.

69,701.-George I. Brrch, New Tork, N. Y.Ironing Board.-A pril 14, 1868. -The board is jointed to a sustaining frame, which may be folded into small compass when not used.

Claim. - The combination of the board A, hinged end frames I D D I) $\mathrm{B}^{\prime}$ and $\mathrm{E}^{\prime} \mathrm{D}^{\prime} \mathrm{D}^{\prime} \mathrm{E}^{\prime}$, with the bottom frame $B^{\prime \prime} B^{\prime \prime} \mathrm{C} C$, and hinged slide $n$, all snbstantially as shown and deseribed, and for the purpose set forth.
g6, 9 goz. -WashingTon Blythe and Nathaniel Hayes, Alexandria, Va,-Apparatus for Turning Locumotive Crank Pins.-April 14, 1868.-An inner eylinder is adjusted upon one of the journals by set scrers, and an onter cylinder carrying the cutting tools is revolved upon it to tnrm off the other journal.

Claim.-1. The reversible and adinstable endcentering deviec, in combination with the outer and inner eylinder, or cither of them, when combined therewith substanfially as described.
2. The extcrior cylinder, earrying the tools 88 , in combination with the inner and stationary cylinder, wheu arranged snbstantially in the manner set forth.

76, 9 03.-TACOB W. Bope, St. Lonis, Mo., assignor to himself and GEORGE R. Chittennen, Chicaso, Ill.-Durnping Platform for Harvesters.April 14, 1868 ; antedated April 7, 1868. -The tiltine platform turns on a pivot near to its rear edge, and has a hinged folding extension for adaptation to tall grain. The platform may be adjusted in inelination to the gronnd, and may be also adjusted in distance from the eutters.

Claim.-1. A tilting platform or dropper turning upon an axis at or near its rear edce, in combination with a hinged extension or tail-pieee for adapting said platform for use in tall grain.
2. A hinged folding extension or tail-piece, in combination with an anti-fiction rod or guard on the platform, for the purpose as deseribed.
3. The anti-friction rod, in eombination with the tilting platform provided with tecth, operating as and for the purpose described.
4. A tilting platform or dropper turning on a pirot or finlerum at or near its rear edge, operated by means of a lever crank or arm attached to said pivot or fulcrum, substantially as described.
5. A tilting platform or dropper turning upon a pirot or fulcrum located at or near its rear edge, in combination with arm or lever $F$ attached to said fulerum, adjustable rod L, arm or lever K, rock-shaft $J$, and foot-piece or treadle $I$, substantially as described.
6. A tilting platform, in combination with a means for adjusting said platform and setting it up or down, or nearer to or further from the cutting apparatus.
7. The adjustable arm $\mathrm{D}^{\prime}$ forming the support for the pirot at the inner end of the tilting platform, substantially as deseribed.
8. The adjustable swinging arm or support H, in combination with the hook pirot or fulernm G it the onter end of the tilting platiorm, substantially as described.
(76, 7(1)4.-TOB Borton, Antrim, Ohio.-Coal Excavating MIachine.-April 14, 1868.-The chisels are upon a reciprocating frame snpported on a truck, and are operated by the sledges which are raised by the wipers on a rotating shaft.

Claim.-1. The picks or ehisels M' M', sledges M M, and cams c c, operated by shaft II and mheel I, in cambination as described, and operating as and for the purposes set forth.
2. Cimm-roller $a^{\prime}$ on shaft $H$, adjustable arm $I^{1}$, eon-receting-rod $b$, arms $b^{\prime}$ and $p$ on rock shaft $b^{\prime \prime}$, pawl $o$, asud ratelet wheel R , in combination with cog.

Wheels S S, as described, and operating as and for the purposes set forth.
3. In combination with a mining machine thus eonstructed, erank shaft $G$, balance wheel F , and gear wheel K , pitman N , constructed and operatiug as described and set forth.
4. The combination of the chisels or picks $M^{\prime} M^{\prime}$ With the transversible frames $B$ and $C$, carroing the intermediate devices, construeted as deseribed, and operating as set forth.
 Haniungton, Birmingham, England.-Umbrella.April 14, 1868.-Patented in England June 17, 1867. - The stick has plain studs, which engage a hole in the spring lever upon the rumer. The runner is prerented from rattling by a spring, which extends beneath it when the umbrella is spread.

Claim.-1. The combination, with the umbrella or parasol stick, and studs or projections thereon, of the slotted rmmer and lever, constructed, arranged, and applied to said runner, substantially in the manner deseribed, so that while the runner rides or passes orer the studs, one arm of said lever will engage with one or the other of said studs, and thus fix the umbrella or parasol in its open or elosed positron, as shown and set forth.
2. One or more botr-springs, made from sheet steel, or other clastic metal, applied to the taper stick of an umbrella or parasol, so as to steady the rnnmer thereon, substantially as herein shown and described.

196, g06.-Henry Brevoort, Brooklyn, N. Y. Detachable Ball Joint.-A pril 14, 1868.-The ball lies in the soeket, and its shank passes through a slot therein, and is turned $90^{\circ}$ to prevent withdrawal.
claim.-1. The ball joint, constricted as deseribed, eonsisting of the shell $A$, open at one end, and provided at its opposite end with the slot having the shoulder $b$, whereby, as the ball is introdueed into the shell, and its shank turned in the wider part of the slot, it will strike sait shoulders, and be locked in the shell until tmrned again, so that its narrower part will enable the ball to be withdrawn from the slot, as herein shown and deseribed.
2. The ball joint, constructed as deseribed, in combination with the bracket $B$ or serew $B$, as herein described for the purpose specified.
g6, gog.-Harvey Brown, Harlem, N. Y.-Port able Cooking Stove.-April 14, 1868.-Hooks upon two of the sides pass through slots in the other sides, and selre to engage them together. The bottom is also attached by similar hooks, and is prorented iy a pawl from slipping, to allow disengagement of the same. The top plate may be somewhat clerated by the wedge-formed portions of bars which are passed beneath it. The stove may be a compound bail, which admits of folding out of the way.

Claim.-1. The connecting togetlier of the side and end plates $\triangle B$, and bottom plate $C$ of the store, by means of the hooks $b d$ and slotis $a c$, snbstantially in the manner as shown and described.
2. The paw D and $\operatorname{lng} e$, in combination with the hooks $b$ and slots $a c$, all arranged sinbstantially as and for the purpose set forth.
3. The lid or cover E, provided with the inelined plates $h h$, for the purpose of admitting of the lid or cover being tightly fitted on the stove, or inore or less elerated, as desired.
4. The bent or angular wires $F$ F and bail $G$, arranged and applied to the store, substantially in the manner as and for the purpose specified.

76, 708.-Spencer H. Brown and Chamles H. Whllets, New York, N. Y.-Corset Spring.-April 14, 1808. - The spring is made in two parts, and is extensible by screws and slots.

Claim.-1. A corset spring, composed of two parts $b b^{*}$, conneeted so that the spring can be lengthened or shortened substantially as set forth.
2. The slide $a^{*}$, moring between the parts $b b^{*}$ of the spring $A$, in combination with the fastening $a^{\prime}$, substantially as and for the purpose deseribed.
3. The adjnstable button $c$, in combination with an extension corset spring $A$ or $A^{\prime}$, substantially as and for the purpose set forth.
g6,709.-DANIEL Broy, Canton, Mo.- Hand Corn Planter--April 14, 1868. - The sced slide is horizontal, and is reciprocated by the relative morcment of the tro parts of the stock. The stock forks so as to deposit the seed in two separated spots.

Claim.-1. The combination and arrangement of the forked bars or hoards $A$ and $B$, plates $C$ and $D$, chanmels H, slide F, cap or block G, and seed box E, with each other, substantially as herein shown and described, and for the pripose set forth.
2. Forming the upper edre of the partition I, that separates the channels if from cach other, sharp or wedge-shaped, substantially as herein shown and described, and for the purpose set forth.

76,710. - Jomy Buencky, Orerpeck's Station, Ohio, assignor to himself and Jonn C. Banintel, same place. -Broom.- 1 pril 14, 1868. -The butt ends of the broom straws are plaed in the serew elip, and the side bars looked into the ferrule. The ring is then erowded domn orel the brish and rests on the hooks at the lower ends of the side-bars.

Claim.-The combination of the rod $b b$, link $d$, nuts $c$ c, bent wires and hand $f f^{\prime}$ and $g$, with the perforated ferrule $e$ and handle i, when the parts are constructed, arranged, and applied for securing the wisp $B$, in the manner and for the purpose described

76,711. -Jacoi Busser, Philadelphia, Pi.Shifting Bucket Propeller. - A pril 14, 1868. - Im. provement on his patent, Jnly $2,186 \%$ - The propellers are placed bencath the boat to render this device applicable to canal boats.

Claim.-The arrangement of the frames carrying the shifting buckets upon the hottom of or underneath the boat, so that both series of buekets shall work in the same plane, and grarded, guided, and slifted for changing the direction of the boat ly devices substantially such as set forth and described.

76,712. - William IH. Castle, Washington, D. C.- Water Elevator.-A pril 14, 1868.-The bueket is raised by turning the hand crank forward and retained by the weighted pawl which engages a ratchet wheel turuing loosely upon the barrel shaft. Attached to the shaft is a ratchet whecl which engages a tooth upon the crank which is attached to the first mentioned ratchet. The tooth is freed fiom the ratchet by drawing back the crank, and the bucket is then free to run dowel.

Claim.-The combination of the slot L , in the crank licad, the spring M, the tooth $N$, cap $O$, and toothed wheel Q, when construeted and arranged as and for the purpose set forth.

76, 713.-J. J. Cline, Migh Hill, Ohio--Animal Trap.-April 14, 1868.-The animal enters one of the counterpart, end, wirc compartments, and takes hold of the bait npon the lever; the morement of the latter causes that of the trigger wire pivoted thereto, and the fall of the gate. The animal enters beneath the drop gate into the inner compartment and by raising the said gate resets the trap.

Claim. -The combination of the (loor D, rod E, and lever F, as arranged with door N, rod H, lever G , and cord K , for forming a self-setting trap, as and for the purpose herein set forth.
76.714.-Gideon W. Cole, Cantou, Ill.-Plow. -April 14, 1868. - The plow beam has lateral and vertical adjustment by an adjustable cap whicl is secured to the upper end of the standard by a bod. passing through it, and working in a slot having an inclined depression to receive the bolt head. A segment-faced shoe is secured to the lower corner of the heel of the beam and works on a curved plate attached to the handle.

Claim.-1. The adjustable cap $a$, secured to standard $b$, as described, and operating substantially as set forth.
2. The segment-faced shoe $f$, trorking on plate $g$, as clescribed, in combination with the cap $a$, or cquivalent attachment, arranged substantially as and for the purposes set forth.
3. The combination of the vertical and lateral ad. justment of the beam, when the different parts are construeted and operated substantially as set forth and described.

76,815. - GEORCE TV. Combs, Canandaigua, N. Y., assignol to himsclf and J. B. Munkay \& Sons, same place.-Car Brake.-April 14, 18tis.The brake is secured to toggle levers which are piroted to a foot which puts on the braises when the ear is thrown from the track, and also acts threawh ib system of levers to draw down the coupling pin ind uncouple the cars.

Claim.-1. In combination with the wheels B, the intermediatelr-placed brakes C C, connected by a toggle joint, D D, and beam E, suspended upon the slotted hangers F , and so arranged in relation to the track that when the cars are thromn from the track the weight of the car shall be applied to press the brakes against the wheels, substantially as set forth.
2. The combination of the beams $E$ and $\mathbf{E}^{\prime}$, arms G and H, spring $\mathrm{G}^{\prime}$, lerer I , spring K , and pin $\mathrm{K}^{1}$, for antomatically disconnecting a car when thrown from the track, substantially in the manner set forth.
3. The combination of the draw bar L, jaw It, spring $K$, and pin $K^{1}$, and arm $K^{2}$, arranged to operate substantitlly as and for the purpose set forth.
g6,716.-Meniy Coulter, Philadelphia, Pa.Lamp Furner.- I pril 14, 1868. -The chimney holiel has three or more springs which press against the chimney and hold it in place.

Claim.-Springs $h h h$, so constructed and conneeted to a lamp-chimney bolder as to rectain mpon the same either a swelled or a cylindrical chimney, as specifica.

76, 717. Richard T. Crane, Chicago, Ill. -Ventilator.-A pril 14, 18(i8. - 'I'he heater is arranged so that when the warm-air pipe is closed the cold-air pipe is opened, and rentilation still goes on.
Claim.-1. The cold-ain 1 nue 1 , in combination with the hot-air pipe A, sulstantially as and for the purposes specified.
2. The air'pipe $B$, in combination with the pipe $A$ and register C, substantially as and for the purjoses specified.
3. Providing the hot and cold-air flnes d IB with a repister, so constructed and operated that when one flue is closed, or partially elosed, the óther will be correspondingly opencd, substantially as and for the purposes specitied.
4. The deflector $E$, in combination with the register C, constructed and operating substantially as and for the purposes specified.
5. The deflector' E, constructed and operating substantially as and for the purposes specified.

76,71S.-RICHARD T. CraNe, Chicago, Ill-Ventilator.- 1 pril 14, 1868. -The valre is automati cally opened by the engine when the steam in the boiler is at a hion pressure. When tho valve is open a current of cold air passes throngh the pipe, and by this current of air the eurtains are driven against the wire netting, and no air can pass througle the netting into the pipe. But when the ralve is closed, a curront of air will pass throngli the netting into the pipe, and thence through the heating chamber into the room to be rentilated.

Claim.-The projection and opening B, prorided with the netting a and cmetains or ralyes $b$, in combination with the pipe $A$, substantially as and for the purposes specified.

76, 719.-Sajuel Dailing and Jomn E. Hall, Bangor, Me.-Inkstand.-April 14, 1868.-The pen rack is hinged to the lid so that the act of putting tho pen upon the rack plaees the lid upon tho ink vessel.

Claim.-1. A swinging pen rack, so combined with the coser of an inkistand, that the movement of the rack will operate the cover.
2. The combination, with an inkstand and its cover, of a pen rack, or its equivalent, in such manner that the mere weight of tho pen-holder, when laid down by the writer, shall cause the ink to be covered, and that the ink shall be uncovered when the pen is taken up.

9,990.-EDWARD P. DAVIS, North Attleboro, Mass. - IIemmer. - April 14, 1868. - The hem is turned down so as to bring the right side of tho stitches to the riglit side of the work.

Olaim. - The combination of the plates $b$ and $c$,
formed as shown and described, with the arm $A$, as and for the purposes set forth.
giv, ${ }^{\text {gel.-JOSIAII P. N. DAVIS, Point Arena, Cal. }}$ -Shingle Machine.-April 14, 1868. -The bolt is placed on the carriage, and the shingle is rived therefrom and shared. The shingles are carried up by claws, and dropped into the straight or inverting chute by whieh they are deposited in the packing box.

Claim.-1. The combination and arrangement of the clamps II H, for holding the shingle, the curved niroted knives I I, and the wedge $b$, for gradunting the distance between the edges of the same for tapering the shingles, substantially as described.
2. The combination and arrangement of the rod $K$ and lever M, for releasing and delivering the finished shingles, substantially as described.
3. The double delivery trough L, divided by the vibrating diaphragm $g$, in combination with the cam $S$, arms $T$ and $U$, and pin $d$, for operating the same, substantially as deseribed.
4. The bar or rod $i$, in combination with the vibiating diaphragm $g$, for reversing every alternate shingle on its way to the packing box, substantially as described.
5. The sliding packing box, having movable partitions, in combination with the inclines $m m$, levers $m_{3}$ and $r$, latch $t$, and spring $z$, for operating the same, substantially as described.
(6.7.28.-ROBERT DICK, Buffalo, N. K.-Printers' Chase.-April 14, 1868. -The inner sides of the chase are cut into inclined recesses which receive the wedges or quoins used in locking up the form. Tho flauge upon the quoin prerents the descent of the same to tonch the stone and raise the chase from contact therewith.

Claim.-1. The construction and use of a sufficient number of suitably-inclined planes, formed along the side and foot of otherrise commou chases, employed in combination with thin wedges of any suitable substance, operating between these inclined planes and a reglet of suitable material, so as to lock up a form in an eighth of an inch of chase room as casily and as efticiently as in two inches of chase room, all constructed and operating in combination, substantially as set forth.
2. The flanged quoin or wedge, constructed and operated substantially as set forth.
769.72B.-Bartlett Doe, Boston, Mass.-Shutter Fastener.-April 14, 1868.-The case is made in two parts and is screwed through a cylindrical hole in the blind. The catches consist of two lerers, and are so arranged that the outer catcl can be moved by the inner catch lever, but the inner cannot be operated from without.

Claim.-1. The manner of uniting the tro halves of the cylindrical case, by means of a ligature applied between the ends of the shell, and at a place of Iess diameter than said ends, substantially as described.
2. Giving to the lower part of the case the rounded and depressed form shown and described, for tho purpose of shedding the rain, as described.
3. Constructing the upper half of the shell with the opening $f$, substantially as and for the purpose set forth.
76.724.-Frederick C. Eimenberg and Theodon Eimenberg, New York, N. X.-Thread Winding Machine. - April 14, 1868. - Improvement on patent No. 43,474. As the spool is rotated the thread guide has reciprocation by a rotating cam which is driven by a screw gear. The thread gruide has an adjustable pirot by which it is made to suit different sizes of spools and thread.

Claim.-1. The eccentric roller X, with corrugations or teeth on its periphery, in combination with spool frame S, substantially as described.
2. The eccentric roller $\dot{X}$ and its finger $Z$ in combination with the stops $Y Y^{\prime}$, substantially as described.

76,795.-Samuel Emrinan, Chicago, Ill-Table Leaf Support. - April 14, 1868. -The curred arm passen through the frame, and when the leaf is
raised the drop latch falls into the notch to retain it in that position.

Claim.-The arrangement of the plate C , with its drop lateh D and slot E, in combination with the curred arm A, when provided with a hinge, $B$, at one end, and noteh or shoulder, $a$, at the other, operating and constructed in the manner and for the purpose specified.

66, \%86. - William Emmons, Sandwich, Ill. Concrete Briek Maehine.-April 14, 1868.-The lid is arranged to swing off the mold, and when in position thereon is held down by the lugs.

Claim.-The lid E , arranged with a lug, P , and to swing on a bolt, C , in combination with lugs' D D $D \mathrm{~S}$, and mold I I, as and for the purpose set forth.
76.72\%. - D. S. Esten, Monson, Mass.-Hinge for Gates and Doors. - April 14, 1868; antedated April 9, 1868.-The hinge closes by the foree of gravity, assisted by that of the spiral spring.

Claim.-The upper part D, provided with a pendent rod, E, passing loosely through the lower part, C , and surrounded by a spiral spring, F , flting against the under side of the part C , and held upon the rod E by the nut $G$, said parts $\mathrm{C} D$ provided with inclined surfaces and shoulders $a b$, sulbstantially as and for the purpose specified.
\%6, \%88.-Thomas Evans, Newark, N. J.-Construction of Ears for Can and Kettle Eails.-A pril 14, 1868.-The base portion is bent at an angle to the upper portion. It has corrugations formed along the sides and end to stiffen it and improve the appearance.

Claim. - The ear for the bail of cans or kettles, formed with corrugations, as and for the purposes set forth.

76, \%29.-Jomn De Gatcleford, Cohoes, assignor to himself and Williad E. Marston, Troy, N. Y.Tube Cutter.-April 14, 1868.-The four rollers which abut upon the pipe maintain the tool in position. Between the two lower rollers projects the eutter, being protruded by the screw shank. When driven against any protuberance on the pipe the block with the lower rollers retires, condensing the spring, which returins the rollers into position when the inequality is passed.

Claim. -1. A pipe cutter, consisting of the G-shaped frame $A$, with its rollers, $b b$, of the screw B , adjustable block C , with its rollers $f f$, of the spring D , and cutting tool E , all made and operating substantially as herein shown and described.
2. The grooved rollers $f f$, when arranged as doscribed, so that they not only serve as supports for the pipe, but also as guides for the cutter, substantially as hereiu showa and described.
3. The block C, when prorided with the spring D, against which the screw $B$ abuts, and when fitted loosely around the cutter E, substantially as described, so that it can yield to projections on the pipe without influencing the position of the cutter, arranged as set forth.

96, \%30. - Bernard Demming, Clevcland, Ohio. -Scroll Saw Hill.-April 14, 1868.-The inclination plane of motion of the saw is adjusted by means of the partial rotation of the saw frame in a rertical plane, a set screw maintaining the required aljustment so as to cut a berel kerf. The rake or formard pitch of the saw is regulated by the vibration on its axis of the lever, from which the upper end of the saw is suspended.

Claim.-1. The frame H, pivoted at $h$, and having projecting bolts or pins, e $i^{\prime}$, working respectively in slots, $g$, whereby the frame may be fixed at any required inclination, substantially as specified.
2. The combination of the saw S with the lever o and slide $m$, the lerer being piroted to the slide, and its inclination being adjustable by means of a pin, $p$, and nut, $a$. or some equiralent device, so that by inclining the lever at different angles to the slide the saw may be causcd to rake more or less, substantially as described.

76, 781. -Lewis Elliott, Jr., New Haren, Conn., assignor to L. Cander \& Co., same place.-Overshoe.- April 14, 1868. - A partial upper is at-
tached to the rmbber foxing, whiel is subsequently tnleanized.
Claim: - An orershoe, formed from India-rnbber in the usual manner, and provided with a fabricated upper, $A$, when the said upper is applied thereto in the manner herein set forth.

76, $782 .-$ Willitan Ettenger and Horace P. EDmond, Richmond, Va.-Hydraulic Press.-April 14, 1868.-The eylinder is placed upon an elevated platform, and the plunger heded rests against a cross head counceted by two or more bars to a moving platform immediately beneath the other. The objeet is placed between the two platforms. The retainer surrounds the plunger between the eylinder and the cross head, and is operated by turning to hold the press to any position gained by the action of the pump.

Claim.-1. The placing of the exlinder of the hydranlic press immediately under the head piece or cross beam of the frame of the press, the head piece or cross beam resting dircetly on the piston.
2. The retainer II, formed with two sets of horizontal steps. 1, 2, 3, 4, and sustained and operated substantially as and for the purpose set forth.
\% 6, ${ }^{\text {g }} 33$. -George W. Feltes, Carbondale, TllFood Lathe.-April 14, 1868. -The spokes are placed in a morable trame and rotated in contact with the rotary cutters which reciprocate longitudinally by the feed screws. The novable frame is operated by a pattern.

Claim.-In connection with the tro models L, L, arranged ant operated as doseribed. the arrangement of a serics of revolving shafts, $\mathrm{E} \mathrm{E}^{\prime}$, cach bearing tro cutting instruments, one at cach end of the shaft, the shatts being held in a sliding frame, which allows the eutters on one end of the series to operate upon a series of sticks parallel to one model, while those on the other end of the series operate on another series of sticks parallel to the other model, whereby any number of spokes, MIS MI M, may be made simultaucously in a single machine.
g6, \%34.-ADDison C. Fletcirer, New York, N. Y.-Grate Bar.-A pril 14, 1868 ; antelated April 3, 1868. - Each of the tubular grate bars has a val ve at the front end, and has at the other end an ammus, which, when the bars are put together, forms a scetion of a hollow erlindrical bridge, which is perforated on the upper side and covered with like perforated tire clay. Air becomes heated in its passage through the grate bars, and passes through the pertorations of the eylinder to add in the combustion of the gases.

Claim.-1. A grate bar, having cast to or forming part of it, in the rear, a perforated eylinder, C. haring an anmular projection on one side and a corrosponding recess on the other, the axial line of which eylinder is arranged transversely to the length of the bar, the same forming, in connection with the other bars of like construetion, a tubular perforated bridge, for the passage of heated air to the fire, subotatially as specified.
2. The application to a grate bar, constrneted substantially as described, of a longitudinal tnbular portion, A, terminating in a transrerse eylindrical perforated strueture, C , of bridge-like character, and mate to form part of the grate bar of au outside lid or valre, $B$, essentially as and for the purpose or purposes herein set forth.

76,735. - Mattiew Flinn, St. Lonis, Mo. Gang I'low.-April 14, 1868.-The plow beams are attached to blocks which have tree lateral movement at the bottom of rertically adjustable standards. The blocks are attached by connecting rods to the rear lower corners of triangular frames which are attached, to both the axle and main beam. The wheels both run on the land.

Claim.-1. The slicling blocks c, connecting rods $c^{1}$, and seetors $c^{2}$, when arranged and employed snbstantially in herein shown and cleseribed, for the purpose of transmitting the draught from the axle to the plows.
2. The scetors or scetor D , pinion $d$, and beams $\mathrm{B}^{\prime}$, when combined and arranged as herein shown and deseribed.
3. The hook $d^{2}$, and lever $d^{3}$, when combined with the beam $B^{\prime}$ and sector $D$, as described and shown.
g6,7:B6.-I. G. Flishel: and E. MI. Bates, Stark County, Ohio.-Double Shovel Plow.- April 14, 1868. - Ihe sole is hinged at the toe and its serew threaded rear end turned up and passed through an eye in which it is adjusted by unts.

Claim.-1. The adjustable sole D E, constrneted and arranged substantially as and for the purposo set forth.
2. In combination with the adjustable sole D E the slide $g$, and nuts $f h$, arranged and operating sul)stantially as and for the purpose deseribed.
3. The entters or knives a a when used in combination with the shovel $c$, £ubstantially as and for the purpose deseribed.
76.737.-Daniel and Meilael. Foneman, Dalton, Ohio.- Draught Bar.- 1 pril 14, 1868.- Tho doable tree is made in two binged sections which are maintained by a spring in a slightly open position When at rest, so as to close by the first impulse of the draught of the team and relieve the wagon of tho usual jerk incideut to starting.

Claim.-Constructing the diaught bar in tro equal parts, and so hinging said parts as to leare a space between them when the samo is nsed in combination with spring $C$ : staple $d$. and clevis $e$, all amanged substantially as and for the purpose set forth.
76.738.-J. H. Frampton, Monewell, Ohio. Corn P'lanter and Mow.-A pril 14, 1868. -Tho forward plow opens the furrow for the seed which drops trom the box ; the following plows turn a lioht furron upon the seed from eaeh side. The seed slide is moved by a rod and lever connected to the right handle, which ribrates on its fulcrum post when dopressed.
Claim.-1. The handle 1 composed of two pieees, d $d^{1}$, linged together at $d^{2}$ when used for the pulposes set forth.
2. The eombination of the hingerl handle D with the rod $n$, lever $l$, and sliding bottom $m$ of the seed box I, when operating substantially as and for the purposes set forth.

76,739.-Thomas W. Fhost, Dorehester, assignor to himself and J. B. Kennall, Milton, Mass. -Shipper for Shifting Belts.- April 14, 1868. - Tho belt passes between eurved plates which are attached to the sliding shipper bar. The plate toward the loose pulley is at a lower eleration, so as to canse the relative depression of that sicle of the belt in stop ping the machine.

Claim.-The within-described guide N, formed in one or more pieces and secured to a sliding bar M, for giving the belt a lateral inclination, as and for the purpose set forth.

76,940.-O. I. Furaian, Addison, N. Y. T Tood Planing Mrachine.-April 14, 1868.-The work is lield betweeu the eenters of one siide, the other slide being raised to hold the work while being. operated upon by the entter. When one side or faee is dressed the slide is covered, the work rotated on its eenter to present another side, and again raised within tho lange of the eutters.
Claim.-'The slide G, having inclined wass upon its sides, working vertically in inclined grooves in the sides of the slide $F$, in combination with the crunk shatt H and lever $h$, all construeted and oper ating as herein deseribed for the purpose specified.

76, \%4… William M. Galusila, Arlington, Vt., assiguor to himselt and N. H. Batchelleir.- $-1 d$ justable Scroll Index for Gear Cutting Machines. April 14, 1868.-On the face of the disk is a spiral groove in which pertorated plates are arranged to more freely. The holes through the plates are equidistant, and although the plate is not held in a eirele the distance between erery adjoining two holes will comprise a number of degrees of a eirele deseribed around the ecnter of the clisk, equal to that between any oue pair of holes of the same plate.

Claim.-1. An index tor gear euttiug and other spacing machines consisting of the perforated or marked plate C moving on a seroll trach, which is provided on the free of the clisk, substantially as herein shown and deseribed.
2. The slotted clamps D D when fitted to bolts $b b$,

Whieh move in a groove $d$, as set forth, in combinatiou with the plate C, as speeified.
3. The index plate $\mathbf{E}$ when provided with the fixed stop $e$ and with the movable stop $f$, and when combined with the disk $A$ and seroll plate $C$, all made and operatiug substautially as herein shown and deseribed.
g6,942.-G. Giuserpe Garibaldi, Buffalo, N.X. -Moscic Floor.-A pril 14, 1868.-A foundation is laid with lime, sand, and seagliola iu equal parts. Upon this are laid colored compositions disposed in patterns. The compositions are made of pebbles or picees of roek of differeut colors imbedded in the marble cement described in his patent of $\Delta$ ugust 20, 1867.

Claim.-1. A composition for mosaie work, substantially as herein deseribed.
2. A mosaie floor, ceiling, or wall made of the composition, and iu the manner substantially as herein described.
g6, ${ }^{\text {g 43. George B. Garlinghouse and J. C. }}$ Moome, Madison, Ind.-Hay Raker and Loader. April 14, 1868. The apron has a double series of slats and three eonnecting chains. The outer end of each slat is fast to the outer chain, but its inmer cnd slides past its fellow slat in a link of the middle chain. The ehaiu pulleys are nearer together on the upper shaft than upon the axle, so that the apron is contraeted as it passes upward.

Claim.-1. The contracting apron when constructed to operate substantially as deseribed and for the purpose as set forth.
2. The guard formed of the bar K and fingers $h h h h$ when used iu the mauner and for the purpose as deseribecl.
3. In combination with the above, the mode of lifting the rake and holding it up, in the manner substautially as shown and described.
4. In combination with the first clause, the wheels H $\Pi^{\prime} H^{\prime \prime}$, auxiliar'y wheels J J, and teeth $i i$, \&e., or their equivalents, when used substantially in the manner and for the purpose as set forth.
'g6,944.-Frank Gerard, Lincoln, Ml.-Hopper Attachment for Wagons.-April 14, 1868-The triangular overshoot at the rear end of the wagon box is hinged to a transverse bar on the bed of the latter, aud is supported by latch bars to the box. It is arranged to vibrate on its hinges and let down to the ground to form a chute in the delivery of the contents of the box.
Claim.-1. The combination of the hopper B, formed with side boards $c$, with the wagon box $A$, substantially as and for purpose specificd.
2. The arrangement of the transverse bar $b$ with reference to the rear cnd of the box $A$ and the edge or end $e$ of the hopper, substantially as and for the purpose specified.
3. The arrangement of the hasps $r$, staples $r^{\prime}$, and hooks $r^{* *}$, with refereuce to cach other, and with the triangular side picees $c$ of the hopper $B$ and the box A, substantially as and for the purpose specified.

96,945--J. A. Gormiy, Bueyrus, Ohio.-Field Fenee.-April 14, 1868. -The boards are attached to the metallic posts by wire loops which are passed through holes in the posts, and through the boards and bearing blocks, aud are then clinehed.

Claim.-1. The loop $d$ when the same is constructed and applied substantially as described.
2. The combination of the anchor A, post B, board D , and loop $d$, when the same are coustructed and arranged substantially as deseribed.

196,946.-Francis H. Gould, Nemark, N. J.Detaehable Covering for Buttons.-A Pril 14, 1868.The forked shank of the cap passes beneath the button, and the hinged cap is brought over and snapped fast to eatch on the ends of the prongs.

Claim.-A eap, B, provided with a suitable fastentng, whereby said cap can be readily attached to or detached from a button, substantially as set forth.
'g(6, 74\%.-Edward Gray, Cuyahoga Falls, Ohio. - Mospital Bed.-April 14, 1868. The bed bottom is hinged so that different parts may be made to assume different inclinations. The invalid may, by
means of the deriees, be raised from the bed ar turned thereon.
Claim.-1. The side rails $A^{1}$ Trith groores $a$, caps $a^{2} a^{3}$ in combination with springs $a^{1}$. and bed frame $\mathrm{B}^{1}, \mathrm{~B}^{2}, \mathrm{~B}^{3}$, as and for the purpose set forth.
2. The bed frame with parts $B^{1} B^{3}$, having rollers $x x$ in combination with part $\mathrm{B}^{2}$, having flat slats, substantially as and for the purpose deseribed.
3. The middle part $3^{2}$ of the bed frame, construeted as deseribed, in combination with rod $b^{3}$, arranged as described, as and for the purpose set forth.
4. The table $S$ with the rods $s$, in combination with ears $s^{\prime}$ and rod $\mathrm{S}^{\prime}$, substantially as deseribed.
5. The shaft $\mathrm{C}^{1}$ with frames $\mathrm{C}^{3} \mathrm{C}^{4}$ when combincd and arranged so as to operate the head picee $\bar{B}^{2}$ or middle part $\mathrm{B}^{2}$ of the bed frame, or both, iu the manner and for the purpose deseribed.
g6, \%48.-Tlishia Gray, Cleveland, Ohio.-Telegraph Apparatus.-April 1.4, 1868.-The invention described in the claims relates to the use of an incluctive apparatas in connection with a relay at each offiee, and the use of an induetion, "to and fro" current to operate the relay instead of the direet or battery current.

Claim.-1. Operating a relay by to and fro eurrents of magncto-electricity, momentarily induced by a disturbance of the main or line currrent, in the manner substantially as described.
2. Iu combination with the receiving magnet or magnets, the electro-magnetic armature, in which a secondary eurrent is indued on the disturbanee of the line eurrent, substantially as deseribed.
3. In combination with the induction apparatus, eonstructed as deseribed, the polarized relay, placed in a short eireuit, and operated by induced currents, in the manner and for the purpose as set forth.
4. The arrangement of the magnets BC and $\mathrm{B}^{\prime} \mathrm{C}^{\prime}$ in combination with the magnets $\mathrm{D}^{\prime} \mathrm{D}^{\prime}$, used in the manner and for the purposes substantially as described.

76, 7 29.-Georae D. Greenteaf and Darius C. Larkins, Depauville, N. Y.-Apparatus for Treating Milk.-April 14, 1868.-The rectangularly coiled prpe has a coutral funnel, and its onter end is turned over the edge of the pan and descends so low as to act as a siphon in emptying the pipe when the stop cock is opeued. The coil is suspended in the pan by chains.

Claim.-1. The cooling pipes $\mathcal{B}$ adjusted in the pan or vat A by means of the ehains $D$ and pins E, as hercin described for the pirrpose specified.
2. The combination and arrangement of the adjustable pipes $B$, haring central turnerl-up end $B^{1}$ and siphon $B^{2}$, the handles $C$, and vat $A$, as hereiu doseribed for the purpose specified.

76,950.-C. B. Gregory, Beverly, N. J.-Fire-place.- A pril 14, 1868.- Improvement in his patent, December 28, 1867. The fire pot is perforated, and between it and the outer shell the space is occupied by air chambers and gravel. The entering air passes through the chambers, the gravel, and theu through the openings in the fire pot into the fire space.

Claim. - The air chambers $m$ and $n$, situated between the inner perforatel casing 13 and outer casing A of a fircplace, and communicating with chamwer's containing gravel or other suitable granulated material, throngh which the air must pass prior to entering the fire pot, all substantially and for the purpose herein set forth.
g6, 751 - W. D. Guseman, Morgantorn, W.Va. -Fireplace.-April 14, 1868.- Above the basket grate the checks are extended outward and a canopy above covers in the space. Within the canopy is a segmental plate which may be let down to occupy the space above the grate and form a blower.

Claim.-1. The projecting front or cap C abore and beyond the perpendienlar line of the front of the grate. substantially as and for the purpose specificel. 2. The sliding blower or screen E in combination with the projecting front or cap C, substantially as and for the purpose set forth.
 himself and W. M. Logan, same placo.-Post LIols

Boring Machine.-April 14, 1868. The eylindrieal auger is open on one side to give flexibility, and is sharp and armed with spurs upou its lower edge. It is used by imparting a rotary reciprocation and a simultancous pressure of the foot on the cross bar. The plunger is used to expel the earth.

Claim.-The body A, spurs $c$, planger F , guides Gr, and cross head if, when constructed, arranged, and combined as and for the purpose specified.

76,753.-Don C. Hall, Hannibal, Mo.-Atmospheric Uhum.-A pril 14, 1868.-Air at any desired temperature is forced into the churn at a point near the bottom by the reeiprocating air pumps, and has Gxit through the lid.

Claim.-1. The combination of the removable pipes L, cylinders C, one or both pistons D, lever $F$, and supply pipes $I$, haring ralves I placed in them, with each other, and with the churn $A B$, substantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the removable pipes L, cylinders C, supply pipes $\Pi$, harving valres I placed within them, and flexible pipe or hose K, with each other, whether used with or without the interposition of the branched pipe $J$. substantially as herein shown and described, and for the purpose set forth.

76,754.-Judson W. Hall, Worcester, Mrass.Sal Iron.-April 14, 1868.-The iron is perforated longitudinally and turned up at the forward end, where it has a lid. The iron is supported on a stand, so that the chimney of a coal oil lamp may oceupy the perforation of the iron. The window allows is vien of the flame.

Claim.-1. The combination with the rear of the iron of the concavities $m$ m, for the purposes stated. 2. The combination with the rear of the iron of window $e$, substantially as and for the purposes set forth.

76,75.7.-G. F. Hammer, Cineimati, Ohio.Machine for Polishing Wood.-A April 14, 1868.-The drum is corered with sand paper, and has rapid rotation and slow vertical reciprocation in the aperture of the table.
Claim.-The revolving vertical spindle $b$, drum E , the pulleys BC , belted together, in combination with the eross head $g$, comecting rod $f$, crank $c$, spur wheel $d$, and worm gear $c$, upon shaft $a$, all arranged to operate as described.

96,756.-Menry J. Hancock, N̄ew York, N.X. -Clothcs Dricr.-April 14, 1868.-A number of bars are piroted to a bracket which is hinged in such manner that the bars can be turned down into a horizontal position and spread out for use, or brought together and raised into a vertical position agaiust the wall when unused.

Claim.-1. The combination of the piroted frame B carrying the laterally extending arms or bars C, with the bracket $b$, on the shaft or rod A, whereby the arms or bars, when closed together, may be brought into nearly or quite vertical position, substantially as herein set forth.
2. The combination of the clasping derice D with the supporting rod or shaft A and the movable arms or bars C, whereby the latter, when closed and turned into an upright position, may be retained in such position, substantially as herein set forth.
3. The arrangement of the laterally extending bracing arms $g g^{*}$ upon the chasping device $D$ and the bracket $b$ of the pivoted frame B , and with reference to the rod or shaft A, whereby the apparatus is prevented from torning upon the axis of the shaft, substantially as herein set forth.

76,75\%.-Theodore William Heinemann, New York, N. X.-Purifying, Scasoning, and Prcscrving Wood.- A pril 14, 1868.-The wood is boiled in water with from $\frac{1}{2}$ to 2 per cent. of carbonate of soda, until no more color is extracted by the solution. It is then dried. The wood may then be pat into a elose boiler with resin and sufficient water to fill the boiler with steam, nud raised to $3066^{\circ} \mathrm{F}$. It is kept at that temperature until the timber is heated throngh. The boiler is then cooled to $200^{\circ} \mathrm{F}$., and t:en heated again. Glass solution may be substituted for resin.

Claim.-1. The method herein deseribed of purifying, seasoning, and preserving wood, hy first frecing it from substanees liable to spontancous deeay, in the manner deseribed, and afterward impres. nating it with any of the substances herein speeified, or their equiralents, lyy means of high steam pressure, substantially as deseribed.
2. The method lierein deseribed of impregnating wood with any of the substances specified, or their equivalents, by means of high steam pressure, when the steam is generated and superheated in the same boiler or retort in which the wood and impregnating substances are contained, and subjected to steam pressure, substantially as set forth.

76,758.-Samuel M. Moncland, Catawissa, Pa., assignor to himself and Daniel Kostenbavder.Morsc May Forl:-April 14, 1868.-The jaw's are barbed on the contiguous sides, and are held in their engaging position by a spring catch on one handle which rests against the looped end of the guide rod attached to the other.
Claim.-The rod d and spring E, substantially as shown and deseribed, in combination with the handles $B$ of a double tined hay fork, all as and for the purpose set fortlı.

76,959.-Frederick Hoddick, Muffalo, N. Y., assignor to George A. Prince, same place.-Reed Organ.-A pril 14, 1868. -The body of the upright organ is divided into chambers, against which the several sets of reeds are placed. The chambers correspond in number with the reeds in a set, and eaeh chamber eovers the eorresponding reeds in each set,
Claim.-1. The employment, in upright organs, of the chambers 13 B , interposed between the sets of reeds aud the ralves, and operating in tho manner and for the purpose set forth.
2. So combining several sets of reeds E E with the chambers B B that the opening of the one ralve C , in any one chamber, shall act upon all the reeds opouing in that chamber, as herein set forth.
3. Arranging the valres C C and the openings D D, which they cover', in two rows, one above the other, and alternating in position, when combined with the chambers 13 B , in such a manner as to ceonomize space, as hereiu set forth.

76,760.-Cyrus B. Holdex, Woreester, Mass.Horsc Rakc.-April 14, 1868. -The ruke is tilted by the traction of the wheels throngh mediam of a ratchet wheel and pawl operated by levers.
Claim.-1. The tubular head C, composed of two parts, connected by the joke $b$, in combination with the axle $A$, the ratehet $c$, and pawl $d$, substantially as and for the purposo specified.
2. The arrangement and combination of the hook $f^{\prime}$ and yoke $b$, with the tubular head C , and its teeth $\mathrm{C}^{*}$, sulsstantially as shown and described for the purpose set forth
3. The tubular head C, arranged eccentrically upon the axle $A$, in such manner as to permit the innermost ends of the teeth $\mathrm{C}^{*}$ to be passed through such tubular head without interfering with the axle, substantially as and for the purpose specified.
g6,761.-Robert Holmes, Middletown: Conn., assighor to Mindetown Plate Company, same place.-Ice P'itcher.-A pril 14, 1868.-The lower bottom is detachable with the rim base, and is depressed in a concavo-convex shape so as to rest upon the table. The concavo-convex inner bottom is stepped in the lower bottom.
Claim.-1. The providing of the bottom of the internal wall F , with a pendent pin, $c$, to fit into a step, $d$, at the center of the upper edge of tho base E , sulstantially in the manner as and for the purpose herein set forth.
2. The connecting of the detachable base, E , with the external wall $\Lambda$, by means of a serew joint, $\alpha$, when said detachable base is used in connection with the step $d$, and the pendent pinc at the bottom of the inner wall, substantially as set forth.

76,762.-Benjamin F. Hooper, Newark, N. J.Coach Pad.-April 14, 1868.-The flaps are made of thin sheet metal with down-turned edges, and aro riveted to a body piece of metal. Near eaeh side
of the body picce are cavities for reception of the terrets.

Claim. - The metal sides $b$, and body piece $d$, construeted and arranged substantially as herein shown and described.
g6, 7 (BB.-Eben N.Horsfond, Cambridge, Mass. -Preparing Acid Phosphate of Lime.-April 14, 1868. - The sulphuric acid is diluted until the sulphate of lead present therein is precipifated. The phosphate of lime is dissolved in dilate nitrie or hydrochloric acid making a nearly saturated solntion which is filtered, and the dilute and purified sulpharic acid added, which preeipitates the sulphate of lime. The nitrie acid and water are evaporated by heat.

Claim. - The use of sulphurie acid or oil of ritriol of commeree, purified as above deseribed, to be employed in the manufacture of pulverulent acid phosphate of lime, when suel acid phosphate is so manufaetured as to contain gypsum or sulphate of lime derived from the phosphate of lime used in making said pulrerulent aeid phosphate for the purpose of raising bread.
g6,964.-Mark W. House, Cleveland, Ohio.-Lamp.-April 14, 1868.-A non-conducting ring is interposed between the burner and the reservoir, and to the bottom of the ring is an extensible tube with a serrated, lower edge resting on the bottom of the lamp.

Claim.-The adapter B, in combination with the tube D E, substantially as arranged and deseribed, for the purpose set forth.

196, 6 6.5.-JOHN W. HYatt, Jr., Albany, N. Y.Composition for Billiard Balls and other articles.April 14, 1868.-Paper pulp is mixed with the same weight of flour of gam shellae, the water is expressed, and the object is then molded, heated, and cooled under pressure.

Claim.-1. My improved method of produeing such mixture by first pulverizing the gum, as above deseribed, and then mixing the same with paper pulp, in the manner and for the purpose abore described.
2. The billiard ball, or other article of mannfacture, produeed from such composition, substantially in the manner and for the purpose above deseribed.

96, \%660-E. D. Ives, New Haven, Conn.- ILanufacture of Glass Knobs.-April 14, 1868.-The knob is east upon the serew shank, and its surface finished under exposure to heat.

Claim.-A glass knob, attached to its socket, shank, or whaterer it may be, and completed by giving to the said linob a fire surface finish, substantially in the manner lierein set forth.
 assignor to himself and JoFN F. Mrers, same place. -Lantern.-A pril 14, 1868. - The air passes downWard through the perforations of a horizontal anmular plato and around the edge of another plate beneath it, before reaching the deflecting cone and passing up inside and outside of the same. The guard rires are hooked to the base.

Claim.-1. In combination with the base and burner of the lamp, the flange plate $B^{\prime}$, perforated annular plate $F$, and annular plate $G$ attached thereto at $\mathrm{G}^{\prime}$, arranged to operate substantially as and for the purpose set forth.
2. A dantern combining in its construetion the following elements: A base and lamp, a flange plate $\mathrm{B}^{\prime}$, perforated amnular plate F , deflecting anmular plate ${ }_{G}$, ring $G^{\prime}$, chimney $L$, detachable firame $H^{\prime} H^{\prime}$, and top I, said parts being respectively eonstructed and arranged in relation to cach other substantially as described.
g6, ${ }^{2}$ \%6.-SAMUEL S. JAnison, Jr., Saltsburg, Pa. - Car Replacer.-April 14, 1868. The groored inclined metallic plates are arranged so that they can be wedgod to the rails to extend to either the right or left, and rest upon the cross ties.

Claim.-1. The combination of the two inelines MI N , when constructed with ears $m m, n n$, on each side, so that they cambe applied on either side of the rail, substantially as and for the purposes speeified.
$\stackrel{2}{2}$. In au apparatus consisting of the groored in-
cline M , and the smooth incline N , so constructing the groove O, that it receires the flange of the ear wheel at the lower and expanded end of the groore, and guides it gradually to wards the rail, fimally dropping the wheel upon the rall in the manner described, and withont causing the wheel to eross the rail.
g6, \%65.-SAMUEL S. JAMISON, Jr., Saltsburg, Pa.-Steam Engine Valve Gear-Amil 14, 1868.At the end of its stroke the cross-head strikes a gainst blocks, which are attached to the slides to which the lower ends of the operative lever of the ralve are pivoted, and eauses the reciproeation of the valve.

Claim.-1. The eombination of the slides MI M, bloeks $m m \mathrm{~N}$, lever $J$, valve stem I, and eross-liead $\mathrm{C}^{\prime}$, when the said parts are construeted and arranged so as to operate the valve gear from the cross-head, substantially as cleseribed.
2. The arrangement of the springs $s s$ with the blocks $m$ and $N$, substantially as speeified.

176, g\%o.-SAMUEL S. JAMISON, Jr., Saltsburg, Pa.-Rotary Steam Engine.-April 14, 1868.-The hub turns in a coneare which covers $120^{\circ}$, more or less, of its periphery. The periphery of the hub has a number of inelined cavities into which the steam is projected as they pasis by the tangential steam port.

Olaim.-The arrangement of the regulating serew $F$, spring brace $G$, movable abutment $D$, and guides M M, operating in connection with a rotary eylinder, A, in the manner deseribed.
ref, mig. -John William Jarboe, Green Point, N. X.-Paper Cask.-April 14, 1868.-Wach edge of the paper cylinder has a metallic band which is rireted through the chine to the metallic easing of the head.

Claim. - A eask, or vessel of similar nature, made of paper, having its head or heads supported by an outer casing, $e$, and secured to the eylinder or body, substantially as shown and deseribed.
g6, gige-EDWARD T. Jeninivs, Ravenswoorl, N. Y.-Closing the Mouths of Jars, Oans, dec.-April 14, 1868; antedated April 7, 1868.-The lower plate spans the aperture and the upper plate corers the same and passes down the rubber gasket upon its edge. The pin is attached to the upper plate and passes throngh the lower one to prevent its turning.
Claim.-The combination of the plates $A$ and $D$, serew $B$, washer $C$, and pin $E$, for the purposes speeified.

96, 973 .-Henry W. Johns, New York, N. I.Compound for Roofing and other purpeses.-April 14, 1868. - Asbestos is combined with pigments and carthy matter to form cement for various purposes.
Claim.-The combination of asbestos with pigments, oleaginous or resinons matters, or varnishes, or spirits, or ground or powdered minerals, or rubber, all substantially as cleseribed, and for the general purposes set forth.
g6, gy, - Erastus Johnson, Wilkins, Pa.-Lu-bricator.-April 14, 1868.- At the top of the cylindrical lubricator is an inside, screw-threaded, eylindrical neek into which the top of the ralre stem enters. The head of this stem is spread ont iuto a cross-bar whose ends are serew-threaded and engage the serew-thiread of the neek. The eap screws into the neek and has two jaws engaging the top of the valre stem and eausing its vertical adjustment by turning the eap. The top of the neek and eap are packed by an lndia-rubber corer.

Olaim.-The combination of the ralve stem $D$, having the head $m$, with the neck I, and stopple E , having the jaws $e$ e, all construeted and combined substantially as and for the purpose set forth.

76,775.-James W. Jones, Cumberland, Ma.Apparatus for Mraking Extracts from Bark and other materials.-A pril 14, 1868.-Improrement on his patent Nor. 5, 1867. The liquor fiom an upper tank is infroduced into the bottom of the leaeh beneath a quantity of ground tan bark which is between *a false top and bottom that are sufficiently open to allow passage to the liquor. After the liquor has
been foreed uprrard throngh the bark by the pressure from the clevated tank, it is drawn downward and discharged at the bottoun.

Claim.-1. Introducing at the bottom of a rat, leach tubs, or other vessel, a column of water or liquid of any desired altitude, to inerease the force of the upward hydraulic pressure, when the liquor is dram ofi" at the bottom, substantially as and for the pur. pose specified.
2. The combination and armagement of the rats, leach tubs, and other ressels, with the tronghs or pipes $G$ and $H$, and reserroirs $G^{\prime}$ and $H^{\prime}$, sulbstantially as and for the purpose specified.
3. The combination and arrangement of the leaches, tank, and hose or pipes, when the same are construeted and arranged substantially as deseribed.
4. The combination and arrangement of the leaches, reservoirs, pump, and hose or pipes, when the same are construeted and arranged substantially as deseribed.

76, 796.-Thomas L. Jones, Natchez, Miss.Slide Valve of Combined Migh and Low Tressure Engine.-April 14, le68.-The stean is cxhansted into the oper air until the pressure of steam at that cat ot the erlinder equals the atmosplicrie pressure, after which it exlrausts into the condenser.

Claim. - The arrangement of the steam ports $a a^{1}$ $a^{2} a^{3}$, eondenser ports $e e^{\prime}$, exliausts $i i^{\prime}$, ralres $g g^{\prime}$, and valre $e c^{1} e^{2}$, when the parts referred to are constructed so as to operate substantially as and for the purposes set forth.

76, \%g7.-Lewis L. Kelley, Delarrare Station, Ind.-Machine for Tanning.- A pril 14, 1868. -The hides are suspended on the pins npon the rim of a horizontal wheel whiel has oscillation within the tank by an arm of its shaft, which is connected by a rod to a crank upon a shaft extending to the outside.

Claim.-The arrangement of the wheel or rack E F, having a reciprocating or partial rotation within a tanner's rat, as and for the purpose set forth.
g6,gg8. - Willan P. Kirkland, San Francisco, Cal., assignor to himself, Joun L. Murruy, and Engar W. Mulirir- - Drain and Water P'ipe. -A pril 14, 1868. - A series of loosely twisted cords are placed in a caldron of boiling' asphaltum. 'Itheir ends are confined to a eylinder suspended orer the tank. The cords are so arranged as to cioss each other diagonally when the eylinder is turned; and between the coils of rope is placed a layer of oakum. Atter the pipe is formed it is removea from the former and coated with the contents of the ealdron.
Claim.-1. In the manufacture of drain and water pipes, the use of ropes, cords, or strands dipped in a pitchy or tarry substance, and weund spirally or placed at right angles around a form, for the purpose of obtaining the desired shape and thickuess of the pipe.
$\stackrel{\sim}{2}$. The nse of a filling of oakum or other fibrons material, placed under the strand or cords, substantially as deseribed, for the purposes set forth.

198, \%\%9. - Dallas Tnowlfon, Liberty, MceStove P'ipe Drum - April 14, 1868.-The plates forming the the passages in the drum are seeured to a disk, and the caloric curreut may be allowed to take a nearly straight course or be forced through a rery derious comse in the drum. Above the drum is a common damper. The disk is turned by a crank.

Clain.-The combination and arrangenent of the partitions $f g h$, with the disk D and the drum or case $A$, its induet $B$, eduet $\mathcal{C}$, and plates $e c^{\prime}$, the whole being to operate substantially as speeified.
2. 'The combination and arrangement of the damper E . with the partitions $f g h$, the disk D , ease $\Lambda$, induct $B$, educt $C$, and plites e $c^{\prime}$, arranged substantially in the manner and so as to operate as set forth.

76,780.-JTacon E. Konout, Brooklyn, N. Y.-Padlock.-April 14, 1868. - The hasp is locked to the body of the lock by a lever and springs attached to the front plate. By pressing the lever downward the hasp is thrown outward, exposing the ker hole. A derice is placed between the sliding boits, which
obliges the key to rnore in one direction for locking or anlocking.
Claim.-1. The stop K and spring L, for preventing retrograde morement of the ker.
I. In combination thererith, the sliding bolts M and shackle spring $R$, all operating together, substantially as and for the purposes described and set forth.
g6,981.-Trenertck T. Laforge and Willlais Gemes, Waterbury, Conl.-Machine for Straightening and liound ig shafting.-April 14, 1868.-The shaft is fed longitudinally betwcen the pressme rollers, which are geared to a common wheel, so as to have rotation in the same dircetion. The feed 1ollers are upon the ends of adjusta ble slides, and are placed obliquely to cause the feed.

Claim-1. The obliquely-arranged feed rolls, in combination with the pressure rollers, substantially as and for the purpose specified.
2. The combination of the quide rolls C , the pressure rollers 13, and the obliquely-arranged feed rolls $a^{\prime} b^{\prime} e^{\prime}$, prorided with their ${ }^{\prime}$ 'espective means of adjustment, all arranged and operating substantially as set forth.
3. The construction of the pressure rollers and supporting rolls, with beveled or tapering-end portions $m m^{\prime}$, arranged, in relation with the mechamism which feeds the shaft or rod to the pressure rollers, substantially as and for the purpose specified.
*6,782.-Patrick M. Lawler, Roehester, N. E. -Shingle Machine.- April 14, 1868.-The reciprocating swing table has a parl acting on the sixarmed star wheel to cause it a rotation of $60^{\circ}$ cach reciprocation of the carriage, and to turn the pinion 1800, to eanse the adjustable crank upon the pinion shaft to tilt the table, ly whicle the bolt is adjusted to gire proper inclination to the shaft.
claim.-The arrangement of the pawl I, star wheel IF, spur whed IV, pinion I', and its shaft $S$, in combination with the crank ( 3 , or its equivalent, and slotted picee $N$, operatin! substantially for the purpuses and in the inanner herein described.
geg, $983 .-$ Isaic LiNDsider, Pawtueket, R. I.Troven Fabrie for lloor Míctting, dec.- A pril 14, 18 (湜. -Straws are woren with tibrous warp in such manner as to hide the latter, allowing the straws to pass alternately orer two threads and uuder one. The selredires are moven closer, and may hare a mumber of rows of stitches added subsequently. In finishing, the labric is stamped and pressed.

Claim.-1. The method herein deseribed of preparing and assorting straw for weft of, and wearing the same into, a fabrice.
2. The woren fabrie licrein deseribed, composed of a weft of straw, prepared, sorted, woren, and finished, as set forth.
3. The mode lerein deseribed of forming the selvedge of a woven fabrie, by securing the ends of the weft by one or more rows or courses of machine stitehing, is set forth.
76. 984 .-Tosern W. Lull, Glen Hope, Pa.Rovolving Cylinder for Tanning Hides.- A pril 1-t, 1868. - The barrel is studded inside with pins, and has a perforated fulse botion near one end, throngh which the tamuing lignid fows in passing fiom the tubular induction gudgeon to the hides within the eylinder. The liquor passes out through tho other gudgeon.

Ctaim.-1. The tanning of leather by means of a revolving eylinder, substantially as deseribed.
2. The eylinder' $A$, constructed with the heads D D, perforated interior head $C$, hoops $\& \in$, fastened by couplings II, door F , and projecting pins e e e, substantially as and for the purpose set forth.

96,785.-T. I. Mameett, Titusville, Pa.-Bed Bottom.- April 14, 18(i8.-Whe slats are composed of an upper and under piece, which are connected at their end and spread by bloeks between them. A frame beneath the head is pivoted to the side rails and by levers, operated by a cord which is coiled upon a shatt at the head of the bed.

Claim.-The combination of the slats $h h$, con structed as deseribed, and their bands $g g$, with the movable arms D D, cross slats $j j$, levers C C, having
pulleys at their tops, cords $f f$, and winding shaft $d$, the several parts being constructod, arranged, and used as specified.
\%6, \%86.-Alexander Martin, Basel, assignor to himself and GEorge OTT, Schafthausen, Switzer-land.-MIatch Box.-A April 14, 1868.- A metallic plate having a corrugated surface forms part of a match safe, or is attached to a wall.

Claim.-The applieation of the described metal grate to match boxes or walis, or any articles whatsoever, for the purpose of lighting friction matehes.
og9, \%8\%.-Anthony M. Mantin and John C. Blocrier, Bloomville, Ohio.-Horse Hay Fork.April 14, 1868. -' Lhe tines are held in their horizontal position by the roller upon a lever which passes beneath the end of the shank. The hecls of the tines slide in a slot in the shank, and they are fonlerumed upon a hanging rod.

Claim.-Tho horse hay fork, constructed as deseribed, haring its central tines bent upward, in rear of the bar $J$, to receive the end of the piroted lever L , bearing the roller $d$, said roller adapted to fit under the lower end of the curred slotted brace $B$, when the fork is loaded, and withdrawn therefrom to permit the brace to slide, by its slot $e$, upon the rod $m$, in said lever, to discharge the load, as herein shown and described.
\%6, \%83.-JoHN Masters, Wankegan, IllDitching JIachine.-April 14, 1868. -The earth is raised by a double-pointed, coneare-topped plow, and the earth is compacted upon it by an adjustable roller. The earth is carried upward and backward by an endless conveyor.

Claim.-1. The piroted plow I, when construeted and arranged so as to be adjnstable in a horizontal position upon the elevator box D , at whatever depth in the ground it may be operating, in combination with the elevator bor D , as herein described.
2. The plow I, when construeted with two land sides $i$, the coneare donble inold board $i^{\prime}$, the curved cutting edge $i^{\prime \prime}$, and the arms $I^{\prime} I^{\prime \prime}$, substantially as and for the purpose specified.
3. The wheel W, rendered adjnstable in the manner herein described, when arranged so as to operate in combination with and at the plow point, snbstantially as and for the purpose specified.

176,989.-Wilitan J. McLea, Buffalo, N. Y., assignor to himself and C. F. Youtg, same place.Gas Reflector.-April 14, 1868. -The burner projects from the face of the refleetor disk, which is jointed to the standard and is conneeted to a sliding block, by whose vertical movement both the burner and reHector are inclined either npward or downward. The pipe behind the burner is flexible, to allow of this movement.

Claim. - The combination of the gas chamber A, the rod $a$, the slide C , the sliding rod $c$, the reflectors D , and the rubber gas tnbes $m$, constrneted, arranged, and operating substantially as and for the purposes herein described.

76, $790 .-G$. M. MCMAHAN, Monnt Sterling, Ky. -Door.-A pril 14, 1868.-A spring platform beneath the door is made, by the weight of a person, to depress the arms of a roek shaft, which has a segment rack engaging a spur wheel it the bottom of a rertical shaft whose arm opens the door. A spring beneath the arms of the horizontal rock shaft raises them into a horizontal position, and thereby closes the door when the weight is removed from the platform.

Glaim.-The combination of the door D, rods C R, gearing $w s$, arm $a$, and spring $m$, with the platform $B^{\prime}$, posts $n a$, hollow supports $e c$, springs $u u$, arehed beams I $I$, and pin $p$, when the said parts are constructed and arranged so as to operate in connection with each other, substantially in the manner and for the purposes set forth.

86, g91.-RuFus N. Merian, Worcester, Mass. -Wood Planing Mrachine.-April 14, 1868.-One or more presser bloeks have their bearing surfaces the reverse of that of the molding, and are so arranged in relation to the molding entters and the side cutter
as to insure the morement of the stnff in a straight line as it passes from the molding entters to the side cutters, which trim the edge opposite to the molding. The feed rollers are pressed down upon the stuff by the downwardly and inwardly-curved ends of spriness which lest upon their boxes, and are adjasted by thumb serews.

