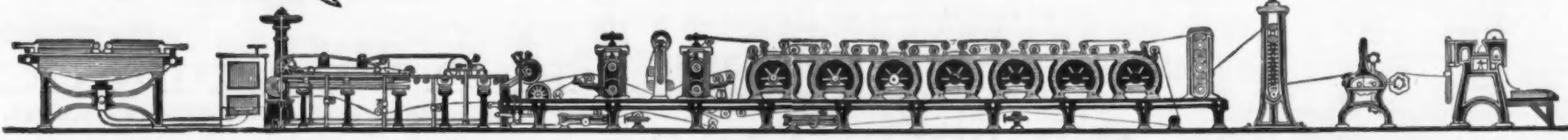


THE PAPER TRADE JOURNAL.



"The Consumption of Paper is the Measure of a People's Culture."

VOLUME XIII.—NO. 4.

NEW YORK, JANUARY 26, 1884.

WHOLE NUMBER 508.

Trade Topics.

Improvement in Wire-Cloth.

The purpose of this improvement in Four-drainer wires is to produce a wire-cloth of greater strength without interfering with the passage of water from the paper-pulp lying thereon in the customary process of paper-making.

A further object is to give a greater material surface to a given portion of fabric, whereby the quality of the paper is improved and a saving of fine "stock" is effected.

The drawing represents a piece of wire-cloth magnified, illustrating the arrangement of the wires therein.

Heretofore wire-cloth has had the wires arranged approximately equidistant apart, both in the warp and woof, so that the openings be tween the wires were approximately square. In this construction the wires are arranged as shown, a' a' being wires arranged close together, with a small opening, d, between, forming in one sense a "double wire," as, for convenience, it is denominated. This double wire alternates with a single wire, b, having wider spaces, c, laterally adjacent. Such wires a' b' preferably form the warp of the fabric and take the longitudinal strain of the belt.

In manufacturing the fabric each strand of the double wire lies in a separate bed; but as they approach the reed they come together, and in that manner pass through a single "dent" therein. The warp passes alternately above and under the wires a'. The single wires b pass through separate dents individually.

Apparatus for Drying Paper.

British letters patent have been granted to Alexander Annandale, for an improved apparatus specially designed for drying paper at the time of its manufacture, but which is also applicable for drying paper when colored, printed, or otherwise treated subsequently to its first manufacture; or for drying woven or web fabrics of various kinds. Instead of passing the paper in contact with metal cylinders heated by steam, as is done with some kinds of paper; or instead of passing the paper round cylinders or drums made with laths with spaces between them, and with steam pipes below to supply heat, together with fans to produce circulation, the paper is by this present invention passed round metal cylinders heated by steam, but is prevented from coming in contact with the metallic surfaces by wooden laths or spars placed so as to hold the paper or other fabric at a suitable distance from the cylinders. With this arrangement there are spaces for the circulation of air between the cylinder surfaces and the paper; and while the drying action of the air is better than that of metallic surfaces in immediate contact with the paper or of the felt ordinarily used with some of the drying cylinders of paper-making machines, there is also the advantage that the temperature is more nearly alike on the two sides of the paper than when there is the hot metallic surface touching one side and the atmosphere on the other side. Among the advantages of the improved arrangements as compared with existing air-drying plans, and the greater uniformity of the heat and regularity of its action applied to the paper at the various stages of its progress; the freer escape of the moisture-laden air that has acted on the paper, and economy of the heat which is brought nearer to the paper by the cylinders and waste thereby avoided.—*Paper-Makers' Circular.*

The First Paper Mill in Germany.

The first paper mill in Germany was in Nuremberg, and Koberger's printing-house, with its twenty-four presses, was so attractive to authors that they settled in Nuremberg in order the more conveniently to oversee the printing of their works. Watches, called "Nuremberg Eggs," were first made about 1500, the clarinet was invented there, and church organs were better made than in any other German town. A new composition of brass, the air-gun, and wire-drawing machinery were all Nuremberg devices. The filigree silver and gold work—the medals, images, seals and other artistic jewelry which were made by the fifty master-goldsmiths who dwelt there—were famous far and wide; and this variety of manufactures was increased by Hirschvogel, an artisan who traveled in Italy and learned to make majolica. His factory, established at Nuremberg in the year 1507, was the first in all Germany in which such ware was made. It is not certain that playing-cards were invented in Nuremberg, but they were manufactured there as early as 1380,

and cannon were cast there in 1356; previous to this they had been made of iron bars soldered together lengthwise and held in place by hoops. In short, the manufacturers of Nuremberg were so widely known as to give rise to a proverb,

"Nuremberg's hand Goes through every land."

and thus the city had the sort of importance which success and wealth bring to a person or a place.—*From Clara Erskine Clement's "Stories of Art and Artists," in St. Nicholas for February.*

Pulp-Washing Machine.

The illustrations serve to give an idea of Quirin's machine for washing pulp. The features of novelty in this device are said to be a horizontal chamber in connection with an upright chamber with a gate and elevated overflow, to discharge dirt and impurities, with a continuous flow of water, keeping the box full during the operation.

Figure 1 is a top view of the machine; Fig. 2 a vertical section. A A is the box, made of wood or metal, being put together in any substantial manner to be water-tight, and provided with boxes at either end to support the shaft B, which may be made of wood or metal, provided with prongs C, running through, as shown in the drawings, and projecting on four sides.

A piece of wood or suitable metal is fastened near the bottom of the box, leaving a space for the water to circulate, and is provided with vertical projecting prongs, standing in such a position that the prongs or beaters, C, in revolving pass between them.

F is the pulley for driving the shaft. G G represents a circular false bottom, containing a netting or screen, H. I is the inlet for water; q and N are outlets.

The operation of the machine is as follows: The pulp to be washed is thrown into the box. The gate O is open, the gate P being closed. The shaft B revolves, and by the action of the prongs the pulp is thoroughly mixed with the water, which is continually flowing through the inlet I and passing through the screen or netting H in the false bottom into the chamber L L', and overflows at m into the discharge-spout N. When the water at the overflow m becomes clear, the gate O is closed and the gate P is opened, and the pulp already washed is discharged through the spout q into a receptacle provided for drawing off the water.

Sizing with Ammonium Albumen.

The advantages which paper treated with animal size has over that prepared with resin size is too well known to require dilating on here.

A chief reason why, on the side of manufacturers, animal size for particular sorts of paper finds little favor is the length of time consumed in the drying of the paper.

It requires several experienced hands; and so generally, where animal sizing is used, it is only applied to the finer papers.

Latterly, where there has been such demand for the animal-sized paper, the slow preparation has been a source of difficulty to many manufacturers.

In the German Imperial Patent, No. 25,757, a process has been patented which will replace the hitherto used animal sizing, and which, among other advantages which it has, dries the paper in far shorter time, and renders it generally possible to complete the paper on the machine.

Before entering into the description of this size and its manipulation, we will speak shortly of the nature of size.

The different sorts of size hitherto in use in paper-making, as bone size, gristle size, &c., and which are designated shortly as albuminoids, have a great similarity to the white of egg kinds of bodies of animal origin, albuminades. Great as this similarity is, the two kinds divide from one another in that the albuminoids are soluble in water, undergo no change by long boiling, and change the alkalies themselves into glucose, slowly in cold, but quicker by heating.

The albuminades which are dissolved origin-

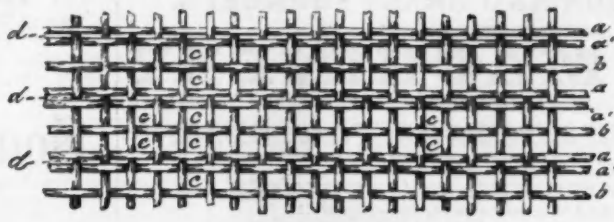
ally in blood and milk become, in blood through the action of the air, and in milk through heating to 130° C., insoluble into fluidity.

They are also insoluble by heating, and are only rendered soluble by a small addition of alkalies.

These properties of albuminades are utilized to provide a substitute for the size hitherto in use.

The albumen of birds' eggs and that contained in blood must be considered as too dear for the purpose, but in casein a substance is found which can be used for the desired purpose, and can be obtained in sufficiently important quantities to be in a position with regard to price to replace the hitherto used size.

As for the surface-sizing of paper, alkali is generally used for the dissolving of the albuminades, which salts, after the drying of the paper, remain in the bulk and work injuriously

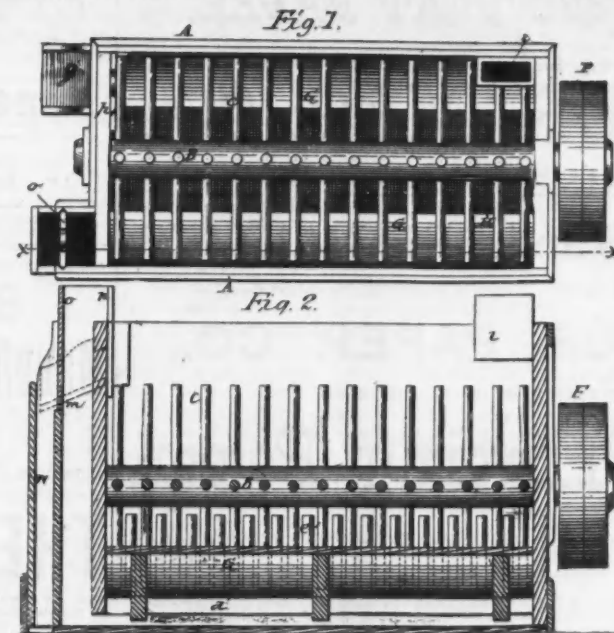


IMPROVED WIRE-CLOTH.

on the fibres; therefore salts of ammonia should only be used to bring the albuminades to a soluble condition.

The ammonia salts volatilize in the air at a temperature under the evaporating temperature of water.

Albuminades brought into solution in this manner and with the following ingredients are called ammonium albumen, whose preparation is as follows: 100 kgs. of dry casein is worked thoroughly in with 10 kgs. of pulverized carbonate of ammonia, and to facilitate the solu-



PULP WASHING MACHINE.

tion of the albuminade about 1/2 to 1 kg. of phosphate of ammonia is added—that is to say, of that salt which the albuminade in milk has in solution. The original white color changes to a pale yellow.

The working in should be continued till the bulk shows an even appearance, free from lumps.

Ammonium albumen is freely soluble in cold water. The solution forms a yellowish colored milky fluid, which, if rubbed between the fingers, feels somewhat sticky, only so long, however, as ammonia is present.

The relation of the ammonium albumen to the clay salts renders it not only applicable to surface sizing, but also to bulk sizing.

In the latter the ammonium albumen is mixed with resin size placed in Hollanders. The albuminades are not decomposed in consequence of the alkalies held in the resin size.

While the albuminoids become changed into glucose—that is to say, a substance which possesses no starch strength, but if contained in great quantities in paper causes the paper to have no strength, while the glucose imbibes moisture from the air, whereby the writing runs.

The application of ammonium albumen to bulk sizing is not interfered with by cost, as the cost is not greater than the old process.

The use of ammonium albumen for surface

sizing is after the same manner as the old process. It is, however, well to heat the paper after drying; as in this case the albuminades become freely insoluble, so that the paper, after damping and subsequent drying, retains its capability of resistance to the penetration of the ink, which the albuminoid-treated paper loses under similar treatment.

The ammonium-albumen treated paper has at first a sticky appearance, but after exposure some time to the air, so that the ammonia present is volatilized, it is in such a condition of dampness that it can be dried with ease on the drying machine.

The hygroscopic property of paper sized with ammonium albumen is much less than of those treated with albuminoids, which is worthy of consideration.

A sample of paper, whereof the sized quadrature weighed 98 g., and after-ward dried at 100°, and then exposed for some time in a damp atmosphere, took in the case of ammonium-albumen sized paper, 2.7 g. moisture from the air, while the albuminoid sample took 5.7 g.

As the power of taking water from the atmosphere is only half as great in the ammonium-albumen sized paper as in the albuminoid, there is no danger of the paper being penetrable by the ink, as is often the case in the latter.

After many years' experience, I find that the resistance power of paper treated with ammonium albumen to the penetration of ink is greater the longer it is exposed to the air.

The contained acid binds the soluble albuminade with the insoluble portion, which protects the paper from the penetration of the ink, and the paper becomes more capable of resistance.

Paper treated with ammonium albumen possesses all the advantages which the sizing with albuminoids gives the paper; the quality produced is better, and the working manipulation is much simplified; so that ammonium albumen, whether for bulk sizing or surface sizing, can, with advantage, obtain an entrance into paper manufacturing.

The advantages of paper prepared with ammonium albumen may be shortly summed up as follows:

1. Paper sized with ammonium albumen has greater firmness and a parchment-like feel.
2. Paper sized with ammonium albumen offers the greatest resistance to the penetration of ink.
3. Paper treated with ammonium albumen retains its pure white color.
4. As a part of the albuminade at once—the remainder after some time—becomes insoluble in water, the paper, after being wetted with water and dried, can be written on as well as before—a property which is especially useful in drawing paper.
5. As the ammonium-albumen treated paper is so little "hygroscopisch," a loss of firmness is not to be feared.
6. The paper requires only a short time for drying, and can also be dried on the machine.
7. After glazing, the ammonium-albumen sized paper has an agreeable gloss which takes the ink easily.
8. The working cost is not greater than in sizing with albuminoids, though the quality of the paper is better.
9. Ammonium albumen can be used with the greatest advantage not only for surface sizing, but also for bulk sizing.—*Paper Trade Review.*

Engines versus Boilers.

In considering the rate of coal consumption per indicated horse-power, says the *Mechanical World*, steam users are very apt to overlook the fact that economy depends, to a large extent, upon the efficiency of the boiler as well as the engine. There are probably not many engineers who have had large practical experience with the working of steam engines and boilers, who have not met with cases of excessive coal consumption where the indicator diagrams have appeared to be all that could be desired. Indeed, it is not all uncommon to meet with engines the indicator diagrams from which show the initial pressure on cylinder to be almost equal to the boiler pressure, the cut-off beauti-

fully sharp and clear, and the steam-curve almost a hyperbola, and yet the rate of coal consumption seems strangely disappointing. On the other hand, we have seen diagrams which did not appear at all economical, where the steam has been apparently carried on much further in the stroke than economical working would seem to require, and to be thrown away at too high a final pressure, and yet the rate of coal consumption per indicated horse-power has been very low; and even if measured by the actual work done—such as quantity of yarn turned off, &c.—the engines have been found to be working very economically. Among other causes for these apparent contradictions we believe it will be found that the comparative efficiency of the boiler is one of the most important. We have before referred to the importance of measuring the economy of the engine by the quantity of steam or water shown by the indicator diagram to be used per indicated horse-power, and if this were more commonly done, attention would soon be directed to the manner in which the boiler was doing its work. If, for example, it was found that an engine and boiler were working with a coal consumption of, say five pounds per indicated horse-power per hour, and the engine was actually using twenty-five pounds of water per indicated horse-power per hour, then the boiler would only be evaporating about five pounds of water per pound of coal, instead of nearly double that quantity, as it ought to be doing, and, instead of spending money in trying to improve the working of the engine, as is too frequently done, attention should at once be given to the boiler. Large sums of money have been uselessly spent in trying to reduce a high rate of coal consumption, through assuming that the engine alone was answerable for the waste of fuel. There are many causes for a boiler giving out a very low rate of evaporative efficiency. It may be very heavily incrustated in the interior, or the plates in the external flues may be thickly coated with soot, and, as scale and soot are both bad conductors of heat, much more fuel will be required to raise the steam than if these parts were well cleaned. Again, the draught may be bad, or the boiler may be carelessly attended to, or uncovered and exposed to the weather, all of which things will materially affect its evaporative efficiency. Assuming a first-class boiler to evaporate nine pounds of water per pound of coal, with an engine using, say eighteen pounds of water per indicated horse-power per hour—as our best engines probably now are doing—we have at once a coal consumption of two pounds only per indicated horse-power per hour, and with a good engine and good boiler, it will be seen that this rate of coal consumption should be commonly attainable. The importance of considering the economy of the engine apart from that of the boiler may be shown in another way. In putting down a new boiler, or in determining the size of boiler required, the question often arises with a steam user as to how many indicated horse-power a boiler will drive. Some will say, for instance, that a seven-foot Lancashire boiler twenty-eight feet long will drive one hundred and fifty indicated horse-power. The Manchester Steam Users' Association some years ago stated that such a boiler was capable of developing two hundred indicated horse-power with the steam applied to a fairly-economical engine. Very little consideration will serve to show that the horse-power developed by a boiler is largely dependent upon the economy of the engine. The real power of the boiler should be measured by the pounds of water it will evaporate into steam per pound of coal, from water of, say 212° temperature. If, for instance, a boiler evaporated ten pounds of water per pound of coal, and consumes eight hundred pounds of coal per hour, or twenty tons per week, and an engine requires forty pounds of steam per horse-power per hour, it would give out two hundred indicated horse-power; but if a more economical engine were used, requiring only twenty pounds of water per indicated horse-power per hour, the boiler doing precisely the same amount of evaporative duty would develop four hundred indicated horse-power. Hence we see it is essential, in order to arrive at a true result of the working of engines and boilers, that the relative economy and efficiency of each should be taken separately. If this were more commonly done, money would not be so often spent uselessly in endeavoring to improve the engine when the boiler was answerable for the wastefulness, and more attention would be paid to the general care and keeping of the boiler, and to work done in the stokehole, where, we believe, there is much more room for improvement than most steam users seem to be aware of. This firing, with the bars allowed to get bare in places,

causing a large inrush of cold air, and the dampers kept wide open, instead of being carefully manipulated so as to properly regulate the combustion, is, we believe, often the cause of great waste of fuel, for which the engines are in too many instances blamed.

