

held, recognized slavery, and by no action of the government could it be set aside. On the opening of hostilities in the war of the rebellion, on the part of the Slave States, the *Times*, however, was among the first to give the national government support.

During 1870-1, the *Times* waged, almost single-handed, war against the celebrated Tammany Ring, and in 1881, after the inauguration of President Garfield, the *Times* began a fight against the Star Route thieves, and has continued the same up to the present time. The circulation of the paper is estimated at 45,000 for the daily and 50,000 for the weekly edition.

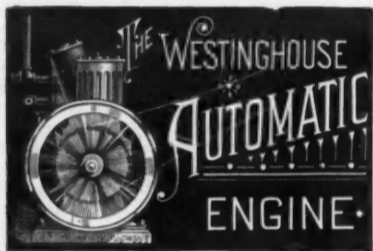
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Wet and Press Felts and Jackets.
All Sizes and Styles suitable for the making from the coarsest to the finest paper.

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80 to 300 Horse Power.
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These papers are manufactured in our new mill built expressly for the purpose, and are unexcelled in Strength, Sizing and Beauty of Finish, by any in the market.
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MACHINISTS, IRON AND BRASS FOUNDERS,
MANUFACTURERS OF
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OF EVERY DESCRIPTION.
FOURDRINIER, CYLINDER and LEATHER BOARD Machines, IMPROVED Washing and Beating Engines, Roll Bars, Bed Plates, Plunger and Fan Pumps, Rope and Rag Cutters, Bundle and Stop Cutters, GUN METAL and CHILLED ROLLS a specialty; also Iron Rolls furnished, covered with RUBBER, by James B. Forsyth's process.
— HARPER'S IMPROVED FOURDRINIER —
LARGELY INCREASED facilities for Grinding Rolls.
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Bill and Ship all Orders Direct from Mills. Correspondence Solicited with Manufacturers and Jobbers.

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Manufacturers of Fine FOURDRINIER
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And Dealers and Packers of all Grades of
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Correspondence solicited with Manufacturers of Book, News and Manilla Papers.

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MANUFACTURERS OF
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Especially for Paper Manufacturers.
THE BEST ANILINE BLUE FOR NEWSPAPERS.
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A large assortment kept in Stock of
Cotton Sampling and Flour-Sack Papers, Pioneer Waterproof Building Papers.
ALL CLASSES OF MANILLA PAPERS.

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Have full control of The Pure Hamburg Linen Machine Hand-Made Papers. Send for Price-List and Discounts. Also, Agents for Commercial Safety Papers. Correspondence solicited.

THE TIPP PAPER COMPANY.
The Cincinnati Commercial Gazette, March 19, says: "One of the latest industries established at Tippicanoe City, Miami Co., Ohio, is the Straw Board Paper Mill—one of the most thoroughly equipped in the United States. The capital stock is \$50,000, all of which has been taken and paid up. The grounds of the works cover some ten acres, and with the two thousand tons of straw piled up in stacks near the buildings, appearances indicate the Pyramids of Egypt. The buildings and machinery are all entirely new, and are of the most perfect of the business construction, and possess every convenience for the easy transaction of the product is entirely of steam-dried straw boards, and has been judged to be the best made in the country. Indeed, it has been a manufacturer. The capacity of the mill is six tons per day, hardly supply the demand, for it has lately been growing to such an unlooked-for extent that speaking to the Commercial Gazette always sure to get additional orders our goods are simply the most for extent that speaking to the Commercial Gazette always sure to get additional orders fore man of our works has no standing of the straw-board business skill as well as to our splendid machinery." A railroad track connects the mill with the Dayton and Michigan Railroad, which gives them first-class shipping facilities.
THE TIPP PAPER COMPANY,
Tippicanoe City, Miami Co., Ohio.

J. C. McNEILL,
— MANUFACTURER OF —
ROTARY GLOBE BLEACHING
— AND OTHER BOILERS FOR —
Wood or Straw Pulp,
— ALSO —
McNeil's Patent Magazine Heating Boiler. Heavy Sheet and Boiler Iron Work for PAPER MILLS a specialty.
Send for Catalogue and information.
J. C. McNEIL, Akron Boiler Works, Akron, Ohio.

Manufacturing News.

EASTERN STATES.

The mill of the Pearl Paper Company, at "Pearl City," South Hadley, Mass., in charge of Edward Lester, treasurer of the company, made its first run of paper last week very successfully.

The Parsons Paper Company, Holyoke, Mass., has begun an important series of repairs and improvements on the old part of its mills, which were built in 1853 and were the first paper mills in the city.

Work is progressing on the dam for the South-west Paper Mill, at Burcham, above Chicopee Falls, Mass. There are some thirty men at work upon it.

The Bowdoin Paper Company, Topsham, Me., and the Androscoggin Pulp Company, Brunswick, Me., are making preparations to build a new dam across the Androscoggin, and make other improvements which will add to their manufacturing facilities.

A paper mill is to be started at West Ware, Mass. The foundations are already in and the materials for the new building on the ground.

MIDDLE STATES.

A paper mill will be built next spring at Mechanicville, N. Y., adjoining the chemical fibre mill of the Hudson River Water Power and Paper Company.

Moore & Wilson, Waterford, N. Y., have been refitting their mill, and have put in a 45x48 beating engine, made by Frank Dilts, Fulton, N. Y.

WESTERN STATES.

The Niles Paper Mill Company, Niles, Mich., is putting in a Westinghouse engine to drive its Fourdrinier.

SOUTHERN STATES.

H. D. Mentzel, Ellicott City, Md., is enlarging and improving his mill. He will drive his Fourdrinier by a 25 horse-power Westinghouse engine.

SPECIAL NOTICES.

[Insertions under this heading will be charged 50 cents a line. Payment invariably in advance.]

MAURICE O'NEARA. Packer of Rags and Paper Stock, 277 WATER STREET, NEW YORK.

EUGENE SULLIVAN. Packer of Rags and Paper Stock, 356 & 358, WATER STREET, NEW YORK.

THOS. BUTLER & CO. Rags, Paper Stock, Old Metals, Rubber, 249-255 CAUSEWAY ST., BOSTON, MASS.

