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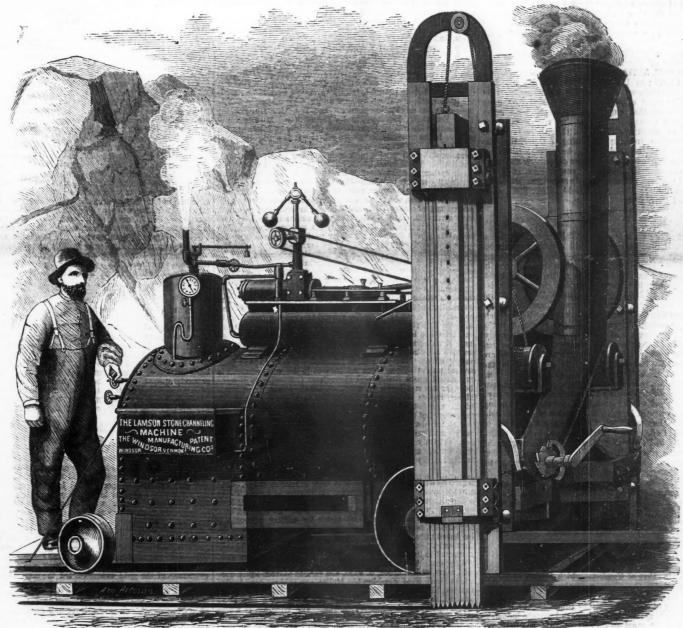
NEW YORK, APRIL 25, 1868,

#### STONE (HANNELING MACHINE.

The machines now used for quarrying marble, slate, sandnels, are just now receiving more than usual attention. Manual labor in mining and quarrying operations is being super- the said crank, like an arrow by a bow string, and drawn back tions, serrations, or mortises, are firmly clamped together in seded by mechanical devices, and these accomplish the work expeditiously and in a much more economical manner. The LAMSON Machine consists in interposing between its driving tive position in such a manner that they can be lowered to annexed engraving represents one of these labor saving machines known as the Lamson Stone Channeling Machine, which links. Unlike other machines, it thereby projects the drills time. All the fixtures are of the best wrought iron and steel.

ward, and connected together by links of steel. Midway of blows does not communicate to the driving parts, to shake the stone and grindstone rock, sinking shafts, opening mines and tuu- these links, by a suitable arm, is attached the gang of drills, same to pieces, whatever may be the rapidity and force of the which gang is propelled against the rock by the operation of striking. The drills, eight or ten in number, without corrugaagain as the crank revolves. The great improvement of the and striking parts, this elastic bow spring with its flexible cut deeper, or removed to be repaired, without much waste of has but recently, been brought to a high state of perfection. against the rock, instead of letting them fall simply by the The drills are plain bars, and the gangs are thereby as much

dred blows of one drill. The crank shaft is attached to the at that instant it is so arranged, that the spring shall be in crown of the bow spring, having the two ends thereof down | equilibrium, so that the tremendous concussion caused by the gangs by head and foot clamps, which are held in their rela-



LAMSON'S PATENT STONE CHANNELING MACHINE.

Numbers of these machines are now in successful operation in power of gravitation; neither is it restricted in the speed of stronger, as they are cheaper in their particular mode of conthe marble quarries of West Rutland, Vermont, where they its driving crank. Gravity cannot be hastened, and if too struction. The machine is made to move along the track by are doing twice the work at half the expense of other machines much speed is given to the driving parts of such a machine, the force of its own friction without the use of cogs; a simple formerly in use and it is claimed that they have doubled the the result is that the gang is arrested and caught up before it device being added when required, that will permit it to be production of marble in that State. They are without straps strikes, thereby producing no effect, except the usual break-moved np and down inclined planes. It is simple and comwhich are known to break continually by wear, or rot from the effects of the weather. Three persons are required to operate one of these machines but the work done is said to be equivalent to the labor of over one hundred men, as in some cases two hundred feet of channel in marble can be cut in one day. Each machine consists of a portable steam engine and boiler of five horse power, driving a shaft having two cranks, one upon each end, to each of which is connected by But the greatest advantage of interposing the said bow string 1865; October 2, 1866; March 26, 1867, and Sept. 17, 1867. means of a shaft and bow spring, a gang of ten drills, which and links between the driving shaft and the drills, is, that by By the first named Patent, was granted, the exclusive right to are thereby hurled against the rock about one hundred and this device, the driving and striking machinery is practically channel rock by the use of cutters which have two combined

No speed, however great in this ing of the connecting parts. machine can prevent the striking of the gangs, and the greater backward, at pleasure, by hand or power, and with or without the speed, the heavier will be the blows. Nor is there liability of breakage, for should the drills from any reason of making, constructing, using and vending these Machines to bind in the deep channel cut, the elastic and flexible motion others to be used, has been secured to the Windsor Manufacof the spring and links relieves the strain otherwise caused by the positive action of the driving shaft or crank. Patent of the United States, issued April 22, 1856; Dec. 19,

sures but eight feet in length, and feeds forward or motion of the drills. The full and exclusive right and liberty tnring Company, Windsor, Vermont, in virtue of Letters twenty times per minute, being equivalent to twenty-four hundisconnected from each other at the instant of striking; for movements, viz :-- a longitudinal movement in the line of the

channel to be cut, and a reciprocal movement to and from the rock wherein the channel is to be made. The machines are constructed of the very best materials in all their parts; the different pieces are made interchangeable and with each machine is furnished without extra expense, ninety-six feet of double track, four sets of drills, ten each, making forty in all; two extra springs, wrenches. tools in a box, everything com-

The Company are now building machines with both gangs of drills on one side and so constructed that they can be inclined at any angle; they are termed "Side Hill Machines" as they cut on ledges inclined at any angle. All further information respecting these machines and mining machinery in general, may be obtained by addressing the Windsor Mannfacturing Company, Windsor, Vermont.

#### The Australian Gold Mines.—Statistics for 1867.

We find in Dickens' Mining Record some statistical information relative to the yield of gold in Anstralia during the year 1867, which may be of interest to our readers:

"The tables, in round numbers, show that the export of Victorian gold from the colony last year amounted to 1,392,336 ozs. In 1866, the amount was 1,480.597 ozs., being a deficiency on the year of 88 261 ozs. There has in fact been a gradual diminution in the export of gold since 1862. During that year the quantity of Victorian gold shipped was 1,658,285 ozs.; in 1863, 1,627,066 ozs.; in 1864, 1,545,450 ozs.; in 1865, 1,480,597 ozs.; and in 1867, 1,392,336 ozs. It has been the custom to attribute this falling off in the yield of the gold-fields to a decrease in the number of miners, who, for various reasons, have embarked in other miners, who, for various reasons, have embarked in other pursuits, and permanently forsaken the gold-fields. The returns miners, who, for various reasons, have emoarked in other pursuits, and permanently forsaken the gold-fields. The returns of the number of miners employed throughout the year would seem to bear out this view. In 1865 the number of miners employed throughout the year would seem to bear out this view. In 1865 the number of miners employed throughout the year was 83,214; in 1865 and 1867 of 17,357 miners. The decrease has been clike gradual amongst miners employed in alluvial and quartz workings. In 1865 the number of alluvial miners was 62,131; in 1866, 55,916; and in 1867, 51,719. The number of quartz miners in 1865 was 17,326; in 1866, 14,878; and in 1867, 14,138. Whether this reduction will prove continuous is a matter for conjecture. The spirit of speculation in regard to mining adventures indicates that capital is forthcoming whenever there is legitimate occasion for its use, and recent events at Ballarat tend to encourage the belief that there is yet an almost inexhausticle treasure remaining in the soil. The decrease in the yield of gold has not been proportionately greater than the decrease in the number of miners, and their wages have consequently improved yearly. In 1860 the average annual earnings per man were, in round numbers, £79; 1861, £74; 1862, £67; 1863, £70; 1864, £74; 1865, £74; 1866, £80; and 1867, £80. 1866, £80; and 1867, £80.

#### The Cost of Labor.

In the report of the Hon. David A. Wells, Special Commissioner of Revenue, introductory to a bill prepared by him as a substitute for the custom laws now in force, may be found the following, given as illustrative of the recent advance in wages:—"A careful examination of a rolling-mill in Pittsburgh, Penn., making band-iron, showed a disburgement of the property of the control o burgh, Penn., making band-iron, showed a disbursement of wages, per week, of \$5,200 in 1866, against \$1,700 in 1860 and 1861—the mill working to the same capacity, and employing exactly the same number of hands in both cases. The average wages earned by melters, forgers, and rollers, employed in the steel-works of Pittsburgh, and working nine hours per day, during the month of October, 1866, was reported to the Commissioners as \$28 and day. The following rates of recessions. missioner as \$8 per day. The following rates of wages are also reported to have been paid during the past year in the same city, in the mannfacture of iron and glass; skilled hamsame city, in the manufacture of iron and glass; skilled hammer-men, working on an average five days per week, \$8 per day; head nailers, superintending four machines, \$11 per day; blowers of bottles and window-glass, \$275 per month. During the months of April and May, 1866, the rates of wages paid in certain of the glass-works of Pittsburgh are reported to have averaged \$11.40 per day. Bricklayers and masons have received from \$4 to \$7 per day in different sections of the country during the past year.

\* \* It further appears, from an examination of the United States census statistics of manufactures in 1860, that the average monthly wages of employes, in all branches of manufactures was, of males, \$27.10, and of females, \$12.50; while by the census of the State of New York, in 1865, the average monthly wages in the whole State was, for males, \$44, and for females, \$20; being an increase over the wages of 1860-61 of sixty-two per cent. for males, and sixty per cent. for females.

#### Coal in the Brazils.

There is at present only a single coal mine in working order at the Brazils, viz., that of Condista, which begins to furnish the coal required for the steamers of the Jacaby Company. It is England, however, which at present furnishes the considerable quantity of coal consumed in Brazil for the imperial and merchant navy, gasworks, railways, and private industrial purposes. One of the great steam lines running to Sonthampton has a depot on an island in the bay of Rio Janeiro, at which the steamers of all the English, French, American, and Brazilian lines plying to the ports supply their wants. Coal is one of the most considerable articles of importation in the Brazils, and this fact places Cardiff and Newcastle in the first rank among the ports which maintain commercial relations with the capital of the Brazilian empire.

#### Improved Safety-Lamp.

Au ingenious self-extinguishing safety-lamp has recently been patented in England by Mr. Louis Dessens, and consists in attaching to the wick-holder a spring, the tendency of which is to draw it downward into the wick-tube. One side of the holder, which is notched, passes through a slot in the tube, and is worked by a screw from below the oil chamber. There is a spring and pins, which permit of the closing of the it is lighted, but if any attempt be made to screw off the top the spring is bronght against one of the pins, and the unscrewing being continued the wick-tube revolves, taking the rack off the screw, and permitting the spring in the wick-tube to draw the wick downward and extinguish the

## Mining Summary.

#### GOLD AND SILVER. South Eastern Nevada.

[From our Regular Correspondent ]

AUSTIN, April 1, 1868.

AUSTIN, April 1, 1868.

BULLION SHIPMENTS.

For 1867 our bullion yield was within a few hundred dollars of two millions, but in two years we expect to treble this amount. Our shipments for January and February were about \$300.000, and for this month \$202.946. There are several reasons why we are not turning out more of the precious metal—only two mills in this vicinity have had salt enough to keep in steady work, there being temporarily a great scarcity of this indispensable material. The mill of the Twin River company has been idle frequently during the winter from the same cause, and from considerable repairs being necessary. From a waut of salt, and perhaps also from the mines not being sufficiently opened to yield all the ore it could reduce, the Centenary company's mill in Newark district. ninety miles east of Austin, shut down two months ago. The old Dominion mill, at Hot creek, ninety miles southeast of here, was burned about the same time; and at Cortes, seventy utiles north of this place, the mill of the Mount Tenabo company has been idle all winter, owing, it is rumored, to a sale of the property being under consideration. At Silver Bend the Beimont company's wet-crushing mill was saving such a small per centage of the silver in the ore that it was thought prudent to quit work till roasting furnaces could be built. As our mines become developed, and legitimate mining rather than speculative stock-jobbing, is the aim of our moneyed incorporations, our bullion product will be very large. dnct wlii be very large.

oped, and legitimate mining rather than speculative stock-jobbing, is the aim of our moneyed incorporations, our builton product will be very large.

A printed prospectus of the Hamilton Gold and Silver mining company, of Nevada, has recently come into my hands, and being one of a class of mining schemes which can be productive only of evil to the interests of the country, it is necessary to give it a passing notice. The company is incorporated in Philadelphia, and has on its directory nine "bonorable" gentlemen, two Coloneis, and one ex-Governor of the State of Pennsylvania. an array of great names sufficient to do terrible mischief In selling stock, if the mines owned by the company are of no value. Of their real worth I know comparatively little, but I can salely affirm they are not of half the value they are rated at in the prospectus. Exaggerations are simply falsehoods, and if they are intended to induce parlies to purchase stocks, who. If they knew the plain truth, would not invest a dollar, they are just as bad in their effects as deliberate untruths. The Managing Director, the Hon. Robert W. Hamilton, in his report of the intentions and prospects of the company, gives some piquantly fresh information relative to the formation of quartz veins: "It is a singular fact," says he, "that silver ore, wherever found on the western continut, exists in ledges of quartz rock running nearly due north and south. These lodes, as they are called, vary in width from a few inches to upwards of a hundred feet. Imagine a great earthquake to have occurred—that the earth has gapped open and formed an immense fissure, miles in length, many feet wide, and bottonless; then you suppose this crevice or fissure to have been ponred full of melted lava, and allowed to cool, and you will have a very fair idea of the shape and nature of the ledges in which silver is found." How simply the mystery of quartz vein formation is here disposed of? How profound the utterance is?—the fissures were filled with melted lava I—wondrous if true!

#### DANVILLE DISTRICT

DANVILLE DISTRICT

is located on the eastern base of a high mountain range, about seventy miles southeast of Anstin. It is easy of access, being within three miles of the Pahrahnagat toll road. Wood is so abundant on the surrounding hills that it will be secured at a low price for many years, and water for milling purposes is available in several small streams in the centre of the district. Its lodes occurring in a silicious limestone are very promising, their surface ore being of a high grade. The Vanderblit ledge is opened to the depth of thirty feet, and shows two feet of good milling ore. Three tons blasted from the "croppings" gave a mill assay, at Hot creek, of \$130. and various batches which were worked here went considerable higher, one of three tons having mill assay, at Hot creek, of \$130. and various batches which were worked here went considerable higher, one of three fons having reached \$172. The Prospector is another lode showing good mineral, five tons of its surface ore having given a mill assay about equal to that of the Vanderbilt. The Hibernia is a vein thirty inches wide, its grade of ore as proved by a working test of two tons being \$119. These mines, in the hands of the right kind of a company, are certainly to become very valuable, and will, no doubt, when developed, yield sufficient ore to keep a large mill in full operation.

The Florida Mine,

large mill in full operation.

THE FLORIDA MINE,
of the New York and Austin Silver mining company, on Lander
hill, is now yielding a bigher grade of ore than at any previous
period. A batch of 100 tons, which is being worked at the Keystone mill, assays, as proved by the daily test samples, over \$400
per ton. The mine is looking better than it ever did before, and
contains a large amount of available ore quite equal to that now
being reduced. The main incline is down 450 feet, and a level
is being supported by the better of it toward the Sherman shaft. being reduced. The man incitine is down 450 feet, and a level is being run from the bottom of it toward the Sherman shaft, which is located one thousand feet farther up the hill, and is intended to be carried down to the depth of 1,000 to 1,200 feet. This level will cut several lodes of acknowledged value almost at right angles, and large amounts of ore are likely to be exposed along its course. The bullion yielded by the Florida during 1867 amounted to \$136.637; its yield for this year will searcely be less than double this amount. be less than double this amount

The time the southeastern portion of Powder Hill was recently thought to be worked ont. Whenever a lode happens to have but little rich mineral in sight, the croakers, who are generally encountered to the powder of the powder who are generally numerous in every mining region, give utterance to their convictions that the claim is "played ont." A drift

carried along the vein where it was barren may in a few feet show good ore again, and then the croakers boast that they knew it was there, and good management alone was necessary to reveal its existence. So is it with the Timoke at present. The ore house contains 15 to 20 tons of ruby ore, which will yleid by mill assay, from \$250 to \$300 per ton, and more of the same kind is being extracted from day to day. Wiseacres knew it all beforehand, though they professed to hold other opinions. A small milling recently gave an assay exceeding \$1,000 per ton, but of course sneh a return as this is far above the usual rate.

THE BIG SMOKEY MINE,

owned hy a New York company, has been worked almost continuously during the last twelve months. The lode is very large and I fear the ore is too low in grade to be profitably worked, while the cost of mining and reducing is at the rates now prevailing. Notwithstanding all the representations which interested parties have made in regard to the high grade of ore yielded by the mine, I have no hesitation in saying that at present only a small quantity of. \$60 to \$70 rock can be obtained. The mine is not opened, and the money expended upon it has not been sufficient (under the management which prevailed until recently) to prove what the real value of the lode is. The company have built aften mill, without apparently knowing whether they would have ore in which to keep it in profitable operation. As if we had never had any experience in this region of the impossibility of working our ores raw, this mill was built for wetcrushing, and would certainly on that account, even if the ore at command were abundant, prove a failure. I allude to the case because such mining schemes, gone into without judgment, are productive of great injury to the reputation of our mines. When the Big Smokey mill will be standing idle a few months hence, its shareholders will probably not blame those who, by misrepresentations, have led them astray, but will unjustly conclude that the silver mines of Eastern N

before it can be profitably worked—time will prove the truth of this assertion.

THE BUCKEYE MINE.

This promising lode is located in Summit canyon, nearly fifty miles south of Austin. It is a north and south vein, pitching a little to the west, though in some places it is almost perpendicular. Having been opened only to the depth of 120 feet, it cannot be said to be prospected as yet, but it has yielded some very fine ore. One batch of ten tons, worked at the mill of the Twin River company, gave a pulp assay of \$300; another of six tons, \$200, and a third of lour tons, \$230. About 400 tons of milling ore are already extracted, and there is a good deal more in sight in the mine. The paying portion of the vein varies in width from a few inches to five feet. Its low-grade ore, of which there are apparently large quantities in the lode, will give a mill assay of from \$80 to \$100. The high-grade mineral, which has been the chief cause of giving the mine its reputation, is found in the pockets amongst the other ore, but it cannot be said to occur "regularly in irregular bunches," as the vein has not been sufficiently developed to determine what its regular or irregnlar peculiarities really are. A tunnel was first run in on the ledge from the ravine in a northerly direction, and on the western wall there was a streak of very rich ore exposed, varying in width from two to four inches, but the rest of the vein was not paymetal. An Incline was next started in the ravine, and is now 120 teet deep. For 75 feet from the surface there was scarcely any mineral, but at the bottom there is four feet of fair milling ore, which appears to be quite as regular in its quality as can be expected in any mine. Having personally examined the property some time ago, I can speak of it with confidence, and Captain Kidd, the superintendent, has furnished me with the particulars of its developement since I had an opportunity of being in the district.

of its developement since I had all opposite district.

THE TWIN OPHIRS lode, in Park canyon. 40 miles south of this place, has had a large amount of work done on it, without, however, amounting to much as to depth. I am sorry to learn that work has been entirely suspended, owing partly to there being no ore in the lowest works, and also, in some measure, to a large quantity of water having been struck. The property is owned by the La Plata company, who had a fine mill nearly completed last summer, but which still stands unfinished. The mine has always been considered valuable, and probably is really so, if it were properly opened. Where there has heen a good outcrop of mineral, the presumption is that there is more of the same sort underneath, but where the formation is broken it is sometimes a difficult matter to keep the course of the vein in the sinking operations.

Montana

#### Montana.

(From o VIRGINIA CITY, M. T., March 26, 1868.

VIRGINIA CITY, M. T., March 26, 1868.

DESCRIPTION OF SUMMIT DISTRICT, MADISON COUNTY.