The common and empirical rules for determining the so-called "nominal" horse-power of boilers by reference to the sectional area, or to the amount of heating surface, are both misleading and mischievous, and ought, with other "rules of thumb," to have been long ago discarded. We should not then have had, as we have now, boilers of one type capable of developing with good engines nearly ten times the amount of their "nominal" horse-power, and other types of boiler, such as small verticals, scarcely able to do more than their "nominal" power. The efficiency and power of a boiler, no matter what its type, should be measured by the quantity of water it will evaporate into steam for each pound of fuel consumed, without reference either to its heating or grate surface, and until some such standard of efficiency is adopted, no satisfactory comparison of one boiler with another, or the relative efficiency of engines and boilers, can be well arrived at.

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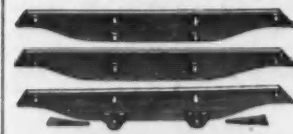
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Correspondence.

Holyoke Notes.

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., January 24, 1884.

We have had some agitation during the past week on the question of reducing wages in the paper mills, but the subject has not taken very definite or very alarming shape. A meeting was called at the Holyoke House the other afternoon, but it was rather poorly attended, only three representatives of fine mills being present, and no result was arrived at further than that all would examine their pay-rolls and cut down, the first of next month, wherever it was found practicable. This agreement amounts to very little, and wages will remain about as they are. It is the opinion of many that they are low enough, and that the mill-owners might better combine to raise the price of paper and stick to a certain schedule of prices. A half a cent or a cent a pound would not be thought of by the consumers, from three to six cents on a ream of note paper. But the difficulty is that the mills do not sell to those who use the paper. It is the jobbing trade and the competition therein which forces down prices till the manufacturers have to look sharp to make a cent. They ought not to be obliged to cut down wages from the present standard in order to make a living profit. If the fine mills in Holyoke and vicinity could work together and live up faithfully to an agreement, they could govern the price of writing-paper and insure fair wages to the employes. This would probably be attempted were it not for one difficulty, and that is the competition of the best product of the engine-sized mills with the lowest grades of loft-dried papers. The engine-sized flats and folded are now so good in comparison with the cheapest of the fine papers that they are being used for some purposes. In view of this the book mills ought all to join in any combination to keep prices firm, and there are so many of these that it seems impracticable to attempt anything. Things will probably drift along as they are and prices will take care of themselves. Meantime, business remains fair. Orders are coming in pretty well, but the mills are having some chance to fill their back engagements.

The Valley Paper Company has gone to the Riverside Company a second time for a finishing foreman. First, it took John B. Hart, who has been promoted to superintendent, and now William H. Jopson has resigned to go to the same mill. The Riverside Company expects to fill his place by promotion.

The wedding of John Zwiler, employed at the Hampden Glazed Paper Works, to Minnie Blumer, at South Holyoke, Saturday, was quite a social event among the Germans of the city.

William Walsh, the machine-tender, who was elected city messenger, has been presented with a \$125 gold watch by his friends in the Whiting Paper Company and outside.

J. A. Snell lost his election as chief engineer of the fire department by two votes, but E. R. Pierce, foreman of the loft at Whiting No. 1, has been reappointed superintendent of the fire alarm telegraph service.

The Valley Paper Company has elected these directors for the ensuing year: Hiram Smith, president; Broughton Alvord, S. G. Gaylord, W. H. Gaylord, J. S. McElwain, Aaron Baggs and A. W. Eiseleck.

George A. Clark, of the Newton Paper Company, was chairman of a committee of the Second Congregational young folks, which very successfully managed an entertainment at the Opera House on Tuesday evening, by which quite a handsome sum was made to go toward the furnishing fund of the new church.

A new bank is about to be organized in the city, to be called the Holyoke Fourth National. Moses Newton, of the Newton Paper Company, and James H. Newton, of the Wauregan, are prominent among the stockholders. The capital is \$200,000, and it is said that it was all taken in a few days.

Daniel Sullivan, at the Albion Paper Mill, had some fingers crushed in a calender yesterday. He had an accident policy.

We have had cold weather the past week, but it is raining to-day, keeping the river well filled.

Boston Notes.

[FROM OUR REGULAR CORRESPONDENT.]

EASTERN OFFICE LOCKWOOD PRESS, 49 Federal St., Boston, January 24, 1884.

I have no material change in the paper trade to report. In paper stocks old quotations continue to rule. There is a very fair movement, but nothing special can be mentioned as showing any activity. The amount of trade done so far this month will bear favorable comparison with last month.

Chemicals continue to hold firmly, but the demand is light. Very little is going into store and the arrivals are not heavy, just about enough for immediate consumption. Bleaching powders still hold at old figures, being quoted at 2 1/2c. to 2.40c. Ash is rated at 1.47 1/2c. to 1.55c., according to position and size of lots. Sal soda \$1.15 to \$1.30. Caustic 70 per cent, 3/4c. to 8.15c. for 60 per cent. Clay and rosin are without change; trade light and stock small.

The straw-board trade is perfectly demoralized, and the principal dealers here are inclined to criticize the actions of the Western manufacturers most severely. Theodore Pinkham, who represents a number of these Western mills and handles large quantities of straw-boards, was called upon with a view of getting his opinion on the matter. That gentleman was found very willing to give his views and spoke very feelingly on the subject. "Some of these Western manufacturers," said he, "notwithstanding they talk of putting boards up to \$40 a ton, have come into this market since the Chicago meeting and sold

boards at extremely low rates, and even taken yearly contracts at these low figures. Here I have been instructed by some of the mills I represent to hold boards at \$40, and I see by the reports that these mills were represented at the Chicago meeting, and yet in the face of these instructions these same mills are underselling me right in this market. A shrewd box-maker can buy all the boards he wants at \$30 or \$32 a ton, and the manufacturers are alone responsible for this condition of things."

Spaulding & Tewksbury, another prominent house of this city which handles large quantities of Western boards, were visited, and in an interview with Mr. Spaulding I was shown the following, written to the firm, from a dealer in Chicago:

"What do you think of trying to raise the price of straw-boards in the East to \$45 per ton? At our meeting here last week of the straw-board manufacturers the prevailing opinion seemed to be that the dealers were to blame as to the present prices, and the talk is to get up some plan to sell boards without the help of dealers. Can't the dealers start a movement to raise prices, so as to satisfy the manufacturers?"

"Satisfy the manufacturers in keeping up prices!" said Mr. Spaulding. "How can we keep up prices when the mills come into the market and undersell their own agents, for that is just what they are doing, and then they blame the dealers. Put the blame right where it belongs and it will rest upon the shoulders of the manufacturers. The straw-board makers have no confidence in each other and consequently can't come to any understanding for their own benefit. They agree with each other to put boards at a certain price, and while the honest makers are keeping good faith, others are underselling the market. We have been ordered by some of the Western mills to hold boards at \$40, while others instruct us to keep their boards at \$35. Now we can hold them just as they want, but we hear every day of these same boards being sold at less rates, and it is the mills that are doing it, and yet we are asked to start a movement to raise prices. Now my point is that the condition of the market is unfavorable for high prices on account of its being overstocked. The yearly capacity of the several mills is 75,000 tons, while the consumption is only about 50,000 tons, leaving a balance of 25,000 tons or about one-third of the product, and this is what keeps up all the trouble. Manufacturers have been trying to remedy this evil, but, as I said, they cannot trust each other to carry out the plan which they want to adopt. Instead of manufacturers wanting the dealers to maintain prices, they had better keep the supply somewhere near the consumption. Purify the fountain and the stream will run clear. If the principles of trade were carried out with confidence by the manufacturers the business would right itself, but the present movement of the straw-board makers in underselling their agent in his own territory will only make matters worse. In the published account of the Chicago meetings of straw-board manufacturers, which I read in last week's issue of THE PAPER TRADE JOURNAL, it was reported that mills would either shut down or store their product before they would consent to a reduction in prices or even sell at present figures. Now, that may have been what they talked and tried to persuade each other was the best to do, but their action since the meeting don't sustain any such view. How it will end is for the manufacturers to answer."

Another party with whom I conversed upon the subject characterized the proceedings of the association as a perfect farce and thought that the manufacturers were acting more like a lot of sickle-minded boys than like business men. This party suggests as a remedy that the price of boards be put down to \$30 a ton and keep it there until some of the manufacturers get enough of cut rates.

From the above statements it will be seen that the straw-board trade is in a demoralized condition and that the Eastern dealers will not allow themselves to be held responsible for it. Future developments will be eagerly watched for and reported by your correspondent A. L. D.

The New Paper Stock Exchange.

The Chicago Metal and Paper Stock Exchange, a corporation formed after the plan of the New York Metal Exchange, and having for its object the facilitation of purchases and sales of all kinds of metal, both new and old, and every description of paper stock, opened its doors with the new year at 49 Franklin street, Chicago, Ill. The officers for the ensuing year are: Albert Bostford, president; Daniel G. Trench, of Charles S. Trench, New York, first vice-president; William Williams, treasurer, and Albert J. Elvig, secretary. The Board of Directors is composed of the following gentlemen: William Williams, Walter F. Moring, Albert J. Elvig, Carl Hansen, D. G. Trench, B. Bostford and Morris Morris. The institution is designed to fill a want long felt for some effective means of regulating the trade in metals and paper stock, both in the city and the Northwest, and of fixing and publishing from day to day the market price therein. The enterprise has thus far received the hearty support and co-operation of a large portion of those interested in these lines, and starts with fair promise.

The Deane Steam Pump Company, Holyoke, Mass., has fitted up the necessary pumping apparatus for the water-works of nine cities within the past few months, costing from \$4,000 to \$16,000 each. It is at work on five more of these pumps and engines and three large pumps, one of which is of 28-inch diameter, are ready for export. The company is running its works on full time and employs about 235 men in the different departments. The past year has been a prosperous one with the company, the business having been in excess of any former season.

Personals.

J. N. Brown, late with the De Witt Wire Cloth Company, is now with Buchanan Bolt & Co., Holyoke, Mass.

J. W. McCallum, formerly salesman and city buyer for J. W. Lyon & Co., associated himself, on January 1, with the well-known packer of paper stock, Eugene Sullivan, of Nos. 356 and 358 Water street. Mr. Sullivan, who has all along devoted his whole time to the personal supervision of his business, proposes making in the coming spring a protracted tour of Europe, during Mr. McCallum will take the management when his absence. Mr. McCallum has a thoroughly practical knowledge of paper making and paper stock, having gained his experience in the largest paper mills in Scotland and England, as well as in the Eastern States.

In Town.

Thomas Tolson, of J. A. Dushane & Co., and Mr. Dillon, Baltimore, Md.; J. Howard Friend, Carrollton, Ohio; George R. Dickinson, Moses Newton, J. C. Newton, Mr. Kirkham and Mr. Caldwell, Holyoke, Mass.; Wellington Smith, H. Garfield, P. C. Baird, John Verran and J. A. Decker, Lee, Mass.; L. L. Brown, Adams, Mass.; W. A. Russell, Lawrence, Mass.; J. A. Crane, Westfield, Mass.; Murray Crane, Dalton, Mass.; George W. Wheelwright and B. M. Wilder, Boston, Mass.; W. L. Bidwell, Rainbow, Conn.; Frank Jones, Ballston Spa, N. Y.; Clark Cornwell, Ypsilanti, Mich.; George Knowlton, Watertown, N. Y.; E. R. Soliday, Lambertville, N. J.

Postal Statistics.

The United States government has had printed a chart of postal statistics covering the period since the organization of the government in 1789. Like all documents which afford an opportunity for comparison between the early beginnings of the institutions of the country and their present expansion, the chart presents a striking view of the immense development which has been going on in the intervening time. In 1790 there were only 75 post-offices in the United States; in 1883 there were 46,231. The extent of post-routes has grown from 1,875 miles in 1790 to 343,618 miles in 1883. The revenues of the department have grown from \$37,965 in 1790 to \$41,883,005 in 1883, and the expenditures have increased from \$32,140 in 1790 to 40,482,021 in 1883. The total salaries paid to postmasters have increased during the same period from \$8,198 to \$10,134,091, and the amount paid for transportation of the mails has grown from \$23,081 to \$23,946,112. A most remarkable increase is noted in the employment of domestic money orders. The amount of these issued in 1865 was \$1,360,123; in 1882 the total issue amounted to \$118,400,118.

General Notes.

Warren J. Robinson, printer, Boston, Mass., has been attached.

The Keystone Clay Company's clay is said to be in very great demand. The company has orders on hand that will keep it actively engaged to fill.

The annual dinner of the Stationers' Board of Trade will occur on the evening of February 15, at Delmonico's, Fifth avenue and Twenty-sixth street. Among other distinguished guests who have been invited to speak on the occasion are Hon. Warner Miller, Hon. W. A. Russell, Hon. William Whiting, Gen. Stewart L. Woodford and Isaac Bromley. A feature of this occasion will be that the principal speeches will be made by members of the trade from different parts of the country.

The Springfield Republican says that George R. Dickinson, James L. Hodge, John E. Clark and Henry S. Dickinson, a majority in number and interest of the members of the corporation known as the Excelsior Paper Company, at Holyoke, have filed a petition with the clerk of the courts asking for a dissolution of the company, and alleging that it has done no business and has neither property nor assets. The petition will be heard before the supreme judicial court of Massachusetts, which sits in April.

Alling & Cory, paper dealers, Rochester, have moved into new quarters, located at the corner of Exchange and Wilber streets. The building is five stories high, handsomely fitted up, and the various departments of the business are arranged with a view to facilitate work, the several lines of goods which the firm carries being separate. New and improved machinery add to the facilities for business. The firm consists of Wm. Alling, David Cory and Joseph Alling, and is a leading house in the paper trade. The senior partner, Wm. Alling, will celebrate his semi-centennial anniversary as a business man in April next.

James Cahill, a prosperous paper dealer of Oakland, Cal., returned recently from his bridal tour in Europe and put up at the Union Square Hotel. He strolled out on Tuesday afternoon and met a pock-marked, red-haired young man in West Fourth street, who began the usual bunco patter, and to whom Mr. Cahill confided his name, residence and occupation. The next bunco man who came up was a tall, neatly-dressed, middle-aged man of a commercial aspect, astonishingly well informed of Mr. Cahill's name, residence and occupation. He was the son of President V. D. Moody of the First National Bank at Oakland. That is, he told Mr. Cahill so, and Mr. Cahill did not suspect him of having just discovered Mr. Moody's name in the *Bankers' Almanac*, under the head "Oakland, California." He invited Mr. Cahill to accompany him to a store here, he said, he intended to purchase some books for President Moody. Inspector Byrnes happened to see the cunning paper dealer and the affectionate son of Mr. Moody walking in West Fourth street and told Policeman Leeson to follow Mr. Cahill and ask him if he knew that he was walking with a swindler. Mr. Cahill confessed that he didn't know it and the policeman arrested the swindler and took him to Jefferson Market.

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Rotary Bleaching Boilers.