Claim.-1. The slots $w$ in the bed $A$, arranged beneath the eutter head $F$, to permit the escape of the chips or shavings, substantially as herein set forth.
2. The arrangement of one or more presser blocks $\mathrm{D} * \mathrm{E}^{*}$, in relation with the molding cutter and one or more side cutters $J$, sulbstantially as shown and deseribed, and for the purpose specifiod.
3. The enrved end portions $b$ of the springs $B$, arranged to act upon the sliding bearings of the feed rollers. snbstantially as shomn and described, and for the pripose specified.
4. The presser plate $D$, formed with a stem $r$, and spiral spring $s$, arranged in the sleeve $n$, and made adjustable upon the slotted bar C, snbstantially as and for the purpose specified.
5. The presser bloek $\mathrm{E}^{*}$, constrmeted with a detachable bearing piece, whose muder surface is the reverse of the surface of the molding, and made adjnstable vertically and laterally, substantially as herein shown and set forth.
6. The slide $K^{*}$, in combination with the slotted bar $L$, screw $b^{* *}$, and piroted frame $K$, all construeted and operating in connection with the slotted bar $r$ to admit of an angular adjustment of the side entters J , subsiantiully as set forth.

196, \%92.-GEORGE MERRITT, Brooklyn, N. Y.-Inkstand.-April 14, 1868.-The jump is an Indiamubber diaphragm, whose edge is held beneath the serew, and is operated by a knob. At the lower end of the dipping funnel is the cireumferentially-grooved plug, which prevents the splashing of ink.

Claim.-1. The filter plag M, in combination with the finmel $\dot{\Delta}^{1}$, and with the jump 11 , arranged to operate smbstantially as and for the purpose herein set forth.
$\stackrel{2}{ }$ The duplicate collars C D, threaded, the one male and the other female, as shown, and arranged relatively to each other and the neek of the orifice $\mathrm{A}^{2}$, and to the jump H , or equivalent means of raising and lowering the pressure of the air in the inkstand, substantially as and for the pmrposes herein specificd.
3. The pen rack $\mathrm{P} \mathrm{P}^{1} \mathrm{P}^{2}$, arranged to locis, by its elasticity, upon the main body of the inkstand, and to form a linge for the cover $R$, substantially as herein set forth.

76,793.-James R. Mills, Macon City, Mo.Weather Strip.-A pril 14, 1868.-A flexible strip, attached to the bottom of the door, oceupies, when the door is elosed, a mptallie trongh which carries the watel away.

Claim.-In combination with a Weather strip, placed underneath a door, and having in its upper surface a groove extending the fnll width of the doorway and increasing in depth from one side of the doorway to the other, and having a noteh or spont in the outer ledge of the groove, at the deepest end, for the purpose of letting the water outward, the elastic band $E$, made of rubber or other material, and applied to the bottom of the door in such a way as that when the door is shat the free edge of the band shall extend down into the edge of the groove, in the manner and for the purpose specified.
76.794.-John R. Moffitt, Chelsea, Mass.Heel Casing.-April 14; 1868.-The sheet metal is ent into the section of an annulus and slotted radially on its conrex edge, which is bent to form the fin or seat piece, the coneave side forming, When bent around and rireted, the cavity for the rubber heel.

Claim.-1. A heel easing, formed of sheet metal. substantially as deseribed.
2. In combination with a metal heel casing, spurs $o$, substantially as and for the purpose set forth.
'76,795.-Richard Montaomery, New York, N. Y.-Metal Beam.-April 14, 1868.-Improvement on his previous patents. The bearing ends of the corrugated, arched beams are extended beyond the
spring of the arch in a right plane coincident with its chord. Interlocking elerations and depressions are made in the ends of the beams and in the saddle plates which embrace and hold them. A forked bolt is used to secure the ends of the corrugated beams to any object, the forks in the shank of the bolt being made to pass between each fold of the corrugation in the beam.

Claim.-1. So shaping and forming the ends of an arch constructed of corngated metal as that saic ends shall coincide with the straight cuds of a beam formingr a chord to said arch, if superimposed thereon, substantially in the manner herein set forth.
2. Imparting a curved or irregular line to the folds of a corrugated metal beam, substantially in the mannet and for the purpose herein speeified.
3. Indenting or breaking the smeface of the folds or corrugations in a corrmgated metal beam, substantially as and for the purpose herein set forth.
4. A bolt E having a torked shank, so amanged and disposed as to fit within and between the folds of a corrugated metal beam, at the ends thereof, substontially in the manner and for the purpose herein set forth.
geg.796.-I. Morris, Clinton, Ml.-Work Stand. - April 14, 1868.-The rertical spool spindles surround a box, which may contain a ball of parn, whose end traverses the lid, which has a pin cushion and is surronnded by a thread cutter

Claim.-1. The groove and socket of the standard D, in combination with the deflected bars d $d^{\prime}$ of the knires E, substantially as and for the purpose set forth.
2. The spool spindles $a$, twine box $A B$, pin cnshion C, and knives E, combined, arranged, and operating substantially as set forth.
g6, 79\%.-Cirus B. Monse, Rhincbeck, N. Y.Making Rings for Ring Spinning.-April 14, 1868. -The ring is bored and finished on the end of a steel tube which passes through the thbular spindle of the lathe head stock. The ring is then cut off the ent of the tube and its wearing end only is hatdened.

Claim.-1. As a new method in the mannfacture of rings for ring and traveler spinning, forming a finished ling on the cud of metal tubes, and then serering the same from the tube itself, as herein described.
2. Making rings, for ring and traveler spinning, of highly carbonized cast steel, and hardening or tempering at a low heat only the wearing portion or parts of the same, as herein described.
76.798.-CyRUs B. Monse, Rhinebeck, N. Y.Spinning Foume.-April 14, 1868. -The lifting rods worls in boxes which extend fiom the step to the bolster rail, and are adjustable in both rails by set screws.

Claim.-The tnbular lifting-rod support E, in combination with the slotted bolster and step rails A B, and with the lifting rail C, for the purpose of adjusting said lifting rail to and trom the center of the machine, smbstantially as hercin set forth.

G6, 999 - David B. Mosher and Charles C. Mosher, Sencea Falls, N. Y.- Window-Blind Fast-ener.-April 14, 1868. -The shaft is turned by hand and extends nearly throngh the casing, where it has a bevel-gear wheel engaging a similar wheel attaehed to an arm, by which the blind is opened and closed.

Claim.-I'Ee combination of the shaft and gear B, gear, fith arm attached C, box or frame D, link E, dog $F$, rose $G$, knoh or handle II, when mado sub stantially as specified and applied as hercin set forth.
\%6,800.-E. MI. Naramore, North Underhill, Vt.-Gete.-A pril 14, 1868. -The rails are pivoted to one post and the pickets to the rails. The gate is opened by drawing back to the catch, when it is thrown uprard by a spring beneath the lower rail.

Claim.-1. The spring J, applied to a pirot gate and in combination therewith, substantially as and for the purpose described.
2. In combination with the pivot gate and spring J , the catch K , substantially as deseribed, for the purposes set forth.

76,901.-John Nichols, Gardner, Mass.-High Chair for Children.-April 14, 1868.-The seat portion is linged to the support and the parts are capable of assuming the position of seat and table, respectively.

Claim.-The child's high chair constrncted as describerd, having the divided legs removabiy hinged together, the lower part $D$ of which, carrying the box $G$, is adapted to be folded mp in front of the chair seat, as herein deseribed, for the purpose specified.
g6,802.-Josiani H. Noves, Center Abington, Mass.-Cap for Oil Cans.- April 14, 1868.-The ordinary can has a screw-threaded mouth and a covering plate attached to its top. The plate has a perforation toward one side. A eap is serewed upon the mouth, and in the serew cap is a eork which bears upon the plate. The eap has an aperture which agrees with that in the plate when turned in one position, otherwise the perforation is closed. A pin acts as a stop to limit the morement of the cap.

Claim.-1. The construetion of the revolving per forated cap, in combination with the neck of the can or other ressel, substantially as herein shown and described.
2. The combination of the sealing packing E with the cap and the diaphragun $a$, substantially as herein shown and described.
3. The slotted flange D , in combination with the stop pin $g$, as and for the purpose set forth.

69, 0 - Lewis E. Osbonn, New Haven, Conn. -Indicator for the Springing or Bending of İciluay Axles.-April 14, 1868. - The toe of the lerer is notched to receire the flange of the whecl and its deriation from rectitude is shown by an index fingel to which it is connected by a cord. The band is placed in the axle at its mid-length, and its crookedness is indicated in the same manner.

Claim.-1. The lerer C placed upon the truek acted on by the flange $b$, and comected with the pointer $d$, to indicate in the manner and tor the purpose specified
2. The bind or ring D placed upon the axle, upon which the said axle acts as an eccentric or cann, ind connected with the pointer $d$, to indicate in the manner and for the purpose herein specified.
3. 'The combination of the dial $A$, levers $C$ C, and rings D D, as a double-acting indicator, in the manner and for the purpose specified.
g6, 804. Thates L. Parker, ITarrisomburg, Va. - Hollove Auger.- April 11, 1868.-The cutter's and dogs are adjustable to torm tenons of rarying size. The length of the tenon is regulated by the adjustable stop.

Claim. -The combination in one instrument of the two adjnstable dogs D D, the cutting instruments $G G^{\prime}$, when constructed and arrangel together as (lescribed, the clamp $F$, the stop) S, atjustable by means of the set screw $s$, the bifncated stock $A$, and the solid head B, prorided with the central opening. O and the raised bed C , in which the blades are countersunk, all the said parts being constructed and armaned and operating together substantially in tho mamel and for the purposes set forth.
g6,805.-Henry O. Peabony, Providence, R. I., assignor to the Providence 'lool Co., same place. -Brecch-Loading Fire-Arm.-April 14, 1868.-The needle has a side arm whose point impinges against the center of the cartridge for "center fire."

Claim.-In combination with the breech block $A$, (operated as described in the reissue letters-patent granted to me March 13, 1866, ) a central and rim firing needle $b 13$, constrincted and arranged substantially as described.
'g6,506.-Antonio Pelletiel, Washington, D. C. -Cement for Coating Wood, de.-A pril 14, 1868.Composed of paper pulp of prepared woody fiber, sand, oxide of zine, Portland cement, ard soapitone. The mass is well stirred and worked with chloride ot zinc.

Claim.-1. The compound, consisting of vegetable fiber, sand or pulverized silicious limestone, canstic or carbonate of lime, Portland cement, oxide of zinc,
chloride of zine, without or with tho additional use of silicate of soda, substantially as described and set forth.
2. As substitutes for oxide and chloride of zine cquivalent metallic salts, substantially as describer and set forth.
3. As substitutes for Portland cement, or hydraulic cement, the addition of aluminous salts, mineral, and slags, together with oyster shells, gas honse lime, dolomite, or similar magnesian limestones, substantially as described and set forth.
4. As a new article of manufacture, the composition, snbstantially as herein described and for the purposes set forth.
\%6,S和多.-T. W. Perper, New York, N. Y.Sewing Mrachine.-April 14, 1868.-The feeder is at the extreme end of the table and is at the top of the upwardly bent end of a horizontal shaft which has either a rocking or a longitudinally reciprocating motion, by arms upon it, whicl are actuated by adjustable cams on the main shaft. The shuttle has reciprocating motion firom a wick and two engaging spur wheels. The needle and shuttle are at the end of an arm which is intended for insertion within tubular work, such as boot legs.

Claim.-1. The combination of the sliding clatch $T$, with its cams or cam formations, levers $\mathrm{N} O$, and rod $h$, with its foeder $L$, for operation in concert with a presser foot $I$, as herein set forth.
2. The combination of the reciprocating shattle $K$, with the feeder L, needle, and presscr foot I, at the extreme forward end of the table C , all constructed and arranged as shown and described.
3. In combination with the shatle driver M, at or near the forward end of the table $C$, the pinions $d e$ and rack $f$, substantially as and for the purpose herein set forth.

76,808-GEORGE B. PhilliPs, Poughkecpsie, N. Y., assignor to Alexander G. Hues, same place. - Mortising Machine.-April 14, 1868.-Themachine is convertible so as to use the tool with a drilling or slotting motion.

Claim.-The hinged or detaehable holder F, so connceted to the standard or frame 13 , that it may be lemoved or turned aside at pleasure, and construeted to receive the shank of the table, or other support adapted to the work, substantially as shown and described.

66,809.-Truman Piper, Birmingham, Conn., assighor to Howe Manufacturing Company, same place.-Pin Book.-A pril 14, 1868.-The paper is so folded that the heads in each row lie in succession one row slightly above the other, and the point sides of the folds are secured together so that cach row of pins, with the fold of paper, constitutes a leaf in the book.

Claim.-The herein-described pin book, consisting of the continuous strip of paper $A$, having thercon a succession of rows of pins, and foldch, and their point ends secured in t'ie manner described, and having: combined therewith the inclosing corcr H and I, substantially as herein set forth.
g6,810. - Amos Putnam, Vemon, Big Bend Post Office, Wis.-Swing Sheep Fecder.-A mil 14, 1868. The swinging feeder may be placed so as to guide the feed to either of two troughs or racks.

Claim. -The removable spont $\bar{B}$, hung in open bearings within the opening in the floor C , and provided with flanges on both faces and at both sides, when so arranged that as its lower end is swang to either side, its upper end will cover one part of the opening in the floor $C$, whereby hay or other feed is conveyed from said floor $C$ into cither one of the parallel racks, cribs, or troughs, as set forth.
\%6,811. - John Raddin, Ljnn, Mass. - Car Wheel.-April 14, 1868. The rim of the wheel is so connected to the central part that it las a limited radial movement thereon and an elastic packing is interposed between the parts.

Claim.-1. In combination with the felloc $c$, the tire $d$, having a flange $f$, projecting over the face of the felloc, the felloe and tire being bolted together,
and having elastic cushions so disposed as to receive the direct lateral strain upon the felloc or tire, substantially as described.
2. Combining with the felloe and tire, made relatively movable, the elastic cusbions $k$, placed in recesses in the felloc periphery, and bearing, cither directly or through the shoes $j$, upon the tire, substantially as shown and described.
3. The elastic cushions or springs $q$, placed in the sockets $p$, and resting upon seats $s$, with means for foreing ont the cushion radially, the enshions being surfaced by a cap 0 , or bearing directly against the tire, substaintially as described.
(76.812.-Carl Recht, New York, N. Y.-Stove Pipe Llbov.-A pril 14, 1868.-The mitered edges of the elbow sections are turned out in a plain flange and the parts secured together by an embracing sheet metal ring.

Claim. - The detached ring $d$, in combination with the plain flanges $b c$ on the parts $B C$ of an elbow $A$, substantially as and for the purpose described.

76,513.-Jenome Redding, Charlestown, and John B. Coe, Boston, Mass.-Pastry Jigger.-A pril 14, 1868. -The rotating marker is upon the side of a shank rrhich cxtends beyond it so as to act as a guide by contact with the side of the pan.
Claim.-As a new article of manufacture, a pastry jigger made up of a circumferential marker $b$, and a shank, which, while operatine as a gange, is notched so as also to serve as a marker, as described.
g6, 3 1. T. Thomas Rhoads, Fiskilwa, Ill.-Propelling Vehicles.-A pril 14, 1866.-A coiled spring is applied to turning the wheels of a rehicle. The mechanism may be stopped or checked by a brukc.

Claim.-1. The arrangement, with relation to the revolving shaft $L$, carrying the whecls $A^{\prime}$, of the wheels $G$ II $J$, pinion $b$, and spring S , as herein deseriberl, for the parpose specified.
2. The pawl $h$ piroted to the frame $D$, when con nected to the lower ond of the pivoted levere, whereby it is made to engage with the ratehet drum E when said lever is drawn baek to the extent of its ribration, as herein described, for the purpose specified.
3. The brake lever d, in combination with the ratchet drum E , pivoted lever E , and pawl $h$, as hercin described, for the purpose specified.
4. The combination and arrangement of the gearing G H J, pinion $b$, spring $S$, ratehet drum $E$, lerer $e$, pawl $h$, brake $d$, all operating as described, for the purpose specified.
(9,815. - Thomas Rich, Kingston, N. Y. -Churn.-April 14, 1868. -The blades are turned so as to cause the cream to flow from the ends toward the center of the churn, where the inflnence of the blades is greatest.

Claim.-The twisted blades C D, when set in reverse dircetion upon the shaft $B$, the outer blades of each series being entire or without perforations, the inner ones being perforated, as shown and described.

76,816.-II. A. Richardson, Sherman, N. Y.Horse Power.-April 14, 1868.- A fixed horse power is applied by gear wheels and crank to a pluager churn. The dasher is balanced by a weighted arm extending in opposition to the crank arm.

Claim. -1. The projecting beam A, supporting the gearing D G F H, and stayed by braces 13 C , in combination with the removable driving shaft E , resting in square socket d of the spur wheel and supporting the forked swoep $P$, the whole being specially ar'ranged for allowing the displacement of the said clriving shaft, as herein set forth.
$\therefore$ The cord $g$, passing centrally through the top of the driving shaft, and having a swivel $h$ bencatl, to prevent twisting, when combined with a belt passing around the hor'se's belly, in the manner and for the purpose specified.
3. The special construction and arrangement of the apparatus as a whole, consisting of projecting beam A, braces B C, gearing D G F H, removable shaft $E$, forked sweep P, pulley $J$, crank K, and the spurring eord $g$, operating in the manner and for the parpose specifica.

G6, 617.-CHarles Pobinson, Boston, Mass.eltamber T'essel.- 1 pril 14, 1868. - The inrerted, conical corer has a cireular series of holes near the lowest part, through which the water flows when the valve is raised, which is done by pressure upon an arm ex. tending to the edge of the cover. The water runs lown it frusto-conical ease to render its descent noiseless.

Clam.-1. The combination of the concare or inclined corel $B$ and valve $C$, vith its extension $d$, arranged and operating substantially as and for the purpose hereiu specified.
2. In combination with the corer $B$, the inclined condnetor $g$ beneath, substantially as and for the purnose herein set forth.
\% $6,819$. Whllam H. Rodmeaver, Miamisbure, Ohio.-Itub for Wagon Wheel.-April 14, 1868. -The lubb is inclosed in a metallie case, coustructed in two sections, which, at the point of meeting, form a continuation of the spolie mortises. The projeetions of the two sections between the spokes ire rabbeted tofether and connected by dowel pins.

Claim. - The arrangement of the pair of bands $B_{3}$ $C$, inclosed in a rooden hmb, and being provided with flanges D E and interlocked lugs $d e$, the whole beiner secured by rivets, in the manner and for the purpose set forth.
76, 813.-P. G. Ross, Darenport, Iowa.-Shaft Coupling.-April 14, 1868.-An interiorly longitudi-nally-ribbed shell has a ribbed hub cast therein so as to allow the shafts attached to the said shell and hub to hare considerable rariation in inelination, while the one eanses the rotation of the other.

Claim.-The spherieal-shaped shell $A$, with the head $B$ cast therein, substantially in the manner and for the purpose as herein set forth.

76, 8: 0. -Jom G. Rotir, New York, N. I.Nutmeg Grater.- $\Lambda$ pril 14, 1868.-The nutmeg is plaeed in a bottomless box, which is supported on sideguides, so as to admit of reciprocation orer the grater:

Claim.-As a new article of manufacture, the nutmey grater constructed as described, and consisting of the plate $A$, forming the bottom and cnds of the grater, the side guide pieces $C$, convex perforated grating surtace $\bar{B}$, sliding block D , removable tube E, and disk F , all inxanged and operating as and for the purpose set forth.

96,8:1.-Burdett L. Rowley, New Iritain, Conn-Flexible Bit for Bridles.-April 14, 1868.The eyes are made by folding the tapered ends around and confining them by a ferrule. The chain conuceting the two double eye picces is covered by in India-rubber case.

Claim.-1. The duble eye $A$, when used in combination with the rings B , chain C , and ferme D , for the purpose and substantially as hereiu set forth.
2. The flexible bit, composed of the double eyes $A$, rings $B$, chain $C$, ferrule $I$, and rubber casing $E$, for the purpose and substantially as herein specified.

76,82B.-T. T. SARAENT, Tunbridge, Vt.-Upsetting Machine.-April 14, 1868.-The upsetting levers are operated by two links eceentrically piroted to a turning disk.

Claim.-1. The disk $b$ and links $m$, or other equiralent devices, constructed and operated substantially as shown and described, in combination with the levers $D$ and arms $I$, all as and for the purpose set forth.
2. The block $B$ and base $\Lambda$, combined and forming a pedestal for supporting the mechanism, substantially as shown and deseribed, in combination with the bed plate E and lerers I) and arms I, all as and for the purposes set forth.
3. The lerers D, formed with arms I, in eombination with the links $m$, disk $b$, and crank $h$, all constructed, arranged, and operating in the manner snbstantially as herein shown and described.
g \$9,823.--Davin Saundens, Brooklyn, assignor to Josirli Nason \& Co, New York, N. Y.-Thead. ing Trubes.-April 14, 1868.-The threading dies are
at the conter of a circumferentially cogged disk,
which is turned by a pawl on the lerer which is piroted to the stock that is clamped to the pipe.

Claim.-The theading tool herein deseribeal. constructed and arranged substantially as herein set forth.

29,\$24.-Bruno Schmidt, Moboken, Ň. J.-Restoring Old Leather. - 1 pril 14, 18(8.-The leather is steamed and soaked in a weak solution of soda, scraped clean and immersed for 24 hours in strong tan liquor; after drying, it is rubbed mith a mixture of tannin and lat.

Glaim.-The mithin deseribed process of restoring old leather, by subjecting the same to the rarious manipulations above set forth.
76.5:85.-Bruno Scimidt, Hoboken, N.J.-Preparation of Manganates and I'ermanganates.- A pril. 14, 1868. - The residum from tho manufacture of chlorine is subjected to the aetion of spirits of ammonia until it ccases to precipitate oxirle of irom. As soon as a clear and filtered sample ot the liquid, when treated with spirits of ammonia, produees at white precipitate slightly colored with rose, the oxide of irow is allowed to settle. The elear liquid is drawn off and treated with spirits of ammonia until no precipitate is produced. The precipitate is allowed to settle and the elear liquid ron oft. The precipitate is dried on a linen cloth; after which it is beated to a red heat, which converts protoxide of manganese into the red oxide which is used in the production of manganates and permanganates of the allalies. Tho proportions used are, (by weight, ped oxide of matrganese, 160 ; caustic soda, (containing 60 per cent. of liydrate of soda, 270 ; and chlorate of potash, 1.25 parts.

Claim.-1. A compound of manganate of soda and ehloricle of potassiom, prepared substantially as and for the purpose described.
2. The within described process of treating the residuum obtained in the manufacture of chlorine, subistantially as and for the purpose set forth.

76,886.--Peter Schoonmakelr, New Britain, Conu.-Trace Clip.-April 14, 1868. The trace clip has a side plate to which the eyo of the hold-batek ring is attacher.

Claim.-1. Sceuring the hold-back ring to a pin $e$, Which is fastened in the trace elip, substantially as herein shown and described.
2. Providing the trace elip with a flange a for tho reecption of the pin to whiel the hold-back ring is secured, so that the hold-back ring is fastened to the trace clip, substantially as hereiu shown and described.

26,887.-T. S. Schanton, New Haven, Conn.Pipe Stem.-A pril 14, 1868.-The two parts of the stem are secured together by screw collars, and may be taken apart longitndinally for eleansing.

Claim.- 1 tobace pipe stem, divided into parts lengthwise, so that said parts may be separated to expose the interior of the tube, substantially as and for the purpose set forth.
g'9, \$2S.-Phlup Scinevier, New York, N. Y. Gas Meater.-April 14, 1868. The barners have a small, perforated, eylindrical tube, surrounded by a corrugated tube, leaving triangular openings for exit of cas.

Claim.-1. The burner D, constructed as described, eonsisting of the corrugated mpper tube $e$, fitted upon the perforated smaller tube d, as herein described, for the purpose specified.
2. Muking the frame of a gas stove polygonal, so that a series of such stoves can be set close togethes to produce one large heating apparatus, as set forth.
3. A gas store, consisting of the $V$-shaped uprights a $a$, polygonal rim $b$, bloek $c$, pipe C , and burner $d c$, all made and operating substantially as herein shown and described.
6, 6, 285.-Samuel II. Sclibner, Chicago, Ill.Wristband for Shirts.-April 14, 1868.-One sideedge of the euff has a stud inside and out, and the other side-edge has two button holes to make the euff reversible.

Claim.-Attaching the wristband or cuff to the
shint sleeve so as to form a reversible cuff, substantially as herein specified and shown.

76,830.-Menry D. Scudder, Amsterdam, N. Y.-Paper Box.-April 14, 1868.-The blank is slit radially from the odges of the bottom, and the wings turned up to form the sides.

Claim.-Forming the sides and bottoms of a eircular paper box of one and the same piece, in the manner herein specified.
g6,S31.-Samuel W. Sears, New York, N. Y.Lawn Mower.- April 14, 1868.-The machine is pushed before the operator, and has a cutter similar to a power mover, which is operated by a crank turnod by hand, or by eomection with the ground wheel.
Claim. -In a hand mower, the combination of the roller or driver C with the eoneentric gear $f^{\prime}$, supporting the frame $\Lambda$, the erank shaft $d$, the shifting sleeve gear, the shaft E , and the reeiprocating cutter bar $D$, constructed, arranged, and operating substantially as and for the purposes herein deseribed.
g6,S32.-S. P. SEDGWICK, Wheaton, Ill.-Medi-cine.-A pril 14, 1868.-For treatment of searlet fever and diphtlieria. Composed of sulphate or aectate of copper, $\frac{1}{2}$ oz.; ipecac, $\frac{1}{2} \mathrm{oz}$; strong sage tea, (sweetened, 6 Oz ; aleohol, $\frac{1}{2}$ oz. To be given as a romit and a gargle. Alkaline mixture. - Biearbonate soda, 1 tablespoonful; paregoric, 1 tablespoonful; water, $\frac{1}{2}$ pint; loaf sugar, a tablespoonful. Dose, a dessert spoonful.

Claim.-The medicine or specific, eomposed of the ingredients about in the proportion as set forth, for the purpose specified.
gef, 333. - Divid V. B. Smart, Troy, N. X.Oar Coupling.-April 14, 1868.-The coupling lateh pin is hung upon a staple whose ends slide in vertieal holes at the sides of the draw head. The entering link swings back the pin, which drops therein and engages the link. Tho staple and pin may be drawn up ward to uncouple the ears.

Claim. - Tho staple C, having its ends passing throngh the sides of the draw head, in combination with the sliding coupling pin $B$ and the slotted draw head, all construeted and operating as desoribed, whereby, as the staple is raised, the pin $B$ is swung wy the kinob E elear of the draw head through the slot H , as herein shown and described.

76,831.-Eldridge J. Smitil and Bevjamiv H. Cheever, Washington, D. C.-Paper File. - April 14, 1868. - The projeeting arms take around the edge of the bottom and tend to hold the moving end to any position in which it is placed.
Claim.-1. The combination, in a paper file, of an adjustable plate with a base and fixed vertieal plate, substantially as and for the purpose set forth. 2. The aljustable plate $\Delta$, with the projecting arms D D, in eombination with the bottom plate 13 and end plate C , substantially in the manner and for the purpose hercin set forth.
g6,835. - Hiram Smith, Des Moines, Towa. Cook Fork.-A pril 14, 1868. -The potato is forcat from the fork by a sliding block, which is forecd down the tinks by toggle levers.
Claim. -The lever D, piroted at $a$ to the shank B of the fork, its outer end provided with the thumb plate G , and pivoted at $b$ to the rod E , whose lower end is attaehed to the slide F , between the tines C , all eonstrueted, arranged, and operating as described, for the purpose specified.

76,836. - J. Homer Smini, Browster Station, N. Y.-Lamp.-April 14, 1868.-The wiok is confined so tightly between two serratel eylinders that no flame ean pass. Cireumferential grooves allow passage to oil.
Claim.-As an improved article of mannfacture, the device for preventing the descent of flame in lamps, consisting of the eylinders B B, mounted in fixed bearings in the wiek tube, and as long as said tube is wicle, when the outer surface of the eylinder is formed with serrated ribs, extending entirely around the eylinder, grooves being formed between the ribs, as deseribed, for the purpose set forth.
ge, 83g.-JOHN SOMERVILLE and ROBERT ELS Don, Maidstone, Great Britain. - Manufacture of Illuminating Gas. - April 14, 1868.-The gas retort is filled with limestone, and a eap, with an air pipe extending nearly the whole length of the retort, is luted upon the retort. The eap of the ascension pipe is removed, and a current of air being established through the retort the "seurfing" (or remoral of the earbonaceous coat) of the inside of the retort takes place simultaneously with the elimination of carbon from the limestone.

Claim.-The use of chalk, limestone, or foul gas lime for the purpose of removing carbon from the interior of gas retorts without injuring them, in the manner substantially as herein describod, while by the same operation a useful product, namely, quieklime, is obtained.
g fa, 838. - Gideon O. Spence, Titusville, Pa., assignor to himself; A. R. Willinais and J. S. Lathrop, same place.-Lubricating Oil.-April 14, 1868. - Composed of petrolcum or residuum, at $30^{\circ}$ Baumó, 200 galls. ; salt, 5 lbs. ; dissolved potash, 5 lbs.: muriate of ammonia, 10 lbs . ; spirits turpentine or linsead oil, $\frac{1}{3}$ per cent. ; and flour of sulphur, 5 lbs. Sufticient heat is appliod during the process, and the liquid decanted when necessary.

Claim.-1. As a new article of manufacture, a lubrieating oil, mate from pretroleum or coal oil, or their produets, as a base, combined with the second and third ehemieal ingredients herein specified, for the purposes set forth.
2. As a new article of manufacture, a labricating oil, made from petroleum or eoal oil, or their products, as a base, combined with the five chemical ingredients herein specified, for the purposes set forth.
gig, 839.-Edvard I. Stearas, Cambridge, Mid. School Desk.-April 14, 1868.-The "cleats" act as brace stops when the corer is open, and act as book rests when the desk is elosed.
Claim.-A school desk, with the lid opening toward the seat and occupant, and snpported in position, when open, by the cleats B, or other suitable deviee, so that what is the under side of the lid when shut is the upper side, for the books to rest upon, when open, substantially as above deseribed.
g6.840.-Harvey B. Steele, West Winsted, Conn. - Machine for Cleaning and Renovating Feathers.-A prill 14, 1868. - The eylinder is filled with feathers and steam, and the fumes of a disinfecting compound are passed into the eylinder while it is rotated. When sufficiently treated the fumes are allowed to escape.
Claim.-1. The arrangement of the chamber P , surrounding the inner cylinder, and the cover $\mathbb{H}$ and slide E, construeted as lescribed, for the purposes set forth.
2. The arrangement of the fumigating slaft C , in combination with the entire double eylinders $A$ and B, so constructed and regulated by stop cocks that the feathers are first disinfeeted and afterwards steam driod, as herein set forth.

96,841.-Levi Stevens, Washington, D. C.Apparatus for Manufacturing Illuminating Gas.April 14, 1868. - The hydro-carbon in a raporized form is mixed with steam in a chamber over tho boiler. The ehamber is heated by flues. The gas from this chamber passes throngh retorts, where it is heated, to form it into a fixed gas. It is then coolod and mingled with atmospheric air, after which it passes through the purifier.

Olaim.-1. In combination with the mixing chamber $D$, the superheater $E$, so that the mixed hydroearbon and hydro-oxygen vapors may be superlicated before being retorted, substantially as and for the purpose described.
2. In combination with the mixing and superheating ehambers, the arrangement of retorts for retorting the rapors, substantially as described.
3. The mixing chamber or ressel L, into whieh the retorted gas is passed, and into wheh atmospherie air is foreed, and therein mixed with the gas, substantially as deseribed.
4. In combination with the mixing chamber $L$, the
cooler M, so that tho cooling shall take place after the atmospheric air is introduced and mixed with the gas, substantially as describerd.
5. In combination with the cooler M, the purifying chamber $N$, furnishod with chloride of calcium as a purifier, sabstantially as described.

76, Siz. - Ezra Stires, New York, N. Y.-Car Truck.-April 14, 1868.-The salety wheels are placed at each corner of the truck, and have spring bearing's by which the shaft is cascd in case any part of the weight of the truck falls upon them. These wheels are ordinarily carried elear of the truck, but may operate, owing to thrir small diameter, to renove an impediment therefiom. Whea these wheels are turned their axle wiuds up the chain by which the brakes are applied to the mitin wheel.

Claim.-1. The broad wheels E E', when arranged in front of the main wheels $B$, and having bearings in the bar D and springs $I$, substantially as and for the purposes herein set forth.
2. The ehain G , and cord II , in combination with the broad safety wheels $\mathrm{E}_{\mathrm{E}}$, arranged as and for the purpose herein set forth.

76,843. - Ezra Stiles, New Iork, N. I.-Car Brake. - ipril 14, 1868. - The immediate operating mechanism of the brake is carried in a housing between the wheels, and the brake operates by contact with the rails, being derressed by a cam and raised by a spring.

Claim. - The thange-bearing block or brake block $\mathrm{E} \mathrm{E}^{\prime}$, when made to extend beyond the lines of the wheels, both outside and inside, as represented, and When combined with and operated by the cam II, lever $H^{\prime}$, and spring $G$ and chain $I$, all arranged substantially as and for the parposes herein set forth.

G6,844.-EzRA Stiles, New Iork, N. Y.-Railroad Car Wheel. - April 14, 1868. - The web and tread are straged from a plain disk, and the hub attached subsequently.

Claim.-The within described car wheel, formedi of a plate of metal of minform thickness, by bending and swaging the same in dies, as herein set forth, and having a hub attached thereto, substantially as and for the purposes herein set forth.

76, S45. - O. IL. Stillahan, Westerly, R. I. Combined Steam Generator and Air Heater.-April 14, 1868. -The grate bottom is conical, and may be rotated by a gear upon the lower side of its outer rim, which is engared by a spur wheel mpon a shaft passing through a tube traversing the water leg. The furnace door is made steam tight. Steam from the primary boiler is, with the addition of air, passed beneath the grate, and passing up through the tirg the caloric current is callried beneath the water in the secondary boider, from whence the purified grases and steam pass to the engine.

Claim.-1. An apparatus for gencrating steam, and mixing and superheating air and steam, consisting of a turnace C , a primary generator $B$, connected with such furmace by suitable injection pipes If, and discharge nozzles $n n$, and one or more sceondary generitors E , arranged and operating together substantially as set forth.
2. Connecting the turnace ( with the passages $K$, leading to the sceondary generator $E$, by means of the blast nozzle $n$. diseharging steam trom the primary gencrator, for the purpose of exhausting the contents of the flue D, tor the passage of gases, and thereby relieving the furnace firom pressure, as set forth.
3. Combining the conducting passage or passages K, leading to the secondary generator, with the fimnace C, by menns of suitable connecting pipes, whereby the prodncts of combustion, in the state in which the sarac are in the passage $K$, can be readmitted to the fire chamber, substantially as deseribed.
\% 6,816.-Drater Stone, Rochester, N. Y.Fruit Jur.-April 14, 1868.-The jar is corered by a slightly groored and flanged metallie disk, and the joint eovered by an annulus of rubler whieh is stretched thereon and bound with trire.

Claim.-The anuular or flat packing ring H, con-
structed and applied substantially in the manner shown and described, an combination with tho cover of fruit jars, for the purpose specified.

76,847.-D. C. Stover, Dayton, Olio.-Attachment for Cultivator Shovels.-A pril 14, 1868.-The shovel is attached to the standard by a hook bolt and staple, and has a cylindrical bearing in the standard so that it may be adjustably inclined to either side.

Clatim.-1. The bearing C, fifted between the shovel 13 and standard $A$, in combination $r$ ith a slipjoint fastening, substantially as and for the purposes deseribed.
2. The staple $a$, fastened to the shovel $B$, and the hooked bolt fastening $b b^{\prime}$, in combination with the rounded bearing portion $C$, interposed between the shorel 13 and recessed standard $\Lambda$, substantially as described.
3. So attaching the shorel $B$ to its standard $\Lambda$, that the shorel can be adjusted and set at different angles with respect to the line of dranght without changing the axis of morement of said shovel out of its true line, substantially as described.
y $6,848 .-\mathrm{B}$. W. Sutherlen, Freesoil, Minn,Sully Ylow.-A pril 14, 1868. - The plow clevis is eomnected by a chain to the formard part of the jointed tongue. The plow is adjusted by the winding of its supporting chains upoin the pulleys on the wheel firame.

Claim.-1. The combination of the axle E, stand ards B B , and plow A, working loosely between the standards, so as to admit of a plow of any construcfion being' snspended by the chains $c c^{\prime}$, and drawn by the chain $c^{\prime \prime \prime}$, substantially as and for the purposo specified.
2. The frame I, in combination with the pulley G and lever $L$, wabstantially as and for the purpose deseriberl.
3. 'The combination of the lever L, frame I, pulley $C r$, chains $c c^{\prime}$, and plow $A$, substantially as and for the purpose specified.
\%6,819.-S.J. TALBOTT, Milford, N. H., assignor to himself, James II. Hall, and James H. Gray. Plate Liftor.-April 14, 1868. -The jaws are drawn together upon the edge of the plate, both by the aetion of the springs and the weight of the disk.

Claim.-A device for lifting hot dishes, composed of the bars A A, connected by hinges or joints a a with a spring B , placed between them and cach bar, having a jaw C attached, substantially as shown and described.
g6,550.-EDWARD T. Tinch, Salem, Ind., as signor to himiself and Geolige R. Harris, same place. - Washing Machine.-A pril 14, 1868.- Tho elothes are attached by the latches to the cylindrical part of the flanged chrum, and carried around beneath the flexible coneave.

Claim.-1. The flanged drum C , provided with latehes $b \checkmark$, and eombined with a flexible coneare of rolling or rubbing bars $\mathrm{E}^{\prime}$, and a device for forcibly depressing this concare, substantially as described.
2. The combination of a lifting cord $a$, with a flexible coneare, a rotary flanged drum $\mathbf{C}$, and a derice for depressing the concare upon the articles being washed, substantially as described.
3. The construction of the drum C with flanges upon its ends, and also with spring latches $b b$, for the pmrposes and in the manner substantially as deseribed.

76,851.-DaNiel J. Tittee, Albany, N. Y., as signor to AbBie M. Tirtle, same place. - Machine for Raking Potatocs.-A pril 14, 1868.- A rake composed of a number of share bars is drawn through the ground to raise the roots therefrom.

Claim.-A root eomb or rake, constructed of a number of teeth A A, of shape shown in Fig. 5, armanged in position and secured as described, and operated with a single or crotch beam B, or its eqniralent, and prorided with one or more handles II H, as set forth and describert.

176,859.-Charles F. Waldron, New York, N Y.-Lamp for Vehicles.-A pril 14, 1868.-The lamp is attached to tho engine by three anmular screw
plates, the upper one of which has a flance turning over the inturned bead at the bottom of the frame.
Claim.-1. The annular intermal plate $C$, formed with the flanch $b$, in combination with the lower portion or edge of the body A, substantially as and for the purpose herein set forth.
2. The annular nut D, in combination with the base shell B and internal plate C, substantially as and for the purpose specified.

76,85B.-ANDREW BARCLAY WALKER, Warrington, England.- Apparatus for Lirewing, Malting, de.-A pril 14, 1868.-A blast of cold air is blown from a rose and impinges upon the surface of the yeast or worts in the gyle tuns. The air is cooled in summer time by passing throumh pipes surrounded by ice or by cold, rumning water. The sides of the tnis are double, and contain ducts through which cold air is passed.

Claim.-1. The general construction and arrangement of the apparatus for attemperating air, as described, and illustrated in Tigs. 1, 2, 4, and 6 of the accompanying dramings.
2. The construction and arrangement of the apparatus for preserving yeast on worts in gyle tuns, as deseribed, and illustrated in Figs. 2 and 3 of the accompanying drawings.
3. The means employed for preserving yeast in the troughs or receivers, as described, and illustrated in Figs. 5 and 6 of the accompanying drawings.
4. The construction and arrangement of tho apparatus for attemperating the atmosphere in malting rooms, gyle-tun rooms, cellars, \&c., \&c., as deseribed, and illustrated in Fig. 7.
5. The construction and arrangement of the apparatus for cooling worts, as described, and illustrated in Tigs. 10, 11, and 12 of the accompanying dramings.

1969854-BENJAMIN Ward, Troy, N. Y:, assignor to Clark T'ompkins.-Knitting MIachine.April 14, 1868. -Loose yarn hanging in the barbs of the needles is removed by the inclined, radial wings of the stripping wheel, and catching upon the comb causes the machine to stop.

Claim.-1. A claw, comb, or equivalent device, arranged in respect to the needlos of a knitting machine, and combined with mechanism for stopping the machine, substantially as described, so that yaru which has fallen or been taken out of the reedles will catch on or engage with the claiv, comb, or cquivalent device, and cause the machine to stop.
2. In a kinitting machine having spring-barbed needles, a stripping wheel M, arranged as described, so as to take knots or loose yarn out of the needles, and thereby prevent the injurious retention or accumulation of such linots or jarn in the needles, substantially as herein set forth.
3. The arrangement, in a knitting machine haring spring-barbed needles, of a stripping wheel just forward of the "sinker wheel," or device for feeding yarn into the needles, substantially as herein set forth.
4. In knitting machines, a series of needles and a stopping mechanism, combined with a comb, or its equivalent, and a stripping wheel, substantially as described, so that yarn taken from the needles by the stripping wheel will engage with the comb, or its equiralent, and stop the machine.
5. In knitting machincs, a stripping wheel and a cam, or its equivalent, combined with a circular series of spring-barbed needles, substantially as described, so that the cam, or its equivalent, will phess or hold the knit fiabric or old loops back on the needles at the place where the stripping wheel is arranged to take waste or loose yarm out of the needles.
6. In combination with a series of needles in a knitting machine, a stripping wheel, a cam, or its equiralent, for pressiug or holding the knit fabrie back on the needles at the point where the stripping wheel acts, a comb, or its cqnivalent, for engaging with yarn taken from the needles by the stripping whecl, and a stopping mechanism, substantially as herein set forth.
 - Window Blind.-April 14, 1868. -'The slats turn on tubular pins or tenons.

Claim.-A blind, in whieh the tenons of the slats
a $a, \& c .$, are formed of tmbes of metal $b u, \& c .$, inserted into the ends of the slats, substantially as hercin shown.
g. 6,856 - Envinard Warren and Thomas BrangWIN, Ceresco, Mich.-Dray.-A pril 14, 1868 ; antedated April 8, 1868. -The body of the dray is jointed transversely, so that the rear portion, to which the wheels are attached, may be inclined as a skid. The body may be rendered rigid by spring eatches. The shatt frame is arranged so that it may be turned around to cither side.

Claim.-1. The dray shafts D, provided with a semieircular bow head E , in combination with the hinged sections $A$ and $B$ of the platform bed of a dray, substantially as and for the purpose specificd.
2. The arrangement and combination of the spring catches $F$, lock plates L, cranked tilting cam shaft $T$, and spring stop $S$, with the aforesaid hinged sections and pivoted bow-headed shafts, substantially in the manner and for the uses set forth.
\%6,85\%-Charles R. Weblb, Philadelphia, Pa. -Boom Gear.-April 14, 1868. - The ends of the jaws are pivoted to the slide plates, which always present straight surfaces to the saddle and mast.

C'laim.-The slides A A', or their equivalents, interposed and properly secured between a vessel's saddle E and the formard cnds of the jaws C C', for the purpose of preventing the jaws from chafing the saddle, smbstantally as herein described and for the purposes set forth.
g. $9.858 .-$ Eugent Webber, Portage, Mich.Horse Collar.-April 14, 1868.-The lower end of the collar is made to open, and is secured by stnds on one of the metallic boxes which cuter catch slots in the other box.

Claim.-The metallie boxes 13 B, with congated slots $a \quad a$, and shanhs $b b$, as constructed and arranged for fastening the collar in the manner as described and shown.
g6,85\%.-Henry J. Weed, Cazenovia, N. Y., as signon to himself, E. S. CAnd, and F. Canrenter. Chimney Cap.-April 14, 1868.-Openings presenting mpward and inward are made in the side of the chimney cap.

Claim.-Troviding chimney caps or smoke stacks with two or more rows of draught openings, arranged one above the other, the spaces between the openings being struck ap to form inclives $b$, the part abore said openings being strmek out, and the part below struck in, whereby said opening̣s are transformed into elliptical holes a a, as herein shown and described.
re9,860. - J. Wentz, Girard, Ala. - Cotton or May Press.-April 14, 1868. -The cotton box is upon bed rails, mpon which it is made to slide, passing between two posts to which the toggle-bars, operatiog the followers, are pivoted.

Claim.-1. The movable cotton box A, with its slot $e$, substantially as shown and described, in combination with onc or more toggle-bars E , and capstan power, all as and for the purpose set forth.
2. In combination with the movable box $A$, having slots $e$, and with the toggle-bars E, the followers $\mathrm{F}^{\mathrm{F}}$, when provided with projections d, all constructed, arranged, and operating as and for the purpose set forth.
969891.-David M. Weston, Boston, Mass.Belt Stud.- $\Lambda$ pril 14, 1868. - Improvement on the patent of G. W. Blake, March 26,1861 . 'The euds of the belt are laid rith grain sides together and slightly bercled ontward toward the jumetion. Longitudinal slits are then made within $\frac{3}{3}$ inch of the end. One end of the stud is passed through the slits and the stud is turned $90^{\circ}$. The cross heads of the stud are rounded off on the salient corner.

Claim.-1. Rendering the heads rigid, by swaging or compressing them, substantially as deseribed. 2. Forming the heads with a rounded or convex surface $e$, as herein set forth.
3. A belt stud, having a soft or yielling bar $b$, and ligid heads $e$, constrncted substantially as shown and described.

76,S62.-Miles B. Wheaton, New York, N. Y. -Clothes Drier.-April 14, 1868.-The frame is eomposed of a number of jointed raeks which may be foldel together or ereeted for use.

Claim.-The frame a $b$, with the troo pairs of legs e $g$, one pair provided with knuckles $i$, tho other resting against the rungs $b$, to admit of the parts being folded purallel, as sloorn.

196,863.-Aaron B. Mhite, Monden, Miel.Bolt Trimmer.-April 14, 1868. -The jaws are at the ends of two eompound levers, and ure intended to ent the ends from bolts and rivets.

Claim.-The combination of the levers $d d^{\prime}$, having stops $J$ J thereon, with shear levers $a \alpha$, straps $b \stackrel{b}{b}$ and $f f$, all construeted, arranged, and operating substantially as deseribed.

76,SG4.-Daniel and George, H. White, Chieago, 111 .-Street Letter Box.-April 14, 1868. -The letter is passed through a passage whieh is extended upward and inward to prevent the abstraetion of letters and the entrance of water. Aecess is gained to the box through a doorway in the bottom.

Claim.-1. The street letter box $A$, of the shape as deseribed, with projecting and pointed roof 13 , and the sides narrowed toward the bottom, provided with morable bottom forming door D , the joints between said door and box protected by cornice G, the whole arranged and operating snbstantially as herein set forth and specitied.

2 . The inside guides or flauges $d d$ of the openings C C, arranged and operating substantially as set forth, and for the purpose speeified.
3. In combination with the abore, the ears II II, loops or staples I I or K K, and brace L, snbstantially as herein shown and deseribed.
4. The sexagonal or octagonal letter box, constrneted as shown and deseribed, provided with six or eight openings for letters and newspapers, and seenrely placed on an iron stool, the same being sceured to the floor or sidewalk, substantially as set forth.

76,86.5.-Benjamin F. Wintaer, Madison, Fla.Combined Planter and Mianure Distributor. $-\Lambda$ pril 14, 1868. -The seed or eoneentrated manure is placed in the hopper and earried out in the radial earities in the seed roller, or by the radial arms of the manure roller. The tops of the earities are eleared by brushes. The furror is opened by a plow pressed by a roller and filled behind the seed by a lunateformed, eonvex-bottomed drag block.

Claim.-1. Making one of the flanges $h^{2}$ of the crlinder It morable, and sceuring it in place, elamping the jointed recessed ring I between it and the stationary flange $h^{\prime}$, by manis of the nnt J screwing upon the said eylinder $H$. substantially as herein shown and deseribed, and for the purpose set forth.
2. Adjustably seenring the hopper F in place within the hopper E , by means of bolts and set serews, substantially as herein shown and deseribed, and for the purpose set forth.
3. The combination of a romorable weight K with the covering drag. J, substantially as lecein shown and described, and for the purpose set fortli.
4. The discharging hopper M, construeted in two parts, in substantially the form herein shown and deseribed, and adjustably seenred to the nnder side of the frame B, as and for the purpose set forth.
5. The stirrer shaft or eylinder N , having radial arms $n^{1}$ and side armes $n^{2}$ attached to or formed upon it, in eombination with the peculiarly-shaped hopper M, and with the frame $B$, substantially as herein shown and deseribed, and for the purpose set forth.

76,866.-William L. Williams, New York, N. I.-Foot Scraper. - April 14, 1868. - The boot is passed between the brushes which are on the jointed arms and are pressed against the boot by springs.

Claim.-1. The brnshics $h$, jointed to the swinging arms $f$, and aeting in the manner and for the pnrpose specified.
2. The swinging brushes $h$, in combination with the swinging arms $f$, seraper $b$, and brnshes $e$, substantially as and for the purposes set forth.
g6,86\%--Albert C. Willson, Green Point, N. Y.-Ferry Bridge.-April 14, 1868. -The bearing of
the bridge is near one side of the float, and the float has a weighted platform extending from one side which is operated by a cord and windlass to change its position, and eonsequently to ehange the height of the outer end of the bridge in respect to the smrfaee of the water.

Claim.-For elevating or depressing the bridge at will, the variable float C, construeted and operating snbstantially as herein deseribed.

96,8G8. - Franklin M. Willson, Whitney's Point, N. I., assignor to himself and IsaAC G. DUNDORE, sume place.-Horse Hay Fork.- - pril 14, 1868. - The eateh tines are piroted to the stoek and are drawn upward ind outward by the links whiel pass from their middles to the end of the operative pod within the stock.

Claim.-1. The combination and arrangement of the compound detachable rod $G$ with the tines $L L$, opening from and elosing into the recess ID, so that, when closed, their points will meet near the pointed end of the point 13 , and when opened or expanded will operate as herein deseribed.
』. Construeting the sheath $\Delta$, with the cletachable pointed end $B$, in eombination with the spring $J$, tumbler $I$, pin or key $F$, hole $P$, and joint pin $C$, all being construeted substantially as lerein deseribed and represented for the purpose set forth.
g6,569. - Groirge Wilson, New Lexington, Ohio.-Treatment of Foot Rot and Other Diseases in Sheep-April 14, 1868. - The "biflex eanal," as the seat of the disease, is drawn bodily from the foot. The earity is dressed with ointment and liept clean for a ferr wecks.

Claim. - The above-deseribed mode of treating discased sheep. having "foot rot," "dry decay," "scours," de., i. c., by extirpating the billes eanal, in the mode and by the process herein deseribed.
g6,570.-William V. Wilson, Philadelphia, Pa. -Clothes Sprinkler.-April 14, 1868. -The water is introdueed into the space ontside the central, perforated pipe, and passes through the latter to reach the sprinklel. A portion of the top is imperforated, which enables the machine to be laid on the side without the water eseaping.

Claim.-1. Construeting a elothes sprinkler with a perforated pipe E, snbstantially as and for the purpose specified.
2. The combination of the pipo $E$ and plate $C$, when the same are arranged substantially is deseribed.
3. The combination of the pipe E and top plate F , when the latter is so constructed that only a portion of the same is perforated, snbstantially as and for the purpose specified.
'g6,871.-ZadIG WoLfsBRUCK, New York, N. I.-Waistband for Wearing Apparel.-April 14, 1868.-The tapes pass through poekets in both portions of the band, and converge to ab point at each end. They are sceured to hooks whieh engage series of cyclets.

Claim.-The waistband for dramers, provided with the adjustable fastening devicc, consisting of the tapes $\mathrm{F}^{\prime} \mathrm{F}^{\prime}, \mathrm{G} \mathrm{G}^{\prime}$, If $\Pi^{\prime}$, passing through suitable pockets thercin, and fastened thereto by means of hooks $13 \mathrm{E}^{\prime}$ and ejes $a$ a $a$, as deseribed heretofore.
g6,Sg2.-EDMund W. Woonrufe and GEORGE C. Gmenen, Washington, D. C.-Paper File..-April 14, 1868. - The boards of the files are made to fold together, and are held at a right angle, when opened, by a pointed brace. The follower' is jointed to a bar whose lower end slides and clamps in a longitndinal, nnder-eut groore.

Claim.-1. A file, for holding papers or other similur artieles, with hinged joints, so that it may bo folded together when not in nse, snbstantially as set forth.
2. A paper file, with the elamping device so arranged that the elamp lerer will turn baekward or forward, for the pmposes spocified, withont being detaehed from the file, substantially as shown.
3. Attaehing the file board to the lever elamp with a hingo, or its equivalent, substantially as shown.
g6, 89\%.-George Worstenhorm, Newark, N. J.-Bolt and Iivet Machine.-A pril 14, 1868.-The shank of the rivet is grasped between the two semicylindrieal dies and the blank ent off by their aetion. The licad then eomes in operation, after which the dies separate and the rivet drops.

Claim.-The feeding slides $h$, and wedge blocks $g$, in combination with serew $l$ aud pin $k$, that presses the rod $i$ upward to hold it while being fed to the machine, substantially as shown.

176,8\%4.-GEORGE M. Zell, Waynesville, Ohio.Harness. - April 14, 1868. - The holder plate has loops for attachment of the saddle straps, the breeching straps, and the tugs. The thill link hangs in the plate and enters a noteh in the lower side of a plate beneath the thill. The belly band is secured to the inner side of the links and bears down the thill into the link so as to secure the harness to the thills.

Claim.-The combination of the holder plate E, having the elastie eushion $J$, the link 1 , strap F , and notehed plate $B$ upon the under side of the shaft A, all construeted and arranged as described for the purpose specified.
g6,875. - Sexmour Ainsworth, Saratoga Springs, N. X.-Fan.-April 21, 1861.-The handle is attached to the stiff foundation pieee, and the latter is then elothed and trimmed as deseribed.

Glaim.-As a new artiele of mauufacture, a fan, composed of the buckram foundation, covered with quill feathers throughout its center, on both sides, trimmed on its edge with down, and provided with a handle, attached substantially as deseribed, the whole construeted and shaped as shown.

96,876.-Edward Andrews, Pottsville, Pa.Window Sash Holder.-April 21, 1868.-The spriug latch slides in a eylindrieal box whieh is attached to the sash. The lateh engages the notehes of the vertieal rack to set the sash to the desired height.

Claim.-The arraugement and combination of the rack C , box A , latel B , and spring J , operating in the maner aud for the purpose hercin described and speeified.
g6,89\% - - Alonzo Armstrong and Alexander Weller, Buff̈lo, N. Y.-Sleigh.-April 21, 1868.The reaeh is eurved upward to allow the fore bob to pass bencath the reaeh in turniug. The body is supported on pendent bars and hanging links.

Claim.-The combination of the curved reach H with the pendent links, hangers, and clevated standards for supporting the sleigh body upon the rear bob.
-76,8g8.-E. H. Ashcroft, Lynn, Mass.-Steam Safety Valve.-April 21, 1868. -The valve when slightly raised allows the steam to issue through small side openings which have exit beneath the flanged part of the disk and inerease the upward pressure on the valve.

Claim.-The valve seat E , with its elbow orifices $h$, in combination with valve eover D , rod $e$, and spriug. $E$, or its equivalent, arranged, construeted, and operated in the manner as shown and deseribed, and for the purpose set forth.

196,899.-David D. Baker, West Alexandria, Ohio, assignor to himself and Harvey Campieds, same plaee.-Churn.-A pril 21, 1868.-The lasher has an open-bottomed box whieh lias jet holes near the edge. It has reeiprocation by a lever.

Claim. -The combination of wings 123 4, and vanes $a b$ e $d$, with the canopy D , rod B , and lever C , the parts being construeted, arranged, and operating eonjoiutly, in the mauner and for the purpose specified.
26,880.-J. F. Barker, Springficld, Mass.-Apparatus for Carburetting Air.-A pril 21, 1868.-The current of air is furnished by a small water wheel and fan blower. The entering air is heated aud dried by steam pipes, and the hydro-carlbon heated by the same.

Claim.-1. The steam pipe $\alpha$, placed within the air eonduit $H$ of a carburettor, or within a sufficient portion of the length of such conduit, for the purposes speeified, substantially as set forth.
2. The arrangement, within the air space of a earburettor, of the steam pipe $a$, for the purpose of direetly heating the air eontained within the earburettor, whether a portion of sueh stcam pipe is immersed in the hydroearbon for heating the same, or entirely exposed to the contaiued air, substantially as deseribed.
3. In eombination with a carburettor or generator, the arrangement of independent water wheel, fan blower, and air eonduit $H$, the whole forming an apparatus for earburetiug air, substantially as dcseribed
g6,881.-George T. Beli and George W. Fumer, Hinekley, Ohio.-Horse and Cattle Pole, de.-April 21, 1868.-The ends of the yoke are pivoted to the eross bar through which the poke is passed. The rear end of the poke has a spring plate whieh is pushed baek by the animal when approaching a fence, and the coneoaled proiuts allowed to pieree the neek.
Claim. The adjustable slide C , in combination with the joke $A$, poke $B$, and head $D$, in the manuer as and for the purpose set forth.
'96,882.-Benjamin V. Betterton, Piqua, Ohio. -Stone Paint. - April 21, 1868. - Composed of erushed shale or calcareous earth, 50 lbs.; rosin, 8 oz. ; linseed oil, 5 quarts. Heat the pitch and oil and liguefy in the benzole or turpentine. Then add the mixture to the slale and grind to the consistence of ordinary paint. Color to stit.
ctain.-The compound above described, for the purposes above mentioned.
ge,883. - Thomas Brett, Genera, Ohio, assignor to himself and W. H. Saxton:-Rest for Grinding Harvester Cutters.-April 21, 1868.-The eutter is elamped by the serew, betwecia the jaws. The standard is adjustable on the liead, and has a wheel at its lower end whieh runs on the stone to adjust the eutter to the proper inelination.

Claim. -The adjustable standard 13, and wheel F, as arranged in combination with the jaws $A$, for the purpose and in the manner as deseribed.
g6,884.-Wessel Brodhead, Meadville, Pa.Carpenters' Gauge.-April 21, 1868. - The bar is slightly convolute in traasverse section so that the head is elamped thereto by a twist.

Claim.-The bar A and the head piece B, constructed and operated as and for the purpose set forth.
'g.855.-JoHN Bromn, Utica, N. Y.-Caster for Furniture. - April 21, 1868.-The ball has a eircumferential recess into which the journal ring enters, being not quite flush with the faee of the ball. The ball is made in two hemispheres and is elamped over the ring by an axial serew. In use the ball either turns on the ring or the ball and the ring turn on the journals of the latter.

Claim.-Forming the roller of the parts $B$ and $C$ and the plate $D$, substantiaily as described and for the uses and purposes mentioned.
g G,886.-Obadiah B. Brown, Malden, Mass. Toy Boomerang Pistol.-A pril 21, 1868.-The boomerang lies upon the upper side of the rest, aud is propelled by the spring beneath the rest, whose end is turned up so as to strike the boomerang when released.

Clain.-The toy herein deseribed, eonsisting of an instrument for supportins and throwing a sinall boomerang, eonstrueted and operating substantially as deseribed.

76,887. - A. W. Buckland and A. M. Danifle, Hartford, Conn., assignors to themselves, Bentinim Bennett, same place, and Albert Fuller, Windsor, Conn.-Artifieial Fuel.-A pril 21, 1868.-Dissolve rosin, 12 lbs ., in gasoline, 1 gall.; add sulphur, 1 oz ; saturate sawdust or shavings with the liquid, then add coal dust, shovel into molds, and press the blocks into shape and leave in the molds till "eaked."

Claim.-An artifieal fuel, made from the materials, in the proportions, and in the manner substantially as above described.
7.6.69.-E. P. H. Capron, Springfield, Ohio. as sighor to himself, George II. Gerrish, and D. B. Ricir-Briek Jachine.-April 21, 1868.-The molds on learing the pug mill pass bencath the striking plate whose rertical pressure is regulated by a screw pod. This plate is secmed to a rod which passes throngh a post, and its friction therein is regulated hy a set screw so as to give way when a stomo has found entrance into the mold. The pressure cam beneath the molds is made adinstable rerticalle and lorizontally. 'The mold wheel surface is coated with remorable stcel plates to keep the smrface trie. The molds on leaving the cams are supported on piroted spring arms trieh engage shoulders in the cavities. The followers have friction rollers which are adjustable, to compensate for wear. The top of the fol lowers is covered br eloth which is sewed to leather strips secnred in grooves of the follower. The follower tops are adjustable by serews which are opcliated fiom beneatli.

Claim.-1. Securing the striker plate in position, by means of the rod $i$ and set screw $j$, arranged to operate smbstantially as described.

