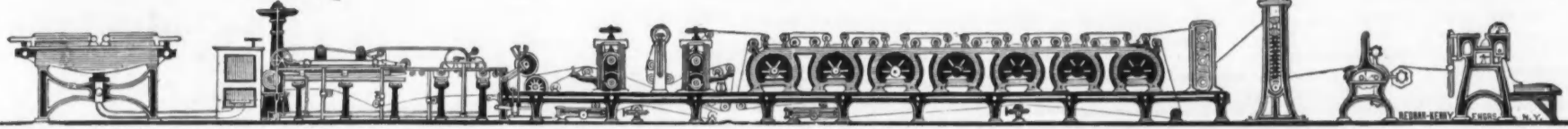


The Paper Trade Journal.



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

VOLUME VII--NO. 4.

NEW YORK, JANUARY 26, 1878.

WHOLE NUMBER 195.

Trade Topics.

Apparatus for the Manufacture of Paper for Packing Goods, &c.

A patent has issued out of the United States Patent Office to James Alfred Turner and James Tolputt Stoneham, of West Gorton, Lancaster, England, for an improved material for covering or packing goods, and a process and apparatus for manufacturing the same.

The invention relates to the manufacture of a material suitable for covering or packing articles, for lining packing cases, and other purposes. Fabrics for these purposes have hitherto been produced by uniting together with waterproof material two or more thicknesses of paper or woven fabric, or a thickness of paper with a thickness of woven fabric, and in some cases by the use of a single thickness of paper strengthened in one direction with parallel threads.

The object of this invention is to produce at a cheap rate a material or fabric which is strengthened in both directions without the use of fabrics previously woven. The patentees cause a continuous web of paper to travel in the direction of its length, serving it or covering it with water-proof or water-repelling material in a fluid or semi-fluid condition—as, for example, drying oil, resinous or bituminous material, caoutchouc, gutta-percha, and the like. From a beam or set of bobbins they supply a number of threads, which are laid or passed over and on the served paper longitudinally; and from other bobbins they supply other threads, which, by means of oscillating levers or bars, have a transverse movement imparted to them while the paper travels onward, by which means these threads are laid in a diagonal or zigzag manner over and on the paper and longitudinal threads. The whole then passes between rollers, which press the paper and threads firmly together, the water-proof or water-repelling material causing the whole to cohere.

Sometimes fine wires are employed instead of or along with the threads, either the longitudinal or the transverse, or both; and sometimes also another thickness of paper is passed through the pressing rolls, so as to cover the threads or wires.

For this process of manufacture they use an apparatus consisting of a roller, which is made to revolve in a tank or vessel containing the waterproof or water-repelling adhesive material in a fluid or semi-fluid condition. When the material employed is of a kind that is rendered fluid by heat the tank is kept hot by a steam jacket, and the roller is made as a steam roller. A continuous web of paper is drawn from a beam passed over the roller, under a deflecting rule, and over a knife or scraper, so that it receives a coating of adhesive material from the roller, and has this coating scraped and equalized by the knife. The paper then passes round a guide roller and between two pressing rollers, whence it is led to drying rollers. A number of longitudinal yarns, derived from a beam or from bobbins, pass with the paper between the pressing rollers. Also, a number of other yarns are passed through holes in plates, which are caused to reciprocate rapidly to and fro across the paper, and these yarns pass also between the pressing rollers along with the paper. The plates, reciprocating transversely while the paper travels onward, have the effect of laying each of the yarns upon the paper in a zigzag form, and by arranging the motions of the two plates so as to make their strokes in opposite directions, the yarns of the one set are made to cross those of the other set; so that when the two sets are laid on the paper they appear arranged as a net-work in the form of a number of successive diamonds.

The plates are caused to reciprocate in the following manner: On the axis of the first roller a toothed wheel is fixed. This wheel, by an intermediate wheel and pinion, drives a roller having an undulating cam-path cut in its periphery. In this cam-path is inserted an anti-friction roller, mounted on an arm projecting from a vertical spindle. Another arm on this spindle is joined to one of the plates.

A like arrangement of gearing, with a cam-roller and upright spindle at the opposite side of the machine, is provided to work the other plate, and both plates being fitted to slide horizontally in guides, their reciprocation is effected by the action of the cam-paths causing the spindles to rock. The cams are so set that the plates are made to reciprocate always in opposite directions.