Those who have unsafe Rotary Boilers in use can exchange them for the Loring Patent Rotary, and can be furnished with abundant evidence that the Loring Boiler is absolutely safe, and the only safe Rotary Bleaching Boiler in use. For the production of chemically prepared wood-pulp it has been found extremely difficult to make a boiler that would remain absolutely tight for any considerable length of time. I have accomplished this result by adopting modes of construction far in advance of the best methods for producing first class boiler work, in combination with substances and methods entirely independent of boiler work, and only known to myself. I invite special inquiries in regard to my patent WOOD-PULP BOILERS, patent STRAW-PULP BOILERS, and Rotary Bleaching Boilers; also to my patent process for extracting water from wood and straw pulp, and to my improved Fibre or Drainer Tanks, and Fibre Valves. The common steam boilers built by the undersigned have proved more durable and safer than those of any other manufacturer in the United States. Steam boilers, now in good condition, that have been in constant use twenty-eight years, can still be seen in use in Boston. Not one of the many thousand boilers, varying in weight from one-half to forty tons, has ever exploded or given out, to cause injury to a single person or to one dollar's worth of property, during the twenty-eight years.

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This machine is, for Simplicity, Accuracy and Beauty of Construction, the best thing ever devised for testing the strength of paper.

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By its use much useful and surprising knowledge has already been gained concerning the strength of different kinds of stock, and different ways of working it, and the relative strength of Cylinder, Fourdrinier and Hand-made Papers, both lengthwise and crosswise.

It is always in order. It never wears out. It will test Paper in one-tenth the time required by any other machine. Securely boxed and shipped, F. O. B., to any part of the world on receipt of \$15.

REFERENCES AND OPINIONS.

- From *The Paper Trade Journal*, December 15, 1883: "H. P. Eldridge, New York, has devised a neat little testing machine for paper. It takes a slip one inch wide. A gripper attached to a well-made spring-balance which is fixed horizontally receives one end of the strip, a thumb-screw being used for tightening the grip. The other end of the paper is then passed to a roller at the other extremity of the machine, one turn of which suffices to bind the paper. A small toothed wheel intermeshing with the gears on the roller which holds the paper is actuated by means of a handle, and by winding up on the roller that portion of the paper intermediate to the holding device takes the strain. The machine is about 6 inches wide by 30 inches long. A strip of Byron Weston's 28-lb. demy, one inch wide, took a strain of 46 lbs. to the square inch, on this machine."
- From a prominent Manufacturer: "My paper is so tender that this machine will give me away in a minute, but I guess I'll take one."
- From another prominent Manufacturer: "The strength of my paper is its chief beauty. Send one in."
- "There have been innumerable devices for this purpose, most of them worthless, but this is complete and perfect. It will be found indispensable to paper manufacturers."—REMMINGTON PAPER CO.
- "An ingenious contrivance, supplying a need that has long existed."—W. H. PARSONS & CO.
- "We already have several testers but this beats them all. It is simple and accurate."—H. E. PRATT & CO.
- "The principle is right and the accuracy undoubted."—J. F. ANDERSON, JR., & CO.
- "For the purpose it is just the thing, and a neat little instrument."—VERNON BROS. & CO.
- "It is just what we need."—PERKINS, GOODWIN & CO.
- "This machine requires no puffing from any paper man. It speaks for itself, and fills a long felt want."—ROBERT GAIR.
- "It is a first-rate thing, and there is no going behind the record."—GEO. W. MILLAR & CO.
- "The principle is right, and it is a neat machine."—C. B. HEWITT & BAO.
- "It is all right. Send me one to the mill right away."—H. V. BUTLER, JR., & CO.
- "That is a first-rate thing. Send us three."—BLAKE, ROBBINS & CO.
- "It is a good thing, there is no question about it."—WILKINSON BROS. & CO.
- "A neat machine, and up with the times."—B. & O. MYERS.
- "An excellent thing for manufacturers."—M. PLUMMER & CO.
- "It is as useful as a paper scale."—S. M. GLADWIN.
- "I think it is a good thing."—H. LINDENMEYER.
- "Every paper maker ought to have one."—HARRIS BROS. & CO.
- "Send us one. I think we shall want twelve."—H. G. CRAIG & CO.

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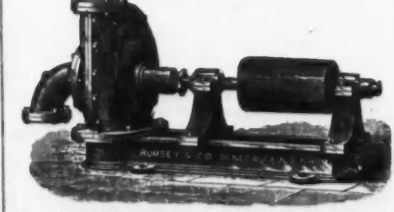
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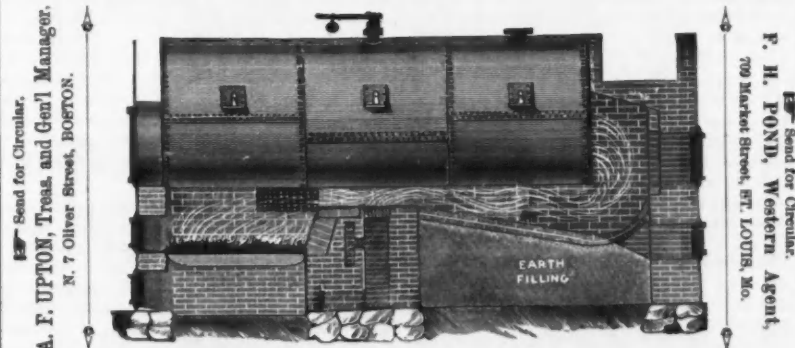
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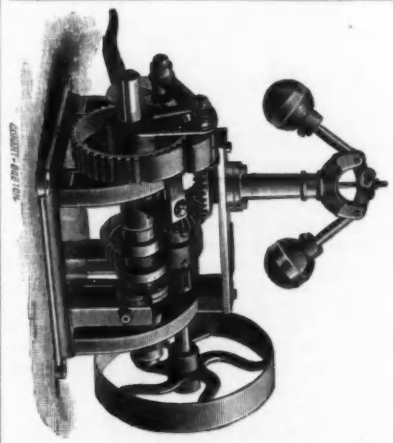
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- BELDEN, M. B., Straw and Manila Papers, Paper Bags and Flour Sacks.
BUTLER & JOHNSON, 44 Beekman st., N. Y.
CLARK-NEERGAARD CO., Paper and Supplies; Dryer Felts a Specialty.
HEWITT, C. B., & BROS., Printing, Wrapping, Building Papers.

Paper Manufacturers.

- CLARK-NEERGAARD CO., Paper and Pulp.
HAND & ELLSWORTH, White and Colored Tissue and Copying Paper.
ORRIS & CO., Printing and Hanging Mills at Troy.

Paper Makers' Chemicals and Colors.

- HELLER & MERZ, Ultramarine, 55 Maiden lane, N. Y.
RIKER, J. L. & D. S., 45 Cedar st.
SERGEANT BROS., 132 Nassau st., N. Y.

Paper Stock Brokers.

- BEEBE, IRA L., 132 Nassau st., N. Y.

Printed Wrapping Paper.

- NUGENT, J. S. & CO., Also Paper Bags and Boxes. 538 and 540 Pearl st., N. Y.

Rags and Paper Stock.

- ATTERBURY BROS., 188 and 255 Front st.
BROWN, EDWARD J., 428 and 430 East 23d street.
COHN, LAZARUS & CO., 253 Pearl st., N. Y.
CORRIGAN, PATRICK, 700 Second avenue, N. Y.
DALY, D., Rags, Paper Stock, Old Metals.

Screen Plate Manufacturers and Repairers.

- ANNANDALE SCREEN PLATE CO., Manufacturers and Repairers of Screen Plates.
ASHMUN SCREEN PLATE CO., Old Plates renewed; charges moderate.
HARDY & PINDER, manufacturers of Patent Cast-Metal Sectional Screen Plates.

Solicitors of U. S. and Foreign Patents.

- CROSBY & GREGORY, 34 School st., Boston, Mass.

Straw Boards.

- PINKHAM, T., Agent for Androscoggin Pulp Co.'s White Box Boards and Ashland Leather Board.
GASKILL, BAUER & CONDERMAN, Straw, Binders' and White Wood Boards, have for sale Straw-Board Cuttings in large quantities.

FOREIGN HOUSES.

Rags and Paper Stock.

- WALKER, J. R., Dealer in Paper Stock, Woolen Rags and Scrap Metals, 30 and 34 Foundling st., Montreal.

IMPORTATIONS OF PAPER STOCK, PAPER, BOOKS, CHEMICALS, &c.

Table with columns for item name and quantity/price. Includes Aniline Colors, Alum, Aluminum Cake, Bleaching Powders, Soda Ash, Soda, Bicarb., Soda, Caustic, Soda, Sal., Ultramarine, Books, Newspapers, Engravings, Ink, Lead Pencils, Paper, Steel Pens, Stationery, Slate Pencils, Clay, Jute Butts, Jute Rejects and Cuttings, Paper Hangings, Paper Stock, Terra Alba, Waste.

Paper Makers' and Paper Stainers' Colors.

- HAMPDEN PAINT & CHEMICAL CO., Springfield, Mass.

Paper Cutters.

- HOWARD IRON WORKS, Buffalo, N. Y.

Paper Manufacturers.

- CRYSTAL PULP WORKS, Holyoke, Mass.
JERSEY CITY PAPER CO., White and Colored Tissue and Manila Wrapping.
LAKE GEORGE PULP AND PAPER CO., Mfrs. of News and Book Paper; also, Wet and Dry Wood Pulp.

Paper Making Machinery.

- EMORY, P. P., & CO., Mfg. of Water Filter Lock Valve.
SMITH, WINCHESTER & CO., South Wingham, Ct.
SPENCER, JOHN S., Chilled Rolls, Super and Machine Calenders a specialty.

Rags, Paper and Paper Stock.

- BRIGHT, ROBT. C., Woolen and Cotton Rags, Metals and Paper Stock.
BULKLEY & CO. (Late with J. G. Ditman & Co.), 132 North Front Street, Philadelphia.
BUTLER, THOMAS, Cotton and Woolen Rags, Iron and Metals.

- LANEY, JAMES, & CO., Dealer in Paper and Paper Stock.
LOEWENTHAL, B. BROS. & CO., 10, 12 and 14 N. Canal St., Chicago, Ill.
MASSASOIT MFG. CO., Gunny and Shivey Bagging and Cotton Mill Sweepings.

- MILLET, GEO. W., Straw and Manila Papers, Paper Bags and Flour Sacks.
PEARL, HENRY W., Paper and Paper Stock, Springfield, Mass.

- RICHMOND & CO., F. H., Paper and Paper Stock Warehouse.
RING, M. A., & BONS, 369 Atlantic ave. and 30 Purchase st., Boston, and 139 No. Front st., N. Y.

- SHAY, WM., Dealer in Bagging and New Paper Stock only.
SIMMONS, JOHN, Wholesale Dealer in Paper and Rags.
SNIDER'S, LOUIS, BONS, Manufacturers and Wholesale Paper Dealers.

- ANNANDALE SCREEN PLATE CO., Manufacturers and Repairers of Screen Plates.
ASHMUN SCREEN PLATE CO., Old Plates renewed; charges moderate.

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ASHMUN SCREEN PLATE CO., Old Plates renewed; charges moderate.

TOTAL IMPORTS.

Table showing General Merchandise, Paper, Paper Stock, etc. for the week ended Jan. 18, 1884. Includes columns for item name and value.

IMPORTS OF Rags and other Paper Stock at the Port of New York, since Jan. 1, 1884, from the following Ports, showing quantities from each Port:

Table with columns for Port, Rags, Old Paper, Wood Pulp, Manila Stock. Lists ports like Antwerp, Aspinwall, Avonmouth, Bordeaux, Bremen, etc.

EXPORTS OF Paper, Books, &c., from the Port of New York to Foreign Ports for the Week Ended Jan. 22, 1884, with Aggregates and Values.

Table showing exports to various countries like Bremen, Liverpool, London, Mexico, etc. Includes columns for item name and value.

AGGREGATES AND VALUES.

Summary table of Paper, books, cases, Stationery, etc. with aggregate values.

TOTAL EXPORTS.

Table showing General Merchandise, Paper, Paper Stock, etc. for the week ended Jan. 22, 1884.

NEW YORK IMPORTS.

John H. Lyon & Co., Cornwall, Avonmouth, 1 bs. old papers, 143 bs. manillas.
E. Hatton & Co., Diamant, Bremen, 151 bs. rags.
Lewy Brothers, by same, 105 bs. rags.
Hagemeyer & Brunn, by same, 192 bs. rags.

Paper.

- E. Kimpton, Katie, Havre, 10 cs.
J. Walker, Wisconsin, Liverpool, 3 cs.
F. J. Emmerich & Son, France, Havre, 1 cs.
C. F. Fournier, by same, 1 cs.
Kinney Tobacco Company, by same, 3 cs. cigarette.

BOSTON IMPORTS.

- Soule & Bugbee, Bavarian, Liverpool, 1 pkg.
Order, Samaria, Liverpool, 2 cs.
C. Schoenhoff, Catalonia, Liverpool, 2 cs.
College of Pharmacy, by same, 1 cs.
G. H. Polley & Co., by same, 1 cs.
E. A. Snow, by same, 1 cs.
Order, Glauca, New York, 1 cs.
E. B. Rowe, Carroll, Halifax, 1 cs.
S. Hano, Gate City, Savannah, 1 cs.
M. Houghton & Co., by same, 1 cs.

Merchants' Dispatch Company, Iowa, Liverpool, 6 ba. paper hangings.

- E. A. Snow, by same, 1 cs. paper hangings.
Order, Cephalonia, Liverpool, 2 cs. hangings.
A. P. Smidt & Co., Catalonia, Liverpool, 13 cs. music.

- H. M. Knowles & Co., Iowa, Liverpool, 64 pkgs. paper stock.
Order, Wandrahn, Antwerp, 152 bs. rags.
Haskins & Montague, Carroll, Halifax, 128 pkgs. paper stock.

- John O'Connor, by same, 60 ba. paper stock.
Haskins & Montague, Gate City, Savannah, 2 ba. rope.

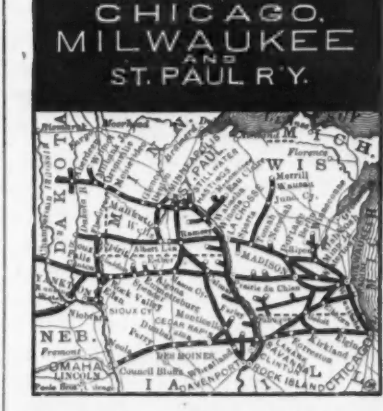
- Order, Thom Holm, Liverpool, 45 cs. ash, 49 cs. alkali.
Order, Thom Holm, Newcastle, 185 cs.
American Print Works, Venetian, Liverpool, 10 cs.
Linder & Meyer, Bulgarian, Liverpool, 37 cs.
Morey & Co., by same, 114 cs.

- Order, Thom Holm, Newcastle, 216 cs.
American Print Works, Venetian, Liverpool, 5 cs.
Linder & Meyer, Bulgarian, Liverpool, 58 cs.
Morey & Co., by same, 159 cs.

- Order, Wandrahn, Antwerp, 10 cs., 35 cs.
PHILADELPHIA IMPORTS.

- Order, Pennsylvania, Liverpool, 70 bs. rags.
J. T. Bailey & Co., by same, 40 bs. bagging.

- Cooper, Smith & Co., Pennsylvania, Liverpool, 119 drums.
Cooper, Smith & Co., Pennsylvania, Liverpool, 130 drums.



Striking Head Lines

Are used to call attention to the fact that this is an advertisement of the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.
Its EIGHT Trunk Lines Traverse the best portions of NORTHERN ILLINOIS, WISCONSIN, MINNESOTA, DAKOTA and IOWA.
Located directly on its lines are the cities of CHICAGO, MILWAUKEE, MADISON, WINONA, ST. PAUL, MINNEAPOLIS, MADISON, FRAIRIE DU CHIEN, MARION CITY, SHOCK CITY, YANKTON, ALBERT LEA, ABERDEEN, DUBUCQUE, ROCK ISLAND, CEDAR RAPIDS, and COUCH BLUFFS, as well as innumerable other principal business centres and favorite resorts; and passengers going West, North, South or East are able to use the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY to the best advantage.

Paper Making and Its Accessories.

BOOKS OF REFERENCE.