こ. 'Jhe rod $h$, prorided with a mut $i$, and arranged to bear upon the striker plate $g$, snbstantially as set forth.
3. Facing the iron mold wheel E, abore described, with the detachable $V$-shaped steel plates $e$, substantially as set forth.
4. The incline $l$, made adjnstable both horizontally and rorticalls, for varying the pressure and pressing the brick from below, sul)stantially as clescribed.
5. Providing the follower $m$ with the hinged supports $p$ thercon, and the springs $q$, for supporting the follower clear from the track while the molds are passing under the liopper, substantially as deseribed.
6. The combination and arrangement of the hinged supports $p$, muts $s$, and the shoulders $r^{\prime}$, in the mold wheel, for adjusting the follower to rary the thickness of the briek as desired.
7. Providing the follower $m$ with a frietion roller, $u$, that can be adjusted to compensate for the wear of the rollers, or the track, or both, substantially as set forth.
8. Securing the cloth to the plate by means of the groores $t$, and leather strips placed therein, and sewing throngh the leather, substantially as described.
9. The plate $a^{\prime}$, with beveled edges, and adjusted on the follower $m$ by means of the screws, substantially as set forth.
76.859.-J OIIN CARR, of the Crescent, Clapham, and Cifarles Lecop, Drmmmond Road, England.Janufacture of Meat and other Biscuit.- $\triangle$ pril 21 , 1868; patented in England January 18, 1868.-The biscuit is first baked, and after being pulverized is mixed with the meat extract, and formed into cakes d) y heary pressure.

Claim.-The manufacture of muat and other bisenits by first baling sneh of the ingredients of the bisenit as require to be baked, then adding extract of meat or such other of the ingredients of the biscuit as would be injured by the heat of the oren, and forming the whole into biscuits by pressure or foree applied to the ingredients while they are contained in molds, substantially as herembefore described.
 Mass., assignor to himself, James Cantwright, Jr., and W. K. Lutis.-Shect-Mctal Can.- $\Lambda$ pril 21 , 1868. -The rectangular sheet of metal has its edges bent over to form the future groore, and is then bent into polyconal form, the cuds meeting to form a single, side joint.

Claim.-A polygonal can, having but one side joint, and a groove d, (for receiving a lip turned down from the bead, ) when said groove is made before the body is formed or bent up, substantially as described.
76.cid1.-O. Cate, Boston. Mass.-Sash Fastener. - April 21, 1868; antedated April 9, 1868.-'Two levers upon the portion attached to the lower sash are swung between the plates of that part which is secured to the upper sash, and the said levers are held by the projections of $a$ cateli plate, mored forward by a cam. The short ends of the levers are bent, and hare studs which enter a cross slot of a sliding piate, moved by a kinob to operate the lever's.

Claim.-A fastener for window sashes, \&c., composed of an arm or arms $O$ and a slide $U$, when ar ranged and combined together, substantially as and so as to operate as described.

6, 6, 80. - Dominico Checheni, New York, N.Y. assignor to himself, Join W. Boteler, and Charles K. Sinerwood, Washington, D. C.—Toy.-A pril 21 1868.-The birds are supported mpon spring wires, whieh are so operated as to cause them to go througlo the motions of fighting chiekens.

Claim.-1. Combining tro cocks or other animals by rods, cords, wheels, or an eqnivalent therefor', in such manner that by operating the said rods, cords, or whecls, the sail cocks or other animals will be caused to imitate the motions peculiar to such animals when fighting, substantially as horein shown and described.
d. Commecting the heads or bodies of the birds or other animals togetler by means of a horse hair, or an equivalent therefor, rmming from one to tho other, substantially as and for the purposes herein speeified.
'96,89:3.-Levi H. Colborn, Chicago, Til.-LowWater Indicator for Steam Generators.-April 21, 1868. - When the water falls below a certain level, steam is admitted to the valve chamber. The valre seat is made of brass and the valve of iron, so that the unequal expansion of the two makes a leakage of steam and operates a whistle or feed-water apparatus

Claim.-A low-water indicator for steam boilers, constructed, conneeted, and operating substantially as herein described.
76.894.-J. C. Cook, Butfalo, N. Y., assignor to himself and Join C. ClifForn, same place.-Bosom Pad.-April21, 1868.-The pad is clastic and inflatable, and has a linitted corer which limits its expansion and determines its shape.

Claim.-A bosom pad, consisting of an inflatable body or sack, prorided with anon-clastic covering of fibrons material, shaped to the contour and dimensions desired, substantially as herein described.
g6,895.-SEldon L. Chockett and Benjanin T. Miles, Lowell, Mass., assighor's to Benjamin 'I'. Mills, same place.-Cam for Card-Stripping Ila-chines.-April 21, 1868.-To obviate the breaking down of the card teeth on the front side of the strip board and at the back side of each top lat, tho flanges are so arranged that as the cam rotates the pin passes into the groove between them and upward orer the romnded projection when the strip card is passing under the elevated top flat, the pin moving gradnally downward in the depression and remaining in that position, with the top flat bearing on tho strip card, allowing the latter a sufficient time to take the waste substance from off the top Hat, and to remore it from beneath the said flat.

Claim.-1. The lifting and replacing cam B, construeted as shown and described, viz, with the prominent portions indicated as 5, 6, and 7, and the depression between 6 and 7 , and a flanch or flamelies $k$, to relieve and case down the top flats, and again elevate the same, substantially in the manner and for the pmrpose set forth
2. The cum B, provided with a flange $k$, constructed as deseribed, and operating in comnection with tho slide and its pin 1 , as and for the purpose set forth.
(6,896.-Menry A. Dirkes, New York, N. Y. —Ballast Keel for Boats.- - pril 21, 1868; antedated A pril 7, 1868.-I'he ballast keel has a certain freedom of motion fore and aft, and also vertically in beaching or riding over obstacles. Its range of depression is regulated by a screw.

Claim.-The ballast keel B, hmg or attached to the boat br toggle joints C , and operating or operated substantially as described.
(96,597.-Johnn Engelilardt, Carbondale, Pa. assignor to E. E. Hendifice and Peter Dolan, sane place.-Composition for Blakking Leather.April 21 , 1868.-Composed of lager beer, 1 gall.; oxide of iron, 1 oz ; and $\log r$ rood, 1 oz .

Claim.-The ingredients in combination, substantially as described for the purpose named.
g6,898.-Join Farrel, Now York, N. Y.-Fire-Proof Safe.-April 21, 1868.-The object is to prevent the conduction of heat from the outside to the inside of the safe. In the usual mode of building, the door frame and front easing are of one piece; but in this they are made of several pieces, with interposed nou-conductors.
claim.-Constructing the front casing and the door of fire-proof safes each of two or more plates of iron, with a non-eonducting substance interposed between the several plates, substantially as described and for the purpose set forth.
'g6,899.-George Feighiver, Wooster, Ohio.Machine for Forming Fifth Wheels.-A pril 21, 1868. -The heated blank is clamped to the flat base plate and against the movable ring by the eam lever and the screws, and foreed into shape by the key which takes orer the ring and the blank.

Claim.-1. The remorable rings D D, in combination with the platform $A$ and adjustable eam lever E , substantially as and for the purpose set forth.
2. In combination with the above, the slotted brace $F$ and screws $G G$, when nsed as set forth, for the purpose of retaining the fifth wheel in place while undergoing its formation.
'g6, 300.-Levi B. Fisk, Lockport, N. Y. - Wreneh for Carriage Wheels.-April 21, 1868.-The socket wrench has two pins which enter the hub and enable the serewing on of the nut by turning the wheel.

Claim.-A hand wrench, combining the forks C C and socket $B$ in a single device, when employed in connection with the hub holes $F F$, the whole arranged and operating in the manner and for the purpose herein deseribed.

96,901. -Lemuel S. Fithian, East New York, N. Y.-Itultiplying Revolutions around an Axis.April 21, 1868. -The reversing wheel is fast upon a shaft upon which the inside geared cylinder is made to turn by an intermediate theel upon a fixed axis. A lever turning upon the shaft has a side pin, forming the axis of a cog-wheel, receiving motion from the cylinder and communicating it to another wheel tnrning upon the shaft, and carrying at the end of a radial arn the axis of another whecl engaging the cylinder. This movement may be multiplied more or less to increase speed.

Claim.-1. The combination of the reversing wheel R , partitioned, revolving cylinder C , with one or more sets of multiplying and intermediate wheels D and P , with straps $g g$, when combined substantially as herein set forth.
2. The straps $g, g, g$, and $g$, and their equivalents, When employed to sustain and strengthen the ends of the axes on which the intermediate whecls $P, P^{\prime}$, and P/ r'evolve.
3. The reversible hollow cylinder C, by means of one or more wheels I and $b$, one haring an axis coincident with the axis of the shaft, and the other or others parallel therewith.

76,902-Lemuel S. Fitiman, East New York, N. Y., assignor to fimself, James M. Horkins, and Jefecisox W. Southmayd, New York, N. Y.Multiplying AFotion on a Single Shaft.-April 21 , 1868. -The standard has a horizontal wheel at its upper end, whieh engages the side gears of a wheel outside the standard which is fast to the shaft, and a wheel inside the standard which turns on the shatt. An arm on the shaft has a wheel on an axis, extending in the direction of the arm, and which engages a side gear on the turning wheel, and a side gear on another wheel turning on the shaft. This seeond, loose wheel has a similar wheel to that upon the arm engaging the first loose wheel, and a sinilar wheel which carries another wheel engaging the first loose wheel and an outer one from which the aceelerated speed may be taken.

Claim-1. The stationary lever B, having slot and communieating wheel $b$, the wheel or disk $A$, and lerer or' wheel $A$ ', carrying slot and communicating wheel $a$, and fast upon the shaft S S, the reverse rerolving wheel or disk $\mathbb{C}$, the revolving wheels or disks D, E, F, se., carrying slotted lugs, and the communieating wheels horizoutrl to the shaft.
2. The stationary lever or slot B and communieating horizontal wheel $b$.
3. The combination of the wheel or disk $\Lambda$, and the slotted lever $\Lambda^{\prime}$ witl communieating wheel $d$.
4. The reverse revolving wheel or disk C, geared differentially.
5. The revolving wheels or disks D E F, and the slotted lags earrying wheels $d e$, arranged horizontal to the shalt.
76,90:B.-F. G. and E. A. Floyd, Macomb, Ill. -Broadeast Seed Sower.-A pril 21, 1868.-Improvement on their patent, $\Lambda$ pril 2,1867 . The flanges are made to strike the grain in a different direction to those of the previous patent. The seed holes are bushed with perforated leather disks which may be ehanged to suit the kind of seed. The holes are so located that by opening the proper one the grain may be thrown to the right or left or may be thrown to both sides. The amount of sced is regulated by skides. The bagg is confined upon the mouth of the hopper by an open ring and fixed and movable eatehes.

Claim.-1. The disk A, with flanges $a$, which flanges do not radiate in a direct line from the center, but whose inner ends are inelined forward in the direetion of the revolution, as and for the purpose describer.
2. The shaft B, with shoulder $b$, thread $b^{1}$, and nut $b^{2}$, in combination with disk $A$, as and for the purpose described.
3. The pointed arm $\mathrm{C}^{\prime}$, in combination with shat $B$, as and for the purpose deseribed.
4. The feoding holes $\mathrm{D} \mathrm{D}^{\prime}$, when arranged in relation to each other and to the disk A, substantially as deseribed.
5 . The bushings $d$, in combination with holes D $\mathrm{D}^{\prime}$, as and for the purpose described.
6. The bag $F$, with open ring $f$, in combination with the hopper $\mathrm{F}^{\prime}$ and catches $\mathrm{G}^{\prime} \mathrm{G}^{\prime}$.
g6,901.-Tanes R. Floyd and Josepil A. Sab. baton, Netr York, N. Y., assignor to Janes R-Feord.-Hydraulie Itains for Gas Works.-April 21,1868 . -The hydraulic main has a lateral opening that is closed by a plate having one or more ports to whieh the tubes are applied which conduet the gas from the retorts. The dip nozzles are preferably cast upon the inncr side of the port plate, and the conducting tubes are bolted to its outside. The joints between the main pipe and the port plate and between that and the conducting tubes are made tight with cement.
Claim.-1. The combination of the main pipe, (constructed with 凤 lateral opening,) with a lateral port plate, (formed separately, and applied to the lateral opening of the main pipe,) substantially as betore set forth.
2. The combination of the said main pipe, lateral port plate, (formed separately, and applied to the lateral opening of the main pipe,) and dip nozzles for the ports in the lateral port plate, substantially as before set forth.
g6,905.-Janes H. Foote. Pittsficld, Mass.Dinner Pail:-April 21, 1868.-The drawer is lifted out of the pail vertically and contains sereral trays and a drink vessel which are taken out of it horizontally.

Claim.-1. One or more trays $b b^{\prime}$, in eombination with the drawer $d$ and pail $c$, as and for the purpose specified.
2. One or more drink cans $e e^{\prime}$, in combination with the draver $d$ and pail $e$, as and for the purpose speeified.
3. The dratrer $d$, in combination with one or more trays $b b^{\prime}$, one or more cans $e e^{\prime}$ and the pail $e$, as and for the purpose specified.
\%6,906.-Fraxcis Fowler, West Maven, Conn. -Convertible Carriage Pole.-April 21, 1868. The metallie cross bar of the tongue has sliding squaremocketed coupling irons whicla slide on the eross bur and have soekets on the rear ends to receire the coapling bolts. The irons are prerented by set screrts from slipping on the cross bar.
Claim.-The attachment of removable poles by means of the shifting rods D D, which slide cither way along the metallie eross bar' $A$ A.
\%6.90\%. - Josinua Garsed, Frankford, Pa. Hand Truck.-April 21,1868 .-The side wheels have fiat faces and the end wheels rounded faees. The truck rests upon but three wheels at a time and may be swong around abruptly withont defaeing the floor.

Claim.-The within-deseribed hand truek, eonstructed and operating substantially as speeified.
g 6,908. - Willias Wallace Goodwin, Camden, N. I.-Dry Gas Meter.-A pril 21, 1868.- The suring keeps the orifice ride open when the passage of gas is in the legitimate direction, but when the eurrent is reversed the arm on the rotating shaft abuts against the short end of the tilting stop lerer (whieh it ordinarily passes over by tilting) and actuates the ralve lerer to close the ralve. The shaft is also prevented from rotating.

Claim.-The application, to a dry gas meter, of a deriee or combination of derices whereby the orifice in the plate through which the eurrent of gas passes to or from the valyes, will bo either entirely elosed or fully opened thereby, in aecordanee with the relative positions of the meter between the supply and discharge pipes, as deseribed, the said deviec or combination of derices being construeted and operated in the manner herein described, or in any other manner that will produce tho same effeet.
g 9,909 - Mattiew Gornon, Washington, Iowa. -Combined Cornstalk Cutter, Cultivator, (Ee.- April 21, 1808.-The machine rums on two whecls and has a vertically adjustable frame whiel has a shaft on whieh are sereral toothed or bladed eylinders. These cylinders are remorable and as many may be used at a time as necessary for the reqnired width of tilth, the rertieal adjustment determining the depth of tilth.

Claim.-The crlinders o $p q$, with eutters and tectlo or hoes armanged non the shaft, and operated substantially as and for the purposes herein reeited.
76.910.-Cilauncer O. Green and Rombet Mas, Troy, N. I.-Boiler.-April 21, 1863.-The boiler stands on a ridge coneentric rith the stove pipe and turns on the latter as a ecnter so that it may be made to oeeupy a position at the rear, npon either side, or in front, in whieh latter ease it eovers the greater part of the rear pair of pot holes, and an inclined plate is arranged to elose the remaining aperture.

Claim.-1. In eombination with a cookingstove or range, a water reservoir or boiler $B$, when hinged or piroted to or upon said stove or range top, in manner suel that the said water reservoir or boiler may be turned, rerolred, or shilted thereon about its pi vot eenter', and thereby be made to rest upon or orer the clifferently heated parts of said stove or range top, to thereby increase or decrease, or regulate the ten perature of water within satl reserroir or boiler, substantially in manner as herembefore deseribed and shown for the aforesait purpose.
2. In combination with a cooking stove or range, the arrangement of the exit passage or flue thereof, for the gases of eombustion, and the said piroted, turning, or shifting water reservoir, both at one aud the same end of said stove or range, iu manner substantially as deseribed, so that the eseaping gases of combustion thereont shall impart heat to said water reservoir, in any one of its shifted positions on and over the stope or range top, as set forth.
3. A cooking stove or l'ange, having a top plate provided with pot holes E , and a water reservoir 13 , so mounted and piroted thereon that it ean be turned or shifted horizontally about its pirot eenter, as deseribed, and placed over or partly over the said pot holes, so as to reecire the greatest heat from the stove or range, and also bo turned off horizontally, to leare the said pot holes exposed or open aud free to place culinary vessels therein, as set forth.
4. In combination with a stove or range top, pot holes E and a water reservoir, turning or shifting about its pirot eenter thereon, as deseribed, a loose and removable eover plate or hood I, substantially as and for the purpose set forth.
5. The manner of seeuring said pivoted and shifting reserroir to the store or range top, by means of the collar $h$, with lug $a$, and flange ring $e$, with notel $b$, or any equivalent devices therefor, which shall hold
the said reserroir upon the store or range top so that it may turu about its pirot center, as cleseribed, and kecp it securely thereon, in any one of its shitted positions on and about its rivot eenter, as set forth.
6. In combination with a stove or lange, and a Water reservoir moring or shifting about its pirot eenter thereon, as cleseribed, a frietion flange or flanges $g$, or any equiralent deviees therefor, formed on or attached to the reservoir bottom, or to the stove or range top, as and for the purpose set forth.
76.911.-Willam C. Girmes, Philadelphia, Pa. - Fire Detector.-A pril 21,1868 ; antedated April 18 , 1868.- A pipe leads fiom near the eciling of each apartment to the watehman's room near the roof se as to give notice of a fire oceurring in any part of the building.

Claim.- A series of tubes converging from seferal apartments of a loonse to one apartment, and adapted for the transmission of aeri-form fluids to this center, substantially as shown and deseribed, and for tho purposes set forth.

76,913.-JoIIN Meberling and William L. Meberling, Mount I'leasiat, Ohio.-Root C'utter.April 21, 1868. - The knife cylinder has upon its periphery gangs of entters which slit the root followed by curred blades which have a "draw" eut and take sliees from the roots as decpas the enters hare penetrated. The slips of root pass through the curved throats to the stationary interior knires and thence to the ehate which passes into the open end of the eylinder and diseharges the pieces.
claim.-1. The knives $H$, or their equivalent, substantially as described and for the purpose set forth.
2. The oblique curred slots $e^{\prime}$, haring an offset direetly beneath the formard part of the knives $F$, to prevent clogging, the coneave and eonrex sides of whieh eurves bend or turn toward the stationary cutting knives used in comnection therewith, as seen at $e^{\prime}$, Fig. 1, all strips or sliees that pass throngh.
3. The projecting cutters $G$, or tecir eqniralent, for the purpose specified.
4. The eombination of the projecting entters $G$ knifo F , enrred slots $e^{\prime}$, and knives H , as shown, and for the purpose specified.
5. Such a regular inclination of the surface of the kuires and the periphery of the eylinder, from the edce of eaeh knife to the one next in its rear, as to bring the said surface within the edge of it a suffieient distanee to eonstitute the throat.
6. The hollow metallic evlinder $\mathbf{E}$, having rimmed ends, one of whieh is open, inclined periphery, obligue eurred slots $e^{\prime}$, substantially as shown and described.
g6,913.-Tsainil Merrick, Merrimaek, N. H.Churning Butter.- April 21, 1868. - The vertieal dashers rotate in eontrar'y directions, and have their relatire positions so adjusted as to pass ench other; the wings of one being transversely of the ehurn, while the others range lougitudinally.

Claim.-The dashers $I^{1} E^{\prime}$, eonstrueted as deseribed, in combinatiou with springs $0 O^{\prime}$, steps $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$, cog-whecls $1313^{\prime}$, piuion C , standards $1\left[\mathrm{H}^{\prime}\right.$, journal box $G$, shaft $\Lambda$, and erank $V$, arranged substantially as and for the purpose set forth.
g6.914--ToseriI W. Mildretit, Boston, Mass. -Leather Polishing Machine.- A pril 21, 1868.-The leather is plaed upon a table whose top is emred to asree with the are of oseillation of the tool. The glassing-tool has an elastic bearing at its pivot, whieh enables it to field to inequalities, and it is reciproeated by comection to a wrist on a hand wheel.

Claim.-In a maehine such as deseribed, the eombination, with the yielding bed upon whieh the leather is placed, of the vibratory lerer to whieh the glassingtool holder is attached, provided at its point of suspension with an clastie and yielding hearing, substantially in the manner and for the pmrposes herein shown and set forth.

769,915.-Alexander J. 11. Hiliton, Boston, Mass.-Iruit Jar and Clamp.-April 21,7868 ; antedated March 10, 1868. - The prongs of the yoke eateh beneath the square lip of the jar. The yoko is twisted
round to tighton the lid, bearing upon inelines on its upper surface.

Claim. - The angular clamp $G$, with its jaws a a, in combination with the inelined planes $F F$ of the cover C, the rubber packing ring, and the straight shoulder IB of the jar A, all as specified.
g6,916.-Joserf M. Hoadley, Birmingham, Conn.-Crochet Needle.-April 21, 1868; antedated April 8, 1868 .-The needle and its holder are each of wire. The former passes through loops in the ends of the latter and takes a coil round it, the elasticity of the handle lolding the neorlle in its prolonged or protraeted position.

Claim.-1. The holder B, for croehet needles, formed, with the needle $A$, from the same piece of tempered wire, as herein shown and described.
2. The holder $B$, for erochet needles, formed of tempered wire, upon which the needle is arranged to slide and be held in position by the clasticity of said holder, as herein shown and deseribed.

76,91\%.-L. E. Holden, Clereland, Ohio.-Fruit Can.-April 21, 1868.-The stopper is held suspended in the neek, so that when the latter is conneeted to tho air pump by a flexible tube the air ean be exhausted from the ean withont dislodging the cork from its position. When the air is suffieiently exhausted the eork is grasped through the flexible pipe and inserted in the neck.

Claim.-The eombination of the pipe $B$, tube $D$, and stopper C, as and for the purpose substantially as speeified.
gig, Sis.-George B. Mowland, Gardner, Ill.Gate Latch.- $\Delta$ pris 21, 1868.- Tlhe two latehes are piroted to the pieee whieh is driven into a mortised hole in the gate post, and one or the other is strnek and lifted by the elosing gate, aceording to the direetion in whieh it is moving. The pivoted stop-piece is lifted above the lateher when opening the gate.
Claim. -The peeuliar construetion of the droplatehes, and their attachment to the middle picee $b$, as shown in Fig. 2 , thereby seeuring an mobstrueted space immerliately above the latehes, so that the gate may be opened, as herein deseribed, without necessarily involving a spring or unnecessary weight of iron, in connection with the bar or stop on the gate, either of which is more expensive and inconvenient to operate.
76.319.-James M. Mulse, Baltimore, Ma.Frame for Stretcling Pants.-April 21, 1868; antedated April 8, 1808.-The pants are stretehed on a frame having one straight bar and a jointed bar adjustable thereto.

Claim. - The eombination of the upriglat a with cross supporting picee $e$, with the hinged streteher $b c$, and adjustable smpporting eross pieces $f a$, the whole arranged as herein deseribed, and for the purpose speeified.

76, 520.-II. Hunt, Delaran, Wis.-Gate.-April 21, 1868. - The roller on the middle post of the gate ruas upon one enred track, while the roller on the inner post runs beneath the other track, being borne up by the weight of the outer ent of the gate. The impulse is given by eords whieh are earried to stations up and down the road, so as to operate the gate without alighting.

Claim.-1. The eonearo-convex traek $J$, arranéed for the rollers $M I$ to run on its opposite sides, in combination with straps $V$ and gate F , substantially as and for the purpose set forth.
2. The eombination of traek $J$, cords $R$, straps $\nabla$, pulleys $S T$, box $W$, and gate F , substantially as set forth.

76,921.-Samuel W. Huntington, Augusta, Me.-Lemp Shadc.-A pril $21,1868 .-T h e$ upper end of the elasp hooks over the rim of the glass shade, and its prong forms a strut to hold it in position. The upper eflge of the shade is held by the spring tongue and the slotted piece.

Claim.- A lamp shade elasp or elamp, strueki up from a single pioce of sheet-metal, in the manner herein deseribed, so that one end of the elasp shall be provided with a spring tolague or elamp, bent iu
the manner specified, for holling the shade, and the opposite end with a hook and arms for maintaining the elasp and shade in position mpon the lamp ehimney or globe, substantially as shown and set forth.
ge,982.-Frank IH. Husted, Buffalo, N. Y.Base Burning Stove.-April 21, 1868.-The magazine chamber in the middle is contraeted at bottom by the semi-dome of the eombustion chamber, so that its diseharge aperture is semi-annular. The ealorie current passes up in front and dives at the rear.

Olaim.-1. Forming the central combastion spaee $f$ by means of the passage $a$ aud deflecting plate $b$, or their equivalents, substantially in the manner and for the purposes slown and deseribed.
2. Divicling the eombustion ehamber surrounding the magazine into vertieal flues ly the magazine itself, of the form deseribed, or by the hinger plates $d$ d, provided with operating rods $n$, or equivalent; substantially in the manner and for the purpose specified.
3. The magazine D, provided with deflecting plate $b$, and semi-anuular discharge aperture $a$, or equiralent, and arranged so as to form an enlarged flne E in front, in combination with the oven $E$, arranged and operating snlostantially as set forth.
\%6.923.-Ryciarn Kerr, Boston, Mass:-Fu-migctor.-April 21, 1858 ; antedated April 14, 1868. - The tobaceo ehamber may be serewed on to a common garden syringe, and has a removable nozzle which is taken off to charge the chamber. Tho tobaceo is liglited at the nozzle end. The rear end has a perforated plate which allows passage to the air.

Claim.-A fumigator arrauged for employment with a piston sylinge when provided with the grate $c$ and the outer removable end $a$, substantially as and so as to operate in the manner deseribed.
g6. 924.-George W. Kintz, West Hemrietta, N. Y.-Washing and Wringing IMachine.-A pril 21, 1868. -The bed rollers are tapering and eireumferentially ribbea. Strips are interposed betreen these rollers. The "rubber" has plain and tapering ribbed rollers standing in opposite direetions to those on the bed. The rubber is eonnected by a link to an arin extending from the side of the box. For wringing, the clothes are drawn between a large eaoutehone roller at one end of the bed and two rollers mpon the rubber which are pressed down thereon.

Claim.-The combined washing and wringing machine having the conieal crimping lollers E E' standing in opposite direetions to produce a erimping of the eloth, and provided with the intermediate ribs and seoops $d, f$, and having the mringing rollers G, II II so arranged as to intermatel and graduate the pressure, the whole operating as deseribed and for the purpose specified.
\%6,925.-Charles Kirchihof, Newark, N. J.Blast Gun.-April 21, 1868.- A sheet of paper is contined between the parts of the pipe by means of a eateh, and a pressure of air being brought upon the paper by means of the plinger, a disk is ent thereform, followed by an explosive noise.

Claim.-1. The combination of a sleet or plate $h$, made of the material as herein described, with an apparatus for eompressing air or gas when said sheet or plate is seeured hermetically to the latter, by means of an arrangement allowing a speedy removal and restoration of sueh sheets, in the mamer and for the purpose speeified.
2. The peenliar construetion and eomection of the parts $b f g$ of the device for seeuring the sheet, as set fortli.
3. 'The extension $p$ and $o$, made in the manner and for the purpose speeified.

等69986.-Rxchand Kitson, Lowell, Mrass.Screen Cylinder ior Cotton Pickers.-A pril 21.1868. -The surface of the sereen eylinders is raised or depressed between the perforations to prevent the eseape of shor't staple cotton with the dust.

Claim.-A crlinder surface, which is more or less raised or depressed between the perforations, substantially as shown and cleseribed and for the purpose or purposes specified.

76,927 -John Kohler, New York, N. Y.Ififting Jack.-April 21, 1868. -The rack upen the lifting bar is engaged by a spur wheel upen the ratehet wheel shaft. The ratehet wheel is turned by a pawl upon a hand lever and held by a pawl Whicli is piroted to the standard. When the lever is raised te its extremo elevation a pin raises the lever pawl, and the latter pawl raises the eatel pawl to allow the ratehet wheel to turn back, and the lifting bar te deseend.

Claim.-1. The lever $\Lambda$, pawl C G, and pawl disengaging pin II in combination with the ratchet wheel D, pinien E, and rack F , substantially as and for the purposes set forth.
2. The slet I aud pin $i$, all operating tegether, as shewn and described, to forma new and impreved curriage jack.
g6,925.-Joseri Liebhaber, Bless, Bararia. Churn.-April 21, 1868.-The beaters of different kinds have various action on the cream and give changing currents to it.

Claim. - The eombination of feur or mere beaters of different censtruction, for the purpose above set forth and described.
76.929.-TVilliam A. Lighthall, New Yerk, IT. Y.-Condenser.-A pril 21, 1868.-The exhanst pipe has a series of openings through which the steam passes inte the condenser, entering inte a space between the twe series of tubes so as not to airectly impinge upen any of them. The object is to prevent their wearing away.

Ulaim.-Arranging the exhaust pipe frem the engine with its series of openings, as shomn, in relatien te the vacant space between the series of tubes, as and fer the purpose hercin set forth.
66.930.-Charles F. Lixscott, Woburn, Mass. -Frame for Window Screens.-A pril 21, 18t8.-Thin metallic clasps are mado to fit orer the inner edges of the frame at the cerners. The side slats may be stipped inte the clasps or remored therefrom for stowing amay.

Claim.-The elasp B made of sheet or east metal and attached to the inner corner of a frame for the prurpese of securing the sides of the frame together gabstantially as set forth.
g6,931.-Frank Livingston, Marathon, N. Y. -atate.-April 21, 1868.-The gate hinges are arranged to slide rertically on the post, and the vertical pujustment of the gate is accomplished by a lever bar which is hinged to the gate pest. 1 pin near the center of the gate traverses a slet in the lever, and the fore end of the lever slides in a rertical slot in the gate, and is sustaimed by spring catches therein.

Claim.-The bar F, hinged and pivoted as described, in combination with the gate and sliding hinges. D U, fer the uses and purpeses set forth.
g6,932.-Samuel P. Mecay, Killborirne, Ohio. Horse Rake. - A pril 21,1868. -The "tumbling frame" ot the rake has two sets of teeth, which are alternately presented. When a lead is gathered or a windrow reached, the lifting of the lever engages the teeth with the greund, and the progression of the dratught frame tumbles the rake, bringing another set of teeth into action.

Claim.-1. The handle II when piveted to the frame and provided with an adjustable shoulder $j$ and hook $l$, for the purpose of regulating the double rake head D, as and for the purpose speeified.
2. The double rake head D provided with S -shaped slots $x x$ in the eross heads thereof, and having spurs $m \mathrm{~m}$. secured therein, in combination with handle II and frame $\Delta$, as and for the purpese specified.

G6.933.-F. P. Micnel, Rechester, N. Y. Pump Piston.-April 21, 1868; antedated $\Lambda$ pril 14, 1868.-The water enters abeve and belew the piston alternately, and passes through the piston and the hollow piston rod. The perforated disk valves are governed, as to the extent of their motion, by stops attached to the sides and te the bottom plate of the piston respeetively.

Chaim--The constructien of the hollew piston $\Lambda$,
with the ribs $f f$, and heek $k$. for the ready insertion and removal of the ralves, the whele arranged and eperating in the manuer and for the purpose specified.
76.934.-Trederick J. Miller, Breohlyn, N.Y. -Construction of Ice Pitchers.-April 21, 1868; nntedated April 10, 1868. -The inner bottotn is domeshaped and its margin rests upen the table and is soldered to the foot of the extermal shell. The inner shell is secured to the dome, which resists the blows of the ice without tearing loose from its conncetions.

Claim.-An ice piteher having the walls $c$ a and bottoms $d b$, and fower rim or base $c$, censtructed substantially as shewn and fer the purpose set forth.
76,93.5.-Edward L. Molineux, New York, N. Y.-Preparing Laundry Blueing.-April 21, 1868. The blueing is mixed with glutinous or saccharine matter, and molded or pressed into sticks which are readily disselved, but have sufficient tenacity to stand transpertation.
Claim.-1. Forming the artiele called laundry blueing inte sticks or fingers, and thus preparing it for sale and use, substantially as desoribed.
2. Combining laundry blucing with stareh, sugar, or ether soluble glatinous or saceharine substance, therely diluting it and improving it for use, whether the same be fermed into sticks er fingers er not.
76.936.-James H. Muremli, Baltimore, Ted. assignor to himself, Lewis R. Kibizer, and Jacon SEEGLER, same place.-Machine for Cutting Bangs.April 21,1868 . -The squared stuff is formarded into the square hellew of the rotating erlinder, aud comes in contact with the rotary cutter, by which it is turned to a eylindrieal form; it is then forwarded into the retating feeding tube, whero it is mored forwarl by the pawl arms actuated by a collar reciprocated by a forked lever. The eylindrical staff eomes next under the action of the eutter, which reduces the end to a fruste-conical form. It is then remored by the saw.
Claim.-1. The arrangement of the collar E . with its spring feeders G G that lie in the slots of the cyl inder E, and are operated to carry the stick through the eylinder after being rounded by the cutters, substantially as specified.
2. The wheel K provided with tho slides $a x$, and placed on the end of the eylinder E for gripping the stick while the bung is beiag formed, substantially as speeified.
3. The arrangement of the sliding frame $\mathcal{L}$, with shafts $T$ and MI placed opposite to each other, ono provided with the cutters ' $T$ and $u$, and the other with the saw N , whereby the bung is formed, eut frem the stick, and dropped, in tho manner sulstantially as specified.
4. The arrangement of the adjustable rod $Q^{\prime}$ in the slecve $Q$, supported by the bars $f l$, mud in combination with the inelined bar R on the end of frame L , whereby the bung is held and dropped, the wholo arranged to operate substantially as specified.

76,93\%-Geonge H. Noble, Lewell, Mass., assignor to himself and Benjamn T. Mills, samo place.-Spindle Bolster.-April 21, 1868-Conical linings fit a tapering hole in the auter shell of the spindle bolster, which has a eup rim to contain oik and passages to lead it to tho space between tho bushings, whence it reaches the spiudle.
Claim.-The dirided and tapering or conieal bashings or linings, eombined with a spindle bolster, as deseribed, the said bolster being provided with one or more oil passages $c$, and a dishing top, to receive and convey the lubrieating substance to the oil space $b$ and the spindle, in the manner and for the purposo specified.

Tg 6,938 .-Tantes Noble, Pittsbirg, Pa.-Lacomotive Cow-Catcher. - April 21, 1868. -The coweateher is a toethed eylinder, rotated by gear conneetion to the driver. The animal lifted by tho teeth is received upon an apron.

Claim.-1. The construction of a locomotive cowcatcher, consisting of a revolving cylinder or cylinders with faee er faces serrated or toothed, and so conneeted with the forward locemotive truck as to
receive the motions described, and operate substantially as and for the purposes hereinbefore set forth.
2. An apron $n$, extending from some fixed part of the locomotive forward over a revolving cylindrical cow-catcher $g$, substantially as and for the purposes hereinbefore set forth.
gG,939.-James Olivier, South Bend, Ind.Casting Mold Boards. -April 21, 1868.-The upper part of the flask has a "chill" with recesses for hold ing cores, which make the bolt-holes in tho moldboard.

Claim.-1. A ehill, provided with core-seats or recesses $e c e$, substantially as deseribed and for the purposo set fortll.
2. In combination with the coro-seats $e$ e $e$, the chamber-chill C, substantially as described.

G6,940.-William B. O. Peabody, Boston, Mass.-Scoring Games.-April 21, 1868.-The sectious of the box are duplicates, one for each player or party. Changeable disks are graduated for the different games. The interior of each box has the usual train of gearing actuating the pointers.

Claim.-1. The series of ehangeable, differently marked dials, in combination with the scoring and registering apparatus, as set forth.
2. The box $A \perp$, formed in two equal parts, and containing the duplicate sets of changeable dials and indicating apparatus, as and for the purpose spoeifiod.
\% G, 941.-Georgn H. Peacock, Fairport, N. Y. -Bag Fastener.-April 21, 1868. -The conds of the cord are firmly attached to the respective clasps, which are locked together by a turn button.

Claim.-The band A,-composed of metallic cord, in connection with the elasps $B \mathrm{~B}$, and fastenings ${ }^{C} D$, arms $E E$, and ears or projections $F F$ aud $G$ $G$, all arranged to operate as hercin set forth.
g6,942.-Lyman B. Prindle, Litehfichd, Conn.Railroad Rail.-April 21, 1868. -The parts of the compound rail form a longitudinal joint, and are laid together to break joint. Tho junction is oblique, the seetious reversible. The chair has a high outer-side and a groove corresponding to one in the waist of the rail; a key is driven into the grooves to form a fish-bar.

Claim.-A continuous reversible rail, with its accompanying ehair and key, constructol substantially as herein set forth and described.
g6,943.-EDMUND W. QUincy and WIlliam Fismicr, Lacon, M1.-Operating Ferry Boats.-April 21,1868 . -The rope reaches from shore to shore, and takes a coil round the central drum on board the boat. Auxiliary guide drums prevent the rubbing of the rope against itself where it is received by and delivered fiom the drum.

Claim.-A ferry or other boat, provided with flanged drums a $a^{\prime} a^{r t}$, arrangod with reference to the prevention of tho abrasion of the parts of the dranght-rope upen each other, in the manner described.

26,944.-Frank W. Reilly, Chieago, IIl., assignor to himself, George F. Root, Ebenezer T. Root, and Cilauncey M. Cadeey, same place.-Lift. ing Apparatus.-April 21, 1868. -The liaudles are vertieally adjusted by the serew threads upon thoir shanks.

Claim.-A lifting apparatus, constructed substan tially as described, consisting of two adjustable vertical rods, projecting abore a table on whieh the pationt stands, connected with suitable mechanism beneath the table for carrying the weights used.
76,945.-Fayette S. Robinson, Boston, Mass. -Iamp Burner-April 21, 1868. - The deflector is held in its place in the ehimney by spring pins, which enter grooves on the inside of the glass chimney. Hooks are drawn inward by springs, and catch upon the foot flange of the chimney. They are released by a slide, when the glass is to be remored.
Claim.-1. In combination with the deflector G , the spring points \&, for the purpose of supporting the
deflector by entering grooves or recesses in the chimncy prepared to receivo them, as deseriber.
2. Confining the chimney and centering it by means of centripetal holders, constructed apl oporating as set forth.
3. Tho eombination and arrangement of the slide $J$, levers K L, sliding holders M, and springs $N$, in the manner and for the purpose specified.

76,916.-Robert Robson, Buffalo, N. Y.-Brick Kiln.-April 21, 1868.-The polygonal building has divisional kilns, together with entry and delirery vestibules and a central area, wheuce aceess is had to the kilns. The furnaces are in the inclosing walls, and are fed from the outside. The caloric current enters the kiln abore the bridge wall, dires through the kiln, passes into the inner flue, and thence into the next kiln, where it is used to dry the eharge of bricks, and whence it is discharged into the chimneys above the archod roof.

Claim.-1. The combination and arrangement of a series of kilns, $A, B, C, \& c$., with a central area, $G$, and passage way or ways $I$, $I$, for supplying and removing the bricks and tile, substantially in tho manner set forth.
2. The furnaces $n$, bridge wall $p$, and connecting flue $J$ and chimncys $S$, arranged substantially as herein described.

96,94\%-GEORGE H. SanBorn, Boston, Mass.Circular Saw Table-April 21, 1863.-The table is used for sawing the grooves in the backs of books, for holding the threads, and those for the catch stitech The slats in the opening of the table fill the spaces between the sarws. Their doretailed ends set beneath the edge of the table at one side of the opening, and their other ends are grooved to receire a spring bar, whicl holds them in position.
Claim.-The spring bar I, in combination with the grooved slats $\mathrm{K}_{4}$ arranged and operating as doscribed.
m6,948.-RuFus S. Sanborn, Ripon, Wis.- Wo ter Vessel for Tire-Proof Safes.-April 21, 1868. The water ressels are designed to give off steam, when the safe is subjected to a charring heat. To keep the valve in the uppor part of the water vessel, even though the safe be dislodged, the ressels are hung, valre upward, from points of suspension abore their centers of gravity, and are allowed freedom of motion upon this point.
claim.-A water ressel for steam fire-proof safes, suspended to the wall of the safe, substantially in the manner and for the purpose specified.
(96,949-D. B. Sanderson, Lemiston, Me.-Peg Cutter.-A April 21, 1868.-The "float" is piroted in the stock and has a flange benoath, in one of whose notches the spring dog is engaged to maintain the "float" in the required angular position.

Claim. -The arrangement of the tonguc $f$, plate $d$, arm $h$, and helix $k$, in the manner herein illustrated and describer, upon and in combination trith tho curved stock $a$, as and for the purposes set forth.
r6,950.-Arthur Hamiton, Sherrrood, Conn. -Sevoing Machine.-April 21,1868 ; antedated April 16, 1868. -The rerolving disk beneath the table lias a single wrist pin, which trarerses slots of peculiar conformation in the arm which drives the shuttle, and in the arm which reeiprocatos the needle bar
Claim.-The combination of disk J, pin L, With the shuttle-carrying arm $D^{\prime}$ and rocking arm B, prorided with curved slots N M, the whole operating substantially as and for the purpose set forith.
g6,951.-Edward Smyder, Slatiugton, Pa., as signor to himself and Morgan Jones, same place. Machine for Rounding the Corners of Slate Frcmes. - April 21, 1868.-The cutter rerolves in fixel bearings. The slate frame has reetangular corners which are suceessirely introduced into a slide and presented to aud moved past the eutter whech. The curved guides eause tho slide to recele from and then approach the cutter, so as to give the rotundity to the corner as it passes the eutier. A spring re turns the slide to its initial position.

Claim.-The eurved guides $d^{1} d^{2}$ and pins $a^{1} a^{2}$, or
their equivalent, arranged and operating, relatively to the entter $C$ and earrier D, substantially as and for the purposes herein set forth.
76.95.-GEORGE A. SQuIER, Sytacuse, N. I.Teeth for Hay Spreaders.- April 21, 1868.-Improrement on patent No. 32,350. A metallic ear is bolted to each side of the fork handle. Each ear is made in two parts which are fitted together with a serrated joint. To cach ear a spring tine is secured by an axial bolt fastening.

Claim.-The fork head $\Lambda$, made in sections A a for seeuring the tines, and having serrated joints $f$, as herein shown, and for the purpose deseribed.
g.953.--O. S. and T. C. St. JoHn, Willoughby, Ohio.-Mtachine for Harvesting Potatocs.-A pril 21, 1868.- A plow runs on each side of the row and throws a furrow ontward. The broad, horizontal blade, munning beneath the hill lifts it and the earth, to a giren width and depth. The pronged drag bars follow at the same depth as the knife and agitate the soil loosened by the latter, so as to collect the potatoes on the surface.

Claim.-1. The use of the elongated flat knife or blade $J$ and straps R R, constructed substantially as described, located and operatingin the espeeial manner herein set forth and for the purpose stated.
2. The employment of the detachable drag separator herein described, having the two outer arms rigid and the intermediate ones vibratory, so as to operate in the manner deseribed, and in conncetion With the said knife $J$, as and for the purpose set forth.
S. The opecial nse and employment of the extra attrachment herein deseribed, constructed and operating substantially as and for the purpose stated.
4. The combination of the said drag separator and the said extra attachment, operating in the manner and for the purposes set forth.

5: The plourhs K and K', in combination with the broad knife $J$, operating as and for the purpose herein stated.
6. The levers $A A^{\prime}$, connceting rods $B B^{\prime}$, forked rods $\mathbb{C} \mathbb{C}^{\prime}$, plow standards $D D^{\prime}$, rods $E E^{\prime}$, guide plates $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$, provided with eateh holes $\mathrm{G}_{\mathrm{G}}$, swing har H, and pawls I I', in combination with the lenife $J$, or with the extra attachment, drag separator, and plows K K' all constructed, arranged, and operating substantially in the manner and for the purposes herein set forth.
g6.954.-HENRY Strickler, Borongh of Carlisle, Pa.-Hay Hoisting Drum and Grain Fork.April 21. 1868.-Grain sheares are piteled onto the fork, which elerates them by means of the conncetium rod and wrist upon the gear wheel which is driren by conmection to the drum shaft. 'The level pinion is disconnected from its main wheel, when the fork is disused and hay is to be lifted. The liorse is attached to a lever on the drum shaft and walls eontinnously around. The rope winds on the drem and is attacied to the ordinary horse hay fork. The drum is unshipped to allow the emply fork to return.

Claiul.-1. The extension $f$ of the lower ratehet $f^{\prime}$, operating with the arm $h$ and the pulley $w$, and the rope $z w^{\prime}$, for the pmpose of enabling the person working the hook or fork on the loaded wagon therefrom to unshift the drum.
2 . The beveled $\operatorname{cog}$ wheel $m$, fastened on the upper onter face of the drum $g$, the beveled cog wheel $n$, the arm $o$, the spur eog wheel $p$, the spur cog wheel 9 , the arm $r$, the arm $s$, the fork $u$, and the inelined plane $r$, all combined and operating in the manner. and for the purpose herein set forth.
\%,955.-TAMES SWAN, Sermonr, Conn.-Machine for making Auger Bits.- 4 pril 21, 1868.-For forming the auger bits on a previously twisted blank. The heated blank is grasped between jaws which conform to its spiral form and is adraneed to be acted upon by threc pairs of dies acting in pairs sueeessively. The fir'st pair has three reeesses Whieh form threo straight spmis on the ond of the blank. The next pair cut off the burr around and between the spurs. The next pair bend outward the outer spurs, to form cutting lips. The blank is ad-
ranced by successite impulses to bring it opposite the sets of dies. in turn.

Olaim.-1. The holding jaws $\mathrm{J}^{\mathrm{J}} \mathrm{J}^{\prime}$, attached to the sliding plate $I$, in combination with the slicles $G G^{\prime}$ $\mathrm{G}^{\prime \prime}$, provided with the dies $c f h$, all construeted and arranged to operate in the manner substantially as and for the purpose set forth.
2. The combination of the holder $J J^{\prime}$, constrneted as described, in combination with the operating parts thercof, as herein shown and described.

G6.956.-TAMES SWAN, Sermour, Conn.-Auger Handle.-A pril 21, 1868.-One section of the handle serews into the other and the square shank of the auger being passed through the onter tubular portion is jammed by a bloek, foreed in by the entering portion of the handle. A $V$-face on the block straddles one angle of the shank and prerents turning. While its pressure prevents longitudinal slipping of the shank.

Claim.-The eylindrical key C , within the handle A B, provided rit its front end with the V-shaped groove $g$, and upon its under side with the longitudinal groore $e^{\prime}$, fitting over the ligg $f$ in the socket a, and having at its rear ond the circumferential groove $d$, fitting orer the lugs $b$ nuon the part 3 of the haudle, all construeted and operating as deseribed, wherebs, as the parts A B are serewed together, the key C is operated longitudinally to clamp the shank of the auger, as herein set forth and represented.
\%6.95\%.-Dexter Symonds, Marlotr, N. I.Process for Tanning.-April 21, 1868.-The bark is consumed by regulated combustion and the raporized products coudensed and collceted. The chimney is surrounded by a condensing chamber of cold water. and the liquid flows into a vessel, and is used for tanning leather.

Claim.-1. The process, substantially as described, of prodneing or obtaining from bark or other substances liquid for tanning hides and skins.
2. The application of such liquid to hides or skins to be tanned.
3. The liquid herein described as a new production for tanning purposes, when prodnced or obtained by the process deseriber.

76,958.-Hirani C. Thompson, Bristol, Conn., assignor to limself, and NOAH POMEROY.-Die for MAaking Clocl: Collets.-April 21, 1868.-The two punches are attached to the stem and work simultancously. In each descent one punch makes the opening and the other ents out the disk. The next deseent the disk punch descends npon the piece whose center was pmehed ont by the previons blow.

Claim.-The combination and arrangement of the dies E e, gange pin F , and back gauge G , arranged and operating on the base plate, snbstantially as described.
76.959. - SAMUEL Toomer, Wilmot, Ohio. Shifting İail for Carriage Seats.-A pril 21, 1868.The shifting rail is seened in the rear brackets by hook tenons and shoulders; and in the front braskets by gibs and wedgo keys.

Claim.-1. The projection $G$, on the under side of the bracket $a$, at the inner edge of tho mortise, in oombination with the gib C and wedge $d$, substantially as and for the purpose herein speeificd.
2. In combination with the gib and wedge fastening at the fiont, the square hook tenons $g g$, and shoulder $f$, bearing with a spring pressure upon the brackets $b$ b, substantially as and for the purpose herein set forth.
\%6,960.-Cromwell Flaetwood Tarley, Net York, N. Y.-Insulator for Telegraphs.-April 21, 1868. -Insulators are immersed or washed with hot or cold coal tar, naptha, petroleum, paraffine oil or wax, (the latter hot.) The objeet is to inerease the insnlating properties.

Claim.-1. The use of petrolenm or parafine oil, coal tar, naptha, or parafline wax, for renovating the insmlating porfer of surfaces rendered defcetive by age, exposure, or other cause, as set forth.
2. The use of the above-named materials for in creasing the insulating power of porous or otherwise imperfeet insulators, as set forth.
g6,961.-Chanles Webster, New Haven, Vt. -Feed Water Heaters for Boilers.-A pril 21, 1868.The water tank eommunieates through elastic pines from its upper and lower part with a pipe reeessed between two flanges extending from the side of the fire chamber. The heater pipe is eonneeted to bell cranks whieh are operated by lerers to move it more or less into tho fire. The water circulation is indueed by the heat.

Claim.-An apparatus for heating the feed water of a steam generator, combining the following elements, viz, a tank B, and a system of pipes, conneeting it with a heater $G$, so arranged that the latter may be adjuisted in its position in the fire box, substantially as set forth.
g6,962.-Cilarles A. Wellevgton, East Lexington, Mass.-Traveling Bag.-April 21, 1868.-For kepping the mouth from gaping when the bag is distendec. Hooks are arranged near the bends of the bag frame, being hinged to one jaw; the toothed ends snapping into perforations in plates attaehed to the other jawv.
Claim.-1. In combination with the jarws $b c$, the hooks $d$, eaeh hinged at one end to the jaw $b$, and having at its opposite end the bend $f$, and tooth $g$, the tooth entering the soeket or recess in the jaw c, to eoufine the jarss together, substantially as deseribed.
2. The stationary staples or eyes $l$, riveted to the metal jaw frame, substantially as deseribed.
 iektown, Ohio.-Gate.-April 21, 1868.-Designed to be opened by the rider without dismounting. The traveler reaehes up and grasps the lever whose depression brings the boveled sufaces into operation and unlatehes the gate. Pushing open the gate he does not release the lever until the hind wheels have passed, when he allows the gate to close by the aetion of the weight.

Claim.-1. The eombination and arrangement of the beveled angles $\mathbf{E}$ and F of the box $\mathrm{C}^{\mathrm{I}}$, and slotted shaft D , operated by the forked or straight lever $G^{\prime}$, substantially as and for the purposes herein deseribed and set forth.
2. In eombination with the above, the springs $m$, or their equivalent, the flattened and oblong head of the bolt $h$, the operating lever $\mathrm{G}^{\prime}$, all arranged and operated substantially as and for the purposes herein deseribed and set forth.
3. In eombination with the abore, the weight H , arranged and operating as deseribed, for the purpose of elosing the gate, as speeificd.

96,964.-Joseph Wolf, Young Ameriea, Tll.Corn Plow.-April 21, 1868. - Eaeh double shovel plow is attaehed by a loop to the axle, so that their relative positions and distanees may be adjusted. The axle is arehed in the center to span high eorn and the tongue is stayed by draft bars to the axle.

Claim.-1. Conneeting the forward ends of the beams $\mathbf{C} \mathbf{C}$ to the axle $\mathbf{A}$, by means of metallie loops, so that the said ends can be shifted, while the rear ends ean be adjusted, substantially as and for the purpose set forth.
2. The arrangement of the axle $\mathbf{A}$ with the beams $\mathrm{C} \tilde{\mathrm{C}}$, whieh are loose at their rear ends, and with the tongue F , as and for the purpose set forth.
3. The arrangement of the clraught bars H H with the axle $A$ and tongue $F$, as and for the purpose set forth.
769965.-EDWIN A. Wood, Utiea, N. X.-Electro-Magnetic Valve Gear-April 21, 1868.-An electro-magnet eonneets or detaehes the palve or talve stem with or from the eeeentrie rod or other part of the engine whieh operates the valve. The valve stem has an iron arm whieh forms an armature for the magnet. A sliding frame of two bars eonneets the two armatures, and the two bars are conneeted near their eenter by eross bars. The magnets are plaeed in the frame faeing their armatures while their opposite ends are united by a bar. Extending between the eross bars is a vertieal support of noueondueting material faecd with metallic plates. eondueting material faecd whe ond of the governor
Whine the knob on thewer end
spinde touehes the plates, the oireuit is complete
and is broken when the knob is in the space between the plates.
Claim.-1. The use of the electro-magnet, one or more, for connecting and detaching the eut-off or governor valve or valves of a steam engine, with and from the power which operates such valve or valves, as deseribed.
2. The use of the governor and eleetro-magnet, one or more, in combination with the inlet cut-off or governor valve or valves of an engine, for the uses and purposes mentioned.
g6,966. - Joinn R. Ackerman, Edward B. Campbell, and Nibami O. Golden, Dobb's Feity; N. Y.-Lamp Burner.-April 21, 1868.-The wick tube is surrounded by a cone and a foraminoas ey!inder surmounted by a eonieal defleetor. The air is thus supplied to the flame to dispense with the neeessity of a chimney in burning coal oil produets.
Claim-The arrangement of the perforated eylindor D with relation to the open bottomed eone C , conieal top E , and wiek tubo A , as herein deseribed, for the purpose speeified.

76,96\%.-G. H. Alger, Ames, N. Y.-Lifting Jack.-A pril 21, 1868.-The lever is suspended by a link from the standard and its end catches beneath the teeth of the raek whieh is sustained by a lever eateh in its elerated position.

Olaim. -The eombination of the uprights C , raek $B$, base $D$, eross pieces $G \mathrm{G}$, lever A, link $g e$, lever eateh $b$, and lifting toe E , all construeted and operating together substantially as and for the purpose shown and deseribed.
g6,968.-JoHN ALLEN, Pughtown, Pa.-Bed Bottom.-April 21, 1868.-Eaeh side band is eonneeted by oblique pieees to two opposite bands so that the weight is distributed and horizontal defleetion is prevented; the end conneetions at head and foot aet as auxiliary stays.

Claim.-Tho bed bottom eonstrueted of inelastic bauds or strips, joined together in thines, erossing eaeh other in the middle, as shown, being supported by rings upon the rails of the bedstead, and stretehed siderise by the bands 12,34 , and 7, the whole construeted in the manner and for the purpose aboves.t forth and deseribed.
ge,969.-EMranuel ANDREWS, Williamsport, Pa.-Hanging Reciprocating Saws in Saw Mills.April 21, 1868.-Strips of steel are riveted on eaela side at cach end of the sarr and their dovetailed edges. Hooks with eurred and correspondingly dovetailed lips engage the steel strips and form a means of adjusting the strain at any part of the saw nearer or further firom the edge.
Claim.-Hanging reeiproeating saws, so that the strain may be adjusted to any desired part, by hooks and stirrups, with eireular lips, when made and arranged substantially as and for the purpose setforth.
g6,970.-Whliam N. Avaus, Morristown, N. J.-Egg Beater.-April 21, 1868.-The eollar is reeiproeated rertieally by one hand while the other hand grasps tho handle. The eollar has sttds whieh follow the threads of the spirals and rotate the wire frame.
Claim.-The serew or spiral-threaded shafts A and L, eog. Theels $i$ and $j$, and the nut D, in combinatiou with an egg beater, construeted, arranged, and operating substantially as deseribed and for the purpose set forth.
g6,9\%1.-Aaron Armstrong, Gillespie, IllCorn Planter.-April 21, 1868. - The maehine has the usual furrowers, seed boxes, and eovering rollers. The front and rear seetions are jointed together, and by depression of the lever the furrowed portion is raised to clear the ground in turning.

Claim. -The foot lerer $\mathbf{F}$, eonneeted or applied to the draught pole $D$, to operate in the manuer substantially as and for the purpose set forth.

F6,9\%马.-DATID Batrd, Bloody Run, Pa.-Hitlstone Exhaust.-A pril21, 1868.-Improvement on his patent, Deeember 3, 1867. The objeet is to sare flour whieh may pass off with the exhaust air from the
millstone and to collect and earry off condensed moisture. The cxhaust air is dirarn throngh a sintrons passage to precipitate the flour, and the moisture is caught in cups.
Claim.-1. In an exhaust for millstones, the separator I , when construeted with horizontal int erlocking shelves $i i^{\prime \prime}$, arranged substantially as and for the purpose set fortll.
2. Collceting the condensed moisture that may be deposited in the exhanst, or in any of the air chambers or passages, by means of of set of cups or receirers $m m, n n$
96,973.-Adolph F. Ballas, Pottstown, Pa.Railway Switch.-A pril 21, 1868.-The ends of the switeh rails lie in the recess beneath the tread, so that the flange of the wheel locs not come in contact therewith. The counter weight restores the switch to position after movement. The switchlever shaft is connected by cog gearing with the turning signal shaft.
Claim.-1. The switch tongues, eonstructed as deseribed, with their points lower than the tread of the rails A B, and adapted to fit against the wel, and below the tread of said rails, free from contact with the tread of the car whecls, as hercin deseribed, for the purpose specified.
R. In combination with the abore, the counter weight, eonstructed and arranged to operate as herein described, for the purposo specifical.
3. In combination with the tongues $C$ and connter weight F , the revolring target P and gearing O , operating substantially as described, for the purpose specifich
g6,974.-Richard C. Barton, Brookiyn, N. Y. -Purifying Oils and Fats.-A pril 21, 18்6s.-The oil or fat is plaeed in the inner tank, which has a rertical shaft having radial stirters, and a diseharge pipe at its lower conical encl. It is surronnded by in water or steam chamber, by whieh the oil or fat is heated to $90^{\circ}$ or $100^{\circ}$ Falr'., respectively, and yeast, 3 parts, added to each 40 parts of the grease. The whole is stirred while warm and then left to ferment, when sediment is drawn off at the bottom. The tank may be used in the manufacture of stearine.
Claim.-1. Purifying fats and oils, and decomposing them, to separate them from inapurities and from gelatinous matter by means of ferment or protein, as set forth.
2. The process, herein shown and deseribed, of treating oils and fats for purification, and for scparating impurities.
3. The process, herein shown and described, of treating stearic acids.
4. The apparatns, hercin shown and described, consisting of the tanks $\Lambda$ and $B$, and of the agitator C, all made as set forth, for the purpose of treating fats and oils in the manner specified.

96,9\%5.-Hazen J. Bachelder and George E. TVoods, Marlboro, Mass. - Horseshoe Machine. April 21,1868 . The bar is fed in between the shears until it butts against the adjustable gauge plate. Being serered by the shears the bender adranees and drires it between a pair of rollers, giving it a proximate horseshoe shape. The hecls of the shoc fall into a depression, and as the bender retires the shoe is drawn from it. The ereasing and nail punch are on an oseillating lever, and the latter aets upon and in conjunction with a lower lever, whieh perfeets the perforation.

Claim.-1. The combination and arrangement of the recess $b$ with the earriage $B$, bender $A$, and rollers E E, formed and arranged substantially in manner and so as to operate as described.
2. The combination and arrangement of the cutting shears $n o$, the stop gauge $p$, the bender A, the rollers E E , and the diseliarging recess $b$, the whole being to operate as set forth.
3. The combination, as well as the arrangement, of the auxiliary nail hole punch $u$, and its operative lever $v$, with the bed $s$, and the main nail hole punch $r$, and its operative lever $G$.
4. The combination of the gauge $t$, the bed $s$, the creasing pmeh, and the lever $G$.
5. The combination of the cammed lever $w$ with the operative cam $m$ of the lever $G$, and with sueh
lever G provided with one or more panches, arranged to operate with a bed $s$, in manner as described.

76,976.-Edgar B. Beacir, West Meriden, Com1.-Bec Hive.-April 21, 1868.-The frame ease may be slipped from the hive, and the latter has an outer case to corer it in winter.
Claim. - The combination of the outer case C with the inner case A, When the inner ease is provided with a frame case E, and so as to be remored from the case A, and so as to be closed by the outer case C, substantially as and for the purpose specified.

76,97\% - Sewel G. Thayer, ndeninistrator of the estate of Dantel N. Beard, deceased, Clereland, Ohio. - Suspendsr for Stove Mandles, de. April 21, 1868.-Au article of oceasional use is snspended on a cord wound upor a spring pulley, so that it can be drawn down and npplied, and will be automatically carried back to its position.

Claim.-Tihe Theel D, when providel with guide $g$, the swirel screw C , spring D , and cord E , as and for the purposes specified.
g6,975. - Friatcis W. Bechwitir, Westmoreland, N. X., assignor to himself and Siithe, Clank \& CO., samo place. - Whifletree Hook. - April 21, 1868.-The hook is east upon the ferme, and its beveled end receives the bereled end of the spring tonguc.

Claim. - The circular spring band $a$, held against, the end of the thimble by the bead $g$ and the tongue $h$, having the projection $i$ piroted between the lugs $m$, all construeted, arranged, and operating as deseribed, whereby the spring is eompressed at each outrard and inward movement of the tongue, and the latter held either open or elosed by the outward expansion of said spring, as herein described, for the purpose specified.
\%6,979.-G. A. Beidler, Philadelphia, Pa.Lamp Tiumer. - A pril 21, 1868. -Within the onter deflector or cone is an inner one whose lower portion is cut into a number of rertical strips, whieh are turned into radial direction.