Market Review.

OFFICE OF THE PAPER TRADE JOURNAL, 15 NASSAU ST., NEW YORK, FRIDAY, AUGUST 17, 1883.

THE MONEY MARKET.—The money market remains extremely easy. Usually at this period money flows to the agricultural districts to aid in moving the crops, but the tide has not yet set in, and the rates for call loans remain 2@3 per cent.

There has been an improvement in stocks, but it was only of short duration, and proved to be spasmodic, the market having been depressed at the close, a sharp decline in the Vanderbilt and Pacific properties carrying the whole list down.

Government bonds were active and strong, with an advance in all issues. Railroad bonds were active and strong, and prices show some important changes.

THE PAPER TRADE.—Very nearly the same features that have ruled the paper market for some time past have been shown during the week just closed. The production although large is not so great but that most manufacturers keep fairly well employed on orders and have little difficulty in marketing their product.

market during the past week for paper quality, and under a fair demand the price has advanced 1-16c., so that nothing can be found to-day under 1 15-16c. cash, with most holders asking 2@2 1/2c. Bagging Butts are unchanged. Sales have been reported to the extent of 2,500 bales of paper quality on the spot and near at hand.

WOOD PULP.—The demand for Ground Wood Pulp is still moderate and prices remain easy. The offerings of Spruce continue large and manufacturers quote at the range of 2 1/2@2 3/4c., and Poplar at 1 1/2@2c., according to quality and distance of shipment.

WOOD FIBRE.—Chemical Fibre is without any new feature, the demand continuing moderately active and prices fairly well held. Bleached is quoted at 4 1/2@4 3/4c., and Unbleached at 3 1/2@4c., as to quantity and maker.

FOREIGN RAGS AND PAPER STOCK.—There has been a little better showing of business this week, several city houses having closed contracts for some fair-sized lots, and having made considerable deliveries on old orders, but in most cases this increase of business has been at a sacrifice on the cost.

DOMESTIC RAGS.—The small improvement previously noted in City Whites has been well sustained throughout the past week, and in fact, there are some holders who are asking 2 1/2c. for No. 2 Whites, while 2 3/4c. is the general quotation.

BAGGING, &c.—The recent large auction sales of damaged Jute Butts have somewhat affected the market for Gunny Bagging, but outside of this the demand has been so feeble and the transactions have been in such small lots that it has been difficult to sustain the prices asked.

OLD PAPERS.—This class of stock is offered so freely, and the supply is accumulating to such an extent, that prices are quite nominal, and it is difficult to establish a basis of value.

STRAW.—Straw continues to meet with a fair inquiry and prices are firm. We quote No. 1 Rye at 55@60c.; No. 2 do. at 50c.; Short Rye, 40c., and Out at 35c.

ROSINS.—The market for rosins has remained quiet during the past week, with very little change in prices. We quote f. o. b., cartage included, viz.: C Strained, \$1.80; D Good Strained at \$1.90; E at \$2.00; F Good No. 2 at \$2.20; G Low No. 1 at \$2.40; H No. 1 at \$2.50; I Good No. 1 at \$2.65; K Low Pale at \$3; M Pale at \$3.37 1/2; N Extra Pale at \$3.50@3.75, and W G at \$4.25@4.50.

CHEMICALS.—The market continues steady for most descriptions, but the demand is still of a hesitating character and confined mostly to jobbing parcels. There is no speculative feeling, and no disposition is shown to purchase beyond present necessities.

low: 250 cks. Bleaching Powders at \$1.90@1.95 as to brand and quantity; 375 tons Soda Ash at \$1.50@1.60; 250 drums Caustic Soda, 70 per cent., at 2.75@2.80c.; 50 tons English Bal Soda at \$1.20; 250 barrels Lump Alum, at 2c.; 375 barrels Ground do. at 2 1/2c.; 375 barrels Pearl do. at 2 3/4c.; 700 barrels Natrona Porous Alum at 2 1/2c.; 100 tons Aluminous Cake at \$1.45; 95 cases German Ultramarine at 23@25c.; 25 cks. Anti-chlorine at 3c.; 25 cks. Yellow Prussiate of Potash at 24 1/2c.; 180 barrels English Venetian Red at \$1.55; 12 cks. Brown Sugar of Lead at 6 1/2c.; 15 cks. White do. at 13c.; 20 cks. Bichromate of Potash at 14 1/2c.; 100 bbls. Corn Starch at 4c.; 125 bxs. Extract of Logwood at 7 1/2c.

CHINA CLAY.—The demand for English Clay has been quite fair, but as there has been no addition to stocks, supplies in the hands of importers are gradually shrinking.

COAL.—The Anthracite trade is not in a booming condition, but the companies are placing their product, and as it may be gathered from the tonnage statements, this is large each and every week.

There has been a little better showing of business this week, several city houses having closed contracts for some fair-sized lots, and having made considerable deliveries on old orders, but in most cases this increase of business has been at a sacrifice on the cost.

PRICES CURRENT. NEW YORK MARKET.

Table listing prices for various goods including Paper Market, Rags, Old Papers, and Chemicals. Includes items like Ledger and Record, Flat Caps, Gunny Bagging, and various types of paper and rags.

Table listing prices for Rags, Rope and Bagging. Includes items like White Shirt Cuttings, Mill Assorted Whites, and various types of rags and ropes.

Table listing prices for Shavings and Old Paper. Includes items like White Collar Cuttings, White Envelope Cuttings, and various types of shavings and old paper.

Table listing prices for English Old Papers and Shavings. Includes items like Hard Shavings, No. 1, Soft Shavings, No. 1, and various types of old papers and shavings.

Table listing prices for Hamburg Rags, &c. Includes items like S P F F F, S P F, and various types of Hamburg rags.

Table listing prices for Ordinary Leghorn Rags. Includes items like P P, No. 1 White Linens, and various types of Ordinary Leghorn rags.

Table listing prices for Alexandria Rags. Includes items like Whites, Blues, and various types of Alexandria rags.

Table listing prices for Memel Rags. Includes items like S P F F F, S P F, and various types of Memel rags.