- THE following is a list of Books of Reference on subjects connected with Paper Making, Chemicals, Colors, Machinery, Hydraulics, &c.:
AUERBACH—Anthracite: Its Constitution, Properties, Manufacture and Derivatives. 8vo. \$5 00
BAIRD—Standard Wages Computing Tables. Folio. 5 00
BENSON—Principles of the Science of Color. 4to. 7 50
BENSON—Manual of the Science of Color. 12mo. 1 25
BESANT—A Treatise on Hydro-Mechanics. 8vo. 5 00
BOX—A Practical Treatise on Heat as applied to the Useful Arts. Illustrated by 14 plates. 12mo. 5 00
BOX—A Practical Treatise on Mill-Gearing. 12mo. 3 00
BOX—Practical Hydraulics. 12mo. 2 00
BRESSE—Hydraulic Motors. 8vo. 2 50
BROWN—Five Hundred and Seven Mechanical Movements. 12mo. 1 00
CALVERT—Dyeing and Calico Printing, including an Account of the Most Recent Improvements in the Manufacture and Use of Aniline Colors. With dyed Patterns. 8vo. 8 00
CHEVREUL—The Principles of Harmony and Contrast of Colors and their Application to the Arts. Illustrated with Colored Plates. 12mo. 8 00
COOPER—A Treatise on the Use of Belting for the Transmission of Power. 8vo. 3 50
CORFIELD—Water and Water Supply. 16mo. 50
CROOKES—Handbook of Dyeing and Calico Printing. With dyed Patterns. 8vo. 18 00
CULLEN—Practical Treatise on the Construction of Horizontal and Vertical Water Wheels. Quarto. 5 00
DOWNING—The Elements of Practical Hydraulics. 8vo. 3 75
DUNBAR—The Practical Paper Maker. 1 00
FAIRBAIRN—The Principles of Mechanism and Machinery of Transmission. 12mo. 5 50
FAIRBAIRN—A Treatise on Mills and Mill work. 2 vols. 8vo. 10 00
FANNING—A Practical Treatise on Water Supply Engineering. 8vo. 5 00
FRANCIS—Lowell Hydraulic Experiments on Hydraulic Motors. Quarto. 15 00
FRESSENIUS—Manual of Qualitative Chemical Analysis. 8vo. 8 50
FRESSENIUS—System of Instruction in Quantitative Chemical Analysis. 5 00
GLYNN—A Treatise on the Power of Water. 12mo. 1 00
HERRING—Paper and Paper Making, Ancient and Modern. Plates. 8vo. 5 75
HOFMANN—A Practical Treatise on the Manufacture of Paper in all its Branches. Quarto. 25 00
JACKSON—Hydraulic Manual. 8vo. 10 00
JACOB—The Designing and Construction of Storage Reservoirs. 16mo. 50
ROSCOE—Lesson in Elementary Chemistry, Inorganic and Organic. 12mo. 1 10
JOHNSON—The Practical Draughtsman's Book of Industrial Design and Machinist's and Engineer's Drawing Companion. With over 50 Steel Plates. 4to. 10 00
KANE—Elements of Chemistry, including the most recent Discoveries and Applications of the Sciences in Medicine and Pharmacy, and to the Arts. Illustrated. 8vo. 1 68
KINGZETT—The History, Products and Processes of the Alkali Trade, including the most recent Improvements. 8vo. 5 50
KIRKWOOD—Report on the Filtration of River Waters, for the Supply of Cities, &c. quarto. 15 00
KOOPS—Historical Account of the Substances which have been used to describe Events and to Convey Ideas from the Earliest Date to the Invention of Paper. By Matthias Koops. Printed on Paper Manufactured solely from Straw. London, 1801. 10 00
KUTTER—The New Formula for Mean Velocity of Discharge of Rivers and Canals. 8vo. 5 00
LEFFEL—The Construction of Mill Dams. 8vo. 50
MUNSELL—A Chronology of Paper and Paper Making. 8vo. 2 00
NEVILLE—Hydraulic Tables, Co-efficients and Formulae for finding the Discharge of Water from Orifices, Notches, Weirs, Pipes and Rivers. 12mo. 5 00
PALLET—The Millers', Millwright's and Engineer's Guide. 12mo. 3 00
PROTEAUX—A Practical Guide for the Manufacture of Paper and Boards. 8vo. 10 00
RANKINE—A Manual of Machinery and Mill-work. 12mo. 5 00
REID—A Practical Treatise on Concrete and How to Make It. 12mo. 2 00
REIMANN—On Aniline and its Derivatives. 8vo. 5 50
RIFFAULT—A Practical Treatise on the Manufacture of Colors for Painting. 8vo. 7 50
ROPER—Use and Abuse of the Steam Boiler. By Stephen Roper. Illustrated. 18mo., tucks, gilt edge. 2 00
ROSE—The Complete Practical Machinist. 12mo. 2 50
ROUTLEDGE—Bamboo, considered as a Paper making Material. 8vo., paper. 80
SMITH—The Dyer's Instructor; 800 Receipts. 3 00
SPON—Workshop Receipts for the use of Manufacturers and Mechanics. 12mo. 2 00
SQUIER—Tropical Fibres; their Production and Economic Extraction. 8vo. 6 00
SUTTON—A Systematic Handbook of Volumetric Analysis. 8vo. 5 00
THORPE—Quantitative Chemical Analysis. 12mo. 1 75
THORPE AND MUIR—Qualitative Chemical Analysis and Laboratory Practice. 12mo. 1 50
HIRE'S DICTIONARY OF ARTS, MANUFACTURES AND MINES.—By Robert Hunt, F. R. S. Illustrated with nearly 3000 engravings on wood. 1867. 4 vols. 8vo. 25 00
VON BEZOLD—The Theory of Color in its Relation to Art and Art Industry. 8vo. 5 00
WEISBACH—Hydraulics and Hydraulic Motors. With 380 Illustrations. 8vo. 6 00
WAGNER—A Handbook of Chemical Technology. Translated and Edited by Wm. Crookes, F. R. S. With 336 Illustrations. 8vo. 5 00
WATTS—Dictionary of Chemistry and the Allied Branches of other Sciences. By Henry Watts, F. R. S. With the First and Second Supplements, bringing the record of discovery down to 1874. 9 vols. large 8vo. 100 00

The Paper Trade Journal.

DEVOTED EXCLUSIVELY TO THE INTERESTS OF THE AMERICAN PAPER TRADE. Weekly, \$4.00 per Annum. Single Copies, 10 Cents.

NEW YORK: SATURDAY, JAN. 26, 1884.

Advertisements cannot be received for insertion in the current week later than 9 A. M. on Friday. The charge for advertising is 25 cents a line, each insertion. Special terms for standing and displayed advertisements to be had on application. Card in Directory Column and one copy of paper, \$15 a year.

THE PAPER TRADE JOURNAL is the recognized organ of the various Paper Makers' Associations of the United States.

THE JOURNAL contains the latest and fullest information relative to the paper trade in all parts of the world, including descriptions of new appliances and processes for making paper, experiments with new fibres and other materials, a record of the water supply, with the latest manufacturing news in all parts of the country. It gives the cream of all the foreign technical journals which relate to the paper interest, besides communications from competent persons in the trade, both at home and abroad. The market review and quotations show the state of trade in all the principal cities, and no pains have been spared to make these accurate and complete.

Subscription and postage for Great Britain, per annum, \$1. Subscription and postage for France, per annum, 25 francs. Subscription and postage for Germany, per annum, 24 reichsmark. Foreign subscribers may address our New York office.

Communications on matters of interest to the trade are earnestly solicited from all quarters, and if used will be liberally paid for. Items of news and facts of all kinds in relation to the state of the mills, &c., will be gladly received.

All communications must be addressed to

HOWARD LOCKWOOD, Publisher and Proprietor, No. 74 Duane Street, N. Y.

BRANCH OFFICES.

Western Office: 8 Lakeside Building, CHICAGO, ILL.

Philadelphia Office: J. VIGNON, General Manager, 150 South 4th St.

Eastern Office: JOSEPH HAMMITT, General Manager, 40 FEDERAL ST., BOSTON, MASS.

Southern Office: F. G. HANCOCK, General Manager, CORNER BROAD AND ALABAMA STS., ATLANTA, GA.

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TO CORRESPONDENTS.

As THE PAPER TRADE JOURNAL is the recognized vehicle of communication in matters of trade interest, we will be glad to receive correspondence from all parts of the country. Information and suggestion upon paper-making topics are especially valuable, and manufacturing news and personal items are equally acceptable.

ENCOURAGEMENT is always welcome, even to a newspaper, and when we know that earnest effort is appreciated, we cannot but feel that an incentive has been given to it. A well-known house, writing to THE JOURNAL, says: "We wish to thank you for the stand you have taken on the question of honest count and weight. We believe in and practise it, not having a ream or bundle of any kind of paper in stock containing less than 480 sheets, and we sell at scale weight." There are other points in this correspondent's letter to which allusion may be made in the future. The moral that we draw from this and other instances like it is that the trade generally feel disposed to unite in putting an end to false practices designed or calculated to deceive, and when we find that one firm after another is avowing its adherence to the strictest rule in the sale of goods, there is hope that the example will affect the whole body of trade and bring even the as yet unrepentant to conformity.

WE see that the paper manufacturers at Holyoke are beginning to agitate a reduction of wages. We really don't see why. If prices of paper are too low to make paper-making profitable we don't think that

the first place to try and make money is to take it out of the help. The fact is that the weakness in paper, if there is any, is due to the manufacturers themselves, who have gone to the length of producing in excess of the requirements of the markets which they supply, and don't seem to exert the energy which would secure them trade in other directions, if they took proper means to that end. It is unquestionably true that the trade—as a whole—have the command of the markets if they wish to exert it. If they will not take some pains to improve their position—provided that it urgently needs an improvement—they ought not to fall back on the operatives and ask them to share the burden which they have created. This is not the way to improve the market.

HOPES of increasing our trade with Mexico have been deferred by the action of the Senate during the past week. The commercial treaty concluded with that country failed of ratification by one vote, and only that the time for the exchange of the formalities necessary to give the treaty effect has been extended, we might have had it to say that the extension of our trade interests in Mexico promised to be impossible. As it is, the treaty hangs fire under a motion to reconsider, the necessary two-thirds vote of the Senate in favor of ratification having yet to be secured. Some of the Senators are alleged to be afraid that injury will result to some of our producing interests, but this is offset by the declaration that nothing which Mexico produces can detract from the value or importance of our own products, and that as for the rest, her tariff is a barrier to the importation of goods from other countries through Mexican custom-houses, and thence into this country under the terms of the treaty. Another reason for rejection in the minds of some of the Senators is said to be the belief that General Grant has personal interests which would be subserved by the operation of the treaty. This is a weak objection, if it were true, but General Grant has made a public statement that he has no pecuniary interests which will be benefited by the treaty. The way in which this innuendo has been put forth calls in question the good judgment and sincerity of those making it. It has been given as a rumor, not to be vouched for by the parties making it, but still of influence sufficient to raise objection to the treaty. This is absurd. The country has hoped for much in its more intimate relations with Mexico and its commercial union, and unless better reasons for rejecting the treaty can be given, and more valid objections can be urged, there will be disappointment followed by condemnation of those who oppose public opinion.

THE French journals, in their annual reviews of the paper trade, show that the results of last year's business were unfavorable to the French paper makers, the domestic product having found it difficult to compete in its home market with English, German, and even American papers. We wonder what our paper makers will say to this! The difficulty has been that there is a tax on paper in France, and that competing countries have been progressive, swift to adopt new processes, utilize new material and everything to cheapen production; while France, on the other hand, has not advanced, but, on the contrary, has been wedded to old methods and retrogressive. Another difficulty has been that French operatives have shown a growing discontent with their wages, the cost of living having increased with the greater taxation rendered necessary to provide for the payment of interest on the public debt and to meet what is asserted to be lavish government expenditure. Within three years the value of the imports of paper into France has increased from \$1,913,360 to \$2,565,300, while the value of the paper exports has declined from \$5,824,420 to \$5,040,400. In Belgium, the principal paper mills were run profitably during the year, the smaller having had a sort of hand-to-mouth trade at low prices and scanty profits. The Belgian mills have

had the benefit of very cheap raw material and only for this the small mills would probably have been compelled to shut down. Two-thirds of Belgium's paper is exported and it will be seen how dependent on foreign markets the paper trade of the country must be. With only one-third of the product consumed at home any considerable falling off in the exports of paper would make the paper makers of Belgium sick and put the industry in a precarious situation. As for England, our exchanges do not indicate a satisfactory condition of the paper trade there. Prices are low and competition is keen among English paper makers, who seem to think, however, that a combination ought to be made to advance prices. Taking a résumé of the situation among all paper-making countries of importance, Germany seems to occupy the best position, and after her comes the United States. We hope and look for better things in our own trade ere long, but pending all possible changes, warn American paper makers to be vigilant—and to be brave.

Water-Marks.

BY DANDY.

Hear what an English paper has to say about the work of the Export Committee of the American Paper Manufacturers' Association!

"The magnificent resolutions of the Paper-Makers' Congress at Saratoga have not been equally magnificent in their results. British commerce is not so easily to be transferred into American hands, as the Americans have supposed; nor is the patriotic resolution proposed by a prominent trade paper, suggesting that paper makers should export at cost or under cost, likely to be adopted with any degree of enthusiasm save by those who do not intend to include themselves within its provisions."

Now, the writer of the above has got the cranky idea, that everything which Americans do to extend their trade is intended as an aggressive movement against British commerce. It may be that the British lion bars the way to trade. If he does, we shall have to run over him, but that we want to hurt him—bless him, no!

The question of magnificence is something that I have nothing to do with. I am convinced that the writer of the paragraph quoted is nothing if he is not magnificent, and I shall leave him to enjoy his grandeur, even if he does air it at the expense of the gentlemen constituting the Export Committee. Perhaps Messrs. Marshall, Greenleaf and Crocker can give him a private view of something so magnificent that it would tone him down a little. Doesn't Mr. Marshall hint a little at something of the sort!

Can anybody guess at the figures on the bids for paper for the public printing? If there are those in the trade who feel like making the effort, I would ask them to send to the editor of THE JOURNAL their estimates. It would be interesting to know how close folks could get to the bids.

There is a bit of gossip about the suspension of a well-known paper dealing firm. Is this the beginning of things to come. I hope not. The firm in question is said to be well supported, and that although embarrassed, it may be able, sooner or later, to pay its liabilities in full—for which your petitioner will ever pray, &c.

They have devised a new way of unloading paper in Duane street. Credit must be given to the inventive genius of Wilkinson Brothers & Co.'s cartman for this facile method of getting rid of a load. The way it is done is to take out the king-bolt of the truck, whereupon the whole load dumps ad libitum. The only inconvenience that I see about it is that fastening the lines to the cart-stakes has a startling effect on the horses by lifting those docile animals into the air and making them get around on their hind legs in a way that would induce most people to think they are chargers.

Ridgway Moore has a reputation as a leader in fashionable society, and one of the daily papers says: "The only favorite leader of Germans at the present day who can manage a whole cotillion with unruffled serenity and shirt-bosom is Ridgway Moore. If Mr. Moore detects one of those sickly, cigarette-smoking, pale faces stealing an 'extra turn,' he sails down, with expanded chest, on the wicked couple, and at the first sound of his deep bass voice the little girl's young blood doth freeze and the little pale face shrivels up, and 'slowly and silently vanishes away.' There is latent power in Mr. Moore's voice."

"Latent power" is good! More power to ye! This is not a joke.

So another of your correspondents has struck out into rhyme. If paper-makers can't make paper, perhaps they can do poetry profitably. "Harper" is a great hand at it. Get up a prize competition for poems!

I hear that the Stationer's Board of Trade is to have a dinner at which the principal speeches will be made by trade representatives from different interests and from different parts of the country. That is a good idea. It ought to have been inaugurated before.

Communications.

"Whooping Up Free Trade."

To the Editor of The Journal:

I'm an old country paper-maker And came from Aberdeen, I landed in America, And went to run machine.

But when I'd saved a little pelf I rented C's old mills, Starting in business for myself Up in the Berkshire hills.

And there I stayed a year or more, But when it didn't pay, Took a job in Holyoke At two and a half a day.

Now I'm head of a big concern, And as my stake is made, I want to give the boys a "turn" By whooping up "Free Trade."

BUNDLE STRINGS.

Exhaust Steam.

To the Editor of The Journal:

Considering the number of questions propounded by "Investigator," who has evidently lost all patience with the suction-box cranks, there should be no lack of subjects for awhile.

The information which he desires relates to matters which many persons deemed settled long ago. As a matter of economy no sane man would allow the heat contained in exhaust steam, and developed at so much cost, to be wasted, especially in a paper mill where the many minor demands requiring a low pressure admit of its utilization without seriously interfering with the efficiency of the engine.

The manner of its application to the various uses is about the same in all leading mills, a portion of the exhaust steam being discharged directly into the drying cylinders; thence conducted to a cistern holding the feed-water for the boilers, while it is used to heat the water intended for the paper-making processes.

Both "Harper" and "Rex" omitted to state how the cleansing and heating of the water can be accomplished when supplied in the manner recommended by them. BESSIE.