The intermediate gearing, by which the roller is connected to the cams, may be made in any desired proportions, and several sets of such gearing, in different proportions, may be provided, like the change wheels of a lathe, so that the velocity of the cams in relation to that of the roller may be varied. In this manner

the obliquity of the yarns, as they are laid on the paper, may be altered at pleasure.

In some cases the inventors dispense entirely with the longitudinal yarns, or employ only a few of these at or near each edge of the paper to form a selvage, strengthening the edges. Also they sometimes employ only one set of the transverse yarns, and in such a case one of the plates being kept stationary, can serve to guide longitudinal yarns, if desired.

Sometimes a web of thin paper is led from another beam on to the paper at a point beyond the pressing rollers, passing between both pressing rollers, so that the thin paper is caused to adhere to the main web and to cover the yarns laid upon it, forming a lining to the material.

The yarns may be threads of any suitable material; or fine wires may be used when great strength and stiffness are desired.

The inventors' claims comprise:

1. An apparatus for manufacturing material by causing a web of paper served with adhesive material to travel longitudinally, while one or two sets of yarns, threads or wires are guided by oscillating bars to traverse to and fro across the paper, consisting of pressing rollers, plates, a vertical spindle, having an arm, upon which an anti-friction roller is mounted, and a roller having an undulating cam-path cut in its periphery.
2. In apparatus for the manufacture of such material, oscillating bars, provided with holes, through which yarns are passed, for guiding the yarns, threads or wires, so that they are laid in zigzag form on the traveling paper.
3. The combination of the roller, tank, beam, deflecting rule, scraper, guide roller and pressing rollers.

Improvement in Paper Cutting Machines

Wilber F. Hill, of North Manchester, Conn., has secured a patent for an improvement in machines for cutting paper. The improvement relates to machinery for the manufacture of paper, it having for its object the cutting off of sheets from the roll as it passes continuously from the paper-making machine. With the ordinary devices in use for cutting off paper from a roll the paper cannot be run continuously, but is stopped at each cutting operation, as the time taken in cutting causes the paper to run out and form a loop, which interferes with the cutting, and prevents the paper from following through the cutting mechanism.

By means of the devices herewith illustrated sheets can be cut off at any angle desired from a continuously-moving roll of paper as it comes from the paper-making machine, or from a drum on which it has been wound.

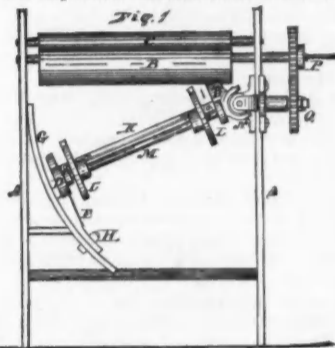
In the accompanying drawings, Figure 1 is a front view of the machine. Figure 2 is a top view with the rolls over which the paper passes to the cutters removed, so to show the parts beneath.

A is the stationary frame of the machine. B is the roller over which the sheet of paper comes from the paper-making machine or other source of supply. C is a smaller roller, resting upon the continuous sheet, in the usual manner, to press it upon the roller B, which may be called the "feeding-roller." D is a movable frame, which is hung upon a hinge-joint, E, so that it can move in a vertical plane. At the other end it is provided with a slide, F, which moves upon an arc, G, and to which it can be secured in any position by means of the set screw or clamp H. I is a movable cutter bar, which slides back and forth in horizontal grooves in the ends of the frame D. It is pressed forward or away from the opposite or stationary cutter K by means of the springs J. The bar K and the sliding bar I are provided with cutting-edges, forming a shears, the edge of I being slightly inclined, so as to cut a little drawing, in the customary manner with such edges. The cutting-edges are pressed together by means of the revolving cams L, which are given such a form as to press the bar I up quickly to do the cutting, and are instantly released, so that the bar may at once fall back from the paper and allow it to continue its motion. The cams L are placed upon the shaft M, which is provided with the universal joint N, whose centre is in the same line with the hinge-joint E, so that the shaft M can move with the frame D, and at the same time be driven by the wheel O, which is geared to the shaft P of the feeding-roller B. The rotation of the cams L is thus regulated, so as to cut off any desired length from the continuous sheet. R is a holding bar, for holding the paper while being cut. It moves on slides R' upon the cutter bar I, and is pressed toward the bar K by means of the springs S.