Table listing prices for Trieste Rags. Includes items like S P F F F, S P F, and various types of Trieste rags.

Table listing prices for Konigsberg Rags. Includes items like S P F F F, S P F, and various types of Konigsberg rags.

Table listing prices for Japanese Rags. Includes items like Whites, ordinary, Blues, selected, and various types of Japanese rags.

Table listing prices for Chemicals, Coloring Materials, &c. Includes items like Alum, lump, Alum, ground, Alum, pearl, and various types of chemicals and coloring materials.

Table listing prices for various chemicals and coloring materials. Includes items like Rosins, low, No. 1, per bbl., Rosins, No. 1, per bbl., and various types of chemicals.

BOSTON MARKET.

Table listing prices for various goods in the Boston Market, including Paper Stock, English Rags, &c., and Chemicals, Coloring Materials, &c.

**GANDY'S PATENT
AMERICAN COTTON
MACHINE BELTING**

Manufactured by
THE GANDY BELTING CO.,
Hollingsworth Street, Baltimore, Md.

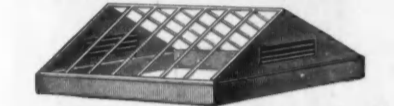
ADVANTAGES.—Much cheaper and stronger than leather. Thoroughly waterproof, and not affected by temperature. Clings well to the pulleys. Runs true, and can be made any length without joints.
Used in all the principal paper mills of Great Britain.

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PATENT VENTILATORS,**



For Paper Mills, Factories, Houses, Schools, etc.
In galvanized iron and copper. A powerful and rapid exhaust Ventilator. Working models mailed on receipt of 30 cents.

Hayes' Patent Metallic Skylights,
Neat, Light, Fire-proof and Durable.



Corrugated Iron Roofing and Siding. Light Iron Buildings, with wrought-iron frames and corrugated iron coverings, suitable for fire-proof sheds, store-houses, boiler rooms, &c. Send for Circulars and Prices. **E. VAN NOORDEN & CO.,**
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CEDAR VAT & TANK
FACTORY,**

1143, 1145 & 1147 N. Front St., Philadelphia, Pa.



Drainers, Stuff Chests, Broken Tubs, Straw Kettles, Boiling and Size Tubs, Water Tanks, &c.,
For PAPER MANUFACTURERS.

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MANUFACTURER OF

Paper Engine Bars

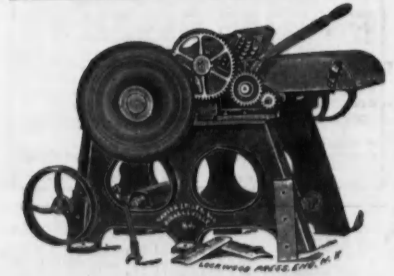


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TRIMMING, RAG CUTTER, STRAW CUTTER

Machine Knives of Every Description,
BELOIT, WIS.



**GIANT
PAPER STOCK CUTTERS**

They are the most durable, have greatest capacity, take less power, and are the cheapest cutters in the market. Estimates and full description furnished on application. Manufacturers of the Angle Bed Plates, Roll Bars (steel laid or all steel), Trimming Knives and Paper Mill Knives of every description.

TAYLOR, STILES & CO.,
Hicksville, Warren Co., N. J.



THE VICTOR TURBINE.

In use in a large number of best Paper and Pulp Mills in this and other Countries.

On view at Permanent Exhibition of Mill Machinery, 36 Broadway, New York.

Possesses more than Double the Capacity of other Water Wheels of same diameter, and has produced the Best Results on Record, as shown in the following tests at Holyoke Testing Flume:

SIZE WHEEL	HEAD IN FEET.	HORSE-POWER.	PER CENT. OF USEFUL EFFECT.
15-inch	18.06	30.17	.8032
17 1/2-inch	17.96	36.55	.8030
20-inch	18.21	49.00	.8032
25-inch	17.90	68.02	.8034
30-inch	11.65	92.54	.8076

With proportionately High Efficiency at Port-Gate.

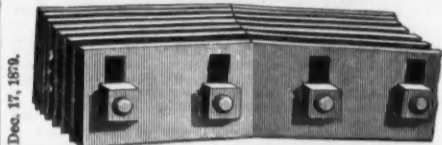
Such results, together with its nicely-working gate, and simple, strong and durable construction, should favorably commend it to the attention of ALL discriminating purchasers. These Wheels are of very Superior Workmanship and Finish, and of the Best Material. We also continue to manufacture and sell at very low prices, the

ECLIPSE DOUBLE TURBINE,

So long and favorably known. State your requirements, and send for Catalogue to the

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DOUBLE BEVEL CRUCIBLE STEEL ROLL BAR.



THE "HORNE" PLATE.



DOUBLE BEVEL CRUCIBLE STEEL ROLL BAR.

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**Jordan and Paper Pulp
ENGINES,
Roll Bars, Bed Plates, Rag Knives.**

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Jordan Bar and Filling Constantly on Hand.

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ALL KINDS OF HOSE AND TUBING,
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The Simplest, Strongest, Most Durable, Economical and Lightest-Running

STRAW CUTTER

For Paper and Pulp Mills ever Invented.

Cut and description will appear shortly, meanwhile, those desiring New Cutters, or any one who is interested, will please address the manufacturers, who will forward references and testimonials from those who are using them. Address

THE BELL CITY MANUFACTURING CO.,
RACINE, WIS.

STOUT, MILLS & TEMPLE,

DAYTON, OHIO,
MANUFACTURERS OF

RAG ENGINES

For all classes of Paper.
We are making a specialty of Cast-Iron Tub Engines, which are in great favor among Paper Makers. They are made strong, are well proportioned, and guaranteed to turn well.

J. J. MANNING'S WIRE-CLEANING APPARATUS

For Fourdrinier and Cylinder Machines.