Claim.-1. The rarefjing conductor $\mathbf{B}$, made substantially as shown and described.
9. In combination with the rarefying zonduetor $B$, the conical deffector $A$, substantialiy as shown and described.
z6,980.-HENRy F. Bemendefer and Dwight II. I'inch, Attica, Ohio. - Hay Fork. - April $\gtrsim 1$, 1868. -The turning head is held by the spring cateh bar as cither a fork or grapnel.

Claim. - The fork $A$, with its shank $B$, arranged with the cateh bar D and handle E , the parts beingo construeted and operating as and for the purpose set forth.

96,981. William H. Betts, Brooklyn, N. Y.Window Sash Lock.-April 21, 1868.-The fastener is made in form of dovetail or under cut groored bloeks, whieh are seemed to the respective mecting rails of the sashes. Upon these a loeking piece is made to slide and engage both dovetail groores to fasten the sash.

Claim.-The dirided under eut or doretail slide 3 $c$, in combination with the sliding locking picee $h$, the parts being constructed and applicd substantially as set forth to form in sash fasteuer.

76,952.-Samuel W. Bevans, Plymonth, Conn., assignor to himself and Geonge A. Munson, same plaee.-Feather Dressing DLachine.-April 21, 1868. - The prismatic or eylindrical receptacle is traversed axially by a pipe, which is perforated on its upper side and bulged on its lower side, and from the bulged part descends a drain pipe. This axial pipe is traversed by a steam pipe which has similar perforations and elosely fits its upper side, so that by turning the imer pipe the steam may be let on or eat off from the inside of the feather receptacle.

Claim.-In a feather dressing machine, attaching a diseharge tube in or near the eenter of the bilge or eylinder, substantially as and for the purpose doscribẹd.

76,983. - Byron Boardman, Norwich, Conn., sssignor to himself and Frank Douglas, same place.-Device for Turning Nuts.-April 21, 1868.The nut is serewed on the arbor and comes in contact with the ring, which has projections on both sides so as to adjnst itself to the untrue side of the nut.

Claim.-1. The adjustable ring $\Delta$, with its projections $B \operatorname{BB} B$, when ased for the purpose specified.
2. The combination of arbor $C$ with ring $A$, substantially as hercin specifich.

76,984. - Cuarles S. Bonney, Penn Yan, N. Y.-Thill Coupling.- April 21, 1868. - The pin is bushed with leather or rinbber, and is held between the fired and sliding jonmal boxes. The latter is adjusted by a temper screw, which is prevented from turning when in working position by the contact of the thill iron with the screw head.

Claim.-l. The construction and arrangement of the parts $\mathrm{A} D$ and screv E , when made and used as and for the purpose set forth.
2. The part $\mathcal{B}$, with the channel $I$, to prevent the screw E from turning, when made and applied to the part A, snbstantially as herein specified.
'96955.-ADAMS. BROWN, Lebanon, Pa.-Tubc Well.-April 21, 1868.-The tube lias annular projections which snpport the onter casing (of wire rope) upon the inner side of the said casing, and bands encirele the casing to support its onter side. The projections hare water holes leading from the aunular spaces between the pipe and casing to the inside of the pipe.

Claim.-1. The outer wall or casing $C$ of a tube well, construeted of twisted wirc cables $g$, arranged, secured, and braced smbstantially as deseribed.
2. One or more annular perfor ted and flaring en. largements upon the inner tnbe $A$, substantially as deseribed.
3. The rings or shields $h$, in combination with a tube $A$, which is constrncted with annular perforated culargements, and with an ontcr perforated or openwork casing C, substantially as described.
\%6,9S6.-Charles E. Brown, Tast Randolph, Mass.-Scwing Machine.-April21, 1868. -The gnicle bar is raised with the needle bar by a cross pin which passes through a slot in the said needle bar. The graide bar is depressed by a spring. An adjustable collar is arranged to compensatc for wear in the gruide bar.

Claim.-The guide bar F, provided with a slot $g$, and pin $h$, in combination with the collar $K$, bolt $d$, and the spring $R$, when constructed and used snbstantially as and for the purpose hercin set forth.
g6,95\%.-SMITR M, BROWN and HaRvey J. Brown, Holly, Mich.-Ticket Holder. - April 21 , 1868. -The ticket is held between the overturned sides of the plates which are bent around the loops for attachment to the hat band.

Claim.-The ticket holder, constructed as deseribed, consisting of the plate $A$, having its sides a $a$, and lower end $b$, bent in toward and parallel with the face of the plate, whereby a channel is formed betreen said sides and plate for the passage of the ticket, which is clamped therein by the lip c, said holder adapted to be secmed to the ends of a hat band by means of the rings $\mathbb{C} C$, hold in the plate $A$ by the bent slides $\alpha$, all arranged as herein described, for the purpose specified.
gig.988. - OTTO BrÜCK, New York, N. Y.Pockct Book and Fan Combined.-April 21,1868 .The fan is of that kind folded by dratring into a cylindrical case and is associated with a poeket book.

Claim.-A fan and pocket book combined, as a ner article of manniactnre.

6,959-Andrew Bucilanar, Brooklyn, N. Y. Quartz Crusher.-A pril 21, 1868. -Two or more jatts hare dircrging crushing faces and are connected by links in such manner that the links sustain the whole strain produced by the operation of crushing; an oseillatory motion is communicated from one jaw to the others. The motion of one jaw is produced by a erank which imparts a rising and falling as well as
an oscillating motion to the same. The other jans are supported by rockers which are adjustable to or from the center of motion. The weight of the jaws is comnterbalaneed by springs.

Claim.-1. The connecting straps F, in combination with the crushing jarvs E G, substantially as and for the purpose described.
2. The rockers $\Pi$, in combination with the jaws $E$ $G$, constrncted and operating substantially as and for the purpose described.
3. The balance springs $J$, in combination with tire jaws $G$, construetcd and operating substantially as and for' the purpose set forth.
g6,990.-David M. Bucklary, Athens, Ohio.Clothes Drier.-April 21, 1868. - The cords wind upon the roller and when suspended support rounds for hanging clothes; lateral rounds aresupported by side cords and are held out laterally by braces.

Claim.-A clothes drier, constrineted with a slaft B , cords D and E , and parallel bar's $\mathrm{F}^{\prime} \mathrm{F}^{\prime}$, arranged substantially as described.

G6,991.-W. G. Busey, Gcorgetown, D. C.Fertilizer. - April 21, 1868. - Composed of solnble super-phosphate of lime, (made of bones treated wifh one-fourth their weight of snlphnric acid, ) 1.300 lhs.; Perurian guano, 600 lbs ; common salt, 100 lbs. Mix.

Claim.-The fertilizer, formed by the combination and manner of combination of several specific materials, substantially as herein set forth.
\%6,992-Albert G. Buzby, Philadelphia, Pa.Steam Safety Valve. A pril 21, 1868.-The pair of valves are placed in the same casing but on separate seats. The loaded lever acts to depress one and litt the other, but the latter is held down by a bar and a pair of coiled springs.

Claim. - The tro valres $B$ and $B^{\prime}$, the former being comnected to but loaded independently of the ralre $\mathrm{B}^{\prime}$, when said ralves are contained within a casing, snbstantially as and for the purpose herein set forth.
g6,993.-EDWard A. Calairan, Brooklyn, N. Y., assignor te Thil Gold and Stock Telegrape Company, New York City.-Printing Telegraph.April 21, 1868.-A single wire communieates a crrrent through all the machines to set the printing wheel to tho proper letter or figmre and another wire acts to cause the impression to be made. Both actions are performed by electro-magnets.

Claim.-1. A magnet, for giving or controlling the impression, placed in a main clectrical cireait, that is separated from the circuit that controls the type wheel or denoting device, so that the impression can be made independently of any other operation, when the type wheel or denoting derice has been properly moved, substantially as set forth.
2. 'I'ro or more type wheels, separately controlled by magnetism, and arranged side by side, or with their axes on the same line, so as to be impressed jointly or separatcly, on one strip of paper, snbstantially as and for the purposes set forth.
3. The combination of the type wheels $k$ and $l$, magnets $f$ and $i$, with the magnet $c$ and impression roller $u$, or its equivalent, substantially as and for the purposes set forth.
4. The rercrso ratchet whecl $q$ and pant arm $r$, in combination with the ratehet wheel $p$ and pawl 5 , for moving and holding the type or character whecl, snbstantially as set forth.
6.9.94.-SHELDON and SpexCer C. CARY, Netr Iork, N. Y.-Bottle Stopper.-April 21, 186S.-The large end of the cork has a flanged metallic cap. Claim.-As a new article of manufacture, a bottle stopper, provided with a cap $B$, of metallic foil, and a flat plate $C$, which projeets over the edges of the stopper, whereby said stopper is merented from being forced too far into the neck of the bottle, as described.
\%9,995.-UAyes Cimistr, Philadelphia, Pa.Nut Fastcner.-A pril 21, 1868 ; antedated April 14, 1868.-The bent wire is hinged at one end and seeured by a screw at the other. It embraces an angular mut or serew head and prevents turning.

Claim.-The wire D, bent, seeured, and applied
to a nut, or to a bolt or sererr head, substantially as and for the purpose deseribed.

3,996.-EliJah J. Clark, Kalamazoo, Mich.Automatic Fly Brush and Fan.-April 21, 1868.The fan arms are upon a rock shaft actuated by an eccentric, connecting rod, and arm.

Claim.-The arrangement of the shaft $h$, cam $l$, md looped rod F, iu combination with the shaft $j$, rods $f f$. and fans $H H$, all construeted and operated as and for the purposes set forth.
76.997 . Nicholas P. Clatike, Central Falls, R. I., assignor to himself aud Cimarles E. Griffis, same place.-Spool Stand. - April 21, 1868.-The spools are placed on rertical spindles on a rotating s.and and each thread is passed through an eje. The shear plate has a number of sharp-sided recesses iuto whieh the thread is passed and is sovered by a piroted knife.

Claim.-Thespool stand, construeted as deseribed, consisting of the revolving spool-carrying plate C , provided with upturned radial arms $a b$, haviug tubes $c$. the fired right-angular plate F Fx, piroted knife $G$, aud operatiuo spring arm II, all arranged and operating as described for the purpose specified
76.9D8.-Gronge Ciump, Hamden, assignor to himself and Willias Enerle, New Haven, ComApparatus for Relieving Choked Animals.- April 21, 1868.-The perforated bar is forced into tho month and held by a strap passing over the poll. The tube is iutroduced through the liole in tho bar and the air being exhausted from the bulb the cup is thrust over the turnip. The bulb is then allowed to expand aud the turuip drarrn out by atmospheric pressure.

Claim.-The herein-deseribed apparatns, consisting of the tube A, provided at one end with the mouth B or balb C , or with one at each eud of the tribe. so as to operate substantially in the manner and for the purpose herein deseribed.
\%6,399.-A. F. Conrs, Chapel Hill, Mo.-Bee-Hive.-April 21, 1868.-Tho metallie hire is of cylindrieal form aud is coated inside with a composition af beeswar and plaster of Paris. The top is bolted on.

Claim.- A bee-hive, construeted of metal, and having its iuncr surface coated with plaster of Paris and beeswax, substantially in the manner as and for the purpose set forth.

J7.000.-Charles H. Colby, Lynn, Mass.Tube Well.-April 21, 1868.-The perforations are made to flare intrardly to prevent closging, and are within remorable plugs whiel ean be extracted to gire opporturity to cleanse the pipe.

Olaim.- A tubular well, with strainers set in serew disks or plugs, the perforations flaring inwardly, all coustrueted and applied as herein set forth.
\%\%, 091.- Hugir W. Collender, New York, AT. I.-Billiard and Dining Table.-A pril 21, 1868 , -The table top is invertible, and the upper portion of the frame is rertically adjusted by inclined slides Which axe moved longitudinally by a serem, turned be a haud crank.

Claim.-1. The elerating meehanism, substantinlly such as herein described, in combimation with a billiard-table bed which is couvertible, so that it can be used for playing billiards, or for diniug or ather uses, as described.
2. The combination of the elerating mechanism, the morable or outer bed frame $d$, and the reversible bed $m$. substantially as and for the purpose described.
3. The combination of the clevating mechanism, the outer or bed frame $d$, the bed $m$, or the equivalent thercof, and the adjustable base picces $c$ of the legs, substautially as and for the purpose described.
4. The combiuation of the spirit levels with tho rungle-sight plates, substantially as aud for the purpose deseribed.
7.7.002.-S. W. Corn*N, Vallonia Springs, N. X., assignor to himself and J. B. Sands, same place-IIcthod of Tightening Tires.-April 21, 1868.- 1 block attached to one end of the tire projects through an apening in the felloe aud las a threaded portion which euters a slotted plate attached to the other
portion of the tire. The parts are drawn together as tightly as is uecessary to hold the felloes timmly, and the position is secured by a mut.

Claim.-1. Tightening the tire, having one end seeured in the folloes by means of the block C formed upon the opposite end of the tire having an inclined side $J$, the rebated slot $E$ in the felloo, the $T$-shaperl block $F$, block $G$, and plate O , all coustructed, arranged, and operating as herein shown and described.
2. The slot $E$ and bloeks $F$ and $G$, aud plate or strap $D$, substantially as and for the purposes set forth.
\%7.003.-W. O. Crawford, North Star, Pa.-Tentilator.-A pril 21,1868 .-The bellows are placed opposite to each other, and operated by clock work through tomgle levers.

Claim.- The arrangement within the portable caso A of the bellows C C beiug opposite to each other within said ease, and surrounded by the pipes D F , said bellows being operated from the central clock work by meaus of the pitmen $f f$, as hercin deseribed for the purpose speeified.

97,004.- Q. C. Culley, Ashtabula, Ohio. Oheese Turning Cover.-April 21,1868 . -The central disk has a marginal rim on each side. The inner faces of the rim are bereled and one rim raisés the disk from the shelf while the other holds the cheese in place.

Claim.-The corer A, provided with a rim or flange $B$, projecting from each side, iu the mauner as and for the purpose speeified.
g\%,005.-A.uos Cutvier, Chelsea, Mass.-Šhutter Fastening.-A pril 21, 1868.-The piroted spring jarrs are commected by a staple to the lower bar of the blind and shat over notehed pins on the window frame and the wall, iu the closed and open positions respectirely of the shatter. The jars are released from the pin by pressing the tail picees together'.

Claim. -The arrangement, upon the sille of the lower bar of a blincl, of arms a $a^{\prime}$, jatrs $m \mathrm{~m}$, spring $c l$, pirot $b$, staple $g$, aud hole $f$ for a blind-catch, in eombinatiou with the two horizontal spikes $c$, one driren into the wall of the honse, aud the other into the wiudow sill, so that said eatch shall operate to hold the blind, when either open or elosed, by one set of jaws, in the manner herein set forth.
g\%,006.-S. A. DARRACII, Newburg, N. Y.Tender for Meating and Delivering Metal I3ars.April 21, 1868.-The bars are contaiued in a shaking box, and fed consecutirely by a sliding pusher which advanees aud pushes a bar into one of the peripherial holes in the revolring ejlindrieal furnace. The end of the bar is thus thrust among the coals and lieated. Being carried round with the furnace the bars reach in turn the poiut of discharge, where automatic tongs withdraw them and drop them on a chute which delivers them at the desired spot.

Claim.-1. The arrangement of a revolving furnace $\Lambda$, provided with holes $h$, in its sides, and covered with a bomet $D$, in combination with the mechanism deseribed for introducing and remoring the bars, substautially as and for the purpose deseribed.
2. The derices herein described for giving to the feed box I, containing tho blanks, a transverse shaking motion, substantially as and for the purpose set forth.
3. The latehes $s t$ and pins $s^{\prime} t^{\prime}$, in combiuation Witl: the jams $o$, wedge $r$, slides $p r$, and revolving fire pot C , all construeted and operating in the manner and for the purpose herein sliown aud describerl.
g\%.90\%. - GEORGE Deas, New York, N. Y. Ventilator for Mats.-April 21, 1868.-The outer band being fitted into the lat and the immer one adjusted to the size of the head, the inter fening space affords room for circulatiou of air to ventilate the interiol.

Claim.-A rentilator for hats, formed of the elastic adjnstable bands $B$ and $E$, counceted together by springs, with an open space betreen them, each being adjustable, the outer one to the size and shape of the hat, and the inner one to the size aud shape of the head, substantially as hereiu shown and described.
ry\%,008. - David Wm. De Forest, Brooklyn, N. Y. - Mucilage Bottle. - April 21, 1868. - The flaring mouth admits the brush withont daubing the elge and the bulge below the neek affords a shoulder on its upper intcrnal edge, against which to draw the brush to remove superfuous mucilage.

Olaim. - The shape of the mouth and neek of the bottle, in combination with the bulge forming the shoulder, substantially in tho manner and for the purposes as herein described.
g7,009.-C. Ders, Canal Dover, Ohio.-Seeding Machine.-April 21,1868 . -The seed cavitics are in the bottom of the box and are closed by the slides altermately at the upper and under sides. The elods are crushed by rollers in advanco of the openers.

Claim. - 1 . The combination and arrangement of the rollers $B$, foot $A^{\prime}$, and share $B^{\prime}$, in the manner as and for tho purpose specified.
2. The slides $H H^{\prime}$, in combination with the box C , when operated in the manner and for the purpose substantially as set forth.
g\%,010.-David C. Delinger, Russellville, Ohio. -Tobacco Hand Tying Machine.-April 21, 1868.The bunch of tobaeco is thrust into the expanded end of the eylinder and is held by the fork while the cylinder is revolving, a tying leaf being held by the block. Pressurc on the treadle rotates the eylinder trice and winds the tobacco in the wrapper which is tied by a subsequent aetion of the machine.

Claim. - 1 . The cylinder $A$, having the slot $s$, and the expanded end, in combination with the bed E and the guard T, substantially as and for the purpose specified.
2. The fork B, when used in connection with a rotating cylinder A, substantially as and for the purposes set forth.
3. The block $G$, when used in combination with a rerolving cylinder and when provided witle a lever and spring, or their equivalents, by whieh it can be raised or lowered, substantially as and for the purposes set forth.
4. The combination of the cylinder A, gear mheels a I, eord $u$, weirght U , and treadle M, substantially as and for the purposes specified.
5. The hook Q, in combination with the crlinder A, substantially as and for the purposes specified.
gy, OR1. - Alexander Joseri Dere, Heusy, Belgimm, assignor to Smon Delize, Providenee, R. I. -Ilachine for Preparing Wool, Cotton, \&c.-Aprii 21, 1868. -The material is placed in the feed box and carried forward by the endless apron on one side thereof to the toothed cylinder at the bottom of the box. It is taken from the eylinder by the toothed beaters, and deposited upon the endless apron by which it is carried to a second beating cylinder which throws it upon an apron by which it is carried to the pressure rolls. The sheet is then coiled upon a eylinder, the layers being separated by a cloth, and is retained thereon until fed to the earding machine.

Claim.-1. The combination of the case or hopper A with endless apron C and adjustable partition $x$, as and for the purpose set forth.
2. The combination of the two cylinders D and B , with the case and endless apron $C$, arranged substantially as herein described, and for the purpose set forth.
3. The combination of the tro brush cylinders 1 and 2 , the two jeservoirs 0 aud $c$, and plate $Q$, substantially as deseribed, and for the purpose set forth.
4. The combination of the oiling apparatus, eonstrueted as deseribed, with the eylinders $D$ and $B$, substantially as specified.
5. In combination, the wool delivering or feeding meehanism, the oiling meehanism, the pressing and the bat or lap forming meehanism, snbstantially as described, and for the purpose set forth.

๗y, $012 \cdot-P a t R i c K ~ S . ~ D e v l a n, ~ H u d s o n ~ C i t y, ~ N . ~$ J.-Material for Journal Boxes.-April 21, 1868.The box has recesses to contain bloeks of the antifrietion material, which is made of fiber pulp immegnated with plumbago, steatite, \&c., and fixed by silicate of soda or other strong size.
Claim.-1. Forming the anti-fiction material for
lining journal boxes of the ingredients, in the manner and by the means hercin describct, and eutting the same by dies or with punches into the required shape, as set forth.
2. The lining for journal boxes, composed of fibrons matcrial impregnated with pulverized plambago, soapstone, or other earthy matter fixed with a strong size, and rolled and cut by dies or punching into the required shape, substantially as herein shown and deseribed.
g\%, $913 .-$ Frank DOUGLas, Norwich, Conn. Wood Planing Machine.-A pril 21, 1868.-The upper feed rolls receive motion througli movable wheels, which are so eonnected by links as to allow the said rollers to adjust themselves to the various thickuesses of stuff.

Claim.-1 Supporting the feed rollers C C' npon a librating bean D, whieh itself is supported by a sliding standard, that permits it to be adjusted higher or lower, when constructed to operate substantially as and for the purpose deseribed.
2. The combination, with the sliding standard $E$, of the screw slaft H, having the collar, or its equivalent $J$, and operating in connection with the ring K, lever L, or its equivalent, and bevel gear $h$, all constructed to operato substantially as and for the purpose speeified.
3. The piroted arm $o^{4}$, when applied to the spur gearing $n n^{1}$, m $m^{\prime}$ and operating in connection with said gearing, and with the arms o $0^{1} 0^{2} o^{3}$, construeted to operate substantially as and for the purpose describeal.
4. The removable bearing $r$, when used in conneotion with the arms o $o^{1}$, in an adjustable gear, substantially as and for the purpose specified.

19\%, (1) 14.-ALFONZO J. EDDY, New Britain. Conn. -Meat Cutter-A pril 21, 1868.-The two sections of the shell have smooth surfaces and are hinged together. The cutters are interehangeable and are plaeed in spiral relation upon the shaft and with intervoning washers which regulate their distance apart.

Claim.-Tho shape and spiral arrangement of the shear cutters $q$, arranged interchangeably upon the shafts $k$, in combination with the feeders $n n$, arranged within a smooth inner surface ease, with the gears $o^{\prime \prime}$, substantially as and for the purpose deseriberl.

7\%, 1015.-Rollen S. Endy, La Crosse, Wis., assignor to himself, W. H. SMITH, SETI DEAN, aud Henry Mermile.-Horse Power.-April 21, 1868 The tumbler shaft has a cross journal pin carryine two bevel whecls turning loosely on the pin and engaging two berel whecls turning freelr upon the shaft, but receiving rotation in the same direction by the motive gear.

Claim.-1. In a horse-power, the bevel whecls $\delta$ $k^{\prime}$ and $n n^{\prime}$, or their eqniralents, when constrieted and arrauged as deseribed, for the purpose of dis tributing and equalizing the strain throughout the gearing.
2. The pin $m$, and collars $i$, or their equiralents, when construeted and arranged substantially as herein cleseribed, and for the purpose set forth.
3. The wheels $h h^{\prime}$ and $n n^{\prime}$, arranged as herein described, on a sbaft II, and held in place by a eollar on the shaft, in combination with the shaft or With a master wheel, N, in a horse-power, substantially as described, and for the purpose set forth.
4. The use of a device for equalizing the strain in horse-powers, eonsisting of two bevel wheels $\hbar h^{\prime}$, or their equiralents, arranged to run loose on a shaft H, and in the same direction, and to mesh into tro other corresponding berel wheels $n n^{\prime}$, or theip equivalent, running looso on a pin M , at right angles with the shaft $H$, and attaehed to it, as shown in Figs. 2, 3, and 6, or to bearings on a wheel N , trirning about a shaft, L , as shown in Figs. 4 and 5 , the whole being held in plaee by eollars on said shafts, or their equivalents, and construeted and arranged to operate substantially as deseribed.

197,016.-John Eibertson, Kirksville, Mo... Cartridge Box.-April 21, 1868. - The disk has pockets parallel to the axis which are reached by a
door on the side. On the edge of the disk are rows of spring nipples to hold caps, and these are reached by opening a shutter on the periphery of the case.

Claim.-1. The self-adjusting disk E, for holding the cartridges or caps, when used in combination with an enclosing caso, substantially as and for the purpose specified.
2. The split nipples $n n$, having their sides springing sliglitly apart, for the purposo of holding the caps, in the manner described.
gy, 01\%.-Walter Elamenhorst and Franz O. MLathiessen, Jersey City, N. J.-Centrifugal Machine for Draining Sugar.-A pril 21, 1868.- The rotating crlinder is stepped below, and its shaft has a bearing in the frame. Tho npper stay is hinged to a post and is brought orer tho upper end of the shaft to steady the same luring revolution.
claim. - In a centrifugal maehiue of the character dascribed, and haring no upper fixed bearing, the combination, with the purging eylinder $A$ and rubber or elastic bearing to the shaft $B$, of a remorable or adjustable bearing brace or tio to said slaft, so lung or arranged as that it may readily be thrown in or out of steadying support to the eylinder while the machine is in motion, cssentially as and for the purpose or purposes hercin set forth.
g\%,018.—Jonin Evais, Philadelphia, Pa., assgenor to himself and Ihomas II. Sintif, samo place. -Dove-Tail Marker.-April 21, 1868.-The instrument is adapted for marking the dove-tail tenons or mortises on the respective boards. The tro plates of the frame are set at right angles to each other, rend each has a seribing edge adapted to mark its side of the dovetail; one plate is adjustable to regulate the widths and distances, the adjustable gange plate affording a guide in setting the marker for the next seribe.

Claim.-1. The within-described instrument, consisting of the frame $A$, with its markinge edges $x$ and $\alpha^{\prime}$, and the slide $B$, with its marking edges $y$ and $y^{\prime}$, the whole being constructed, arranged, aud cuerating snbstantially as and for the purpose herein set forth.
2. The combination of the above with the adjustainc plate $d$.
g. 019.-JoHN A. Evarts, West Meriden, Comn., assignor to Bradier \& Hubbard, same place.-Extension Fixture for Chandeliers.- A pril 21, 1868.-The socket is permanently attached at the proper distance from the ceiling and the rod or tube dlips through it. The lerer clamp permits fice motion upward, but resists accidental, downward motion by applying a pressure more than sufficient to counterbalance tho weight of the chandelier:

Claim.-1. The socket 13, combined with the lerer E and shoe C, and constrneted so as to operate substantially in the manner herein set forth.
2. In combination with the above, the adjusting block $F$, to adjust the friction, substantially as and for the purpose set forth.
\%\%,080.-Join Fandel, Boston, Mass.-Mrilk Can Cover.-April 21, 1868.-The spring hokts the cover in open or closed position and the packing inside the lid shonts down nipon the lip of the ean.

Cleim.-The combination, with a milk or other can, of the hinged cover $B$, the spring $S$, and paeking' $b_{1}$ smbstantially as and for the purposo specified.
g\%,021.-Samuel M. Farnilam, Tully, N. Y.Oil or Polish for Leather.- April 21, 1868.-Composed of alcohol, 1 gall.; Venice turpentine, 1 lb.; Shellac, 1 lb .; glycerine, 1 lb ; myrtle wax, $\frac{1}{8} \mathrm{lb} . ;$ and lamp-black to color.

Claim.-A composition compounded from glycerine, resinous and other substances, substantially as and for the purpose set forth.

1g\%,022.-Charles E. Finkle, Now York, N. Y., nssignor to himself and R. O. Glover, same place.-Metallie Base and Mrolding jor Heating Pur-poses.-A pril 21,1868 .-The metallie plate is attached to the floor and to the wall in the place of a base board and is perforated above. It covers the steam or hat air pipes which warm the apartment, or by a
duplication of the plate may be mado the medium of collveying tho heated fluid.

Claim.-A metallic base or metallic molding for dwellings or public buildings, whon constructed and used substantially as herein shown and described for the purposes specified.
g7, ©®3.-H. H. Forbes and H. C. Sears, New Bedford, J[ass.-Carriage Seat.-A pril 21, 18(s8.The carriage seat is smpported by a pair of $X$ frames, the lower", forward ends of which are piroted so that tho seat may be rocked forward when reqnired. By taking out the pin at the intersection of the cross frames the logs may spread and the seat be lowered.

Claim.-In combination with the seat of a carriage, the piroted, crossed, and clamped legs, arranged to operate substantially as and for the purpose described.

7\%,024.-E. L. Formeman, Rantoul, M1. Ditching Machine.-April 21, 1868.-The boards are set at an angle to each other, the rear of one being adjustable as to divergence. 'Lho platform is fur the driver to stand upon, and the lever assists in regulating the machine as it is drawn along in the ditch.

Claim.-Whe platform C , in combination with the lever $F$ and sides $A$ and $B$, when arranged and usced as and for the purposo specified.
yg,025.-Lawrence B. FOx, Williamsport, Pa - Method of Finishing Leather. - April 21, 1E68; antedated April 7, 1868.-Tho leather is placed on the table, which has horizontal and rotary movo ment, and the plano stock has reciproeation upon it A rotary knife is associated with the plane stock.

Claim.-1. The plane stoek for finishing leather, with its two slecks and cireular knife, as deseribed and shown.
2. In combination with the plane stock, as do scribed, the adjustable tablo, construeted and operated as shown, and for the purposes set forth.
3. The combination and arrangement of the sereral parts composing my finisher, when used for tho purposes already stated.
yg, 626.-James D. Frary, Now Britain, Conn. - Ilanufacture of Table Forlus.-April 21, 1868.The fork is punched out of an annealed sheet of steel. The fork is then hardened and tinished.
Claim.-The fork A, punched or ent entire from shect stecl, substantially as described, as an artielo of manufacture.
ky, 02\%.-BenJamin G. Fulier, Baltimore, Mrt. -Hydrant.-April 21, 1868. The air chamber sur rounds the ralve tubo and communieates with it through the perforated walls of a chamber beneath the valre. The piston hoad may be raised off the ralre stem and the valve tube unserewed from the top air ehamber by a sockot wreneh. The whole valre meehanism may then ho rithdrawn.

Claim.-The combination with the air chamber and the piston eylinder of the hydrant, of the ralvo and herein-deseribed valye meehanism, operated by, but not attached to, the piston head, and held within a tube or case constructed and connected with the said air and piston cylinders or chambers, in tho manner and for the purposes shown and specified.
gg, 025. - Menry Ganney, Louisrille, Ky.Watch Key.-April 21, 1868.-The spindle turns in the head and has a cross pin, whieh impinges against the spring. Tho spring gives way to a slight pressure when turning backward, and also gives way when a sufficiont forward pressure is applied to endanger the works by overwinding.

Claim. - The combination of the head piece D with its spring E, spindle A, liaring one or more studs C, substantially as and for the purpose deseribed.
rgy,029.-D. A. Ginnent, Morrisville, Vt.-Shoe Lacer.-April 21, 1868.-The recurred ond of the hooks prevonts tho aceidental disengagement of tho cord.
Claim.-The lacer $\Lambda$, as an article of mannfacture, when made with the end of its hook turaed nuder, in the form shown and deseribed, and used as and for the purpose herein specified.
gy, 030.-D. A. Grlbent, Morristown, Vt.-Buttea Tub.-April 21, 1868.- Ears are attached to the side of the bucket and the lid has a notched edge, which enables it to pass the ears. The lid is then partially rotated and is clamped tight by wedges between the upper flange of the eurs and tho top of the lid.

Claim.-The bars B B, construeted as described, and used in combination with the cover C , packing $a$, and wedges $c e$, as and for the purposo set forth.
g. 0. $0.31 .-N . A . G r a y, ~ C l e r c l a n d, ~ O h i o .-S t e a m ~$ Plow.-April 21, 1868.-Improvement on his patent October 27, 1863. The excarators are supported on a carriage which has scparate wheels from the locomotire, and is jointed thereto so as to allow its accommodation to the surface of the ground. Tho spades are adjustable in inclination and are operated by a compound crank shaft, turned by chain gearing, the motion tending to move the machine forward.

Claim.-1. So hanging or jointing tho digging apparatus to the locomotive that the said apparatus will hare an independent adjustment, whereby it is rendered adjustable according to the unevenness of the gromnd, in the manner and by the means substantiolly as set forth.
2. Ithe stay I, rod II, and arm $J$, arranged in relation to the digging apparatus, as and for the purpose set forth.
3. The arm $J$, cross head $K$, spades or picks $L$ MI, and kers R , arranged in the manner and for the purpose substantially as specificd.
4. The construction and arrangement of the spades and picks, when combined with the compound crank and operated in the mannor and for the purpose substantially as set forth.

7\%, 032.-C. B. Gregory, Bererly, N. J.-Coal Stove.-April 21, 1868.-The caloric current passes laterally and swceps around the chamber, which receives air from the external pipe and delivers it in a heated condition at the openings in the stove top. This heated current warms the air in the internal frum. A damper in the vertical, cxternal pipe, determines the amount of air having access to the anmular heating chamber.

Claim.-1. The combination of the outer casing $A$, inner casing $C$, drum D , and the within-described oponings for admitting cold air to and discharging it from the space between the casings $C$ and $D$ and to and from the space within the drum, all as set forth.
2. The vertical pipe $B$, having a damper $g$, situated between the opening $e$ (for admitting cold air to the space between the casings $C$ and $D$ ) and the branch $f$, through which the products of combustion pass to the said vertical pipe, as speeified.
gy, 033.-Henry C. Grigas, Waterbury, Conn., assignor to Holmes, Grigas, and Smith, same place. - Buckle.- April21, 1868.-The bar of the buckie has openings through which pass the ends of the tongue plate and loop, which are hinged to portions of tho bar.
Claim.-A bìnckle frame, constructed with the bar B , when the said bar 13 is perforated, as at a a and E, so as to form hinging points $f f$ and $d$, and the comnections $n a$, so as to receive and support the tongue F and loop $I$, in the manner substantially as herein set forth.
 son, Lancaster, Pa.-Cord Holder.-April 21, 1868. -The tail piecc of one jaw forms a hook, and the cord passes over the other jaw. Strain on the cord draws the jaws closer together and binds the cord tightly. Claim.-The hook A, rith its jaw a, in combination with tho lerer 13 , with its rounded and eared head $b$, both parts $A$ and $B$ connected by a pirot joint with each other, in the manner shown and for the purpose set forth.
g\%.035.-V. A. HACRER, Knorville, Tenn.-Scrubber.-April 21, 1868.-Tho brushi is piroted in the hifureated end of the handle, and has holes in the back to nllow aceess of water fiom the sponge above when the latter is pressed by the lever.

Claim.-1. The combination of the brush B, block $C$, and sponge $D$ with cach other, and with the arms $a^{2}$ of the handle $A$. substantially as herein shown and described, and for the purpose set forth.
2. 'Lhe perforated concare plate E and piroted lever F , in combination with the slotted handle A, substantially as lierein shown and described, and for the parpose set forth.
g7,03d.—Tosepu Male, Somerville, Mass.-Machine for Bending Wood. - April 21, 1808.-For wind ing holices with their coils in contact with each other, in the manufactnre of bent wooden wasluers. The wooden strip is associated with a metallic band, and coiled upon the mandrel rhile the feeding cross-head retreats as it is pressed back by the coils. The tube and coils are then removed to an oven to dry, and the operation repeated, the cross-head being mored back by a scrent.

Claim.-1. In combination with the tube a and with the mandrel $c$, when the arrangement is such that the action of the incline of said tube and the rotation of the mandrel cause a relative movement botween the said parts, the entering troush, made adjustable to the diameter of the tube, and to the width of the strip being wonnd.
2. The adjustable firiction deviee, combined with tho cross-head carrying the inclined-faced tube.
gey, 03 \%.-Harvey D. Haraden, Hartford, VtoClothes Pin.-April 21,1868 . -The hole and slit at one end of the clothes pin form the javrs. The other end has a wedge removed, and a spring assists in kecping tho jaws closed. The thin connecting piece forms the hinge.

Claim.-Improved clothes pin, consisting not only of the picce of wood $\Delta$, haring the slit $a$, the angular opening $c$, and the hole $b$, formed and arranged in it as described, but of the spring d arranged in said slit, the whole being substantially as described.
\%\%, 038.-Andrew Hartupee, Pittsburg, Pb.Grate Bar.-April 21, 1868.-The grate bar is of a T-shape, and has circular apertures near its ends. The cross bearers are notched to reccive the depend ing webs of the grate bars.

Claim.-1. The notehed cross bearers $b$ of a fur nace, in combination with the rib $d^{\prime}$ of a $T$-shaped grate bar, of either cast or wrought iron, constructed and used substantially as and for the purpose abore set forth.
2. A T-shaped grate bar, having a series of circular apertures near to cach ond, substantially as heroinbefore described.
3. A T-iron grate bar, constructed with or with out apertures through it, substantially as above doscribed, as a new axticle of manufacture.

易然, $039 .-J$. Henry Hermax, Boston, MassRailroad Rail.-April 21, 1868.-As a means of restoring tho wheel to the track, an occasional inclined plane is afforded on the side of the rail. A groove is cut through the track flange to allow passage to the flange of the wheel.

Claim.-A railroad rail, havine an inclined pro jection on one or both sides, provided with a groove, for the purpose of guiding the car wheel up unto its proper position upon the track, substantially as set forth.
gey 40 -Charles C. Holcomb, Madison, Wis. -Gate and Door Lateh.-April 21, 1868.- A coilea spring around the pirot forces the two latches apart, eacn cngaging with its omn cateh upon the post.

Clain.-Constructing tho piroted ends of each latch with a slell or cup, which, when put togetheri inclose a coil spring operating upon the latehes all together, being suspended by a serew or other derice, passing through the center of the cup and spring and into the gate or door, operating aud constructed substantially as described.
\%'g, 011.-GEORGE G. Hood and John D. Kellx, Providence, R. I.- Washing Machinc.-April 21, 1868. The corrugated roller is journaled on the sides of the tub and rests on a concare bed of comrngated rollers which are journaled in a spring frame. The frame has a downwardly-projecting pin at cach cor-
ner which sets in a spiral spring, whose lower end is planted on the \&oor of the tub.

Claim.-The cnrved frame C, carrying the eorrugated rollers $G$, when provided with the guide pins, fitting into the spiral springs D, in the four corners of the box, in combination with the tab $A$, tapering block I, plate H, drum E, and shaft F , as herein sliowil and described.
g\%, 012.-LEON V. Hut and Charles Rozit:re, Paris, France.-IKolding Designs.-April 21, 1808.The design is impressed upon the glass while nearly fuser, and it is then covered by another pioce of glass also in a nearly fused state.

Claim.-The method of forming or impressing internal ornamentations or designs in glasstrarc or crystal, in the manner herein shown and speeified.
'g. 04.3.-H. C. Hunt, Amboy, Ill-Head Test. - April こl, 1868; antedated April 10, 1868.-Tho standard is attached to the baek by the adjustable hooks. Its npper end has a piroted pad, and its lower end rests against the back.

Claim.-The passenger or invalid head rest, herein shome and deseribed, composed of the pad $A$, perforatedstandard $B$, inclined fork C , and hooks $d$ and $e$. when construeted and arranged in tho manner shown and described.
\%g, 044.-EDIVIn F. HuTcminson, Auburn, Me. -Land Roller.-April 21,1868 . - The heads have projecting hubs and jomrnals, and the salient lims givo space for the bolts and nuts which attach tho staves forming the surface of the roller.

Cluim.-The metallie heads B B, consisting of solid metallie plates, with exterior flanges and journals, as specified, and used in combination With stares C, eommected by the bolts $x$, in the manner as set forth.
g\%.025.-Allen Ingalls, Martwick Tomnship, Y. I.-Sleigh Brake.- Ipril 21, 1868. The dog brake is connected by a lever and connecting rods to the lerer, which is operated by foot or hand.

Claim.-The brake irons B, combined with levers $D$ and E , rods F and G , and sleigh A , arranged as deseribed and set forth, for the purpose specified.
g\%. 19.-Eli H. Janney, Alexandria, Va.-Car Coupling.-April 21, 1868.-The link engages orer the upper ends of the oscillating eatehes, and is prerented from being thrown off by the gravitating latches. In coupling, the free end of the link is thrown up against the draw head, and the coneussion of the car's in meeting brings it down npon the cateh of the other ear.

Claim. - 1. The combination of the oscillating cateh E , mounted upon a pirot $\mathrm{E}^{\prime}$, in the mouth of a draw head $B$, the movable bar $I^{\prime}$, lever $I$, and lateh D, when constructed and arranged substantially as and for the purpose set forth.
2. The support or rest II, when used as and for the purpose set forth.
g\%,01\%.-DAVID F. JAUSS, Marrisburg, Pa.Chimney Cowl.-A pril 21, ]868. -The inner tube is surronnded by two outer tubes of about double the height. The air passes down between the outer two tubes, and upward between the inncr two, mingling at top of the inner one with the gases aseending from the chimncy.

Claim.-1. The combination and arrangement of the case $S$ with the two inner cases herein shown, so as to effect the commmication of exterior air with the produets of combustion, in the manner as herein set forth.
2. The case $S$ and the tubes $n$ and $R$, constructed and arranged snbifantially as hercin shown and described.
3. The constrnction of the deflectors $\mathrm{B}, m$, and L , in relation to each other and tho hats $H$ and $W$, as herein shown.
g7, 048. - Elijail O. Jones, Brandon, Mich.Land Roller.-April 21, 1868.-Tho rear roller is journaled in a frame which is hinged to the main frame, and may bo raised from the ground by a lever, to bring its weight upon the other rollers.

The rear roller tracks in the space left between the other two.

Claim.-1. Constructing a sectional roller in suels manuer that the weight of the rear seetion or sections may be transfcred, when desired, to the front and outriard sections, substantially as and for the purpose deseribed.
2. The firame $A$, rollers $B B C$, frame $C$ ', lover $D$, standard $a^{2}$, and seat E , the whole being combined aud operated substantiully as described.
g\%,049.-J. W. Kelley, Cleveland, Ohio.-Mode of Attaching Whip Sockets.-April 21, 1868.-One or hoth hooks have inturned tops, which scive to prevent the rise of the loops when the wedge-keps are driven in between the hook and the socket.
Claim.-The hooks C, loops D, key $b$, as arranged, in combination with the socket $\Lambda$, for the purpose and in the manner substantially as set forth.
79.0.50.-D. A. Kersinner, Elliottstown, M1, Corn 1'lanter.- April 21,1868 .-The furrow is opened and the corll automatically dropped and corered. The planter is followed by a roller frame, which is hinged to it and compaets the earth upon the seed. Whe faces of the rollers are seraped to remove adhering earth.

Claim.-1. The combination of the bed plate $F$, sliding dropping-plate $H$, hoppers $G$, leather conductines spouts $J$, projection $h^{\prime}$, piroted lerer I, and arms $e^{1} e^{2}$, with cach other and with the axle E and frame A, substantially as herein shown and deseribed, and for the parpose set forth.
2. The combmation of the lerer Mr eross bars $L$ and $P$, and leather straps $K$ and $Q$, with each other and with the bed plate $F$ and plow-beams IL, substantially as herein shown and described, and for the purpose set forth.
3. The combination of the frame W, concare rollers X , scraping device X Z $\mathrm{A}^{\prime}$, and lerer $\mathrm{B}^{\prime}$. With each other and with the frame A, substantially as herein shown and deseribed, and for the purpose set forth.
gg, 051.—M. A. KNG, New Tork, N. Y.— Iuff. -April 21, 1868.-Improvement on his patent, Ne eember 10, 1867.-The sliding strip aets as a guide in opening and shentting the lid, and prevents straining of the hinges.

Claim. - The spring strip $a$, in combination With the other parts of the frame and mufli, substantially as and for the purposes set forth.
gy,052.-D.NEL KNnt, Masleton, Towa.-Combined Seeder, Cultivator, and Murrov.- Ipril ¿1, 1863.-The rim of the rear wheel has transserse, zigzag curves, which act upon the anti-friction rollers upon a sliding firame, and through medium of a lerer eause the reciprocation of the agitator within tho seed hopper. A harrow is suspended beneath the frame.

Claim.-1. The agitator $\mathrm{E}^{\prime}$, lever $\mathrm{F}^{\prime}$, link $\mathrm{H}^{\prime}$, and friction lollers $I^{\prime}$, eonstrueted and arranged to operate in the manner and for the purpose specitied. Q. The enltivator D and harrow K , as constructed and arramged in relation to euch other, and operated by the whecl C , arms $I \boldsymbol{I}$, and lever $J$, in the manner and for the purpose suhstantially as set forth.
3. 'The combination of the seeder $A$ ', cultivatom D , and ribratoly harrow K , when construeted and arranged to operate conjointly in the manner and for the purpose set forth.
g7, 0.5 B. -GEORGE W. LA BAW and Ira W. Fleming, Jerecy City, N.J., and Aaron 'I. HutcirInson, Harlem, N. Y.-Miter Gauge.-April 21, 1868. - The pair of arms is hinged to a stock, on which is a sliding clamp) that carries the saw guide, and is connceted by links with the said arms, so as to allow them to be placed within, and conform to any angle, and insure at the same time the proper position of the stock midway between the said arms.

Claim. - The arms $d$, jointed to the stock $a$, and connected by the links $g$ to the clamp e, that slides upon the stock $a$, in combination with the saw guides $k$, at the joint $i$, and the satv guide $h$, on the elamp e, substantially as and for the purposes set forth.
g\%,054.-HugII W. and Robert Lafferty, Gloucester, N. J.- Centrifugal Mydro-Ejector. April 21, 1868.-The shal't is suspended by its upper end, a steel collar upoil the shaft having a bearing in a brass sloeve, at whose upper end is an oil cup. The bearings are supported on a side hanger or bracket, and covered by the conical driving palley. The machine is brought to a stop by a treadle brake beneatli the shaft.

Claim.-1. The combination of oil cap $C$, sleeve S I, hollow shaft H S, and India-rubber piceo I D, with the shaft $S$ of a centrifugal cjector, the whole constructed and operated in the manner and for the purpose above sef forth and described.
2. The eombination of inverted conical lug with hollow cone $\mathrm{C}^{\prime} o^{\prime}$, and nut H N with shaft S , in tho manner and for the purposo abovo set forth and dcscribed.
3. The combination of bearing boxes $B$ and $B^{\prime}$ and their braces $B d$, ribs $R \quad \mathbf{B}$, and bolts $b b$ and $b^{\prime} b^{\prime}$ with India-rubber I D, hollow shaft HIS, oil cup $\mathrm{C}^{\prime}$, sleeve S I, and shaft S, the whole construeted and operated in the manner and for the purpose above set forth and deseribed.
4. The combination of waste-oil eup $\mathrm{C}^{\prime}$ with the shaft of a centrifugal ejector, in the manner and for the purpose above set forth and described.
g\%,055.-GEORGE LANE, Hamilton, Ohio.-Boot Heel.-April 21, 1868.-The tanged metallie plate has upper and under recesses for receiving the boot heel and a metallic plate.

Claim. -The metallic plate A, laving flanges B $D$, in combination with the heel $E$, and the central screw for attaching said heel to tho plate, as herein shown and deseribed.
gig, 05 6.-Dibnnis G. Littlimficld, Albany, N. Y. -Coal Stove.-April 21, 1868.-The magazine is removable, and is suspended by its top, so that its expansion and contraction shall not influence the shell. The feed opening of the magrazine is closed by a damper, whose handle is detachable therefrom When the hopper is removed preparatory to removal of the reservoir.

Claim.-1. The complete separation of the covered magazine from the sides of the surrounding ease, and tho devices described whereby it is suspended and securcly held in its proper position for use, while it may at pleasure be taken out of the case and again restored to its place, without injury or disturbance to the case.
2. The adjustment, in the manner described, of the handle of the cover of the magazine.
3. The reciprocal adaptation of the magazine cover, the flue plate, and the hopper to eaeh other, and of the hopper to the cover of the burner, in the manner and for the purposes specified.
gy, 95\%. - H. C. Locke, Somerville, Tenn. Corn Planter.-A pril 21, 1868.-The plows are reversible from side to side, to cast the earth to or from the eorn row. The seed slide is operated by a wiper on the wheel, and a return spring.

Ulaim.-1. The reversible plows C C, mounted on the standards $\alpha$, constructed and arranged substantially as deseribed, in combination with the drill tooth E and the seed hopper IF, as and for the purpose set forth.
2. The seed hopper $F$, provided with tho gate $b$, operated by the spring $c$ and eam $e$, or the wheel $G$, as and for the purpose deseribed.
3. The eombination of the reversible plows $\mathrm{C} C$, drill tooth E , and seed hopper F , with its automatie diseharging mechanism, and the dragging coverer E , arranged and operating as described.
4. The standard $a$, eonstrueted with two upright bars and a horizontal connection bar at the bottom, substantially as shown and for the purpose described.
g'oss. - George G. Lyman, Independence, Iowa, assignor to himself and GEORGE P. LADD, Milwaukee, Wis.-Harvester. - April 21 , 1868 .Upon eaeh side of the broad ground wheel is a cireular series of anti-friction rollers, whieh act as eams on the ends of levers by which tho eutter bar is actuated.

Claim.-1. The combination of the driving wheel

A, friction rollers $a$, in the rim $b$ of said wheel, vibrating lovers ${ }^{\circ} c$, sickle bar $e$, and link $g$, as herein described, for the purpose spocifiod.
2. The vibrating lovors c c, in combination with the fickle bars $e$ e, and the link $g$, arranged and operating substantially as and for the purpose specified.
g\%,059.-JAMES W. Lyon, Brooklyn, N. Y.Lamp Shade Supporter.-April 21, 1868. -The shade is intended for application to a lamp whether with or without a chimney, and its collar is clamped by a set serew to the burner.

Claim.-1. Grooving tho clamping ring center of the shade holder on the inside, correspondingly irith the bead on the lower corner of the elimney gallery of a kerosene lamp burner, substantially as described, whereby the elamping ring center is held securely in plaee, and enabled to gripe the strongest part of the gallery, substantially as sot forth.
2. Adapting the elamping ring center of the shade holder to burners which have chimney screirs, by removing a portion of the metal of the clamping ring center, which would otherwise interfere With the screw, substantially as described.
3. Adapting the clamping ring center shade holder to burners which have chimncy springs, by the relative arrangement of the radial arms with the clamping ring eenter, and its ears, and a clamping serew of sufficient length, so that the spring can play freely between the ears when thrown down to release the chimney, substantially as set forth.
4. In combination with radial supporting arms, a clamping ring center, constructed substantially as herein described, so that it may be applied either to a burner having a chimney thumb-screw, or to burners having chimney springs, at pleasure, and without change.
5. In combination with a elamping ring center, exteusible supporting arms, whether sliding or hinged, substantially as described.
gy, 060 .-Tbuman Mabbett, Sr., Vineland, N. J.-Fruit Crate.-April 21, 1868.-On both sides of the upright corner pieces are attached slats, which form an open-sided double erate, the wire bottom of which has a certain elasticity to preserve the fruit from bruising. The perforated bottom and the foot pieces assist the access of air.

Olaim.-1. A double crate, eomposed of the slats $a \quad a \quad a$ and $b b b$, eorner uprights $d e$, perforated bottom A, all substantially as shown and described and for the purpose set forth.
2. The spriug bottom, substantially as shown and deseribed, in combination with tho double crate, all as and for the purpose set forth.
gyy,061.-CHarles B. MaEDEL and Jacob WoLas, Chicago, Ill.-Skate Fastening.-April 21, 1868.-The heel calk passes through that end of tho L-shaped bar which is beneath the foot block, and the other end is traversed by a thumb serew passing horizontally into the heel.
Claim.-The bar A, L.shaped, prorided mith a loop at one end, and having a shoulder at its other, When connected to the slaate by tho heel calk E, and to the boot or shoe heel by the eyclet serew $B$, in the manner substantially as and for the purposes set forth.
 Pencil Case.-A pril 21, 1808. -The tubular portion, or body of the ease, is a cylinder of whalebone, to which the cap and pencil end are attached.
Cluim.-An artiele of manufacture, consisting of a peneil case, having whalebone cylinders a, substantially as shown and described and for the pueposes set forth.
gy,063. - Horace B. Marshall, Waldoboro, Me., assignor to himself and Wiclian W. Lumincs, Lynn, Mass.-Boot and Shoe.-April 21, 1868.-The edges of the instep opening have an interclosing series of loops of elastio material, through which passes a single lacing eord.

Claim.-1. Making or forming loops a a of flexible matcrial, alternately on cach side of the openings for the string or laeing.
2. In combination with the loops above claimed, a flexible string or lacing to draw the loops together.
3. In combination with the loops or lacing, one or more eyelet holes $d d$, to facilitate the fastening of the lacing.
4. Naking or forming the loops for the string or laeing alternatcly on the edges of the openings of the various kinds of boots and shoes by perforating or cutting out the binding or edge facing of said openings.

7\%,061. - Jomn A. Mashmerer, Beardstown, Ill.-Buckle.-April 21, 1868. -This has two frames. The sewed strap is attached to a bar of the tongue frame, whose other end lias the pin which enters the hole in the strap that passes through the main frame.

Claim.-A buckle, composed of the two parts A $B$, fitted together or arranged substantially as shown and described, and with the pin or tongue $f$ applied to the part $B$, as set forth.
g7,065. - Franz O. Matthiessen, Jersey City, IF. J.-Tacuит Pan Apparatus.-April 21, 1868.The connection being open between the pan and the tank the same range of vacuum is maintained in both, and any part of the contents of the former can be rux into the latter without impairing the action on that which remains in the pan. Communication beiug then closed the removed sirup can be treated as desired.

Claim.-The combination, with the vacuum pan, of an auxiliary air-tight tank or ressel, provided with suitable air and discharge cocks or ralres, and having connections under the control of appropriate cocks or ralres with an air pump, or its equivalent, aud with the racuum pan, both above and below, for operation in the manner described, and whereby a boiling, or any portion of a boiling, may be rull off without destroying the vacuum in the pan, and a continuous boiling therein be kept up, substantially as specified.

19,066.-P.McDUFF, Atehison, Kansas.-Fence Post.-April 21, 1868. -The triangular frame has an upright with cleats to hold tho boards, a brace to sustain it, and a cross piece with stay wires.

Claim. -The triangular fence post, constructed as described, consisting of the upright $A$, having cleats B , the inclined brace D , short cross piece E , and wire $m$. as shown and described, for the purpose specified.

17,067.-Honace G. MrcDuFfe, Bradford, Vt.Planing Ifachine.-April 21, 1868 ; antedated April 18, 1868.-The shingle blank is placed in one of the wedge-shaped pockets on the outer surface of the endless carricr, and passes beneath the rotary cutter, which removes the portion above the carrier.

Claim.- In a planing machine, as above deseribed, a carrier, haring its upper or outer surface formed into a series of beds or depressions $O, P, R$, in sliape the same as the shingle or clapboard to be planed, When constructed aud operating in combination with the planer $X$, substantially as and for the purpose set forth.
g7,098.-AARON MCNELLL, Cincinnati, Ohio.Safety Attachment for Pocket Books. - April 21, 1868.-The chain is secured by a loop to a button, and has a spring catch which engages in a socket fastened to the pocket book.

Claim. -The flat spring cateh $\mathbf{C}$, in combination with the soeket $A, B, b$, and ligament $D, E$, all constructed as herein represented and described, to prerent the abstraetion of the pocket book without the knowledge of the owner, but permit him to readily detach it within the pocket when desired.

17\%,069.-Ithamar B. Merrill, Dexter, Mo.Blacking for Leather, dec. April 21, 1868. - Composed of beefs' tallow, 82 lbs. ; castor oil, 6 quarts ; whale oil, 4 quarts; rosin, 3 lbs.; beeswax, 9 lbs; lampblack, 1 lb.; ivory blaek, 1 lb . ; and pulverized pine coal, 2 lbs.

Olaim.-A blacking and polishing compound, composed of the above named ingredients, in the manner and about the proportions substantially as deseribed.
'g7,070.-Janes Miller, Allegheny City, Pa.Apparatus for Distilling Petroleum.-A pril iil, 1868. - 'Tho crude petroleum lias the benzine removed in the racuum still, and the residum is passed to the sccond still, whore distillation is effected by the use of vacuum and a small degree of heat, by feeding the oil while yet heated through a coil of pipe arranged in tho still, and discharging the oil through small perforations near the bottom, from whence it rises to the surfaco and passes off.

Claim. -1. The combination of two or more racumm stills, one, A, for leating the oil and driving off its more Folatilo ingredients, and tho other, B, for carrrine on a continuous distillation, by feeding therein the heated oil from still A through a coiled or zigzag pipe $m^{\prime}$, with apertures $n$, substantially as and for the purposes hereinbefore set forth.
2. The use, in the discharging end of the condensing pipe of oil distilling apparatus, of a glass section $g g^{\prime}$, and coek $f^{\prime}$ or $f^{\prime}$, in connection with a vacuum still, for ascertaining the rapidity of the condensation and the quality of the product; sub. stantially as above set forth.
3. $\Lambda$ coiled or zigzag pipe $m^{\prime}$, with perforations $n$, arranged in a vacuum still $B$, with a continnous feed, either separately or in combination With gauge cocks $n^{\prime \prime}$, constructed and used substantially as aud for the purposes hereinbefore set forth.
4. Utilizing the uncondensed gases and rapors which are passed orer in the process of distillation, by feeding them from the receiving tanks, through perforated pipes $l$, into the furnaee, substantially as liereinbefore set forth.
g\%,071. -SMEON MILLs, Madison, Wis. - Car Coupling. - April 21, 1868. - A gravituting, hooked draw bar is piroted in the draw head and engages the coupling link, whieh raises it as it enters. The engagement, when made with the larger hook, is permanent until the draw bar is remored. Each head carries a link, and the disused one lies on the floor of the draw head.

Claim. - The draw bar B, secured in the draw head $A$ in the manner specified, and provided with the hooks $C$ and $D$, and $\operatorname{lng} \mathrm{E}$, as and for the purpose spocified.
g', 0\%2.-Jonn A. Mnor, Midaletown, Conn.Illusion Toy.-A pril21, 1868.-On the principle of the thaumatrope, andlike it depending for its action upon the persistence of risual impressions. The wheel with the horse thereon is rotated by a cord wound around its spindle, and the animal has different colors on its respective sides. By rapid rotation the oye appreciates both colors, and the retina receires the impression of a pair of horses upon the rotary wheel.
Claim.-The toy, constructed substantially as herein set forth, so as to produee tho illusion as described.
g7, 073.-चAmes Monaci, Philadelphia, Pa., assignor to himself, John Mutchinson, and Jeffrey Hart, same place. - Preparing Jute Farn. - A pril 21, 1868. -The jute yarn is boiled with caustic alkali at a strength of $40^{\circ}$ to $80^{\circ}$ "Traddell." After boiling two hours it is washed and then steeped in a weak solution of sulphuric acid, again washed, and then dricd.

Claim.-As a new manufactrure, jute yarn treated with caustic alkali of from $40^{\circ}$ to $80^{\circ}$ Twaddell's hydrometer, substantially as dascribed, for the purposo' specified.
g.g.094.-JoHN H. Moone, Binghamton, N. Y.Moving Buildings. - April 21, 1868.- 'Ihe building rests on across bolster, which is supported by two trucks with threo rollers each. In turning, rollers journaled beneath the bolster traverse ways upon the trucks.

Claim. - Tho frames A A, having three trucks each, and construeted as described, with transperse pieces $C, I$, and $J$, and springs $E$, all in combination with the cross piece $G$, resting on springs and rollers, substantially as described, and for the parpose set fortlı.
 W. Elliott, Now Madrid, Mo.-Feather Renovator. -April 21, 1868.-Steam is conducted from the medi-
cated and the elear water through the hollow trunnions and perforated pipes in the revolving cylinder. The latter has slats which beat and loosen the feathers. To dry the feathers the access of steam to the interior space of the eylinder is shut off, and the feathers in the said spaee are dried by the presenee of the hot pipes.

Claim.-1. In a machine for renovating feathers, the combination of the water boiler $B$ with the chemieal boilcr $D$ and the pipes $G \mathrm{G}^{\prime}$, for the purpose of gencrating, eonveying, and uniting the two kinds of steam, preparatory to subjecting tho feathers to their joint action.
2. The eylinder I, when construeted of slats $i i i$, slightly separated, in the manner and for the purpose set forth.
3. The eombination, within a revolving cylinder, of the tubular shaft $J$ with the pipes $K K^{\prime}$, the latter being provided with valves o o $o$, substantially as and tor the purpose set forth.
4. The combination of the boilers D D , pipes $G \mathrm{G}^{\prime}$, effinder I, shaft J, pipes K K', valves 000 , and stop coeks $r r$, substantially as and for the purpose set forth.
5. The method of purifying and renovating foathers, substantially as herein described.
g\%,076.-Ira Morse, Danbury, Conn.-Wrench. - April 21, 1868.- The upper hook jaw is attaehed to the shank, and the other jaw is hinged to a slecve which slips on the shank and is held by a serew collar.

Claim.-A wrench, having the bar A, serrated rigid jaw B , and hinge serrated jaw D , attached to the sleeve C , both jaws being divergent outward, and all constructed and arranged substantially as dascribed.
g\%,07\%.-Ira Morse, West Franklin, Pa.-Mfachine for Operating Ohurns, de.-April 21, 1868.The rocking ehair' is placed within a frame and its rocker conneets by a pitman with the walking beam to which the dasher shaft is attached.
claim.-The within-deseribed maehine for operating churris, composed of the rockers $a$, cross bars B , platform C, frame D and E , forked post F , lever G, box H, bar $I$, lever K, and Dlook L, for the purpase and substantially as herein deseribed.
g'g,079.-Charles S. Moseley, Elgin, Ml.-Watch.-April 21, 1868. - The outer end of the hair spring is fastened in one end of a stud in the extension arm of the bridge plate. A set screw holds the stud in place.