Wishing through the JOERNAL to convey the facts as to mining in this Territory. I have determined to take each District as visited and explored in person, and jot down my observations; thereby giving a general history as well as the peculiar characteristics of the various beits that are now known to exist; and by so doing we shall arrive at conclusions as to the richness and permanency of the mines of Montana, which must prove far more satisfactory than any general description that could possibly be given. I commence with Summit District, which lies south of this city, and north of what is known as the Madison Range of Montains, and is on both sides of Alder Gulch. The richness of the Gulch both in Highland, Pine Grove, and Summit, and the coarseness of the gold extracted, led the miners at a very early day to prospect for lodes or ledges of gold-bearing quartz, so that as early as the 22d of March, 1864, we find that a lode called the "Montain Sheep" was staked and duly recorded. Day after day from this ou we find that new discoveries were made, and many of them of remarkable richness, so much so that in 1865 and 1866 we find that a large amount of capital from the Eastern States had been invested in lodes, machinery, and mills. The "Lucas Mining Company," of St. Louis, have erected a 20 stamp mill. The "Hawk eye Company," of Burlington, a mill of 15 stamps. The "Seneca Falls Company," of St. Louis, a mill of 15 stamps. The "Excelsior Company," of St. Louis, a mill of 15 stamps. The "Seneca Falls Company," of St. Louis, a mill of 16 stamps. The montain mill, and the Seranton Company, of Scranton, Penn., a crusher and patented mill. The latter has never been in operation. The fine lodes of the "Oro Cache," "Kearsarge," "Keystone," "Munson," "How," "Stele?" "Cavarone," "Louas," and many others that could be named, it was thought justified the various mill enterprises already mentioned. The richness of the ore and facilities f me various mill enterprises already mentioned. The richness of the ore and facilities for timber and water made the district a favorite with mill men, and without development or the ownership of any of the lodes, it was determined to locate and take chances for ore. The enterprise failed not for want of rich ore, but from conflict of interest. The claims can expect with the failed not for want of rich ore, the conflict of interest. but from conflict of interest. The claims, generally only 100 leet, had been divided and subdivided, until, in very many cases, 10 feet on the "Oro Cache" was deemed a fortune, and would not be sold for less than a fabulous price. This resulted in a failure but from conflict of interest der Hill
to obtain ore, and a proper development of the mines, so that
for the last year the mills have been generally idle, and capital
roakers,
has been disheartened. Time has overcome these difficulties, so
we utterA drift
The rich ores of the "Oro Cache" and "Keystone" now being

warfahi the conclusion that during the coming summer this district will prove to he what it has always heen reported to be one of the richest of the Territory. The gold of this district is remarkable for its fineness, and free from annoying sulpburets. Timber is abundant and cheap, and the topography is such that every mine can be worked and drained by tunnels. Advantage is being taken by the unners of this peculiarity, for we now have some six or eight tunnels in progress, tapping the fluest lodes of the district. The permanenty and value of these mines by the labor now being expended will, within the year, have been proven and established. From what we now know of the geological formation, topography, and location of this district, it must become the district at a large per cent. Inpon investments now thade, at an early day.

come the that will """ a large per cent. npon investments now made, at an early day.

RROWN'S DISTRICT, MADISON COUNTY.

This district lies west of Summit and Fairweather District, and north of the Madison Range, and is on both sides of the Guich, known as Brown's Guich, a tributary of Aider Guich, and is about eight miles in length from north to south, and probably about four miles from east to west. The general features of the district are al-out those of Summit and Fairweather, and but little difference to be observed in the geological features of either, save on the lower parts of this district we find an extensive strata of crystallized limestone admitting of a fair polith, with no traces of fossil or organic matter, white the limestone in the southern part, near the monatism and Continuing to the summit of the Range, abounds in Mallie fossils of unknown classes to your correspondent. The districts, though side by side, are entirely different the thing that the summit of the results of the summit of the Range, abounds in Mallie to see a sold or see a summit of the Range, abounds in Mallie to see a summit of the summit of the Range, abounds in Mallie to see a summit of the summit of the Range, abounds in Mallie to see a summit of the summit of the Range, abounds in Mallie to see a summit of the summit of th

will prove Brown's District to be one of the best silver districts of the Territory.

From the Virginia City Post of the 21st uit, we give the following: The mill of the N. Y. and M. M. and D. Co., in Hot Spring District has been leased for one year by E. L. Pratt. Esq., to Captain T. D. Maltby. The latter has had large experience in mining in California. Mr. Pratt still retains the position of generat agent of the Company. Capt. M. will at once commence reducing from the Richmond, a well developed, and good lead....

The case of Coi, John A Nelson against the Nelson Mining Company, which has been pending over one year in the District Cont. has been determined in tavor of the plaintiff in the sum of \$13,400..... Hussey, Dabler, & Co., have received fifty-two ounces of gold retort, valued at \$1,222 currency, the product of Wood's mitl, at Bannack..... We saw last week in the office of Weils, Fargo, & Co., a nice little silver brick, which was on its way East as a specimen. It weighed 25:50 ounces, was 967 fine, and was valued at \$29.38. It was taken from 287 pounds of ore out of the Van Timmons lode, in Flint Creek. One ton of the rocks at the above rates would yield \$204.28, which is a pretty good average yield...... E. Taggart writes from Jefferson City, March 17: "Something like a hundred tons of first class fine grained argentiferous galena ore has been taken from the Aita nine this winter. The owners are now running a shaft to strike the iedge at considerable depth. A tunnel of over 125 feet has been run and is yet progressing, designed to tap the "Lincoln" silver iedge. The O. M. and G. S. Mining Company are putting up a furnace similar to those at present in successful operation at Argenta, under the direction of Prof. Keyes, only on a larger scale. There need be no lack of ore to keep the furnace running from the Gregory mine, for as far as opened it promises to be one of the best mines in Montana. The galean reaching a depth of over 120 feet, perpendicular from the surface, with a wide crevice. Over 500

#### California.

Amador County.—The Jackson Ledger of the 7th ult. has the following items of news:—During the month of February, not less than \$90,000 ln gold was taken from four of our quartz mines—the Keystone, Eureka, Oneida and Coney & Bigelow ....
The last month's run at the Coney and Bigelow mine was a very encouraging one, though the rock was of a miscellaneous character. From the plates and batteries \$6,300 was taken, and the value of the sulphurets saved, is not less than \$1,000, and will probably run up to \$1,200. It is safe to say that the proceeds for the month, with sixteen stamps, will amount to \$7,500. They are still sinking, and will continue to do so until their shaft is fifty feet deeper than at the present time. While the process of sinking is going on, the mill will be enlarged by an addition of ten more stamps—the material for which is on the spot, thus giving them a crushing force of twenty-six stamps..... The owners of the Kennedy mine have made a contract with Messrs. Coney & Bigelow to crush two hundred tons of rock for them. They will commence in a day or two..... The Hayward mine, otherwise known as the Amador Mining Company, located at Snter Creek, in this county, has lately changed hands, in a great measure. We are informed that Michael Reese, Lloyd Tevis, M. S. Latham, Mr. Gashweller and John A. Faull, have purchased a large majority of the stock—paying therefor about one million of dollars, and will in future have central of it. This is the heaviest sale of mining interests ever made in this portion of the State, and we congratulate the purchasers on the profitable in vestment they have made.... Last Saturday the semi-monthiy AMADOR COUNTY .- The Jackson Ledger of the 7th ult, has the State, and we congratulate the purchasers on the profitable investment they have made . . . . Last Saturday the semi-monthly clean-up was made at the Oneida nine, and the yield was a little over thirteen thousand doliars, from about one thousand tons of rock. The ore worked on this occasion was taken indiscriminately from the mine. The next run will be made from the ore taken rock. The ore worked on this occasion was taken indiscriminately from the mine. The next run will be made from the over taken from the five hundred foot ievei, and will prove more valuable than any heretofore worked. The mill has been supplied with an additional boller, and is now running sixty stamps ... The Dispatch says:—The owners of the Kennedy mine contempiate building a mill at their mine, as soon as suitable lumber can be had and brought to the site.... The chiorination works of the Coney & Bigelow mine, from a few days working, turned ont \$3,500 in gold, which was assayed by P. Reichling, of this place, and found to be .996 fine..... Sierra County.—The Mountain Messenger of February 29th, has the foliowing:—The American Company, at Sawpit Flat, are working twelve men, and are making from \$8 to \$12 per day to the hand. The Buckeye Company are workat Sawpit Flat, are working twelve men, and are making from \$8 to \$12 per day to the hand. The Buckeye Company are working seventeen men, and are making from \$6 to \$8 per day to the hand. The Union Company are working seven men, and are making an average of \$7 per day to the hand. The New York Eagle and Union companies are taking out pay-dirt, but will not be able to wash up until the weather moderates so as to give them water, when they expect big results. Several hydraulic companies will commence operations as soon as water comes. Sawpit will be a livety camp this spring....ALPINE COUNTY.—The Imperial Silver Quarries Company, of London, have contracted with Wm. Mercer, of Silver Mountain. to run one hundred and flity feet of tunnel. at \$12.45 per foot, on their claim at Mount Bullion.....Work has been commenced on the Isis lode.

........CALAYERAS COUNTY.—We condense from the Chrowicle the following:—Good news has been received from the Goiden Gate claim. The last washing yielded the sum of one hundred ounces, the result of the labors of six drifters for three weeks. It is safe to presume that not more than half of the gold was extracted. to presume that not more than haif of the gold was extracted. During the coming spring it is the intention of the company to substitute more powerful machinery for that now in use. We are informed that the incline tunnel through which the mine is worked informed that the incline tunnel through which the mine is worked is to be enlarged to double its present size, so as to admit of the laying of two tracks..... The Mokelumne Hill and Campo Seco Canal Company for the last four years have been making a ditch of larger capacity, and have extended the line fifteen miles below Campo Seco, to the new diggings at Cat Camp. The company propose to complete this work this summer, and keep np a supply of water the year around for the new mines at Cat Camp, where there are already about sixty companies at work, taking out about eight thousand doliars of gold per week..... Mantpost Couxty.—From the Gazette, March 7th, we learn that Mr. Weber, proprietor of the Washington mine, near Hornitos, is now erecting a new ten-stamp mill. The chlorination process will be used to extract the gold from the sulphurets. This new process gives promise of obtaining good results from rock hitherto nsed to extract the gold from the sulphurets. This new process gives promise of obtaining good results from rock hitherto thought worthless. The Washington mine has heretofore, under the management of Flint, Peabody & Co., paid well. The ore now being extracted is better than formerly—in addition to the old process, the new one insures still larger profits....The Gnadalonpe quartz-mill has been standing still for some two weeks past, partly on account of the fluming giving away. Mr. Hambleton thinks he has struck the main lead in the mountain, which has been sought after for many years....Nevada County—The National is informed by a gentleman from Kough & Ready mining district, that the quartz struck by Arborgast & Co., continnes to yield rich prospects as it is worked npom.... We are informed also that \$3,000 have already heen taken from it by the lucky owners in panulng out the decomposed quariz and dirt lying between the stratas of the ledge......The old Oceola ledge is to

be worked this season. The company intend putting on machinery to work it extensively. In other mining operations in the vicinity of Rongh & Ready, we hear of Hawes & Co. working on Gosben Hill. near Rich Flat, in hydraulic claims, and averaging from \$5 to \$6 a day to the hand. Barker & Rix are also said to he making money. The Vial brothers of Grass Valley are opening up diggings on Randolph Hill. They have laid 2,000 feet of iron pipe to facilitate their operations, and have now got to work washing, with the most flatiering prospects of success..... Mining prespects at Scott's Flat and vicinity were never better than at present..... The Grass Valley Union says that a large interest in the "Betsey" mine, and in the Orieans mill property has recently been bought by Mr. Pearce, of San Francisco. Mr. Pearce is already an owner in the Empire mine.

..... The usual monthly dividend of the Eureka Company of Grass Valley, of \$20.000, was made payable in San Francisco.

..... Placer Gounty.—The Herald, March 7th, says that in the mine known as the Baker, or Harpending, the owners have suruck as good pay as ever, and are going to start't the newly mill soon.

..... Toolume County.—The Sonora Democrat, March 7th, says: Some two weeks ago, Mr. Thos. Mylar sent us a bottle of crystallized cinnabar from his mine near Horseshoe Bend. The mine is a valuable one, and has already yielded a large quantity of cinnabar, the greater part of which has been shipped to China, and the remainder sold in small quantities to the Cetestiais in neighboring towns..... We have seen some extraordinarily rich rock from the Arbona mine..... P. B. Bacon has taken the old "Tennessee" quartz vein, above American Camp, and has crushed a small ict of rock which yielded twenty-five pounds of amaigam. He will continuo getting out more till he has out enough to keep his ten-stamp mill running five or six weeks. He is also owner of the famous Jones lead, near American Camp, and has a few hands at work getting out rock. One year ago Jones and his partner

#### Coloradc.

The Central City Herald speaks cheeringly of the prospects of silver mining in Colorado. It says:—"Our silver works were nnable to begin operations until late in the season last year. They were small and imperfectly constructed. There was a want of capital, and a want of experience. Yet we produced over four thousand pounds of silver. This year we begin early, with works of increased capacity, with enlarged experience and greater confidence. We will turn ont enough silver this year to pay for all the bad investments and mismanagements of the past. We will more than double our present monthly shipments of buillion before the summer is over. There is a better opportunity to invest in silver property now, on reasonable terms, than ever beail the bad investments and mismanagements of the past. We will more than donble our present monthly shipments of bullion before the summer is over. There is a better opportunity to invest in silver property now, on reasonable terms, than ever before, because there need be no hazard about it. A piece of property can be tested on a legitimate working basis and its real value ascertained.".... Our shipments for the past two weeks, says the Herald, April 2, have been serionsly affected by the state of the weather. For the week ending Wednesday, 25th, the amount of gold shipped was only \$20,000, showing a considerable falling off on the previous week. For this week the amount shipped is \$22,000, or thereabouts.... The silver mines near Dale City are the latest novelty in that vicinity. All the excitement now consists in silver prospecting.... The Register of the same date has the following items of news:—The Sensenderfer mili is bringing forih golden fruit in gratifying quantities. Up to this time the machinery has been propelled by steam. The recent snows have enlarged the stream of North Clear Creek, and the race is again filied with water, which will be used as heretofore, in the ore is from Bobtail, No. 6, crushed just as it comes from the mine, without any assorting. The usnal yield is seventeen ounces per cord......The Gold Rock Company are sinking on the Manmoth lode. Their shaft is now three hundred feet deep. They have a ten-foot crevice, composed of fine black pyrites, divided in the centre by an eighteen-luch vein of gangue. On the surface is not less than seventy-live cords of well-selected ore .... The Donglass mill, In Chase Guleh, is constantly at work upon second quality ore from the Bates iode. This is one of the model milk of the country. It has twenty stamps, each of seven hundred ponnds weight. The hatteries are furnished, not with iron screens for the issue, but "Australian floats" said to be superior to anything ever introduced here for the purpose. An immense stamp is being put up to break th the batteries. This is to save manual labor. Mr. Sabin claims that he is paying all the expense of mine and mill from the weekly product of second quality ore ....Col. Tannatt has leased the Rocky Mountain Company's mine, on the Bates lode, and is now at work. He has more ore in sight than can be worked out in a year. At a depth of forty feet he has a three-feet vein of sulphuret of from and copper, for which Hill offers \$100 per ton, not. Beside this there is a large vein of whitish rock which will yield pluret of iron and copper, for which Hill offers \$100 per ton, net. Beside this there is a large vein of whitish rock which will yield in stamp-mill, about six ounces to the cord, and wilt pay largely for working. He has a five years' lease of the mine, and will doubtless make it profitable to work it. It costs but twenty dollars per cord to take out and assort the ere. It may from this time forward be considered as a paying mine. ... Siegel, a Frenchman, is working over the dirt once worked on Chicago Creek, and is, after carrying the dirt three hundred feet, taking out an onnce a day. A young man just above Idaho, is working alone, and is taking out half an onnce a day. Two nuggets were recently taken out just above Idaho, one of which weighed seventeen pennyweights, and the other, twenty-two: There is abundance of unoccupied ground all along Clear Creek that will pay if it is worked. Extensive preparations are being made tor the spring .... Mr. Clark, of the Clark-Gardner mine reports that at a depth of seventy-five feet he has in one end of the shaft, three, and in the other, three and a-half feet of ore of excellent quality. He has now commenced drifting each way, and is still running in good ore. .... New batteries are being put in the Chicago mili, which is to be rin on enstom work. ... Messrs. Conant & Fullerton have started the Holman mill on Clear Creek, near the month of Chase Guich. Six stamps are at work on "Foot & Simmons" ore, and six on the "Next President." The Empire mill, by the same gentlemen, is crushing Bates, for S. P. Lathrop, and Hunter for some one eise .... The Denver News of the 8th inst., has seen a piece of quartz from the Rising Sim lode, Granite district, Lake county. The free gold was to be seen all over it in large quantities. The specimen was taken from the skatt at a depth of thirty feet, at which depth there is a vein of ore thirty linches wide, all free gold bearing quartz. .... The eelebrated of Five-twenty lode, of Catiforuia guleh, it is nuderstood, has been sold for \$40 sented. Such being an about the Ni-Wot mill, in Ward district, has started up again.....A copper iode has been discovered on Four-Mile creek above Maxwell's mill ..... Haswell and Henry are about to start their mill in Ward district, on ore from the Ætna lode.....The Goiden City Transcript of the 8th mst., says that considerable prospecting is being done in the bar-diggrings, with a view to future operations. Last week the King grings, with a view to future operations. gings, with a view to future operations. Last week the King-prothers worked a part of two days with a short string of sinice-boxes—about seventeen feet—and obtained a result which they say warrants them in putting in a greater length of slnices. They cleaned up on Saturday night over an ounce and a-half of clean cleaned up on Saturday night over an onner and a-nail of clean gold, which was equal to about ten dollars per day to the hand for the time worked. From prospecting that we have seen we doubt not that from fifteen to twenty dollars per day to the man conid be made all along the bar, with the proper appliances, which are at hand.....The Georgetown Miner says:—George T. Clark & Co. shipped on the 25th of last month 481:66 onnees of silver, coin vaine, \$533.05. This bullion was from the Cliff lode, and the ore was treated by Garrott, Martine & Co...... While on Brown mountain, Salurday last, we visited the Coin Extension, now being worked by J. T. Harris, and others. They are down about twelve feet, the vein appearing to be somewhat broken up. Some very fine mineral, combined with gangue, is being taken out, and it promises to be equally as good as the vein of which it is the west extension.... The Guittens' is now in about ninely feet, and has cut a cross lode which they have run in about twenty feet, and must be an immense fissure vein...... The Central City Herald of the 8th inst. says:— It is runored that Mr. Wm. L. Lee will start up the Black Hawk Co.'s mine, up on the Gregory lode, this week, so as to have the water out of the pump shaft by the time the new and large pump arrives...... Mr. Havs has a force of hands at work at the New York Company's mill, on North Clear Creek, buddling (ailings..... The Mr. Havs has a force of hands at work at the New York Company's mill, on North Clear Creek, buddling tailings .... The Camper Gold Mining Company, who are working on the Dead Broke, just south of the Gregory lode, have every indication of being through the heavy cap-rock which they have been contending with for some months past.... Mr. Beverly, of Nevada, has commenced putting his eight-stamp mill in condition for crushing. He will run on custom ore, of which he has an unlimited trapply engaged country at the learn his property. ing. He will run on custom ore, of which he has an unlimited supply engaged: enough, at all even's, to keep his mill constantly employed for the next three months.....From a friend just in from Ward District, we learn that the Ni-Wot company have started up their stamp mill again, which has been lying idle for some time past. Also, that Messrs. Haswell & Henry contempiate starting their ten-stamper some time during the coming week.... The following we clip from the Boulder Valley News of the 1st inst.:—Mr. B. Sanders is down about fifteen feet on his big copper lode, above Lee Hill. This lode is undoubtedly as rich in copper as any yet that has been discovered.....A copper lode has been discovered on Four-mile, above Maxwell's mill, by "Jerry." A company is being formed to work it.

Idaho.

Idaho.