This apparatus is made entirely of brass, and is designed to remove the accumulations of foreign substances that causes perforations in the paper without interrupting the useful operation of the machine, or injuriously affecting the wire. No Fourdrinier or Cylinder Machine should be without it, as it prevents the destruction of the wire, apron and jackets, that is caused by the uneven application of sulphuric acid for cleaning the wires.
Send for references and circulars to the Patentee,
JOHN J. MANNING (Lock Box 53), Gt. Barrington, Mass.

THE ROTARY HYDRAULIC GOVERNOR

Secures Perfection of Speed of Water-Wheels. The only Governor that can satisfactorily control heavy changes of labor.
SCIENTIFIC in principle, accurate in construction and application, perfection never before approached in results. Each change of labor ACCURATELY WEIGHED and an EQUAL AMOUNT of power instantly changed. Power and labor equal, speed must remain uniform, otherwise not. This secured only by instantaneous and rapid action of the gate. Will carry the gate as far in one second as any other regulator can in one minute, and not "run by." Perfect control of Web Calendar and Pulp Grinding Wheels, earning their cost many times each year. Equally efficient on Engines and Machine Wheels—seventeen in use in Holyoke. Efficient, simple, reliable, durable. Warranty unlimited. **GILLESPIE GOVERNOR CO.,** Works, 49 Purchase St., BOSTON.
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MANUFACTURER OF
**Fourdrinier and
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Send for Catalogue and Prices. — CLEVELAND, OHIO. — **DANDY ROLLS, &c.**

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IS PARTICULARLY ADAPTED TO THE
Removal of Steam, Moisture and Heat from Machine and Bleach Rooms in Paper Mills.

It is in successful operation in the following places: Paper Mill of Messrs. Averill, Russell & Carpenter, Minneapolis. Paper Mill of Messrs. Warner, Newman & Warner, Minneapolis. Paper Mill of Minneapolis Straw Board Co., Minneapolis. Atlas Paper Co., Appleton, Wis. Lockport Paper Co., Lockport, Ill. Cedar Falls Paper Co., Cedar Falls, Iowa. Cleveland Paper Co., Cleveland, O. Geo. H. Friend & Son, West Carrollton, O. South Bend Paper Co., South Bend, Ind. Mead Paper Co., Dayton, O., and many other places.
Send us diagram of your mill and dimensions, specifying where steam is generated, and we will make estimate and guarantee the removal of steam in winter and heat in summer.

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IRON TUB RAG ENGINES,

Built on the latest improved plans, and being rapidly adopted by the
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Dumb-Waiters, Automatic Hatch-Doors, &c.
Sole Owners of the right to apply the HEBNER PATENT GOVERNOR to Elevators and Hoisting Machinery.

Henriksen's Automatic Safety Clutch does not depend on springs and arrests fall of car should cable, belts, or any part of the machinery break.
SEND FOR ILLUSTRATED CIRCULAR.

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Rotary Hydraulic Governor for Water-Wheels.

That uniform speed is an indispensable requisite to the success of any mill is admitted; yet, it is well known to all critical observers that most mills driven by water-power, including nearly all that obtain their power from one wheel, are run at a disadvantage and loss for want of efficient control.

There are few machines performing so important an office, and on which so much effort has been expended by inventors, as the ball regulator, on which so little improvement has been made in its long years of service.

The rotary hydraulic governor, manufactured by the Gillespie Governor Company, and here-with illustrated, discarding the revolving balls, is constructed on new and scientific principles, and in its results is so wide a departure from other regulators, that in point of merit as an invention, it deserves to be classed with the sawing machine, electric light and telephone.

Power and resistance, labor on the wheel, remaining equal, speed must be uniform, otherwise not. This is self-evident. To maintain these relations on any change of labor, small or large, there must be a simultaneous change of an equal amount of power.

Its indicator or governing device is unlimited in its sensitiveness and can be adjusted to a variation of one-tenth of 1 per cent., or one turn in a thousand. As applied, it gives a positive action on a change of 1 per cent. When attached to the wheel the required speed is attained by adjusting weights to the indicator or piston, a given amount of weight always maintaining a certain rate of speed, consequently any rate of speed can be at once attained without changing pulleys or gears.

Maintaining its control over the entire range of gate, it will meet as satisfactorily the largest as the smallest changes. On the average wheel, no two wheels governing precisely alike, it will control a simultaneous shifting of 50 per cent. of the entire load on the wheel without a noticeable disturbance of the speed.

These claims, clearly stated and fully warranted, are very far beyond the achievements of other regulators. No patron is required to pay for a machine till its merits are tested and acknowledged on each wheel to which it is applied.

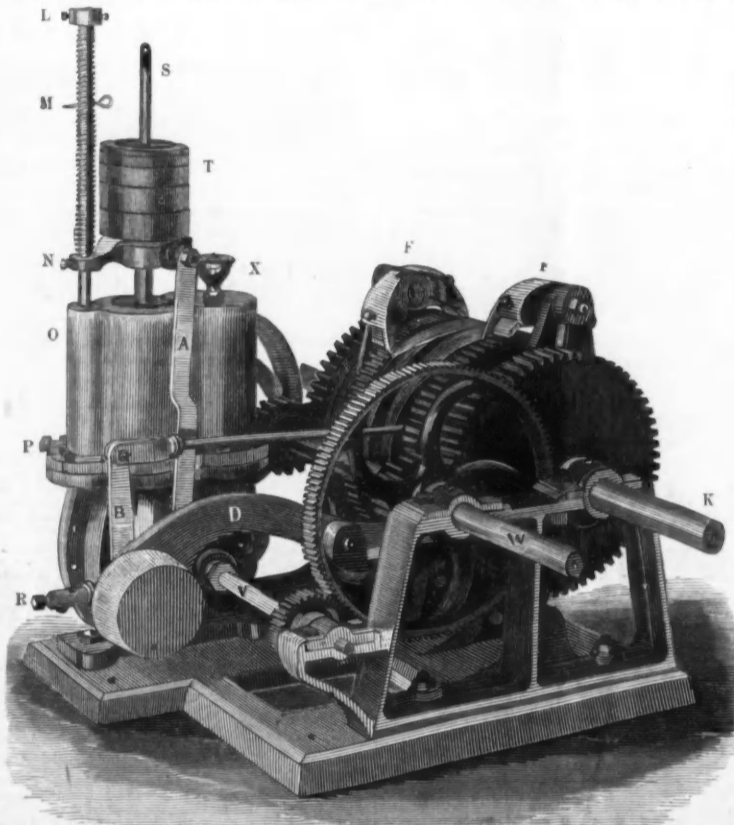
The product of every machine in a mill, and often the durability of the machine itself de-

pends on the quality of the speed, and sometimes to the extent of determining the failure or success of the mill. So the governor, next to the water-wheel, becomes the most important machine in the mill; and in these days of sharp competition and narrow margins, should not be overlooked.