Claim.-The combination of a stud and set serew or serews, for holding and fastening the outer end of a hair or balance spring to a wateh movement, with a bridge plate, or any equivalent therefor, sulbstantially as deseribed.
g\%,079.-J. W. Moyer, Cherry Valley, N. Y.Saw Hill.-April 21, 1868. - The sat frame has springs above and below the saw, whieh operate to give it the neeessary tension. One leaf in each spring has a bearing on a permanent bar and a bearing on one of the sam levers, and their power is regulated by adjusting them toward or from the centers of oseillation of the levers.

Claim.-1. The combination, with a gig saw S , of two springs $s s^{\prime}$ of equal power, the tormer at the upper cond of the saw and acting upward apon it, and the latter at its lower end and aeting downward upou it, all the parts being constructed and combined, and operating together substantially in the manner and for the purposes set forth.
2. The combination of the gig saw $S$ with the notched levers C E and equal springs $s s^{\prime}$, all the parts being constructed and combincd substantially as and for the purposes specificd.
g',080.-N. E. Mulford, Madison, N. J.Striking Attachment to Clocks.-April 21, 1868.-A heart-shaped cam is mounted on the spindle of the hour wheel; seven pins are arranged in a spiral line around the center of the hammer wheel. A lever, hinged at its opposite end, rests upon the heart-shaped cam, reaches with its free end toward the hammer wheel, and, as its end is moved by the eam, it is brought
against the pins to arrest the hammer whicel at the expiration of a certain number of strokes. The pins stand at different distances from the center of the wheel, and the lever is brought to the proper place for each hour by the mation of the eam. A half-hour striking apparatus is set by the rod to which the regular striking apparatus is attached.
Claim.-1. The arrangement of the seren detent pins $u, u^{1}, u^{2}$, \&c., on the face of the hammer wheel E , the said pins being set in a spiral line, as described, and at sueh distanees apart that the required number of pins $i$ will be between every two adjacent pins 26 , substantially as and for the purpose herein shown and deseribed.
2. The heart-shaped cam $O$, when mounted on or conneeted by gear or otherrwise with the tube H, to which the hour hand is fastened, and when combined with a lever N, whieh is gradually raised or lowered by the rotation of the eam, so that its end will be brought into a different plane, substantially as and for the purpose hercin shown and desoribed.
3. The lever $N$, when arranged substantially as herein shown aud described, in combination with the heart-shaped eam 0 , turning with the tube $H$, and with the seven pins $\tau u, u^{1}, \& e$. , arranged spirally on the face of the whecl E, Which earrics the thirteen pins $i i$, substantially as herein shown and described.
4. The lever M, when eonneeted with the bar o, and when raised and lowered by means of the eam L , in combination with the stops $p$ on the fly $\mathbb{F}$, all made and operating substantially as herein shown and described.
5. Connecting the detent lever N with the retaining lever M, and with the releasing lever 0 , substantially as and for the purpose set forth.
6. The arrangcment and combination with each other of the heart-shaped eam 0 , lever N , wheel E , having the seveu pins $u, u^{1}, \& c$. , cam $L$, levers $o$ and M , and stops $p$ on tiy F , all made and operating sibstantially as licrein shown and described.
7. The half-hour striking apparatus, when eonsisting of the hammer P , rods $w$ and $y$, the latter being held by means of a spring catch $z$, substantially as herein shown and described.
8. Conneeting the lever M with the cateh $z$ of the half-hour striking apparatus, so as to release the same, substantially as hcrein shown and deseribed.
9. The arrangemont, herein shown and deseribed, of setting the half-hour striking apparatus, by means of the arm $l$ of the main hammer, whieh eatehes the, rod $y$ of the half-hour hammer, loeking it with its eateh $z$, when the main striking derice is in operation.
10. The eam L, when mounted on the staff G, as herein shown and deseribed, and when provited with a recess $s$, and with an eleration $b^{\prime}$, opposite to the same, substantially as and for the purpose herein specified.
11. Pivoting the arm $o$ to the lever M, and combining it with the spring $r$, for the purpose of allowing the hands to be turned baekward, substantially as herein shown and described.
12. Setting the lualf-hour striking apparatus by means of the main striking apparatus, when the same is in motion, substantially as set forth.
g\%,081.-James F. Neall and William MyERS, Philadelphia, Pa.-Furnace Draught Regulator. - April 21, 1868.- The damper is operated by a piston through means of the weighted lever. The piston is prevented from blowing out by a guard bar passing over the leter.
Clain. The arrangement of the piston $A$, crlinder B, packing ring $\mathbb{C}$, and weightcd lever $E$, substantially as described.
g7,082.-Jacob Noepel and Bernhard AssMan, Newark, N. J.-S'aw S'et.-April 21, 1868.-The tool has a rotary head with four radial arms having variously-formed faces for different saws. The tool is upon thead of a spring lever whieh is operated by a cam at the end of the short handle.
Claim. - The short lower handle B, piroted in the slotted long handle $A$, and provided with a eam $f$, which works upward througia the slotted handte against the lever C, whercly the short handie is operated by the fingers of the hand while the long handle is held comparatively stationary, as set forth.
78.053.-G. H. Owexs, Maysrille, Ky.-HoeApril 21,1868.-The tang and the stad at its end rest in recesses iu the handle, and the tapering ferrule is driven upon it.

Claim.-The ferrule D, the shank B with the teat $e$, and the handle C, constructed, arranged, and combined substantially as and for tho purposes deseribed.
g\%,084.-Ralpil G. Packard and Micharl Hasmivas, Brooklyn, N. Y.--Lock-up Safety Falve. -April 21, 1868.-The annular weights, whieh are imposed upon the rods connected to the ends of the lerers, are made in sections doretailed together, but detaehable so as to be remored at openings in the side of the easing, when the doors elosing the same are removed.

Claim.-1. In lock-up $\begin{gathered}\text { afety ralres, forming the }\end{gathered}$ weights in sections adapted to bo inserted and removed through openings $a$ in the exterior or loek-up casing, substantially as and for the purpose herein specified.
2. In connection with the abore, doretailing together the several pieces, substantially as and for the purpose herein set forth.

77,0S5.-G. W. and W. F. Parieer, Kalamazoo, Mich.-Fur Mufter-April 21, 1868.-The fur is lined with silk, and covers the sides and back of the head. It is supported by a band whieh goes over the head from car to ear, and moots a band which emmes orer the crown.

Olaim.-As a new artiele of manufacture, the fur mufter A and lining 13 , when the same are construeted in the form shown, and provided with head bands I) $\mathrm{D}^{\prime}$, and the whole is so constr:eted and arranged as to operate substantially as deceribed for the purpose specified.

7\%,085.-S. J. Patterson, Bridgeport, Conn.Inife for Removing the skins from Animals.April 21, 1868.-The blade is scoured betreen two guard plates to prevent injury to the hide.

Claim.-As a new article of manufacture, a knifo for remoriug skins from animals, constructed as described, consisting of the curved blade A, having a back of irregular form, adjustably secured between the two sides B C, having their edges beveled at different angles, and formiug the outer portion of the handle E, said blade and sides being pointed at onc cud in the form of a knifo, as herein shown aud described.
g\%,95\%.-Lewis P. Pease, McCordsrille, Ind.Portable Fence, - A pril 21, 1868.-The brace lics orer a short panel, and extends from one loug panel to another, and is secured to each.

Claim. -The alternate long and short panels, so arranged that the adjustable brace $g$ will bind two long and one short pauel together, in combination with the long bars $e e$, as and for the purpose set forth and deseribed.
g7,088.-Join J. Pellett, Oconomorroe, Wis. -Gate.-April 21, 1868.-The sliding rails are mored endwise by a cord from eaeh end which ruus around a reel, and the inclined piroted slats fold together on the principle of a lazy tongs. The reel shaft is carried up and down the road a short distanee, and is operated by levers.

Claim.-1. The combination of the pivoted bars a a with the cuclosing frame $S \mathrm{~S}^{\prime} \mathrm{T}^{\prime} \mathrm{T}^{1} \mathrm{~T}^{2}$, when operating. substantially as and for the purpose set forth.
2. The combiuation of the arms il H, connecting rod $h$, and locking pin $h^{\prime}$, when usod in conncetion with a sliding gate, as above deseribed, and with the wheel and cord for opening and shatting it, as a device for securely loeking said gate, in tho mauner deseribed.

7g,089.-Ricmard Ponl, Port Hurom, Mich., assignor to Oswald UxGER, samo place. - Skate. April 21,1868 .-Levers cross each other beneath a plate under the ball of the foot and their claw ends grasp the sole when they are drawn forward by their adjustable bar piroted to their fore ends, in which position they are fastened by a set serew. The heel is engaged by the back-turned spurs of a flango in front of the heel plate.

Claim.-1. The construction of a sliate. in substantially the form as deseribed, that the spring of the skate will cause it to be firmly attached to the boot of the woarer.
2. The slides $I I$ and $M$, provided with set serews $J$ and $N$, the levers G and $F$, and plato $L$, when arranged and operating substantially as and for the purposes sct forth.
3. The combination of the abore-named parts with the runner $A$, the heel plate C, provided with the flunge P and poiuts R , and the bar E , when construeted and operating substantially as and for the purposes deseribed.
g7,090.- William E. Prall, Washington, D.C. -Hot Water Elevator:-April 21, 1868.-A heating chamber is placed within a furnace and connceted by a pipe to a well or cistern. The pipe has a valre and cold water chamber above and adjacent to the heating ehamber, A valved, boiler-supply pipe extends fiom the heating chamber to the boiler.' Steam generated in the heating ehamber forces the contents into the boiler until the level of the water supply is reached. Entering water condenses the steam ind the partial racuun refills the cold water channer with water from the well.
Claim.-In conneetion with a stove or like heater, and for domestic purposes, an automatic water clevator, coustructed and operating substantially and for the purpose set forth.
g7,091.-Join Rankin, Taunton, Mass.-Harrow. - April 21, 1868. - The frame is trapezoidal. The toothed bars are pivoted to the front and pear bars. A fust aud a loose wheel rotate by eontact with the soil, aud when the cinteh is engaged the outer toothed bars are oscillated so as to stir the ground by a positive motion additional to that ineident to their being dragged through it.

Claim. - The harrow coustructed as described, and eonsisting of the bars $a^{1} a^{2} a^{3} a^{1}$. toothed rock shafts I) E F, haring standards G H I, erauk shaft P , bearing loose wheel R , and fixed wheel Q , elatch S , lever' I , threc-armed pivoted lever K , and pitmen J M N O, all arrauged and operating in the inanaer and for the purpose herein set forth.
g\%,09: - Charles A. Reiget, Middletomn, N. F., assirnor to himself, Menry B. Dill, and Geohgle A. SWALM, same place.-Milk Can.-April $21,1863$. -The junction of the eylindrical portion with the bottom and breast is streugthened by certain doableseamed and riveted bands.

Olain. - The combination of the tin band B, double seamed, with the tin top or bottom of a milk eau, and soldered or riveted to the iron eylinder $\Lambda$, of greater thickness than tho said bands, or top or botton, all substantially as aud for the purpose shown and described.
g\%,093.-Aithur Dallison Rexshaiw, London, Englaud. - Apparatus for Clipping the Hair of Animals.- $\Lambda$ pril 21, 1868.-The sliding eutter plates are operated by a lever and spring. The lever is operated by a cord.
Claim.-1. The cutters $a$ and $b$, constructed, combined, and operating substantially as and for the purpose set forth.
2. The combiuation of the said cutters with the adjustable presser bar $g$ and lever $k$, and with or without the spring $m$, for the purposes aud suistantially as set forth.
3. Operating the lever $k$ by means of a cord or wire passed through the handle $p$, or over a rotating eam or disk, and connected with any suitable driv. ing mechanism, substantially as set forth.
7\%,09A.-Cilarles W. Requa, Aibany, N. Y.Still for Distilling IIydrocarbon.- A pril 21, 1868.The lower part of the exterior of the still is exposed to the action of the fire, and steam is introduced from above and discharged through the perforated bottom of a chamber near the lower interior surface of the still. This keeps the lower stratum of oil in upward motion continuonsly. The air chamber above the upper part of the still keeps an equable temperature.

Claim.-1. The nse of steam in the distillation of
liquid hydrocarbons in stills heated by exterual fire, when the steam is introduced into the still in such a manner that the lowest stratum of liquid therein will be continually removed from contact with the bottom of the still by the netion of the steam, and its place supplied with fresh liquid from above, substantially as and for the purpose above described.
2. Constructing stills heated by an external fire, and in which stean is used, as and for the purpose above described, with an air chamber over them, constructed and operating substantially as and for the purpose above described.
\%\%,095.-C. T. Rideout, Boothbay Harbor, Me. -Rudder Geur.-April 21, 1868.-A segmental rack on the tiller engages a similar rack upou a disk at the head of the rudder post. An arm of the disk is vertically perforated to receive a pin which enters one of a series of holes in a plate beneath to fix the rudder wheu desired.
Claim.-The combination and arrangement of the toothed sector C , having the tiller and socket $\mathrm{T}^{\prime} \mathrm{T}^{\prime}$, the toothed disk $\mathrm{C}^{\prime}$, having projection D with hole $h$, aud the perforated are $D^{\prime}$, as herein described for the purpose specified.
'g\%,096.-Henry R. Robbtns, Baltimore, Md., assignor to himself and W. H. Green, same place.Tobacco Pipe.-April 21, 1868.-A tube descends from the bowl into a water chamber beneath. The stem commuuicates with the upper and empty part of the chamber. The chamber unscrerws at midheight, and has a horizontal, perforated diaphragm at that point.
Clain. - In a smoking pipe, composed of the stem A , bowl B , tube D , and vessel C , the minutclyforaminated sereell $c$, operating in connection with the tube D and ressel C , substantially as and for the purpose specified.

19\%,09\%-William Robbivs, Minsiale, In., and Edward SWasey, Bucksport, Me.-Amalgamator. -April 21, 1868.-The slime is passed down a rotating tube to the bottom of the cylindrical vessel containing mercury. The slime runs from the lower end of the tube beneath a perforated disk upon the tube, and an annular plate on the sido of the ressel. The tube has radial agitators. A vertically reciprocating rod prevents clogging of the tube.

Claim.-1. The agitator $f$, arranged to operate in connection with the tube $B$, substantially as described.
2. An amalgamator, consisting of a tub for holding the mereury, and a rotating tube provided with arms for stirring and mixing the gold, or other material, with the mercury, and having its lower open end arrauged to feed the material into the mereury near the bottom of the tub, with the agitator $f$ for preventing the tube from becoming clogged or choked, all constructed and arranged to operate substantially as shown and described.
gy, 098.-Henry A. Roberts, Boston, Mass.-Refrigerator--April 21, 1868. -The refrigerator consists of a vertical series of detachable sections which may be removed to lessen the capacity.

Claim.-1. A refrigerator, constructed of metal, or other suitable material, of two or more sections, substantially as and for the purpose described.
2. Diminishing the interior capaeity of a refrigorator chamber, by dividing, cutting off, or removing a portion thercof, for the purpose of economizing in the use of the cooling agent, substantially as described.
3. The movable and adjastable frame $d^{\prime}$, conforming to the interior shape of the refrigerator, with the reeeptacles $e$, so formed that they fully utilize the interior capacity thereof, substantially as and for the purpose described.
4. An ice box, having a close bottom, perforated sides, covered with absorbing fibrous material, whereby the box is rendered air-tight, substantially as described.
5. All iee box, as above deseribed, provided with a flue or serics of fines, with or without radial divisions for the cireulation and condensation of air, substantially as deseribed.
6. An ice box, as above described, provided with
a flue or serics of flues, with or without perforated sides or cyaporating surface, substantially as doscribed.
g7, $099 .-$ L. F. Ronertson, West Farms, N. X_Compound for Treating Hides and Skins.-A pril 21, 1868.-The compound is ased to unhair hides and to assist in the subscquent operations of tanning. Coco posed of lime 6, carbonate of soda $\frac{1}{2}$, coal tar 1 , and molasses 2 parts. The lime is first mixed with water
Claim.-A compoand for treating hides and skins, made of the materials herein specified.

19\%, $100 .-$ Tayes Robisson, Funkville, Pa, 8 , signor to himselfand WILLIAM ROBINson, Brooklyn, N. Y.-Lamp Chimney.-April 21, 1868; antedated April 9, 1868.-The foot flange of the glass is notehed and the lip turned up to form a stop in rotating the glass bencath the catch pin.

Claim.-The lip $b$, formed of the partially severed material of the flanche $c$, in the formation of the notel or recess $a^{\prime}$, substantially as and for the purposes se forth.
g'g, 101.-HENRT W. Rutt, Reedsbarg, assignor to himself and Jonathan M. Rhoads, Wayne Coure ty, Ohio.-Fence for Poultry Yard.-April 21, 1868.Above the picket fence are tilting frames which tip when a fowl alights upon them and allow it to fall back into the yard.

Claim.-The reel C C, composed of two semicirern lar disks, connected together by a narrow slat at each side, and one at the bottom, and piroted boo tween the vertical fence posts B B, directly above the fence, all constructed, arranged, and operating as specified.
gy, 102. - Christopher E. Rymes, Somervilpes Mass., assignor to Robinson \& Hearn, New York N. Y.-IILachine for Cutting Tobacco.-A pril21, 1868* -The continuous baind of tobacco is passed between cndless chains, one of which carries a series of knives, and the other a series of pads against which the knives cut.

Claim.-1. A tobacco-catting machine, in which the bar of tobacco to bo divided is passed between the rectilinear sarfaces of two traveling and cons verging endless chains or belts, one of whieh serves to support the bar, while to the other are attached the severing knires, substantially as described.
2. Attaching the knires of a tobaeeo-cutting ma chine to one of two traveling and eonvergiag planes, so that the plane of the knife, while passing through the tobacco, shall, in every position, be parallel to its plane in orery other position while so passing, and thus a square and smooth cut be secured, as specified.
3. The links $l$, constructed, arranged, and operato ing as described and shown.
4. The combination of a knife with one or more of the links of an endless chain, as speeified.

1g\%, 103.-JOHN SANDERSON, Fredericksburg Ohio.-Bridge.-April 21, 1868.-Eaeh section of the bridge has a trausverse tie with side wiugs. The wings of the separate sections are fitted together, and are clamped by screw bolts.
Claim.-The bridge hercin described, eomposed of sections, consisting of cross-ties or ribs 13 B and wings A A, provided with lugs and recesses, as de seribed, the several sections being bolted together as and for the purpose set forth.
g', 104. Joseril F. Sargent, Boston, MassNailing or Pegging Machine.-April 21, 1868.-The head may be mounted on a fixed frame, and fecd machinery may be applied to feed the shoe; or the shoe may be fixed, and the head steadied by one hand of the operator, who with the other hand turns the operative crank. The cutter and carrier operate to cut from a continnous pieee short sections, which are then carried under the driver. The nail carrier forms one-half of the upper part of the nail tnbe in whieh the driver works. The wire is fed to the cutter by wheels operated by ratchet wheels, pawh lever, and ratchet shield. The devices are arranged to adjust the nails to the length required.
Claim.-1. A pegging or nailing machine, con-
strueted substantially as deseribed, so as to operate to automatically cat, at one location, short pieces from a long or wire-like formation of material, and to conver them, when so cut, to anothor location, where they receive the action of the driver.
2. The tube, or a part thereof, througl which the nails or pegs are to be foreed into or toward the material to be united, made in two parts capablo of beiner closed and separated on a lougitudinal plane passing through the tube, sunstantially as and for the purnose speeified.
3. The tube throngle whieh the nails or pegs are foreed by the driver, made in two or more parts, of which one division is made substantially at right angles to the axis of the tube, so as to cuable one part of the divided tube to be moved with respeet to the other part or parts, substantially as and for the purpose described.
4. The combination of the tubo or groove, through which the wire is thrust to be subjected to the action of a cutter, with a cutter, for sercring a nail or peg from the wire or wire-like material.

5 . The combination of intermittently-operating feed rolls or wheels, for feeding material ot a wirelike form, with entters, for eutting off the material so fed, to form nails or pegs, substantially as deseribed.
6. In combination with feed wheels, for supplying lengths of wire like material to the cutters, the ratehet wheel and parrl, and the adjustable shell or shield $v$.
7. A pegging or nailing machine, construeted substantially as described, so as to operate in producing eorrect register of the awl hole beneath the driver, by first transferriug the contact of the sole from the nail tube to the feed foot, then causing the awl to enter and withdraw from the sole, then giving the feeding morement, to bring the awl and driver holes in register, and keeping the contact of the teed foot with tho stoek till the driver has made its driving stroke, after which, by vertical movement of the feed foot, contact of the sole is transferred to the driver tube.

77,105.-D. R. Satterlef, Now Haven, Conn.Machine for the MLanufacture of S'late Pencils.A pril 21,1868 . -The slate is fed in at one sicle of the machine and subjected to the cutters whieh operate upon opposite sides of the slab. First the slab, and atterward the peneils, are supported by grooved plates. The pencils are delivered eompletely formed.

Claim.-1. The combination of the two seres ot entters, each series formed so that the first hatf forms the pencil, and while the scoond completes the pencil, and combined with the groored plate $F$ and correspondingly grooved bed I, in relative position to each other, हind to the two series of eutters described, so as to form guides from the inist seriea of eutter's to tiee second, and from the second to the discharge, substantially in the mamer herein set forth.
2. In combination with the above, the reed rolls D and $k$, arranged and operating in the manner substantially as described.
3. The arrangentent of the entters between the heads L, so as to be set and adjusted, substantially in the manner described.

77, 10G.-CHables C. Savery, Philadelphia, Pa. -Enameled Water Cooler.-April 21, 18v8.-The chambers are cuameled on the inside, and the upper one on the outside so far as it is liable to drop condensed moisture into the chamber below. The object is to aroid rust and the vitiation of the water ; either that to be withramin for use or that which eondenses and drops upon the provisions in the lower ehamber.

C'laim.-1. The mode of enameling the inside and outside of the water and ice tank (or both, if used separately) of a water cooler and refrigerator, in tho manuer and for the purpose above set forth and described.
2. The combination of a water and iee tank or wrater and ice tanks, enameled inside and outside, with a water cooler and refrigerator, for the purpose and in the manner above set forth and de. seribed.
3. The combination of vitiated air discharge-tube or pipe M T with the provision chamber of a water caoler and refrigerator, in the mamer and for the purnose above set forth and deseribed.

77,107.-Thomas A. Sharle, Providence, R. I. - Wrench.-April 21 , 1868.-The segment of a cog. ged pinion, attached to the sliank, works in a cog rack on one of the jaws of the wrench. When the rectuired adjustment is attained, the spring collar is adranced to maintain the jaws at their "set."

Claim.-The sliding collar D and spring S , in combination with the handle H, shauk E', toothed segment $B$, stationary jaw $A$, slotted movahle jaw $a$, and pivots $a^{1} a^{2}$, all constructed, arranged, and operating as and for the purpose deseribed.

7\%, 10 .-George W. Serran, Memplis, Tenn.Baling I'ress.- April 21, 1868.-The press is double ended, each follower forming an abutment for the other as they are foreed together by the toggle levers.
Claim.-1. The toggle levers, when suspended upon the cords or chains F II, forming flexible suspension points, whereby bales of unequal size are pressed with oqual force by the platens C, substantially as herein set forth.
2. The arrangement of tho cords F TI, pulleys $c c^{\prime}$, and windlass $G$, as herein deseribed, for the purpose specified.
g\%, 109.-N. Laivrence Silaw, Tilson, N. Y.Fence. - April 21,1868 .-The rails run past the uprights and the ends are half ent away and lapped yogether. The fonce is held together by a wire which runs past the outside of the salient corners.

Claim.- The combination of the fence panels A A with the wire or wires $c$, applied substantially in the manner and for the purpose specified.

7\%,110.-SAMUEL S. ShatV, Nemport, N. J.Oyster Finder.-A pril 21, 1868.-The crank shafts liave sliding drums and there is a deviee for throwing them into gear; the device is disengaged when the dredge fouls on a fixed obstruction. The object is to present injury to the operator by the reversal of the erauk.

Claim.-1. An oyster-winding apparatus consisting of the shaft B , sliding drun C , gear whocls $b, e$, and $d$, and piroted segment $F$, all made and operating substantially as and for tho purpose herein shown and deseribed.
2. The drum C, when arranged so that it ean turn and slide on the shaft 13 , and when combined with the gears $b c$, and with the lerer $D$, all made and operatiug substantially as set fortla.
3. The block $F$, when pivoted to the frame $A$, and When provided with the frietion roller $g$, as set forth.
4. The slotted bar $e$, for clevatiner the block F , iu combination with the same and with the drum C, all made aud operating as set forth.
 Surfacing Sheet Iron anel Metal ilates.- April 21 , 1868.-Composed of plumbago, aninal fat, soda, and water.

Claim.-The applieation of carbonaceous material to the heated surfices of iron and steel, while being rolled or otherwise manipulated upon, substantially as and for the purpose set forth.
\%g, 119.-T. E. Shear, Saugerties, N. Y.-Furnace loor Fastening.-April 21, 1868. - A hinged bar folds before the doon, and its free end is slotted to receive the hinged link which carries an eceentric lever. The latter is turned up to lighten the sitid. bar.
Claim.-The hinged or jointed bar E, in combination with the hinged link $e$ and the eccentric $F$, all constructed, arranged, and applied to, the frame or month picee of a furnace, substantially as and for. the purpose set forth.
gry, 118.-THILANDER P. Simmons, Daveuport, Towa.-Bed Bottom.- 1 pril 21, 1868.-The bed bottom has a ware of cords ind a filting or: weft of fune slats. It rests upon an open, slatted frame, supported by springs from bars beneath.

Claim,-A spring bed bottom, consisting of a web made of slats $d$ woven together with wire, in combination with the wooden strips $c$ and, the spiral springs $f$, or their eqnivalents, when constructod and arranged substautially as described.
g\％，114－Thomas J．Sloan，New York，N．Y．－ Operating Window Shutters．－A pril 21，1868．－The retaining pendant is hinged so that its end may be brought down on the blind hinge，and prevent its being raised；or the pendant may be turned up to allow the removal of the blind．The hinge has a segmental bevel－grear which engrages a similar gear， truning on the operative shaft passing through the casing．The gear on the shaft is held by a drop catch which is raised by a cam turned by the shaft， and a lug on the shaft enters a slot in the gear hol to canse its rotation and operate the blind．
claim．－1．The employment，in combination with the gears K，$f$ ，and shaft $\Pi$ ，of the retaining eatch bar $n$ ，and a cam $O$ ，for lifting the same，the whole arranged to operate substantially as described for the purpose set forth．

2．The employment，in combination with the hinge sector $f$ and stand $D$ ，of a swinging or mora－ ble retaining pendent $F$ ，arranged to operate as de－ seribed for the purpose set forth．
g\％．115．－A ustin A．Suith，Seneca Falls，N．Y －Lamp Shade．－April 21，1868；antedated April 11，1868．－The shade has a number of panels mhich turn horizontally，rertically，or angularly，to al－ low passage to the light through any part．
claim．－1．As a new article of manuficture，a lamp or gas light shade of usual form，composed of numerous upright panels or sections C C C ，situated closely together to form a screen，and turuing hori－ zontally or angularly on snitable joints，the whole arranged and operating so that any number of said panels may be opened at any desired position，and the passage of light may be graduated，as herein set forth．
2．Forming one or both of the joints of the panels of spring trires $f f$ ，resting in the square or oblong slots $a$ ，operating as and for the purpose specified．

7\％，116．－CALVIN D．Suntir，Baldwinsville，Mass． －Tilting Chair．－April 21，1868．－From the back and front of the seat，picces are carried down which meet together and are piroted to the base frame Between the sides of the base is a roller connecter to the scat by bands attached to it and winding in contrary directions．The roller is held by a curved spring to limit its oseillation．

Claim．－1．The arrangement and combination of the spring，the bands，and the barrel or roller，as ap． plied to the ehair and its stand．
＇2．Wheir arrangement with and application to the stand and chair，substantially in manner as speci－ fied．
g\％，县7．—CaLvin D．Smitir，Baldwinsrille，Mass －Tilting Chair．－April 21，1868．－The ehair is piv－ oted to the lower part of the stand，and a stud upon the mader side of the seat rests between the levers， which are connected by springs and meet against a stop bar，which is beneath the stud when the chair is npright and at rest．
ctaim．－1．The combination as well as the ar－ rangenent of the stud $a$ ，the stop bar $d^{\prime}$ ，the two ams $b b$ ，and the spring $e$ ，as applied to the chair and its supporting frame $\mathbf{D}$ ，and comnected together substantially as specified．

2．The arrangement of the stud $a$ ，the stop bar $d^{\prime}$ ， the two arms $b b$ ，and the spring $e$ ，with the chair and its supporting framo D．
 ENCE，Richview，Ill．，assignors to themselves，F．P． SEAWELL，and H．G．WHiTNENBURG．－Briek Ma ehine．－A pril 21，1868．－The molds are slid beneath the mud box and the clay forced into them by a bloek in form of the sector of a cylinder．The block is reeiprocated on an axis concentric with the curred side，and is turned $90^{\circ}$ so as to earry it alternately through the side of the box and down upon the bot－ tom abore the molds．

Claim．－l．The combination of the piroted frame I．bearing the rollers J，mold holder K，hopper plate $I$ ，inelinca pawls MI non shaft $N$ ，the segment $P$ ， and straps $U$ ，all arranged and operating as de scribed for the pmpose specified．
2．The mold L，the sides $l^{1}$ and ends $l^{2}$ ，of which are connected to the bottom $l^{3}$ ，and to each other by
inclined prongs $T$ ，arranged substantially in the manner herein shown aud described and for the pur－ pose set forth．
gry，119．－Jasper Snell，Pottsville，Pa．－Rail－ road Sill and Chair．－April 21，1868．－The base plate has inclined walls forming a trough in the bottom，and near each end of which is a mortise containing a spring．A plate，having two lugs on its under side，doretails into the trongh，the lugs setting into the mortises and resting mpon the springs．A T－shaped ehair，having jaws at one end to tit the shape of the base of the rail，dovetails into the tronmin and sits upon one－half of the plate．One side of the base of the rail is inserted between the jaws of the chair，and the other side rests in a cor－ responcling chair．

Claim．－1．The base plate $A$ ，walls $B$ ，and springs $G$ ，all substantially as and for the purpose set forth and described．
2．The plate $C$ ，dovetailing between the walls $B$ ， and provided with the lugs $c$ ，substantially as above set forth and described．
3．The chairs $D$ ，dovetailing between the walls $B$ ， and provided with the jaws $d d$ ，in manner substan－ tially as above set forth and described．
4．The railroad sill and chair，consisting of a base plate $A$ ，walls $B$ ，and plate $C$ ，resting on springs $G$ ， in combination with chairs D，furnished with the jaws $d d$ ，in manner and for the purposes substan－ tially as abore set forth and described．
g\％，120．－Nicholas Starr，Jr．，Homer，N．Y －Horse Hay Fork．－April 21，1888．－The piroted cutters at the lower end of the stock have spurs which project outward to engare the hay，and are connectod by links to the sliding bar by whose eleva－ tion they may be drawn in to release the hav．

Claim．－The two spurs a pioted at their lower ends to the stock $A$ ，in combination with the shift－ ing bar $c$ aud toggle braces $b$ ，substantially as herein set forth for the purpose specified．

桀，181．－Oliver B．Steele，Franklin，Pa．－ Comuined Rule and Pocket Knife．－April 21， 1868. －The jointer rule opens out of the handle similarly to a kinife blade．

Claim．－Combining a jointed rulo with the handle of a pocket linife，substantially as and for the pur． pose shown and described．
gay，196．－A．G．STephents，Manchester，N．H．－ Door Stop．－April 21．1868．－The rubber－cushioned stop is piroted to the door by its lower end，and stands vertically against the door when closed． When the door is opened the toe of the stop strikes a stud in the floor which throws the ston into a hori－ zontal position，so that the rubber pad strikes the base board．The stop is raised by a spring when the door is closed．

Claim．－1．A door stop，constrmeted as described， consisting of the piroted lever G formed at the lower end into a toe $F$ ，spring $L$ ，cushion $K$ ，and case $E J$ ． 2．The eombination of piroted lever $G$ ，spring $L$ ， and cushion K，with the case E J attached to the lower part of the door A，substantially as described．
3．Operating the door stop by means of the trip pin N，substantially as described and for the purpose specified．
ga，123．－Hugh Stewatit，Clinton，Mass．，as－ signor to George F．Wrigit and Wilurar ORr， Jri．，same place．－Compass．－April 21，1868．－The points are remorable and reversible，so as to act as compasses ol calipers，and to admit rencwal when Torn out．

Claim．－The combination in one instrument of dividers and inside and outside calipers，by use of the adjustable combination points，used in the man－ ner and for the purpose herein described and set forth．

笑祭，12，－Fremerick T．Suirn，Titusville，Pa． －Apparatus for Burning Iydrocarbon．－April 21， 1868；antedated April 7，1808．－The firame forms the top of a perfornted box through whose sides and bottom the air passes to the pipes，and a central aperture leading through the oil pan and furnishing
air to the hydrocarbon contained therein. The furnace las air adjustable eap by which the flame is concentrated more or less.
('laim.-1. The cap) or corer C, together with the inside partitions $m$ in and the reducer $P$, for the purpose of confining ank directing the currents of dir upon the flame before they ean pass out of the opening at the top.
2. The combination of the fiame, draught pan, oil disli, and corers, as above deseribed, ali so placed, air-tight, in the fire box or chamber that no air can jaks into the said fire box, execpt such as passes throngly the draught pan aforesaid, for the purpose of protlueing leat from erude petroleum or other combustible fluids.

子7,135.-J. B. Siveethand, Pontiae, Mich.IIorse ILay Fork.-A pril 21, 1868. -The troo pairs of jains are brought together by foreing the tines into the material, and are sceured by a catch. When the fork is laised and the latel freed, the jaws are opened by weight of the hay and pressure of the hoisting ropes.

C"dim.-1. The arms $A$ and $A^{\prime}$, constructed substantiully as represented, and prorided with two sets of tines, G G and II II, as and for the purpose set forth.
2. The eross head J prorided with two or more tines, and adjustably or rigidly connceted to the arms $\perp \Lambda^{\prime}$, as and for the purpose set forth.

77,129.-Jantes H. Swinnell, Camden, N. J.Indexing Books and Ledgers.- April 21, 1868.Pages which are formed by a primary noteh index, denoting hundreds, thousands, capital letters, dic., are subdivided by notehes to iudieate secondary divisions.

Claim.-Arranging an alphabetical or numerical index for books, by cutting iwo or more sets of motelies in the markius of such hooks, and by making appropriate marks to cach of the said notches, substantially as and for the purpose herein shown aud described.
ry\%,127.-Cmarles A. Taylor, Chicago, Ill.-Trumi.-A pril 21, 1868.-Wach section of the bent brace has a hook which eureges an cye in the front of the trunk, and its bow lest.s upon a stud projecting from the lid. The meeting ends of the brace bars enter a hole in the loek plate, and are seeured by the hasp.

Claim. - The method of securing trunks, as herein described, by means of the braces D and studs I, or their equivalents, arranged to operate substantially as herein set forth.
g\%,128.-Albert Tmompson, Ridgway, Pa.Shingle JLachine.- $\Lambda$ pril 21, 1868.-' 'Two bolts on separate carriages are fed to the same cirenlar saw, the feeding being fuster and slower on the ends alternately so as give the butt and point to the shingless at alternate ends. This is effected by irregularly toothed feed wheels. Each carriage is locked in effective position by a barbed head which is grasped by spring dogs, and the carriages are independent of each other.

Claim.-l. The combination of the earriages I I', having the barbed coupling bolt $\mathrm{m}^{3}$, rith the barbed dogs $m m$, spring $m^{1}$, and cord and pulley $m^{2}$, by which either of the carriages can, independently of the other, be instantly attached to or detached from the sliding beam I which operates them.
$\underset{\sim}{2}$. The combination of the can wheels S , having tho cams $\mathcal{S} s$ \& formed and operating in the manner described, with the shaft $N$, having the spur wheels $n^{\prime} n^{\prime}$, the spurs of which are at different distances apart, the whole operating together in the mamer and for the purposes set forth.
g\%, 129.-Charles R. Tompkins and Jomn Whigit, Rochester, N. T.-Saw Mill.-April 21, 1808. - Upon ouc of tho sliding picces is a hub upon which fits the movable sardlle carrying the adjustable rollers which swing upon it as a center. Thumb screws press upon the sides of the saddle and enable it to be moved to adjust the rollers so as to present the hoard propery to the sarr.

Claim. -The movable saddle $d$ turning ou the hub
$l$, and adjusted by the set serews II II and the slots J J with their confining serems, all adjusted to operate substantially as deseribed.
g\%, 1BO.-EDWN J, Toof, Fort Madison, Iona. Try Square.- Ipril 21,1868 ; antedated A pril 11, 1868.- 1 sam blade is sonttached to the metallie arm of the square as to be slipped forward into operative position to make a shallow kerf. Oblique slots in the blide are traversed hy guide pins in the arm of the square as the blacle is pushed formard by the thamb piece.

Claim.-In combination witle a try square $\Delta$, an adjustable cutter $B$, aranged and operating substantially in the manner and for the purposes set forth.
my, 1: 1.-EDwin J. Toof, Fort Madison, Iowa. - Paper Clamp and Inlistand Combined.-April 21, 1868.-Improrement on his patent Jan. 30, 1866, in respect of the addition thereto of an inkstand with a sliding enver, sponge pen wiper, and pen rack, and in the atdlition of springs for pressing a bar agaimst the maper to secure it.

Claim.-The combination of the paper holder A with the inkstand E , provided with a cover F , with or without the sponge arm G, shaft I, whether extensible or not, and the crank $J$, or its equiralent, arranged and operating substantialiy as and for the purposes herein deseribed.
g\%, 13?.-Tra Van Pelt and John S. Var Pelt, Petersburg, Va.-Carriage Coupling.-April 21, 1868.-Coupling bars are dispensed with. The doubletree is conuected by stay chains to the king bolt and to the axle. The bolt of the double tree slides in a slot of the tongue.

Claim.- The combination of the sliding piroted swingletree $E$ with the chains I, J J, axle $C$, and bolster $G$, substantially as and for the purposes speeified.
y7, 1.3B.-SAMUEL D. Van Pelt, Anderson, Ind. -Sceffold Bracket.-April $21,1868$. -The tung of the lower plate is pushed up bencath the course of shingles, and its elaws engage the rafter. The upper pivoted claw plate is brought dowu upon tho shingrles by the vibration of the lever.

Claim.-The plate A with claws B and upright II, the dog lever I with dogs E E pivoted to the upright II of the plate $A$, and the upright $D$ piroted to the dog lever I, all constructed and operating substantially as shown and described and for the parpose specified.

197, 134.-EDWARD L. W A LKER, Benford's Store, Pa.-Morse Hay Furk:- A mil 21, 1808.-The prong is piroted to the end of the staff and is governed in its positions by the lever which actuates it through the medium of the link and slide bar.

Claim.-1. A prong at the lower end of a hay elevating fork in combination with the sliding bar $e$, or equivalent mechanism, that acts to turn said prong up below the hay, substantially as set forth.
~. The link $h$ and lerer $h$ in combination with the bars $e$ and $a$, and prong $l$, substantially as specified.

7\%, 135.- Emory P. Walker, Belehertomn, Mass.-Butter Worker.-April 21, 1868.-The butter in the tray is worked by the pressure of the passing roller, the lound at the end of the moving frame traversing in the slots of the sides. The oblique picees keep the butter on the tray and conduct the buttermill to the discharge hole.

Claim. - The diagonal flanges D D placed at the mouth or front eud of the bottom $\Delta$ of the box with a hole $x$, as described, the rarious parts being constructed and operatiug as specifiod.
gy, 136.-Joselli H. Wanker, Grand Rapids, Mich.-Horse May Forl-- - $p$ pril 21, 1808.-Tho prong is ledd in effectire position by a cursed bar when a cam in the stock occupies a noteh in the upper portion of the said bar. When the tripping corld pulls the cam out of the notch, the bar is tree to slip, and the wright of the hay eauses the prong to oscillate and discharge its load.

Claim.-The cam lerer D piroted between the upper ends of the bars C C, and arranged to operate
in combination with the curved bar $B$ when said bar is providod with a stop at its cnol, and a recess, as described, all coustructed and operating substautially as specificd.
gy, $13 \%$ - John W. Walters, Ricerille, Iowa. -Machine for Boring Hubs.-April 21, 1868.Clamps at each end of the hub form guides for the central shaft, which has a box to carry the cutter, whose progression is obtained by the thread on the shaft. The cutter has a threaded shank, and is fed outward to enlarge the diameter of the bore by the rotation of the tube, which has a crown whecl engaging a pinion nut on the tool shank.

Claim.-The combination of the two.shatts A K, the latter having the crown gear whecl $C$, tubnlar shaft $H$, box $\mathbb{B}$, adjustable cutter $E$ having the pinion $F$, all operating as describca for the purpose specified.
g', 188.-GARDNER WARREN, Roxbnry, assignor to himself and Hezekiah H. Bryant, Boston, Mass. —Treating Woolen and Silk Goods.-A pril $21,1868$. - A composition is formed of glyccrine, 1 , and water, 18 parts. The fabric is saturated in the liquid and then passed between rollers and dried. Other ingredients may be added, such as borax, alum, \&c.

Claim. -The process of treating fabrics, made of wool, silk, or other animal fibcis, with a solution of glycerine, substantially as described.

7y, 139.-TAMES WASH, Mount Sterling, Ml.-Beehive.-April 21, 1868.-The brood and honey boxes arc inclosed in all outer shell, but are not in contact therewith except at the feet, which have cmps to prevent the access of millers and grubs. The boxcs are separable and removable, and liave apertures for ventilation and for access of the bees, and slides by which they may be isolated when required.

Claim.-1. The combination of the box C, provided with partitions having spaces E , and passages $h i$, with the hives $C^{\prime}$, smbstantially as and for the purpose described.
2. The combination, with the box C and hives $\mathrm{C}^{\prime}$, of the perforated passage $D$ and outer housing $A$, substantially as and for the purpose described.
3. The combination, with the box C and hives $\mathrm{C}^{\prime}$, of the perforated passage $D$ and outer housing $A$, and the self-adjusting guard H, substantially as and for the purpose described.
4. The combination, with the hives $\mathrm{C}^{\prime}$ and long perforated passage $D$ of an outer housing, provided with the odor passages. F, substantially as and for the purposes deseribed.
g. \%, 14.0 - C. D. P. Watters, New York, N. Y. - Egg Cup.-April 21, 1868. -Pressure on the levers opens the jaws to receive the egg, which is grasped when the levers are freed. The cup is then brought to a vertical position, standing upon the foot.

Claim.-An egg cmp, consisting of the basc A, spring jaws $B$, levers $D$, and handle $E$, all made and operatiog substantially as herein shown and deseribed.

7y, 141.—J. B. Websten, Stookton, Cal.-Seed Sower and Harrow Attachment to Gang Plowe. April 21, 1868.-The plows are arranged in the nsmal oblique order in the firame, which has a caster wheel in front and supporting wheels behind. The seed box may be placed to drop the seed in front of the plows, to be covered thereby or behind the p! oms, in which latter case a harrow is trailed in the rear.

Claim.-1. The plow frame a $a^{\prime} b$, provided with means for attaching a sceder to its front end, and prorided also with the frame $d d^{\prime}$, at its rear end, for the attachment of a seeder, substantially as described.
2. The bracket $e$, in combination with the plow frame $a a^{\prime} b$, as and for the purpose described.
ga, 142.-B. Weirich and John Shith, Middlebury, Ind.-Farm Gate.-April 21, 1868.-The gate is in two longitudinal sections, of which the lower one may be raised and slipped alongside of the upper to inake an opening beneath for small stock, or raise the lower portion ont of the way of snow. A. lever piroted to the heel post is the means of lifting.

Claini. -1 . The sections $\mathrm{C} \mathrm{C}^{\prime}$, lever $h$, and brace $k$,
combined and operated as and for the purpose set forth.
2. The swinging bars $b b$, sections $C C^{\prime}$, lever $h$, and brace $h$, all arranged as specified.
g\%, 143. - Chairles Welite, Frankford, Pa.Meat Cutter.-April 21, 1868.-The gang of knives at the lower end of the vertical shaft is reciprocated by a crank wheel, connecting rod, and balanced lever, while the meat box is revolved bencath so as to expose each part consecutively to the knires. A scraper turns the meat from the edges and places it in the track of tho knives.

Claim.-The combination of the revolving meat box $I$, gear wheclis I and $H$, vertical shat't $G$, berelgear wheels F and E, horizontal shaft C, crank wheel D, gear wheels $J$ and $K$, short horizontal shaft $L$, crank or crank wheel M, connecting rod $N$, pivoted and balaneed lever $O$, aud slide $R$, to which the cutter T U V is attached, substantially as herein shown and described, and for tho purpose set forth.
byg, 144.- Amos Westcott, Syracusc, N. Y.-Churn.-A pril 21, 1868. - The churn stands on three legs, one of which is adjustable to vary the position of the conical body. The arrangement of the oblique dashers drives the cream toward the small end of the body, from whence it returns down the inclined bottom. A fan drires a blast of air through the churm.

Claim.-The combination of the conical body, adjustable leg, horizontal dasher shaft, and alternately oblique dashers, and fan wheel, substantially as described, for the purposes set forth.
rgy, 145.-Cybenus Wheeler, Tr., Auburn, N. Y -Harvester. - Division A.-April 21, 1868.-Tho axle of the ground wheel is cast npon one side of the frame, and the tubular box which reccives the berelWheel shaft is cast upon the other side. The tongue and crank frame are linged to the main fiame at tho axis of the berel-wheel shaft. A sliding block upon the tongue receives the draught, which is communi cated to a standard upon the crank frame. The cut ting apparatus is raised by a lever upon a wheel connected With the shoe.

Claim.-1. A main frame, having an axle for the drive wheel, formed or cast on one side, and a hol low eylindrical arm on the other side, for supporting the sliaft of the bevel wheel.
$\therefore$ The main frame, as described, in combination with a tongue frame, hinged to the hollow cylindrical arm of the main trame.
3. The combination of a main frame, having an axle for the driving whed on one side, and a hollow eylindrical arm on the other side, wi th a crank frame hinged to said arm, so as to vibrate indepeudently of the main frade in following the undnlations in the surtace of the ground over which it is drawn, substantially as described.
4. The combination of a main frame, constructed as describerl, with a tubnlar box for holding the bevel-wheel shaft.
5. The crank frame, arranged and vibrating as described, in combination with a stop on the main frame, and a wheel and lever mounted on the shoe, for raising the cutting apparatus.
6. The driver's seat, mounted on the main frame in a position behind the main drive wheel, in combination with a crank frame so hinged to said main frame as to vibrate independently of said frame and seat.
7. Connecting the dranght to a stondard on the crank frame, in combination with hinging said crank frame to the main frame, on an axis coincident with the axis of the berel wheel, but independent of the main axlc.
goy, 16.-CIRENUS Wheeler, J1., Auburn, N. Y. -Harvester Riak.-Dirision B.-April 21, 1868. The machine is convertible as a reaper or mowrer, the parts in common being similar to the foregoing, (No. 77,145.) The rake and reel arms are guided in their irregnlar rotation by a cam track, each of the two rake and two reel arms having adjustable eonnection to its fellow. The said arns are actuatet by chain gear. The rake heads on descending to the platforin coms in contact with the ridge board on the grain divider. The cutter is driven by a gear on the
ground wheel, which engages a pinion turning upon the berel-wheel shaft, but foreed by a spring to engage a eross-pin of the said shaft." The pinion may be slid out of engagement with the eross-pin to stop the eutter.

Claim.-1. In a combined reel and rake, the arms of which are hinged, independently of each other, to and travel around an axis perpendicular, or nearly so, to the platform, arranging said axis on the vibrating erank frame in front of a line drasm along the front edge of the finger bar.
2. Mounting the axis of a combined reel and rake on a vibrating crank frame, which ean rise and fall inclepeudeutly of the main or gear frame.
3. The location ot the axis of a combined reel and rake, upon a vibrating erank frame, behind the axis of the main wheel, in front of the finger war, aud outside of a line drawn aeross it at right angles, and touehing the outsido of the shoe.
4. In a combined reel and rake, the arms of which are hinged to and more around au aris perpendicular, or nearly so, to the platform, hingiug the rake heads to the arms, and so combiuing them with mechanism, under the control of the driser, that the tecth of the rake shall, in reching, retain a rertical position until they reach the finger beam, and then roll back to pass orer the platform, and in raking retain a vertical position in their passage orer the platform for the diseliarge of the gavels.
5. Uriving a combined reel and lake, lucated on one side of and below the highest point of the drive wheel, by nuechanism connceting it with the hub of the wheel on the other side, substantially as deseribed.
6. Adjnsting and supporting the crank frame and inmer end of the cutting apparatus, in reaping, by a ehain, connceted with a lifting wheel and lever, monnted on the main firme, substantially as decoribed.
7. Changing the angle of cut aud the inclination of the platforia by means of a pinion in the draughtframe. combined with a sector gear on the main frame.
8. The ridge board or inelined traek on the graia divider, in combination with the orerhauging ends of the rake heads.
9. 'The employment of set-serers, in combination With the rake and reel arms, and the rerolring head, to which the arms are piroted, for adjnsting the height or ancrle of the rakes.
10. A combined rake and reel, the arms or rake heads of which rotate about a shaft or pirot in adFance of the finger bar, and are of suffeient length to reach the point of the divider in recling in the grain, in combination with an inclined track or ridge board for raising the rake heads to pass the cutters.
11. Automatically retracting the rake head to cause the rake teeth to resume their vertieal position by means of the lower heel cnd of the camway acting upon the inner or heel end of the rake head, substantially as described.

7\%, 147.-Martin Wheeler, New Haren, Comi. -Carriage Iub.-April 21, 1868. The spokes are first fixed in the rooden limb and then supported between two bands, one of which has side projections extending between the spokes and to the other band, and dowel pins passing through the latter.

Claim. - The plate $\mathbb{C}$, provided with the arms or lugs a, combined with the hab $A$ and spokes $B$ and the plate $D$, when the whole is construeted and united, substantially in the manner herein set forth.
g\%,148.-Thayer D. White, Cineinnati, Ohio. -Dovetail Machine.-April 21, 1868.-The gang of circular saws is placed upon a mandrel soparated by washers and clamped by a nut serew threaded on the mandrel. The saws have a gradually-decreasing diameter from end to end, so as to cut a like distance into the end of the board and in an inclineddircetion. The stuff is inelined by the adjustment of the fences and of the bed.

Claim.-The combined arrangement of a series of saws of mequal diameters, and an oblicque table for fecding planks thereto, as and for the purposes herein specified.
y\%, 190.TMAYER D. Wimte, Cinciunati, Ohio. - Macline for Ilaking Dovetait Iortises.-Aprilㄹ1,
1868. -The bed mar be inelined, and the lover end of the gang of chisels has a like inclination, to cut ont one side of a whole set of mortises at one operation.

Claim.-The removable block B , having tro oppo-sitoly-inelined planes $1 B^{\prime} B^{\prime \prime}$, and employed in conjunetion with the sliding gate $D$ and chisels $d d$, substantially in the manner and for the purpose set forth.
g\%,150.-W. T. WICKFRSHAM and ELISIIA Rousir, Springfickl, Ml.-Car Coupling.-April 21, 1868.-The eoupling bar trips the slotted link in entering, and the latter lalls behind the projection on the link. A coupling pin falls into the slot of the bar and its rectangular arm rests on the gravitating link.

Claim.-The combination of the rod or pin D, gate $C$, link $B$, buffer $A$, pirot $a^{\prime}$, and arm $a$, substantinlly as shown and described, and for the purpose set fortl.
\%7.151.-Miran S. Wiley, Madison, Ind.Machine for Jointing Staves.-April 21, 1868.-The saw carriage traverses guides which are eurved eoucentrically with the comntershaft, from which the saw has inotion. The stares are elamped in a curved form concentrie with the conrse of the saw. The saw earriage is moved by a spur wheel, which is turmed by a hand erank, and engages racks upon the frame.

Cluim.-1. The curved guitues 3 B earrying the moriable saw frame $G$, said guides being concentric with the driving shatt placed abore tho frame, whereby the tension of the belt from said driving shaft to the pulley If on the saw carriage is regulated, as herein shown and deseribed, for tho purpose specified.
2. The combination of the morable cursed raeks $C$ C with the pinion $M t$ and the morable saw bed $G$, substantially in the mamer herein shown and deseribed.
3. The derices $m^{2} m^{2}, m m, h h^{\prime}, g g, n$, and the treadle $k$, for operating the enrved racks C C, working tomether substantially as herein shown.
4. The clamps $c c^{\prime} c, r^{\prime} r^{\prime}$, and their conneetions $m$ $m, m^{2} m^{1}$, for operating the same, as substantially set forth.
5. The combination of the eatch $c$ and its wiper $f$ With the saw bed and lifting deviees, substantially as herein shown and deseribed.
\%7, 152.- Willias Wilson, Galesburg, Ill. Slide Talve. - April il, 186s. - The valre seat has two exhaust ports and two eylinder ports. 'The ralre has two exhanst chambers, two passages for exhanst steam and one for supply. Whe steam is taken and exhausted by double openings, and the valve serves as a cut-off.
Claim.-1. A steam sliding valre, prosided mith two exhaust chambers $C$, and the two exhaust steam passages $a^{2}$, and the steam passige $a^{1}$, whereby the steam is both admitted to and exhausted from a steam eylinder by double openings, snbstantially as shown aud deserilied.
2. A steam valve, provided with the steam passage $a^{1}$, and the exhanast steam passages $a^{2}$, and the chambers C , in combination with the stean and exhaust ports of any valve seat, $\Delta$, substantially as shown and described, and for the purposes set forth.
gay, 153.-J. IF. Winx, Delphi, Ind. - Concrete Irrick Press. - A pril : 1 , 1868. - 'he molus beine charged with concrete and the cover instened down, the followers are raised from below by the compound lever arrangement shown in the illustration. The corer is then withdrawn by one lever and the blocks raised by a third one to clear them from the mold.
claim.- L. The eomponnd togrgle joint, consistings of the toggle bar $k$, link rod $e$, step lever $h$, and lever a, substantially as shown and deseribed, in combination with the mprights $d$ and bottoms $u$, for the purpose of compressing conerete blocks, all arranged as set forth.
2. The press, construeted as deseribed, and consisting of the molds $u$, cover C , link E , lerer $\mathrm{D} p$, bottoms $u$, mprights a $q$, fuide $m$, lever $\mathrm{G} r \varepsilon$, toggle bar $h f l$, step lever $h$, link $e$, and lever $a$, all arranged within the frame $\Lambda$, and operating in the manner and for the purpose set forth.
g7，154．－WILLIAM W．W OODRUFF，New Britain， Com1．－Fermentation Bung．－April 21，1838．－＇The hollow bung is surmomented by a tubular stem and a cup．A cap rests on the stem，and its rim is sub－ merged in the contents of the cup．Carbonic acid generated by fermentation may pass fiom the barrel． but the cup and cap form a trap which prevents re－ flux of air．

Claim．－The bung $a$ ，cup $a^{\prime}$ ，tube $a^{\prime \prime}$ ，and cap $b$ ， constructed and arranged substantially as and for the purpose described．
mg，155．－JaMes Wool，Boston，Mass．，assignor to himself and $\mathrm{F}^{2}$ ．II UNNEWELL，same plaee．－Drop Hammer．－April 2. 1868．－Whe lifter has a oore of Trood which maintains its density，and is faced on each side with leather which maintains the proper surface without growing so smooth or abraded as to impair its action．

Olaim．－In combination with the Treight and lift ing rollers of a drop hammer，a lifter，having a stiff central body of wood，or its equivalent，faced on both sides with Ieather，or other equivalent yielding ma－ terial，substantially as and for the reasons set forth．
g＇g， 5 ．Willian H．LaUbach，Philadclphia， Pa．－Apparatus for Carbonizing Gas．－A pril 21， 1868．The chamber las a number of partial parti－ tions extending from alternate sides，and which compel the liquid to follow a sinnous course in con－ nection with the hydro－carbon liquid and saturated fiber．The gauge tnbe shows the lieight of the liquid，and is held between the eaps by the straps and set screw．

Claim．－＇The hollow glass gange tube C ，caps $f f$ ， straps $d d$ ，set serew $e$ ，and tubes $g g$ ，in combination， made in the manmer and for the purpose described．

177，15\％．－A．J．ADAMS，Portland，Oregon，as－ signor to himself and Boyd P．Quincy，same place． －Animal Trap．－A pril 28，1868．－The two jaws are connected to a single spring beneath，and are licld apart by a tripping platform．The auimal steps on the platform，which falls and allows the impaling teetli to adrance．

Clatm．－The spring C and claws K ，in combina－ tion with the hinged treadles ant the base $\mathrm{A} E$ ，all constructed，arranged，and operating substantially as deseribed．
g\％，158．－Peleg Barker，Battle Creek，Mich．－ Lathe for Cutting Irregular Forms．－April 28， 1868．－The material is clanped in the adjnstable frame and is then fed beneath the rotating curred bit，which makes a groove in the blank．The artiele being then rotated anotlier cut is made，and by a suecession of operations it becomes fluted．

Claim．－The sliding adjustable frame $G$ ，contain－ ing the holding devices for the uncut timber，ar－ rauged relatively with the eurved knife C ，when constructed and operating as deseribed．
gy， 159. －Willian T．Batty，Canton，Ohio，as－ signor to himself and Gniffitis Deshant，same plaee．－Car Brake．－April $88,1868$. －When the bunt－ er bars of the ears come in collision，as in slacking up the train，the rear projection comes in eontaet with the brake lever and puts on the brakes．By rotating the knuekle－joint support the contact of the bar with the brake lever is aroided，and the brakes are operatable by the usual hand deviees．

Claim．－1．＇The supporter 1 ＇，witl axes $b$ and $c$ ， and erank R ，when used in connection with knnckle joint O，substantially as and for the purpose herein shown．

2．The peculiar arrangement and combination of the erank F ，chain S ，pulley 1 ，iron V ，iron $V$ ，and ear boty $X$ ，the several parts being arrangel as and for the purposes herein speeified．

3．The peenliar arrangement and combination of the draw har $K$ ，knuekle joint $O$ ，snpporter $P$ ，and brake lever II，the several parts being arranged and combined substantially as and for the purpose speci－ fied．
gag，160．－WILliam T．Best，Seranton，Pa．，as－ signor to himself＇aud Daniel Vaugian，same placo． Ohurn．－April 28，1868．－The eream is subjected to
a donble process，being first acted upon gradually by breakers in a small vessel，and flowing thenco into the main body of the ehura，in which it is beaten by dashers on a vertical revolving shaft．A pam－shaped lower portion colleets the butter．

Claim．－1．Tho supplementary box B，having a eonverging bottom，aud being provided with the slotted and perforated eylinder $C$ ，and used with the staff E and its breakers，as and for the purpose set forth．
2．The frame $N$ ，constructed substantially as de－ seribed，and provided with a rim around its lower end for collecting the butter，said fiame being 11 sed in the ehurn A and with the staff L and its dashers， as and for the purpose specified．

3．The gate $d$ ，surrounding the slotted portion of cylinder C ，for regulating the flow of cream to said cyliuder，substantially as herein specified．
mag，101．－A．Milton Blakie，Canton，Ohio．－ Spring for Chairs．－April 28，18ti8．－The front legs have conical coils which form spring fect．Ther are attached by metallie sockets to the legs，and have sole plates which rest on the floor．

Claim．－The use of the conieal spiral spring $F$ ，in combination with the foot plate $G$ ，plate $E$ ，soclet or spindle D ，and chair leg C ，in the manner and for the purpose herein specified．

G\％， 169. Toinn A．Bower，Middlefield，Ohio．－ Carriage Lock．－A pril 28，1868．－The hold－back straps are attached to loops on sliding bars beneath the thills，and the bar vibrates the brakes on the pirots in the cross bar of the thills，binging them against the whoels．

Glaim．－In the brakes for carriages，the levers B B hinged heads E E，springs $J J$ ，and rods $G G$ ， as arranged in combination with the thills A A，in the manmer and for the purpose substantially as set forth．
mg， $16: 3$. －Silas H．Bowman，Malf Moon Bat， Cal．－Manufacture of Brick．－A pril 28,1868 ．－With the lommy clay for 1,000 brieks is mixed peat， 200 lus．；and errade petroleum， 3 galls．The bricks shoald be Trell dried，and，when igniting the liln，the flame should be driven through all parts at onee to pre－ vent the collcetion of capor in any part．

Claim．－The use of petroleum and peat in the manufacture of brieks，by mixing both，or cither one of them，with the elay of whieh brichs are to be made， substantially in the manner and for the purposes herein set forth．

7\％，自6，－TOSHUA BRIGGS，Peterboro，N．H．－ Piano Forte Śtool．－April 28，1868．－The stool has metallic legs，wooden feet and an erdinary scat．The slotted flangos of the legs slip over and are fastened by screws bencath the seat．

Claim．－1．Construeting＇the stool with metal legs $c$ ，each having a fiange，$d$ ，containing a socket，$e$ ，to enable the les to be fastened by and slid from the sererf $f$ ，whieh conneets it to the seat，and pins $g$ ，to keep the leg in position，substantially as set forth．

2．Combining with cach leg，as clescribed，the too picee $i$ ，of wood，driven into a socket，$h$ ，in the leg， substantially as and for the purpose set forth．
 assignor to Rusself and ERWin Manufacturing Comphny，same place．－Key－Hole Guard for Door Locks．－April 28，1868．When the key is inserted and turned，the first rotary motion bring＇s the cut－off in front of the ker－hole，closing all but that portion oceupied by the bund of the ley，while the bit of the key moves the bar and by the intervention of the comnecting parts throws the bolt．Unless the liey corresponds to its daty it is powerless to act upon the bolt，and the liey－hole is guarded to prevent the in－ troduction of implements．

Claim．－The combination and arrangement of the oscillating spring guard or ward bar $A$ ，with the latch and tmmblers，substantially as and for the pur－ pose described．

盟多，B6．－Lomin Brooks，New York，N．I．－ Boot and shoe Conformateur．－A pril $28,1868 .-$ The ＂size－stick＂has the usual heel－piece and a sliding toe－
pieec to measure the length; a sliding standard has means upon it for measuring the height of the instep and the height of the shank or "hollow " of the ioot.