The telegraph informed us last week of the killing of three men and the wounding of several others in the mines of the Ida Elmore and Golden Charlot companies. The Owyhee Avalanche of the 28th uit. has fuller particulars of this horrible war. which the authoritles have thus far shown themselves unable or indisposed to bring to a close. It says: "Last week we stated that the Ida Elmore and Golden Charlot companies were strongly fortified and closely watching each other, which state of things continned till about noon on Wednesday last, when it appears that the Golden Charlot party underground stormed the works of their opponents, forced them back to the main hoisting shaft of the Ida Elmore and within ten feet of which they hastily made a breastwork of gunny sacks, filled with sand, which commands the shaft, so that no one can go down or np, but still leaving as a breastwork of guany sacks, filled with sand, which commands the shaft, so that no one can go down or np, but still leaving as a means of ingrees and egrees to the Ida Elmore party the New York shaft, four or five hundred feet further north. Desperate fighting ensued during the charge, at the time of which, or immediately after, John C. Holgate, an owner in the Golden Chariot, and one of the foremost in the advance, was shot in the head, and must have died almost instantaneously. One of the Ida Elmore fighting men was taken prisoner and disarmed. Two more were penned up in a stope and refused to give np their arms, but we understand they were allowed to come out before dark. Shooting was kept up at intervals during the night, and the next morning a man named Meyer Frank, who was fighting on the Ida Elmore side, was brought down to town mortally wounded, a bullet from a Spencer or Henry riffe having passed through his intestines, producing a fearful wound. The untortunate man died about two o'clock in the afternoon. A short time after noon, on the same day, another Ida Eimore man. named Jas. Howard, was bullet from a Spencer or Henry rifle having passed through his intestines, producing a fearful wound. The unfortunate man died about two o'clock in the afternoon. A short time after noon, on the same day, another lda Elimore man, named Jas. Howard, was brought down with his right arm broken—a large bullet did the work. The bone is horribly splintered and smashed up between the elbow and shoulder. It is thought that it will have to be amputated, and fears are entertained that it will prove fatal. Some others have received slight wounds, but up to the time of going to press, nothing serious has occurred. The Golden Charlot party still hold the ground which they seized on Wednesday, consequently the Ida Elmore party have been compelled to suspend work, although we are told that the former are taking out more ore than ever. As yet there has been no fighting outside of the mine, but it is feared that peace will not long be kept, as both parties have secured commanding positions and fortified them within gunshot of the two mines, and as there are, at least, fifty men armed to the teeth on each side, we are prepared, at any time to hear of a bloody battle. . . . . John Holgate, who was killed in the fatal affray last Wednesday, was a native of Ohio, and came to Oregon on an early day, previous to the discovery of gold in California in '48. He is identified with the early history of Oregon and Washingtoa territories, and was one of the first pioneers in Idaho. In 1863 he was in Boise Basin, and came over to Owyhee the next spring, where he resided up to the time of his unfortunate death. While here he made geology a stindy and became largely interested in quartz mines, some of which are of great value. We learn that he has a brother and sister residing at Seattle, on Puget sound, bestides other relatives in the States. He was buried on Thursday last. A large number of people followed his remains to the grave. . . From the same paper we take the following items of news: The Oro Fino company have struck another chimney o promise has been effected between the parties, which stipulates that Wilson & Co. shall hold fifty feet of the mine south from the north side of their main shaft, Grayson, Beachey & Co. being allowed to retain the remaining portion of the ledge, south of that point. This is a final settlement and precludes the necessity of a law-suit. Deeds have already been passed between the parties and are recorded. The gray deed the parties and are recorded. of a law-suit. Decede hart to the ground was measured and the armed men withdrawn. Work will continue in both mines as if nothing had happened.

North Carolina.

A correspondent of the World, writing from Charlotte, April 2d., says: "Finding good quarters in this place, we have prolonged our stay, and have also been more minute and careful in the examination of the mines in this locality than at any of the other places we have visited during our sojourn in the State. Be-

fore further speaking of the mines here, I would say this is the pleasantest, most-enterprising and thriving place I have seen in the State. It has three fine churches—Presbyterian, Methodist, and Episcopai; two large female seminaries, one under the care of the Presbyterian, the other of the Methodist denominations, each having a good number of students. On our way to this place we visited the mines near Jamestown and High Point; the Tuck and Harrison's mines near Saiisbury, the old and celebrated Gold Hill district lying some fifteen miles southeast of Salisbury, and the Vanderberg, Barnard, Banler, Cabanas, First National, New Hope, Reid, Crosby, and Phenix mines east and southeast of Coucord. Many of these mines are now being "reconstructed" an i systematically opened, and will, ere long, with southeast of Coucord. Many of these mines are now being "reconstructed" an i systematically opened, and will, ere long, with the vicinity of this place are numerous mines; some have been worked for many years prior to the war, yielding large returns, even with the old drag or Chilian mill, which was the only process in use here until recently. They have introduced varions kinds of machines for the reduction of the ore, both by the wet and dry process. "About one mile west of this village is the Rudsill mine, successfully worked for many years, but now owned and operated by a Baltimore company. They now have a good steam engine, pump, and boisting works at their main shaft, which is 200 feet deep, developing to the fall satisfaction of the superintendent. At the Jugnot, mines they have introduced machines and are nearly ready to operate. This property is owned in New York, as is also that of the Empire Gold Mining Comnany. Iying north of the Jugnot, and some six miles westerly of this village. It is less than six months since the last named property passed into the hands of the present owners, during which time they have sunk some five or six shafts at different points along the vein, erected a fine mill with a full se satisfied will soon command the attention of many of the enterprising capitalists of our Northern States. I have been much pleased with the formations of the country, also the climate for agricultural pursuits, and believe that the same energy and care exercised in the cuitivation of the soil here, as is displayed in its cultivation in the middle or New\*England States, will prove it far more productive than theirs. Peaches, apples, grapes, and blackberries seem to grow almost spontaneous, the climate being so favorable for them. The people of this section are hospitable and friendly, and free from all that moroseness we expected to find here—in fact we have at all times and in all places been treated in the most friendly manner, and they seem desirous to have Northern men come and settle among them."

Nevada.

stock was represented. [The names of the trustees elected were published a fortnight ago in the Journal of Mining, Ed.] Geo. S. Mann was re-elected President, and Joel F. Lightner, Secretary. From the President's annual report we extract the following: "During the first six monlhs of the past fiscal year, the trustees were enabled, from the profits of the mine, to pay the monthly divided of \$125 per foot, amounting in the aggregate to \$300.000. One assessment of \$150.00 per foot was levied. From the Superintendent's annual report we learn that on the first of March, 1867, the ore on hand amounted to 766 tons. The product of ore during the eleven months ending Jannary 31, 1868, was 25,432½ tons, taken from the following points: 175 level, 254½; 300 level, 172; 700 level, 5,722½; 780 level, 16215½; 830 level, 2,415½; and second station 930 level, 652½ tons. Of the quantity extracted, 213 tons of a low grade were sold, averaging \$4.35 per ton; 25,333 tons were reduced, showinga bullion product of \$864,998.45—and average of \$34.14 per ton, or 65½ per cent. of the company's assay value taken at the mine. The cost per ton of reducing the ore was \$14.23. The Secretary's report shows an excess over liabilities amounting to \$119,495.66. the present daily product of this mine is about one hundred tons, and during the past week the average yield ranged from \$32 to 38 per ton. They employ two mills for the reduction of their ore. The trustees have called a special meeting of the stockholders, to take place on Thursday, the 30th of April next, for the purpose of considering "the proposition to increase the capital stock of said company from \$1,200 000, divided into 800 shares of \$1,500 each - the present capital—to \$1,600,000 to be divided into 8,000 shares of \$200 each .... During the week ending March 5th, the Choliar Potosi mine yielded 170 tons of ore, while 252 tons were taken from the dump during the same time. The total bullion product in February amounted to \$30,526.93 against \$41,000 in January...... At the Overman for expenses, etc., leaving a profit of \$17.433 for the month. For March account the first shipment of bullion amounted to \$5,641.88.....Amador in February reduced two thousand one hundred and six tons of "rock," showing a yield of ix tons of "rock," showing a yield of ...The liabilities of the Gold Hill Quartz comone hundred and six tons of "rock," showing a yield of \$22.72 to the ton....The liabilities of the Gold Hill Quartz company, on the 29th February, amounted to \$8.404.37, and as an offset to this they have merchandize, chemicals, etc., valued at \$7,405.90, showing a deficit of \$998.47. An assessment of \$20 per share was levied on the 13th ult.....The Empire bullion product in February amounted to \$16,601, against \$16,050 in the month of January.....The total amount of bullion from Virginia City and Gold Hill for the month of February, was \$725,823.04. Of this amount \$546,089.49 was shipped from Wells Fargo & Co.'s Virginia office, and \$179,733.55 from the Gold Hill office.

Georgia. THE ETOWAH GOLD MINES.

CUMMING, Forsyth Co., Geo., April 4th, 1868.

Cumming, Forsyth Co., Geo.. April 4th, 1868.

Editor American Journal of Mining:—Mining is going on slowly in Dablonega and eisewhere hereabouts, and the yield of goid is excellent, but not the fourth part what the ores give, according to analysis. This shows that the machines in use are not perfect, and puts a damper on gold mining in this county. There is a mine, representing a Northern company, ten miles from Cumming, and forty miles north of Marietta, called the old Franklin mine. A large amount of gold has been taken out of this mine, and it has paid well. The old works are about sixty feet under ground, and the vein is as good as ever, but there has been some trouble with water, which has made it necessary to put up an engine to pump it out. Preparations are being made for erecting machinery and stamps. I am still testing and opening all the veins of my own mine at different depths. I am now at water-level, seventy feet deep, and the farther down I go the more the veins swell. Fine gold is regularly distributed through the mass of the veins, with but hardly any barren parts. I have taken out myself, with one hand, from one of the four feet veins, eight tons per day, and no where can be found belter paying ore.

S. F. Charles.

Arizona.

The news from this territory this week is unimportant. The Prescott Miner says that all the quartz ledges now being worked upon in its vicinity promises well. The Placer miners continue to get good pay for their labor, and the utmost confidence is expressed in the ultimate success of the mines. The Indians are making some trouble in the vicinity of Prescott, and seem intent upon opening their spring campaign in a vigorous and aggressive manner. "On Wednesday night." says the Miner of March 28, "they made the best 'clean-np' at the Sterling that has yet been had in that locality; their process beats Reed's all hollow; whereas his only resulted in the disappearance of quicksilver, theirs effected the disappearance of grub, blankets and all other movable traps are und the institution.

The Columbus Crisis, of the 25th olt., says: We were yesterday shown, by Hon. Thomas Beer, ol Bucyrus, specimens of pure gold taken from a certain tract of land on Clear Fork creek, pure gold taken from a certain tract of land on Clear Fork creek, in Richland county, which are undoubtedly as pure and good gold as can be produced in the California mines, being 22 carais fine. The precieus metal is found in a bank of black sand, looking very much like common gunpowder, and is said to be lodged there in sufficient quantities to justify its collection. One man, who had no experience in working gold, and no other facilities than a common wash-basin, is known to have collected gold to the value of \$4 50 in one-haif of a day.

Canada.

Mining enterprise in the Madoc mining region has of late suf-fered a temporary check, partially owing to want of confidence engendered by recent disclosures, and partly to the recurrence of cold weather. "Everything here," writes the Beileville Cor-respondent of the Toronto Monetary Times, "is in ruch an embry ostate that a very slight cause suffices to produce a depression, which for a time retards, though it cannot hinder, the process of development. At such times it has generally happened that something has turned up to counteract the iii effect, and to cess of development. At such times it has generally happened that 'something has turned up' to counteract the ill effect, and to restore confidence and reanimate enterptise. Thus the opportune letter of Dr. Sterry Hunt eame just in time to neutralize the evil impression made by the disclosures respecting the Empire mine, and the encouraging result of the 18 ton crushing from the Moira mine, in the shape of a thirteen onnee bar of real 'Madoc gold,' followed with a most beneficial effect. Another gratifying discovery has been made during the week on lot 16, in the 11th concession of the township of Marmora. It consists of a vein of true vitreous quartz, with numerous well-defined crystals on the outside, and containing drusy cavities in the mass. It is strongly colored with red oxide of iron, and holds a few sparse grains of gray copper ore and iron pyrites. The whole is pleutifully studded with spangles and grains of gold, from the scarcely visible particles to the nuggets the size of a grain of wheat. \* \* This is a very important and interesting development, as it is only the third instance, so far as I know, where gold has been found in any quantity in the quartz proper, the dolomite and calcareo-silicious rocks having so far been found to be its usual vehicles in this district." ...... At the Moira mine arrangements are in progress by which a continuous crushing of the ore in quantity will be made, without waiting for the crection of machinery at the mine ..... There is now a prospect that the work at the Richardson mine with, it is hoped, more tangible results than heretofore. The new amalgamating apparatus is now in its place. ..... The machinery for the Bay State mine is rapidly approaching competion, and it is intended that it shall be in opporation. .....The machinery for the Bay State mine is rapidly approaching completion, and it is intended that it shall be in opperation before the close of the present month.....Dr. T. Sterry Hunt paid a flying visit to Madoc, Eldorado and Bridgewater last week.

#### COPPER.

Michigan.

Michigan.

"There is but little mining news to give," says the Ontongon Miner, of the 21 inst. "Our mines," it continues, "are working small forces, te noving but a small amount of ground. The general appearance of the veins remain about the same. All of the mines have turned their attention to stoping, preparatory to early shipments. True, some are still opening, but they are few, and but small forces engaged. A general remark may be made: ail the mines looking well, producing well, and the majority, if uot all, are paying expenses. Of course, a result such as this, is pleasant at these depressed times.".... From the Miner, of the 4th, we learn that the Minnesota and National Stamps have not yet commenced running....... At the Knowlton mine the entire force is employed in stoping. Good results expected...... Evergreen Bluff stopes look richer than before for some time. A large number of small masses taken out of the stopes between Nos. 2 and 3 shafts, on deep adit. Same force working....... At the Ridge, the entire force is stoping, producing fine barrel and stamp work, with some mass copper. The mine, if anything, is looking better than when last visited. The force remains about the same as during the winter...... The tributors of the Victoria mine are reported as raising chunks of copper running from 50 to 150 feet pounds in weight, besides giving a large amount of groad stamp rock. It is thought the mine can be made to pay the 50 to 150 feet pounds in weight, besides giving a large amo good stamp rock. It is thought the mine can be made to p eased twenty or thirty tons every twenty-four honrs. isprint we were last week made to say the stamp m the stamp mill of the

Shelden Columbian company bad been started up to stamp an hundred tons of rock each for the Concord and Douglass, should have read "eight hundred tons each."..... One side of the Delaware mill has been running since Monday of last week...... Reports concerning the duty of the stamp mill diminish the daily product of the Hecla from fifteen to ten tons. The breaking of a rope on the incline, on Saturday, resulted in the smash-up of three cars, and some not very serious damage to the lower trestle work. Still later reports put the daily product of mineral at seven tons, which is probably very near the correct amount..... At the Garden city the drift south from the Ash Bed workings is now in eleven b:indred feet to the Vulcan rocks, and still going forward. The vein has shown well in copper nearly all the way, and has varied in width from three to twelve feet. In the Ash Bed series of rocks, considerable mass copper is reported to have been found and left standing. In the present end the vein is small and poorer. A cross-cut east to examine another large vein is now in about one hundred and fifty feet, and is thought to be but a few feet from the vein..... Yesterday about fifty miners and a corresponding number of laborers were put to work at the Agawam, the present intention being to work only a moderate feet until the opening of nagication when the company miners and a corresponding number of laborers were put to work at the Agawam, the present intention being to work only a moderate force until the opening of navigation, when the company will be reorganized under the more acceptable title of the Hu: on Copper company, and the mine resumed on a full basis of operations. The engine, mills and machinery, throughout have been Copper company, and the mine resumed on a full basis of operations. The enrine, mills and machinery, throughout, have been overhauled and put in prime condition for work..... We have the following products for the month of March: Hoar & Brothers—Stamps, 20 tons, 700 lbs. South Pewable mine—Stamps, 25 tons, 500 lbs. Qnincy mine—Stamps, 66 tons, 1,485 lbs.; Mass, 3 tons, 1,137 lbs.; Total, 70 tons, 602 lbs. Pewable—Masses, 3 tons, 1.010 lbs.; Barrel work, 17 tons, 145 lbs.; Stamp, 36 tons, 1,296 lbs.; Total, 75 tons, 1,359 lbs. Isle Royale—Barrel and stamps, 37 tons, 370 lbs. Hancock mine—Barrel and stamps, 31 tons, 51 lbs. Copper Falls—Mass and barrel, 65 tons, 1,547 lbs.; Copper Falls—Mass and barrel, 65 tons, 1,547 lbs.; Cogima mine—Masses, 1 ton, 1,710 lbs.; Barrel, 5 tons, 102 lbs.; Stamps, 9 tons, 1,540 lbs.; Total 16 tons, 1,358 lbs. Evergreen Bluff mine—Masses, 8 tons, 1,280 lbs.; Barrel, 9 tons, 1,829; Total, 18 tons, 1,100 lbs. 18 tons, 1,100 lbs.

Arizona.

The copper mines on Williams' Fork, on the Colorado river, in Yuma county, says the Arizona Miner, March 14th, are just now yielding plenty of rich ore. There are nearly two bundred men now employed by the Planet, Great Central, and Springfield companies, and next to Wickenburg, it is, we are told, the liveless came in the Territory. hest camp in the Territory.

### COAL AND IRON.

#### Missouri.

Tests to solve the problem, whether good iron can be made from the iron ores of Missouri and the coal of Illinois, are now being conducted on an extensive scale at Carondelet. The St. Louis Journal of Commerce gives the following in regard to the first "grand test." It says: "The blast was fired on Friday last, and the first cast was made in the presence of a uumber of citizens who visited the furnace to watch the operation. Good judges pronounced the effort a success from the start, and testified their appreciation by sentiment and exultation worthy of the occasion. It is but seldom, if ever, that a newly erected furnace gives out a prime article at the start. Generally the first cast is worth comparatively little; but in this instance the quality of the metal was pronounced merchantable the moment the cooling process permitted an examination to be made. Here, then, is a discovery which enrolls itself among the most important of the age. It is to St. Louis the linitial of a new epoch, more than equal to It is to St. Louis the initial of a new epoch, more than equal to any event which has bitherto urged her upward progress to greatness. With the advantages the rivers have given she has become a great maritime and commercial city; and with her mountains of ores she is soon destined to stand equally conspicuous as a manufacturing centre. manufacturing centre.

The Baltimore Commercial announces the sale of the property of the Susquehanna Coal and Coal Mountain company, located at Mount Caimel, in the Shamokin coal basin, in Northumberland county, Pennsylvania, to Messrs. Thomas Wilson. George W. Abell, and William A. Fisher. for two hundred thousand dollars, subject to some visionary and unimportant claims. This is a valuable coal property, in convenient connection with Baltimore by the Northern Central railroad and Tide-Water canal.

#### Pennsylvania.

We condense from the Titusville Herald, of the 16th inst., the following facts relative to the oil business, for the month ending the 16th inst.:

THE PRODUCTION.

The Production.

The production has undergone a slight increase in three or four districts, but in most of the others there has been a falling off which has largely overcome the increase. The decrease from this time last month is seven hundred and fitty barrels. The number of new wells struck during the month was twenty, which was much smaller than during any previous one in half a year. Of this number not more than ten are now producing oil in paying quantities. The increase from the completion of these wells has not reached over two thousand barrels during the entire month, and that from the resuscitation and cleaning out of old wells has scarcely amounted to twenty-five hundred barrels. The weather during the month has been more favorable. The total production in the oil region, and at Parker's Landing, on the Alleghany river, is nearly, nine thousand barrels per day. From the indications it seems that the minimum production for at least the first balf of this year has already been reached, or, if it has the indications it seems that the immunity production of at least the first balf of this year has already been reached, or, if it has not, that it will be during the coming month; for there are several new wells in large producing districts that will be completed within the next fifteen days, and from this time the weather will favor the continuous working of old wells. But while an increase may be expected, it is altogether probable that it will not be large. not be large.

THE DEVELOPMENT AND THE TERRITORY.

The return of warm weather and the somewhat improved prospects of the trade, have caused the development to be prosecuted with more energy, and during the past month the number of new wells bas been largely increased. The same causes have produced unusual activity among dealers in territory, and probable of the same causes have produced unusual activity among dealers in territory, and proproduced unusual activity among dealers in territory, and pro-bably a larger amount has changed hands within the past mouth than during any three months in the past year. The price has considerably appreciated in nearly all parts of the region. Alto-gether about two hundred wells are being drilled in the region. About twenty-five are located on wild territory. From present indications it is probable that the number of drilling wells will be increased by the close of the coming month to two hundred and fifty.

STOCK OF OIL IN THE OIL REGION.