Pumping.

ROCK FALLS, Ill., January 2, 1884.

To the Editor of The Journal:

I have read the pumping inquiry of "Z," also the answers of "Rex" and "Harper," and do not think that either one of them points out a remedy in full for "Z." I take it for granted that "Z" pumps all of the water to his tank and draws from it to supply his mill at all points where water is needed. I will say to "Z:" Reduce the speed of your pump to throw water just high enough to supply your beaters and washers; then put in a small rotary or pulsometer pump to throw from this height to your tank, and of a capacity to throw just what water is needed for your machine and for supplying the boilers, &c. I cannot see where "Rex" and "Harper" would save any power, as in their plan the pump would have to run at a speed sufficient to lift water to the tank to furnish good showers on the machine. I also presume that "Z" would want water in the tank to fill his boilers after washing out, or in case of a shut down. This matter of pumping water in paper mills is annoying as well expensive, and the remedy I name is the best that I have found in an experience of over twenty years, as it saves the expense of lifting a flood of waste water from the beater floor to the tank. NORTHWESTERN.

Facts from Experience.

YORKLEY, Del., January 10, 1884.

To the Editor of The Journal:

Several of your correspondents having given their views on the pumping question, I will state a few facts from actual experience.

We have used several different makes of fan pumps for raising our wash water and, making some changes in our machinery, were compelled to put in a pump of much greater capacity. We substituted one of the best makes of fan pumps with a No. 4 Holly elliptical pump, and find that the Holly pump running 130 revolutions per minute throws more than double the quantity of water with less than half of the power. You must pump with the Holly, or any one of its kind, into a tank, as it is a positive action pump and will throw proportionately the same water running any given number of revolutions, whereas with a fan pump has to run "like all possessed" to throw any water at all. We ran our old fan pump 800 a minute and pumped direct into the pipe leading to the engines and we think that it takes considerably more power to pump against the hydrant than when it was discharging into the engine.

We think that we have solved this question to our satisfaction and would not under any circumstances have a fan pump for raising wash water. We also know of several other parties who have made the same change with like results. ROTARY PUMP.

Advantage of An Indicator.

To the Editor of The Journal:

Your correspondent "Investigator" wishes to know what advantage an indicator can be to a manufacturer who has an 85 horse-power engine more than to gratify curiosity in noting the various changes in the load, as effecting pressure, &c. His simple inquiry opens up a very interesting and important element in connection with steam engineering and its elucidation, and would require more space than THE JOURNAL could spare for such a purpose. The indicator is an acknowledged auxiliary to-day with all parties conversant with its use, and it is getting to be a common custom with large manufacturing companies to require "cards" to be taken every day. I can only repeat my suggestion made in a previous communication, that the Cummer Engine Company, of Cleveland, gives a very clear and concise treatise of its uses in its recently issued catalogue, and I

have no doubt that it will be happy to furnish a copy to any reliable party who will communicate with it on the subject.

I was present at the Louisville Exposition last fall, when some very interesting tests were made with the indicator with several engines of different makes, and among others was a Cummer. I had never seen one of these engines at work before, and had no previous acquaintance with the builders. I was not a little surprised at the results obtained under the various conditions. One of the special features of this engine are its close governing qualities, which will be appreciated by paper makers specially. C.

Changes, Removals and New Firms.

Albert Clark, publisher, Boston, Mass., has sold out.

W. J. Boese, stationer, San Francisco, Cal., has sold out.

John Duff, stationer, &c., Urbans, Ohio, has sold out to M. L. Duff.

R. N. Claggett, bookseller, San Antonio, Tex., has sold out his business.

B. S. Whitehead & Co., printers, Newark, N. J., have dissolved partnership.

A. C. Lowery, publisher of the Courier, Georgetown, N. M., will remove to Kingston.

Bradford I. Taylor, paper maker, Westfield, N. Y., has been succeeded by H. L. Kent & Co.

Pitchoer & Wise, printers, Philadelphia, Pa., have dissolved partnership. Wise & Van Horn succeeded to the business.

Charles W. Holmes, dealer in stationery and news, Morristown, Pa., has sold out to H. C. Hughes and E. E. M. Evans.

Stone Brothers, paper-stock dealers, &c., Cleveland, Ohio, have removed their office to 70 and 72 Merwin street, in that city.

H. M. Colton has retired from the Berkshire Valley Paper Company, Pittsfield, Mass., and D. B. Colton has been admitted to the firm.

O. T. Porter, publisher of the Herald, Albany, Ore., has admitted D. M. Jones to partnership. The style of the new firm is Porter & Jones.

Garrett & Co., booksellers and stationers, Pittsfield, Ill., have dissolved partnership. The business is now carried on by Mattie A. Garrett.

A dissolution has taken place in the firm of Wood & Bancroft, stationers, Wilmington, Del. William Bancroft continues the business under the same firm-name.

Searing & Hyde is a new stationery firm which has just fitted up a very attractive establishment at No. 40 Exchange place, New York city. Mr. Searing was formerly associated with F. F. Taylor in the stationery business.

Allan C. Kerr & Co., dealers in printers' supplies, Pittsburg, Pa., have dissolved partnership. J. Grace Hilliard retires from the firm and the remaining partners continue the business under the same style.

M. Thompson, printer, Severy, Kan., has sold out to R. H. Smith.

The Valencia County Vindicator, Los Lunas, N. M., has suspended.

A. Mueller & Co. have succeeded M. Wolf, paper-box manufacturer, St. Louis, Mo.

C. V. Smith, publisher of the Republican, Centerville, Mich., has sold out to S. D. Crane.

The Daily Democrat Publishing Company, Cheyenne, Wyo., has been incorporated with a capital stock of \$10,000.

M. W. Dowd & Co., printers, Winchester, Conn., have dissolved partnership. The business is continued by M. W. Dowd.

Wales & Mautz, printers and publishers, Binghamton, N. Y., have dissolved partnership. Ira L. Wales continues the business.

White & Adams, paper rulers and manufacturers of paper bags, Holyoke, Mass., have dissolved partnership. F. E. White succeeds to the business.

The Fort Smith Printing Company, Fort Smith, Ark., has been incorporated with a capital stock of \$10,000. The corporation succeeds the firm of Weaver & Johnson, publishers.

C. A. Laffarty, stationer, Bellville, Ohio, has sold out to J. Mock and W. W. Wilson.

Trimble & Austin have bought out the publishing business of S. E. Colegrove, Corry, Pa.

Bridgman & Gay, publishers of the Evening Herald, Holyoke, Mass., have sold out to V. J. Irwin & Co.

Porter & Patterson, booksellers and stationers, Rochester, Minn., have dissolved partnership. J. M. Porter continues the business.

H. V. Butler, wholesale paper dealer, New York city, advertises that he will do business under the style of H. V. Butler, Jr., & Co.

A dissolution has taken place in the firm of Ivison & Perry, booksellers and stationers, Auburn, N. Y. J. H. Ivison continues the business.

A dissolution has taken place in the firm of Gates & Lincoln, dealers in paper hangings, Providence, R. I. H. L. Gates succeeds to the business.

W. A. & C. S. Houghton, wholesale and retail stationers, Sacramento, Cal., have dissolved partnership. The business is continued by C. S. Houghton.

A dissolution has taken place in the firm of White & Jacobson, manufacturers of paper boxes, Brooklyn, N. Y. R. Tyson White continues the business.

W. L. Ames and J. S. Houghton continue the business of Ebersold & Co., printers, Seattle, W. T., under the style of the Globe Printing Company, the old firm having dissolved.

S. B. Betts & Co., dealers in paper stock, &c., Henderson, N. C., have dissolved partnership.

M. L. Goldenberg has been admitted to partnership with C. C. Davis, publisher of the Lead-

Wills Democrat, Leadville, Col. The firm will do business under the style of C. C. Davis & Co.

W. G. Blymer, publisher of the Democratic Times, Defiance, Ohio, has sold out to White & Mans.

Edwin C. Stokes has been admitted to an interest in the firm of E. S. Hand & Co., publishers' agents, Philadelphia, Pa.

Hooker, Knox & Tuttle, printers, New York city, have dissolved partnership. Knox & Tuttle continue the business.

Salls & Kent, newsdealers, stationers, &c., Burlington, Vt., have dissolved partnership. B. L. Kent succeeds to the business.

Hagedorn & Sheubrooks, printers, Baltimore, Md., have dissolved partnership. Thomas J. Sheubrooks succeeds to the business.

Edward J. Buckley has been admitted to an interest in the firm of John E. Potter & Co., publishers and booksellers, Philadelphia, Pa.

A. C. Keel, stationer, &c., Fort Wayne, Ind., has taken Louis A. Steid into partnership, and the firm will do business under the style of A. C. Keel & Co.

G. Walter Snow has been admitted to membership in the firm of Coburn Brothers, printers and stationers, Boston, Mass. The style of the firm has been changed to Coburn Brothers & Snow.

Failures.

Phil. Bohnett, printer, Cincinnati, Ohio, has assigned.

Allen & Gates, stationers, Ware, Mass., have become insolvent.

Aug. Otto Lavidis, bookseller and stationer, Racine, Wis., has been closed out by the sheriff.

An assignment has been made by Bloch & Co., printers and flag manufacturers, Cincinnati, Ohio.

John A. Marcus, dealer in stationery and fancy goods, Philadelphia, Pa., has been sold out by the sheriff.

Hugh M. McNeill, printer and stationer, Allegheny, Pa., is offering to compromise with his creditors at thirty cents on the dollar.

W. J. Clarke, stationer and fancy goods dealer, Montreal, Que., has compromised with his creditors at 50 cents on the dollar.

The International Publishing Company and Book Exchange, New York city, had a meeting of its creditors yesterday with a view to making a compromise. It is thought that it may be able to pay 75 cents on the dollar.

Dr. Edward J. Birmingham, doing business as Birmingham & Co., medical book publisher, No. 28 Union square, has made an assignment to Frederick S. Lyons, M. D., preferring claims to the amount of \$18,322.13, the largest of which is to Miss Birmingham for \$9,527.

H. V. Butler, Jr., & Co., paper dealers, 32 Reade street, New York, suspended this week, and are about to call a meeting of their creditors, with a view of making a compromise. Mr. Butler says that he hopes to be able to make such a proposition as will eventually enable his firm to pay in full. The mill property at Paterson is owned by the Ivanhoe Manufacturing Company, of which H. V. Butler is president and other members of his family are joint owners. It is understood that the mill property is mortgaged for \$60,000. The sheriff is said to be in possession of the office in New York.

Mortgages, Etc.

[In the appended list R. signifies a renewal of a pre-existing mortgage; B. S., bill of sale; and Real, a mortgage on real estate.]

Table with columns: Mortgagee, Amount, and other details for various mortgages.

EASTERN STATES.

Table listing mortgages in Eastern States.

MIDDLE STATES.

Table listing mortgages in Middle States.

WESTERN STATES.

Table listing mortgages in Western States.

SOUTHERN STATES.

Table listing mortgages in Southern States.

The Novelty Book Store (H. E. Siddall, manager, Minneapolis, Minn., has been attached for \$1,162.

Obituary.

WILLIAM C. PLUNKETT.

Gen. William C. Plunkett, who died at his home in Adams, Mass., on Saturday, January 19, was at one time in the paper business. He bought the Richardson & Upton paper mill at Adams about 1877 and organized the Adams Paper Company, his two sons being associated with him; but, after running it a few years, the mill was turned into a cotton mill.

General Plunkett was born in Lenox, where he spent his boyhood. He was the oldest of three brothers—the late Thomas F. Plunkett, of Pittsfield, and Charles H. Plunkett, a leading manufacturer of Hinsdale. Two sisters survive him, Mrs. Samuel A. Hulbert, formerly of Lee, and now living in Pittsfield, and Mrs. Daniel D. Wheeler, of Adams.

He went to the district schools of Lenox, and then for a while attended the old Lenox Academy. After teaching school for a while he went into business for himself in a country store. He moved to Adams about 1830, and became a prominent manufacturer in the town of Adams and North Adams from that time until his death. He made cotton and woolen goods, and as the business increased the mill was enlarged, and the Plunkett Manufacturing Company was formed later. When his sons William B. and Charles T. came to manhood, the mill known as Plunkett & Sons was conducted by them, and he also, in connection with William B., took part in the Greylock corporation later in North Adams. He bought out his partners and established new mills till General Plunkett and his sons either owned entirely or had a controlling interest in some four or five mills in which cotton and woolen goods and gingham are manufactured. He was always considered one of the best business men in the county, and earned for himself a handsome property, which is said to be in good condition, so that his estate will not be difficult to settle. He leaves the two sons above mentioned, who are prominent business men.

General Plunkett was eighty-four years old, hearty and active until within a few months, when he delivered an address in the town hall on the occasion of the reunion of the Forty-ninth (Mass.) Regiment, and caught cold. The general—his title came from the old militia training days—was a striking figure everywhere, being over six feet high, straight and supple as an Indian; he held many offices of trust in the State. He was Lieutenant-Governor of Massachusetts in 1854. He was a member of the State Senate in 1840, and several times represented his district in the lower branch of the Legislature, the last time in 1873-74. He served in the Executive Council with both Governors Rice and Long, and was a member of the Constitutional Convention in 1833. He always took a great interest in town affairs, having held the office of selectman many times, and being for years moderator of the town meetings. He was instrumental in building good school-houses and maintaining creditable schools, and all matters that pertained to the interest of the town found him ready to lend a helping hand. He helped form the Cotton and Woolen Manufacturers' Mutual Insurance Company, of Boston, had been president of the company since its organization and was re-elected to that office last week. General Plunkett will be particularly missed by the Congregational church and Sunday-school, having been one of the most prominent members of the church since its formation in 1840, its most liberal supporter and a deacon almost constantly. He was superintendent of the Sunday-school for forty-two consecutive years.

WILLIAM PERRY.

William Perry, of Holyoke, Mass., at one time a well-known paper maker, died on January 23, at the age of eighty.

Francis Flanders, dealer in paper stock, Lynn, Mass., is dead.

Fires.

M. Gore, publisher, Orlando, Fla., has been burned out. Not insured.

Williams & Wesley, publishers of the Enterprise, Attleboro, Mass., have been burned out.

H. G. McWilliams, stationer, Lowell, Mich., has been damaged \$200 by fire. Not insured.

Charles A. Kiel, bookseller and stationer, Tecumseh, Mich., has been burned out; insured.

Charles S. Case, manufacturer of paper pails, &c., Binghamton, N. Y., has been burned out; fully insured.

The Spectator printing-office, at Hamilton, Ont., was burned on Wednesday. The loss is \$50,000; insurance, \$21,000.

SPECIAL NOTICES.

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

EUGENE SULLIVAN, Packer of Rags and Paper Stock, 260 & 258, WATER STREET, NEW YORK.

THOS. BUTLER & CO., Rags, Paper Stock, Old Metals, Rubber, 249-253 CANTREY ST., BOSTON, MASS.

Market Review.

OFFICE OF THE PAPER TRADE JOURNAL, FRIDAY, JANUARY 25, 1884.

THE MONEY MARKET.—Loanable funds continue abundant in this market, rates for call loans on stock collateral being 1 1/2% per cent., and 4@5 1/2% per cent. for prime indorsed mercantile notes and acceptances.

The stock market has been depressed, and has at times bordered closely upon panic. Many stocks that had been carried for months have been thrown upon the market.

Government bonds are less firm than of late; the currency sizes sold lower.

Railroad bonds were active and prices generally lower.

The market for sterling exchange was very firm, owing to the continued limited supply of bills and a better demand for sixty-day bills, but the volume of business was not large. We quote:

Table of exchange rates for various banks and currencies.

THE PAPER RADE.—Although there is very little of an encouraging nature to be said of the present movement of paper, the prospects of an improvement as the spring season advances are quite promising. In some instances dealers report trade so far this month as in excess of the corresponding month of last year, yet business is being done in a slow and spiritless manner, and the abnormally low prices of nearly every grade of paper failed to stimulate the demand. Buyers generally are supplied against current wants, and are unwilling to lay in quantities for which they do not see an immediate or early outlet into consumptive channels. Competition, it is asserted, was never at any time so sharp in every branch of the paper trade as at present. Print Papers hold to a very steady line of values and the same can be said of Manila Wrappings. Straw Wrappings show less irregularity than they did a month or six weeks ago, the product being somewhat under better control.