Claim.-The combination, with the horizontal scale or size-stick A, of the vertical sliding standard D. provided with the seale $d$, adjustable arm C, and spring table D, arranged and operating substantially as and for the purposes set fortl.
g7,167.-Charles P. Cartiv, Ponghkeepsic, N. Y., assignor to himself and Nohris M. Carier, samo place.-Mechanical Power.-April 28, 1868.The motion of the pendulous weight is communicated to the gearing and to the walking beam, to whose outer end the churn dasher is attached.
Claim.-l. The wheel $d$, with teeth, formed as shown and described, in combination with pawls $E$ E, for imparting motion to flange $f$ and arm $J$, in the manner shown and described.
2. The bail $h$, when arranged and eombined with shaft $g$ and flange. $f$ and pamls E E, substantially the same as shown, and for the purpose set forth.
 N. Y.-Inhating Gases.-April 28, 18 tis.-A flexible pipe convers the gas to the inhaler, and the elaims cite a number of specific features for alapting it to be readily aceessible to exhaust the effete air into the atmosphere and to indicate the quantioy of gas at command.

Claim.-1. Placing the gas pipe a in said apparatus at an angle with the pipe $b$, for inhaling through, to obviate the necessity of a valve to prevent the return of the exhaled gases into the gas pipe, substantiatly as herein described.
2. The expanding mouth-picee, construeted and arranged substantially as and for the proposes set forth.
3. A suspending deriee, employed in combination with the breathing apparatus, by which the same is drawn out of the way, and supported when released by the operator, substantially as and for the purposes set forth.
4. The formation of the joints of the apparatus by compressing the elastic tube between the surfaces of two rigid tubes, as above spectifed.
5. The construction and operation of the breathing apparatus, substantially as herein deseribed, so as to administer the gas: if required, during an operation, or while the month is open and free iherefor, as well as before the patient is rendered insensible, substantially as abore specified.
6. Aftixing a gas inhaler to the nose of a patient by the employment of an apparatus, substantially as herein described, in combination with said inhtiler, so as to administer gas while the operator is free to operate upou the patient rithout the aid of assistant, as would otherwise be required.
7. Affixing the apparatus either to the operating chair or other suitable permanent fixture, so as to relieve the operator or patient of the weight and annoyance of the apparatus, while it is at al times ready for use without other aid, substantially as herein deseribed.
8. The deviecs illustrated in Figs. 3 and 5, adjustable or otherwise, substantially as there represented, for opening the jaws of the pationt, as herein set forth.
9. The employment of an indicator in combination with a respirator and gas reeeptacle, presenting to the eye of the operator at all times the state of the upparatus and the supply and quantity of gas taken, substantially as and for the purposes set forth.
10. The diapirragm, substantially as deseribed, to be placed in the mouth, to cut off communication between the lungs and the external air througl the mouth when the mouth is open.
g', 169. - GEORGE Cliter, Memphis, Mich.-Loom.-A pril 28, 1868. -The whole meehanism of the loom is operated by movement of the lathe.

Olaim.-The combination of the top beam $\Lambda$, the lathe 13 , the breast beam C , the ctoth beam D , the frame E, the treadle wheel F , the shuttle thrower G . the lateh $H$, the treadles I, the pulley $J$, the yard beam K, the pins L, the spring har M, the standard N , the fiame O , the buton $P$, the cords Q, the transverse tie $I$, the standard $S$, the oscillating frame $T$,

The connection $U$, the हpring $V$, the hangers $W$, the geared wheel $\mathbf{X}$, the dog and spring $\mathbf{Y}$, the geared wheel $Z$, the bel 2 , and the cord 3 , when constructed, arranged, aud operating sulstantially as and for the purposes hereinbefore described and shown.
g7, 139.-T. I. Cole, Milbury, Mass.-Die for Jaling Thimbles and Ferules.-April i8, 1868. The die has a circular rertieal-sided portion which just receives the blank disk, and from this part the die gradually decreases in diameter so as to eatuse the contraction of the edge of the metal without buekling.

Claim.-Jointly, the die and plunger A and B , the co-acting surfaces of which hare the configuration herein deseribed and shown, for the manufaeture of ferrules and thimbles fiom diskis of cold wrought iron, in the manner lereinbefore set forth.
 Drive TFell.-April 28 , 1868.-The tube has a detachable head, longitudinal slits, and a foraminous case.

Claim.-The pipe $A$, with slits $a$, and lips $a^{\prime}$ in combnation with bands 13 and sereen $C$, arranged as described.
g\%, 1 $\mathbf{1 7 2}$.-George IV. Corbit, James MI. Orplet, and George M. Case, Malta, Mll-Churn.-Aprik $28,1.868$.-The semi-cylindrical churn has an oscillating dasher, whose arms interlap with arms projecting radially inward from the sides of the tul). The dasher is reciprocated by a train of gearing through the intervention of a cam, rateliet bar, and segment g"ear.
Dlaim.-1. The combination of the cam efg, bar $f$ h, ind wheel 1234 , substantially as deseribed.
2. The method of connecting and detaching tho cos-wheel P with the other parts by the device substimtially as describod.
3. The combination of the cam efg and wheel 1234 , substantially as deseribed.
g7, 罗3.-Fraycis and George G. Cragle, Lewiston, Me., assighors to Whliam N. Higigins, and said HeGirs insighor to himself, F. O. Sants, W. M. Emerson, and IV. 'I'. McNally. - Roller for Drawing Machines. - April 28,1868 .-The core of the upper roller in machines for treating cotton or wool is covered with thick woolen cloth, glued on, and the cloth is covered with layers of twine saturated with rarnish, which receires a "surface."
Claim.-The within described roll for machines for treating coston and wool, when constructed and operating as and for the purposes set forth.
 - - pril 28, 1868.-The gate is smspended by its middle bir fiom a crane hinged to the post. 'The latch is antomatic, and consists of an angular slotted bur on the post, on which is pivoted it horizontal, seginental plate, into whose noteh the grate shats. A leaer latch falls into all opening in the plate and fustens it and the grate.

Claim.-1. The combination of the gate $P$, with the crane $z$, link or hinge g, and serew-rod E, substantially as, in the manner, and for the purpose as herein shown and described.
2. The construction and arrangement of the slotted angular bar R, metallic plate 1 , and lever $h$, when used in combination with a fin'm, gate, and operating. substantially in the mamner and for the purpose as herein set forth.

37, 1 g. - R. E, Cuntis, Great Bend, Pa.-Cut-lery.-April 28,1868 --The tang runs through the handle. The bolster is in two portions, riveted to the tang, and forms sockets for the seales, which are also riveted to the tang.

Cletim.-As a new article of manufacture, knires or forks constructed substantially as described.
ayg, 1 g. - Martin Darling and Hala Gray, Marathon, N. Y.-Cultivator and Potato Digger Combined.-April 23, 1808.-Whe earth is thrown outward from eael sifle of the potato row, and tho potatoes raised by the inelined lalie.

Olaim.-The fiamo a a, oblique cultirator rake

B $U$, laterally-adjustable plows C C and adjustable supporting wheels and standards e $f$, all combined, constrmeted, and arranged as herein shown, and for the purpose set fortli.
rgy, 17g.-Ciarles De Hass, Washington, D. C. -Roofing Buildings.-April 28, 1868.-Over a common, longitudinally-laid, inch sheeting, T-rails, halt an inch deep, are nailed, in a lateral direction, $2 \frac{1}{2}$ feet apart. The spaces between the rails are filled in with concrete, having lime, 1 ; hydraulic cement, 1 ; and sand, 3 parts. The cement is immediately rolled, and an outcr conting applied having equal parts of sand and asphaltum.

Claim.-A roof, constructed as herein described.
g7, 19g.- Lewis Donaell, Columbus, Ohio.-Tuyere.-April 28, 1868. -The blast passes up an annular space between an outcr and inner cylinder, and over the top of the latter. The blast is regrllafed by screwing the inner eylinder in the outer one.

Claim.-A combination of the screw $p$ with the revolving top $A$, the valve $O$, the eylinder $C$ and $J$, and the handle or lever N, constructed and operated substantially as and for the purpose set forth.
'g. 179.-Nicholas Downes, Syracuse, N. K.Stove Drum.-A pril 28, 1868.-The lieat radiator is connected by its upper cnd to the stove, and by both ends with the chimnoy. The radiator is traversed by rertical air tubes. The pipe commecting the upper part of the radiating drum and chimney has a damper. A pipe passes through the bottom of the drum and discharges air into the upper part thereof. The said pipe has a lid which may be placed on its lower end.

Claim.-The shell B, flues $d d$, pipes $C, e, f, g, I$, and damper $h$, all constructed and arranged as herein shown, and for the purpose described.
g\%, 180.-Robert Elliott, Chester, Pa.-Railway Rail splice.-April 28, 1868.-The edges of the plate lie respectively beneath tho rail, and outward aloug the tie. The rebent edge of the plate is folded into four thicknesses, and bolted to the rail. The bolts pass throngh plates which are bent over the heads and nuts respectively, and the latter plates hare rectangular holes serving to prevent the nuts shaking loose.

Claim.-1. The railroad rail joiner, composed of the double flanged piates D and L , of wrought iron, the bolt $F$, burr $g$, and guards $G$ and $I$, all constructed substuntially as set forth.
2. The guard H, overlapping a series of two or more projecting bolt-heads, $f$, to prevent the bolts F from working out of their places in case of the accidental removal of some of the burrs, $g$.
gg, 181.-John M. Elward, Chicagro, Ill.-Trist Pinfor Reapers and Mowers.-A pril 28, 1868; antedated April 15, 1868.-An octagonal or other angr-lar-sided hole in the rim of the crank-wheel receives a pin of corresponding form, which is sccured by a spline key. The wrist pin, to which the pitman rod is comnected, may be adjusted toward or from its axis of motion to regulate the lengtli and velocity of its stroke.

Claim.-The combination of the wheel B, proFided with an angular recessed or slotted opening $b$, with the wrist pin $\mathbb{C}$, provided with angles corresponding with the said opening, and a key, a, all arranged and operating substantially as set fort!.

刕, 189 -George F. Foss, East Boston, Mass., assignor to himself and Samuel U. Hopkins, same place.-Bean Pot lifter and Carrier.-April 28, 1808. - The pot is supported in a wire lifting frame. The lid is upoa a stem which passes through the connecting picce beneath the bail, and is secured by a set serew.

Claim.-The bean pot carrier, made substantially as described, that is, of the bottom guard $d$, the wires $a$ and $b$, the corer $g$, the conucetion picce $e$, and the clamp screw $i$, arranged and combimed as specpicied.
gry, $183 .-S t e p h e n$ Fountain, Silver City, Ne-vada.-Amalgamator.-April28, 1868.-The pan has
a central, hollow column for the passage of the vertical shaft which rotates the muller, and around the said column is a second wall enclosing a steam heatod space.

Claim.-Casting the pan with a hub, laving an opening through it for the shaft to pass through, and having a donble wall around this opening to form a steam chamber for supplying heat to the machine, substantially as described.
\%7, 181.-Josern S. Gonfrey, Leslic, Mich.Revolving Mrold Board.-A pril 28, 1868.-The mold boards are circular, tapering blocks, and are hung so as to turn with the friction of the earth upou them.

Claim.-The combination of the mold boards A A with the cutters $B$ B the shares $C$ C the shafts $D$ $D$, and the frame $E$, when constructed substantially as described, for the purpose designed and set forth.
gig, 185. -William Gray and Henry E. PorTER, Hebron, Conn.-Attaehing Axles to Vehicles.April 28, 1868.- 1 circular plate attached to the rocker has an outwordly projecting flange which lies under an inside flange of a circular plate attached to the axle.

Claim.-1. As an improred mode of manufacture, a device for securing togcther the forward axte and rocker of a vehicle.
2. The combination of the plate $\mathbf{B}$, having a round flange, D, plate $F$, with a correspondinground flange recess and plate $G M$, which encloses and allows the flange $D$ to work closely and freciy therein, by means of the segmental portion H of said plate, and the projections K, for griping the rocker A and axle E , substantially as and for the purpose described.
 Mode of Preventing the Corrosion of Cast Iron Vessels. -April 28, 1868.-The innor side of the ressel is conted with linseed oil and heat applied thereto to form a permanent coat of the same upon the metal.

Claim.-As a new manufacture, the improved article of cast iron ressels, as deseribed herein, and having their interior surfaces prepared or lined by the application thereto of oil and heat, thereby forming a hard, clurable liulng coat therein, in the manner substantially as set forth, and by which said ressels are made non-corrodible, as described.
g\%, $18 \%$ - Henry R. Mall, Philadelphia, PaEnameling Hachine.-April 28, ]868.--The driring shaft and pinion wheels give motion to the endiess chains. The moldings or other things to be enameled are introdnced into the spaces between the chains and are fed forward througln the hopper which gives the coating material and the scraper which removes the surplus. The side of the hopper forms the scraper.

Claim.-1. Making the hoppers and serapers selfadjustable by the application of springs thereto, substantially as shown and described.
2. Fceding the moldings or other objects to be enameled through the scrapers by means of cudless chains set edgerrise, and provided with flat links to prevent indentation of the moldings, substantially as shown and described.
3. Making the bed plates $b$ and $b^{2}$, both or either of them, with their chains or other aftachec? parts, adjustable relutively with the fixed bed plate $b^{1}$, its chain and other aitached parts, to adapt the machine to the varions sizes of moldings or other objects to be cnameled, substanfially as shown and described.
4. The chdless chains $k h^{3}$, their respective ways or lateral bearings $m m^{\prime}$, and the mechanism for giving motion to said chains, in combination with two scrapers or a singlo scraper, substantially as shown and described, for the purpose specificd.
g\%, 188. -John S. Hall, Pittsburg, Pa.-Plow. - April as, 1868.-The mold board and landside are made in one piece, either cast together or subsequently attached. The share and renovator are detachable.

Claim.- $\Lambda$ mold board and landside united in one piece, the former having the share and point attachod to it, and the latter having the renovator or sole attached to it, and both united to a standard, A, so
as to be readily remored when worn wout, and replaced by anoticer mold board and landside, in the manmer and for the purposo described.
my, 夏89.-Henry Meath, Now York. N. Y., assignor to Fisk, Clark, and Flang, same place.Cloth Drawers.-April 28, 1868.-The drawers are made of woren eloth. The waistband is depressed and pointed in front so as to fit the abdomen. The leg has a seam behind the knee and terminatos in an ankle band.

Claim.-1. The combination of a pointed waistband with a cloth leg, constructed with a seam at the rear of the knee, substantially as before set forth.
2. The combination of the drawers leg, construeted With a scam at the rear of the knce and a band at the lower end of the leg, substantially as before set forth.
3. The combination of the drawers leg, eonstruefed with a seam at the rear of the knen, With both a pointed waistband and an ankle band, substantially as before set forth.
g7,100.-SMitu S. Inendfinson, NorthCohocton, N. K.- Wagon Brake.-April 28 , 1868. - As the tongue oscillates rertically in lodeling back, the bent bar at its rear end is depressed and draws upon the clain which brings the rubbers against the vhecls. Io obtain an extra pressure an anxiliary block is brought down parallel with the usual rubber so as to decrease the interval betreen the rubber and the whecl.

Olaim.-1. The arrancement and eombination of the ragon tongue or pole I, bent metal bar II, elain $F$. roller $G$, and slide bar $E$, to connect with the Irake bar D , for operating in the manner herein deseribed.
$\underset{\sim}{\Omega}$ The brake blocks $c$ c and $a$ a, hingen together with slotted straps $e e$, as construeted and secured to the hinged brake bar D , the same being connected by lerers $d d$ with the slide $E$, by a plate hinge $f$, so as to adjust the pressure of the brakes to the relieels, substantially as and for the purposes set forth.
 -Capstenfor IIoisting Muclines.-ipril 28, 1868. The ordinary capstan has a lever frame and brakes licar the top of the vertical shaft. The hrakes ale operated from the foor abore for the parpose of discheaging the sweep to which the horse is attached, and to regulate the descent of the follower and bottom press.

Cleim.-1. The combination of lerer H, conneeting bar or leg $C$, lever frarue $L$, joke $K$, slide block $b$. Wone arm or connceting bir e, short arm $g$, and rod $f$, or their equivalents, whem arranged and cmplored jn the manner or substantially in the manner and for the purpose herein set forth.
2. The combination and arrancement of the lever frame $L$. or its equivalent, with the hrake blocks $d d^{\prime}$ and rim or cirele $s$, as or substantially as and for the purpose herein described, when located with respect to shaft $A$ and to cach other, substantially as deseribed.
 ship, Pa-Safety Pocket.- April 28,1868 . - The hiasp, eateh, spring, ant disengaging thumb pieceare constructed as asual. To the thumb piece is hinged a cateh piceo which shats down upon one jaw of the hasp aud prevents the depression of the thumb piece until the sail catch piece is lifted.

Claim. - The catch $E$, in combination with the thumb piece $D$, spring $C$, clasp $\Lambda \Lambda^{\prime}$, with the indentation (x therein, and hasp 13, substantially as set forth, for the purpose specified.
a\%, 19.3- ANTHONY Tske, Laneaster, Pa., assignor to himself and BeNJAMn Mismlen, same place- Mospital Bedstead. - April 28, 1888. - The hinged trap supports the picee rhiel fills the opening in the mattress abore the bed pan, and is swung downward before the pan is placed in position by slippine its supporting hoard on the rods bencath the bed. the rack bars admit rertical adjustment of the head and foot pieces respectively.

Olaim.- In combination with my swinging trop $L$, the sliding table $Q$, with its groores $q$, supported
on the eross braees I, with the stop $i$, together with the arrangement of the several luck bars $D K$, when held in pirots, and mode of making and connecting the several segments, all arranged aut operating in tho manner and for the purposo specitied and shown.
g\%, 194.-DAYid A. JAMES, Cincinnati, Ohio.Expressing Liquids from Solids.- A pril $28,1868$. The material is placed in the canvas bag which forms a lining to the perforated tube. The tube may be from thirty to fifty feet in length, and the weiglit of the eolnmin abore expresses the fluid from the lower portion. A ralpe allows a portion of the material to pass off below when the operation on the lower part of the column is complete.

Claim.-1. The method of expressing fluids from solids, by the pressure of the material to be acted upon, in a tube or trumk, substantially as deseribed.
$\therefore$. The perforated trink, in combination with the cloth or canvas lining, smbstantialdy as and for the purposes deseribed.
3. The combination of the perforated trunk with the discharge valve $C$, substantially as and for tho purposes deseribed.
gy, 195.-Tmomas JENKIN, Thetford Centic, assiguol to Barthetr Bubr. Fairlec, Vt.-Sauing Machinc-April 28, 1808.-The machine is alanted for performing a variety of work, haring circular saws and rotars eufters in eonancetion Trith frames and tables for the presentation of the wood, in slitting, cross cutting, planing, tenouing, wrooving, beading, and chamfering. Fences, ganges, and specnal adjustments are used and varich aceording to the adjustments.

CZaim.-The construction and arrangement of tho reciproeating table $P$, hinged tablo H , tables Q T V, siw arbor's $\overrightarrow{C D}$, and cutter heads $U$ W, all operating upon the same frame, in the manmer and for the purposes herein shown and deseribed.

7\%, $196 .-$ Isaac D. Jomison, Kennett Square, Pa.-Check Erace for Cerringes.-1pril $28,1868 .-$ The eheck oraces connect the upper parts of tho springs to the eoupling pole or perch. They permit fiectom of vertical motiou, but oppose horizontal do flection.

Claim. -The combination of the two braces B B, their attachment to the upper half of the springs or spring bars $E E$, the braces $A$ and $U$, and the flexible plate $B$, all constructed, arranged, and employed in the mamer aud for the purpose herein shown and described.
yy, 19\%.-TMOTIY Keerier and Creorge S. Ar゙viry, Danbury, Conn.-Fariable Eccentric.-April 28,1868 . - The rod is attaelied by a ring to the collux on the eccentric, and being held at its other end in it socket whieh is out of the plane of revolution of the eceentrie, receives a lateral reciprocation as the cecentric rotates.

Cleim.-Connectiug the rod C to the eecentric $A$, Whereby an oscillating motion is imparted to the rod C, varying from a line at right angles with the cecentric sliaft, and without rarging the throw of the cecentric, as herein showu and described.
\%\%, 148.-Gineon Kive, Eminence, Ky-Hog Scaliting Tunl.-April 28 , 1808. - The hog is laid npon a inack which is supported by eords attached to its four corners and drawn up by it windlass jonrmaled to standards at the ends of the frongh whieli is plaeed over a furnace.

Cltam.-1. The bevels R R, and the adjustable sheet iron plates $N \mathrm{~N}$, when applied to the tank $(x$, as and for the purpose deseribed.
2. The shect iron ML, with the angle D D, when confined to tho tank $G$, as and for the purpose set forth.
3. The crank T, eog wheels K, windlass H, and rack $E$, in combination with the shafts $F E$, when arranacd, constrneted, and attached to tho tank $G$, as and for the purpose specified.
4. Rope $\Lambda^{\prime}$, pullegs $j j$, pole $w$, and pole $v$, in combination witl shafts IF $F$, when constructod and operated substantially as and for the purpose described.
reg， 199 －Willian Koplin，New Castle，Pa．－ Spile MLachine．－April 28，1888．－Improvement on his patent，January 15，1867．The heated rod lests upon a earriage and is fed to the cutters by an arm on the main roek slaaft．The odge of the upper die forms one eutter and the lower eatter recedes as tho blank is severed and formed between the two lies； the header is then advaneed to eomplete the opera－ tion．

Claim．－1．The eutter $k$ ，moving in the are of a circle，in combination with the reecding custer $h$ ， substantially as and for the purpose set forth．

2．The combination and arrangement of the dies K $\mathrm{K}^{\prime}$ ，sliding cutter $h$ ，pivoted stock $s$ ，cariage $t$ ，arm $u$ ， spring $s^{\prime} v$ ，lever $m$ ，and shaft $m^{\prime}$ ，substantially as and for the purposes deseribed．
my，20才．－AUGUSTUs Lafever and Raxison K． Larawar，Battle Creek，Mieh．－Equcilizer．－April 28，1868．－The doubletree is attached by a sprines and case to the hook on tho tongue so as to aroid jerks and have an indieatiou of the power employed． The singletree draws upon a bolt which acts in con－ juwetion with a spring behind the doubletree near its end．

Claim．－The combination of a dranght indieator， on the draught pole，with an equalizer $D$ ，on the doubletree $F$ ，sulustantially as deseribed．
g．g． 9 R．－W．I．Ludlow，Cleveland，Ohio．－ Fruit Bag．－April 28 ，1868．－The bas is hooked to a limb while being filled，and may be lowered by the picker and the hook disengaged from the bail，so as to empty the bag upon the ground and draw it again into the tree without the descont of the per－ son piekiner the fruit．

Claim．－The bag or vessel $A$ ，when provided with a bail $B$ ，and when eonnceted at its under side with a rope or cord，C，to which a double hook，D，or its equivalent， E ，is attaehed，all made aud operating substantially an hereiu shown and deseribed．
 Dens，Green Point，N．Y．－Pan for Concentrating Sulphurric Acid．－A pril 28，1868．－Each pan over－ flows into the one next below，and by neans of the partial partition and spout the liquid is taken from the bottom of the pan where it is in the most con－ ceatrated eondition．

Claim．－Providing a pan for eonecntrating sml－ phuric acid，with a partition or pariitions，$a$ ，reach－ ing nearly to the bottom of the pan，substantially as and for the purpose herein shown and described．
\％y，293．－SETH March，Norfolk，Va．－Plow Irame．－A pril 28，1868．－The trapezoidal iron frame is bolted to the beam and forms a means of attach－ ment for the share and mold board．Openings in the iron frame admit the bolts for attaching the parts together，and the elongation of the slot gives means of adjustment．

Claim．－The frame $\Delta$ ，provided with the elonga－ ted slots $a^{\prime}$ ，for the adjustment of tio mold board， and the elongated slot $i^{\prime}$ ，for the adjustment of the plow beam，substantially as described．
go， 204 －Willian Hartley Mrleer，Philadel－ phia，Pa．－Packing for Engines，Pumps，©c．－April 28,1868 ．－The ealcimine is mingled with the fibrous material used in packing．

OLaim．－1．The use of ealcimine，ehina elay，or White clay，or their equivalents，as a substitute for dry－powdered soapstone，and other dry－powdered substances，in their combination with fibrous or other materials in the manufacture of paeking．
2．The use of ealcimine，china elay，white clay，or their equiralents，for the purpose above described， in the manner above described，or any other praeti－ cal application thercof，whereby said substanees be－ come ingredients of packing for the stuffing boses of engines，pumps，and for the joints of other ina－ chinery．
\％\％，205．－T．I．Norton，Tremont，Ohio，assignor to himself and William H．Cloun，same plaec．－ Drying Apparatus．－April 28，1868．－The steam is conveyed around the building by pipes near the floor and thence into vertical branch pipes，over
whieh are placed perforated artieles，sueh as carriago hubs．

Claim．－1．An apparatus，substantially as de－ scribed，for discharping steam into the central open－ ings of wagon hub，and other similar perforated ar－ ticles of wood，for drying the same，as and for the purpose described．
2．The combiuation of the steam eoil $C$ and verti－ eal ejecting pipes $d$ ，substantially as and for the pur－ pose leseribed．

3．The combination，with a drying ehamber，A B of the staam pipes $C d$ ，substantially as and for the purpose described．

多军，208．－S．E．OvIatT，Riehfield，Olio．－Grains Separator．－A pril 28，1808．－Instead of a continnons， slatted straw carrier，the conveyor is made in nec－ tions．The first receives the matter from the thresh－ ing eylinder and delivers to the next above，and so on．Fingers on the bars are so arranged as to take a tangential position in passing over the frums and thus interlap with and clear those of the section next below．

Claim．－1．A grain－scparating eonvejor con－ structed in scetional carriers B，provided with bars D and fingers $a$ ，so arranged that the axis of the lower end of one earrier is below the axis of the up－ per end of the next lower carrier，substantially as and for the purpose set forth．
2．A conveyor or earrier construeted in sections， with each section prorided with bars D and finser＇s， so arranged that the fingers of one seetional carrier will interlap with the fingers in the adjoining car－ rier，as and for the purpose set forth．
3．The earrice sections so arranged in relation to each other，when provided with bars D and fingers a，that the plane or upper end of one carrier shall be above the lower end of the next suceeeding car－ rier，substantially as and for the purpose set forth．

Fy，207．－GEORGE T．Palmer，Brooklyn，N．Y． －Mosquito Net Frame．－April 28，1868；antedated April 14，1868．－The eanopy is suspended orer the center of tho bed and has radial slats which are turned around toward the head of the bed to bring： the net out of the way．
Ctaim．－1．A pradially folding mosquito net canopy frame composed of folding arms e e e，disk or sup－ port a，and supporting arm C，made substantialiy as and for the purpose slown and described．
2．Supporting a radially folding canopy frame from under its center by means of the standard $B$ and supporting arm C，when the arm C extends over tho bed and the folding frame is piroted thereon，sub－ stantially as shown．
3．The rods $f f$ suspended from the folding arms of a mosquito net frame，for the purpose of folling and untolding the frame，substantially as shown．
4．The pins $a^{\prime \prime} a^{\prime \prime}$ ，in combination with a radially folding mosquito net frame，whether said pins are aftived to the arms of the frame or fitted in sockets at the ends of the arms，for the purpose described．
5．Supporting the radially folding arms of a mos－ quito net canopy frame by supporting braces piroted to the upright $c$ ，substautialiy as shown．

Hy，30S．－TOHN T．PARSON，Washington，D．C．－ Rocudway Favement．－April 28，1865；antedated April 18，1868．－The brick bloeks are octagonal prisms and are set on end；the square interrals oc－ curring on four of their sides are oceupied by wooden keys．The block is made of refraetory elay requir－ inge great heat，and is a partially vitrified silicate of alumina，tempered without mueh lime or other flux．
Claim．－1．A paving block，haring an octagonal－ slaped end，composed of elay treated as deseribed， and for the purpose set forth．
2．A paring bloek of octagonal or other form，de－ signed ind arranged so as，when laid，to leare small holes at regularly recurring intervals，for the pur－ pose set forth．
3．The herein－leseribed baked or burned elay par－ ing block，as a new article of manufacture．
4．The combination，to form a roalway parement， of paving blocks，having an oetagonal or other form， designed and arranged so as，when laid，to leare small holes at regularly recmring intervals，and wooden keys，substantially as deseribed．

7\%, 909 -GEORGE W. Parsons, Harrisburg, Pa. —Stiarw Cutter.-A pril 28, 1868. -The feed rollers are operated by a spur wheel on the crank shaft Which engrages an inside sear wheel upon the lower feed roller. Motion is communieated from the lower to the upper teed roller by clisks whieh have side tecth having an ovate acuminate seetion which al lows the upper roller id considerable vertical play. The knires on the whecls are counterbalanced br bloeks whieh may he remoyed and knives substituted to ent the chaff to half the lengeth. The motion is communicated to the fly whed by a frietion deviee or br wooden pins, so that in case an obstruction passes under a knife the fly wheel may rotato sinely.

Claim.-1. The pinion 0 , on the end of the shatt $c$ of the driving gear wheel, in combination with the movable and adjustable brace $N$.
2. The intemal gear wheel F , in combination with the drivingegear wheel K, whose shatt is supported by il movable and adjustable brace, as set forth.
3. The morable aud indjustable brace N, supporting the laree genr wheel $\bar{k}$, in combination with the $\operatorname{cog}$ pinion I on the linife sliaft $D$.
4. The pinion $P$. fitting on and over the pinion $O$, in combination with the shaft $c$ and drising gear wheel K.
5. The combination, in a stran eutter, of ia feed roller whose shatt moves up and down, with the driving gear wheel K and pinion O, when said wheel and piuion are supported by an outside brace.
6. The employment of detachable counterbalnuecs F F on tho arms of the knife shaft D, when combined with a single adjustable rotary knife.
7. Operating the feed roller $\mathrm{C}^{\prime}$ of a strat entter by means of the disks $I$, when construeted with eog. teeth of $f$, discomnected radially from the hubs thereof, in the inamer and for the purpose as described.
8. The screw nut 'I, clastic washer g and fixed driving washer S , with radial ribs, in combination with the rudial libs on the hub of the fly wheel, substantially as (lescribed.
9. The construetion of the hub and fixed driving washer', with holes $h$ for the inser'tion of wooden pins, substantially as described.
10. The consiruction of the sluaft, witl! a hole. $g^{\prime}$, for the insertion of a wooden pin, with the slot aeross the hub of the fly wheel, substantially as deseribed.
g\%,210.-Join Player, Norton, England. Banuftecture of Balls, Blooms, and Slabs of Jialleable Iron. - Ipril 28,1868 . - When the iron is bronght to a malleable condition, instead of balling by hand it is remored to a mold, and subjected to heary pressure.

Claim.-Thu forming a ball, bloom, or slab of iron or steel, maule maileable by the operation of puddling, by moving the metal ont of the furnace where it has been puddled into a mold or form, in which it is subjeetel to heary pressure, substantially as described.
**.211.-E. T. Prindle, Anrora, Ill.-Cuting Tool for Maning and Milling Mactines.-April 28 , 1868. - The tool is pivoted in a slot of the holder and forced to its cutting position by a spring. It is set by tro sereus.

Claim. - The eutting tool, composed of the shank A, entter B, with the shoulder $F$ and set serews D and $C$, when construeted in the manner and for the purpese substantially as herein specified.
ga, 219.-TVY ATwOOD PutNam, Mexico, Me.Chute for River Navigution.-April 28, 1868; antedated April 18, 1868. A chnte or canal traverses the shoal place, and the passage of the boat either way is assisted by roller's set in the bed of the stream and jomrnaled in the sidetimbers of the chate, whieh is of only sufficient width for the passage of one boat, so as to ceonomize the Water and obtain a decper stream at that point. A dan is built across the river excepting the width ot the ehute.

Claim.-The construction of a chate tor the passage of boats over the shallow or rocky parts or rapids of a river, in the manner substantially as specificd.
 Fonds, Switzerland, assiguor to HENRy Hilisif adal

SEligMan Oppenimemer.-Self-Winding Wateh.April 28, 1868. -The cover is conneeted to a lever rhich is operated by opening and closing the said cover, and aets throngh as gimbal joint upon a leren to which a curved liatchet bar is piroted. 'I'he curved ratchet bar engrges a ratehet wheel which commanicates with the works so as to partilly wind the same when the corer is openca to onderero the time.

Claim.-1. The racte or ratchet E, operated ly the lerer D, imd connected to the eorer $A^{\prime}$, and to the Works of the watch, substantially as and for the purposes herein set forth.
a. In combination with means substantially as herein specitied for winding the watel by the motion of the linge, the independent button II, shat't $h$, and crown wheel of, arrangod and comnceted reith each other, and with the lands, and with means for liolding the button within the case when not required, substantially as and for the purposes herein set forth.
 Mydraulic Engine.-April 28, 1868.-The Fater trom an elerated leservoir bears upon the pistons of the pumi and engine and operates the pump). The slide ralres of the engine and pump are actuated by a lever on the common piston rod, which is tilted by striling the stutling box.

Claim.-The engine $A$ and pump $G$, connected to the supply pipe N, by the hanches o and $p$, so isis to operate in the manner and for the purpose substantially as set fortli.
 T'umbler IIolder.- 1 pill 28 , 1868. -Tho liolder hats on ring at the lower end to receive the tumbler, and of projection at the unper end whieh extends over tho rim of the glass and has a button engagiug the same.

Claim.-A tumbler holder, haring a handle $b$, ring $c$ c, projection $d$, aud button $c$, in substantially the manner deseribed and shown, and for the purposes set forth.
gy, 216. -Jane Rilery, Cincinnati, Ohio, administratrix of the estate of Jomn D. Inilizy, cleceased, assignor to IEviy G. Dayton, Maysville, KyDistilling Apparutus. - April $28,18(8 .-T h e$ ripor's pass up into the (lonbler by rertical bipes and defleeting tabos, and then pass ont at the top of tho doubler into a second vessel. From the latter the rapor rises by pipes which pass through the doublo hottom and lower water jacket of the condensel and thence upward, being again deflected downward by eaps and open-bottoned tnbes which learl it into tho condenser, which as well as the deflecting pipe is cooled by the smrounding Tater. I pain abovo supplies water to tho lower jacket and also to tho water space around the upper tubes.

Claim.-1. A condensing apparatus for stills, consisting of tho pan $C$ and ressel $D$, and receiving the rapors though perforated upright pipes f that aro covered by the cooling caps $k$, substantially as herein shown and deseribed, the pipes $f$ passing through the pan C , in the lower part of which cooling liguid is contained, substantially as herein shown and described.
2. The above, in combination with a doublry, A, made substuntially as herein shown and described.
3. The water-listributer 1 , consisting of a pan, from which a series of pipes $l l$ projouts downitard, to contuet cooling liquid to the lower part of tho condenser, substantially as herein shown and rloscribed.
4. The arrangement and combination with each other of the doubler $A$, vessel $B$, pan $C$, pipes $f$, condenser D haring caps $k$, and of tho distributer ID with its pipes $l$, all made and operating sabstantially as herein shown and deseribed.
ryg. $917 .-C l a h k$ Robinson, Fox Lalio. WinIfiter Box.-April 98, 1868.-The slottal standirids are pivoted to blocks made to slite on longitudi!na rods and are simmltaneously adjusted to torm for tho sam at iny ancre.
Claim.-1. The combination of standards $\mathbb{C}$, eross bars $B$, and rorl $L$, constructed to operate substan. tially as deseribed.
2. Tie combination of rods N, support S, rod L,
bloeks D, and rods K, construeted to operate substantially as set forth.
gig, 218.-Tueodore F. Rockwell, Yorkville, N. Y.-Blind Slat Fastening.-April 28, 1868; antedated April 15, 1868.-The perforated plate which is piveted to the lower end of the slat rod slides in the soeket, and is set by a pin traversing both plate and soeket picce.
Claim. -The pendent plate C, attaehed to the slat rod $B$, and pertorated with holes $b$, and an oblong slot $c$, in combination with the bent wire or rod F , and the soeket or guide D, all construeted, arranged, and applied to the window blind, to operate substantially in the manuer as and for the purpose set forth.
gay,219.-Samuel C. Rundlett, Portland, Mc. Brace for Bits.-April 28, 1868.-A slot through the socket admits the transversely sliding latch pieee which has an angular, interior edge to engage the notch in the square shank of the tool. A headed pin and spring actuate the catch when not depressed by the thumb to release the tool.

Claim.-The arrangement, in the horizontal slot $b$, of the slite $c$, haring the shoulder $h$, slot $d$, edge $c$, rod $i$, spiral $k$, and adjusting thamb pieee $j$, as and for the purposes set forth.
g\%, B2D.-GEORGE W. Sawin, Nashua, N. M.Attaching Wheels to Axles.-April 28, 1868.-Spring latehes at the butt end of the hub take over a collar upon the axle.

Claim.-The combination of the latehes E $\mathrm{E}^{\prime}$ with the lub A and ring H, made substantially as described and for the purpose set forth.
g\%, 2id. - Peter Shellenback and John AugsPURGER, Middletown, Ohio, assignors to Peter Shelemback and James Hudson.-Rotary Steam Engine.-April 28, 1868.-The central eylindrical hub has four radially sliding pistons, which pack against the inside of the shell. The abutment is formed by one or the other of the piroted valres, Which are brought into action by slotted arms moved by a lever on the outside. Reversing the engine is effected by bringing another valve into action.

Claim.-1. The valves $l l$, constructed, arrianged, and applied in combination with the nut A and its sliding pistons $j$, in the manner and for the purpose substantially as described.
2. The combination, in a rotary steam engine, of the slotted bloek I and lug's $m$, curved slotted arms $n n$, lerers $r s$, and their eonnecting mechanism, for reversing the action of the engine, in the manner and for the purpose specified.
3. The arrangement of the induetion orifice D in relation to the exhaust pipe $E$, and the valves $l l$, and pistons $j$, in the manner and for the purpose described.
gy, 22\%. - Willian M. Stypson, Davisburg, Mich.-Bee House and Hive.-April 28, 1868.-The honse contuias several brood and honey boxes, with provision for connection. Hinged floors give access below for examination. The front door gives access for remoral. Ganze covers to the air holes admit rentilation and exclude moths.

Claim. - The construction of a bee honse and hives combined, when constructed, arranged, and operating substantially as and for the purposes hereinbefore described.
g\%, $2: 28 .-L . J$. Surth, Hamilton, Ohio, and D. S. Knigm, Now York, N. Y. - Car Brake and Starter. -April 28, 1868.-When the brake is applied the spur wheel on the axle engages one sile of the forked rack and drats out the spring, whose force is subsequently applied in starting the ear by means of the other side of the rack.

Claim.-1. The slotted and notehed or recess plate $g$, when arranged substantially as herein slown and described, for the purpose of throwing the pinion a in or out of gear, and also for raising and lowering the rack frame H, substantially as and for the purpose herein shown and described.
2 The plate $g$, when connected with or part of the sliding bar $G$, in combination witi the pawl $d$, ear-
rying a frietion roller $j$, and with the elutel $b$ and spring $i$, all made and operating substantially as herein shown and deseribed.
3. The slotted sliding plate $g$, when arranged as described, in combination with the slide $r$, fixed frame E, and rack frame $H$, all made and operating substantially as herein shown and described.
4. The sliding rack frane $H$, in combination with the pinion $a$, and with the notehed bar $l$ and spring pawl $J$, all made and operating substantially as herein showe and described.
5. The device for throiring the spring patwl $\mathcal{J}$ off the bar $l$, consisting of the eam $m$, slotted plate $p$, and sliding bar K, having two studs $t$ and $u$, all made and operating substantially as and for the purpos? hercin shown and described.
6. The bar K, earrying the studs $t$ and $u$, when hinged to the end of the bar $g$, and when conneeted with the adjustable swinging bar $r$, all made and operating substantially as herein shown and described.
7. The rack frame H, when provided with the pin or stud $w$, in combination with the sliding bar $M$ and crank $e$, all made substantially as deseribed, and operating so as to automatically throw the clutch off the pinion $a$, when the rack frame is at cither extremity of position.
8. The rack frame $H$, when provided with a notched bar $l$, and when fitted around the pinion a and axle $B$, in combination with the springs $I$, or their equivalents, all made and operating substantially as herein shown and deseribed.
9. A combined railrond-car brake and starting apparatus, made and operating substantially ns described, and comected with vertical shafts F F at the ends of the ear, so as to be under complete control of the brakeman, as set forth.

G7, 盟24.-Peter J. Simth, Philadelphia, Pa.Brick Machine.-April 28, 1868.-Clay is pressed by the plunger from the hopper into the mold, which is then drawn back. During this motion the carrics strikes the inclined planc, raising the piston and compressing the brick bereath the top plate. A further motion of the carrier elerates the piston and discharges the brick above. The outer mold is then brought beneath the hopper. The brieks are swept from the plates by clearers.

Claim.-1. The reciprocating double-acting skeleton clearer $J$, arranged and operating substantially as set forth.
2. The combination, substantially as set forth, of a rceiprocating mold, a pistou, and an oscillating carrier, with a top plate $A^{1}$ and an inclined plaue $\alpha^{\prime}$, whereby the bricks are compressed during the diseharge movement of the mold, as set forth.
3. The combination, substantially as set forth, of an open-ended box, a reciprocating mold frame, pistons $H$, a hopper E , and a plunger D , with a reciprocating clearer, which sweeps off the bricks discharged by the molds.
g\%, $2 \mathfrak{2} 5$. Whlian H. Smith and Rollin S . EDDr, La Crosse, Wis., assignors to themselves, SETH Dean, and Mexiy Merrile- - Ifachine for Cutting Key Seats.-A pril 28, 1868. The tool is a saw which cuts on the dorm stroke, and is reciproeated by a rack and intermittingly-moring pinion. The lenyth of stroke is regulated by adjustable steps on the bar which operates the clutch to change the motion. The guard turns the elhips out of the machine.
Claim.-1. In combination with the slotted pin $d$, the eutting tool C , having its front edge provided with saw teeth, and made tapering longitudinally for the purpose of feeding forward in deseending and cntting a key seat, substantially as deseribed.
2. In combination with the reciprocating rack bar B, the adjustable collars $g^{\prime} g^{\prime \prime}$, or their equiralents, arranged with the shifting mechanism to operate in the machine, as described, for shortening or lengthening the morement of the entting tool C , as set forth.
3. The guard $U$ and spring $U^{\prime}$, in combination with the cutting tool C , when arranged as herein doscribed, and for the purpose set forth.
4. The combination of the pulley K and pinion $L$ on the same sleere, the pinion $M$, wheel $G$. and pinion I on the same sleere wheel $O$ and pinion $N$, wheel

I aud pinion E , attached to same shaft $h$, rack B and cluteh $P$, all constructed and arranged as deseribed, for the purpose of giving a reciproeating motion to the eutting tool C , to ent key seats, as set forth.

7\%,226.-Daniel، E. Somes, Washington, D. C. - Apparatus for Consuming Smoke and Gas, and Increasing Draught in Boiler Furnaces.- $\Lambda_{\text {pril }}^{\sim} 8$, 1868. - The ealorie current arising from a furnace is aeted on by a blast eurrent, whieh returns it to the furnace for more thorongh eombustion.

Claim.-1. The drawing or foreing, or drawing and foroing, the smoke, gases, rapors, \&e., from the fire chamber of a boiler or furnace, or other heating apparatus, and into the same fire ehamber again by a curreut or blast of air, steam, or vapor, or any or all of them, for the purpose and in the mamer set fortll.
2. The drawing or foreing, or drawing and foreing. the smoke and other produets of combustion from the fire ehamber of a stoam boiler, furnace, or other lieating apparatus, br means of a current or blast of air trarer*ing one or more different ehannels from such produets of combustion, for a given distanee, and then made to impinge on said products so as to mingle with and drive or draw them through a common flue into the originating fire chamber, substantially as and for the purpose set forth.
3. The drawing or foreing, or drawing and foreing the produets of eombustion from the fire ehanber or flue of a puddding or other furnace, or steam boiler or other heating apparatus, througl the flues of another steam boiler or other heating apparatus, by means of ? enrrent or blast of air, or steam or vapor, substantially as set forth.
4. The combination of the shell A, aud the flues and flue spaces of a steam boiler, with the chamber D. and its flue openings $a a^{\prime}$, and an air pump, fan blower, or equivalent device, substantially as and for the purpose set forth.
5 . The ehamber $D$, when divided by a partition plate $d d^{\prime}$, and combined with a steam boiler or other fieating apparatis, substautially as and for the purpose set forth.
6. The eonnection and arrangement of the perforated pipes $F$ and $I$ with the shell $A$ and flue spaces of a steam boiler, or with the ehamber D, or with both, substantinlly as and for the purpose set forth.
7. The eombination of the air chambers $\mathrm{O}^{\prime}$, and pipes P Q, or their equivalents, whether on the outside of the shell of a boiler or other heating apparatus, or extending thromgh the interior of the same, substantially in the manmer and for the purpose set forth.
8. The combination of the pipes P Q, or their equivalents, with their interior steam pipes, Fig. Il, for the purpose set forth.
9. The combination of the air chambers $\mathrm{O}^{\prime} \mathrm{O}^{\prime}$, and air pipes $P$, or their equiralents, with the flues of a steam boiler or other heating apparatus, substan. tially as and for the purpose herein set forth, and shown in Fig. 13.
10. Heating air by foreing or draming it through pipes or channels, along or around the shell, or through the interior of a steam boiler, substantially as set forth.
11. Oxygenizing gas and smoke, as and for the pmpose set forth.
12. The pipes $P$ and $Q$, substantially in tho manner and for the purpose set forth.
13. The smoke aud air tubes, substantially as shown in Fig. 12, and for the purpose set forth.
14. Generating steam, as set forth, and for the purposes described.
gy, $28 \%$-JOSEPII WARREN, Lodi, Ohio.-Corn Sheller.-April 28, 1868.-The cobs have a cireumseribed passage to give no opportunity to jamb one against another.

Claim.-The ease A, haviug one of its sides prorided with a cireular depression around the axis of the disk, in combination with the segmental discharging tube $J$, in the manner and for the purpose specified.
g7,92stiong. A. Watkins, Proctorsville, Vt. Chair S'eat.-April 28, 1868 ; antedated April 6, 1868. - The slats are lapped transrersely in the rabbet of
the frame, and confined by tho hoop which fits into the said rabbet.

Claim.- $A$ chair or other seat or bottom, construeted substantially as deseribed, of a web of splints D, sceured at their ends br means of a rabbet $a$, made in and around the face of the frame $A$, in combinetion with the strips $C$, leld to their places by a strengthening band or hoop E, essentially as specified.
g7,289.-Unban A. Woodbunt, Morrisville, Vt. -Looking Glass.-April 28, 1868. -One glass is hinged to the support, and the other is nnon the end of a folding arm hinged to the first. The second glass has oscillatory adjustment, by means of a hingo and ratehet eateh.

Claim.--The slaft or pin G, with its arm E and arm I, eonnected to glass B and to bar D in such a manner that the glass ean be revolved or adjusted aidd lield at any desirable angle to the bar i) and glass A, as and for the purpose herein set forth.
77.230.-WAlTER Bentley Woodbuliy, London, Great Britain.- IIode of Producing Designs for I'aper.-A pril 28, 1868.-Improrement on lis Ameriean patent, Feloruary 20 , 1866. A relief is first obtained in gelatine, whieh is mounted or laid on a plate of hard metal, and the paper to be impressed is passed through a press in contact therewitl. The portion of the paper pressed against the relief parts of tho design is rendered transparent. On looking at the paper by reflected light, a positive will be seen; by looking by transmitter light, a negatire will be scen. A metallie intaglio may be obtained by the eleetrotype process.

Claim.-The peeulinr method, hereinbefore deseribed, of prodneing transparent designs or water marks upon paper from relicfs or intaglios obtained by the aid of photography, and also of producing, by the same means, (with the interposition of paper cliarged with a greasy substance, ) of designs, either directly upon stome, or whieh may be transferred ont to stoic, for printing by the ordinary lithographie process.
77.231.-Walter Bentley Woonbury, London, Great Britain.-Production of Ornamental Surfaces for Jevelry, de.- 4 pril 28, 1808.-Improvement on his American patent, Felumery 20, 1866.- A metallic mold is produced by the means shown in the said patent, but produced from a transparent positire iustead of a negative, and a cast is taken therefrom in white material, such as porcelain, clay, or plaster of Paris. A dark semi-transparent material is then foreed into the white east and the surface ground off level.
Claim.-The produetion of surfaces to be used for jewelry and other ormamental purposes by the aid of photography, substantially is hereinbefore set forth and described.
g\%, 23: - Walter Bentley Woodmuny, London, Great Britairs. - Mode of Producing Surfaces for Printing from Photographs:- April 28, 1868.-Inprovement on his patent, February 20, 1866.-The gelatine relief is obtained aecording to the aforesaid patent, the solution of gelatine being mixed with coloring matter so that the pietorial effeet will be risible When viewed by transmitted light. Before removing the relief from the glass an additional shado or pietorial effect is added by painting upon the glass (while warm) with a solution of gelatine and coloring matter. Clouds, shadows, de., are introdueed in this mauncr. A metallie reverse or intaglio is taken from the relief which is printed from, (aceording to former patent, ) in semi-transparent ink.

Claim.-l. The method hereinbefore deseribed of improving or adding pietorial effects to the gelatine reliefs by painting thereon by haid with a colored solution of gelatine.
2. Produeing such gelatine reliefs entirely by hand, as hereinbefore described.
3. Produeing the metallie intaglio from the gelatine reliefs by pressure, substantially as hereinbefore described.

7\%, 23:3.- Alva Wonnen, Ypsilanti, Mich. Whip IIolder.-April 28, 1868. -The two parts of the
socket are hinged together at mid－height so that the linol at the end of the handle will expand the lower part and draw in the upper part upon the whip stock．

Claim．－Making the clasping extension or ex－ tensions a part of one of the javis of the whip socket， and substantially in the manaer and for the purpose herein described．

7然， 93 香－S．V．R．York，Antwerp，N．Y．－Sur． cingle．－A pril 28,1868 ．－The surengle has a number of rings for passage of rumning straps passing to the limbs and head．

Clam．－The combination of the scries of rings， numbered 1 to 12．inclusire，with the sureingle A and $B$ ，long line or rein $D$ ，pastern straps $C$ and $F$ ， and foot strap E ，arranged and applied in the man－ ner and for the purposes shown and described．
＇g7，235．－S．V．R．York，Antwerp，N．I．－Bit－ ting Attachment．－A pril 28，1868．－A strap passing around the neek lias a ring in each end and has two elastic straps fastened to the sides of the neek strap and ending in cords which pass throngh a ring be－ neath the throat and then through the mouth in contrary directions．The rope then passes through the rings in the ends of the strap and through terret rings in the sureingle．

Claim．－The conbination，with the neek strap A， prorided with the ring B ，of the elastic webbing $b b$ ， cords E E ，and bearing rings $\mathrm{C}^{\prime}$ ，arranged，applied， and operating substantially as and for the purposes set forth．
g．g． $236 .-J O S E P H$ J．A DGATE，Liberty，N．X．－ Animal Power．－$\Lambda$ prili28，1868．－The platform wheel is upon a vertical shaft whose bearings may be in－ clined so as to incline the wheel more or less．One side of this wheel rests upon a wheel on a horizoutal shaft，which latter wheel supports the weight of the auimal walking on the incliued platform wheel．Be－ neath this wheol is a piroted brake to cither end of whieh a wooden lever may be applied．

C＇iaim．－1．A machine for utilizing and economiz－ ing animal power，composed of a platform wheel $L$ ， rotating in bearings in a vibrating arm $J$ ，adiustable at any required anglo by the supporting attachment I，held upon the eireular projection $K$ ，substantially as shown and describerl．
2．The rotating supporting attachment I，furnished with notehes or teeth $a^{3}$ ，in combination with the circular projection K，and the notehes $a^{2}$ on tho end picee A，substantially as shown and described．

3．The device for tightening the supporting at－ taehment I upon the circular projection K ，by means of the bolt $c^{2}$ ，and the opposite inclined finees on the attachment I，substantially as shown and deseribed．

4．The vibrating arm J，formed with the projee－ tion $e$ ，in combination trith the movable bearing $e^{1}$ and the spindle M，substantially as shown and de－ scribed，and for the purposes set forth．

5．The slots $e$ and $a^{2}$ ，in combination with the bolt $e^{2}$ ，substantially as shown and described，and for the purposes set forth．

6．The manner of joining the end pieces $A$ and $A^{\prime}$ with the perch B by mortises or sluts，and wedge－ shaped and doretail tenons，substantially as shown and described，and for the purposes set forth．

7．The double aeting ifietion brake $G$ ，in combina－ tion with the wheel E，substmtially as shown and described，and for the purposes set forth．

8．The crank pin 0 ，arranged to be adjusted in a radial slot in a wheel $F$ ，and secured in plaee hy means of nut and washers，operating substantially as and for the purpose set forth．

㫨，23\％．－GEORGE M．Alterton，New York，N． Y．－Apparaties for Raising Sumken Vessels．－April 28,1868 ．－Flexible bags are connceted to the sides of the ressel by casings whose margins are piereed with eres to receive the spikes whieh are driven into the planking of the ship．They are inflated by air pipes from above to float the ressel；excess of air escapes below．

Claim．－1．A scries of casings．provided with eyes around their edges，to be secured to the ressel by gpikes，in combination with separate air bags intro－ fuced within said casings，and eapable of inflation， as and for the purposes specified．

2．An escape air tube，extending below the air bag， substantially as and for the purposes set forth．
3．A series of air bags，connceter to the supply pipe $d$ by the tubes $c$ ，in comlination with coeks $c^{\prime}$ $d^{\prime}$ ，as and for the purposes set forth．
gry，28S．－Isaiau B．Artiule，Sidonsburg，Pa．－ Combined Corn Plow．Planter，and Culivivator－ A pril 28，1868．The draw bars are pivoted to the frame at their fore ends and the rear plow beans are commected to a roek shaft，and by turning the rock shat＇t these plows and the guard plates ittached to their standards may be raised from the gromed；the fore plow is also vertieally adjustable．The sced slide has reciproeation by a bell crank eonnected by a rod to a short crank shaft receiring motion by gear eouncetion with a ground wheel．

Claim．－The combination and anpancement of the plow F ，plows M M，R R，beams J，K K，roller I， lever $I^{\prime}$ ，guards $G G$ ，seed box $C$ ，slide $c$ ，lever $L_{\text {：}}$ ： shaft $S$ ，and wheel $B$ ，when the said parts are con－ structed，combined，and arranged so as to operate substantially as and for the purpose specified．

7．7．239．－SOLOMON S．Avis，Penn＇s Grove，N．J． －Lard Press．－April 28，1868．－The can lias a side chamber with which it communicates by a perforated partition；at the bottom of the side chamber is a discharge spout．Pressure is brought upon the ma－ terial by a follorrer，serew，and cross head，connected by links and hooks to the bottom board．
Claim．－The screw D，eross bar E，links $h h^{\prime}$ ，fol－ lower bloek $G$ ，evlinder $I$ ，chamber $m$ ，spout $l$ ，and eye plates $A$ ，all constructed，combined，and ar－ ranged substantially as shown and deseribed and for the gencral purpose set forth．
 －Quartz Crusher．－April 28，1868．－The rotating eam straightens the toggles and brings the movable against the dixed jaws crushing the quartz ；the rear end of the toggle has a bearing agaiust slides， baeked by elastic material．The crushing cylinder is held to its shaft by means explained in the seeond elaim．

Claim．－1．The toggles C，provided with or con－ neeted to the shoos $\mathrm{C}^{\prime}$ ，in combination with the slides E，and rubber or other springs F ，all arranged to operate in the manner substantially as and for the purpose set forth．
2．The scemring of the periphery or shell $u$ of the roller $J^{\prime}$ to its shaft $g$ ，by means of the India－rubber heads $r r$ ，expanded by the fixed collars $q$ ，loose col－ lars $o$ ，and the nuts $t$ ，or their equiralents，all ar－ ranged substantially as and for the purpose horein set forth．
3．The cecentries $d d$ ，applied or axranged in re－ lation with the slides E of the toggles，substantially as and for the purpose speeified．
\％g， $241 .-J U A N S . L$ Babbs．New Albany，Ind．， assignor to himself and J．B．Ford，same place．－ Machine for making Pegs．－April 28 ，1868．－The bloek is clamped to a table which admits of turning 90 degrees to allow of furrowing and splitting the block at right angles．The knives are in a head re－ ciproeated by conncetion to a crank pin on the mo－ tive wheel，and are arranged upon eaeh side of a conrex－edged，splitting tool so as to operate in both directions．

Claim．－1．The splitting knife $q$ ，and entting bits $p p$ on the muder sidie of the morable hend K in the sliding frame $F$ ，when arranged to operate substan－ tially as speeified．
2．The arrangement of the table $M$ upon the ways I，serew shaft $w$ ，ratehet wheel $I$ ．double parrls $v v$ ， levers $I$ and $N$ N，connceting strips $P T$ ，and spring $T$ ，in combination with the movable frame $F$ ，the several parts being construeted to operate substan－ tially as set forth．
g\％，æ4R．—TEROIme Bacon，Medina，Wis．－Ploro Land Side．－April ¿8，1868．－The land side has an adjustable shoe whieh is secured by rabbet．lugs and bolts，and is removable for repair or renewal as it wears．
Claim．－1．The ears C，attaehed to the shoe B，by which the shoe is secured to the land side，thus re－
liering the rear of the land side from all weight and wear，substantially as deseribed．

2．The slots $d$ ，in the car＇s C，by which the shoe is made adjustable，substantially as and for the purpose set forth．

3．The adjustable shoe $B$ ，applied to a land side，$A$ ， in the manuer deseribed，and provided with ears C， haring slots $d$ ，adantal to fit orer bolts $e$ ，fixed in the land side $A$ ，substantially as and for the purpose herein set forth．
y\％，243．－Janes II．BakER，Saratoma Springs， ラン．Y．－Floor Clamp．－$\Lambda_{\text {pril }}$ 28，18（i8．－The sliackic slips upon the joist or seant ling and is secured thereto by a pin in the rear and a point beneath the patchet bar on the face．A pawl on the lever cngares the ratchet bar，while the end of the extensible arm is driren against the edge of the board to be clamped．

Clam．－The arrangement of the pivoted arm F， and slotted extension arm $\mathrm{F}^{\mathbf{\prime}}$ ，both having ratelnet teeth，and secured togethor by a set serem，for fore－ ing one board to another，or two or more boards of different widths，construeted to operate substantially as herein set forth．

77．2定．—Charles L．Barritt，Richland，Mich． －Marvester Rake．－April 28，1868．－The cecentric pin on the driving pulley traverses a slot in the latie bar and causes its oseillation．At the end of the of－ fective movement the lower portion of the spring eatel rod impinges against the face of the look so as to spring back the rod，which，as it mbs past， spuings behind tho retaining lip in such manner that on the return movement the shaft is turned aud the rake elerated．

Claim．－1．The arrangement and combination of the driring pulley $\mathrm{P}^{\prime}$ ，or equiralent gear mheel，stud pin $p$ ，and slotted radius bar E，with the rocking slaft F，and connected rake F ，substautially as and fur the purpose herein described．

2．The stationary arm hook II，in eombination with the spring eatcl rod I，when connected and arranged relatirely with the rocking shaft，slotted radius bar， and frame aforesaid，for the clevation of the rake during its return stroke，substantially in the manner as set forth．
 Bitters．－April 28,1868 －For treatment of（rspep－ sia，\＆c．，composed of aloes，zedoart roct，serpenta－ ria，saffron，rhubarb，white agaric，gentian，galangal root，cardamom，gum allyrrhac，confect．opii，Thu－ riace，aleohol，and water：

Claim．－A medical compound or composition formed by combinirg the abore－mentioned ingrodi－ ents，substantially as deseribed．

祭夺，2迫．－Thmes Blease，Richmond，Ind．－Fore Part Trons．－April 28，1868；anteclated April 25， 186．－The lip is secured hy a serew to the stock of the tool and fits orei a flange on the latter so as to be aedistable towneri or from the gmard，aceording to the thickness of the sole．

Claim．－1．Adapting the tool a to the different thieknesses of the soles be meaus of the adjustable lips，substantially as set forth．

2．Adapting the tool a to the different purposes herein specified by means of the detachable lips，as shown and described．
 N．Y．－IIay Rater and Loader．－A pril 28，1868．－ Whe described arrangements are for tilting the load－ ing apparatus so as to throw it ont of action；or for detaching it．The tecth are made of steel，bent to form two tines and are connceted to the belt by a rreted plate haring its edges turnod up to form lips； the attachment is further secured by stads or rirets．

Cleim．－1．So pivoting the apmaratns to the re－ hicle that it may be tilted to bring the driving pin－ ions $m$ out of gear with the toothed rims or spur wheels $b$ on the rear wheels of the vehiele，substan－ tially as and for the purpose speeified．

2．The attachment of the forlis $h$ to the endless belt by means of the plates $u$ ，furuished with lips $e^{\prime \prime}$ ， and the studs or lirets $f^{\prime \prime}$ ，sulustantially as and for ${ }^{-}$ thes purpose speeifiod．
3．The transterse rod $n$ and pinas $s^{*}$ ，in combina－
tion With the series of slats $r$ ，their side fromes 3 and the frame A，supporting the carrier belts B，whereby the slats $r$ ，with their side fiames，may be readily de－ tached，substantially as and for the purpose specified．
g＇g．24S．－S．Y．Branstreet，Monticello，Iowr． －S＇afcty Truck．－ 1 pril 28,1868 ．－The supplementary safety tiuck has inclined wheels，having a horizontal tread and vertical flange when in contact with the rail．The upper sides of the wheels run in contact with horizontal brace wheels．

Claim．－1．The combination of the inclined groored wheels C C with the horizontal bracing Whecls F F substantially as and for the purpose bet forth．

2．The spring $J$ ，in combination with the sliding plate $G$ ，and fixed plate or block II，substantially as fud for the purpose set forth．
3．An ausiliary truek，movided with inclined wheels C C，and bracing wheels F F，and sliding vertically in guides II $H$ ，in the manmer and for the purposes indicated．

4．The combination of the plates $G$ G＇with the wheels C C ，F F ，the spindles D D，having shoulders d $d$ ，and the nuts a $a$ ，substantially as and for the purpose specifica．
5．The guide blocks II H，when supported by pirots AL M，working in elongated bearmgs，in the manner and for the purposes deseribed．

6．The rubber cushions $c e$ ，when used in combina－ tion with the anxiliary safety truek abore deseribed， in the manner and for the purposes specified．
gig，249．－Lewis Brivmbachi，Reading，Pa．－Ma－ chine for Wool Burring．－$A$ pril 28，1868．－The burr leceptacle is hinged to the frame，and is laised hy the burrs as they are carried round with the wool hy the toothed roller，but will finl before they are acted upon by the slatted roller，being thus in a position to catch them as they are forced from the wool by the latter．

Claim．－The recentacle G，arranged in respect to the slatted and toothed rollers of a wool burring machine，as described，and so balanced that it will he raised by a burr carried beneath it，and will foll with its edge in contrat with the flecee before the slatted roller strikes the burr，all as and for the pur－ lose deseribed．
ryg， 250. Isaac Bullard，Dedham，Mass．－Te－ getable slicer．－April 28,1868 ．－The tuber or finit is impaled on the screw，and is sliced hy the kinife on the revolving disk below，the seren lieeping it fed to the knife．

Claim．－The disk C with an oponing F ，and cut－ ting plate a，in combination with the rim $A$ and plate I），and the point I and knife－edge II，all sub－ stantially as and for the purpose shom and described．
g7，B61．－E．P．H．Carhon，Springfield，Ohio．－ Ferm Gate．－April 28，1868．－The gate consists of the usual horizontal and rertical bars，except that they are pinned at the infersections instead of the former being mortised into the latter．The outer end of the gate may be set $n$ p when samered，or in case of snow，and the inclined struts engage ratchets to hold it at this adjustment．

Claim．－1．A gate，consisting of the longitudinal bars $A$ ，cross bars 13, U，and I），braces E F，connect－ ing bar $a$ ，and ratehets $e$ ，construeted and arranged to operate substantially as herein deseribed．
2．In a gate，adjustable as describer，the use of a pin $f$ ，for the purpose as herein set forth，and in the manmer described．
g\％．9．5．Z．－H．J．Case and F．I．Tomnson，Sngar Grore，Pa．－Washing Machine．－Ipril 28， 1868. The larger roller is journaled in the sudes of the box， and the smaller ones are joumaled in suavitating frames，and rest upon the former．Jho elothos are passed between them when the lower roller is rotated．

Claim．－An inprored washing machine，consist－ ing of a box $A$ ，having mounted therein the sroofed roller $B$ ，in eombination with the groored rollers $C$ and D，mounted respectipely in the arms E and F， hinged independently of cuch other and provided with the cross bars $c$ and $a$ ，all construeted and ar－ ranged to operate substantiully as herein deseribed．
gy, $25: 8$ - Solon L. Cileyney, Wooster, Ohio.-Drier.-April 28, 1868.-The fruit trays are in two tiers in an inner chamber, around which cirenlates the caloric current from a furmace beneath. Air enters at a pipe bencath, is heated by a chamber immediately over the roof of the furnace, and thenee passes into the fruit chamber. The access of air to furnace and chamber and its delivery, direct or circuitous, are controlled by dampers.