The stock of oil in the oil region has slightly increased during he past month, and it now reaches five bund red and fifty-nine housand six handred barrels, or an increase of about seven housand barrels. The amount on the hands of producers is

somewhat larger than at this time last month, and it is set down at seven days production. During the month about seventy-five thousand barrels were shipped by water to Pittsburgh. Over one half of the total stock is held along the Allegbany river, in an easily accessible situation for river shipment, and the greater part of the remainder is stored along Oil creek, where, for the greater part of the year it can only be moved by railroad. Probably, about fifty thousand barrels of the total stock is thick oils and nearly all that in iron tankage is under forty-five degrees, gravity.

THE IRON TANKAGE.

The capacity of iron tankage has been enlarged during the past month by the completion of nearly one bundred thousand barrels, or nearly one-tenth of the entire capacity. The total capacity is now nearly one bundred barrels, of forty-three gal-lons each. There is now in course of construction along Oil capacity is now la course of construction along on creek, tankage to the capacity of seventy five thousand barrels, and along the Alleghany river there is contracted for and being constructed, a capacity of at least seventy-five thousand barrels, making in the aggregate that will be erected, of two bundred and fifty thousand barrels. The greater part of this tankage will be completed by the first of June.

During the greater part of the past month the price of oil both bere and in the outside markets, has been without any violent fluctuations. The demand has been steady during most of the time. Latterly, however, it has fallen off considerably and the appearance of the market is more unfavorable. This has been occasioned in part by the decrease in the consumption consequent upon the approach of long days, and by something of a stringency in financial circles. The quarterly bank statement was made on Monday last, and it is expected that the money market with the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and it is expected that the money market was made on Monday last, and the money market was made on Monday last, and the money market was made on Monday last. was made on Monday last, and it is expected that the money market will now become much easier. At present 40 to 49 gravity is quoted at \$2.50 at points north of petroleum centre, at Oil City at \$3.00, and at Tidioute \$2.75. As compared with this time last year the above prices show an advance of twenty-five

#### Missouri.

LOUISIANA, PIKE COUNTY, Mo., April 6, 1868.

LOUISIANA, PIKE COUNTY, Mo., April 6, 1868.

EDITOR AMERICAN JOURNAL OF MINING:

Last winter a company was formed in this place for the purpose of boring for oil at the month of Salt river, seven miles above here. The company was composed of sound business men, and they went to work in carnest. Last Friday they struck oil, after having penetrated through solid rock a distance of fifty feet. The following day they pumped out about one hundred barrels of oit and water, when their pumps gave way and they were forced to discontinue operations. I caught some of the oil as it came from the pumps and brought it to this city and had it examined by chemists, who pronounced it the best quality they had ever examined—far superior to the Pennsylvania oil. The company intend boring deeper, although they can obtain oil now in paying quantities. Their plan is to connect a pipe to the pump and lead the oil to the bank of the Mississippi river. one mile distant, where there is a good landing, and where it will be convenient for shipping. Oil-boring will not stop at this well, for there are many places in this vicinity that show as promisingly as that did; in fact, in some places the indications for, oil are better. This strike has created no little excitement among the citizens of this city and the country adjacent, as it is a new thing. Yesterday (Sunday,) more than a bundred people visited the spot to verity by touch, taste and smell, the reality of the discovery. The company are now getting their pumps repaired, and when finished they will resume pumping and prove oil-boring in Missouri a success.

## Personal.

JAY COOKE don't believe in oil companies. In fact, to such an extent does he carry his antipathy to the interest, that he would not allow his name to be used oven in connection with one under any circumstances. Some cute speculators in London, however, are particularly desirons that he should be identified with the interest, if only to the extent of being "trustee," How he regards the whole thing is fully set forth in the following card which we find published in the Evening Post:

"AS UNAUTHORIZED USE OF NAME.—A company calling itself the "ANGLO-AMERICAN OIL COMPANY, LIMITED," has published in London its memorandum of articles of association, and names two parties as trustees of the Company. One of them thus named (Mr. Jay Cooke) thinks it his duty to notify the public that his name is thus used without the shadow of authority. Under no circumstances would he allow his name to be used in connection with any oil company.

"The parties to this English affair, and all others interested, are notified that, in his opinion, it is a deuterate and infamous trand thus to associate his name, witbout his consent, with any such enterprise.

"Philadetphia, April 17, 1867."

All doubts of the safety of Dr. Livingstone, the African explorer, are now disabled.

ALL doubts of the safety of Dr. Livingstone, the African explorer, are now dispelled. Sir Roderick Murchison has received a letter from the distinguished traveler, which came by the way of Zanzibar. Dr. Livingstone writes that he is in good health, that his journey of exploration has been successful, and that he will soon return to England.

soon return to England.

John Maoee, who died recently at his residence in Schuyler county, N. Y., the owner of property estimated to be worth \$40,000,000, commenced without a cent. His ownership of Pennsylvania coal mines and lines of transportation leading directly to them gave him the great bulk of this wealth.

John A. Brown, Esq., of Philadelphia, has given \$20,000 to Lafayette College, at Easton, Pennsylvania. Mr. Pardee, of Pennsylvania, recently gave the same institution \$220,000, and a mmber of other citizens of the same State have given sums ranging from \$20,000 to \$25,000.

SIR ROBERT MURCHISON has been elected by the Acadamy of Sciences in Paris Foreign Member, in place of the late Professor Faraday. There are only eight such members, and the honor is regarded by men of science as the highest which a man of science can receive.

REV. WILLIAM HENRY GREEN Was elected President of Princeton College, on Thursday last, in place of Rev. Dr. Maclean, who resigned. Mr. Green has lately been a Professor in the Presbyterian Theological Seminary.

DR. PETERMANN, the noted geographer at Gotha, addressed the Kreuz Zeitung to state that the German Arctic Expedition will become a reality in a few months. It is to sail from Bremen for the Polar continent.

ALVINZA HAYWARD bas purchased the Peter Donohne property at San Vateo, Cal., which includes the "People's Park" field. The consideration expressed in the deed is \$50,600.

The consideration expressed in the deed is \$50,600.

Mr. Dewey, of the San Francisco Mining and Scientific Press, is now in this city. He will probably return to California on the steamer of the 1st proximo.

Mr. Mull, the English philosopher, has returned to his country residence at Avignon, France, where he was lately visited by one of our prominent citizens.

George Barkert & Co. have issued a prospectus for a new paper to be called the Press, and issued at Virginia City, New Mexico.

ROBERT C. WINTHERD has been cleared to

## Special Scientific Brevities.

In Angust next, the annual meeting of the American Association for the Advancement of Science, will be held in Chicago. This new clation is similar in its character and objects to a zelentific association in Evraland, and to another in Germany, each of which has been in operation many years, and has accomplished much for the cause of science. The American association was organized and held its first meeting in Philadelphia, on the 20 h of September, 1848. An association which had existed for ten years previous, known as the Association of American Naturalists and Geologists, was merged into it, and, though the new society started out with hut few members, its growth was rapid, and it soon enlisted the attention of scientific men all over the land. The breaking out of the war was the cause of temporarily sourching the meetings, many of the members when go joined the reaks of their country's delenders. At the last meeting, which was held at Newport, R. I., in Angust, 1860, 726 members were carolled on the books of the association. The officers elected at the last annual meeting, for the ensuing year, were as Ioliows; President, Dr. B. A. Gould; Yice President, Colonel Charles Whittlesey; General Secretary, Prof. Alired Rockwood; Treasurer, Dr. A. L. Elwyn. The sossion, which will open on the 5th of Angusl, will continue one week. Both day and evening meeting will be held, which will be open for the public,—[Western R. R. Gazette.

—[Western R. R. Gazette.

AFF At a recent meeting of the London Chemical Society, an Important paper, which br. Frankiand characterised as describing "one of the greatest triumphs of modern synthetical chemistry," was read by the Secretary. It was communicated by Professor H. Kolke, and entitled "Reduction of Carbonic Acid to Oxalic Acid," by Br. E. Drechsel. A mixture of pure sodium and dry sand was heated in a flask to the boiling point of mercary, and a rapid stream of dry carbonic acid passed. After a few hours the silvery aspect of the metal changed to a red mass, and ultimately hecamo nearly black; towards the end, the heat should be moderated to avoid reduction to carbon, and the whole slowly cooled. Left in the air for the sodium to oxidise and then exhausted with water, it furnished a solution containing oxialate or sodium. From ten parts of sodium one part of calcie oxalate was obtained. Potassium smalyam containing 2 per cent. of the alkali metal acts in the same way.

Prof. O. M. Marsh bas seenred and presented to the Yale Saf Prof. U. M. MARSH DAS SECTIFED AND PRESENTED to the Extense. Some sixteen years ago, there were imported from Ireland the fessil remains of four of these gigantle, post-teritary animals. On their arrival in this country thee fossils were stored in a commission bouse in Philadelphia until a lew weeks since, when they were sold at anction. The one secured for the Yalo collection, measures in the span of its antiers, ihirteen feet, two inches. The others were of smaller size, and were sold, one to the Smithsonian Institute, one to the Philadelphia Academy of Natural Sciences, and the remaining one to Professor Marsh.

MATSI.

AT A thin shell of metal, such as copper, brass, bronze, silver, gold, etc., which, from its costliness, may not be available for a desired purpose in solid form, may be filled in with motten iron without melting, or even translating, if it is immersed in water. The utility of this method is obvious in cheapening ornamental furnishings of almost all kinds. Another method for coating iron with copper, is to plunge it into a boiling solution of a compound of copper with an organic acid (such as the double latrate of copper and potable, with excess of alkali, and holding it with a brass wire during the immersion, which may be longer or shorter, according to the thickness of coating desired.

\*\*\* Dr. Perrin, of Paris, employs kerosene oil against intesti-ual worms. For pinworms, he makes an emulsion with half a desert spoon-tul of oil and the yolk of an egg, and administers this in a small injection of lukewarm water. For the round worms, he gives from one to two drops of the oil in a capsule.—[I. Union Medicaie.

AP It is stated as the result of careful experiments for six years at Greenwich Observatory, that rain is more frequent between noon and midnight. The smallest rainfalls take place in the morning, as the sun is going up; the greatest in the afternoon as the sun is setting.

\*\* The Lennox, Mass., plate-glass company, are to use gas ercsfter for melting purposes instead of wood.

#### MARKET REVIEW.

Faidar Evening. April 24, 1868.

Gold and Silver Stocks.—The tone of the market is weak, but many stocks show an advance in price. Nevada stocks are lower. Combination Silver, held last week at \$55, can now he bought at \$33, and Twin Eiver, for which \$70 was asked last Friday, is now offered at \$60. Manhattan is still held at \$185. Colorado stocks are improving. Bullion Consolidated has advanced from 10 to 50c., and some holders think it worth \$1 50. Black Hawk commands \$5; Kipp & Buell 10c.; Smith & Plarmelee \$2 15. Consolidated Gregory is a shade lower at \$157. \$20 is asked for Owyhee Mining. Montana Gold has declined to 33c. Prices are thus quoted at the heard:

1		Bld.	ASK			Asked
1	Alameda Silver	70	1	00	Keystone Silver	
Ì	American Flag	- 41		55	La Crosso Gold 35	35
1	Atlantic and Pacific		-	75	Liherty Goid	4
	Bates & Baxter Gold	-		50		165 00
ı	Benton Gold	- 15		30		60
1	Black Hawk G	5 00	6	00	Montana Gold 33	- 50
J	Bohtail Gold	1 00	1	50	New York 55	65
1	Bullion Consoildated	- 50			New York & Eid'o	1 7
	Columbian G. & S		_		Nye Gold 1	- 1
ı	Combination Sliver		28	00	Owy :- Mining 20 00	
1	Consolidated Gregory.		2	65	Ophir Gold	1 00
ı	Lorydon Goid	- 26	-	34	People's G. & S. of Cai - 5	21
ı	Edgehill Mining	2 50		00		1.0
	Gold Bill		1	00		
	Gnnneli Gold	- 75	î	00		- 17
	Gunnell Uniou			45		2 2
	H'n G & S. bs			90		7.00
	Harmon G. & S. bs		2		Symonds Fork Gold	1 0
	Holoran		U	10		- 1
	Hope Gold			20		60 0
	Kipp & Buell Gold				Vanderburg G	- 70
		idson	has a	dva	nced, and sold yesterday at 380	. 50c
	was offered for Hilton.					
	Caledonia C				Gardiner Hili	
	Canada		_	ôυ	Hilton	1 0
	Davidson	35		45		
	Detwolenm Steeler	Deloc		dha	a another at the board .	

	Petrolenm Stocks, Prices are thus quoted at the hoard: Bid. Ask'd.	Bid.	Askd'.
	Bennehoff Run 1 0) 1 70 N. Y. and Alleghany	1 00	2 75
í	Brevoort 40 50 Pit Hole Creek	50	
	Buchanan Farm 42 42 Rathbone Oil Tract Co		
	Contral 20 60 Rynd Farm	. 7	12
ì	Gamason Ott 90 1 10 Sherman & B	25	
	Columbia 4 00 Unite 1 Pet. Farms		. 12
r	Manhattan 5 Uoited States	1 45	1 55
	National 1 00 3 90 Union	2 50	
	Wiscellaneous Stooks Cumberland Coal is quoted to-day	at 37	· Welis

Missellaneous Stocks.—Cumbei and Coal is quoted to-day at 37; Wells, Fargo & Co., 28\%@29\%; American, 60\@61; Adams, 62\%@62\%; Maclad States, 60\%651; Merchants' Union, 31\%\@31\%; Quicksilver, 28\%\@28\%; Marlposa, 7\@8; Marlposa, 7\@8

Government Stocks.—United States securities have been somewhat irregular. The exportable bonds have fallen off  $\frac{1}{2}(a_0)^2$  per cent., in sympathy with the weakness in gold. The securities of the issues neld at home are steady. Frican are thus gooded.

eac	ly.	Prices are thus quoted :	
1	J. S.	6s. 1881, reg	4@ -
1	J. S.	6s, 1881, conpon1123	6(0)113
		5-20s, 1862, rag1043	
1	J. S.	5-20s, 1862, coupon	60112
1	U. S.	5-20s, 1864, coupon110	@1103
1	U. S.	5-20s, 1865, conpon110	6@1101
-	U. S.	5-20s, July, 1865, conpon	4(0)1083
		. 5-20s, July, 1867, conpon	
		10-40s, coupon102	
	U. S.	. 7-30s, June, large107	@1073
	U. S.	. 7-30s, July, large	@107
	-		

Foreign Exchange shows rather more firmness. Leading drawers ask 11014, and transactions are generally done at that rate or 1-16 per cent, less. There is rather more commercial demand, and but a ilmited supply of hills.

l	The following are the current rates:
ì	London, (prime hankers')60 days'
۱	London, (prime bankers') sight
	London, prime commercial
	Paris, (hankers') long
	Paris, (hankera') short
Į	Antwerp5.16/4@5.15
Ì	Swiss
I	Hamburg (haukers')36%@36%
ı	Amsterdam (bankers')
1	Frankfort (hankers')41 @41%
1	Bremen (hankers')79%@79%
1	Berlin (hankers')

Mexico.

ROBERT C. WINTHROP has been elected President of the Massachusetts Historical society.

Professor Leenback is building a ship at Bethlehem, Pa., with
which to navigate the air.

John Gall.—The tendency of gold is downward at 139% @139%. Loans are made
at two per cent. for carrying to "fat."

American silver sells at 6@7c. below the price of gold. Mexican dollars are
nominal at 108@103% in gold.

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The te

the second of th	A
call, on good slock collaterals, at 7 per cent and exceptional transde in large sums, upon government securities, at 6 per cent. class commercial paper is placed at 7@9 per cent. per anaum disc.  The official report from the United States Mint at Philadelphia	Strictly first vount.
amount of money coined during the month of March to be \$351,6 there were gold coins to the amount of \$205,650, silver \$22,4 balance in cripper coinage. The following will show the exports of specie from the port of N	521, and the
the week ending April 18, 1863 :  April 14—Steamer Saxonia, Hamburg —  Silver bars.  Moxican silver and gold bars	
Gold bars	. 20,000
Silver bars	208,049
American silver.  April 15—B: ig Harry Ponce— American silver.  April 16—Steamer Columbia, Havana—	15 000 I
April 18—Brig Alice, Para—	7,000
April 18—Steamer Pennsylvania, Liverpool—	. 1,380
Gold bars April 18—City of Paris, Liverpool— Britisb gold American gold.	. 14,520
April 18—Steamer Cuba, Liverpool— American gold. April 18—Steamer St. Laurent, Paris—	100.000
Gold bars	100,000
Mexican Silver. April 15—Steamer Bremen. Bremen Foreign silver	4,300
American silver	
Total since January 1, 1868	
The shipments of treasure from San Francisco from March 1 to as follows:	the 10th, was
March 5, per Nevada, to New York. \$374,000 00 To England. 100,009 67	474.009 67
Marcn 7, per Great Republic, to Hong Kong\$286,069 41 To Shanghae	0 292,159 47
March 10, per Constitution, to New York.     \$124,153     17       To England.     190,112     06       To France.     32,742     94       To Panama.     15,000     06	362,008 07
March 14, per Nollie Abbott to Hong Kong.           March 17, per Idalo to Honolulu.           March 18, per Colorado, to New York.         \$325.573.79           To England.         313,838.07           To France         327.676	93 847 25
To England       313,838 00         To France       45,387 60         To Panama       20,000 00	701 700 41
March 19, per Orpheus to Hong Kong. March 24, per Andubon to Hong Kong March 25, per Oregonian to New York.	704,799 44 34,566 37 35,104 05 303,000 00
Total since March 1, 1868 Previously this year	\$2,824,494 32 6,268,392 93
Total since January 1, 1868	
Decrease this year	
souncy is obtained as the first per annum. The tew days of fine have enjoyed lately nave not been sufficient to restore easy of the have enjoyed lately nave not been sufficient to restore easy of with the interior, and we have consequently to report the built comparatively bare. Gold bars have advanced under this search of the days of the of	mountcattor on market as ty, and are in turrency bills rafts, payable xhange, 49d., from Oregon be added as the credit of p \$129,000 in
Copper—has continued in good domand and the sales of the stand 23 \( \frac{1}{2} \)	expected ar- confidence in for June and
again £76 for Chill pig copper.  The purchases for export to Europe since the 1st lostant, smc	
1,500,000 lbs. Tin—ls quiet with littic offered. Straits 23%@24c.; Banca, 2 23%, all gold.	714; English,
Spelter—6%c. for Silesian without wholesale business.  Lead—6% for ordinary foreign.  Pic. Francis quiet. South, No. 1, can be quoted \$406.42.	according to
Pig Iron—is quiet, Scotch, No. 1, can be quoted \$40@42, brand. American, No. 1, \$38@39.  Zinc.—Sheet Is scarce and firm. Sheet per Ib.	1
Lehigh, firm	@12
Receipts for the week ending April 21pkgs. Exports for the week	12 116 433,212 11,615,653 8,407,945
10. same time last year	556,619
Portland	4.726.609 627'061  5,910.289
Total 7.821,506 Total Exports from the United States 19,676,109 Same time 1866. Same time 1865. Antimony —Quiet, at 16c. currency. Bismuth —Fair demand at \$4 per th. gold. Nicael. —Quiet, at \$1 2562 06, gold.	ATIOUG LAW
THE IRON TRADE.	
Domestic.—The market for both Scotch and American pig is sales of American foot up in the region of 600 tons at about \$33. only notice two to 300 tons from yard at \$40 tor Eglington and shortle. Raw irou continues duil. Old ravis are scarce and sales foot up 470 tons at \$45. The market in steel is well sup demand is only moderate, at our quotations.  Foreign.—Ascording to late advices from England, trade is almost every bracch. The Glasgow pig-fron market, however pressed; sellers prices rule at 52s, 5d, cash. The market for low is also reported quiet.	lmproving in r, is still de- manufactured
The strike or lock-out in the moulding trade in Scotland is n the men baying unconditionally accepted the terms of the em	ployers. The

In number, more particularly on account of the foreign markets, "Already," writes a correspondent of the Guerdian, "one of the local iron companies is making preparations to send large supplies of railway iron to the United States, several vessels having been chartered to convey the iron, and there are further offers on the books of the freight agents. One of the American companies requires an less than 25,000 tons, a considerable proportion of which will probably be sleet rails, and there are several other companies whose requirements average from 10,000 to 15,000 tons."

1868.