JUTE BUTTS.—There has been rather more doing in the Butt market during the past week, and values continue firm, in sympathy with the Calcutta market, closing strong for spot at 2 1/2% c. The spot sales embrace 1,800 bales paper quality, and 750 bales Bagging. The transactions in futures include 700 bales paper quality at 2 1/2% c., and 500 bales Bagging at 2 1/2% c. Sales of about 5,500 bales, January or February sailing, from Calcutta, are reported and said to be at 2 1/2% c.

WOOD PULP.—Spruce Pulp continues to be offered somewhat sparingly, and former prices ruled steadily, the range of quotation remaining 2 1/2@2 3/4% c., according to make and shipping point. Poplar is offering a little more freely, and prices are slightly weaker in consequence, 1 1/2@2 1/4% c. being quoted delivered at the mills. Some small sales of Norwegian have been made at 1 1/2% c.

WOOD FIBRE.—Chemical Fibre is being contracted for to a fair extent on the basis of 4 1/4@4 1/2% c. for Bleached and 3 1/4@3 1/2% c. for Unbleached, while in some instances 1/2% c. more is asked for jobbing quantities.

FOREIGN RAGS AND PAPER STOCK.—The market for foreign stock has developed no new feature since our last issue, the general line of values, and the demand being about the same. There is a very small call for Linens, the higher qualities—as for some time past—continuing almost entirely neglected. The fine grades of Cottons although in moderate supply have a very light inquiry. Although the low and medium grades of Cottons attract the most attention, the sales resulting are mostly in very small lots, and at prices within the range current for some weeks past. Recent failures of manufacturers have created a very cautious and uneasy feeling among the dealers and importers, and while many hope and believe that we have already seen the worst of the business difficulties, a large number incline to the belief that many more failures are yet to take place, and in consequence credits will be scrutinized very carefully. The outlook for the immediate future is not very encouraging to dealers for an advance in prices, as at the present rate of import and condition of the stock already here, there is really no basis for it unless a reaction should take place in the demand. The arrivals during the past week aggregate 5,291 bales and bags, embracing 4,641 bales Rags, 273 bales Old Papers, —bales Wood Pulp, and 377 bales Manillas.

DOMESTIC RAGS.—The market is still devoid of features of interest, the demand being extremely light and the supply gradually becoming reduced. While there are no indications of weakness, large buyers could possibly secure some concessions from current prices for future delivery. No. 1 City Whites hold to late quoted prices with a marked degree of steadiness, but on some moderate transactions this week of No. 2 Whites rather better prices have been secured; the former held at 4 1/4@4 7/16 c. for the best packings, and the latter at 2 1/2@2 3/4% c. Seconds are unchanged. We note, among other sales, 125 bales No. 1 Whites at 4 1/4@4 7/16 c., and 90 bales No. 2 do. at 2 1/2@2 3/4% c.

BAGGING, &c.—Gunny Bagging remains firm on a quiet market, and importers find it difficult to secure any advance, although Jute Butts are selling 1/2% c. higher than they were when Bagging was being sold at the same figure it is now offering at, the relative difference between the two being about 1/2% c. Bagging at the present price of Butts ought to be considered rather low. There is no anxiety shown on the part of holders of No. 1 Manchester to sell, the range of price being 2 1/2@3 1/16 c. London Gunny is held at 1 1/2% c., with some small sales reported at 1.80c. Jute Rope is held at 2 1/2% c. English Manilla firm at 3 1/4@3 5/16 c., and Domestic Rope finds purchasers to a moderate extent at 3 1/2@3 7/16 c.

OLD PAPERS.—Here and there are some dealers who are moving fair-sized lots of Manillas, Solid Stock, Shavings and Folded Newspapers; but the large supply is a bar to any improvement in prices, and quotations throughout are quite nominal. We quote: No. 1

Manillas at 2@2 3/4% c.; No. 2 do. at 1 1/2@1 1/4% c.; Folded News, 1 1/4@1 1/2% c.; Hard White Shavings at 3 1/4@4 c.; Solid Printed Book Stock at 2 1/2@2 3/4% c., and Soft White Shavings at 3 1/4@3 3/4% c.; Ledger Stock at 2 1/2@3 c.; Mixed Shavings, 2 1/2@2 3/4% c.; Light Book Stock, 1 1/2@1 1/4% c.; Commons, 50@55 c.; Straw Board Clippings, 50@75 c.; Bogus Manillas, 1/2@1 c., and Binders' Clippings, 1/2@1 c.

STRAW.—Straw continues to meet with fair inquiry, and prices rule a little firmer. We quote in New York: No. 1 Rye Straw, 55@60 c.; Short Rye do. 45@50 c., and Oat 45@55 c.

ROSINS.—The low grades are dull and barely steady, but there is a little more jobbing demand for the medium and fine, and prices for the latter are slightly higher. We quote yard lots, cartage included, viz.: C Strained, \$1.65; D Good Strained at \$1.75; E at \$1.80; F Good No. 2 at \$1.90; G Low No. 1 at \$2; H No. 1 at \$2.10; I Good No. 1 at \$2.30; K Low Pale at \$2.50; M Pale at \$3; N Extra Pale at \$3.37 1/2@3.62 1/2, and W G at \$4@4.50.

CHEMICALS.—There is a firm market for nearly all descriptions of paper-makers' chemicals, but buyers continue to operate rather cautiously and appear unwilling to anticipate their wants to any extent. Foreign markets also continue firm, and prices here are about on a par with those of Liverpool. The slight advance in Bleaching Powder and 70 per cent. Caustic Soda noted last week is maintained. Sales are said to have been made here as follows: 600 cks. Bleaching Powders at 2.40@2.50 c., to arrive and on the spot, as to brand and quantity; 300 tons Soda Ash at \$1.55@1.62 1/2; 200 drums Caustic Soda 70 per cent., at 3.12 1/2@3.30 c.; 100 tons English Sal Soda at \$1.15@1.20 spot to arrive; 500 barrels Lump Alum, at 2 c.; 200 barrels Ground do. at 2 1/2% c.; 650 barrels Pearl do. at 2 1/2% c.; 1,000 barrels Natrona Porous Alum at 2 1/2% c.; 200 tons Aluminous Cake at \$1.45; 25 cases German Ultramarine at 21@23 c.; 30 cks. Brown Sugar of Lead at 6 1/2@6 3/4% c.; 100 bbls. Venetian Red at 1.55 c.; 20 cks. Yellow Prussiate of Potash at 6 1/2@6 3/4% c.; 200 barrels Corn Starch at 3 1/2% c.; 100 barrels Potato do. at 4 1/4% c. and 100 boxes Extract of Logwood at 7 1/2% c.

CHINA CLAY.—The demand for English Clay continues light, but as the spot supply of the leading brands is growing smaller, importers' views are firm on the basis of \$15 for prime to arrive. Sales are reported of 35 tons at \$16@16.50, 25 tons at \$14.50, and 50 tons to arrive at \$16.50. We quote: Prime, \$16@16.50; Medium, \$15@15.50, and Common, \$13@14.50. Southern Clay is quiet and barely steady at \$12, at which price we hear of a sale of 50 cks.

COAL.—Trade is in good shape for Anthracite Coal, and the stock is becoming reduced by half-time output. Seward's Coal Trade Journal says: "Ports and places which had been stated to have a sufficient supply to last until spring are coming into market. It is reported that the heavy demand thus far has been purely local, but from what we gather there is an increasing circle each week of places which are not so well supplied as had been thought to be the case. Apart from the uncertainty of getting coal after it has been purchased, by stress of weather, &c., there is little to stir the even tenor of the trade. We occasionally hear of sales at round circular figures, but these are mainly on manufacturing sizes or on special coals. There is nothing to warrant the starting of spring prices on the basis of the figures at present realized, and if this scheme is tried it will fall of its own weakness. The Anthracite steam sizes now come pretty high, and steam users are looking about for substitutes at lower cost, and we hear of many efforts to effect the desired end. The Bituminous trade is dull and quiet, as is usual at this season of the year. We look for a large output this year, and a low range of prices." Philadelphia and Reading Company at Elizabethport, N. J., quotes Lump at \$4.85; Broken, \$4.40; Egg, \$4.60; Stove, \$4.80@5.05, and Chestnut, \$4.50@4.60. Lackawanna at Weehawken is quoted: Lump, \$3.90; Egg, \$4.15; Stove, \$4.45, and Chestnut, \$4.55.

PRICES CURRENT.

NEW YORK MARKET.

Paper Market.

Table of current prices for various paper products in New York.

Table of prices for Straw Boards, Wrapping, and other materials.

Table of prices for Shavings and Old Paper.

Table of prices for Rags, Rope and Bagging.

Table of prices for Hamour Rags, &c.

Table of prices for Chemicals, Coloring Materials, &c.

BOSTON MARKET.

JUTE BUTTS.—There have been only some small sales on spot at 2 1/2% c. for common butts. The market is very strong, and the Calcutta market has advanced about 1-16c. during the week. We quote 2 1/2@2 3/4% c., according to quality.

Table of prices for Chemicals in Boston.

PHILADELPHIA MARKET.

Table of prices for Paper Stock in Philadelphia.

Hemp Twine	4
Black Hemp Bagging	2 1/2
Sunny Bagging	2 1/2
Shivy Bagging	2 1/2
Scrap Bagging	1 1/2
Dyed Bagging	2 1/2
Tarred Shaking	2 1/2
Wadding	2 1/2
Binders-Board Cuttings	3 1/2
Straw-Board Cuttings	3 1/2
Common Papers	2 1/2
Cotton-Mill Sweepings	2 1/2

MILWAUKEE MARKET.

Paper	16	21
Super-Calendar, white and tinted	11	12
Fine Book, white and tinted	9	11 1/2
No. 2 Book	9	10
Colored Glazed Mediums	9	14
Rag News, No. 1	9	14 1/2
Ordinary Rag News	9	14
Straw and Wood News	9 1/2	14 1/2
Bleached Manila, No. 1	9 1/2	10
Ordinary Manila	9 1/2	10
Bogus Manila	9 1/2	10
Straw Wrapping	9 1/2	10
Hardware Wrapping	9 1/2	10
Tissue Manila, 24 x 36, full count	1.00	1.25
Tissue, white, 30 x 30	1.00	1.25
Tea Papers, 14 x 20	7 1/2	9
Tea Papers, 13 x 18	7 1/2	9
Tea Papers, 12 x 16	7 1/2	9
Straw Boards, air-dried, 7 ton	60.00	65.00
Straw Boards, steam-dried, 7 ton	50.00	55.00
Wood Pulp Card, middles	6	7

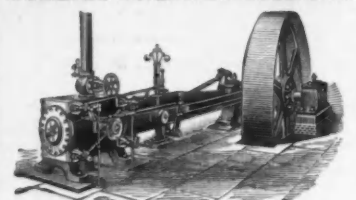
Whites, No. 1	3 1/2
Whites, No. 2	3 1/2
Thirds and Blues	3 1/2
Prints	3 1/2
Manilla Rope	3 1/2
Mixed Bagging	3 1/2
Wrapping Stock	3 1/2
Seamed Cloth	3 1/2
Wool Seams	3 1/2
New Clips	3 1/2
Soft Wools	3 1/2
Print Papers	1.30
Manilla Papers	2 1/2
Common Papers, 100 lbs	1.10
White Shavings	3 1/2
Mixed Shavings	3 1/2
No. 1 Book	3 1/2
No. 2 Book	3 1/2
Straw Board Clippings, 100 lbs	1.00
Skirted Delaines	3 1/2

CHICAGO MARKET.

Paper	17
Super-Calendar, white and tinted	10
Fine Book, white and tinted	9
No. 2 Book	9
Colored Glazed Mediums	12
Rag News No. 1	9
Ordinary Rag News	9
Straw and Wood News	9 1/2
Bleached Manila, No. 1	9 1/2
Ordinary Manila	9 1/2
Bogus Manila	9 1/2
Straw Wrapping	9 1/2
Hardware Wrapping	9 1/2
Tissue Manila, 24 x 36, full count	1.00
Tissue, white, 30 x 30	1.00
Tea Papers, 14 x 20	7 1/2
Tea Papers, 13 x 18	7 1/2
Tea Papers, 12 x 16	7 1/2
Straw Boards, air-dried, 7 ton	60.00
Straw Boards, steam-dried, 7 ton	50.00
Wood Pulp Card, middles	6

Advertisements.

CORLISS ENGINE BUILDERS.



BOILER MAKERS, Rotary Boilers, Wood Digesters, WOOD CHIPPERS, Wood Pulp Machinery.

THE WRITER IS MAKING HYDRAULIC AND Screw Presses, and Machines to test the strength of paper or other material.

WANTED.—GOOD MACHINE TENDER, with back tender, on Straw-board Machine, double cylinder.

WATER-POWER FOR SALE.—SITUATED on the river Raisin, in the village of Manchester, Mich.

FOR SALE.—PAPER MILL, SITUATED in the town of Putney, Vt., three-quarters of a mile from R. R. station.

FOR SALE.—A 44-INCH STRAW BOARD Machine, with 3 Forming Cylinders, 17 Dryers, Calendar and Cutter.

FOR SALE OR A LONG LEASE.—A PAPER Mill, in good order for making Manila, Poster, Hanging and Colored Papers.

FOR SALE.—A 44-INCH STRAW BOARD Machine, with 3 Forming Cylinders, 17 Dryers, Calendar and Cutter.

BRIGHTMAN

FOR SALE CHEAP. One side recently renewed and never run; the other side in good order.

ADVERTISER. Who has for several years superintended a two-machine mill running on Book Paper, desires to make a change.

FOR SALE OR LONG LEASE. With Privilege of Buying, the Paper Mill Property at Hamburg, New Jersey.

PURE CHEMICAL FIBRE. Spruce Chemical Fibre, Unbleached, Good Color, Strong and Clean.

FOR SALE—CHEAP. A lot of new Machinist Tools, Lathes, Planers, Upright Drills, Shaping Machines, &c.

WANTED. One set of heavy steam Calenders, Chilled Rolls; one Wet Machine and six stacks of Steam Dryers.

FOR SALE. Four Calender Cast-Iron Rolls, 68 x 12 inches; three Beating Engines.

FOR SALE. One 72-inch Merrill & Houston Cylinder Machine, complete and in good order.

FOR SALE. One Horizontal Corliss Engine, 150 horse-power; one Locomotive Boiler.

FOR SALE. One 66-inch Fourdrinier Machine, complete, and in perfect order; now running.

FOR SALE. Rotary Bleach, 18 1/2 x 6 feet, shell 3-16 in. iron, wrought-iron heads.

FOR SALE. Three Rag Engines, 300 lbs., with rolls 36 in. long, 30 in. diameter.

FOR SALE. One Left-Hand Paper Engine, Roll 28 x 28 inches, 42 Bars, 42-inch Pulley.

FOR SALE. Second-Hand Paper Machinery. One 62 inch Fourdrinier Machine; can be seen running on fine writing papers.

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SPECIAL FACILITIES FOR Waxing Heavy & Light Papers.

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Improved Appliances for Elevating and Conveying Rag, Straw, Manilla and Wood Pulp.

BALED AND CUT STRAW. DETACHABLE LINK BELTING

Is extensively used for driving Paper Mill Machinery; it is unaffected by heat or dampness, and its motion is positive.

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BRANCH HOUSES: 81 John Street, New York; 921 North Second Street, St. Louis, Mo.



Catalogue and Estimates on application.

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Of Every Description, and STEAM ENGINES, R. O. MOORHOUSE & CO., Thirtieth and Buttonwood Sts., Philadelphia.

FOR SALE. One 72-inch Double Cylinder Machine, three Beating Engines, and all the machinery to make a complete Paper Mill.

FOR SALE—CHEAP. One 48-inch Harper Fourdrinier Machine, One 1200-lb. Washing Engine and Tub.

FOR SALE. One 72-inch Merrill & Houston Cylinder Machine, complete and in good order.

FOR SALE. One Horizontal Corliss Engine, 150 horse-power; one Locomotive Boiler.

FOR SALE. One 66-inch Fourdrinier Machine, complete, and in perfect order; now running.

FOR SALE. Rotary Bleach, 18 1/2 x 6 feet, shell 3-16 in. iron, wrought-iron heads.

FOR SALE. Three Rag Engines, 300 lbs., with rolls 36 in. long, 30 in. diameter.

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—MANUFACTURERS OF— Paper Mill Machinery, FOURDRINIER AND CYLINDER MACHINES,

Beating and Washing Engines, CALENDERS, CUTTERS, STUFF AND FAN PUMPS,

Reels, Rag Cutters, Screens, Screen Plates, REAM CUTTERS, CYLINDER MOLDS, WIRE CLOTH, DANDY ROLLS, DECKLE

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CLEVELAND WIRE WORKS.—W. S. TYLER.