No machinery can be run with economy on a varying speed, or produce its most profitable results without being run at its highest rate of speed, consistent with its durability and the production of a perfect fabric.

Fifteen years of unflinching success has demonstrated, it is claimed, the capacity of this governor to secure all these results to a perfection never before approached on water-wheels, and unsurpassed by any motive power.

Green is the president and John S. Rogers treasurer and general manager of the Gillespie Gov-



ROTARY HYDRAULIC GOVERNOR.

ernor Company. The company's office and works are at No. 49 Purchase street, Boston, where all of its varieties are kept in stock, and all orders are promptly attended to.

Blowing out boilers should be done at least once a month, except in the very rare instances in which water is used that will not form a scale. The boiler should not be blown out until the furnace is quite cold, as the heat retained in the walls is likely to injure an empty boiler directly by overheating the plates, and indirectly by hardening the scale within the boiler.

Its indicator or governing device is unlimited in its sensitiveness and can be adjusted to a variation of one-tenth of 1 per cent., or one turn in a thousand. As applied, it gives a positive action on a change of 1 per cent. When attached to the wheel the required speed is attained by adjusting weights to the indicator or piston, a given amount of weight always maintaining a certain rate of speed, consequently any rate of speed can be at once attained without changing pulleys or gears.

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The product of every machine in a mill, and often the durability of the machine itself de-

Accidents.

A machinist was hurt at Joseph Jordan's paper mill at Valley Forge, Pa., yesterday afternoon. He was assisting in placing some machinery in position, and while doing so his left hand was caught in a fly wheel and badly mashed.

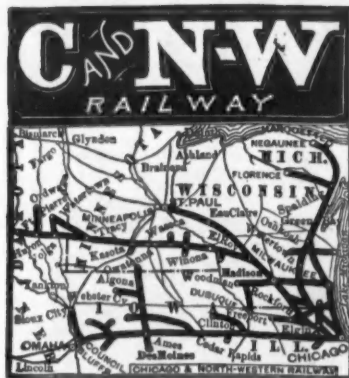
General Notes.

An attachment has been issued against E. C. Beard, printer, East Portland, Ore.

An attachment has been issued against George Bythe & Co., publishers Boomerang, Palouse City, W. T.

The Council Bluffs Water-Works will pump the muddy water of the river into their settling basins by two 15-inch Andrews centrifugal pumps. Each pump is coupled direct to a Westinghouse engine of 100 horse-power, making 300 revolutions per minute, and fitted with an adjustable cut-off in order that the speed may be varied to meet the varying heights of lift.

E. D. Irvine & Brother, Macon, Ga., correct the statement that they have sold out their book



The Chicago & Northwestern Railway

Is the OLDEST! BEST CONSTRUCTED! BEST EQUIPPED! and hence the

Leading Railway of the West and Northwest. It is the short and best route between Chicago and all points in Northern Illinois, Iowa, Dakota, Wyoming, Nebraska, California, Oregon, Arizona, Utah, Colorado, Idaho, Montana, Nevada, and for Council Bluffs, Omaha, Denver, Leadville, Salt Lake, San Francisco, Deadwood, Sioux City, Cedar Rapids, Des Moines, Columbus, and all points in the Territories and the West.

At Council Bluffs the Trains of the Chicago and Northwestern and the U. P. Railways depart from, arrive at and use the same joint Union Depot.

At Chicago, close connections are made with the Lake Shore, Michigan Central, Baltimore and Ohio, Ft. Wayne and Pennsylvania, and Chicago and Grand Trunk Railways, and the Kankakee and Pan Handle Routes.

It is the Only Line running the CELEBRATED NORTHWESTERN DINING CARS West or Northwest of Chicago. Pullman Sleepers on all Night Trains.

Insist upon Ticket Agents selling you Tickets via this road. Examine your Tickets, and refuse to buy if they do not read over the Chicago and Northwestern Railway.

If you wish the Best Traveling Accommodations you will buy your Tickets by this route, and WILL TAKE NONE OTHER.

All Ticket Agents sell Tickets by this Line. J. D. LAYNG, Gen. Sup., Chicago.



PRINCIPAL LINE

The SHORTEST, QUICKEST and BEST line to St. Joseph, points in Iowa, Atchison, Topeka, Des Moines, Missouri, Kansas, Nebraska, Missouri, Kansas, New Mexico, Arizona, Montana, Wyoming, Colorado, Texas.

CHICAGO

This Route has no superior for Albert Lea, Minneapolis and St. Paul. Universally conceded to be the best equipped Railroad in the World for all classes of travel.

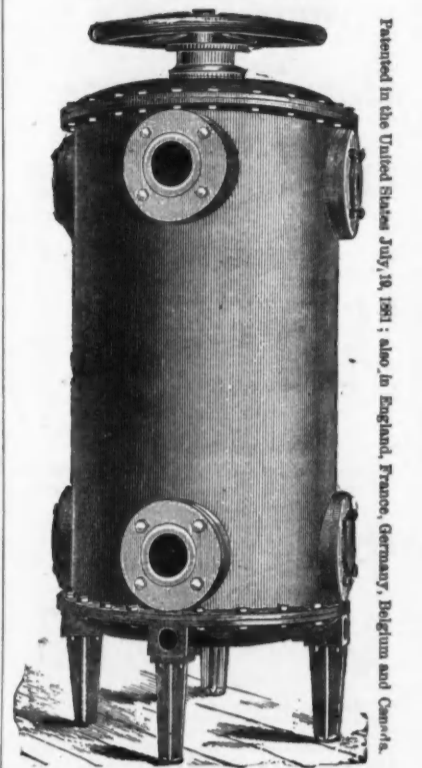
KANSAS CITY

All connections made in Union Depots. Omaha, Denver, Lincoln, California.