The operation of the cutting machine is as follows: The continuous sheet of paper passes over the drum or roller B, and between the cutting-bars I and K. When the cams L come opposite the cutter bar I, they press it and the holding bar R which it carries with it toward the paper. Just before the cutting edges engage, the hold-

ing bar R clips the paper between it and the bar K, so as to hold the sheet while being cut. The cutting edges then shear the paper and are instantly released, so that the continuous sheet can move on before it has time to form a loop or become disengaged from its proper position. When it is desired to cut off square sheets, the bar I is set horizontal, and when it is desired to cut sheets at any other angle, the frame D is depressed, so that the cutters shall have the proper inclination, and is clamped to the arc G by means of the nut H, which holds it firmly in position. The inventor claims:

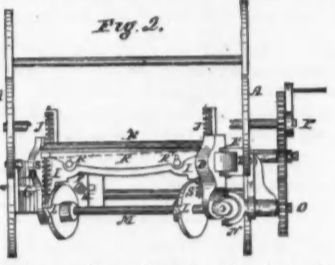
1. The adjustable inclined cutter-frame D,



hinged at one end, in combination with the slide F, the arc G, and the clamp H.

2. The frame D, containing the cutters swinging upon the hinge E, in combination with the cam-shaft M for operating the cutters, connected with the actuating mechanism of the machine by means of a universal joint, N, in line with the hinge.

3. The combination of the rotary cams L, oper-



ating to press the cutters together, the cutter-bars I and K, the holder-bar R with its springs S, and the springs J for withdrawing the cutter-bar I.

Manufacture of Soda from its Sulphate.

A new process in the manufacture of soda from its sulphate has been patented by Frederick Gutzkow, of San Francisco, Cal.

The nature of the invention consists of an improved process of preparing caustic soda, or the carbonate of soda, from sulphate of soda. There are for this operation no apparatus or implements required but such as are commonly used and generally known in the arts.

A tank or cistern, made of stone, wood, or metal, and provided with a false bottom, or a perforated pipe, or any other appliance by which gas may be drawn or forced through a liquid, is partially filled with sulphite of lime obtained in the course of the process, as described below. Water is added, and sulphurous acid, obtained also in the course of the process, or from any other source, is forced through the pulp until it is fully or quite saturated with the sulphurous gas, and the sulphite of lime has been wholly or partly dissolved. Then sulphate of soda, in a solution or in the dry state, is added, when a precipitation of sulphate of lime will take place, which is removed by filtration or settling, forming a by-product of the process.

The solution of bisulphite of soda thus obtained, is run off into a closed vessel or still, and heated to the boiling point by steam or otherwise, when sulphurous acid will escape with the water vapor, which, after being suitably cooled, is passed into the tank or cistern, where the sulphite of lime is dissolved, as described above.

The solution of the neutral sulphite of soda thus obtained is run into an iron vessel, and about so much quicklime stirred in as the proportion of the sulphite of soda in the solution will require in order to form caustic soda and sulphite of lime. The sulphite of lime is removed by filtration or settling, and re-enters the course of the process, as described above.

The clear solution of caustic soda thus obtained may be exposed to the action of carbonic acid, and converted into a solution of the carbonate from which the commercial sal soda or soda ash or bicarbonate is manufactured in the usual way, or it is at once boiled down for caustic soda, when, in the course of the concentration, the sulphite and sulphate of soda which it may still contain will separate.

Correspondence.

British Notes.

[FROM OUR REGULAR CORRESPONDENT.]