Claim.-1. In an apparatus for drying fruit, the arangement of the furnace D , chamber $s$, drying oren A, pipe $p$, and aperture $s^{\prime}$, by which the cold air is caused to traverse the whole length of the furnace, in contact with the floor of the drying oven, in order to thoronghly heat it and utilize its heat, substantially in the manner and for the purposes specificd.
2. In an apparatus for the purposo specified, tho fiange $m$ and wall $w$, in combination with the aperture $r$ and damper $r^{1}$, substantially as and for tho purposes set forth.
3. The non-conducting beds $t t$, when arranged along the bottom of the drying oven, and leaving the space $u$ between them, for the purpose specified.
4. The regulator E, When constructed with tho openings $e e$, arranged in the manncr and for tho purposes specifed.
g'g, 25 -Lamp Burner.-April 28, 1868.-The base of the chimney sits upon an anmular glass plate, and a conical glass tube partially cncloses the burner. The object is to direct the air to the flame, using a material which will not intercept the light.

Claim.-In kerosene and like burners, the detachable annular transparent rim or plate E , arranged in relation to the cone C , perforated disk D , and transparent shell $A^{*}$, substantially as herein shown and described.

7\%,955.-D. Chipman and William F. ChipMan, Mount Carmel, Ill.-Machine for Planting Corn.-A pril 28,1868 .-The frame is supported by a pair of rollers which follows the planting devices. Cams and ratchets on the inside face of one of the rollers operate the domble system of seed slides; one at the boxes to drop the corn from the hopper, and the other nearel to the gromnd to plant the seed.

Claim.-1. The combination of the loose wheels $b$, provided with eams $b^{3}$, ratchet whecl $b^{1}$ and spring pawl $b^{2}$, arranged and opcrating substantially as and for the purpose set forth.
2. The combination of the slides $e c^{2}$, levers $\mathrm{D}^{\prime}$, and springs $d d^{\prime}$, arranged and operating substantially as and for the purpose set forth.
3. The hand lever $a^{\prime}$, piroted to the swinging arm or standard $a$, and operating substantially as and for the purpose set forth.
gyo 256.-Tacob Clark, Clarksville, Pa.-Water Wheel.-April 28, 1868.- The wheel shaft las radial arms, supportiag rims to which the buckets are attached abore and below. The buckets are S-shaped in horizontal section, and have cup-shaped ends to receive the perenssive force, and tiperingends where the water escapes into the central opening.

Claim.-1. The wheel having the shaft $B$, the plate $B^{\prime}$, and the two series of buckets, the latter constructed in the form deseribed, and arranged, one above and one below the plate $\mathrm{B}^{\prime}$, substantially as specificd.
2. The buckets $e e^{\prime}$ haring tho curves $v$ and $w$, in combination with the plate $B^{\prime}$, snbstantially as and for the purpose specified.
gy, 25\%.-JAMES H. Cole, Adrian, Mich.-Roofing Dlachine.-April 28,1868 .-Improvement on the patent of Richardson and Cole, in respect of the snpporting of the rolling instrument employed therein, by an arm which reaches to and travels upon ways overhead, so that the opcrator can travel alongside of the instrument and direct the same.

Claim.-1. Supporting and guiding the rolling instrument 1 , by means of the ways $\mathbf{F ~ F}$, substantially as ant? ior the purpose set forth.
2. The gudd 5 , when applied at the end of the bed $G$, substantially as and for the parpose deseribod.
gy, 258.-Andrew Coleman, Red Bank, N. J.Weeding Hoe.-April 28, 1868.-A "scafle" or "Dutch" hoo, having connected angnlar pointed projections at each side, so as to raise and crumble the carth througle which it passes.

Glaim.-1. A weeding hoe, composed of a succession of comnected corrugations, $B$ B B, \&e., formed from the same plate of sheet metal, substantially as and for the purpose shown and described.
2. The points D D D, \&c., substantially as shown and described, in combination with the corrugations B B B, \&c., all as and for the purpose set forth.
 Apparatus for Disintegrating Ores.-April $28,1868$. - T'he pan is charged witl the auriferous earth, and a steady stream of water is pomed in. 'The stirrers agritate the particles against each other, cansing mutual attrition. When they becomo sufficiently disintegrated, they pass through the slots into the pan below. The larger stones are discharged at a slide hole, when the conglomerate or "cement" has been reduced.

Claim.-Disintemrating or reducing any goldbearing material, by means of agitation and friction with water, so as to permit of the separation of the gold from snch disintegrated material, by the ordinary means of sluice-bor, amalgamation, \&c.

79,260. - Andrew J. Craig, Ashmore, MluDouble Shovel Plow.-April 28, 1868.-The handles and plow standards are pivoted to the beam, and the latter terminate at their rear in perforated segments, which permit the vertical adjustment of haudles and standards.

Claim.-1. Adjustably attaching the plow standards $D$ to the rear ends of the beams $A$, by means of the vertical cross heads $a^{\prime}$ formed upon the said rear ends of the said beams, substantially as herein shown and described, and for the purpose set forth.
2. Adjustably connecting the handies $F$ to the beams $A$ and plow standards $D$, by means of the uprights G, construeted and arranged substantially in the manner herein shown and described, and for the purpose set forth.
gey, $261 .-W E L L S L T$ W. Crane, Auburn, N. Y.-Solf-Lubricating Box for Shafting.-April 28, 1868. -The lower box is placed in a case containing oil, and has a depending tnbe through which the oil may be drawn up by the rotation of the sliaft, the oil descending over the cdge of the box to the reserroir again.

Claim.-Tho combination of the loose, hanging interior bearing 0 , slotted in its center, and provided with a depending tube, C , with the elongated receiver E, having a circamferential groove, and suitable bearings for the jomruals of the hanger $O$ to lest on, the whole constructed and used substantially as specified.

沓等,262-T. DayISON, Richmond, Va. - Nait Machine.-A pril 28, 1868.-The depressions in the periphery of the wheel form dies into whieh the nail blanks are dropped and in which they are consecutively subjected to a desecnding die which holds them in place while the header is advanced against the protruding portion of the blank and swages it into a head. Headers adrance from alternate sides according as the larger end of the blank is presented. The nail plate is fed in through a tube being antomatically and intermittingly adranced by a bar, actuated by a cans and spring alternately. A descending cutter severs the blank from the plate, the box through which the cutter worls being slightly oscillated before each cut so as to give oblicquity to the cut, corresponding to the taper of the nail. Oblique plates remore the mails from the die and allow them to drop.

Claim.-l. The rotary wheel or die I, in combinstion witll the planger or dic J, vibrating catter L , and box M, all arranged to operate in the manmer smbstantially as and for the parpose specified.
2. The feed tube Q, lined with a suitable non-eonducting material, and arranged to operate in connection with the cutter by means of spring bar S and cam $F$, substantially in the manner as and for the prirpose set forth.
3. Tho combination of the feed tubo $R$, box $M$, cutter L, wheel I, plunger or die J, and discharging ledges $f f$, all arranged for joint operation substantially as and for the purpose specified.
g9,263.-Menhy W. Eastman, Maltimore, Md. Toilet Attachment for Bureaus.-A pril 28, 1868.-At the rear of the glass is a shelved cupboard and the glass forms a panel in the door framo which closes the cupboard. The glass is hinged below so as to be inelined rertically, and tho door frame is hinged to more horizontally.
Olaim.-The toilet attachment for bureans abore described, consisting substantially of the upright cabinet B, provided with horizontal shelres $s$, the frame D swinging on side hinges. and the mirror M hinged to the frame D and provited with an adjusting rod or cord $r$, the whole operating together in the mamer and for the purposes specified.

99,264.—Hexry H. Elwell, South Norwalk Conn.-lieversible Knob Latch.-April 28, 1868.When the hub on the spindle is mored longitudinally, its lues are freed from the hooks of the lateh stirmp, and the latter is then free to moro so that the bereled end of the latch may be withdrawn and turned! 1800 to suit it for a door shutting in the reverse direction. This change cannot be made after the loek is attached to the door.
Claim.-1. The hab D, whon adapted to be moved longitndinally with its asis through the lock case, to release the latels and admit of its being turned, substantially as described, for tho purpose specified,
2. In combination with the sliding linb D, the flange $i$, surrounding the hole for the passage of the hub, nyon the inside of the ease, whereby sand hub, when operated to release the latch, will not be displaced laterally, as herein shown and described.
3. The arm $j$ of the bar E, arranged as shown, and in sncl relation with serew loles $k$ as to canse, when the look is screwed to the door, the arm $j$ to bear against the lubb D , and prevent the latter from moring longitudinally to release the slido catch, as set forth.

77,895. - Johy M. Evril, Centre, Pa. - Mill Bush.-April 28, 1868.-The inclosing box corer is bercled on the upper side around the spindle, and has a bereled collar sceured to it by serews, the two bevels forming a box, the packing in which prevents the entrance of dust. The corners of the enclosing box hare compartments communicating by rertical slots with the spindle, and containing fibrous inaterial saturated with oil. Between the compartments are the four sections of the journal box which aro forced inward by the wedges behind them. The wedges ore operated by set screws.

Clain.-The box A, provided with groove J, chambers K, blocks C, wedges $e$, and bolts D, all arranged, combined, and used substantially as and for the purposes specified.
g7,366. -Oliver G. Fessenden and Setii G. Fessenden, Stamford, Comn. - Ticket Holder for Piailroad Cars, dic.-April 28,1868 . -The passenger inserts his ticket through the top of the holder frame, and turns the roller which forces tho ticket down behind the glass. The ticket can bo removed only by unlocking the door of the case.
Claim.-1. The ticket holder, made substantially as described, and its equivalents, for the pmrposes speeified.
2. The roller E , and its oquivalents, for tho purposes specified.

7\%,26\%.-Tilliam D. Field, Protidence, I2. I. -Door Lock.-April 28, 1868.-The arrangement permits the tumblers to be shifted to change the combination, without removing the bolt. The latter has groored edges and slides in ways being mored by a plate, which is attached to, but separable from the bolt, and when in position, the plate is the means of keeping the tumblers, \&c., in their places. The sleeve in whieli the barrel of the key fits has a projecting arm which strikes against arms projecting from the bolt, so as to move tho latter after the wards hare raised the tumblers.
Clatim.-1. Providing the bolt B with tongued or
grooved edges, substantially as set forth, and combining it with the guide plates C C, as described. so that it will remain on the loek when the imner plate of the same is removed, substantially as herein shown and doscribed.
2. Forming the arms $h$ and $i$, by mears of which the bolt is moved, on a plate E , which is serewed npon the bolt, so that the tumblers are held in place by tho said plate, and can be removed when the same is taken ofi, substantially as herein shown and deseribed
3. The bolt B, plate E, oscillating and sliding tumblers D , springs $f$, and revolving tube $G$, having a projecting arm $l$, all arranged in combination with each other and with the key F haring changeable wards, and all made and operating substantially as herein shown and deseriber

77,268. - Perry Fiveey, Memphis, Tenn. Clothes Pin.-April 28, 1868.-The metallie spring is eoated with rubber to prevent injury to the elothes.

Claim.-A plothes pin, construeted of sheet metal and coated with rubber or gitta percha, in the manner and for the purpose set forth.
g7,269.-C. C. Foster, Olessa, Del.-Fertilizer Attachment.-A pril 28,1868 . -The fertilizer is stirred hy the pin and the disks which are set upon the shaft in the box; the obliquity of the disks eanses them alterwately $t$ ) advance and reeede the fertilizer which is taken from the throats by the polygonal rollers. The faces of the rollers are cleaned by spring scrapers.

Claim.-1. The mode of sowing phosplate, or any like mannre, by means of an attachment, constructed and operated as above described, or any other snbstantially the same.
2. Wings W S, combined trith pins $P$ and shaft $\mathrm{S}^{\prime} \mathrm{H}^{\prime}$, for the prymose and in tho manner abore set forth and described.
3. Rollers R M. springs S C P , reversed bearings K V , the whole combined, construeted, and operated in the manner and for the purpose abovo set fortb and deseribed.

77, 270 - -Samuel W. Francis, Newport, R. I.Railroad Car Meating and Ventilating A pprratus.April 28, 1868.-Air is collected by a hood im front of the locomotire, heated by passage in the vicinity of tho boiler and furnace, and conducted by pipes and conplings to the cars. By isolating the pipe from leating influences it inay beeome the means of ventiating without heating, or the two may be combincu.
Claim.-The combination, with the locomotive, of the air tube or conduit communieating with pipes opening into the ears, and a removable heat-contining jacket snrrounding the said conduit, under the arlangement herein shown and deseribed, so that the said conduit and pipes may constitute cither a rentilating or a heatng and ventilatiog apparatus, as herein shown and described.
g7,9\%1.-Chahles Fhicke, Mobilo, Ala.-Der-rick:-April 28, 1868.-Designed to be crected on the joists of a building to elevato materials. Tho leess are planted on the joists and reeeived in sockets on tho beam fiom which the tacklo is suspended. The usual winch is employed, and a number of smaller ropes attached to a ling on the lower end of the hoisting ropes affords means for attaching to sereral parts of an objeet to be lifted.
Claim. -Tho arrangement of tho shoes or sockets B lb on the horizontal borm A, adjustable legs C C, wiuding drum $I$, and cord $N$, provided with a ring and three small corrls $\mathrm{g} g \mathrm{~g}$, at one end thereof, when operated as described, and adjusted on the joists ot a new building, for the purpose of elevating the material therefor, substantially as herein set fortll.
g\%,2\%2. - Willian Gallagier, Shullsburg, Wis.-Plow.-April 28, 1868. The plow beams are attached to vertieal posts secured to the asle, and a plarality of holes in the posts permits adjustnent for different depths of plowing. Levers piroted on the snmmits of the posts are comnected by rods to the
rear ends of the beams which are raised when the forward ends of the levers are depressed.

Claim.-1. The combination of the vertical bar E with the axle B and forward end of the plow beam $\mathbf{F}$, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the levers K with the plow beams F and vertical arms or bars F , substantially as herein shown and described, and for the purpose set forth.
3. The combination of the braecs $O$ with the axle $B$ and plow beams F , substantially as herein shown and deseribed, and for the purpose set forth.

7\%, 273.-James E. Gedaey, Petaluma, Cal. Trestle. - April 28, 1868. - The legs have slots traversed by elamping bolts rendering them extensible, and the brace rods are adjustable to suit the said extension.
Claim.-1. The legs B, attached to the beam A by means of the plates D, bolts F, and thumb nuts IF, as herein shown and described, and for the purpose set forth.
2. The combination of the beam A , extension legs C, legs B, removable plates D, having sockets d', and flanges for the passage of the bolts E , the bolts IJ, thumb nuts K L , and plates M N , as herciu described, for the purpose specifiecl.
3. Seeuring the extension legs $C$ to the legs $B$ by means of the bolts $I$ and $J$, thumb nuts $K$ and $L$, and plates M and N , as herein showa and deseribed, and for the purpose set forth.
gh, 玉g4.-JAMES W. Gladding, Normal, Ml.Clothes Line Iolder.-A April 28, 1868.-The line is passed over the piroted tongue, and when the latter is raised the cord is forced between the jaws. The is raner side of the tongue is the thicker, and the space between the jaws widens in rrard so that the tongue cannot be drawn out by strain upon the cord.

Claim. -The jaws $A$ and the tongue $D$, constructed, arranged, and operating substantially as shown and doseribed, for the purposes set forth.
g\%, 2\%5.-James Glandivg, Philadelphia, Pa., assignor to himself, David H. Wilson, and EdWard S. Lowhy, same place.-Manufocture of Packing for Stcam Engincs.-A pril 28, 1868. -The packing, as plaited, is passed through a condensing hole, and rertically orer the same is a nozzle from which flows paraffine, staarine, or either of them, mixed with scapstone, to enter the body of the packing.
Claim.-The process, hercin described, of applying lubricating material to packing, that is to say, introducing the material among the fibrous strands during the plaiting of the latter together, and at the point where they are being united, substantially as specified.
 Ill, assignor to himself and L. M. KimbalL.-Spring and Body Brace for Velicles.-April 28, 1868.-The brace is intended to prevent the langing forward or baekward of the bods, and the consequent tipping of the springs, while the latter are yet allowed free vertical motion. The levers are counected by pairs to the bed and to the perch, and also to each other, so as to form a double toggle. The upper levers are comneeted by straps from their midlength to the lower part of each spring.

Claim. -The levers $a$ and $b$, and straps F F, arranged as described, in combination with pereh A and body E, the whole arranged and operating as and for the purpose set forth.
gy, 2gy.-J. H. Gooch, Cheras, S. C.-Cotton Bale Tie.-April 28, 1868. The plate has bars to Thiel one end of the hoop is first attached, and after placing in position in the bale, the tongues forming the divided bar admit the entranee laterally of a fold of the hoop without reeving it through lengthways.

Claim.-The plate A, constructed with the depression $a$ a, the bars $c c^{1} c^{2}$, the tongues $m n$, and the slots B and $\mathrm{C} \mathrm{C}^{\prime}$, the latter slot being constructed with the recesses $e c^{\prime}$, having the inclined edges $i i^{\prime}$, and the whole apparatus operating substantially in the manner and tor the purposes set forth.
gy. 288 .-M. A. Goonenough, New York, N. Y.-Fcather Duster.-April 28, 1868.-The head of the flexible ecntral stem gives place for attachment of a bunch of feathors to make up the center, the middle feathers being shorter than those forming the outside.

Olaim.-In combination witl a feather duster, the elastic stem B, arrangel substantially as and for the purposes herein shown and described.
gg, 2g9.-Alvah Graves, Marcellus Falls, N. Y.-Potato Digger--April 28, 1868.-The fork is suspended by a chain from a bar in the tripod in the act of raising the hill of tubers.
Claim.-The suspending frame A and flexible or swinging comnction $c$, in combination with the fork B, substantially as shown and for the purpose described.

19\%,280.-John L. Hadden, Philadelphia, Pa.Water Cooler.-A pril 28, 1868. -The bottom of the cooler is made conical and radially corrugated to prevent injury fiom dropping ice.

Claim.-A sheet metal water cooler, having the bottom B of its inuer eylinder A made of sheet metal, raised and corrugated substantially as described and ehown, for the purpose specificd.
g7,281.-J. H. Hawes, Boston, and Geonge H. BLiss, West Stockbridge, Mass.-MIachine for Cleaning Emery.-A pril 28, 1868.-A serpentine rubber is rotated in a vertical cylinder, throngh which the impure emery is passed. The object is to finely pulverize any foreign matter contained, so that it may be subsequently remored by sifting.
Claim.-1. The combination, with the eylinder A, of the rotating rubber D , of sorpentine torm, substantially as specificd.
2. The combination of the plate or disk E with the cylinder A and rubbor D , for operation together as described.
g\%,282.-Jacob H. Hawes, Boston, and Geoncie H. Bliss, West Stockbridge, Mass.-Belt Clasp.A pril 28, 1868 ; autedated April 25, 1868. -The edges of the belt are rebent and inserted beneath the robent edges of the clasp. The spring slip is then inserted between the ends of the bolt and the clasp, the serrated edges of the slip holding it to place.
Claim.-1. The clasp, constructed with the leares $a$ and internal lips, serving conjointly to hold the ends of the belt, sul)stantially as herein set forth.
2. The detachable spring slip B, constructed with the toothed lips $b^{*}$, and arranged within the shell of the clasp, substantially as and for the purpose specified.
g7,28:-SMuth Head, Halifax, Pa.-Shingle Hachine.-April 28, 1868. -The machine has two carriages and two sets of saws, and ents a shingle at each forward and baekward motion of either carriage. By means of an armed, central, vertical shaft the sams are shifted on both sides of the machine at once, bringing two into action and remoring two out of aetion, the aprous retaining their relative positiou to the saws to which they belong. The shingles are edged on both sides at once by a pair of saws adjustable in distance, the axis of onc slipping in the sleeve which forms the axis of the other.
Claim.-1. The arrangement, in a satring machine, ot the four saws $\mathrm{C} \mathrm{C}^{3} \mathrm{C}^{2} \mathrm{C}^{3}$, the two mandrels a $a^{\prime}$, each bearing two of the four saws, and the os. eillating arms $L^{\circ} \mathrm{L}^{\prime}$, for the purpose of communicating a reciproeating motion to the mandrels, when used in connection with two bolt carriages $\mathrm{D} \mathrm{D}^{\prime}$, one on each side of the machine, and the whole being constructed and operating substantially in the manner and for the purposes specified.
2. The combination of the shaft $F$, the cranks $G$ $G$, the pitman $\mathrm{H}^{\prime}{ }^{\prime}$, the arms $I \mathrm{I}^{\prime}$, moring the earriages $D D^{\prime}$, and the oseillating post or shaft $k$, haring the lateral arms $\mathbf{M 1} \mathrm{M}^{\prime}$ and the longitudina] arms $\mathrm{L} \mathrm{L}^{\prime}$, all the parts being constructed, combined, and operating together substantially as and for the purposes set forth.
3. The elging apparatus, above described, consisting of the mandrel $R$, working in the sleeve mandrel $\mathrm{R}^{\prime}$, and adjusted therein by the set screw $\delta$, the man-
drels bearing the auxiliary satws $r$ and $r^{\prime}$, when constructed and operated substantially as aud for the purpose deseribed.

9\%,284.-Frederic Mewitt, Newark, N. J.-Pulley.-A pril 28, 1868.-In order to obrinte slipping the pulley onto the shafting, longitudiually of the latter, and of remoring some pulleys to replace the faulty one, the pulley has a divided rim aud a removalbe section to the hubl. The tire is secured to the rim and spans the break.
Claim. -1 . The puller. construeted witl the dirided hub and the detachable rim, sulbstantially as herein set forth, for the pmrpose specified.
2. The combination of the divided rim, the wrougltiron urms formed with comnecting parts $a x$, and the divided hubl, sulstantially as herein set forth, for the purpose specified.

79,2953.- Tillinm F. Hotsine, New York, N. Y.-Thbular Structure.-April 28,1868 .-The rings have groored edges to receire the ends of the stares of the rdjoining sections, and are themselres fastened together by longitudinal bolt rods. At one point in each ring the continuity of the circle is broken and the interval is spanned by a loop which forms a bridere picee for the insertion of a wedge-shaped tightening stare to complete the cylindrical form.

Claim.-1. The rings A , formed with a groove a oul each side, and provided with breaks $b$ and ears $d^{\prime}$, substantially as and for the purpose deseribed.
2. In combination wilh the above, the staves $B$, tongued and grooved, and formed with tenons, substantially as and for the purpose set forth.
3. The combination of rings $\Lambda$, staves 13 , and tie rods C , all constructed and arranged substantially as described.
4. The rings A , when provided with loops D , sulbstantially as and for the purpose set forth.
gy,2s6.-Charles Monge Mudsox, Roxbury; Mass.-A pparatus for Difiusing Liquids.- A pril 28, 186\%:-The air is forecd from a lower clamber by the int:oduction of water from an elerated reservoir, and a steadr blast thus furnished which draws the atomizing liquid from the ressel.
Clcim.-1. In an apparatus for atomizine liquids, the use of a lydrostatic blower, substantially as describecl, in combination witl an aldjustable reservoir for supplying a head of water which will produce more or less pressure in the air vessel or blower, as may be required.
2. The combination of the cans $A$ and 13 and tule D. construeted and operating substantially as deseribed.
3. In an apparatus for applying hydrostatie pressure to produce a current of air to operate an atomizer. a regulating deviee, sulsstantially as herein described, neting automatically, to adapt the apparatus to the use of an excessive liead of water without affecting the strength or eremness of the sir current.
4. In an apparatus for applying liydrostatic pressure to produce a current of air to operate an atomizer, a regulating stop coek in the tube leading from the air ressel to the atomizer, to tary or stop the flow of air, substantially as deseribed.

27,28\%.-Edward Huxter, Philadelphia, Pa.-Spectacles.-April 28, 1868.-The nose pieee is detaclable, the shanks being adjustable in soekets in the frames. The bridge piece is thus adjustable in position, and the glasses in relative distance.

Claim. - The nose picee $\mathbf{C}$, adapted to projections $b$ on the frames of the spectacles, tor the arjustability of the same, sulsstantially in the manner set forth.

78,@SS.-Peter H. Jackson, New Yorl, N. Y. -Steering Apparatus.-April 28, 1868.-The tillerwheel shaft has a right and left handed screw whieh passes througa muts whiel arce comnected by arms to the gudgeons of the rudder head. The rotation of the shatt draws the nuts simultaneously toward or from the rudder, and rotates the latter on its axis.
Claim. - The right and left-lianded serew shaft $c$, set in rertical sliding boxes, in combination with the arms $l$ that are jointed in pairs to the nuts $m$, and extend to the gudyeons $i$ of the rudder head, as and for the purposes specified.

77,289.-Abiezer Jameson, Trenton, N. J.-Vise.-April 28, 1868.-The lower plate is slotted and is secured to the bench. The upper plate or base piece of the rise is horizontally adjustable and is fastened in the desired position by a set bolt. The jaws slide on their base and are mutually approached by a right and left handed scrers shaft.
Claim.-1. The combination of a plate, B , jaws A $\Lambda^{\prime}$, and serew $F$, connecting the said jaws, the whole being urranged and operating substantially as and for the purpose specificel.
2. The combination of the said sliding jaws A and $\mathrm{A}^{\prime}$, movable plate B , and lower permanent plate D , the whole being constructed and arranged for the lateral and longitudinal adjnstment of the jaws, substautially as hercin described.
g\%, 290 .-Jomn C. Jomison, Louisville, Ky.Crystal Fountain.-April 28, 1868 ; antedated April 17, 1868. - Water is supplied from an elevated reser. voir to the eylinder and passes thence by pipes to points of junction with tubes which admit air. The iningled water and air are then conducted to the fomtain derice, where they issue in a jet.
Claim.-The crrstal fountain abore described, haring the cylinder A, supply pipe B, pipes C D, faucets E F , ralres G HI, and bent pipes I K, communicating with the fountain jet, the whole apparatus being constructed, combined, and arranged substantially in the manner and for the purpose specified.
gy, 291.-Amasa C. Kasson, Milwaukee, Wis. assignor to himselt and Nelson C. Ghinley, same place.-Ted and Coffee Pot.-April 28, 1868.-The infusion of coffee is made in the upper chamber, being heated by the water bath below. The steam from the lower chamber rises and mingles with the contents of the upper one until the water falls below a certain level, when it rises through the central pipe and somads the whistle.
Claim.-1. A tea or coffee pot, consisting of an upper chamber for the tea or coffee, and a lower chamber, 13, for lot water, with an outer central tulbe, C, attached, and corer D, with tube E, whistle F, and hood I, all constructed and arranged snbstantially as described.
2. In combination with the hot water chamber I and central tube C, the cover D, with hood I and tube E, when constructed and arranged substantially as herein described.
3. The corer D, with the tube E and conical deflecting tube or hood I, attached substantially as de seribed.
g\%,29玉.-I. J. Kidd, Young's Settlement, Texas -Cotton Scraper.-A pril 28, 1868.-The machine is supported on two wheels and straddles the row. The shares are intermittingly reciprocated across the row so as to make gaps therein and leare the plants in hills. This is performed by cams on the imner faces of the wheels which actnate rods attached to the share beam, causing it to oscillate transversely and horizontally.

Claim. - The cams C C, in combination with the horizontal bars If II, beam L, and plows or scrapers P P, when constructed, arranged, and used substantially as and for the purpose specified.
g7, 293.-I. J. Kidd, Young's Settlement, Texas. -Cotton Chopper:-A pril 28, 1868. -The machine is supported on tro wheels and has a plow to run on each side of the row. Motion is communieated from the rotary axle by bevel wheels to a revolving head having oblique cutters which chop gaps in the row of plants as the machine progresses.

Claim.-1. The knives K KK, seenred to the disks H II and shaft C, when constructed and operated substantinlly as and for the purpose specified.
2. The arrangement of the shafts or axles B and C , and their cos wheels D and E , diskis H H , and kivives K K, with the frame A, provided Titl cross bar $h$, longitudinal picees $g g$, and the plows $L$, $L$, sulbstintially in the manner as and for the purpose specified.
g\%,894.-Henry F. Knapr, Net Xork, N. X.Collar Machine.-April 28, 1868.-Improvement on
his patcnt, November 6, 1866. Additional longitudinal entters are applied for sceuring both a straight and curved longitudinal cut in collars or other articles.

Claim.-'The knives or eltters I, MI, K, cutting block D, and eutter L, arranged for operation together, essentially as herein set forth.
g\%,995.-C. W. Theodore Krausch, Philadelphia, Pa.-Belt Coupling.-April 28, 1868; antedated April 21, 1868.-The claws upon the hinged jaws are placed in the lace holes and the jaws brought together by the nuts of the screw bolts passing through the jaws.

Claim.-1. An adjustable belt or band clasp, (coupling,) by means of which also the degree of tightness of a belt or band can be cffeeted.
2. A belt clasp, combined with belt tightener, substantially in the manner as and for the purpose set forth.

אु7,296.-Elista Leffingwell, Sempronitis, N. Y.-MIachine for Trimming Teazle.-April 28, 1868; antedatcl April 16, 1868.-The upper cnds of the tubes are flaring and toothed, and around them revolve cutters which trim off the burr ends of the thorns or sword leaves of the teazles which are inserted in the tubos. The reciproeating cutters play close to the lower ends of the tubes and cut the stalks to equal lengths.

Claim.-1. The tubes J J, constructed substantially as described, and used with the pulleys K K, and their revolving blades $c e$, as and for the purpose set forth.
2. The entter bar $o$, with its cutters $s s$, in combination with the tubes $J J$, as and for the purpose set forth.
yg, 297. - JOHN MACY, Pine, Oregon. - Tire Shrinker.-April 28, 1868.-The tire is clamped in the fixed and sliding jaw, and the latter forced toWard the former by a lever eam.

Claim.-The fixed bed $B$, provided with the fixed and adjustable clamps $a a^{\prime}$, in combination with the shiding plate $C$, aetuated by the eam lever $D$, and the elamps $G$ G' fitted to tho uprights $E$ E, F F , when all said parts are constructed and arranged in the manner substantially as and for the purpose set forth.

Moy, mids. -James TV. Mahlon, Brooklyn, N. Y.- $^{\text {W. }}$ Gas Meter.-April 28, 1868. - Intended for withdrawing the water of condensation from the measuring or bellows portions of dry gas meters; separate cscapes are prorided to a water-recciving chamber below, provided with discharge ralres operatable from the exterior.

Claim.-1. The eombination, witl the measuring or working chambers, of separate water escapes or outlets and lower receiving chamber or comprartment, with valve or valres, for operation in such manner as that the several chambers making up the body of the meter may be relieved of water collecting in them without disturbanee or removal of the meter, and when the valves are closed, without establishing commumication between the sereral chambers to interfere with the operation of the meter, substantially as specified.
2. The eombination with the supply chamber, to which gas is admitted from the measuring compartment, of a water escape pipe or outlet, lower waterrecciving chamber and valve eontrolling said outlet within the latter compartment, essentially as herein set forth and whercby a single water cseape may serve to relieve both the supply chamber and inlet and outlet pipes; also, whereby the meter is better protected against being tapped of gas drawn from the inlet pipe, as speeified.
3. In combination with the several nozzles or outlets to the water-escape pipes, or their equivalents, from the sereral gas chambers that eompose. or mainly so, the body of the meter, a valve or falrular device arranged to simultaneously control said outlets, essentially as deseribed.
4. The hollow and perforated water-discharging serew or its equivalent, in combination with the palte or valvalar derice that controls the water nozales or outlets to the sercral gas chambers, or
certain of thom, of the meter, substantially as specificd.
5. The combination with the water-discharging screw, or its equivalent, and Falve or valvular deviec controlling the outlets from the several chambers of the meter, of an clastic or spring-liko connection interposed between said screw and valve, essentially as herein set forth.
gy,299.- H. Collins Mapes, Rushville, Ṅ. Y. Horse Hay Fork.-April 28, 1868.- The tines are attached to the end of a lever and are thrust into the hay in manncr of a common fork. The lever is piroted to the hoisting bail and to the clamping tine, which latter is drawn down apon the hay by depression of the lever, and is set by the pawl entering a notch in its upper sitc.

Claim. -The catch $g$ and the clamping tine $f$, formed with notches $f^{\prime}$, arranged in relation with cach other, and with the bail $d$, tines $a$, and handle $b$, substantially as and for the purpose specified.
\%\%,300.-L. J. Marcy, Newport, R. I.-Mragic Lantern.-April 28, 1868.-The cylindrical box and chimney are double, and a current of air is indueed in the space between the shells by the upward current of air through the annular space surrounding the flue space of the chimney.

Claim.-1. Forming the box or body of a magic lantern, or other lens lanterns, with a clouble shell, A D, and double ehimney C E, substantially as shown and described, and for the purpose set forth.
2. Tho slider plate $K$, lever $G$, grooves $d d$ and $f f$, and tube plate Q, all constructed and operating substantially as shown and described, and for the purpose set forth.
3. The double eylinder A $D$, caps $I$ and $G$, chimneys $C E$, and lens $J J$, all constructed and operating together, substantially as shown and deseribed, and for the purpose set forth.
4. The cylindrical form of the box or body $A$ of a magic or signal lantern, when the diameter of the same is just sufficiently large to contain the condensing leus or bull's eye, (or a reasonable approximation thereto, substantially as shown and deseribed, for the purpose of rendering the said lantern more portable, in combination with a shect metal chimney and condensing lens or bull's eyo J J , all as set forth.

Fy, 301.—JACOB MARTIN, Cairo, Tll.—Steam Slide Valve.-April 28, 1868.-The quadrangularly-shaped valre has its top and bottom remored. The valve is eorered by a flat plate suspended from a piston lod whose piston is fitted to a vertical cylinder in the back of the stoam chest and fits stcam tight to the upper face of the valre. The cxhaust steam passes into the rertieal eylinder abore its piston, the pipe being continued from the opposite side of the eylinder to the condenser. The steam admitted to the chest has pressure upon the minder side of the piston of the rertical cylinder and upon the plate attached thereto, and the arca of the piston is less than that of the plate within the open back of the valve which is there exposed to the exhaust steam.

Claim.-1. The combination of the steam chest B, exhaust pipe $M$, and cylinder $J$, substantially as herein sot fortly.
2. The combination of the suspended plate $I$, piston K, piston rod N , and spring L, substantially as shomn and described.
g7,302.-M. H. Matson, Horscheads, N. Y.Water Wheel.-April 28, 1868.-Combined with the cccentrie chutes of the curb are horizontal partitions Which divide the water space into compartments. The gates are so applied that all in a sories shall hare simultancous aetion, but that each series shall be operated separately. The whecl is suspended from the top and its lower side is held in position by a suide.

Claim.-1. The water space of the curb and wheel, each divided into compartments, $1,2,3, \& c .$, by the partitions $b b, b^{\prime} b^{\prime}$, when combined With the eecentric chutes $a$ a, the whole arrangod and operating in the mamner and for the purposes herein set forth.
2. The combination with the above of the series of gates $d$, and the arrangement of the hoop $C$, arms $g$.
and lugs $f$, for operating the gates, in the manner and for the purposes specified.
3. The combination of the conrex bearing block $l$, bearing $n$, with upturned edges, to retain the oil, and the adjustiug nut m, the whole so operating as to suspend the wheel, and allow its vibration from an axial line, as set forth.
4. The colubination of the clamping disks $t$ and lolts $u u$ with the globe-conpling $S$, operating in the manner and for th? purpose lierein set forth.
g7,303.- Reubes B. Matthews, Fitchburg, Mass.-IIachine for Facing Grindstones.-April 28', 186:3. The carriage slides on lorizontal mays, carrying a bar of iron at right angles to its path of movement, the alternating movements and feeding being effected by berel gears and a screw. The turning of the crank canses the tool to traverse from right to left across the periphery of the stone, aud riee versa. The carriage is advanced by a sliding tubular shaft.
Claim.-1. Applying the carriage A, and its abovedescribed mechanism, to the shaft $a$, in such manner as to be enabled to effect its horizontal adjustment, or augle of departure from a horizontal line, substantially as before deseribed.
2. The combination and arrangement, with the carriage $\Lambda$, of the tubular serew $k$, hollow shaft $m$, and bereled gear $q$, the whole being arranged and operating as befcre set forth and explained.
3. In combination with the carriage A, screw $k$, shaft $m$, bereled gear $q$, and shaft $b$, the screw $v$, as supported upon the adjustable post $w$, and prorided with the beveled gear $s$, in manner and operating as before set forth.
\%a, \%04.-John A. McClellaxd, Louisrille, Ky. - Material for Dental Plates and for other Purposes. -April $\gtrsim 2,1868$.-To collodion is added gum eopal, coloring matter, and a small quantity of phosphate of ammonia or other matter to render it uninflammable. The matter after settling may be dried and powdered, and worked into a solid material for dertal plates or other thiugs.
Uiaim. -1 . The methods of preparing and working collodion and its compounds to form an improved material. substantially as hereiu deseribed.
2. Forming dental plates of the improred material, prepared as herein described.

7\%,305. - George R. McIntire, Houghton, Mieh.-Apparatus for Measuring Cloth.-April 28 , 1868 ; antedated April 16, 1868. The eloth is passed between rollers comnected with a register.

Claim.-1. The combination and arrangement of the three rollers $B, B$, C, with the cam $c$, hinged dog $c l$, ratehet wheel $r$, dial D , index $f$, and morable frame $a$, the whole operating substantially in the manner and for the purposes indicated.
2. The e'Jth measuring instrument above described, consisting of the parts referved to in the first clanso of this claim, in combination with the shafts $\mathrm{MI}^{\prime} \mathrm{M}^{\prime}$, screw N. guides G G, and board $I$, all constructed, arrauged, and combined, substantially as and for the purposes specificd.

77,:396.-L. C. Miller, Mamphrey, N. Y.Spring Brace for Carriages, de.-April $\_8$, 1868.The brace is designed to be nsed with elliptic springs, and its duty is to hold the spring perpendicular to the plaue of the wagon and protect it from being wrenched.
Claim.-An improved brace, $A$, for carriage and other springs, construeted substantially as hercin shown and described, that is to say, consisting of a longitudinal bar or stem, $\omega^{1}$, having two inclined or curred arms or branches $a^{2}$ projecting from one end, and laving tro arms a $a^{3}$ projecting from its opposite sides, as and for the purpose set forth.
g7,30\%-Cinarles E. Moore, Elizabethport, N. J.-Fluid Meter.-April 28, 1868.-The liquid runs into the pau, and as soon as the amount overbalauces the weight, the pau tips, cutting off the supply, discharging the liquid, aud by means of a pawl aetuates a ratehet which is connceted by a train of gearing to a registcring deriec.

Claim. -The combination of the hinged meter-pan

IK, arm I, weight $J$, cock $d$, pawl $i$, ratchet wheel $k$, and any suitable registering dials, all constructed and operated substautially as shown and described, and for the purpose set forth.

7\%,:308.-Charles Mudge, Orid, Mich,—Buildcrs' and Painters' Scaffold.-April 28, 1868. -The platform is supported on vertically suspended bars, and is adjustable thereon by means of pawls which engage notches on the bars, whose lower euds are held out from the building by struts. The platform bars are suspended from root bars which are held in slides dogged to the roof.

Claim. -1 . The slide bars $M$, the supports $N$, standard braces $Z$, the plates C , provided with slots E, spur hooks D, the ribrating rods and springs P , when arranged and operating in conncetion with hanger plates F .
2. The standards $G$, the platform supporters $\Pi$, projections 3 , pawl or clip $X$, operated lyy ropes $R$ and Q pulleys T, and rod K, when constructed and operating substantially as and for the purposes set forth.
3. The combination of the foregoing-named parts with the adjustable hook plates I and braces L, when aranged, constructed, and operating substantially as herein shown and described.

27,309.-II. E. Murray, Chester, N. Y.-Clamp for Vehicle Seats.-A pril 28,1868 .-For fastening the seats of vehicles in position on the top of the bed or box. The clamp link has a foot eateh which engages bencath a cleat on the inside of the wagon bed, aud the ring at its upper end is engaged by a lever to dram the eatch into the holding position.

Claim.-1. The plate C, with its rack extension D, with its pawl E, the lever B, hook K, and link H, with its foot catch $I$, all constructed and operating together, substantially as shown and described, and for the purpose set forth.
2. The rubber spring $Q$, hollow head $a$, and hook $K$, in combination with the link $H$, lever $\mathcal{B}$, and pawl, all substantially as and for the purpose set forth.
g\%,310. - Joinn 0'Mahony, Savannah, Ga. Dray Saddle.-April 28, 1868.-Blocks are secured beneath the leather corer and serve to keep the pads in shapc.

Claim.-In a dray saddle, the beveled blocks C C, secured to the leather covering A , in combination With the pads D and grooved bar' B, said hlocks C being secured to the nads at their centers, for the purpose of preventiug such pads from flattening upon the back of the animal, under the weight of the dray, as herein shown and described.
g\%,BHE.-F. C. Payne, Netr York, N. Y.-Folding Beed.-A pril 28 , 1868. -The bed folds together iuto a cubical form for transportation.

Claim. -The bed, composed of the central framo A and two end frames $B$, bereled at their continnous ends, aud conneeted by the slotted hiuges $e$ a , in such manner that, with the mattress attached thereto, they may be brought or folded into rectaugular form without outwardly-extending or excrescent parts, substantially as herciu set forth.

7\%,312.-Willlam H. Peckilam, Net Fork, N. Y.-Machine for Bending Rings.-A pril 28, 1868.The blank is placed between an upper and nuder. grooved roller, and two under rollers attached to slides are brought against the blank to bend it iuto a circular form.

Claim.-1. The combination of the revolving axles B C, adjustable friction rollers D D, upon the concentric bearing plates $d$, concentric guides $c$, conuecting rods $e$, aud gear wheels $f f$, as herein deseribed for the purpose specified.
2. The device herein shown and described of oporating the firiction rollers $D \mathrm{D}$, consisting of the guides $c e$, slides $d$, rods $c e$, and wheels $f f$, all made aud operating substautially as herein shown and described.
3. Adjustiug the friction rollers D D around the larger roller C, and with relation to the upper adjustable roller B , by meaus of the enrved plates $d$, operated in concentric guides around the roller C, by
the conneeting rod $e$ and gear wheels $f$. $f$, as herein deseribed.
-g. 3 H: B. - F. J. Perkins, Salem, Mass.-Button. - A pril 28, 1868. - The stem of the button is eircumferentially grooved and is engaged by a slotted disk which has two lips to engage a slotted loeking plate, the said disk and plate being placed inside the garment.

Claim.--The disk $b$, formed with parallel lips $b^{\prime}$, in eombination with the plate $d$, having parallel straight sides, and eaeh slotted, as deseribed, for application to the cireumferentially-grooved stem $\alpha$ of the button, essentially as shown and set forth.
 -Gas Tubc.-April 28, 1868.-The paper tubing is lined with rubber, or viee versa.

Clam.-As a new artiele of manufacture, imperrions flexible gas tubing, composed of rubber and paper tubes, substantially as and for tho purpose deseribed.
'gay $315 .-$ II. Pierce, Winona, Minn.-Olothes Wringer.-April 28, 1868. -Tho lower roller is journaled in a yoke extending orer the top of tho main frame, and resting by a set serew upon wooden springes.

Claim.-1. The yoke frame G $H$ applied to the main frane $A$, and earrying lower roller of maehine, substantially as described.
2. Extending the shaft $F$ of tho mpper roller $D$ at one side of the wringer, and the shaft $E$ of the lower roller $D$ at the other, so that a erank handle may be applied to one or both at the same time, substantially as desoribed, and for the purposes speeified.
3. The wooden spring $J$, when eonstrueted, arranged and applied, substantially as and for the purpose deseribed.
4. Miking the upper roller $D$ of larger diameter than the lower roller', when the shafts of both rollers are extended and in opposite directions, so that the power may be applied to the smaller roller, when it is only desired to use one erank, substantially as deseribed and represented.
goy, Bi f. - Cimanles R. M. Pohlf, Rielimond, Va. -Envelope.-April 28, 1868. -The four flaps are all perforated to allow passage to a tongue whose gummed ends are folded ovor and attaehed.

Claim.-The manner I conneet the different parts, and elose the whole.
g7, 31 y. - Alexander Pope, Jr., Dorehester, Mass.-Preventing Horses from Dragging Weights. - A pril 28, 1868. - The hiteh strap is fastened to the end of a lever sccured by snaps to the bit rings, and having a bar resting against the under side of the horse's jaw.

Claim.-1. The bar or lever A B, provided with a cross pieee, c, or its equiralent, in eombination with eross bar D, substantially as and for the purposes speeified.
2. The swiveled bar D , provided with the fastenings $d s$, as and for the purpose set forth.
3. The attachment to a horse's bit of the lever A $B$ and swiveled eross bar $D$, as and for the purpose deseribed.

7g. 318.-Warren B. Potter, Boston, Mass.Cfiech Iecin Slide.-April 28, 1868. -The slicle is a metallie plate doubly slotted, and is plaeed upon the cbeck rein. In use it is run up to the cheek hook.
Claim.-The eheek rein slide, eonstrueted as deseribed, as a new artiele of manufacture.
g'g, $819 .-$ A. Pudigon, Charleston, S. C.-Gather ing Turpentine.-A pril 28, 1868. -The spout is made in a $V$ form, and is driven into the tree to form the bottom of the "boxing" ehopped out to eolleet turpentine.
Claim.-The $V$-shaped shcet-metal gutter $b$, substantially as shown and deseribed.

多\%, $3: 20$. - Joshua Pusey, Philadelphia, Pa.-Tuy.-April 28, 1868.-The limber monkey is pivoted to the top of a rod and agitated by a sliding stem.
Claim.-A toy, arranged, constracted, and oper-
ating in the manner as above set forth and deseribed.
rgy, 321.- Amos Rank, Salem, Onio--Plaiform Bridge for Railroad Cars.-April 28, 1868. - The bridge has side rceesses whieh reeeive the uprights of the guard railing of the platform.

Claim.-A bridge or footing $B$, eonstrueted with reeesses $c$ c, or their equivalent, in its side edges, and adapted to be applied between railway enrs whieh are eoupled together, substantially as deseribed.

7\%,32\%.-Granvil Rich, Smithville, Mo.-Mechanical Movement.-April 28, 1868.-The motive levers have straps attaebed to the peripheries of the loosely turning wheels. A belt extends from the same point of the peripheries to pulleys whieh turn on a eountershaft in one direction, but are eonneeted to the said shaft by pawl and ratehet, to eause the rotation of the shaft when the pulleys are rotated by the movement of the levers. The return rotation of the pulleys when the levers are released is eaused by eoiled springs.

Claim-1. The eombination of the lever I, rope or strap $K$, wheel $C$, rope or strap $L$, and wheel $E$, all as shown and deseribed.
2. The eombination of the wheel E , construeted with the hub $c$ on one side, and having on the other side a parrl $G$ and spring $b$, with the ratehet wheel F , all as shown and described.
3. The cimbination of the wheel E , construeted with the hub $c$, pawl $G$, and springs $b$ and $d$, all as shown and deseribed.

7\%,323.-Granvil Rich, Smithville, Mo.-Compound for Tempering Cast Steel.-A pril 28, 1868.Composed of tallow, $3 \frac{1}{2}$ lbs. ; bceswax, 1 lb. ; sweet oil, $1 \frac{1}{2}$ pint; pulverized sal ammoniae, $1 \frac{1}{2} \mathrm{oz}$. ; street spirits of niter, $1 \frac{1}{2} \mathrm{oz}$. ; and eream of tartar, 1 oz . The steel is hardened by immersion in the mixture while red hot, and the temper is then drawn.

Claim.-1. The eompound, as deseribed, and for tho parposes speeified.
2. The proeess of tempering steel by the use of said compound, as deseribed.
g7,3ఖ4.-CONRAD Friedrich L. Risci, Huntingburg, Ind.-Heliometer.-April 28, 1868.-For ascertaining the solar time in all latitudes, and for aseertaining the latitude when the apparatus is set at noon aceording to the clate. Also, for aseertaining the datc and length of day, sunrise and sunset, other eonditions being established. Also, the differeneas of time between two places, the position of the earth's axis in relation to the level at the point of obserration, \&e., \&e. It does not arlmit of a brief description.

Claim.-1. A heliometer, construeted and ${ }^{2}$ arranged to operate in tho manner herein shown and deseribed.
$\stackrel{\text {. The arrangement of tho northern and southern }}{ }$ polar surfaees on opposite sides of the revolving cube C, substantially as herein shown and deseribed.
3. The revolving dial plates $h$, when arranged within the stationary dial plates $d$ and $c$, and when arranged within the eirele on whieh the degrees of longitude are marked, substantially as and for the purposo herein sliown and deseribed.
4. Tho semi-eylindrieal sun-dial D , when arranged as set forth, and when provided with a gnomon $i$, substantially as and for the purpose herein shown and deseribod.
5. The semi-eylindrieal sun-dial D , when arranged as set forth, in eombination with the donble polar surfaces of the revolving eube C , upon which the dials for the northern and southern hemispheres are respeetively arranged, substantially as and for the purpose herein shown and de seribed.
6. The triangular plate $E$, provided with a hand or pointer K, when connceted with the revolving eube, and when eombined with the semi-annular are $c$, substantially as and for the purpose herein shown and deseribed.
7 . The flange around the plate E , when provided with a hole at on for a ray of light to fall upon the opposite ares, substantially as and for the purpose herein shown and deseribed.
8. The curved bloek $l$, when attaehed to the re-
rolving plate E , and when combined with the are $e$, and when graduated, substantially as and for the purpose herein shown and described.
9. The plate $\mathbb{F}$, when arranged in combination with the cube C and are $e$, all made and operating substantially as herein shown and described.
10. The arrangement of the hour lines, latitnde lines, and diagonal lines on the plate F , as set torth.
11. The plate F, when arranged as set forth, and in combination with the stationary day and night divider $n$ on the are $c$, made as describeil.
12. The plate F , when arranged as described, in combination with the plate E and ares $c c$, and with the cube C, all made and opcratiag substantially as herein shown and describel.
13. The plates E and F , in combination with the sun-dials on the revolving eube C , made as described.
g7,3æ5.-Abrainam K. Sandeles, Brooklyn, N. T., assignor to himself and Join II. Buntis, New York, N. Y.-Heater Range.-April 28, 1868.-Designed to supply warm air to rooms above when the range is not in use for cooking, or while cooking is in progress to direct only the waste heat to the rooms above. Iu the former ease the air which is heated in the orens is united with that in the surrounding casings and carried to the apartments; in the latter case only that in the surrounding chamber is so used. Dampers effeet the changes in direction.

Claim.-1. The arrangement of the flues oo and dampers 7 , at the sitles of the range, in the air space $d$, in combination with the flues $g$, to the ovens $h h$, as and for the purposes specified.
2. The heating chamber $k$, provided with the plates 8 and 9 , in combination with the flues $00, i$, and $p$, and ovens $h h$, the parts being arranged and operating in tho manuer und for the purposes set forth.
g7,326.-Thomas Silaw, Philadelphia, Pa.-Washer-A -A pril 28,1868 . The washer is cut through obliquely so as to form two pawls which engage respectively the nut and the bar.

Claim.-The washer $d$, construeted as described.
 -Boiler upon Stove Pipes.-April 28, 186is.-The first link of the store pipe is made tapering and it is surrounded by an upwardly-flaring water heating vessel.
Claim.-1. The cone-shape pipe $A$, connectel with the ressel S, as shown and described.
2. The inverted conc-shape pipe B, attached to the pipe $\Lambda$, for the purpose set forth, as specified and deseribed.
g7,325.-Patrick, Join, and Fraycis Slevin, New Tork, N. Y.-Whistle.-A Mril 28, 1868.-The whistle is placed in the month with the reed mext to the tectly. The reed is secured around the edpes of the bow but is left free at one edge to the action of the tongue and lips.
Clain.-The combination of the bow-shaped holder and reed, substantially as and for the purpose described.
g\%, $829 .-J a m e s$ P. Smitir, Cherry Hill, Pa.Excavating Telicle.-April 28, 1868.-An amular trough covers the rear side of the whecl, and sparles are arranged to slide radially outward and entering the earth to travel around inside the trough with the earth detached by the spades and the exeavator at the mouth of the trough. On arriving at the top the spades are drame downward by the eceentric, and the earth scraped from the wheel and deposited in the wagon.
Clciin.-1. The combination of the shorels D, prorided with friction rolls, with the eccentric $F$, and Wheel B, said cecentric being adjusted by means of a rod at, and lever II, all construeted, arranged, and operating as and for the purpose herein shown and described.
2. The hollow band C, provided with a scraper K, in combination with the wheel 13 , when said band is adjustable simultaneonsly with the ececntric $F$, by means of the rod $f$ and lever $\Pi$, all construeted and arranged as described, and for the purpose speeified.

97,330.-1. M. Southard and W. J. Hobson, Sarannah, Mo.- Stone Drilling Machine.-A pril 28, 1868.-Tmprovement on their patent, September 3, 1867. The drills are raised successively by the cams which are set spirally on the rotary shaft. On a lower bar are a series of water cans whose contents trickle through a spont to the drill bars. When not in use or moring, a supporting plate is slipped beneath each drill bar.

Claim.-1. The arrangement of the cans $V$ upon the slotted brace $W$, by the bands $z$ and bolts $y$, for adjusting the same to operate with bars L L, as set forth.
2. The slotted plates $x^{\prime} x^{\prime}$, when coustructed and used in combination with the bars $L$ L, for the pur. poses described.
g\%,331.-Thomas S. Speakman, Camden, N. J. - l'ipe Coupling for Railroad Car Heaters.-Amril 28,1868 . - A rigid bell-mouthech tube is attached to one car, and a flexible self packing tube attached to the adjoining car slides into the former forming a coupling joint between the steam or heated air passages of the cars in the railroad train.
Ciaim.-1. A pipe F, haring a bell mouth at one end, arranged beneath a car as described, and adapted for the reception of a flexible tube $G$, which communicates with a rescrvoir beneath another car, and slides in the pipe F , all as set forth.
2. The reservoir B, communicating with the tubes II and $G$, aud haring a recess for the reception of a coupling pin D, substantially as specified.
g7,332.-II. C. Storrs, New York, N. Y.-File Handle-April 28 , 1868.-The shank turns in the capped ferrule and is screrred into the nut, which in turn screws into the socket.

Claim.-The internally and externally threaded nut C , in combination with the chambered handle $\mathbf{A}$, for holding the shank $c$ of the tool B, substantially as specified.
77,333.-Augustus Thayer, Allany, N. Y.Combined Sercen and Shovel.-April 23, 1868.-The bottom of the scoop is removable to expose the sereen.

Olaim.-1. A combined scoop and sereen, provided with a remorable bottom or slide, and a remorable or sliding sercen, arranged in the manner substan tially as showra and deseribed.
2. The llap or door C, arranged with a spring tc operate in the manuer substantially as and for the purpose specifici.
3. The combination of the serecn and remorable bottom with the flap or door C, all constructed, arranged, and applied to operate in the manuer substantially as and for the purpose set forth.
g\%,331.-R. S. Titcomb, Gloversville N. Y.Folding Bedstead or Crib.-April 28, 1868. - Improvement on his patent, December 17, 1867. The parts are hinged so as to bo folded together when expanded, a bar piroted to the central portion is brought into horizontal position and interlocks with plates on the posts.
Claim.-1. The combination of the plates F , attached to the bars D of the bed frame, with the plates E, sceured to the posts A, substantially as herein shown and described, and for the purpose set forth.
2. The combination of the plates $F$, attached to the bars D of the bed frame, with the plates G , secured to the stationary part C of the end boards, substantially as and for the purpose specified.
g\%,335.-Frederick Traub, Philadelphia, Pa. -Operating the IIarness in Looms.-April 28, 1868. -The harness is operated by an upper and lower series of levers which are actuated by cams on two shatts above and beneath the upper series of levers so that the motion is steady and positive.

Clain.-In the combination with the frame B F, the npper and lower series of levers, and the mechanisu for operating the same, arranged as hercin set fortlo and described.

77,336.-Joshua Turts, Athens, Olio.-Steam Pumping Engine.- April $\lesssim 8,1868$.-The piston rod is tubular, and a plunger secured to the rear head of the cylinder traferses the pistou and oceupios the
hollow portion so as to eause the alternate injection into and ejection of water therefrom. The eavity of the rod communicates with a valve chamber in the cross head, and the said ehamber communicates with the tubular plungers of the induction and eduction ports of the feed-water pump of the boiler.