Through Tickets via this Celebrated Line for sale at all offices in the U. S. and Canada. Information about Rates of Fare, Sleeping Cars, etc., cheerfully given by T. J. POTTER, Perceval Lowell, Chicago, Ill.

THE MOORE Filtering Machine

Extreme Height, 5 ft. 6 in.; Diameter, 32 in. Supply Pipe, 6 in., Outlet, 6 in.



HOLYOKE PAPER CO., HOLYOKE, MASS., Feb. 2, 1882.

The Moore Filtering Machine is in use in our mill, gives entire satisfaction, and I can recommend it as a practical device for use in Paper Mills, or where large quantities of filtered water are required.

O. H. GREENLEAF, President. HOLYOKE, MASS., Feb. 2, 1882.

This is to certify that we are using one of the Moore Filtering Machines—using it all through the time when the water was the worst, giving us ample water for two engines, and I can safely say that it is the best filter for paper mill use, where a large quantity of water is wanted, than anything I have ever seen or tried yet, and can recommend it to any one wanting filtered water.

D. P. WILLIAMS, Supt. Holyoke Paper Co.

THE ONLY FILTER

in which the principle of "control" has been perfected. Which exteriorly indicates the condition of the filtering material in it, and the precise position of the wearing parts. That will give large results with a low head of water. That can always be cleaned without removing the filtering material.

Public Comparative Test Invited (in Holyoke) with any other Filter.

For information relating to the construction and operation of this machine address, G. H. MOORE, Norwich, Conn.

CHICAGO STEAM BOILER WORKS.

Water, Lard and Oil Tanks and Sheet-Iron Work, 66, 68, 70, 72 Michigan St., CHICAGO.



Rotary Bleachers and Castings. Marine and Stationary Boilers.

The E. T. Barnum Wire & Iron Works.

MANUFACTURERS OF IRON, STEEL, COPPER, BRASS.



WIRE CLOTH For Paper and Flouring Mills, Breweries and Mining. STEEL TEMPERED WIRE CLOTH, for BOLLING PURPOSES, Wire Office and Counter Railing, Wrought Iron Fences, Wire Signs, Stable Fixtures, Weather Vanes, Roof Cresting, &c.

WIRE AND IRON WORK OF EVERY DESCRIPTION. Write for Catalogue. The E. T. Barnum Wire & Iron Works, Detroit, Mich.

CRAIG'S HYDRAULIC GOVERNOR

FOR STEAM ENGINES. The Most Perfect Governor Known. RUNS IN OIL.

Guaranteed to accurately regulate all classes of Engines. Illustrated and Descriptive Catalogue sent on application.

W. H. CRAIG & CO., Sole Manufacturers, LAWRENCE, MASS.

NOVELTY BELT HOOK CO. HARTFORD, Conn. Manufacturers HARTFORD, Conn.



AN EJECTOR WICKERSHAM & HUSTON, OF WILMINGTON, DELAWARE,

And manufactured by them, expressly for Suction Boxes on Fourdrinier Paper Machines, has proven itself to be the most complete and sure device for the purpose ever used. Price for each Instrument or Box, fifty dollars (\$50).

The Superintendent of the Jessup & Moore Paper Company's Augustine Mills writes concerning this Ejector as follows: 'GENTLEMEN—Referring to your Ejectors for suction-boxes, would say we have in use the first one made for this purpose, and have since fitted up all our machines with them, considering them superior to anything we have ever tried.'

W. C. HAMILTON & SONS write: 'We have seven of your Ejectors in as many suction-boxes, and can say nothing but praise. In every way we consider them superior to a pump or any other device.'

Circulars, with directions, sent upon application to WICKERSHAM & HUSTON, Wilmington, Del.

ALWAYS GIVES THE UTMOST SATISFACTION.

MAIN BELTING COMPANY,

MANUFACTURERS OF
THE LEVIATHAN COTTON BELTING,
Unsurpassed for Strength, Durability and Cheapness.
Made to any Length, Width and Strength.
MAIN DRIVING BELTS,
Guaranteed to Run Straight, Even Throughout.
No Cross Joints. Unaffected by Damp, Clings well to the Pulley, Has no Equal; in fact, is THE BELT.
MAIN BELTING COMPANY,
S. W. cor. Ninth and Reed Sts., Philadelphia.

F. GRAY, President. H. C. NELLS, Vice-President.
W. C. GRAY, Secretary and Treasurer.

PIQUA WOOLEN MILLS.

THE F. GRAY CO.,

MANUFACTURERS OF
FOURDRINER and CYLINDER FELTS,

FELTS Press Felts and Jackets for all kinds of Paper.
FELTS Special attention is invited to our FOURDRINER FELTS for FAST RUNNING ON NEWS, which are unsurpassed.
ALSO, TO OUR

"EUREKA FELT,"

For Fast Running on Cylinder Machines, which we have perfected within the last few months, and which is rapidly gaining favor with Paper Makers wherever it is used.

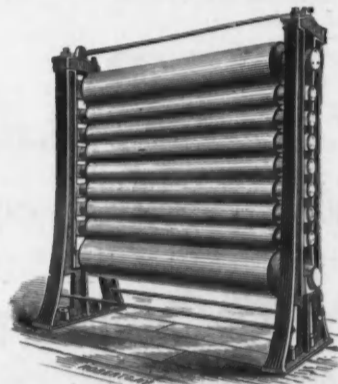
EXTRA HEAVY CANVAS DYER FELTS, all widths, cut to any length, at Manufacturers' Prices. WE WARRANT EVERY FELT to work well, and if it does not, it can be returned.

We also manufacture Blankets, Flannels, Stocking Yarns of all Colors, and Men's Heavy Wool Socks. Also, an Extra Heavy 6-4 Scarlet and White Flannel for underwear, which we guarantee not to shrink. All the above we offer to Paper Makers at the Lowest Wholesale Prices, in quantities to suit. Very respectfully,

THE F. GRAY CO., Piqua, Ohio.