Fourdrinier and Cylinder Wires, Send for Catalogue and Prices. — CLEVELAND, OHIO. — DANDY ROLLS, &c.

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SHOVEL EDGE, Seamless, Rounded Corners, CURVED HEEL. RUNS EASY, STRONG AND DURABLE, EMPTIES CLEAN.

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BEING practical machinists for the past twenty-five years, we feel confident we can give the best satisfaction, and therefore we guarantee our work as to prices and quality in every respect, and most respectfully solicit the patronage of PAPER MANUFACTURERS.

Manufactured by BOGGS & CLARKE, 123 & 125 South Clinton Street, Syracuse, N. Y.

CYRUS CURRIER & SONS, NEWARK, N. J., General Machinists, Founders and Engine Builders.

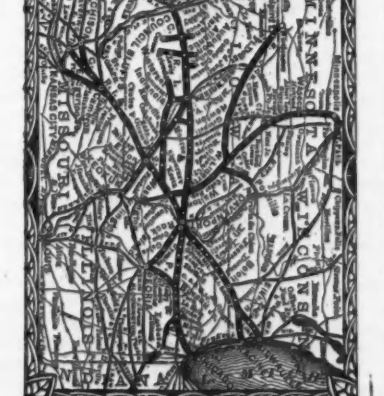
PAPER MACHINERY A SPECIALTY. Fourdrinier and Cylinder Machines, Chilled Iron and Paper Calenders, Beating and Washing Engines, &c., &c. All Steel Roll Bars and Bed Plates Cheaper and Better than Laid Bars.

KINGSLAND BEATING ENGINE, The Best and Cheapest. Upwards of two hundred in Use.

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By the central position of its line, connects the East and the West by the shortest route, and carries passengers without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul.

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

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AMERICAN COTTON
MACHINE BELTING**

Manufactured by
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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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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.

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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.
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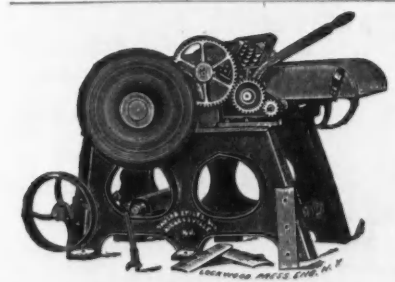
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Draughts, Stuff Chests, Broken Tubs, Straw Kettles, Boiling and Size Tubs, Water Tanks, &c.

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**GIANT
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(THREE SIZES). They are the most durable, have greater 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.

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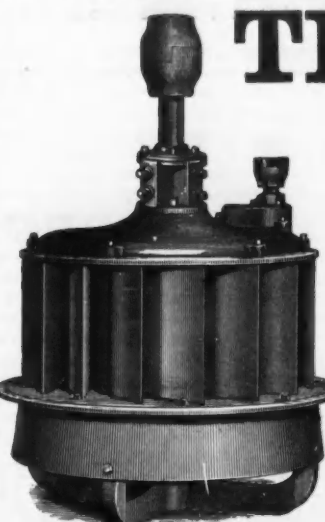
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THE VICTOR TURBINE.

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:

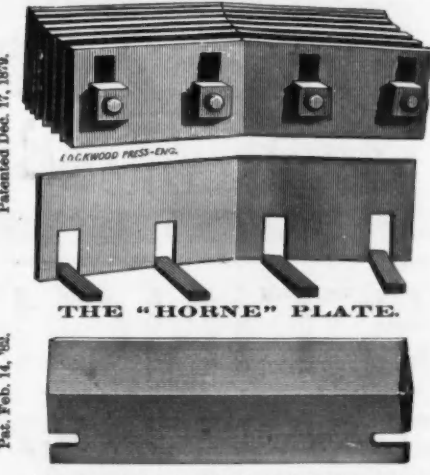
SIZE WHEEL	HEAD IN FEET.	HORSE-POWER.	PER CENT. OF USEFUL EFFECT
15-inch	18.06	30.17	.8932
17½-inch	17.96	36.35	.8930
20-inch	18.21	49.00	.8532
25-inch	17.30	68.62	.8584
30-inch	11.65	92.94	.8676

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,
STILWELL & BIERCE MFG. CO.
DAYTON, OHIO, U. S. A.**

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



DOUBLE BEVEL CRUCIBLE STEEL ROLL BAR.

J. H. HORNE & SONS,

MANUFACTURERS OF

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

JORDAN ENGINES REFILED.

Jordan Bar and Filling Constantly on Hand.

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STEPHEN A. MORSE. C. M. WILLIAMS. EDWIN F. MORSE.
CLEM & MORSE,
MANUFACTURERS AND BUILDERS OF
Hydraulic, Steam, Belt and Hand-Power **ELEVATORS** Passenger and Freight
Dumb-Waiters, Automatic Hatch-Doors, &c.
Sole Owners of the right to apply the HEEBNER PATENT GOVERNOR to Elevators and Hoisting Machinery.
Our Patent Pneumatic 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.
411 & 413 CHERRY ST., PHILADELPHIA, Pa.
Branch Office, 108 Liberty Street, New York.

ATTENTION, PAPER-MAKERS!

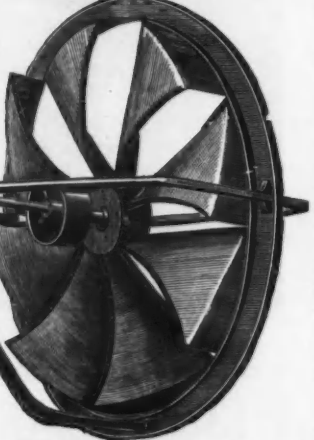
THE EXHAUST VENTILATOR FAN

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.

EXHAUST VENTILATOR COMPANY,
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NEW YORK EXHAUST VENTILATOR CO.
Agents for New York, New Jersey and New England States, 45 Fulton Street, New York.



F. SHELDON,
FITCHBURG, MASS.,

MILLWRIGHT ARCHITECT,
Manufacturer of Rag Engines, Cylinder Washers, Rag Cutters, Dusters & Vats for Paper Mills.
ALSO AGENT FOR HEALD & SISCO'S CENTRIFUGAL PUMPS.



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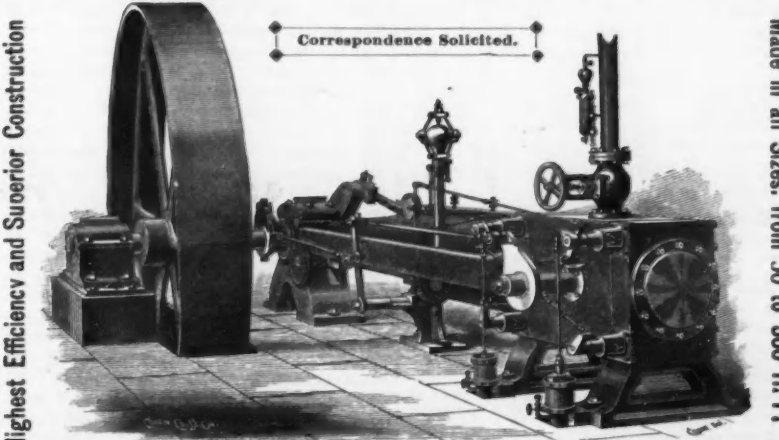
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1030 Germantown Ave., Philadelphia, Pa.,
W. H. RUSSELL'S SAND WASHER,
An improvement in Washing Engines.
MACHINISTS & MILLWRIGHTS.
MANUFACTURERS OF Beating and Washing Engines, Pumps, Rag Dusters and Paper Mill Work in general.

THE PATENT CONE WASHER.

Do not confound with others, as is often the case, refer to the annual calendar and be sure you are right. These Washers are now made from wood, as before, with iron heads and wood buckets, or all metal, as desired.

For particulars and prices address the manufacturer,
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Close Regulation and Best Attainable Economy of Fuel and Steam.

THE HOOVEN, OWENS & RENTSCHLER COMPANY,
Builders of all Styles of Engines, Boilers, Saw Mills, &c.,
BRANCH OFFICE: No. 811 N. Second St., ST. LOUIS, Mo. HAMILTON, OHIO, U. S. A.

THE CUMMER ENGINE CO.

— WERE AWARDED THE —
GRAND GOLD MEDAL FOR THE BEST AUTOMATIC ENGINE,
And a Special Prize of \$100 in gold for extraordinary merit, at the Industrial Exposition just closed at Cincinnati, Ohio. Send for 150-page catalogue. Address:

CUMMER ENGINE CO., Cleveland, Ohio.

JENKINS BROS. MANUFACTURERS OF THE
JENKINS' PATENT VALVES
Have no Ground Joints to be Leaking; no Lead Seats to Corrode.
GET THE GENUINE.
MADE OF THE BEST STEAM METAL. WARRANTED PERFECTLY TIGHT.
Stamped "JENKINS" BROS.
71 JOHN STREET, NEW YORK; 79 KILBY STREET, BOSTON.

THE NEW PULSOMETER

The cheapest, strongest, most simple, compact, durable, effective and economical STEAM PUMP IN THE MARKET, for raising liquids under and up to 100 feet. No Machinery. No Oil. No Special Care. Can be worked suspended by a chain. Will pass grit, mud, sand, pulp, etc., without injury to its parts. Needs only a steam pipe from boiler to run it. Price, 600 gallons per hour, \$50; 1,200 do. \$75; 3,600 do. \$100; 6,000 do. \$150; 10,000 do. \$175; 18,000 do. \$225; 25,000 do. \$275; 45,000 do. \$400; 60,000 do. \$500; 120,000 do. \$1,000. Compare this with any other Pump List.
Write for illustrated descriptive book with testimonials, &c. Mailed free.
PULSOMETER STEAM PUMP CO., 83 John St., New York City, U. S. A.

"THE DEANE."
Unequaled for Simplicity of Mechanism. Of all Sizes, and for Every Possible Service. SPECIAL PATTERNS FOR PAPER MILL USE.
— MANUFACTURED BY —
THE DEANE STEAM PUMP CO.,
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226-228 Lake Street, CHICAGO. 54 Oliver Street, BOSTON. 92 and 94 Liberty Street, NEW YORK. 49 North 7th Street, PHILADELPHIA, Pa. 630 and 632 North Main Street, ST. LOUIS, Mo.
Power Pump. Boiler Feed Pump. Fire Pump. Independent Condensing Apparatus.

THE BALDWINVILLE CENTRIFUGAL PUMP WORKS.

ESTABLISHED 1861.
VAN WIE & FITZGERALD, Proprietors,
SUCCESSORS TO CLARKE & VAN WIE,
48 & 50 S. WEST STREET, SYRACUSE, N. Y.
MANUFACTURERS OF **THE OLD RELIABLE** CENTRIFUGAL PUMP.
2,500 in use by Paper and Pulp Makers. Send for Catalogue. We Defy Competition.

THE BEST and CHEAPEST GRATE BAR
FOR ANY KIND OF FUEL.
W. W. TUPPER & CO., 216 West St., New York, Send for Circular.

Manufacturing News.

EASTERN STATES.

The Glen Pulp and Paper Company, of Hartford, Mass., is to start a new wood-pulp mill at the east end of the Hoosac Tunnel, which is to be fitted with improved machinery from Germany, and the inventor has been brought to this country to superintend it.

The new pulp mill at Garvin's Falls, in Bow, N. H., is being run day and night, and the whole production goes to paper mills at Franklin and Lawrence.

The new mill of the Green Mountain Pulp Company, at Middlebury, Vt., complete, cost \$17,000.

The pulp mill at South Wallingford, Vt., idle for months, is soon to resume operations.

Evans' Fibre Manufacturing Company, Boston, Mass., has taken the mill of George A. Shepard, East Jeffery, N. H., and will make wood pulp under the Evans' process.

Wildner & Co., Ashland, N. H., have just put in a 25 horse-power engine to run their No. 1 machine when water is low.

MIDDLE STATES.

The Hunterdon Paper Works, at Glen Gardner, N. J., are almost completed, and will be in operation soon.

L. Kent & Co. have bought the Westfield (N. Y.) paper mill, and have added new machinery.

WESTERN STATES.

The Lick Paper Company, Agnew, Cal., has ordered new Babcock & Wilcox boilers. It is running its mill full time.

Brownell & Miller, St. Charles, Ill., have shut down their mill.

The Minneapolis Straw Board Company, Minneapolis, Minn., has shut down till February 4.

SOUTHERN STATES.

John A. Dushane & Co., Morgans, Md., have put four Babcock & Wilcox boilers, 60 horse-power each, into their Woodbine mill, and have built a new boiler-house.

Thos. F. Scully is running the lower Sugar Creek Mill at Atlanta, Ga. The mill has two 300-lb. and one 500-lb. engines, and a 36-inch cylinder machine, making No. 2 bogus manillas.

The Upper Sugar Creek Mill at Atlanta, Ga., is run by William McNaught & Co., who have relinquished their other mill. This mill has two 350-lb. and one 250-lb. engines and a 36-inch cylinder machine run on manillas.

The Machinery Trade for 1883.

Very few reports from the machine shops which supply paper makers have come to hand. Such as have been received are appended and further returns will be given from week to week until they are exhausted. It should be remarked that some of the shops decline to supply the information sought.

THE BLACK & CLAWSON COMPANY.

Hamilton, O., reports the following list of paper-mill work done by it during the last year:

Mead Paper Co., Dayton, O., 3 dryers 36-inch diameter, 72-inch face, with brass packing-boxes, gears, frames, &c., complete. Remington Paper Co., Watertown, N. Y., a new 86-inch press part; Friend & Fox Paper Co., Lockland, O., a 40-inch cone pulley cutter; Longley Barnard & Co., Middletown, O., a stack of heavy card calendars 16x34 inches, with stands, &c., complete; Vandalia Paper Mill Co., Vandalia, Ill., combination cylinder and Fourdrinier machine; Tipp Paper Co., Tipton, O., four 36x72 inch and four 28x72-inch dryers with frames, gears, &c., complete; Northumberland Paper Co., Campbellford, Ont., a stack of two straw-board calendars 16-inch diameter, 43-inch face; Friend & Forgy Paper Co., Franklin, O., a 76-cone-pulley cutter; Pennsylvania Pulp and Paper Co., Lock Haven, Pa., 68-inch cone pulley cutter; Remington Paper Co., Watertown, N. Y., seven dryers, 36-inch diameter, 84-inch face, with brass packing boxes; Winnesseege Paper Co., Franklin, N. H., 63-inch cone-pulley cutter; Wolverine Car Roofing and Paper Manufacturing Co., Detroit, Mich., a cylinder machine for paper 3/4-inch in thickness, dryers, 48x56 inches; Plain City Paper Co., Plain City, O., 66-inch cylinder machine; Haldeman Paper Co., Lockland, O., five 28-inch diameter, 68-inch face dryers, with frames, gears, packing-boxes, &c., complete; Erwin Lane & Co., Elkhart, Ind., new Fourdrinier part and patent screen; Xenia Paper Co., Xenia, O., stack of four Knight's dryers, 14x62 inches, with stands, packing-boxes, levers, &c., complete; Andrews & Co., Penn Yan, N. Y., one Fourdrinier machine; Godfrey & Clark, Pittsburg, Pa., 63-inch cone-pulley cutter, and a 4-stack of upright reels; Dager & Cox, Bridgeport, Pa., one Fourdrinier part; Elkhart Straw Board Co., Elkhart, Ind., one 84-inch cylinder machine; Orr & Spencer, Piqua, O., two dryers 36x72 inches, with brass packing boxes and a stack of seven chilled rolls, with stands, pulleys, &c., complete; Dager & Co., Bridgeport, Pa., two 36x56-inch dryers, with frames, packing-boxes, gears, &c.; H. F. Watson, Erie, Pa., a new patent screen; Miami Valley Paper Co., Miamisburg, O., one 36x72-inch dryer and one new patent screen; Pennsylvania Pulp and Paper Co., Lock Haven, Pa., one Fourdrinier part. The company is about completing a cylinder machine for John B. Shepler, Toledo, O., and the rebuilding of two cylinder machines for Godfrey & Clark, Pittsburg, Pa., and reports business fair and outlook rather good.

PHILMONT PAPER MACHINE COMPANY.

This company, located at Philmont, Columbia County, N. Y., reports its sales as follows: One 68-inch cylinder machine to Newton Lefevre for his mill at Linlithgow, N. Y.; one 72-inch cylinder machine, two 700-pound engines and two 15x16-foot bleaches to Hart & Barnes, Brenard, N. Y.; one 15x16-foot bleach to C. F. Davis, Valatie, N. Y.; two 12x12-foot bleaches to

J. W. Rossman & Son, Stockport, N. Y., and two 12x12-foot bleaches to Wilkesbarre Paper Co., Wilkesbarre, Pa. The Philmont Co. is a young concern.