Claim.-The provision, in a steam cylinder, of the hollow piston and rod $\Gamma$ and $B$, communieating with the feed water of the boiler, in the described combination, Witl a stationary plag C , substantially as set forth.
my, 3:3g.-E. D. Tyler, Gibson, Pa.-Fclloc Dowel Pin.-April 28,1868 . -The contacting facos of adjacent felloes are united by a tubular metallic dowel.

Claim.-A tubular metal felloo dowel pin, employed substantially as herein described.
gy, 33 3.-Henry S. Vrooman, Boston, Mass.Support for Passengers in Cars.-April 28, 1858.Tho ends of the strap are held apart by a spreader, or the strap is cut suffieiontly wide at top to give it an extended bearing.

Claim.-A double-acting flexible passenger support in horse railroad cars, constructed substantially as and for the purpose heroin shown and doscribed.

7\%,339.-Challes Walker, Chester, Vt.-Bed Bottom.-A pril 28, 1868.-The longitudinal slats are attached to spiral springs which rest removably in two cross bars near the ends. Each of the cross bars is connected at its middle to an upturned transverse spring upon whose ends it rests through medium of spiral springs.

Claim.-The spring bed bottom, construeted as doscribed, and consisting of the transverse suppoits C, spring eross slats D, blocks E, springs B F, slotted slats $A$, and loose cross bars G, provided with pins H , all construeted, arranged, and operating substantially as and for the purposes specified.
\%ey $840 .-$ J. T. Wheeler, St. Charles, Ill.Washing Machine.-April 28, 1868.-The stirrer has reeiproeating rotation by a horizontal pinion at its top which is engaged by a vertical segment gear oscillated by a lever.

Claim.-A washing machine, consisting of the box $A$, lever $F$, gear wheel $C$ and $D$, and stirrer $E$, prorided with the spreading pin e, when construeted and arranged as herein described and for the purpose set forth.
g7,341.WILLiAM J. Woodside, Zanestille, Ohio.-Animal Irap.-April 28, 1868.-The bait is upon a barbed hook insido a hole througl whieh the animal reaches to seeure the bait. The bait look is upon the arm of a roek shaft eonnected to the trigger rod so that when the bait is drawn forward the trigger is withdrawn and the woight shaft makes one rotation, throwing down the portcullis and raising it again.

Claim.-1. The combination of the perforated plate D, knives L, sliding block J, connecting rod I, crank $H$, and skaft $E$, with each other, whether said shaft is operated by a weight or spring, substantially as herein shown and deseribed, and for the purpose set forth.
2. The combination of the bait hook N , short shaft $o$, erank P , and trigger bar Q , with each othor, and Tith the eam M upon the shatt E, for the purpose of tripping the trap, substantially as hercin shown and described.
3. The eombination of the bent or hook lover R with the cam $M$ and trigger bar $Q$, for the purpose of setting the trap, substantially as herein shown and described.
 Sugar Pan Derrick.-April 28, 1868.-The loisting cord is attached to a frame from whose four corners depend hooks for engagement of the rings at the eorners of the pan. From the eonter of the framo arises a sliding upright whieh passes through the derriek to steady the frame.

Claim.-1. The steadying staff $G$ and frame a $b b$, substantially as shown and deseribed, in combina-
tion with the eord I and derriek A B D, all as and for the purpose set fortly.
2. The block E, bearing the pulley e, and lield botween the arms $B$ of the derrick, when said bloek is slotted for the passage of the rertieal bar G, which steadies the pan as it is elevated by the cord I, as herein shomn and described.
3. The arrangement of the steadying bar $G$, frame $a b b$, pulley $e$, slotted block E , arms B , and elerating cord I, with relation to the derrick A D, whereby a series of pans in a row is elevated in a rertioal line without removing the derrick, as herein shown and described.
grg, 313.-ROBERT ALEXANDER, Eugene City, Oregon.-Medical Compound.-April 28, 1868.- For treatment of cancer, composed of ist. Caustie potash and chloroform in form of ointment. 2d. Caustic potash, 75 grains ; nitrate of silver, 25 grains ; to which is added a mixtnre of chloroform, 75 , and nitric acid, 25 parts. 3d. Decoetion of poke evaporated to a salve. 4th. Potrdered Indian turnip.
Claim.-The combination of the foregoing mixtures of medieines, to be used for the cure of cancer in the human systom.
gy, 344.-Willitam H. Andrews, New Haren, Coun., assiguor to Burton Mallory, same place.Attaching Door Knobs to Spindles.-April 28. 1868. - A portion of one edge of the spindles is flatted off, making a surface for the end of the set serew to impinge against as the knob is set ont or in.
Claim.- Forming lupon one angle of the spindle a flat surface parallel with the axis of the spinclle, combined with a set screw in the neok of the knob, so as to sceure the knob to the spindle, substantially as set forth.
gy,345.-David M. Bailey, Carlisle, Pa.Wagon Brake.-A pril 28, 1868. - The rubber blook is held between the clamping jaws that are dramn inward upon the block by insertion into the $V$-shaped mortise in the bar.
Claim.-The manner of securing rubber blocks to a bar in a wagon brake, substantially as speeified.
gy, 346.-SELDON A. BaILEY, Woonsocket, R. I., assignor to Bailey Washing and Whivging MaCHNE COMPANy, same place.-Wringing Machine. -April 28, 1863. -The peenliar form of the flanged teetli is for the purpose of enabling them to adapt themselyes to the variation of distanees between the eonters of the rolls as elothes pass betwoen the latter. The flanges keep them from engaging too deeply. The adjustment of the rods which stiffen and support the rubber covering of the rolls is to give them dirmness and elasticity without endangering their breaking.

Claim.-l. Flanged toeth, with their extremities enlarged, and nearly eireular in form, and with shanks diminishing tomard the hub, substantially as shown and deseribed.
2. A gear having a separate flange on each tooth, as and for the purpose set fortll.
3. The collars D, construeted to admit and retain the stiffening rods of the rolls, substantially as described.
4. The stiffening rods $d$, so fitted and held in tho collars so as to allow end play, substantially as and for the purpose set forth.
ga, 34\%.-Albelit B. Bean, Now Haven, Conn assignor to limself and W. T. Schanton, same place. -Nret Jachine.-April 28, 1868.-Improrement on his patent, March 19, 1867. A spring is placed upon the face of the eam to insure the making of a perfeet nut when the metal is rather small in quantity, and to give way when a surplus of metal enters the mold and thus prevent the fiactire of the machinery.

Claim.-Tle arrangement of a spring or springs $f$ upon the face of the eam, so as to yield at the point of pressure, and relieve the strain upon the machine, substantially as herein set forth.
ge, 3ss.-Willlam E. Beman, Portland, Me.Jib Boom.-April 28,1868 . -The jib boom is hinged at its rear end, and held by a hinged strap to the fore end of the bowsprit so that the strap may be loosened
and the boom raised into a vertieal position without diseonnecting the stays.

Glaim.-The jib boom a, when hineed to the bowsprit in the manner herein sot forth, and for the purpose specified.
\% \% $349 .-E l i J a i l$ W.Bigelow, Woreester, Mass. —Spit for Roasting Mcats.-A pril 28, 1868. -The frame supports the dripping pan and its standards hold the spit, which has a square shape at one of its bearings so as to hold its position eren though the meat be not balaneed. It is slightly raised before turning it.

Claim.-1. The frame A, with standards C C', constructed as deseribed, so as to reecire the dripping pan $B$, and support the spit $D$, for the purpose set forth.
2. The spit D, provided with the reetangular portion $h$, in eombination with the slot $i$, of proper size to-fit said rectangular portion, as set forth.
3. The detachable standards $\mathrm{C}^{\prime}$, construeted as described, in combination with the lugs $a \alpha$, as and for the purpose set forth.
'gy, 359.—JOHN W. Blake, Jefferson, Wis., assignor to himself and Amaziair T. Howes, same place.-Sled Kinee.-A pril 28, 1868. -The bench and runner are connected to the upright and the inclined brace; additional plates resting upon the sole and boneath the bench.

Claim.-The metallie sled knee, consisting of the upright $A$, and brace or braces 13 , with their extensions $a, b$, and $x$, each made and arranged as described, and combined with plates $D$ and E , in the manner herein shown and speeified, the whole arranged and operating as and for the purposes set forth

197,351. - John M. Blessing, Jeffersomville, Ohio.-Corn Planter.-A pril 28, 1868.-The seed cavity is made through the boss, near the middle of the seed slide. The slide plays between an upper and lower pair of anti-fiction rollers.

Claim.-The arrangement of a reciproeating feed bur, $J$, having the boss $j$, in eombination with the rollers I $I^{\prime} G G^{\prime}$, and openings $h$, as and for the purposes set forth.
yg, 352.-Caleb F. Bradlet, Coatesville, Pa.-Clurn.-April 28 , 1868. - The air colleeted in the buckets is forced through the air flues and beneath the eoverings to mingle with the cream.

Claim. - The construction of flnes or passages of eseape for the air from the buckets or chambers, with the projecting eovering for the mouth of the flues, as and for the purposes herein deseribed and set forth.

78, $353 .-T a m u s$ Brown, Portland, Mich., assignor to himself and T'MEOVOLE IB. If UBBARD, same place.-Reel.-A pril 28,1868 .-The frame is clamped to a table edge; the reel shaft may be put in rertieal position to aet as a swift, or placed horizontal to act as a reel. In the latter case a worm mpon the shaft turns the snap meehanism.
Claim.- The combination of the adjustable sleeres H and J, arms L, bars M, braees $N$, bar D, having a serew thread, F , and being hinged at C with the holder A, wheel F, and spring $G$, all construeted and arranged substantially as and for the purposes described.

77,354.-J. C. Center, Bath, Ml.-Adjustable Marrow.-April 28, 1868. -The lateral bars are hinged to the eentral bar, and the outer bars on each side are also hinged. By adjustment of their linging point upon the eentral bar, the width of the harrow is regulated.

Cluim.-1. The harrow, consisting of one or two dionght beams, $\Lambda A^{\prime}$, and frame beams $B B^{\prime}$ and $C$ $\mathrm{C}^{\prime}$, linged together as deseribed, and arranged and operating substantially as set forth.
2. The hinges $\mathrm{D} \mathrm{D}^{\prime}$ and $\mathrm{G} \mathrm{G}^{\prime}$, construeted as deseribed, in combination and conncetion with the parts of the harrow, substantially as herein described and speccified.
\%\%, $355 .-B$. D. Choate, Springfield, Vt.-Mop Wringer.-April 28, 1868. The bars are pivoted
together, and one of them looks orer the side of the bucket. The pressure of the foot on the upper bar brings the two together, and closes the rollers against the mop.

Claim.-The bars $A$ and B, piroted together, and eurred as represented, bar $\Lambda$ being provided with the hooks $d d$, and the two used in combination with the rollers C and D and a mop-pail, as and for the purpose set forth.

77,356.-W. B. CoAtes, Philadelphia, Pa., assignor to Dayid Liman, Middlefield, Comm.-Starching Apparatus.-April 28, 1868.-The stareh is inclosed in a portable case, having a soft bottom which serves as a strainer. By rubbing the porous surface orer the limen the stareli is uniformly distributed.

Claim.-The starching device herein described, consisting of a rigid ressel $A$, elosing means L , and a strainer $C$, construeted and adapted to operato substantially in tho manner and for the purposo herein specified.
gry,357.-ANDHEW J. Cocirañ, Indianapolis, Ind.-Tenoning Chisel.-April 28, 1868.-Tho two elisels are counected by steady pins and a key to the stoek, and are adjusted into exact parallelism by two right and left-lianded set screws.

Claim.-The combination of the bits B B with tho stoek A C, key D, and right and left serews E, when constructed and arranged to operate substantially as deseribed.

197,358.-Dantel C. Coldry, Washington, D. C. assignor to Josian IIUMPIrery, same place.-Dust Pan.-A pril 28, 1868.-The dust is swept up the inelined plane, falls into the box, and then the ineline is brought over to form a lid.

Claim.-A dust pan, provided with the part B, so arranged as to serve for the incline on which to reecive the dust, and also as cover to the box part $A$, for the purposes specified and set forth.

197,359.-Lewis Colwell, New York, N. Y.Talve for Sugar Pans.-April 28, 1868.-The valre ehest is globular, and has an opening at one sido with a poppet valre. On a continuation of the valve stem is a plunger, which breaks the erust of sugar accumulated in the neek of the pan.

Claim.-1. In combination with a sugar pan, a ralre, inclosed in a globular chest, arranged so as to concentrate tho sugar into a solid stream as it issues from the chest and pan into the receiver.
2. The use of a poppet valve inclosed in a chest, in combination with a sugar pan, substantially as described.
3. The use of the breaker $c$ on the end of the walre stem, to break the crust of the sugar, and clear the neck of the pan or nozzle of the valre chest, and allow a free exit for the sugar, substantially as doseribed.
4. Arranging the valyo stem guide $e$ in the ehest, substantially as deseribed, by which it, the ralvo stem and breaker, can be removed out of the chest, by simply taking out the serew in the end of said ralre stem guide.

77,369.-Jonn B. Cook, Lyons, Iowa.-Wagon Brake.-April 28, 1868.-When the team holds baek on the neck yole, it vibrates the lever on the end of the tongue, and draws npon a rod beneath the tongno, whiel brings the brake into action. When the team pulls on the doubletree, a chain relieres the pressure of the brake on the wheel.

Claim. - Tongue C, yoke piece B, lever A, rod K, chains L L and O O, lever J, brakes H H, and doubletree $D$, all arranged and operated as and for tho purpose described.
rgy, 361.-George Crompron, Woreester, Mass. -Loom.-A pril 28, 1868.-Instead of fixing the hand lever of the shipper in plaee by notches in its slotted guide pieee, it is held by a horizontally turning spring lateh, having at its inner end a segment gear, which meshes with a raek bar, having at its outer end a fork straddling the slipper lever. When the lever is thrown out, the above mechanism causes the latch to swing back. To enable the shipping to be effected at either end of the loom, the lack bar
is comnected by a rigid bar to a hand lever placed at the opposite site of the frame.

Claim.-1. In eombination with the shipper lever, the swing latch $t$, arranged to hold the lever in position, substantially as set forth.
2. In combination with a swing latel for holding the shipper lever, the fork $x$, raek gear $w$, and segment gear $v$, operating together, substantially as deseribed.
3. Combining the shipper lever lateln meehanism with the hand lever $z$, at the opposite end of the lowm, substantially as and for the purpose set forth.
4. The shipper fork, mornted on the roeking arm, and conneeted, substantially as deseribed, witl the shipper lever.
g\%,369.-T. J. Crow and G. Sanderson, Frederieksburg, Ohio.-Drier.-A pril 28, 1868.-The box has drawers for the fruit, and is heated by fire in the tubular furnaee below.
Claim. - The metallic furnaee $\mathrm{B}_{\text {, when }}$ made eylindrieal on its upper face, and tapering from its mouth to the smoke pipe C, and arranged under the box A, with its drawers and ventilating openings, whereby the flow of heat to the fruit is equally distributed, in the manner as speeified.
ryy,363.-Joserif Dalton, Brooklyn, N. Y.Finitting ALachine.-A pril 28, 1868.-By the retion of the jacquard eards or plates, the point slides reeeire a reeiproenting motion toward and from the needles in addition to their tilting and traversing motion, in suel a manner as to faeilitate the narrowing of the knit fabrie. The special details cannot be enumerated within admissible limits.
claim.-1. The point slides C C, arranged in a tilting frame $\mathrm{C}^{1}$, and reciproeated toward and from the needles by the direet aetion of the jaequard plates, substantially as and for the purpose deseribed.
2. The spiral stop A, with its ratehet gear or equivalent, operating with the thread guide and needles, as deseribed, in combination with jaeqnard cards B B and point slides C C, coutrolled by said cards for the purpose of narrowing the goods, substantially as herein speeified.
3. The ratehet cam $D$, in combination with the spring guide F, stationary parwl (r, and pawl H, substantially as and for the purpose herein set forth.
4. The suspended reciproeating parrl H , in eom. bination with the ratehet eam $D$ and spiral stop $A$, and its ratehet wheel $I$, substantially as and for the purpose herein described.
5 . The perpendieular slide bar $J$, operated by the shoe K and eam L , or their equivalents, and aeting in eombination with the thread guide $\mathbf{M}$, and moving, by means of its pawl H, the spiral ratehet, all snbstantially as herein deseribed.
6. The sliding thread guide, attached to the regular thread cuide, in eombination with the horizontal lever, which aets direetly on the upright slide thread guide, and is operated by the upright shaft that drives the spiral ratehet gear, substantially as and for the purpose set forth.
7. The point slide traverse stay bar $S$, turning in eontact with the point slides in the direction opposite to its formard morement, substantially as and for the purpose herein set forth.
g7,364.-F. Demma, Bridgeport, Conn., assignor to Jorin B. Atherton and Henry a. Whleler, same plaee.-Horse Hitching Device.A pril 28, 1868.-The ring or strap is held in the hook by the spring, which forms a mousing.

Claim.-In combination with the hook A, formed upon the plate $B$, the spring C , having one end fixed and the other bearing upon the surface of the plate and eurved so that the surface of the spring bears apon the end of the hook, and so as to elose the same in the manner deseribed, and with this combined the ring D , as and for the purpose speeified.
g\%,365.-Rufus A. Fisir, Woreester, Mass.Fish Hook.-April 28, 1868. -The line is secured to the hook by a loop bend near the end of the blank portion, so as to turn the hook sideways when pulled upon.

Claim.-1. The method of adjusting the line to the hook, as slown in Fig. 3.
2. Leaving the end of the wire A in such position that by pressure it will turn the point of the hook C either up or down, eausing it to hook the fish either in the upper or lower jaw, thus orercoming the diffeulty of the old-style hook, whielh often slips flatwise from the mouth of the fish withont hooking, construeted substantially and for the purpose shown and deseribed.
gg, 366.-Andrew Flannigain, Trappe, Md.Ice Dreaker.-April 28, 1868.-The finger beams being in adrance rest upon the ice, and keep the saw tectl in the required position upon the upper and under surfaces of the ice. The eake is then raised by the double ineline and broken, or laterally displaeed so as to leave the eanal open. The apparatus is attached to a frame placed in front of the bows of a steamboat.
Claim.-Projecting finger beams D D , combined with the front edge $w$, of an inelined frame A, on either side thereof, and with errt ting-blades arranged at their intersection with said frame, and operating to eut the iee on the upper and lower sides thereof, all substantially as and for the purpose herein set forth.
ga, 369.-Ratsom Fleming, Vietory, N. Y. Double Sliding or Turning Gate.-A pril 28, 1868.The traveler grasps the cord suspended from the post, and draws open the gate which slides on rollers. After passing through, a pull upon the cord on the other side of the gate eloses it. The cords run over pulleys supported by posts.

Claim.-1. In combination with said gate, and as a component part thereof, the pulleys $O$ and $T$, and the pulley $Q$ in the stand $R$, as above set forth.
2. The fire posts, in combination with the cords W and cords $A^{\prime}$ and $B$, when all are construeted in the manner used as and for the pnrpose specified.
g\%,368.-Jacob J. Fouts, Midaletomn, Ohio. -Machine for Slaughtering Hogs.-April $28,1868$. -One end of the sealding platform is adjustably hinged to the windlass frame, and the other is plaeed on the edge of the scalding tub. The windlass cord has a hook by which the hog is raised.

Olaim.-The construetion, eombination, and arrangement of the frame $A$. $B_{2}$ extended rails $\mathrm{C}_{2}$ pulley supporter E , with the adjustable platform I and windlass $H$, in the manner and for the purpose deseribed.
g7,369.-Martin Gardner, Sr., Carlisle, Pr. -Expanding MIandrel.-April 28, 1868.-The radial gibs of an expanding mandrel are mored ont or in by an interior serew shaft and inelined planes operated from the exterior of the mandrel.

Claim.-In eombination with the mandrel for ehneking wheels, pnlleys, washers, and other articles, the arrangement of the radial "gibs" and their inelined planes, the longitudinally moving serew eylinder and its inelined planes and the serew D , all constructed and arranged as deseribed.
-g7,390.-Geonge F. Green, Kalañazoo, Mieh. -Pneumatic Tooth Burr and Drill.-April 21, 1868. -The engine ease contains two counterpart pistons Which rotate together by the aetion of compressed air, and the spindle Thich forms one of their shafts is extended to receive the burr or drill that is serewed therein.

Claim.-1. The combination of a rotary engine, operated by means of eompressed air, with a burr and drill, in the manner and for the purposes set fortlı and deseribed.
2. The mode of attaching the burr or drill to the holder in eombination with an engine, as set forth and deseribed, in the manner and for the pnrpose speeified.
3. The mode of attaching the barr or drill holder to the shaft of the engine, in the manner and for the purpose speeified.
4. The combination of burrs or drills, rotating in one direetion with an engine, as set forth and deseribed in the manner and for the purpose specified.
gog, 3g1.-C. S. S. Griffing, Unionville, Ohio.Portable Fence.-A pril 28, 1868. The frame ronsists
of a sill, two posts, tro braees, and an ujper tie piece; and on a hill side the former is oblique with the posts while the braees are of unequal length.
claim.-1. The post for a portable fence composed of the pieces $\perp, B, C$, and $D$, arranged in relation to one another, substantially as and for the purpose set forth.
2. The post when constructel with side braces B $\tilde{\mathrm{B}}$ of unequal length, and an inclined sill pieee, $A$, substantially as set forth.
g7,398.-Bexjamn F. Hancock, Monroe, Wis., assignor to himself and Chables A. Lytle, same place.-Animal Trap.-April 28, 1868.- A descending part of the floor is comnected to the trigger so as to cause the descent of the door when the animal steps upon it. The trap is reset by the entrance of the animal into the inner chamber.
Claim. - The door $\mathrm{J}^{\prime}$, rod or trigger $h$, spring $m$, platform G, and rods $d$ and $e$, all constructed, arravged, and operated substantially as and for tho purpose described.
g\%,373.-Dexter D. Hardy, Cincinnati, Ohio, assignor to Hexry J. Behrest, Hexry C. and EdTramd Dant, Ner York, N. Y.-Rotary Engine. A pril 28,1858 . Each piston is a portion of an annulus, revolving in an annular space between the stationary, inner, concentric block, and the outer case. The central blocks are recessed on the appproaching sides to complete the amular piston way. The pistons are attaceed to disks, Which are upon the sliafts, and turn in recesses of the head of the ease.

Claim.-1. The concentrie fixed hubs, recessel substantially as deseribed, in combination with the two geared shafts, their attached pistons, and the crlinder or case, substantially as set forth.
2. The pistons attached to the facing sides of the two disks: secured to their respective shafts, and so arranged that the piston or pistons of one shaft work against the face of the disk of the other shaft, substantially as herein described.
g7,374.-Sinas Hewit, Sencea Falls Village, N. Y.-Flour Pucker.-A pril 28, 1868.-The barrel is placed on the follower, and being raised by the cam is allowed to descend suddenly to jolt the flou together.
Claim.-The eombination of the weighing receiver T, provided with its hinged botfom, the rertical shaft E, follower D, and eam G, all constructed, arranged, and operated substantially as and for the purposes herein set forth.

7\%,3g5.-David Micks and Sidaex Doty, Pontiac, assignors to themselves Jerome B. Sweetlaid, Charles E. Abams, Shauel N. Brosson, and Alonzo Batrbour, Oakland, Mich.-Rafter Hook for Hoisting Apparatus.-April 28, 1868.-The lerer is fulerumed to the lower end of the hook, and its upper end lies up the ontside of the other hook bar so as to hold them firmly inward by the action of the weight suspended from the lower end of the lever.
Claim. -The combination of the hooks $A$ and B with the lever D, the latter constructed as described, and piroted betreen the plate C and lower eud of the hook $A$, in such a manner that its outer end is extended up the side of the hook 1 , and made to foree said hook against and penetrate the rafter as specified.
\%7,376.--L. B. Hoit, Ceclar Falls, Lowa.-ITilk ing Stool and Pail Holder.-April 28, 1868.-The milking stool has a forwardly projecting arm, which bears a circular frame into which the pail is set.
Ctaim.-As a new article of manufacture, a combined milking stool and pail holder, constructed substantially as described.
g\%,bร7.-W. W. Horton, Katomal, N. Y.Rack for Hats and Dishes.-April 28, 1868.-The pegs on the frame, when it is laterrlly expanded, may receive articles of clothing. When the frame is collapsed the pegs are brought near together and into line so that they form slielves or a support for shelves.
Claim.-The combination of tho feet A , standards

B slotted at E, and an expansion frame, composed of divisions D jointed to eaelh other, and haring parallel rods 12 , as speeified.
g\%,378.-TV. Storer Mow, Cineimnati, Ohio.-Tial.-April 28,1868 ; antedated April 22, 1868. The vials are intended for liquids drawn in small quantity at a time, such as scents, hair oil, or the stronger medieines.

Claim.-Providing the neek of a bottle, vial, or jar with one or more apertures id $d^{\prime}$, which are so located as to be closed wheu the cork or stopple is completely inscrted, and to be opened when the said stopple is partially withdrawn, as and for the purpose herein described and set forth.
ga, 379.-A. Y. Hubbeld, Elmira, N: Y.-Man ufacture of Sad Irons.- A pril 28, 1868.-Improrement on his patent, Oct. 1, 1867.- The top or hollow portion is cast with rivets, to which is cast the bottom part of the iron, the chamber being filled with a non-conducting substance.
Claim.-Casting the top or hollow parts with rirets, upon which is east the lower part of the iron, the interrening space or chamber being either supplied with a filling or a ractum, created substautially for the purpose deserihed.

79,380.-Josiail Humphery, Washington, D C.-Sad Iron Holder.-A pril 28, 1868.-Thiee slips of metal, punctured and roughened as a grater, are backed by pasteboard, which is covered by two or wore thicknesses of cloth.
Claim. -The combination of the three pieces A B A, linel with pasteboard, or some other non-conductor of heat, punctured and made rough on their under surface, and riretel to a covering of eloth on other cheap material, for the purpose of holding and landling flat-irons, tailors' irons, and for use abont stores, ranges, furnaces, forges, \&e., the whole being constructed sulstantially in the manner and for the purposes described.
g',381.-A. G. IUnter, Flint, Wales.-Manufacture of Carbonate of Soda and Potash.-April $: 28,1868$. The sulphate of soda or potash is mixed with a solntion of bicarbonate of lime, whereby sulphate of lime and alkaline bicarbonate are produced.

Claim. - The process of converting sulphate of soda or sulphate of potash into the corresponding carbonate by double decomposition with bicarbonate of lime, substantially as described herein.
g7,388.-Mosea B. Hurd, Aurora, Ill., assignor to himself, Jonn N. and Suruel IUurd, same place. Carriage-Pole Support.-April 28, 1868.-Bencath the tongue is a spring bar, whose rear end rests in a soeket in front of the axle, and the front bears, by a spring, against a bracket on the tongue, to keep the latter clevated.

Claim. -The combination and arrangement of the tube $b$, spring $e$, bar F , spring $d$, shonlder $h$, and lip $y$, with the asle B and pole $\Lambda$, in the manner herein set forth.

7\%,353.-Georgry L. Jones, Chicopec, Mass.Bread Cuiter.-A April 28, 1868.-The kinife has a pin near its half, which travels in a guide groove, while the end of the blade is free to protrude beneath the bar which forms the fulcrum. The adjustable guide determines the thicliness of the slives.

Claim.-1. The combination of the knifo B, having its end free, with the eccentric gride C and projecting plate $D$, substantially as and for the pmrpose described.
2. In combination with the device above claimed, the reversible gange, consisting of the piece $G$ and pins $f$, arranged as described.
g7.3S4.-II. A. Kerinart, Fletcher, Ohio.Flood Gate-A pril 28,1868 .-The posts are hinged at their foundation, but remain vertical nuder ordinary circumstances. The gate is fastened by staples to the post, and slips up and down thereon with the changes in the depth of the water, so as to arrest massiug drift. The hinged board opens under pres. sure, to allow passage of water.
claim.-The hinged posts $\Delta \mathrm{A}$, in combination
with the sliding gate $\mathrm{B} c$, and the valve C , in the manuer and for the purpose set forth.
gga,385.-Jamics L. Knick, Lexington, Ill.-Implement for Extracting Hedge Plants and Weeds.April 28, 1868. - The two jaws are hinged at their rear euds, and are forced apart between the hand aud the jaws by a helical spring. The jaws are padded with rubber, to preveut injury to the young plants.

Claim.-1. An instrument which is adapted for the extraction of plants and weeds, consisting of handle portions $a$ and jaws $b b$, united together by a spring strap $g$, and provided with a slotted strap $d$ and spring $e$, substantially as described.
2. In such an instrument, the elastic lining $g^{\prime} g^{\prime}$ applied to the jaws $b b$, substantially as described.
ga, 386.-Andrew F. Lapiam, New York, and Frank E. Pratt, Mott Haren, N. Y., assighors to Malcom C. Turner- Clothes Wringer- April 28, 1868.-The four compressing bars are held together by two swivel links, aud have, at their forward ends, two wringing rollers, and at their rear ends two rubber balls, whieh aet as springs and yield to pressure as the rollers are partef by passing clothes. Thumb nuts on the bolts of the swivel links adjust the pressure.

Claim.-A clothes wringer, eomposed of the compressing bars $A B$, link C , with its thumb nut a, springs E E, and rollers D D, all constructed, arranged, and operating in the manner aud for the purposes hereiu specified.

7\%, $38 \%$ - Whliam H. Laubach, Philadelphia, Pa.-Talve for Gas Engines.-April 28, 1868.-The engine is driven by an explosive mixture of air, 90, and gas, 10 parts. The air lias adjustable flow into the mixing chamber. The gas passes beneath a valve when the same is raised by eams upou a sleeve which has longitudiual adjustment on a prismatie shaft, from which it has motion. The cams aet upon a shoulder of the vertical valve stem. The eams gradually narrow from end to end, so that the amount of gas is regulated by the position of the eam sleere upon its motive shaft.

Claim.-The deviees herein described, eonsisting of the sliding sleeve $m$, prorided with the cams $k$, constructed as deseribed, the lerer $n$, shaft $l$, valre $d^{\prime}$, and stem ( $d^{\prime \prime \prime}$, with its tooth $k^{\prime}$, for regulating the flow of a combined eurrent of gas and air, alternately with air alone, into the cylinder of a gas engine, in such a manner that the former current shall continue to flow until the elosing of the induetion port and the moment of the ignition of said gas, substantially as described.
g\%,388.-John A. and Reuben Lighthall, Brooklyn, N. Y.-Manufacture of Glue.-April 28, 1868.-The spissated glue is placed in a tank beneath two vertieal flues. An endless belt carries a number of metallic plates projeetiug rectangularly from it, and is so hung that the plates become immersed in the tank and earry a eoat of the same around, up one flue and down the other. In the first flue the glue is subjeeted to an upward blast of eold air, and in the other to an upward blast of heated air. The latter completely dries the glue and causes it to separate from the metallie plates and fall into the diseharge trough.

Claim.-1. The combination of the series of plates with the belt and driviug pulleys, as and for the purpose set forth.
2. In eombination with the series of plates, attaehed to the belt, as before named, the arrangement for blowing a blast of eold air on the said plates after they hare been dipped into the reservoir, for the purpose of preventing the drip from the same, so that the glue attaehed to the plates shall be preserved of an equal and uniform thiekness.
3. In combination with the serics of plates, attaehed to the belt, as before named, the arrangement for blowing a blast of hot air on the said plates on the descending side of the apparatus, for the double purpose of remoring from the glue attached to said plates any moisture that may remain in it, and for removing the fiuished glue from the plates, as set forth.
gy,389.-William Menry Lockwood, Brooklyn, N. Y.-Ventilating Show Case.-A pril 28, 1868. -The show case for vegetables, fish, \&c., has perforated sides and bottom, and a drip drawrer.

Claim.-1. The combination, in a show case, of the ventilating sides or walls $\mathbf{A} \mathbf{A}$, with the vertical partitions C C parallel to a transparent front, E , substantially as and for the purpose specified.
2. A false bottom B, and a sliding pan F, in combinatiou with a show ease with ventilating sides or wails A A and vertical partitions C C, substautially as herein described and specified.
g', 390.-Austin Z. Mason, Adriam, Mich., assignor to himself and Richard B. Robeits, same place.-Vise.-April 28, 1868.-The moving jaw is ball-jointed to the standard so as to accommodate itself to the wedge-shaped object.

Claim.- -1 . The adjustable ring C , constructed with oblique faces $x y$, and a handle $h$, for turuing it on its axis, to adapt it to impart any desired set to the face plate $D^{\prime}$, in the manner and for the purposes set forth.
2. In combination with the adjustable ring $C$, the washer plate $B$, and the face plate $D^{\prime}$, with its spherieal bilge $\mathbf{D}$, all constructed in the manner set forth and described.
g\%,391.-John M. Max, Jrnesville, and Wreslow M. Colton, Stoughtou, Wis.-Mop Wringer.April 28, 1868. -The wringer has two loose rollers and is clamped upou the bucket top by two thumb screws. The moviug roller is brought in contact with the other by a treadle bail.

Claim.-The combination of the base B , and lever E, with rollers C D and thumb screns $F$, substantially as and for the purposes specified.
g7,392. - William McKee, Neponset, IllSignal Box.-A pril 28, 1868.-Intended for displaying day or night signals, by operation from a distanee. The flag or lautern is contained in a tube and suspended by a cord whieh lowers it into a position where it is visible, or withdraws it from sight into the tube. A guide bloek runs on ways in the tube.
Claim.-1. The combination of a box, M, tubes C D, provided with ways H, bloeks E F, with lips e f, eords and pulleys I I, arranged and operating as and for the purposes set forth,
2. The eombination of the box M, tube C, block E , eord and nulley I, and the rentilator or draught-indueer for the lautern, arranged as described, and for the purposes specificd.
3. Providing the tube C with a glass, or its equivalent O, wheu used in combiuation with the bloek E and lantern, iu the manner and for the purposes set forth and shown.
4. The eombination of the box M, tubes CD, guides H, blocks $\mathrm{E} F$, with their lips $e f$, eords and pulleys II, ventilator I , and glass 0 , all arranged and operating in the manner and for the purposes specificd and set forth.
g\%,393.-Thomas McLaughlin, Millville, N. J.-Shield for Nipples.-April 28, 1868.-The eap may be of horn, and the nipple slield is a fine elastic perforated membrane of India-rubber.
Claim.-The shield or eovering A, with the small holes B, in combination with the cap C, constructed and arranged as and for the purpose set forth.
g\%,394.-Georae Meader, Prairie Centre, 71. -Corn Harvester:-April 28, 1868; antedated April 19, 18f8. - The machine may be attaehed to the side of an ordinary ragon or may be used singly, and is intended to piek and lusk the ears of corn, and deliver the same into the wagon. The stalks pass between the gatherers, the ears are severed by the knires, and the husks torn off by the spur-faced disks.

Claim.-1. The combination of gatherers $\mathfrak{J}$, cuttcrs $n$, aud piekers I, arrauged and operating substantially as and for the purposes set forth.
2. The eombination of said gathering arms $\mathcal{J}$ with a roek shaft, L, or its equiralent, for rendering said gatherers adjustable, substantially as deseribed and set forth, and for the purpose of adapting the machine to corn of different heights.
3. Proriding said gatherers with the partitions $m$, substantially as and for the purposes set forth.
4. Providing said gathering fingers $J$ with tho depressions $c$, in the manner specified.
5. The arrangement of the cutters $n$ immediately belind the shouders $c$, as and for the purposes set forth.
6. In combination with said gatherers $J$ and picker's I, the adjustable husking plates or wheels M, arrangel and operating substantially in the manner and for the purposes set forth.

7\%,395.-JOIN J. D. Mencke, Milmankce, Wis.-Forwara Gear for Carriages.-A pril $28,1868$. -The fore axle and body are comected by a fifthwheel frame formed of metal and haring two for-wardly-extending arms to whieh the pole couplings are seeurel.
Claim.-Draught irons C C and bottom and top pieces D and E , in combination with kimg-bolt $\mathrm{H}^{\prime}$, substantially as described.

77, 396 .-George Mercele and John Hintun, St. Lonis, Mo.- 1 pparatus for ternpering Śaw Plates and Similar Articles of Steel.- 1 pril 28, 1868. - The saw is clamped between two perforated plates whieh run upon a rail track leading down to the bath. The carriage is operated by cords or chains actuated by crank handles. The upper plate is hinged to the lower and is raised by a windlass.

Claim.-1. The carriage 13 33', when constructed of perforated plates, and the trussing ribs $b^{2} b^{3}$, substantially as shown and described.
2. The combination and arrangement of the cap $B^{1}$ rope or chain D , clevis $d$, and pin $d^{1}$, and crab $d^{2}$, all arranged and operated as deseribed and set forth, for the purpose of clamping and straightening the plates E.
3. The cap $\mathrm{B}^{1}$, when combined eccentrically with the carriage $B$, by means of the eccentric shatt $B^{2}$, and operated by the chain ur rope $E$, roller $F^{\prime \prime}$, anet erank $f$, for the purpose of exposing the whole surface of the plate to tho aetion of the temperine fluid.
4. The springs II, when arranged in combination With the bath tub A, as herein deseribed and set forth.
5. The set serew $G$, when employed in comnection With the tub i and carriage $1 \mathrm{~B} \mathrm{~B}^{1}$, as deseribed and sct forth.

77,397.-J. I. Moore and Willian Joinson, New Haren, Conn., assignors to Hesin Male \& Co., same place. - Window Holder for Carriages.- A pril 28, 1808. - The holder is intended for the doors of landau carriages, and is elerated to support the susle when it is raised, but is otherwise folded down upon the top of the door.

Claim.-'the arrangement of tho two parts D and D, hinged to and combined with the holder A, the whole construeted in the manner substantially as herein deseribed.

77,398.-Thomas M. Moone, Nemton, N. J.Car Coupling.-April 28, 1868.-The construction of the coupling allows it to become detached by a certain detlection of the cars, as, for instance, when a car is thrown from the track. The rear of the draw head has an enlargement which catches behind projections on the front of the sliding box and becomes disengaged by extreme lateral deflection.

Claim.-The arrangement of the notehed plate $d$ on the rear of the head $m$, in combination with the slidine box $j$, with its projections $c c$, and the interior piroted plate $f$, and spring $k$, all constructed and operuting substantially as specified.
g7,395.-F. B. Morse, New Maren, ComnPacking for Carriage Shackle- A pril 28, 1868.-Betreen the clip and the thill iron is an interposed block of clastic material, whose duty is to prevent rattling. It is liept in position by two flanges on the clip whiel embrace the protuberance on the rear of the said block.

Claim.-The packing lierein tescribed, as an article of manufacture, and consisting of block E , with the projections F and $\operatorname{lip} f$, as set forth.

子多, 100.-H. Walker Neal, Sidney, Ohio.Fruit Gatherer.-April 28, 1868.-The fruit pouch is
attached to a bloek which slides on a guide rod and is raised by a cord which passes over several pulleys, which are so proportioned as to raise it rapidly to the hook at the upper end, when the cord is pulled.

Claim.-1. The slide $D$ attached to the basket of the frnit-gatherer, and working up and down upon the guide E.
2. The combination of the cord $h$ and multiplying pulley $G$, for the purpose of rapidly clevating the basket.
3. The combination of the cords $f$ and $h$, basket $C$, and look S , arranged and operating as described, for the purpose set forth.
g7, 801.-P. M. Papin, St. Lonis, Mo.-Quartz Stamp Mill.- April 28, 1868.-Each sub-battery has two stamps, a round one, whose shoe is made to Jotate by a patsl acting on its serrated upper surface, and a square one, working in a box having a somewhat lower lerel, and divided from that of the romed stamp by a partition which may be raised to allow the partially crushed ore to pass beneath it. 'Who stamps are raised by inclines on a rotary drum, Which pass beneath the roller-armed pins projecting horizontally from their stems. The pulverization may be coinpleted by the arrastras in the central mart of the machine.

Claim.-1. The stamp B, its serrated shoe B? and the spring pawl $d$, when arranged and operated as lierein described and set forth.
2. The stamping boxes E E', when constructed with the floor of one higher than that of the other, and arranged as herein described and shown.
3. The friction brake H, when appliecl to the rod B or $B^{1}$, as and for the purpose set forth.
gy, ade.-Phineas Pamine, New Haven, Conn. - Apparatus for Discharging Bilge Water.- April 23. 1808 . - A suction is formed in the open moutl of the flexible tube which draws the water out of the ressel.

Clatm.-The combination of the flexiblo tube B , and its open mouth C , together constituting a portable upparatus, and construeted and arranged so that the said tube will lead from the hold of the vessel out through any conrenient opening, or orer any convenient point abore tho water line to the stid open month, so as to suspend the said mouth from the ressel, and so that the ressel passing through the water, or the water passing the vessel, will create a clraught through the said mouth and tube, and by such draught eanse the water in the hold to piss through the said tube and out at the saicl mouth, all as herein set forth and described.
g\%, 403. - Hugir M. Jimnney, Cambitgeport, Mass.-Register.- April 28 , 1868.-The box firme is made in four plates, which are secured together at their eorners and which have provision for securing the wall plates. The blades are journaled directly on the box plates. A spiral spring is inserted between an extension of the slide and the under face of the wall plate, which bears upon the slide to set the blades to any position in which they may be placed.

Claim.-1. The scetional frame $b$, made in parts connected together and to tho register plato a, substantially as described.
2. In combination with the slide $r$, the spring w, inserted beneath and bearing against the plate $c$ and against an extension $v$, from the slicle, substantially is set forth.
g'g, 404.-DDAVID II. Priest, Watertomn, Mass.Ready Solder.-A pril 28, 1868.-Composed of muriatic acid, 1 pint; zinc, $\frac{1}{2}$ lb.; rosin, $1-6$ pint ; sal ammoniac, $1-6$ pint; and water, 33 per cent. The part to be solclered is moistoned with the mixture (whieh is kept in a corked vial) and the solder wire melted in a tlame and applied.

Claim.-1. The aboro described composition for soldering metals, prepared and compounded sub. stuntially as described, and in about the proportions specified.
2. Putting up the above claimed composition in bottles having solder wire wound around them, conrenient for use and transportation, substantially as described.

7\％，105．－Momer Rexford，Sandy Hill，N．Y．－ Canal Loc\％Gate Step．－April 28，1868．－The gate pirot has a side lng whieh enters a rertical groove in the soeket of the box in the bottom of the heel post，and the said lug turns in a horizontal groove in the socket．

Claim．－The construction and arrangement of the step $B$ ，with its pivot $A$ and feather $F$ ，when com－ bined with the metallic box C ，coustructed with its annular slot $D$ ，in the mamer and for the pur－ poses herein deseribed．
my， 106 ．－ERRA S．Robertson and AUstin B． ColLiNs，Mount Liberty，Ohio．－Lifiing Jack．－ A pril 28，1868．The lifting bar has a roller at its lower end which bears upon a eurved wedge－shaped eam that runs upon another roller and is operated by a lever hinged to its end．

Claim．－The combination and arrangement of the lifting bolt 13，having a groove $d$ ，and pulley $e$ ，with the standard $A$ ，lever $F$ ，curved wedge $C$ and thumb screw E，the whole when constructed and op）orating in the manner and for the parpose as herein shown and described．
g\％， $107 .-$ Hentr J．Ruggles，Poultney，Vt．－ Mowing MLaehine．－April 28，1868．－The draught chains are attached to a bar sliding bencath the tongre，and to a series of links upon the swinging frame；by adjustment on the latter the chaius have more or less tendeney to raise the eutter－bar from the ground，being arranged aeeording to the reight of grass upon it．

Claim．－1．The combination and arrangement of the swinging frame $E$ ，adjusting rings $t t t$ ，or their equivalents，on the sides of the frame，the draught ehains $s$ s and sliding draught hook I，substantially as and for the purposes herein specified．

2．The suspending hook $T$ ，arranged and operating substantially as herein specified．
gy\％， 408 ．－WTLLIAM G．Schnitdin and Jeremian W．Driscoll，New York，N．Y．－Reftector．－April 28，1868．－To inerease the area illuminated by the conieal polygonal reflectors，eoneare－dome reflectors are attached to the sides of the former．

Claim．－The concave dome refleetors，introduced in the seetions or sides of the conieal polyronal re－ fector，as and for the purposes set forth．
g\％，403．－George H．Sellers，Phonixtille，Pa． －Wrought Iron Roof Truss．－April 28，1868．－The rafter has an amular flange at top and a rounded bulged edge at bottom．The lath bars are notehed into the top flange of the rafter．The skew baek has two angle picees which are bolted to the plate and to the rafter near its lower end．The struts embrace the rounded enlargement at the lower edge of the rafter and are fitted to the same to take a firm grasp with the help of rivets．

Claim．－1．A bulb－beam A，or a rafter，having a bulb $b$ ，below，instead of a fiange，for the purpose of uniting the struts and tie－rods thereto，without de－ fleeting them from a straight line，substantially as deseribed．

2．Securing the purlines to the rafter，by means of notches in each at the points where they meet，and thus make a firm and simple union between them without the use of bolts，or rivets，or other fasten－ ings，and allowing room for expansion or eontrac－ tion withont separating，substantially as deseribed．

3．A skerr－baek，mado of angle braekets $d$ ，bolted or riveted on eaeh side of the web of the beam，as and for the purpose herein described and repre－ sented．
\％7，410．－Jomn H．SHarp，Wortsville，N．J．－ Corn Sheller．－April 28，1868．－The eorn is shelled from the eob by passage between the spiral serics of teeth on the eylinder and the yielding bars whieh form a coneave above it．

Claim．－The employment of a series of yielding bars $C \mathrm{C}$ ，suspended orer the inelined roller B by means of springs $d$ d and rod $c$ ，when all aro arranged as and for the purpose described．
g7，411．－JOSEPH R．SMITI，Bethel，Comm．，as－ signor to himself and WiNFIELD S．SHAw，Buffalo，

N．Y．－Lock Nut for Axle and Slecin Boxes．－April 28，1868．－The mut has internal lips and the end of the axle box has external lips．The spaces between the lips in the nut correspond to the lips on the axle， and viee versa；so that the nut being applied to the axle the lips may be passod beyoud cach other and by a slight turn be made to interlock．A key hinged to one side of the nut drops into the recesses in the nut aud box so as to prevent the rotation of the nut．

Claim．－1．The internal lip on the nut and the ex－ ternal lip on the axle or skein box to sceure the nut on the axle or box，as set forth．

2．The combination of the key $F$ ，with the spring eatch and the intervening lips of the mut and axle，as and for the purpose specified．
my，412．－GIDEON and JONAS SMOKER，Smith－ ville，Ohio．－Mand Truek and Saek Molder．－April 28， 1868 ．－The truck being placed in rertical position the sliding platform is aecommodated to the mouth of the bag，which is fastened upon the hooks and the springs；the deviec acting as a＂bag holder＂as woll as a truek．

Claim．－The combination of the hand truck $A$ ， with sliding platform D，arranged to slide in groores in the sides of the truek frame，said platfom being provided with springs C C and rods $\mathrm{F}^{\mathrm{H}} \mathrm{F}$ ，upon which are spiral spriags $e$ e，all arranged as and for the purpose set forth．
gy， 4 IB．－OTIS W．STANFORD and SELDEN S． Scovince，Lebanon，Ohio．－Washing Machine．－ April 28，1868．－The box has a number of compart－ ments，some of whieh have false sprincs bottoms fommed of rollers journaled in frames．The beater mechanism is scemred to the lid which is hinged to a bloek sliding upon the side of the box so as to bring the beaters into aetion in either compartment．A furnaee is plaed bencath those compartments hav－ ing false bottoms，and the flue passes bencath the other compartments．

Claim．－1．A washing maehine，consisting of the yielding bed or frame $g I$ ，rollers $G$ ，battens $J J^{\prime}$ ， stems $j j^{\prime}$ ，roek shaft $K \ldots k^{\prime}$ ，and link $I$ ，the whole being combined and operating substantially as hercin deseribed and set forth．
2．The deviees $J J^{\prime}, j j^{\prime}, \mathrm{K} k k^{\prime}$ ，and L，when at－ tached to the sliding lid $N$ ，and adapted to be oper－ ated in either of the chambers $\mathrm{C}, \mathrm{D}$ ，or E ，as ex－ plaimed．

3．The derices $\mathbf{P} Q \quad$ v for caabling the shifting of the lid $N$ ，and for secming it at any desired posi－ tion，for the purpose deseribed．

4．In eombination with the sliding lid N ，and its described aecessories $J J^{\prime}, j j^{\prime}, K \cdot k \cdot i^{\prime}$ ，and $L$ ，the chambers $\mathrm{C}, \mathrm{D}, \mathrm{E}$ ，and F ，for the object explained．

5．In a washing maehine construeted substantialiy as above set forth，the shiftable wringer rest T U u， as deseribed and set forth．

7\％，是县。—James Sutliff，East Boston，Mass．－ Steam Generator：－April 28，1868．－A hollow eham－ ber forms the fire bridge and is eounceted by pipes with tho water and steam spaees of the boiler．It also has a feed water pipe and is traversed by tubu－ lar bolts whieh allow passage of the flame．

Claim．－The holiow steam bridge wall C ，the sides braeed by the hollow bolts $g g$ ，and eonnected to the boiler pipes $f$ and $d$ ，constructed and arranged substantially as and for the purpose set forth．
g＇g，415．－Noam IH．Tilman and David G．Good， Areanum，Olio．－Table Fan and Caster Stand．－ April 28，1868．－From the eenter of the easter stand rises a post，supporting a box with gearing whieh rotates the fly brushes．

Claim．－The arrangement of the frame E outside of the box D ，and the stationary caster standard B ， said framo being perforated as deseribed，whereby the fans F F may be adjusted to operate as herein speeificd．
g＇116．－Edwin J．Toof，Fort Madison，Iowa． －Comb Cleaner．－A pril 28，1868；antedated April 17，1868．－Thin，elastie，eonverging，metallie slips are seeured in a head and are adapted to be passed between the teeth of a eomb to elean the teeth．

Claim．－The arrangement of converging elastic
strips $a$ with a head, A, whether said head be prorided with a brush, B, or not, as and for the purposes specified.
g7, 41 . -Newton Trowbringe, Tully, N. Y. Washing Machine.- 1 pril 28 , 1858.-The peunder is Tertically reciprocated by attachment to a crank shaft resting on the chimb of the barrel. The face of the pounder has wedeeformed blocks and it is reciprocated by the reaction of the water and clothes against an fincline on the face of the pounder.

Claim.-1. The combination of the barrel A and reciprocating pounder $B$, constructed with wedseformed projections $B^{1}$ and an inclined projection, $B^{2}$, substantially as and for the purpose set forth.
9. The combination of the barrel $A$, the pounder B, the shank C , $\operatorname{rod} \mathrm{D}$, and crank E , spring $\operatorname{lng} \mathrm{E}^{2}$, pinion $\bar{F}$, spur wheel $\dot{G}$, and lever $\bar{H}$, all arranged to operate substantially as set forth.
g\%, 18.-NEwton Trowbirioge and Edward Riciardson, Tully, N. Y.-Roofing Cement.-April
 and crude petroleum, 1 gall. ; are melted oser a slow fire; then add resin, 120 lbs ; petroleum, 3 galls.; sulphur, $\frac{1}{2} \mathrm{ld}$. Alter melting and mixing add waterlime, 1 peek; and sand, $2 \frac{3}{4}$ bushels.

Claim.-The composition, compounded of the ingredients, and in the manner substantially as and for the purpose set forth.
g7,419.-James S. Urton, Battle Creck, Mich. -Grain Separator.-April $23,1808$. -The striaw and grain from the eylinder pass over a set of backTardly inclined "sereens" which have a compound rertical and longitudinal vibration.

Claim.-l. The sereens $D \mathrm{D}^{\prime} \mathrm{D}^{\prime \prime}$, combined with the cylinder $B$, and operating in the manner set forth lor separating the grain from the straw, substantially as specitied.
2. The vibrating spout C , in combination with a threshing eylinder, and the series of screens $\mathrm{D} \mathrm{D}^{\prime}$ $\mathrm{D}^{\prime \prime}$, when used substantially as and for the purpose set forth.
g\%, 420.-Oscar A. Wagner, Darenport, Iowa. - Artificial Slate Surface-A pril 28, 1868.-To illeohol, 98 per cent. proot, add as much gum shellace as it will dissolve. To this mixture 50 , add drop black, 5 , pulverized pumice stone, 25 , and iron filings 20 parts. Grind in a paint mill and apply with a brush.

Claim.-A composition of matter for forming an imitation of the surfitee of slate, compounded from the ingredients named, substantially in the manner set forth.
geg, 421.-H. S. Walcott, Boston, Mass., assignor to Boston Sioe Stud and Butron Company. - Boot and Shoe Stud.-April 28, 1868.-The studs have rounderl heads with a eireumferential groove beneatb. The imner end of the stud is tubular and its edge is turned ont forming a flange around the inner side of the hole.

Claim.- A shoe stud, formed of a solid piece of metal, and hasing a head and a shoulder or flange, with a groove between them of sufficient size to permit the lacing to more frecly therein, and haring a tubular stem, by which it can be secured to the shoe, as hereiu shown and described.

77,422.- Albin Wartir. - Stapleton, N. Y.Pen Holder.-April 28, 1868; antedated April 19, 1868.-The end of the stick is triangular and fits a similar socket in the pen or brush, and the portion grasped by the finger's is triangular or has one or more flat sides.

Claim.- A pen or brush holder, the finger part of Which is made triangulare to fit the space between the fingers grasping the same, and which is provided with a triangular end, that is twisted in regard to the finger part, and made to fit the $V$-shaped or triangular socket of the pen or brush, substantially as and for the purpose deseribed.

等, 123-REBECCA WEAVER, Washington, D. C.-Trunk.-April 28,1868 .-The trank is cylindrical in form and is cirenmferentially ribbed. It may bo mado of shect metal or other material, aad con-
tains eylindrical and segmental receptacles sliding ont at the cnds. The heads are looked in by a series of radial bolts.

Claim.-1. A rolling trunk, constructed as herein described, as and for the purposes specified.
2. The construetion of the tills $B 1$, having rims d $d$, with hinged or other props $f f$, so that they may be set up or collapsed at pleasure.
3. The jack-up cleats $\mathbb{C}$, in combination with the tills $B$ and the eplindrical or rolling trunk $A$, substantially as and for the purposes herein set forth.
4. 'The manner of constructing the coser or lid D and cap E, for protecting the lock, and securing tho trunk Water fight, substantially as herein set forth.
5. 'The manner of constructing the folding corer or lid K K with the hinged bolts and overlapping cap, substantially as and for the purposes herein set forth.
6. Placiug drawers If within the eylinder A, to be dramn out at the end, thus giving double security to the contents when elosed, as herein deseribed.
77.424.-William N. Weeden, Boston, Mass. -Tag Fastening.- 1 pril 28, 1868.-Improvement on the patent of E, A. Locke, May 24, 1864. The anchor is bent to gire it strengtle and its sides are conved around the stem and sceured therein by clinched wire or nuts.
Claim.-The improred anchor, as made with the hook e, the encompassing fingers $d d$, and the an-gularly-formed barb $f$.
g\%,495.-GEORGE MI. Whels, Chicago, Ill., assimnor to Moses D. Weds, same place. -Last Holder or Jack.-April 28, 1868 . -The shank of the last is a frustum of a pyramid and rests in the socket of the ball upon which the carrier is cast. The ball turns in the carrier which has recesses to reccire one side of the shank when in rarious inelined positions. When rertical the end of the shank enters a recess in the bottom of the carriel.

Claim.-1. The lotary block or ball A, as constructed, with a shank recess socket $d$, and combined with a carrier $B$, formed to receire such ball, as set forth,
2. The carrier $B$, as cast with an opening through its bottom, and in one piece, on the rotary block or ball, provided with a sliank socket, as set forth.
3. The carrier 13 , as cast in one piece, upon the rotary block or ball, and with an opening throngly its bottoin. and a fastening flange projecting from its sides, all as specified.
\% $7,426$. R. Ralif C. Wintrinouse, Boothbny, Mc.-Clevis.-April28, 1868. -The end of the tongio has a drop block which engrages the soke ring when the cattle are drawing. 'The block is forced downward by a spiral spring, but may be raised to uncouple the ring.

Clam.-The combination of the cleris box a having its pisoted clevis $b$, hold-back $e$, either with or without the helix $f$, and to be attached as and for the purposes set forth.
\%7, $428 .-$ EDWand P. Whitaet, Stamford, Conn. -Instrument for Drawing Nails.- April De, $186 .-$ The heel of the claw is hinged to a block which retains its lerel position on the bearing surface when in ase and is returned to its nomal position by a spring.

Claim.-1. The combination of the elaw-head A and shoe $B$, constructed and operated substantially as and for the pripose herein specified.
2. A spring, C , in combination with the elaw-head $A$ and shoc $B$, substantially as and for the purpose specified.
g7, 128.-A. W. Wilcox, New Haren, Coun.Bellows for Reed Ifusical Instruments.- -1 pril ise, 1868.-The air is exhausted from the wind chest, and the air eutcrs through the reeds. A valre eliamber is placed within the reserroir and the ralres are placed in the vertical side thereof so as to close lightly by their own weight.
Claim.-1. Tho arragement of the valve chamber D within the rescrvoir 13, by the construction of tho wall E therein, with the openings $e$ and valyes $d$ thereon, substantially in tho manner and for the purpose specified.
2. The construction of a recess in the floor $G$ of
the exhaust, beneath the openings $f$, substantially in the manner and for the purpose described.
g7,429.-GEORGE D. WILcox, Providenee, R. I. -Mucilage Brush.-April 28, 1868.-The mueilage is applied mith a eurved spatula of gutta-percha.

Claim.-The improved instrument for spreading mncilage or adthesive compositions, substantially as herein deseribed.
vg, 430 .-John F. Zacharias, Leesburg, Va.Machine for Attaching Labcts to Newspapers, de.April 28, 1868 ; antedated April 11, 1868. -Smprovement on his patent, Aug. 13, 1867. The papers are placed in the hopper and fall one at a time into the carities of the cudless earrier. They are carricd beneath the label-attaching deviee by which labels are eut off and attaehed to the papers.

Claim.-1. The eombination of the sliding gate $I$ and the seissors $M \mathrm{M}$, of an automatic labeling machine, with the ececntrie $J$, the transmitting devices $P$ and $T$, giving proper periods of rest to the carrying bands $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, all arranged and eombined smbstantially as set forth.
2. The slotted connceting rod P , having a compound reciproeating and oscillating motion upon tho fulerum pin $P^{\prime \prime}$ for the purpose of transmitting a rotary motion from onc erank to another, in combination with the other devices of the machine, sub stantially as set forth.
3. The eombination with the said deviecs, or their equivalents, for transmitting rotary motion, of the anxiliary slot $V$ in the eomnecting rod $T$, for permitting a rest for the earrying bands $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, at every revolution of the roller $B$, as and for the purpose set forth.
 Ohurn.-April 28, 1868.-The dasher has a rertical and rotary reciprocation, the former indueed by the motion of the gate to whiel it is attached and which is driven by eranks. The latter, or reeiprocal, rotary motion is induced by its spirally grooved sliank trarersing against projections in the framo above the churn. A perfornted disk dasher and sleeved dashers on the raclial arms agitate the cream.

Claim.-1. Communicating a rertical reciprocating motion to the clash rod $N$, at the same time giving to this rod right and left rotary motions, by
means of a rertically moring sash, C, a spirally grooved portion $f$, and fixed but adjustable tecth $e c^{\prime}$ arranger and applicd within a frame, and driven from a shaft, E, substantially as described.
2. The movable head-picee $\mathrm{D}^{\prime}$, armanged over the ehurn vessel, and provided with adjustable toothed plates $J J$, in eombination with sash $C$ and a spirally grooved portion, $f$, on the dash rod, substantially as deseribed.
3. The ehurn ressel $K^{\prime}$, scated into a fixed base ring, $L$, in combination with the morable head piece $\mathrm{D}^{\prime}$, and the means, substantially as deseribed, for operating the dash rod.
4. The perforated dasher $P$, and dash rod $N$, provided with perforated or imperforated radial wings, $g$ or $h$, constructed and applied substantially as deseribed.
5. The rotary wings $j$, applied to rods $i$, projceting radially from the dash rod, substantially as described.
g9,432.-Obadiail Marland, Boston, MassConstruction of Safes.-April 28, 1868.-The alternate stcel and iron plates are fitted and welded together throughout their adjaeent surfaecs. Their attaehing bolts are made of coneentric tubes of iron and steel alternatcly, and are spread after insertion so as to resist withdrawal. The miter joints at the safe corners are guarded by a peenliar presentation of the stccl

Claim.-1. A safe or bank vault, the boundaries of which are made up of, or are proteeted by, entire eompound plates, cach of which is constituted of plate layers of iron and stcol TelCled together, the steel layer or layers of each laminated plate being hardened, sabstantially as shown and described.
2. The formation of the joints at the eorners of the safe and at the edges of the door, so that the bottom of eaeh seetion of joint is eovered by stecl, substantially as shown and deseribed.
3. The bolts $k$, made of altermate tubes of iron and stecl, drawn and welded together, substantially as set forth.
4. Inserting the bolts $m$ into holes prepared, smibstantially as deseribed, for their reception, and then elanging the form of the bolts by pressure or percussion, so that thereby, and with the eonjoined action of a spreader, $p$, the bolts $m$ will hold in their sockets, substantially as deserbed.



[^0]:    Dunk, A. A., Philadelphia, Pa. Printing press
    Dunks, Charles I., and Thomas J. Gatfney. (See Gaffiey \& Dunks.)

[^1]:    Juily 7, 1868
    Dec. 1, 1868
    July 7, 1868