THE J. MORTON POOLE CO.,

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Chilled Rolls

GROUND BY THEIR PATENT PROCESS.

PRESSES for Baling PAPER, RAGS, &c.

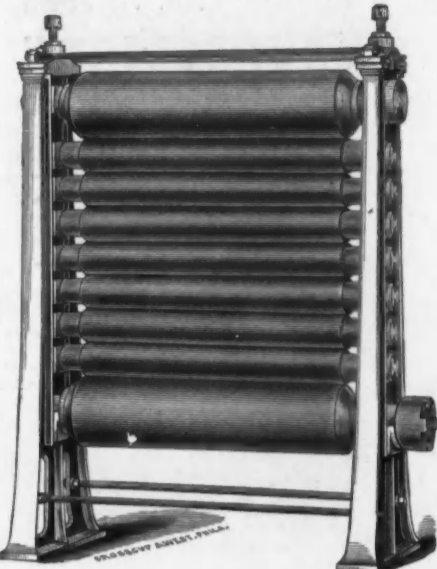


Send for Circulars, Price List, Terms, &c., to the Sole Manufacturer, JAMES N. BALSTON & SON (Successors to Ingersoll & Balston.)
Greenpoint, Kings Co., N. Y.

LOBDELL CAR WHEEL COMPANY,

WILMINGTON, DEL.

The Oldest and Most Extensive Manufacturers of Chilled Car Wheels in this or any other Country.



EXTRACT OF AWARD ON CHILLED ROLLS.

The undersigned having examined the product herein described respectfully recommends the same to the United States Centennial Commission for award, for the following reasons, viz.:

This exhibit contains a stack of calendering rolls intended to be part of a complete paper machine. These rolls are of cast-iron, chilled at the surface in casting, and thereby made hard, like tempered steel. They are separately ground according to a highly improved plan, and are so true that, when placed together, they bear upon each other throughout their entire length. This exhibit has the exceptional merit that the rolls are not only GROUND true but CAST by the exhibitor.

(Signed) JAMES M. WILCOX,
Signature of the Judge.

ALSO MANUFACTURERS OF

CHILLED ROLLS

For Paper Machines, Rubber, Brass, Copper, Rolling Mills, &c.

The vast quantity of iron used daily in the business of this establishment permits the very best selection for the composition of CHILLED ROLLS. The long experience of Mr. Geo. G. Lobdell in making chilled castings, and who personally directs the selection, enables them to make

CHILLED ROLLS UNEQUALLED IN QUALITY AND GROUND AS PERFECTLY AS ANY OTHERS.

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GEO. S. BARTON, Pres. and Treas.

LEWIS C. STONE, Manager.

RICE, BARTON & FALES MACHINE AND IRON CO.,

(At Old Stand of Rice, Barton & Co.)

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—MANUFACTURERS OF—

PAPER MACHINERY

OF EVERY DESIRABLE VARIETY,

Iron and Brass Castings, Chilled Iron and Paper Calender Rolls, Rag Engines, Rag Cutters, Steam Pressure Regulators, &c.

HYDRAULIC PRESSES, FROM 5 TO 14 INCH PISTON.

SMITH, WINCHESTER & CO.,

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SOLE MANUFACTURERS of the Jordan Patent Beating Engine, which has no rival for clearing the stock for fine papers. Chilled Iron and Paper Roll Super Calenders, Plate Calenders, Chilled Stack Calenders, Rag Cutters, Hand and Power Cutting Presses and Stop Cutters; the Hatch Patent Stop Cutter, the only Cutter that can be regulated to cut between water marks of writing papers. Screens, Brass and Nickel Plated, the latter warranted to wear twice as long as brass. Bed Plates, Roll Bars, Fan and Plunger Pumps. Also, Gun Metal Covered Rolls, for Size and Press Rolls; Stevenson Water Wheels, Shafting and Mill Gearing generally.

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Aniline Colors, Carmine, Pulp Colors, Eagle Brand Ultramarines, N. C. F. Concentrated Alum.

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Manufacturers of CYLINDER and FOURDRINER

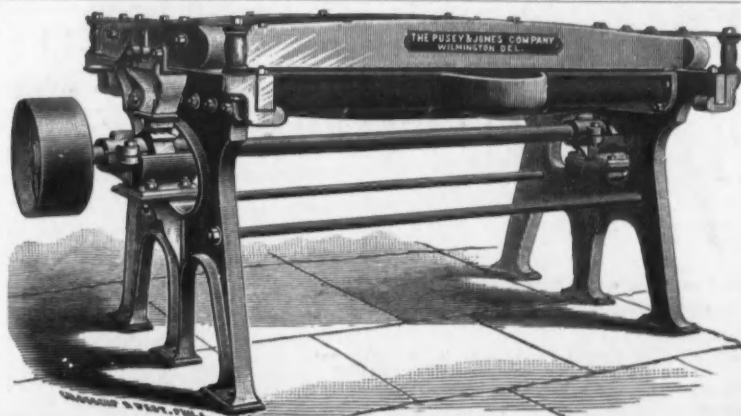
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CHILLED ROLLS GUARANTEED EQUAL TO ANY MADE.

Plans and Estimates furnished, and special attention given to the execution of contracts for the entire machinery necessary to make any kind of Paper, set up, ready to run.

Calenders and Press Rolls reground by special machinery. The attention of Water-power Users desiring the highest efficiency is especially directed to the HOUSTON TURBINE WATER WHEEL.



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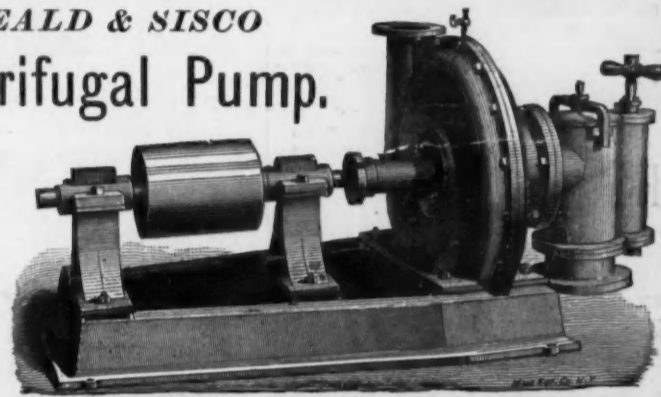
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HEALD & SISCO

Centrifugal Pump.