There is no change to notice in pig iron. The market is duli and the sales have been confined to small lots at \$42@45 per too, and American at \$40@45 per too, according to quality and brand. In har trou the sales have been moderate, but at steady prices. Russia sheet iron is firm, and has been selling at 12c. per lb., gold.

Boston Imports of Pig Iron from January 1 to April 18, 1868.

From Great Britain, tons. 1868, 1867.
Coastwise Ports. 3,545

Lehigh Valley Iron Trade. Lehigh Valley Iron Trade.

The following table shows the amount of Pig Iron transported over the Lehigb Valley Railroad for the week ending April 18, 1868, and for the season to that date.

41,227

Exports of Iron and Steel from Great Britain to the United States The following statement exhibits the quantity of various kinds of iron and Steel exported from Great Britain to the United States during the months of January and February of this year, and also the quantities shipped bither during the corresponding months of last year. It will be noticed that the exports this year are materially lighter than last year, excepting in the case of railroad iron, in which there has been an increase of about 60 per cent.

		Quantiti 1867.	es. Tons. 1868.	Declared	Valus. 1868.
Iron,	plg and puddled		2.991	\$259,043	\$46,347
	Bar, angle, bolt and rod	8,008	3,727	347,561	161,423
66	Ratiroad of all sorts	20,321	32,942	763,109	1.063 547
6.	Castings	75	50	6,116	5,185
66	Hoops, sheets and boiler			,	,
	plates	8.051	1.796	167,989	93,091
4.6	Wrought, other	1,569	610	163,586	62.10
	Total	49,740	42,116	\$1,707,404	\$1,431,702
Steel,	unwrought	4,118	1,655	\$656,370	\$256,764
	Ma	rket !	Prices.		

The strike or lock-out in the moulding trade in Scotland is now at an end, the men baving unconditionally accepted the terms of the employers. The strike or lock-out lasted for a period of nine weeks. Upwards of 1,800 men were thrown out of employment.

At the quarterly meeting of the North of England fron Trade, held at Middle-horo, the Cleveland steel question engaged great attention and it was shown that in that district success continues to mark each stage in the experiments.

The Shoffield correspondent of the London Guardian cities as promising results.

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The Shoffield correspondent of the London Guardian cities as promising results.

The Shoffield correspondent of the London Guardian cities as promising results.

The Shoffield shert.

35 00—4 mos.

50 tons No. 3 red short.

ANTBACCIE.

ANTBACCIE.

ANTBACCIE.

Ston 10 tons Juniata. #20 00—4 mos. 20 tons charcoal. 90 00—4 mos. 90 00—4 mos.

ally occur at quotations, but not sufficient transpires in this way, to create the slightest appearance of activity. The receipts last week amounted to 384 tons, shipments 200. We quote this week:

Mill, hot blast.

Sist 00 a 40 0)

Foundry, hot blast.

60 00 a 60 00

Only one of the har mills is running. Business does not appear to pick up in the least, except probably in one or two kinds of iron. Rates are steady at 33% a 43%.

Nalls are very active at \$5. Shipments large.

At the meeting of the iron manniacturers beld at Pittsburg last Monday, they agreed to keep prices as they are at present. The iron puddlers have gone to work at the old prices.

The Belion furnace has received 3,000 tons of M'ssouri ore.

Bosros, April 22, 1868

Swedish—common ass'd...\$150@155

English—com.

55 90

do refined.

95 100 No. 1, other brands.

42 45

American, No. 1.

San Francisco, March 30, 1868.

We have, says the Com. Herald. few sales of nic or other iron to report.

	180	67.	18	68	INC. 0	R DEC.
	WAEK.	YEAR.	WEEK.	YEAR.	WEEK.	YEAR.
Phil. & Reading R. R.	62,176	791,393	63,558	846,903	i 1,382	t 55,510
Schuvlkiii Canal	25,819	93,967	23,908	84,057	d 1.91t	d 9,910
Lenigh Valley R. R.	37,843	468,534	47,333	722,359	i 9,490	1 253,824
Lehigh Canal	16.027	25,685	19,034	(24,210	1 3,007	d 1.475
Scrapton North	6,431	105,429	7.914	110,546	i 1,483	5,117
" South	27,939	869,250	26,067	308,061	d 1,67	d 61,189
Penn'a Coai Co. Raii	19,149	175.184	19,977	183,423	1 828	8,239
Pepp'a Coal Canai	802	1,490	702	1 046	d 100	d 444
Del. & Hudson Canal.	42,000	150,605	51,168	86,813	9,168	d 63,792
Shamokin	8,777	118,632	11,090	101,604	1 2,113	d 17,027
Trevorton	148	5,042	668	5,30t	1 520	1 259
Short Mountain	1.613	5.231	2,890	9,270	1 1 277	1 4,040
Lykens Valley C. Co.	1,024	12.411	597	22,479	d 427	1 10,068
Broad Top		57.339		53,178		d 4,161
W'mstown Coi'y, E	2,106	18,805	4,212	40.885		
Total	251,854	2,398,997	259,118			
	*****	*****	251,854	2,398,997	*****	******
Increase			7,264	d 201,138		

Schuylkill Coal Trade. BY RAILROAD AND CANAL, FOR WEEK ENDING APRIL 16, 1868.

	RAILROAD	CANAL.
Clair	42,594	
Carbon	8,387	*****
tsville	1,636	*****
uylkill Haven	22,364	
urn	1,059	
t Clinton	5,847	*****
Total for week	81,887 846,903	29,432 84,057
TotalSame time last year	928,790 865,632	113,489 119,318
Increase	63,158	d 5,829
Cumberland Coal Trad	A.	

By B. & O. RAILROAD.—The shipments over the Br for the week ending April 18, were as follows: From Cumberland & Pa. R. R., via Cumberland: Consolidation Company.

1	Borden	do.				, 885	11
1	Midlothlan			**************		227	19
ł	New Hope	do.		************			
ı	Midland	do.	***********			11	04
ı	From George's Cr	eek via I	Piedmont.				
ı	George's Cree	k C. & 1.	Company		1	,055	13
J	Central	44				2,856	01
1	Atlantic	4.6				,361	U1
ı	Piedmont	4.6				1,701	Uð
į	American					2.378	19
	Swanton	46				847	12
	Potomac	4.6	***********			1.200	V.
1	George's Cree	k Mining				90	4.54
	Hampshire					2,003	18
1	Franklin	46		******		1.238	02

APRIL 25, 186	88.]		3 25			AMERICAN JOURNAL OF MINING.	265
Savage Mountain			••••••			Sunhury. West Brance and Susquesanna Canal. 300 200	Haverstraw. 45 Warren. 1 60 Sing Sing and Nyack. 57 Pawtacket. 1 75
From Eckhart Rail C. C. & I Co	road.					80 insgrove.     1,330     1 500     Williamsport.     840     430       Liverpool.     110     310     Jersey Shore.     770     920       Dry Valley.     9,330     1,400     Mill Hali.     800     370	Tarrytown and Piermont   50   New Bedford   1 90
Total	There were	despatched	from the	port of Cur	74 17 pherland,	Callisquaque	reasonable dispatch, at the expense of the consignee, who shall also pay whar-fage on the boat. Boatmen will tend ports of the construction of the
y the following compo	111 boats, la anies:	den with 1	12,677 15 to	ns of coal, f	orwarded 68 11	Watsoutown         350         260         Phillips' Mills         70         70           Pt. May         100         650         Total         26,960         13,410	gny while unloading. Portland
Borden				1,4	27 09 52 17 03 06	Juniata Furdace         JUNIATA CANAL.         520           New Port         1,660         500         Petershurg         112         200	St. Jones
Consolidation				1,5	92 00 46 16 08 03	Millerstown   630 3,660   Alexandria   150   Mount Uniou   4,875   Mount Ville   1,020   670   Williamsburg   6,270 3,260	Satem
Total				12,6	77 15	McVeightown 12,100 13,475 Hollidayshnrg 1,040 870	Pawtnckot 200 — Milton
port of Coal Transfor the week ending						Newton Hamilton 100 Total, 22,772 29,490 Uxion Canal 13,160 3,365	New Haven 1 30 1 90 Norwich
SHIPPERS.	RAILRO Week.	Total.	CANA Week.	Total.	Grand Total.	Union Water Works. 800 2,135 Total. 16,110 12,160	Saco
ROM MAUCH CHUNK.	Tons.	Tons.	70ns.	Tons.		Harrisburg         37,600         33,960         Marietta         46,100         45,250           Duncanoo         9,280         8,180         Columbia         65,200         57,620           Middletow         7,760         10,940	Fall River
Tolal			9,711			Brainbridge.         350         Total         166,290         155,950           Tide Water Caval.         Total         1,515           Wrightsville.         500         3,300         Spesssic Island.         1,515	Albany
ankfin Coal Co idenried high & Susqueli'na	::::	50	::::	::::		Sale Harbor 150 Cooper's Creek 110 115 Peach Bottom 820 Wilmington (Del.) 100	Fall River
rmania Coal Co iikes Barre C. & I	121	4.759 12,782	604 3,461	604 t 066		Harre de drace. 42 800 39,515 Delaware City 1.210 150 Willow Grove. 1,500 200 Philadelphia. 2,620 100 Baltimore. 78,200 57,345 Princeton. 110	Hndson
rish & Thomas w Jersey	839 429 671	9,041 23,577 7,657	432 97	432 225		Port Deposit 4,470 3,780 Camden 12,780 Perryville 1,470 635 New York 1600 Elkton 2,400 670	New Bedford.     1 50     — Providence.     1 50     — New Laboration.       New Haved.     2 00     — Salem.     1 75     — New Haved.     2 00
yoming C. & T. Co.	116	2 432 3,227				Deer Creek 629	Rates of Transportation to Tide Water.
rris & Essex Mut'l nsumers erhart Coal Co	107	1,165				Wyoming Valley Canal     79,890     54,024       West Branch and Susquehanna Canal     26,960     13,410       Juniata Canal     22,772     29,490	To Port Richmond.—(Philadelphia.)
ymouth Coal Co ilman & Son wkley, Price & Co.	386	152 4,299 149				Union Canal	Brunswick and South of Cape Heory, until further notice;
neral Springs	713	6,295	::::	::::	::::	Tide Water Canal     151,620     107,535       Grand Total     463,642     372,569	Drawback Freight Nett.   Steamboat   115   2 00   875
B. Linderman & Co ashington Coal Co.		10,445	****		****	Prices of Coal by the Cargo.	Broken         1 00         2 00         1 00           Egg.         65         2 00         1 35           Store         50         2 00         1 50
rclayawnee	65	2,552	187	187		CORRECTED WEEKLY.!  At New York, April 24, 1868  Schuylkiii R. A., ebote. \$6 00@8   Lehigh Broken	Chestnut. 75 2 00 1 25  From Port Carbon, 8 cents per lou more. 1 25  To Elizabethport.
nsumers Coai Co arvey & Bro yoming Vailey	128 92 199	1,927 1,269 1,318				" Ordinary 5 75 " Egg 48 7½ 5 12½ 5 12½	TO Elizabethport.
mry Colliery w England l. & Hudson C. Co.	45 142 5	429 230 11		::::		" Broken 5 00 Wilkesbarre Lump 5 00 B'ken & Egg. 5 00	1 75
ner Shippers	4,688	93,788	4,341	1,020		" Chestnut 4 50 " Chestnut 4 50 Ledigh W.A. Lump Oid Co 5 00	Total 2 00
ROM B. M. REGION. Y. & L. [T.H. & Co	3,667	16,201	4,041	0,802		SPECIAL COALS.—Dealers' Quotations.	L. V. R. R
oney Brook Coal Co. or Pa. Coal Co oring Mountain	987 2.451	41,120 15,762 33,972	257 951	91 257 961		Honey Brook "Lehigh. 5 50   H. Heils, E. S'klin, Lorb. 5 50   New England Red Ash 5 25   Spring M'n " 5 50   Wyorning 5	Total
leraine W.T.C. & Co Meadow (D. W.) hn Connery	2,462	22,842	187	187		Sugar Creek "	
high Zinc Co		126		::::		Stons	Shipping Expenses
Total	9,574	130,025	540	631			I I I I I I I I I I I I I I I I I I I
entral Coal Co		433				1	
t. Pleasant [Halsey azleton (A. P. & Co) ast Sugar Loal	331 4,911 3,332	6,647 80.326 47,403	69 994	69 1,188		" Chestaut	Drawback
ount Hallatimer (A. P. & Co)	1,167	12,4 22				W. A. Lump and 3 00 3 25 Lorberry Coal. 4 50 Steamboat. 4 00 Shamokin (Lykeus Valley) 5 00 Franklin, (Lykeus Valley) 5 00	Total
tout Coal Co Iarleigh Coal Co bervale Coal Co	1,179 1,654	9,788 19,277 26.239	564 286	564 286		Figa and Stove. 4 10 4 50   Bread Top. 4 60 Scranton Coal at Elizabethport, April 24, 1868. (Corrected weekly by D. L. & W. R. R. Co.)	Freights through
eddo (G. B. M. & Co) Voodside (J. C. Co., fighland	2,585 301 917	45,370 5,300 23,095	256	644		Lump.         \$4 00@         Egg.         4 50           Steamer.         4 00         Stove.         5 25           Grate         4 25         Chestini.         4 00	Towage
cross Creek (C. B.) Colored Ridge [S.W. & Co. Buck Mountain	1,606 1,712	8,578 32,383 22,688	168 837 445	163 931 445		(Corrected weekly by Penna. Coal Co.)	Morris " 34
Total	20 861	349,125	4,261	4,737		Lamp, per ton of 2210 lbs.\$4 10@   Egg	Freight
C. LEBIGH REGION.	546	22,279	179	179		Lackawanna at Rondout, April 24, 1868.	Total  Expenses from Mauch Chunk to Jersey City for Re-shipment. Lehiga tolis (net) 34
Total	546	22,219	179	179	<del></del>	Compared   Compared	Morris         34           Freight.         1 50           Re shipping         30
MARANOT REGION. At. Rose Coal Co Aount Etna Coal Co	46 135	46 865				Lehigh Coal at Elizabethpert, April 24, 1868.  Lump	. Total 2 48
dahanoy Col. [N.M.M.	1.054	9.704 3,950		::::		Egg	Sydney to N. Y
iendon rimrose Coiliery . 8 Siliman	1,265	11,243 550 35 479	·			Lump	Cow Bay
IcNeal Co Inickerbocker Thomas Coal Co	936	20,304 20,348 9,337				Broken 4:5 Chestrut. 4:5  At Baltimore, April 24, 1868. Wilkesbarre & Pittston W. From wharf or yard, 50c.	Foreign Freights.  New Castle and Ports on Tyne
Williams & Herring New Boston Coal Co Shamokin Coal Co	120 1,029	3,265 13,375				A. by car	San Francisco Coal Trade.
Caledonia M. & M Coal I'm Cataw'sa RF Other Shippers		7,654				Sunbary & Soamokin R. or I and f. o. h. at Locust P't for shipping	SAN FRANCISCO, March 30, 1868.
Total	11,662	136,140				Wilkesbarre or Pittston, W. Sunbury or Shamokin, R. on board	are to a considerable extent quits nominas. The cargo of 1506 tons English, ex Charles Luling, is being retailed out at \$16 per tou, since reported sold to a dealer upon terms withheld. The involve of 375 tons Wallsend, ex Silas Fish,
rand Totalsame time last year. ncrease	47,333 37,843	722,359 468,534 253,824	16,027	25,685		Trevorton R. A., on board 5 50 Lykens V'y, R. A. on b'd 65 A. George's A. George's (reck and Cumberland t. o. b 5 64	
Decrease				1,475		Prices of Gas Coals.	A 1elegram from San Francisco, daied April 20, to Messrs. Less & Wallan Bankers, 33 Pino street, this city, quotes stocks as follows:
We are indebted to	o Mr. W. A.	J. Brittain	, our corre	spondent at	Beach Ha	rrov:NCTAL. Coarse. Stack. Gold. Gold. Currency.	STOCKS. Bid per l't. STOCKS. Bid per l't. Gould & Curry 555 @ 560 Belcher 210 @ \$20
COAL MIX	, and valuat	NT TO MA	RKET, AND	1866.	1867.	Block House	O Choliar Potosi
Butler Coal Co., Pitt Mercur & Co.,					3,840 300	Sydney.   2 1334   71.54   Ponn.   8 50   8     Pictou.   2 134   1 184   Newhurgh Orrel Gas.   8 59   8     Little Glace Bay.   1 75   1 00   Delivered in New York.	Crown Point 9 110 602 175 Cal State Tolograms Co
Henry & Co., Freeland, Welch & Foley				898	760 100 4,840	International Co.'s 1 75 Prices of Foreign Coals.	New York Imports of Metals &c.
Maryland Coal Co.,				11 493	6,460	Duty \$1.25 per top.  Corrected weekly by Passeners Boss., 32 Pine Street, N. Y.  Liverpool Gas Caking	The following will show the imports of Metals, &c., at the port of New York Ircm toreign ports, for the week ending April 17, tees. The quantity is given in packages, unless otherwise specified.
J. H. Swoyer, P Wyoming C. & T. Co Bowkley & Price, M Hillman,	ill Creek		•••••	59,288	26,36	" Canuel	00 Brass Goods
Baltimore Coal Co.,	Iron Co., Wil	Kesbarre		151,060	110.00	Liverpool Orrei, screened\$18@20   Liverpool Cannel, scr'd 22 00@— per tou 2000 ibs. delivered.	Copper 63 28
Parrish & Thomas, Plymonth Coal Co., Shawnee Coal Co.,	Plymouth			30,570 20,353 2,324	1,49	(Green And Worklan)	Gas Fixtures
Davenport, Harvey Brothers, N Salem Coal Co., Shi	anticoke			11,272	23,70	Rates of Freight from Newburgh	Iron, Hoop, tons
Cohen, Northumberland	4.6				11	On "Pittston" Coal, hy boats and Stamford	25 Iron, Sheet, tons
Total	HO	W DISPOS	ED OF.	463,644	372,56	pany, per ton of 2,240 lhs.   Bridgeport.   1   Troy and West Troy.   \$ 55   New Haven.   1   Albany and Greenhush.   50   New London,   1	25 Lead, pigs
Wilkesharra	WY01	MING VALLE	EY CANAL.	1 22	566. 186 ,000 23,20	Cocymans	50 Old Metal
Wilkesbarre S hickshinny Beach Haven	410	320 C	oom upertatawissa anviile	4	820 7 ,800 8 ,120 20,4	Sangerties and Barrytown 35 Sag Harbor	55 Steel
Briar Creek Lime Ridge	5,630 5,200	400 N 2,175	orthumberl	and	800 5	Fishkill Landing	55 Tin, boxes
Espy	4,020	2,220	Total	, 78	,890 54,0	Peekskill 40 Dighton	60 Wire

## AMERICAN Yournal of Mining.

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papers will be gladly given to those who may wish to favor us with their patronses.

#### NEW YORK, SATURDAY, APRIL 25.

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Subscribers receiving their paper in a blue wrapper will accept the same as a notification that their subscriptions have expired, and that the Journal will be discontinued unless we are other authorized.

#### THE STETEFELDT FURNACE.

This furnace for the chloridizing-roasting of certain classes of silver ore, is attracting a good deal of attention in Nevada, and promises to be the means of greatly increasing the profits of the silver mines of the Reese River, Twin River, and other similar districts. It is the invention of Mr. Chas. A. Ste-TEFELDT, a thoroughly educated metallurgist of great skill, whose reputation in Europe, as an assistant and co-laborer of Bruno Kerl, is considerable, and whose career in this country has been highly creditable to him. As might be expected, Mr. Stetefeld's plan for roasting silver ores is not a chimerical one, based on "new principles in chemistry;" but a carefully elaborated, practical development of well established metallurgical rules. The discovery upon which it is based is this: that the chlorination of argentiferous ores by roasting with salt, although it requires considerable time in the ordinary reverberatory, is chemically an instantaneous process and that the mere falling of the ore and salt, in pulverized form, through a shaft, against a current of heated air, is sufficient to effect its entire chlorination. After several more or less successful attempts to realize this principle, it was finally carried out at the mill of the Twin River company, with results which, from all we can learn, certainly seem to have been brilliantly satisfactory. We propose to give a brief description of the furnace, and of the saving accomplished by its use. As the one built at Twin River was only for experimental strength and durability of the track." In another place he purposes, and not arranged to be regularly run in connection with the mill, we presume it will be some time before it will be steadily at work on a large scale. Still there is but one report as to its success; and its general adoption will be therefore mainly a question of time.