BOSTON MACHINE MANUFACTURING COMPANY.

The Boston Machine Manufacturing Co., of Boston, Mass., reports the following as the principal items of paper machinery furnished by it during the year: Sebago Wood Board Co., South Windham, Me., one 70-inch cylinder machine for forming and drying wood board, having six cylinder molds and twenty-one dryers; Umbagog Pulp Co., Livermore Falls, Me., one 70-inch cylinder machine, same as above, also two 30x30-inch pulping engines, extra cylinder molds, &c.; Lincoln Pulp and Paper Co., Lincoln, Me., one 84-inch cylinder machine for forming and drying wood pulp, sixteen dryers, one 72-inch wet machine and four 42x48-inch engines, iron tubs; Angell & Langdon, Greenwich, N. Y., one 72-inch cylinder machine; George West, Ballston Spa, N. Y., one 90-inch Harper improved Fourdrinier machine; Columbia River Paper Co., Portland, Ore., one 72-inch cylinder machine; Nova Scotia Wood Pulp and Paper Co., Mill Village, N. S., one 62-inch wet machine; J. Ford & Co., Port Neuf, P. Q., one dryer part of 42-inch machine; P. C. Baird, Lee, Mass., one wet part for 62-inch Fourdrinier machine; L. Lincoln & Co., North Dighton, Mass., one 40x42-inch pulping engine; New Hampshire Pulp and Paper Co., Bristol, N. H., four 38x42-inch engines, six revolving reels, rag cutters, pumps, screens, &c.; Robert Wetherill & Co., Chester, Pa., two 42x48-inch engines, iron tubs; Russell & Armstrong, Philadelphia, Pa., one 42x48-inch engine, iron tubs. Also additional dryers to P. C. Cheney Co., Manchester, N. H.; Crystal Spring Mill Co., Middleton, Mass.; Moore & Wilson, Waterford, N. Y., and Ward Brothers, Riverton, Conn. Other work was as follows: Winona Paper Co., Holyoke, Mass., one crane with three false bottoms for bleach; Deseret News Co., Salt Lake City, Utah, one 5-roll railroad duster, rag cutter, &c.; Haverhill Paper Company, Haverhill, Mass., one thresher, one crane with four false bottoms for bleach. In addition, a large number of gun-metal covered, chilled and charcoal iron rolls, stop cutters, cone cutters, cylinder molds, composition and iron fan pumps, stuff pumps, screens and screen frames, slitting machines, winding shafts, &c.

THE CLEVELAND PAPER COMPANY.

Cleveland, O., reports sales of Brightman engines in 1883, as follows: Merrimac Paper Co., Lawrence, Mass., one No. 3; Wead Paper Co., Malone, N. Y., one No. 2; Franklin Paper Co., Franklin, O., two No. 3; West Swaney & Jackson, North East, Pa., one No. 2; Wolverine Car Roofing and Paper Manufacturing Co., Detroit, Mich., one No. 4; D. W. & J. C. Newton, Holyoke, Mass., one No. 4; Ferrine Paper Co., Franklin, O., one No. 2; J. H. Tangeman & Co., Lockland, O., one No. 3; W. P. Lewis, Dayton, O., one No. 2; New Portage Straw Board Co., New Portage, O., one No. 4; Howland & Co., Sandy Hill, N. Y., one No. 4; N. W. Taylor, South Bend, Ind., two No. 1.

WILLIAM H. HARRIS.

Providence, R. I., built Harris-Corliss engines for the following named paper makers: Newton Paper Co., Holyoke, Mass., one engine of 100 horse-power; Geo. R. Dickinson Paper Co., Holyoke, Mass., one engine of 475 horse-power and two engines of 50 horse-power each; Hollingsworth & Whitney Co., of Boston, Mass., for South Braintree Mill, one engine of 100 horse-power and one of 325 horse-power.

MURRAY & STOUGHTON.

Hartford, Conn., manufacturers of the Medart patent wrought-iron pulleys, report sales of pulleys during the year to Remington Paper Co., Watertown, N. Y.; Star Paper Co., Shortsville, N. Y.; F. G. Weeks, Skaneateles, N. Y.; Weld Paper Co., Malone, N. Y.; Beaver Falls Paper Co., Beaver Falls, Pa.; C. R. Remington, Watertown, N. Y.; Victoria Paper Co., Fulton, N. Y.; Delaney & Munson Paper Co., Unionville, Conn.; Platner & Porter Manufacturing Co., Unionville, Conn.; Hudson River Pulp and Paper Co., Palmer Falls, N. Y.; House & Co.,

Windsor, Conn.; Springdale Paper Co., Westfield, Mass.; Jessup & Moore Paper Co., Wilmington, Del.; New York Pulp Co., Hadley, N. Y.; Glens Falls Paper Co., Glens Falls, N. Y.; Wm. L. Longley, agent (Cumberland Mills), Cumberland Mills, Me.; Denison Paper Co., Mechanics' Falls, Me.; Frank H. Whittlesey, Windsor Locks, Conn.; S. S. Brown Paper Co., Adams, Mass.; Forest Paper Co., Yarmouthville, Me.; Glen Pulp and Paper Co., Hoosac Tunnel, Mass.; Manning & Peckham, Troy, N. Y.

An Italian correspondent of THE PAPER TRADE JOURNAL prefers a request for a sample copy of the paper in the following words: Mr. Director, I beg you to envy me a number for essay of your newspaper, 'PAPER TRADE JOURNAL.' I thank you with my heart." This request has been honored.

Steam Without Fire.

A Berlin correspondent of Bradstreet's writes that a new invention by Maurice Honigmann, engineer, of Aix-la-Chapelle, is exciting considerable interest in technical and industrial circles in Berlin. It is expected to cause great changes in several branches of technical industry. Mr. Honigmann has constructed a boiler to generate steam without fire, and therefore free from all the inconveniences, such as smoke, &c. The construction is based upon the principle that solutions of strong alkaline substances boiling only at 210° to 245° Celsius, when subject to the influence of steam, absorb it and store up the heat, thus attaining a temperature much higher than that of the steam itself. On this principle Honigmann produces steam by placing a boiler filled with water into a larger one containing boiling alkaline, which is kept boiling

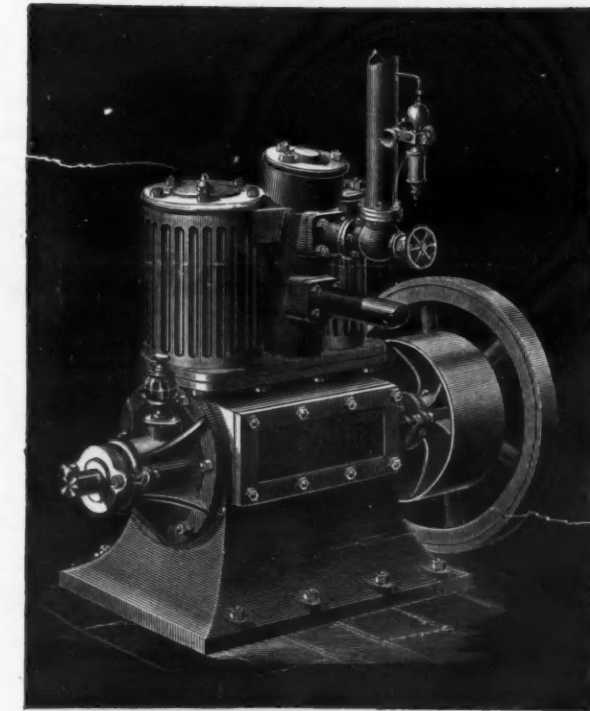
by the spent steam from the engine. Thus the production of steam is continued until, by dilution, the boiling point of the alkaline solution becomes too low for heating purposes, in consequence of its getting too weak. The boiler must then be refilled with a strong solution, whereas the weak one can again be condensed by fire. Experiments have proved hydrate of soda to be a substance especially fitted for this purpose, and these boilers can work for hours without requiring to be refilled. The procedure, besides being less annoying than the common steam engines, producing no smoke or waste steam, is economical, all the spent steam being made use of for heating purposes. A successful experiment was made a short time ago on one of the steamers plying between Berlin and the village of Treptow on the Spree. Other experiments, too, on the tram elevated railways in Berlin are about to be tried.

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Our small Engines are largely used for driving Fourdrinier Machines, Centrifugal Pumps, Jourdan Engines, Calenders, &c.; and our large Engines as a Relay to Deficient Water-Power.

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No. 401 ELM STREET, DALLAS, Texas.

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EXTREME HEIGHT, 5 FT. 6 IN. DIAMETER, 32 IN. SUPPLY PIPE, 6 IN. OUTLET, 6 IN.

HOLYOKE PAPER CO., HOLYOKE, Mass., February 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.

HOLYOKE, Mass., February 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 anyone wanting filtered water.

D. P. WILLIAMS, Superintendent Holyoke Paper Co.

THE ONLY FILTER

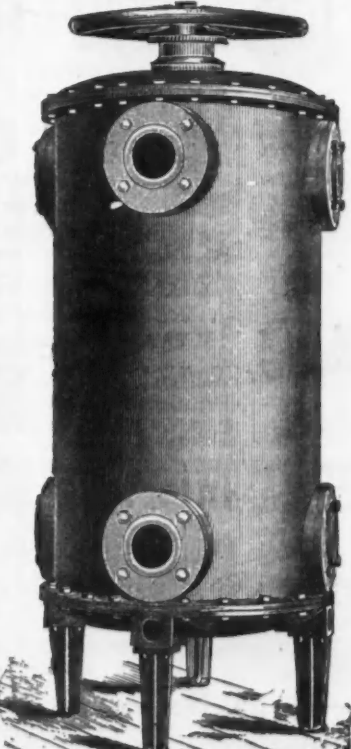
in which the principle of "control" has been perfected. Which exteriorly indicates the condition of the filtering material in it, and the precise position of the working parts. That will give large results with a low head of water. That can always be cleansed without removing the filtering material.

It will operate freely without cleansing for a longer time than any other Filter. It is superior in its construction, operation, and in the quality and quantity of the filtrate furnished, to any other device yet invented.

PUBLIC COMPARATIVE TEST INVITED (IN HOLYOKE) WITH ANY OTHER FILTER.

For information relating to the construction and operation of this machine, address

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ALWAYS GIVES THE UTMOST SATISFACTION.

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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
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FAST RUNNING ON NEWS,
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ALSO, TO OUR

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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.

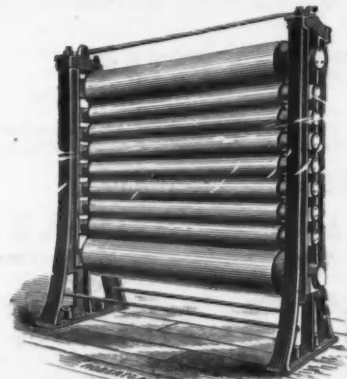
EXTRA HEAVY CANVAS DRYER FELTS,
all widths, cut to any length, at Manufacturers' Prices.
WE WARRANT EVERY FELT to work well,
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We also manufacture Blankets, Flannels, Stocking
Yarns of all Colors, and Men's Heavy Wool Socks.
Also, an Extra Heavy 6-4 Scarlet and White
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GROUND BY THEIR PATENT PROCESS.

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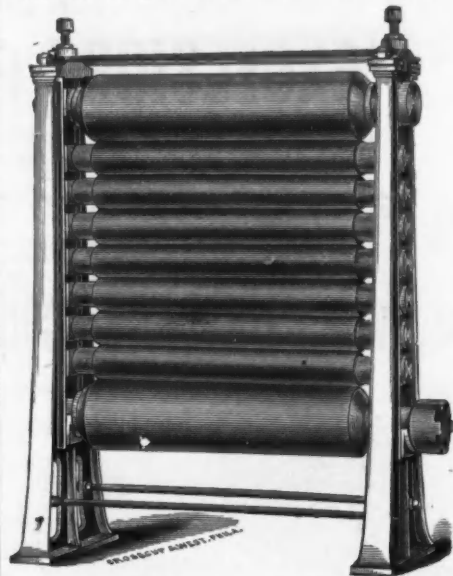


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The Oldest and Most Extensive Manufacturers of Chilled Car Wheels in this or any other Country.



**EXTRACT OF AWARD ON CHILLED
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The undersigned having examined the
product herein described respectfully recom-
mends the same to the United States Centen-
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This exhibit contains a stack of calender-
ing rolls intended to be part of a complete
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chilled at the surface in casting, and thereby
made hard, like tempered steel. They are
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out 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.

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The vast quantity of iron used daily in the business of this establishment permits the very best selection
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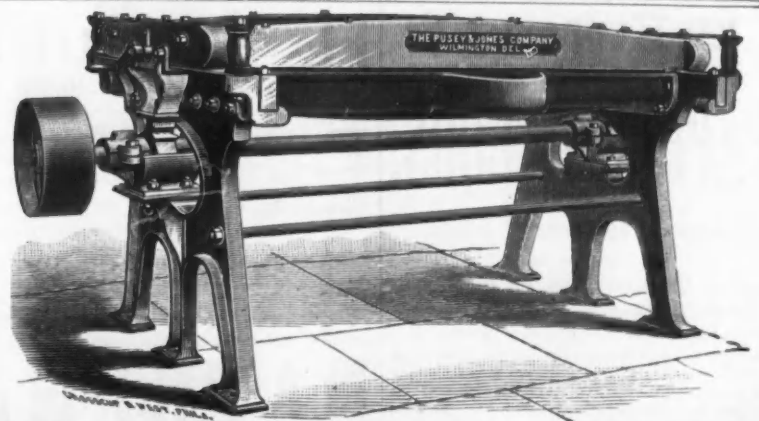
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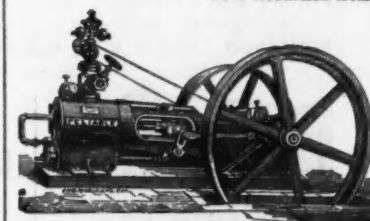
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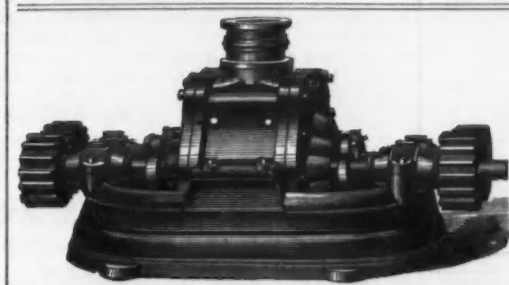
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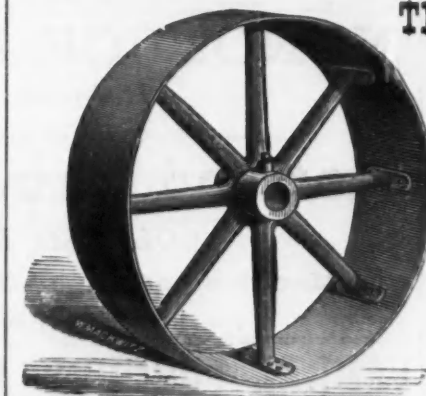
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FREE FROM IRON AND FROM EXCESS OF ACID.
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The Richest in Sulphate of Alumina, and 20 per cent. Stronger than the Strongest Alum in the Market.
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CONTAINS NO FREE ACID.
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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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Manufacturers of
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Brass, Copper and Iron Wire, Dandy Rolls, Cylinder Molds, Best Quality of Wire Rope.
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SOLE MANUFACTURERS OF
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ALSO MANUFACTURE
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CYLINDERS AND DANDY ROLLS MADE AND REPAIRED.
Lettering and Designing on Dandy Rolls executed Neatly and Promptly.
DEALERS IN ALL KINDS OF PAPER MILL SUPPLIES.

IMPORTANT TO PAPER MANUFACTURERS!
We have now running at our works one of
POOLE'S PATENT ROLL GRINDERS,
and are prepared promptly to regrind Old Rolls, soft as well as chilled.
Manufacturers can rely upon having their rolls ground perfectly, and at a material saving of freight, by applying to
THE TOWNSEND FURNACE AND MACHINE SHOP,
RUFUS K. TOWNSEND, Proprietor, ALBANY, N. Y.
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German and Russian Linen Rag Packers.
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MINERS AND MANUFACTURERS OF WHITE CHINA CLAY,
Especially adapted to Paper Makers' use.

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