Specially adapted to the needs of Paper Makers.

A greater number of these Pumps in use than of all other Centrifugal Pumps combined. CAUTION!—The term "OLD RELIABLE," as applied to pumps, was adopted by us sixteen years ago. Be not deceived by other manufacturers who appropriate our time-honored motto.

Send for latest pamphlet of 78 pages, containing hundreds of testimonials, to HEALD & MORRIS (formerly Heald & Sisco Co.) Baldwinsville, N. Y., U. S. A.

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Little Giant Turbine Water Wheel

IS THE MOST PRACTICAL AND DURABLE WHEEL MADE, AND IS THE BEST PARTIAL GATE WHEEL ON THE MARKET.

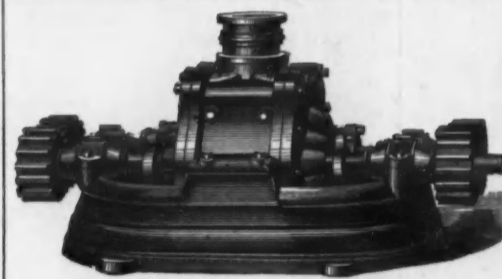
Capacity Increased and Prices Largely Reduced.

We sell Wheels for less money per Horse-Power than any other manufacturer.

SEND FOR NEW ILLUSTRATED WHEEL BOOK.

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THE ROTARY PUMP IMPROVED.
The Best Fire and Supply Pump Made.
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DEALERS IN
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HAVE ALWAYS ON HAND AND TO ARRIVE
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Also Sole Agents for the following Brands of

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Extra Heavy Canvas for Dryers.

NATRONA POROUS ALUM,

FOR PAPER MAKERS' USE.
FREE FROM IRON AND FROM EXCESS OF ACID.
Two pounds of it will size as much Paper as three and one-fourth pounds of Lump or Ground Alum, and is 12 per cent. stronger in alumina than any other Alum offered.

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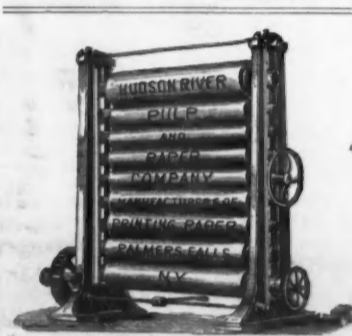
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FOURDRINER AND CYLINDER WET FELTS, PRESS FELTS AND JACKETS,

Pronounced by many equal to the best Foreign Felts, at a much lower price.
EXTRA HEAVY CANVAS FOR DRYERS.



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Daily Product:

PAPER, . . . 12 Tons.

PULP, . . . 30 "

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EXTRA CONCENTRATED PEARL ALUM FOR PAPER MAKERS' USE.

The Richest in Sulphate of Alumina, and 20 per cent. Stronger than the Strongest Alum in the Market.
2 lbs. Pearl Alum will do as much Sizing as 3 1/2 lbs. Potash or Ammonia Alum.
CONTAINS NO FREE ACID.

Chemical Laboratory, University of Pennsylvania.
Messrs. HARRISON BROS. & CO., WEST PHILADELPHIA, April 18th, 1879.
Gentlemen:—The sample marked "EXTRA CONCENTRATED PEARL ALUM," H. B. & Co. April 17th, 1879, which I have examined for alumina as requested, contains 65.96 per cent. of neutral sulphate of alumina.
Yours very truly, (Signed,) F. A. GENTH.

HARRISON BROS. & CO.

Manufacturers of Extra Concentrated PEARL ALUM, Lump and Ground Alum, ALUMINOUS CAKE, Oil of Vitriol, White Lead, Colors for Paper Makers and Painters, Sugar of Lead and other Chemicals.
Offices: 35th STREET & GRAY'S FERRY ROAD and 105 SO. FRONT STREET, Philadelphia, 117 FULTON STREET, New York. Agents at Boston, E. & F. KING & CO.

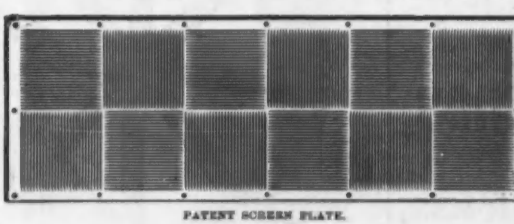
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RAG WAREHOUSE,
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FOREIGN AND DOMESTIC PAPER STOCK AND WOOLEN RAGS OF ALL DESCRIPTIONS.

Cash paid for all kinds of WOOLEN RAGS and PAPER STOCK in large or small lots.

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SCREEN PLATES
A SPECIALTY

Fourdriner and Cylinder Paper Machines, Rag Engines and Cutters, Dusters, Cylinder Washers, Patent Bleach Tubs, Press Rolls, Couch Rolls, Chilled Calenders, Breast Rolls, Tube Rolls, Suction Boxes, Suction Plates, Pumps, Screen Plates, Shafting, Gearing, etc.

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No. 74 John Street, New York,

"EXCELSIOR" FELTS PIECE FELTING and JACKETING.

For Economy, Durability and Good Results they are Unequaled. Long Established and Well Known. A Trial is Solicited from Manufacturers not already Using them.

EXTRA HEAVY CANVAS DRYERS.

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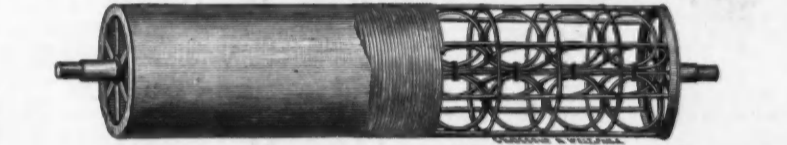


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