The experimental furnace consists of a plain shaft, 22 feet high, 4 feet square inside at the bottom, and 3 feet square at the top. The flames from the fire-places, which are built on opposite sides of the shaft, enter it three feet from the bottom. The roasted ore accumulates at the bottom. Near the

upper end of the shaft are four fines, which unite into one horizontal flue connected with a small fire-place designed to roast the fine dust that escapes through the flues. This horizontal fine is connected with a perpendicular fine leading down into the dust-chamber. This chamber covers an area of 10 by 18 feet, is 10 feet high, and surmounted by an iron chimney, 2 feet in diameter and 30 feet high.

The salt is mixed with the ore before crushing, and the pulp is conveyed to the feeding apparatus, which, by an ingenious combination of a hopper and sieves, delivers it into the furnace shaft. Every particle of the pulp is roasted when it arrives at the bottom; and, what is of equal importance, nearly all the chlorides of the base metals are decomposed by the steam contained in the flame, and hydrochloric acid and metallic oxides are formed, the former of which escapes through the chimney. The result, as every mill-man knows, will be a higher grade of bullion from amalgamation, than could be obtained from the same ores, roasted in a reverberatory; since, in the latter case, the chlorides of the base metals enter into the amalgam.

The roasted ore presents a very uniform appearance, and from 83 to 91 per cent. of the silver contained in it is chloridized. Mr. Stetefeldt believes that the chlorination would be higher in a continuous operation, when the walls of the shaft would have time to attain their normal temperature, and the whole process would work with greater regularity.

The following is the estimated expense of roasting sixteen tons of ore at the Twin River mill:

IN EIGHT REVERBERATORY FURNACES. 

. 76 80 . 12 00 Tctal cost......\$270 00 IN STETEFELDT FURNACE.

 2 men to overlook machinery
 \$8 00

 3 firemen at \$4 each
 12 00

 2 pulp coolers at \$4 each
 8 00

 3 cords of wood at \$8 50 per cord
 25 50

 8 per cent, of salt at \$40 per ton
 51 20

 2 men to overlook machinery.
3 firemen at \$4 each.
2 pulp coolers at \$4 each.
3 cords of wood at \$8 50 per cord.
8 per cent. of salt at \$40 per ton.
Sieve and tools. .. 3 00 Total cost......\$107 70

These comparative estimates show a saving in roasting 16 tons of ore in the new chloridizing furnace over the reverberatory furnace of \$162 70. The cost of roasting in the former furnace is less than \$7 per ton; in the latter it exceeds \$16 per ton.

The inventor claims still greater saving from the use of his process on a large scale; but the above is sufficient. A most interesting and unexpected fact was the assay of one and a-half thousandths of gold in the bullion of the Twin River company produced by the Stetefeldt process, while the ordinary bullion of the company only contains one-sixth of that amount of gold. This opens to the new furnace a wide field of application in the treatment of auriferous silver ores. We shall hear more of it, before long.

#### RAILWAY REFORM.

As a purely commercial question of economy, the London Engineering makes a remark that our railroad directors would do well to ponder, as applying to matters of more vital importance. Discussing the very small net returns of 8 per cent on the enormous capital of 475 million pounds invested in English railways, and trying to find some means of lessening working-expenses, so as to increase profits, it says: "The great hope of railways is in the improvement of their permanent way. Upon this, all questions of working economy hinge."

That is a very simple proposition and one most easily proven Yet it is one that seems to find hard work to get into the minds of railroad directors in any practicable shape. It is hardly to be expected that mechanical perfection will ever be reached in the building of a railroad, although every interest urges the managers of their own and other people's money to the construction of a way which, giving unvarying resistance at all speeds, would reduce their immense and continuous expenses for repairs by at least one-half. As it is, careless construction and subsequent neglect cause the rapid increase of resistances, accumulating, one after another, until the wear and tear of road and rolling-stock becomes a chronic drain upon the treasusy and occasionally the absolute breaking down of one or another important portion of the road's machinery results in such awful calamities as the Erie road has so lately exhibited.

The report of the General Superintendent of that line, made last mouth for the year preceding, shows the tendency of all says: "Forty-two-tou locomotives hauling trains of fifty and sixty loaded cars, and passenger engines weighing thirty-seven tons, running at a speed of thirty to forty miles per hour, literally crush and grind out the iron rails beneath them." His " steel rails as far as practicable," have received an endorsement iu the final bruising out of a flimsy, laminated irou rail and the wreck of the precious freight it bore. For the proportion of broken steel to broken irou rails is scarcely 1 to 100.

To suppose that railway directors will ever reconstruct their

ricketty road-ways for the sake of humanity, is, of course, preposterous. But the smoothing and strengthening and consolidating of the roads will make a way for lessening weight in engines, so that fifteen and twenty tons could do the work of thirty and forty; diminishing the weight of rolling-stock in general, enabling the use of heavier gradients at less expense, reducing the cost of vast, wholesale repairs, and doing away with the most fertile canse of accidents. Penny-wise is always apt to be pound-foolish. Are not events the most potent advocates of a thorough reform in American railways?

#### HUMAN FLYING.

ICARUS the son of DEDALUS, who fled on wings to escape the resentment of Minos, has served for many generations as a symbol of ambition, and fatal ambition at that; for his waxjoined wings melted in the heat of the upper air and he was whirled downward into the sea. Inventors have puzzled their minds for ages to compass the problem of air navigation by machines or by flying men; and but little advance has been made. The Aeronautical Society of Great Britain claim that one of their number has succeeded in making a pair of wings by which he is able, with a short run by way of getting momentum, to mount into the air, fly horizontally, descend swoopingly towards the earth and rise again. But alas! with the skeptical Perer Probasco, "we have our doubts."

It would of course be absurd to affirm that anything could not be done, in this age of the world; but while this feat may be accomplished to an extent "enough to say so," we are incredulous of any practical benefit of the thing to man. The muscular power of cats, squirrels and kangaroos, relatively to their weight, is tremendous when compared with that of man; and with all their airy leapings they are still of the earth, earthy. But the force of birds as related to the insignificant weight of their slender tubular bones and expanse of feathers, is something almost inconceivably beyond this. The force which a man is able to expend in rapid ascension of heights, even with the firm earth under his feet, is very small; and we have never seen any principle elucidated which was able by apparatus to increase his power or lessen his gravity in proportion to it. The balloon remains; but that, if used, presents such a surface to the atmosphere that it cannot be accurately guided without, by means of steam-boilers or other weighty machinery, storing up power for propulsion, in a manner of itself too cumbrous and heavy for successful navigation.

So that, whether it is for his own personal flight through the air or the management of a great atmospheric ship, man seems to be hemmed in on every side by almost insuperable natural difficulties. And besides, even were all this obviated, who would run the risk of accidents at a great height above the earth, beyond the reach of help-but not of gravitation? It is an interesting problem, and may result in pretty scientific toys; but for real helpfulness to humanity we see but little in Aeronautics.

#### THE ANNITA COPPER COMPANY.

The trustees of this company have furnished us with an abstract of their superintendent's report, representing that there has been no work done since June, 1866, at which time a contract of sale was entered into with a representative of English capitalists; that the work previously done produced over four thousand tons of copper ore, which is estimated at three thousand tons of 24 per cent. ore. This ore, it is reported by the superintendent, is still at the mine. The reason given by the trustees for the inactivity of the past two years is that the general depression in the copper mining business of California has, on the one hand, delayed the consummation of the contract of sale alluded to, while, on the other hand, it offered no inducement to the company to terminate that contract and resume mining operations for themselves. The ore on hand was included in the proposed sale. The trustees express their confident expectation that the sale will be consummated, as originally designed; but declare that, if such should not be the case, they intend to ship the ore on hand, and resume active operations.

We are not ourselves, and we do not know that many of our readers are, personally interested in the affairs of the Annita company; but it is claimed that the severe criticisms of this paper upon their operations, mere than a year ago, were unfair; although it is not denied that the statements positively made to us, and not publicly refuted by the officers of the company, were such as to give us reason for distrust and censure. The present officers of the company, feeling that there is no need for secresy as to their plans, desire us to present the statement of the case from their side; and we have no hesitation in granting so proper a request. The AMERICAN railroads, and especially of the Erie, to adopt larger and more JOURNAL OF MINING is intended to be fearless, but just powerful locomotives; and he adds, "this has been carried to More detailed statements, supporting and explaining the views such an extent as to render them out of all proportion to the of the trustees, are promised, and will be given in our columns as soon as furnished.

#### To Our Readers.

In reply to many letters of inquiry, we would say that Mr. ROSSITER W. RAYMOND, lately appointed Commissioner of arguments for the immediate adoption and laying down of Mining Statistics, is still, and will continue to be, the Editor of the American Journal of Mining, and may be addressed at the Editorial Rooms. Mr. RAYMOND intends to sail for San Francisco on the 9th of May, after which his address will be in that city, care of J. W. RAYMOND, Esq., but letters sent to this office will be regularly forwarded to him.

#### THE SPECTRUM OF THE BESSEMER-PLAME.

Since the introduction of the various rapid modes of con verting iron into steel, and the extensive application of this, which may almost be called a new material, to many uses whereiu iron was formerly used, the efforts of chemists and metallurgists have been excited to constant activity, in still further simplifying and making the process sure and invariable. The most beautiful illustration of the co-operation of sciences is seen in the various observations made by competent chemists on the spectrum of the Bessemer-flame. The great difficulty in that process has been to ascertain the exact point of time at which the decarbonization is complete and the process must be stopped. The change is so minute that the appearance of the flame itself does not show it with sufficient exactitude. But by the observatious of Lieibig, Roscoe, Watts and others with the spectroscope, the flame is subjected to a continuous analysis from the commencement of the "blow" to its termi-

The Chemical News thus describes the process:

"When the blast is first turned on, nothing is seen but a "When the blast is first turned on, nothing is seen but a continuous spectrum. In three or four minutes the sodium-line appears flashing through the spectrum, and then becoming continuously visible; and gradually an immense number of lines become visible; some as fine bright lines, others as intensely dark bands; and these increase in intensity until the conclusion of the operation. The cessation of the removal of carbon from the iron is strikingly evidenced by the disappearance of nearly all the dark lines and most of the bright ones."

Everything that tends to cheapen and perfect the manufac ·h material, is a blessing-and not "in disguise,"

#### SEMI-CENTENNIAL.

ae Lyceum of Natural History of New York propose to celebrate their semi-centennial on the 29th of April, the fiftieth anniversary of the day on which their legal existence commenced by the act of incorporation. The history of the society has been marked by periods of great prosperity, and of long-continued depression; but its friends have never permitted its scientific standing to be compromised by affiliating with inferior organizations. At one time it owned a building on Broadway, containing many unique specimens in a fine museum, and it was the most flourishing scientific society in the country. Financial embarassment deprived it of its building, and the museum was stored on Fourteenth street, awaiting better times; when the unfortunate fire of 1867 consumed the accumulations of so many years. The library-even now exceedingly valuable for European reference-is preserved, and will soon be made accessible to the members. Within the past two years, new life and activity has been ifussed into this organization; and if properly encouraged its pristine reputation will return. No city in the country is better situated for the growth of a great museum than New York. The exercises of the celebration will be opened by a historic sketch of the Lyceum by Dr. John Torrey, one of the fifteen original members, followed by Pres. Barnard and other eminent savans. The exercises will be held in the great hall of the Coeper Institute.

## Griginal Papers.

NOTES ON URANIUM.

BY ROBERT HEUSCHREL, Mining Engineer, 90 Broadway, New York

Uranium is a white metal, resembling silver; but it is peculiarly easy of oxidation, burning with great brightness at a low red heat. Of course, then, it does not occur in nature in its metallic state, but only in combination with oxygen, with which it unites in several proportions. The protoxide, UO and the peroxide U2 O3, are the most common. The minerals containing Urauium are: uranite, a hydrated phosphate of lime and the peroxide of uranium, (CaO+U2O3) POs +8 HO; chab colite, a similar phosphate in which CuO replaces CaO; uranocalcite, a hydrated carbonate of lime and protoxide of uranium (of which voglite and liebigite are varieties); uranium ochre, or hydrated peroxide of uranium, U2 O3 +xHO; sam arskite or uranotantal, containing oxide of niobium, uranium, iron and yttrium, in which the two former bases seem to play the part of acids; johannite, or uranic vitriol, a hydrated sulphate of the peroxide of uranium, U2 O3, SO3 + HO; and, finally, nasturan, or pitchblende (the uranpecherz of the Germans), which is essentially protoperoxide of uranium, UO, U2 O3, but contains accessory constituents in such quantity that the contents of UO, U2 O3 seldom amount to 80 per cent.

A glance at this list of uraniferous minerals is sufficient to show that all of them, except the last, occur so rarely and in such small quantities as to be nnavoidable for any commercial manufacture. Pitchblende is the only ore of uraninm mined for such purposes. The others are sought as mineralogical christies. This ore is used in the painting and coloring of glass, enamel and porcelain. In the high temperature of a porcelain-furnace the peroxide of uraninm is reduced to black protoperoxide, and is therefore employed for the production ef fine black when the colors are "burnt in." The peroxide of uranium gives to glass a beantiful shimmering green tinge. Of late years, the production of pitchblende has been considerably increased, and the manufacture of "uranium yellow" and "nranium orange," has attained considerable proportions. Since the peroxide of uranium is soluble in all acids, and pro-

yellow, green, brown and black, it would be widely applied in dyeing and printing but for its rarity and costliness, which are still great, though not so great as formerly.

Pitchblende has very variable characteristics, determined doubtless by the number and variety of its accidental constitnents. In color, streak and lustre there is not only a difference among specimens from different localities, but even among those from the same locality. In general terms we may say, however, that the color is pitch-black, greenish or brownish black; the streak olive-green or brownish black; and the lustre resinous. The specific gravity varies from 4.8 to 8, and the hardness from 4 to 6; but NAUMANN classifies these variations, and gives the hardness as 3 to 4 or else 5 to 6, and the gravity as 4.8 to 5 or else 7.9 to 8.

The accessory constituents already alluded to include silica, iron, lead, cobalt, bismuth, arsenic, sulphur, lime, magnesia, manganese, silver, copper and water. Vanadium and selenium were found by Wehler, Svanberg and Karsten in the pitchblende of Saxony, and by PATERA, GOETTL and LINDAKER in that of Joachinisthal.

Joachimsthal (or Joachim's dale) lies about ten miles from the celebrated watering-place, Carlsbad in Boh uia. The silver mining industry of this valley is centuries 1; and has a peculiar historical interest for Americans, since the dollar owes to this locality its origin and its name. The silver pieces coined at Joachimsthal obtained the name Joachimsthaler, which was shortened into thaler. The coins of the German empire, or Reich, were called Reichsthaler, which in other northern languages became rix-daler or rix-dollar; and the American dollar is the offspring of this monetary system, and perpetuates the fame of this remote Bohemian valley.

The present mining industry of Joachimsthal includes the production of silver, cobalt, nickel and bismuth; but uraninm as become a product of great importance, and the profits of its manufacture bear no insignificant proportion to those of the other metals. Joachimsthal must be considered the principal locality for pitchblende. Durnberg, belonging to the same formation, carries in its argentiferons veins nranium ore of unusnal purity, and in such quantity, that the largest of the private mining enterprises at that place, the so-called "Sæchsisch Edelleutstollen," (Saxon Noblemen's adit) is made renumerative, in spite of expensive drainage, by these ores alone. The old dumps of Abertham, a small decayed mining settlement contain pitchblende, and so do the tin veins of Schlaggenwald. Pitchblende occurs also at Marienberg, Annaberg and Johanngeorgenstadt in Saxony. All the localities hitherto mentioned are in the Erzgebirge or Ore-mountains, a mining region which includes portions of Saxony and Bohemia, In other parts of the world pitchblende has been found, but only as a curiosity. Redruth, in Cornwall is given as a locality. The mineral from the west coast of Lake Superior, described by LE Conte under the name of coracite, has been proved by GENTH to be a variety of pitchblende.

The process of manufacture pursued at Joachimsthal is the following:

The finely pulverized uranium ore is first roasted in a reverberatory for the purpose of volatilizing as perfectly as possible arsenic and sulphur, and converting the protoxide of uranium into peroxide. The product is then heated with calcined soda, to produce sodic uranates, vanadinates, tungstates and arseniates. The salts of the last three acids, together with the excess of soda, are soluble in hot water, and are now removed by leaching in a filtering-tank. The residum contains all the uranium and other metals of the ore (i. e., according to its original constitution, more or less, Fe, Ni, Co, Ag, Cu and Bi), and is now diluted to a thin paste by the addition of water or weak uraniferous mother-liquor from previous repetitions of the process itself, and digested with sulphuric acid, as nearly free from arsenic as possible. A little nitric acid is added, to convert into peroxide any protoxide of uranium that may still be present. This operation dissolves the greater part of the metallic contents; and the residuum, consisting mainly of silica, iron, (silicate) lime (sulphate) and traces only of uranium, is separated from the solution by filtration. The filtrate containing sulphates of uranium and other metals is treated with an excess of carbonate of soda, which precipitates all the metallic oxides, but re-dissolves the uranium as a double salt-carbonate of the peroxide of uranium and soda. This solution of the carbonate is pure, if the carbonate of soda employed contains no bicarbonate, and is used in not too concentrated form, and not too great excess. Otherwise, a portion of the iron is also re-dissolved; but the uranium solution is always heated in a copper kettle, and any iron which may be present is precipitated.

From the purified solution of carbonate of nranium and soda the light nranium yellow, (Na O, U2 O3 + x HO) is precipitated in a tank by means of caustic soda, separated from the her-lianor by conical linen filters, pre sed dried washed again, to free it from adhering glauber salts (Na O, SO3) and carbonate of sada, dried again, powdered and put up in paper

When orange-colored uranic potassa (KO,  $U_2 O_3 + x HO$ ) is mannfactured (which is done only when specially ordered by customers) the ore is roasted with potash and saltpeter, and treated as before. After the removal by leaching of the solnble salts of potassa, and solution of the nraniferous residum in

duces with different re-agents precipitates of various shades of uraninm and potash is obtained by means of carbonate of potash, and the uranium orange is precipitated with canstic potash.

The cost of producing nranium yellow is about six Austrian florins (nearly \$3 gold) per lb. As it is never sold for less than twenty florins (\$10) per lb., the margin of profit is very

#### [WRITTEN FOR THE AMERICAN JOURNAL OF MINING.] NITRO-GLYCERINE AT FREIBURG.

By L. H. MITCHELL, Mining Engineer.

Although the invention of nitro-glycerine may not effect a revolution, it will, however, in my estimation, mark at least an epoch in the history of explosive agents.

The German, though slow to act, yet untiring and exhanstive in action, has already seized upon this newly discovered force, and may eventually succeed in so controlling and directing, as to make it, upon economical grounds, a substitute for gunpowder in the working of quarries and mines.

It will certainly be very interesting, if in no great degree beneficial to the reader, to lay before him the results of a series of experiments lately made with nitro-glycerine in the mines of Freiburg, Saxony, and reported in the Freiburg Jahr-Buch (Year-Book) of 1867.

These experiments were instituted in four of the principal mines of the district, and carried out with great care and completeness, during the years 1865 and 1866.

I will first present the advantages which result from the use of this explosive agent as compared with that of gnnpowder. They are in the main as follows:

1. In order to blast away a given mass of rock in a given time, a less number of miners is required; or, in other words, with the same number of men, less time is required.

2. On account of the less number and depth of drill-holes necessary to produce the same effect, there is a consequent saving of expense in the wear of steel and iron, as also in the cost of repairs.

3. Various kinds of blasting materials, such as priming needles, tamping irons, etc., are no longer necessary; but of course a requisite supply of patent cartridges and fase takes the place of these, and thus far, it appears, are somewhat more expensive.

4. The charging of the drill-holes is effected easily, quickly, and safely.

5. In the case of rock, impregnated with water, the difficulties that stand in the way in the use of gunpowder at once disappear. The drill-holes can be charged with nitro-glycerine, and then, having filled with water, they may be discharged.

6. Drill-holes that have missed fire can be charged again; this, when powder is employed, is either impossible, or, to say the least, attended with great danger.

7. Nitro-glycerine in contact with flame is, indeed, inflammable, but not explosive.

On the other hand, the following evils, connected with the employment of this agent in mines, present it to us, as compared with gunpowder, in a disadvantageous light.

1. When nitro-glycerine receives a violent blow, or shock, it explodes only in the immediate circuit of such blow or shock; while that part, unaffected by the concussion, remains as an uncharged, explosive residue. If, for example, a thin layer of nitro glycerine be spread out upon an anvil, and then struck upon any given spot with a hammer, it would explode only at the point of contact; while the residue, as yet unchanged, could be exploded at will, by means of repeated

The fact, repeatedly observed in blasting, that, occasionally, a part of the nitro-glycerine does not explode, may have its origin in the above-mentioned peculiarity, if not, perhaps, in its chemically impure state; while, possibly, the shock given by the detonation of the cartridges is not communicated through the entire mass with uniformity and force enough to effect a complete explosion. This property of nitro-glycerine has, of course, an unfavorable influence upon its intended effect, as also rendering it more dangerous, and injurions. That, more especially, the latter inference is a correct one, is shown by the following statement, viz.: the nitro-glycerine that does not explode, is, by this opportunity, generally thrown about upon the surfaces of the rocks, in the form of a thin coating, where it is likely to remain some time, at once a source of danger, and a cause of nnhealthfulness. In case of fractured, or fissured rocks, this residue of nitro-glycerine is particularly dangerons. Were it to penetrate these fractures or fissures, and, afterwards, in the process of boring new holes, to receive a blow, or shock, a sudden, nnexpected explosion would necessarily follow. It is, indeed, possible that by means of a new arrangement of the cartridges, this incomplete explosion may be partially, if not wholly, avoided. Moreover, the coating of nitro-glycerine, that remains upon the surfaces of the rocks after an incomplete explosion, might, perhaps, be rendered harmless, by merely washing it away with water.

2. Another evil is found in the finid condition of this explosive agent. In case of horizontal, or vertical borings, this fluidity necessitates the use of cartridges for the oil. The cost of blasting is, of course, thereby correspondingly increased. But even in the case of drill-holes directed downward, it would seem advisable to put the oil in cartridges, or, at least, to line the drill-holes with a coating of clay, properly prepared; otherwise, one is never certain but that a part of the nitro-glycerine sulphuric and a little nitric acid, a solution of carbonate of may penetrate into cavities, cleavages, or fissures of the rock.

3. An evil lies in the present want of an easy and sim ple method of testing the nitro-glycerine; in order, thereby, to judge of its purity and fitness for use.

4. The cost of nitro-glycerine-about eight times that of ordinary gunpowder-does not always stand in proper relation to its greater effect. In mines of compact, tough rock, it is found to be disproportionally less effective than in those of of soft. The same remark holds true in regard to blasting, in narrow, in contradistinction to roomy shafts, and galleries. It has, thus far, been used in the mines, with pecuniary advantage, only in soft rock, or in the working of roomy shafts, galleries, &c. In other cases, at the mest, only a gain in time can be effected; and that, too, only at a greater or less increase of expense.

This relation would, of course, be very much changed if, by an extended and continuous use of nitro-glycerine, it could be bought at one-half its present price, or even at a less rate than that. There would then, probably, be an economical advantage in its use, well worthy of consideration, even to say nothing of the gain which would result from the saving of time and labor. At the same time hoping that, with great care, and fitting arrangements, the above-mentioned evils can be rendered, for the most part, harmless, these views would lead us to the conclusion, that the application of nitro-glycerine, as an explosive agent, would eventually become very extensive, were it not from the fact that another obstacle presents itself, which, in most cases, has proved to be, thus far, insurmounta-

5. The very active and obstinately injurious influence of nitro-glycerine, as also of the gases resulting from its explosion, particularly in mines, npon the health of the workmen, renders its extensive use, under such circumstances, a matter of question. In the Freiberg mining district, the exclusive and continuous use of it, for any length of time, without sen sible injury to the men, has taken place only in quarries, in other works above ground, as also in a very few underground works, where there were but few miners employed, and where the ventilation was nnnsually good. In other cases, its evil effects have very soon shown themselves in such a manner that the miners were at once obliged to abandon its use. Thus far, all attempts to remove or counteract this great evil, have been without avail.

This, then, is the great problem to be solved, before nitroglycerine can take the place of gunpowder in the working of

## Scientific Meetings.

#### POLYTECHNIC BRANCH OF THE AMERICAN INSTITUTE

NEW ALLOYS OF LEAD AND TIN-THE COMING ECLIPSE-ANOTHER ASTEROID-SECURING PANES OF GLASS-AGRICULTURAL MA-CHINE-BIOMETRY-MAGNETISM.

The usual weekly meeting of the above Association was well attended on Thursday evening, April 23d. Professor TILEMAN occupied the chair, and during the time devoted to miscellaneous business, introduced some interesting subjects. The Chairman stated that M. Plno describes two new alloys containing less tin than ordinary pewter, which are not acted upon by boiling acetic acid, or by salt water, and may therefore be used for some kinds of utensils. The first alloy contains 1 part of tin and 2.4 parts of lead. It has a density of 9.64, and melts at 320° Fahr. A second alloy, less malleable and more brittle than the first, consists of 1 part of tin with 1.25 of lead. 'The lead is first melted, and, after skimming it. the tin is gradually added; by stirring with a wooden stick the lead is prevented from settling to the bottom. Both English and French astronomers are making preparations for observing at the east an eclipse of the sun, on the 18th of August next, which will be total for the space of 6' 46" along a line passing through southern New Guinea, Hindostan, the Bay of Bengal, the Maylayan Peninsula, and the Gulf of Siam. On the 17th of February last, M. Borelly, of the observatory at Marseilles, France, discovered a telescopic planet, which is the ninety-sixth of those now known, liaving orbits between Mars and Jupiter. Three nights later it was observed by M. Loewy with the great meridian instrument, at Paris. Mr. A. K. Eddows described from models an improved plan for setting and securing glass. The edges of the pane are held between a rubber tube and a flat rubber strip, the whole being clamped together by metal or wooden clamps and screws. An air and water-tight joint is thus made without the use of putty, and damaged glass can be speedily removed. The invention was patented January 21, 1868. Mr. W. Rich exhibited a model of an entirely novel agricultural machine. The machine is a combined and convertible cultivator, harrow, The machine is a combined and convertible cultivator, harrow, and corn-plough. It will stride a row of corn five feet or more in height, thereby hoeing two rows at a time, and is equally adapted to broad cast harrowing, or tilling. The machine is stated to be a thorough pulverizer. Dr. T. S. Lambert gave an interesting lecture on Biometry or Measure of Life. He stated that long trunks in the human body, and hazel eyes are indications of longerity and that a cortain doubt of the crifice. indications of longevity and that a certain depth of the orifice of the ear will also indicate a short or long life. Brown eyes belong to the bilious and blue eyes to the sanguine temperaments; he would add other two, viz., the capillary and lymphatic temperaments, and classify the mechanism of the human body as blood making and mental. He remarked that the lives of those accustomed to sedentary employment were short whereas blacksmiths and machinists generally lived to old Where parents had lived to a ripe old age—their descen-would inherit their longevity. In Znrich there are few dants would inherit their longevity. In Znrich there are few persons who live after sixty years, whereas in Berne, Switer-land, the inhabitants were remarkable for logevity. The lecturer interspersed his remarks with some very amnsing anecdotes, but at the same time expressed many new ideas worthy of reflection and thought. Professor Van Der Weyde of reflection and thought. PROFESSOR VAN DER WEYDE then took the stand and spoke upon the subject of magnetism and the practical applications of that science.

#### Correspondence.

[To insure insertion of Correspondence in our columns the full nam and address of the wriler must be given.]

#### The Bulletin Tax

TREASURY DEPARTMENT, Office of Comptroller of the Currency, Washington, April 21, 1868. EDITOR AMERICAN JOURNAL OF MINING:

I enclose, herewith, statement of the value in currency of the gold and silver bullion assayed in the United States, and the tax paid on the same for the fiscal year ending June 30, 1867. A similar table will be found on page 266 of Finance Report for 1866 for that year. The statement for the last fiscal year has not been published, and is worthy of insertion in the Journal of Manya.

in the Journal of Mining.

The act of March 31, 1868 "To exempt certain manufac turers from internal tax, and for other purposes," exempts bullion from the tax of one-half per cent. heretofore collected by the Assayer.

STATEMENT of the value in currency of the Gold and Silver Bullion assayed in the United States, and the tax paid on the same for the fiscal year, ending June 30th, 1867.

	States and Territories.	on gold assayed.	Collections on sil. bul. assayed.	Cur. val. of g. bullion assayed.	Cur. val. of sil. hullion assayed.	Cur. val. of g. & s. bul. bullion.
1	California.		5,568,27	44,178,724	1,113,654	45,292,378
1	Colorado	809,44		161,888		161,888
1	Idaho	. 2,348,90	3,921,64	469,780	784,328	1,254,108
ı	Montana	1,526,70	44	305,340	88	305,428
1	Nevada	. 62,708,05	45,362,56	12,541,610	9,072,512	21,614,122
1	New York	49,284,44	3,098,47	9,856,888	619,694	10,476,582
1	Oregon	. 15,518,18	7.01	3,103,636	1,402	3,105,038
I	Pennsylv'a		1,270,35	4,209,512	254,070	4,463,582
١	R. Island.	3,43	175	686	350	1,036
1	Utah	. 5,949,83	*****	1,189,966		1,189,966
I	Washingt'r			403,772		403,772
١	Total	382 100 01	50 230 49	76 421 802	11 846 008	88 267 900

Note.—The tax on bullion assayed in New York, Pennsylvania and Rhod sland, was returned from the cities of New York, Philadelphia and Prov

#### Manufacturing and Mechanical Notes. No. XVI.

#### Diamonds.

Many persons suppose that diamonds are only used in jewelry—for rings and other articles of personal adornment, and that they are really of no essential value whatever in the practical arts. This is a mistaken notion; they are used for a great number of purposes in the arts. Thus, for cutting the glass in our windows into proper size, no other substance can equal it, and it is exclusively used for this purpose. A natural edge, or point, as it is called, is used for this work, and thousands of such are annually required in our class factories. Diamond of such are annually required in our glass factories. Diamond points are also employed for engraving on cornelians, ame-thysts and other brilliants, and for the finer cuttings on cameos thysts and other brilliants, and for the finer cuttings on cameos and seals. Being very hard, the diamond is also used in chromometers for the steps of pivots; and as it possesses high refractive with inferior dispersive power, and little longitudinal aberration, it has been successfully employed for the small deep lenses of single microscopes. The magnifying power of the diamond in proportion to that of plate glass, ground to a similar form, is as 8 to 3. For drawing minute lines on hard steel and glass, to make micrometers, there is no substitute for the diamond point. The rough diamond is called bort, and the diamond point. The rough diamond is called bort, and the points used for glass-enting, are fragments of the borts. Great care and skill are necessary in selecting the cutting points, because the diamond that cuts the glass most successible to the control of the control of the control of the cutting points. points, because the diamond that cuts the glass most successfully has the cutting edges of the crystal placed exactly at right angles to each other, and passing through a point or intersection made by the crossing of the edges; a polished diamond, however perfect may be its edges, when pressed upon the surface of the glass, splinters it with the slightest pressure; but with the natural diamond the most accurate lines are produced on glass, and their surfaces are so highly burnished that, if ruled close together, they decompose light, and afford the most beautiful prismatic appearance—all the colors of the rainbow flashing from them as from the silvery interior of a pearl oyster shell. Diamonds are also employed to drill points to perforate rabies, and bore holes in draw-plates for points to perforate rubies, and bore holes in draw-plates for fine wire, and also for drilling in hard steel. The apparatus The apparatus for boring rocks with diamonds, was originally patented in France by Leschot, in 1864, and was rendered practical by Pther, in 1866. The expense of excavating tunnels with a single machine of this kind, in hard rock, was found in France to be 40 or 50 francs per cubic metre, which corresponds to six or eight dollars per cubic yard.

#### No. XVII.

#### Case's Patent Diamond-Pointed Rock Drill.

We have had several inquiries concerning the above useful machine, besides excavating and mining implements in general, and sometimes have been unable to give our patrons such eral, and sometimes have been unable to give our patrons such as a sisfactory answers as we wished respecting the mannfacture and purchase of this description of machinery. We are now enabled to state that the diamond-pointed rock-drills are manufactured by the Windsor Manufacturing Company, Windsor, Vermont, who make all kinds of implements for mining, tunneling, drilling, or excavating in stone. The following particulars of the rock drill may be interesting to some of our

More than 2,000 feet have been drilled with one drill-head and the diameter and other hard rocks, without the slightest repair, and without showing the slightest wear on the cutting edges of the diamonds, when examined under a strong glass. Other drill heads have been used in the hardest rocks with similar results; thins establishing the durability of the drill-head, and of the cutting points. This drill bores in marble, eight inches per minnte; in solid quartz, three inches per minnie; in granite, fonr to five inches per minnte; in Hoesac tunnel rock, it drills a two inch hole six inches per minnte. These facts show the rapid rate at which holes can be bored in the hardest rock. The drill censists of a composition drill-head, the face of which is set with carbonate or black diamonds in their natural form; the natural edges of the diamonds forming the cutting edges of the drill-head, which is screwed into an iron drill-rod. A rotary motion is given to the drill-rod, by a small oscillating engine, or by a rotary engine, weighing, with the drill rod, two hundred and five pounds. The engine, and the frame that supports it, are easily car-

ried by two men, and can be adjusted in any desired position, and operated by one man; it will bore holes in any direction, vertical, horizontal, or at any possible angie, or at any distance under water. Steam is bronglit to the drill through a rubber hose. Holes can be drilled to any depth and then chambered out to more than twice their original diameter; a result that can be accomplished by no other drill. A hole five inches in diameter has been drilled 784 feet deep, and then chambered out to twelve inches in diameter for 18 feet further. The hole made is perfectly straight and smooth, and the simplicity and dnrability of this drill, the ease and small cost with which it can be run. this drill, the ease and small cost with which it can be run, and the great amount of work that can be done with it, make it one of the most valuable of labor-saving machines.

#### Telegraphing by Touch

A correspondent, a telegraph operator, proposes to have the blind taught to read telegraphic signals by touch and sound, and those who are deaf as well as blind, by tonch alone. His plan appears to be feasible, and this widening of the bounds which now hem in our suffering fellows, would no doubt meet the approval of those who have the care of them. We do not think, however, that reading telegraphic signals by tonch is novel, as we have several times seen the feat performed. But its introduction into our deaf and dnmb asylums would be a work of mercy. The apparatus, as our correspondent shows, would be simple and cheap, and it might be applied to a variety of uses.—E.c.

## Patent Claims.

## Interesting to Miners, Millmen, Metallurgists, Oil-Men, and Others.

76,331.—APPARATUS FOR SEPARATING ORES AND MINERALS.—Stephen R. Krom, New York, N. Y.
1 claim, 1. Iu 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 inclined or level bed of a double or single machine, as herein described.

2. In such machine, the small apron G, at the lower discharge, as described.

3. In such machine, the shoe F', at the lower end of the lower discharge, as

3. In such machine, the shoe F', at the lower end of the lower discharge, as described.
4. In such machine, the escape-valves c c, for the purpose described.
5. It such machine, the blowing means, or its equivalents, situated close to the material, it combination with the within-described manner of maintaining its proximity under various changes of stroke, tor the purpose described.
6. The bellows C, having a series of flaps C2, covering nearly the whole open-work or perforated surface, as shown in figs, 1,5, and 7.
7. In such machine, the cam-wheel D, constructed, and arranged relatively to the lever D2 and its connections, as and for the purpose described.
8. It such machine the closed box H, constructed and arranged relatively to the euclosed and connecting parts, substantially as and for the purpose herein described.
7. Set METRIC LEAD ORE.—David P. Webster

to the euclosed and connecting parts, substantially as and for the purpose herein described.

76,364.—FURNACE FOR SMELTING LEAD OBE.—David P. Webster, New York, N. Y.

I claim, I. The method herein described of forming the interior or lining of furnaces, that is to say, by building the hed, walls, and arch of the plastic material herein described, or the substantial equivalent thereol, in the manner shown and specified, and subjecting the same, when formed into shape, to heat, as herein set lorth.

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, with the furuace, of an iron casing or pan under the arrangement herein shown and described, so as to support the plastic structure of the furnace, and also allow free passage of air under and around the same, as and for the purposes set forth.

76,413.—PROCESS OF EXTRACTING GOLD FROM ITS ORES.—Rudolph D'Heureuse, San Francisco, Cal.

1 claim the process herein described for extracting gold, by passing gold-bearing substances, reduced to a fine powder, without previous alloy, through melted zinc, as set forth.

76,551.—Decarbonizing Iron.—John F. Allen, Tremont, N. Y.

melted zinc, by introducing said substances below the surface of the melted zinc, as set forth.

76,581.—Decarbonizing Iron.—John F. Allen, Tremont, N. Y. I claim, I. Purifying iron irom its carbon and other impurities, by causing the molten iron, contained in a revolving cylinder, to pass in the shape of a shower of spray through atmospheric air or other oxygen-bearing gas or vapor passing or being forced through the revolving cylinder containing the iron, substantially in the munner as set forth and described.

2. The construction of the revolving cylinder A, with suitable lintog C. provided with holes or cavities n on the inner circumference, in the manner and for the purpose substantially as set forth and specified.

76,678.—Bottle For Holding Hydrofluoric Acid. David P. Webster, New York, N. Y.

I claim, I. The preparation of bottles for receiving hydrofluoric acid, by coasing them internally and externally with asphalt of coal tar, or the hereindescribed composition of gum-shellac and India-rubher, as set forth.

2. As an article of manufacture, a bottle made of wood, papier-mache, or like material, coated externally and internally with a composition of varnish not affected by hydrofluoric acid, substantially as berein shown and set forth.

3. Making the bottle for holding hydrofluoric acid of wood, and in two parts or sections, untiled substantially in the manner and for the purposes shown and described.

76,676.—Smellting Lead Obe.—David P. Webster, New York, N. Y. I claim the improved process herein described for smelting or redning phos.

pourets or phosphates of lead.

76,704.—COAL—EXCAVATING MACHINE.—Job Borton, Antrim, Ohio.

1 claim, 1. The picks or chisets M' M', sledges M M, and cams c.c. operated
by shatt H and wheel I, in combination as described, and operating as and for
the purposes fet torth.

2. Cam-roller a' on shaft H, adjustable arm 11, connecting-rod b, arms b'
and p on rock-shatt b'', pawlo, and ratchet-wheel R, in combination with cogwheels SS, as described, and operating as and tor the purposes set torth.

3. In combination with a mining-machine thus constructed, crank-shaft G,
halance-wheel F, and gear-wheel K, pitman N, constructed and operating as
described and set forth.

described and set forth.

4. The combination of the chiscls or picks M' M' with the transversible frames B and C, carrying the intermediate devices, constructed as described and operating as set forth.

## Ondit about Minerals, &c.

A.W. Putnam, who has been searching for some time past, under the guidance of a Boston Spiritualist, for buried Spanish treasures at Scitico, Ct., thinks he has now fairly reached the walls of the euchanted cave. At a point twenty-fue feet from the entrance, the witch hazel turned to three points, and he has goue to Boston for a medium to visit the spot and tell what t means. At a previous visit to Boston, he left orders with his workmen to continue until directly beneath a certain stump, and then stop, awaiting his return. At the time of their stopping, he was summoned by a medium, who told him the fact in detail, and sent him back, as the spirits couldn't let the work wait.

former years.

Solution of the second bed has been discovered in Genesee county in this State. The swarers see golden visious.

### All Forts.

There were published in this country last year, 1,773 books. From this number are excluded 335 pamphlets, 11 new periodicals, 5 maps, and a large number of reprints of English and foreign works. Including all thase the total was 2,124. Of the whole number 385 were for young people. Classified according to sniplect, 741 were fictions; 238 related to religion and theology; 107 to history; 120 were poetical; 121 legal; 70 medical; 74 were narratives of travel and graphical treatises; 30 belonged to the department of belies-lettres; 31 to that of fine arts; 142 were devoted to the mechanic and useful arts; 32 to social science; 75 to education; 17 to amusements; 25 to philosophy and morals; 28 are indirectly set down as scientific; 38 discussed the question of government: biography and genealogy included 103 works; learned literature 24; there were 11 new periodicals started, and 34 publications described as "other books" were issued.

issued.

### Telegraphic signals are now designed for use on shipboard.
On a naval steamer, a circular dial, with movable hands and indicatory
words, is fitted on deck; a similar dial is placed in the engine-room, or on
the gun-deck, or at the rudder, each connected by metallic air-tubes with
the one on deck. The officer wishing to give an order turns a handle fitted
in the side of the dial by which he stands, and instantly the same signal
appears on the steersman's dial, and he obeys the order. In the same way,
the captain may send his commands to the captains of the guns, or to the
engine-room.

engine-room.

\*\*2\*\* There is such a glut of American silver in Canada that the government of the Dominton has been memoralized to withdraw from circulation all the silver, at a discount of four per cent., and issue in its place \$1,000,000 of Canadatan silver, the remainder of the currency to be made ap of paper money, in bille of not less than one dollar. There is said to be now \$7,000,000 worth of American silver in Canada; and a duty of fifteen per cent. has been imposed upon the importation of such airver coin into the province.

\$7,000,000 worth of American silver in Canada; and a duty of fifteen percent, has been imposed upon the importation of such ailver coin into the province.

\*\*For In 1860 the interior commerce of Mexico was estimated to be more than \$400,000,000. Manufactures were valued at \$90,000,000 annually. Estates were 13,000, worth \$720,000,000, and town preperty \$630.000,000, or a total of \$1.355,000,000, or an average of \$163 per head. In 1850 the agricultural products were estimated at \$200,000,000.

\*\*For An Englishman lately called at one of the Paris post-offices to inquire how much it would cost to send him home to England by mail. He was weighed and the calculation was \$,643 francs. The sum was counted out, but the clerks objected to sending this new species of parcel, and the police being called, the gontleman was taken to his hetel as insane.

\*\*For The gross receipts in round numbers of the Paris Exhibition were twenty-nine million lances and the expenditures twenty-seven millions, loaving e profit of ahout \$400,000, which is much better than was at one time expected. The building is now being taken down.

\*\*For The telegraphic systems of Rolgium, which are managed by the State, have now been established 16 years, and the cost of their establishment has hene entirely covered by the surplus receipts.

\*\*For The order banishing foreigners from Mexico, who have served under the Empire, has been modified so as to admit of the continued residence of those who give proof of good behavior.

\*\*For A large cave has beeu explored near Bentonville, Ark. One chamber is six hundred test wide, and three hundred feet high. The cave has been explored to the distance of nine miles.

\*For In 1866, the weekly pay-roll of a Pittsburg iron manufacturing firmshowed an aggregate of \$5,200 in wages paid; in 1861 the same number of hands received only \$1,700.

\*For In Olorado servant women are paid ten dollars a week, and are scarce on those terms.

are scarce on those terms.

\*\*\*s="A codfish breakfast and an India rubber coat will keep a man dry all day."

## 61st AUCTION SALE.

SEVENTY-FIVE THOUSAND TONS OF SCRANTON COAL,

ON WEDNESDAY, APRIL 29, 1868.

The Delaware, Lackawanna & Western Railroad Company witl sell, 1868.

MESSRS. JOHN H. DRAFER & Co., Auctioneers, at the Company's Selectroam, No. 26 Exchange Place, corner of Williams street, New York, on WEDNESDAY, April 29th, at 12 o'clock, noon.

75.000 TONS

Of Coal from the Lackawanna regions, of the usual sizes, deliverable at their Depot, Elizahethport, N. J., during the month of May, 1868.

The sale will be positive; each lot put up will be sold to the highest bidder; no hids, in any form whatever, being made for account of, or on behall of the Company. The conditions will he tully made known at the time of sale.

TERMS: Fifty cents per too, payable in current funds, on the day of sale, and the balance, within ten days thereafter, if required, at the office of the Company.

SAMUEL SLOAN,

President.

pany. Ap.25:1t

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Gold Dust, Bars, Old Gold and Silver bought. Jeweines are prefined.

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For saie, 1 Hepburn & Peterson Pan, and 1 Bogardus Quartz Mill. Inquire at the Manhattan Metallurgical and Chemical Works, 552 and 554 West Twenty-Eighth street.
Parties shipping Ores to these works for treatment must prepay all freight charges.

For engagements and terms, apply at the Works or to SECOR, SWAN & CO.,

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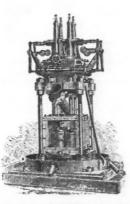


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The office of this Machine is to break Ores and Minerals of every kind into nall fragments, preparetory to their further comminution by other ma-

small fragments, preparedry to their nurther communation by other machinery.

The machine has now been in use, conduring the severest tests, for the last ten years, during which time it has been introduced into almost every country on the globe, and is everywhere received with great and increasing fevor as a labor saving machine of the first order.

Illustrated circulars, fully describing the machine, with ample testimonials to its efficiency and ntility, will be furnished on epplication, by letter, to the undersigned.

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mar14-1y

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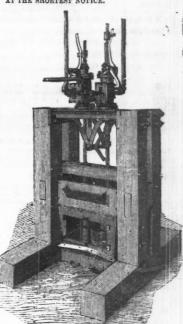
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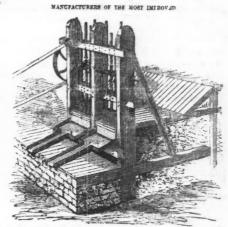
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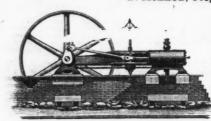
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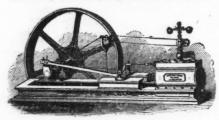
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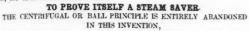
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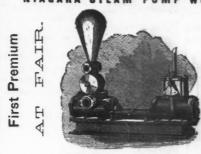
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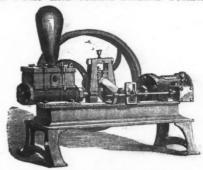
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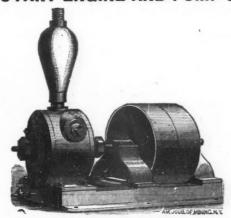
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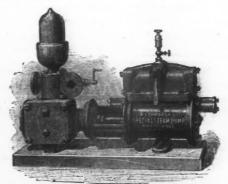


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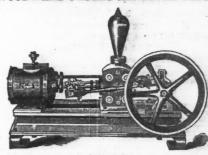
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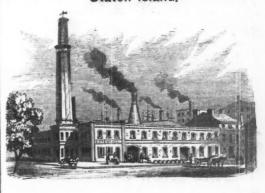
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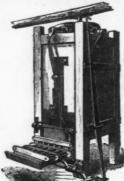
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## MINING ENGINEER,

GEOLOGIST AND TOPOGRAPHER, No. 135 South Fifth Street, Philadelphia.

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#### COMBINATION INKSTAND

The annexed engraving represents a new description of ink-stand which is made of flint glass, with handsome bronze caps to the ink-holders. 'The combination of two ink-holders, sponge-cup and pen-tray, in one piece of solid shining glass, is a good contrivance and one that will be appreciated by those who wield the pen with commercial rapidity, or who follow literary pursuits. As editors, we welcome any and everything that conduces to the elegance and comfort of our sanctum, and whatever facilitates the production of copy, is held by us in high estimation. As we dip our pen in the murky fluid contained in one of these transparent and elegant inkstands, we are reminded that perspicuity is the first excellence in writing of the contained in the contained of the contained in the contained of the conta ing or speaking. Away then, ye conical and unshapely stone bottles of editorial fluid that neither indicate to us the depth of your contents nor worthly ornament our, in other respects, extremely pleasant escritoire. Give place, we say, to the progress of the arts; and, if you would still exist let it be upon the shelf in the corner, among the Patent office Reports and the

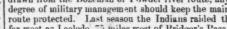
Summer clothing is not wanted. Flannels should always be worn next the skin, and woolen socks, woolen clothing stout boots, a good overcoat, and a pair of California. nia blankets are indispensable to comfort, as the nights are always cool, and in the mountains often quite cold. Ladies should have good winter clothing, a heavy waterproof cloak, a quited hood, and as few toilet articles as possible. Stages a quilted hood, and as few toilet articles as possible. Stages are usually very much crowded, and surplus luggage is a great nuisance to the owner as well as to others. Every tourist crossing the Plains should have good firearms. A brace of revolvers, with ammunition, can be carried with other little articles, in a small leather traveling bag, swung from the shoulder by a strap, and thus have the weapon always at hand in case of necessity. Every gentleman should also have a Henry carbine. Not one in fifty may have actual use for them, but if needed they are very handy to have about the coach. Coaches are not often attacked by either Indians or road agents (highway robbers), but they may be attacked any day, and it is well to be fully prepared.

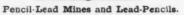
There will be a regular stampede to the Sweetwater mines this Spring. They are more accessi-

this Spring. They are more accessible than any other mines from which we have reports of fabulous success in digging gold. They can be reached by about 200 miles staging from Cheyenne, and not over 60 miles from the regular overland stage route. Coaches will run to Sweetwater from Sage Creek station (about 12 miles west of the North Platte Crossing, and 20 miles east of Badger Pass), and a two days' ride from the railroad will land the adventurer in the new Eldorado. Many trains will go from Cheyenne to take provisions, goods, machinery, etc., and most of the mining class will go with them. Of those who go there to work claims four out

go there to work claims four out of five will come away disappointed, and very many will be glad to beg or work their way back. Of those who go to speculate a few will succeed, while most will fail, and many will lose their entire capital. Good quartz lodes are said to be there, and I doubt not that many will prove to be valuable; but just now they are held at speculative prices, and those who do not wish to lose money will not invest in them this year. Next season they may be purchased reasonably, and, after another season, devoted to development, machinery may be shipped with reasonable confidence that success can be be shipped with reasonable confidence that success can be

This season will be a most dangerous one for adventure I mean for exploring or prospecting the valuable mineral and agricultural region north of the Platte. The hostile Indians agricultural region north of the Platte. The hostile Indians possess the whole country from the Platte Valley to the Uper Missouri, and will resist every advance of civilization. I look for more active hostilities on the part of the savages this season than we had last year; but as the army is to be withdeawn from the Bozeman er Powder river route, any ordinary degree of military management should keep the main overland route protected. Last seasou the Indians raided the line as far west as Laclede, 75 miles west of Bridger's Pass, and eastward as far as Platte City, 300 miles east of the base of the





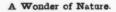
Every one knows what a black-lead pencil is, but it is not generally known that there is not a particle of lead in the pencil. The material variously known as black-lead, graphite or plumbago, is almost wholly composed of carbon. It probably owes its misnomer to the fact that previous to the employment of graphite for making pencils, common lead was used and this within the present century. For a long time ployment of graphite for making pencils, common lead was need, and this within the present century. For a long time the best graphite was obtained, not in very large quantities, at Borrowdale, in the English county of Cumberland, where it was discovered in 1564, early in the reign of Queen Elizabeth, and pencils, much like those still in general use, were produced in the year following. As the supply of the graphite (known in Cumberland, while in the mine, by the first force), was not large the British government from the first of wad), was not large, the British government, from the first, took great pains to prevent the exportation of the article, and took great pains to prevent the exportation of the article, and even to limit its home sale to a supply just sufficient to meet the estimated demand. Graphite is found in various parts of Europe, and even in North America, but of very inferior quality. The Cumberland mines were worked only a few weeks in each year, yet the yield of vad was estimated at £40,000 a year. While the graphite lasted, England had a monopoly in supplying the best pencils to the wold. Year after year, for a century past the graphite deposit in Cumberland became "fine by degrees and gradually less." The result was that graphite powder had to be compressed into a solid cake from which pencils could be supplied. A French variation, said to be an improvement, was to mix the powdered and purified

to be an improvement, was to mix the powdered and purified graphite with clay, which is largely done still.

Nearly one hundred and fifty years ago, the pencil manufacture commenced in England, and improved in France, was transplanted to the village of Stein, near Nurnberg, in Bavaria, and, little more than a century since, Casper Faber there began to make the pencils which continue to be made by his ded dants, and bear the family name, all through the world. dants, and bear the family name, all through the world. The present John Lothair Faber, great grandson of Caspar, has been head of the firm since 1839, and is not only very wealthy, but was lately ennobled by the king of Bavaria. One of his brothers is associated with him at Stein, in the processes of mannfacture; the youngest of the three, Eberhard Faber, represents the firm, for the Western World, at New York. Stein is literally a town of pencil factories, of which Baron Faber is the ruler, taking care of the health, government, education, industry, thrift, and amusements of the inhabitants, and always living in their midst. It may be asked—how do the Fabers make lead-pencils without the famous graphite from Cumberland? It appears that twenty years ago John Peter Alibert, a Frenchman, resident in Asiatic Siberia, having heard of the gold discoveries in California, began to examine the sandy beds of various rivers flowing into the Arctic Ocean. He found samples of pure graphite, evidently brought a considerable distance by force of the stream, in one of the mount tain gorges near Irkurtsk, and pursuing his discovery, tracked back to a branch of the Salan Mountain range, on the very summit of Mount Batougol, 275 miles west of the town of Irkurtsk, near the Chinese frontier, in the midst of the rocky desert, and found pure graphite. After years of costly labor Alibert found an exhaustless deposite of graphite equal to the

best ever taken from Cumberland. Besides decorating and nost twee taken from the Russian government changed the name of Mount Batougol to that of Mount Alibert. Nearly every crowned head in Europe has honored him. With the consent of the Russian government, Alibert now supplies Faber's house exclusively with graphite from the Mine in Asiatic Siberia. Pencils of this material were first made by Baron Faber beria. Fencing of this material were first made by Baron Faber in 1861, and were not introduced into the American market until 1865, from which time artists and others perceived and acknowledged their superiority. If the world were to endure a thousand years more, there is sufficient graphite in Mount Alibert to supply its population with good black-lead pencils.

—Philadelphia Weekly Press.



The California correspondent of the Milwaukee Sentinel gives the following account of a wonderful discovery which has just been made in that State:—"A vein of very curions rock has recently been discovered in El Dorado county, which as has recently been discovered in El Dorado county, which as yet has failed to elicit from the scientifically inclined any satisfactory explanation. Several large slabs have been taken out and are now on exhibition in this city. Its peculiarity is that it represents landscape drawing wreught by the hand of nature thousands of years, perhaps, before the advent of man upon this innodane sphere. Mountain scenery is here portrayed on ineffaceable tablets by a peerless drawing master, representing, in variegated colors, bold and rugged peaks rise one above suchter and descending in long rolling ridges. ing one above another, and descending in long rolling ridges of hilly country. Barren rocks, trees, and manzanita brush in profusion give variety to the pictures, but nowhere is to be found that essential requisite to a complete scenic picture—a mountain stream. And here it would seem that even so matchless an artist as nature, has actually blundered. Another singularity of this rock is that the pictures extend through singularity of this rock is that the pictures extend through the entire vein, so that, cut in any direction, it cannot be destroyed. The coloring is of a dull, heavy character consisting mainly of grades of red, yellow and black—seen at a little distance they resemble merely rude outline pencil drawing. No geological savant has favored us with an opinion as to the cause and manner of their formation. The action of water and reflection in some as yet undefined way is the most plausible hypothesis advanced. It has given rise to a 'Photographic Landscape Rock Company,' who design shipping to the Atlantic States and Europe samples for exhibition. There is certainly no deception about it, and it may justly be classed as the eighth wonder of the world."

#### Phosphorus in Iron.

The remarkable deteriorating effects of phosphorus in iron rnish a curions and striking illustration of Lord Palmerston's definition of "dirt"—natter in the wrong place. The London Colliery Guardian says: "The phosphorus in Cleveland iron. which so seriously reduces its value in the market, and renders it necessary to bring iron from other districts to mix with the iron of the district in the puddling furnaces, and to use the ores of other districts to mix with its own—would, if extracted, even in its lowest priced form—as a manurial incredient, he worth at least 160 services on the original place. gredient—be worth at least £66 per ton; as one ton of phosphorus is equal to 2 ton 5 cwt. of phosphoric acid. or 4 ton 10 cwt. of the highest qualities of Patagonian, or seven tons of Peruvian guano. There is therefore a tolerably good margin for working expenses if the process by which the phosphorus is extracted is carried out on tolerably economical principles. For instance iron which is now worth 47s per principles. For instance, iron which is now worth 47s, per ton, when containing one per cent. of phosphorus, would, if freed from this element, be worth at least as much as hamatite iron, or say 54s. per ton."

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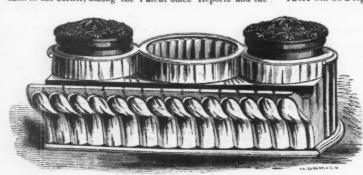
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#### How to go West.

A trustworthy and intelligent correspondent of the New York Tribune, and one that has traversed the mountain territories in all seasons, ventures some practical suggestions which may be of value to them who propose to cross the Plains this season. He says: "The completion of the Union Pacific Railroad beyond Cheyenne, within a few miles of the summit of the rocky range: the construction of the railroad to Sioux City, where boats, built expressly for navigating the Upper Missouri river, connect, to complete the line to Fort Benton. and the rapid progress of the Eastern Division of the Union Pacific, rendering Denver, Southern Colorado, New Mexico, and Arizona of comparatively easy access, will make thousands visit the West, or take their families, in search of new and more inviting homes, who have hitherto hesitated because of hostile Indians, and the privations and dangers of the Plains hostile Indians, and the privations and dangers of the Plains. Persons who wish to start early in the spring for Northern Dakota or Montana should go by rail to Chicago, and thence to Sionx City, where they will find a regular line of steamers to take them to Fort Benton. Hitherto the river route has been most tedious, and the most perilous of all the highways to the West; but now 1,000 miles of the worst river navigation is obviated by the extension of the railroad to Sioux City, and the boats of the new line having been built expressly for the Upper Missouri trade will be more safe, speedy and comfortable. This route is not entirely free from the danger of Indian attacks, as the boats are compelled to land frequently in the hostile regions to cut and take on supplies of wood; but it is as asfe. or rather safer, on that score thau any other route, is one-half cheaper, and will not now require more than route, is one-half cheaper, and will not now require more than fifteen days longer to reach Virginia City or Helena than by overland coach. From Fort Benton, tri-weekly coaches run o Helena, and daily from there to other important points in

Those who wish to visit Denver, Cheyenne, Salt Lake, Idaho Nevada, or California, should not start earlier than the middle of May, as the roads are very bad and the waters high on the Plains and in the mountains until late in May or early in June. Plains and in the mountains until late in May or early in June. They will go by rail to Chicago, Omaha, and Cheyenne, and from thence by the daily line of coaches that reaches into every part of the West and North-west. Salt Lake can be reached from Cheyenne (the western terminus of the railroad in five days and nights, and Virginia City, Moutana in three days more. It is nearly 600 miles from Cheyenne to Salt Lake, and 400 from there to Virginia City. The stage fare is about 25 cents per mile, and meals cost \$1 50 each. The fare on the Pacific Railroad is about 10 cents per mile. Those who wish to reach Southern Colorado. New Mexico, or Arion the Pacific Railroad is about 10 cents per mile. Those who wish to reach Sonthern Colorado, New Mexico, or Arizona, should go by rail to St. Louis, and thence to the western terminus of the Eastern Division of the Pacific Railroad (about 250 miles east of Denver) where they can take coaches to every prominent point west and southwest. Daily coaches run from the terminus of both the Pacific Railroads to Denver City. By the Cheyenne route, Denver can be reached from New York in five days; by the St. Louis and Smoky Hill route, in six days. During the coming summer. Denver will be consix days. During the coming summer, Denver will be connected with the Pacific Railroad at Cheyenne by the comple tion of the Denver Railroad.

Persons who desire to make a leisurely and pleasant trip to the Mountain Territories, should start about the 1st of June go by Cheyenne to Denver, from which point they can reach the leading mining region of Colorado in a day by coach. Here they should go by coach to Salt Lake, exchanging the snow and desolation of the mountains for the fruits and flowers of the Mormons, and from there they can go to Montana or Idaho by stage, spend two months in observation or attending to business, and return by boat from Fort Benton to Sioux City, where they are connected with the East by railroads Those who desire to visit the Rocky Mountains only, should not start till August, as September is the most pleasant month of the year for travelling in the mountains. Those who wish to escape the heat, dust and epidemics of the cities in the heated term, can now spend the summer months more cheaply, pleasantly and profitably in the mountain regions at Colorado, than at any of the Eastern watering-places. The finest mineral springs, of every property and temperature, abound in the mountains within easy drives of Denver, and visitors can now

be comfortably entertained there. Travellers in the West want to be incumbered as little as