13 PATERNOSTER ROW, London, E. C., }
January 3, 1878. }

The new year has opened very inauspiciously if the weather may be taken as any indication: The cold, sharp frosts have again given way to wet, muggy dirt and slush. It is surprising to note the dampening effect of such weather. We Englishmen are great observers of the weather, and can ever find in this at least a subject for conversation; so excuse my opening 1878 with a growl at an old enemy. There is not very much to report in the way of business this week, as many people join the New Year to Xmas and keep up both holidays. The prevailing anxious topic is the action of Government, and every trade is awaiting the 17th inst. with great suspense. Nothing will be done until the eventful day comes and the programme of our Cabinet is in the hands of the public. Various opinions naturally exist as to the intentions of Government, but the majority of people think, and certainly hope, that they are peaceful. As soon as this vexed question is settled we may, I think, reasonably look forward to a time of real good business. Every trade has been slack during the past year, and a general rise in all commercial quarters may be expected. Indeed, after so low a condition of things, a violent and excitable reaction may be looked for. Meanwhile there is great distress in many of our manufacturing districts, chiefly owing to strikes. The iron trade has especially suffered. It is to be hoped that if our working classes cannot see the folly of driving trade away into foreign countries, they may be taken in hand and trades unions suppressed or put under proper government. The new year, while opening ominously, has yet signs of promise, and I trust we may find it a good year for our trade.

Our markets cannot offer any very special point of interest just now, as the holidays and the uncertain state of affairs preclude any change taking place. Things are about the same, but as it is always interesting to know at the beginning of each year how we commence trade, I have appended a full report of the various markets.

There is no mill news this week of any consequence. Many mills have been taking advantage of the holidays to have a thorough clean-up and see to their machinery and plant being in proper repair to start the new year with.

I see the Edinburgh Paper Mills were burned down yesterday. The loss is estimated at about £35,000. They employed 80 hands.

A contemporary has the following remarks: "Paper-makers evidently may look forward to a happy new year. The following may give a clear view of the extent of our paper trade. It is generally admitted that the process of paper-making was introduced into England about the beginning of the fifteenth century, and into Scotland at the end of the eighteenth century. The process of converting rags into pulp was until the last century very laborious, but at that time the Hollander or beating machine was invented, which completely revolutionized the mode of making paper. The number of mills in Great Britain is 385, of which 65 are in Scotland. There are in these mills 526 machines at work, producing annually 350,000 tons of paper, to which must be added 10,000 tons made by hand. The total production is thus 360,000 tons, valued at twenty millions sterling. Our exports amount to 16,000 tons, while we import 34,000 tons."

Our friend and contemporary, the *Paper Makers' Monthly Journal*, has published with its January number a supplement which is really an alphabetical list of the paper mills, manufacturers and their specialities in the United Kingdom. A number of advertisements also complete a very useful and handy reference in the office. The *Journal* itself is more than usually interesting, and contains much matter calculated to impress its readers. I particularly note the appeal for, and defense of, the Paper-makers' Club, and I see that at the next meeting "the complete reorganization of the club, and an extension of its usefulness to the trade" will form a subject of consideration.

The question of fibre supply has often been alluded to in these columns and I see from a short note in the *British Trade Journal* that experiments have been made with the leaf of the pine-apple plant. This plant grows very luxuriantly in the tropics, and the penguin—a fibre which I have repeatedly advocated here—belongs to the same family as the pine-apple. In the West Indies the pine-apple and penguin plant flourish abundantly, the latter being considered a positive *bête noir*. When it once gets a good hold it is something like our hop plant—very difficult to eradicate. It spreads wonderfully, and hence a

good supply might in a few years be relied upon. Even as the utilization of waste products has been a growing industry and produced boundless wealth to people who have prosecuted the matter perseveringly, so we shall soon cultivate weeds and find it pay. The fibre of the pine-apple family is good, clean and strong, and would be an excellent material for paper-making. It takes very little chemical treatment and when properly prepared is about the finest fibre I have ever seen for color and quality. Several specimens prepared in Jamaica were sent to the Centennial.

Our Home Markets.—Our fibre market is so quiet through the absence of people that any remarks are unnecessary. Prices at present are but nominal. Inquiry increased somewhat towards the end of the week and holders were firm. Many contracts for waste papers are on the tapis, and we may perhaps expect rather better prices.

Rags.—Best linens, 26s.; No. 1 ditto, 24s.; No. 2 ditto, 20s.; No. 3 inferior ditto, 15s. to 16s.; the best cottons, 24s. to 35s.; No. 1 ditto, 21s.; No. 2 ditto, 16s. to 17s.; No. 3 superior ditto, 14s. to 15s.; blues, 16s.; colored rags, 10s. to 12s.; London fines, 25s.; Essex ditto, 25s.; outshots (country), 15s.; seconds, 10s. to 11s.; thirds, 6s. to 7s.; best canvas, 22s.; seconds, 15s. to 17s.; inferior, 9s. Clean gunny, 9s. to 10s.; bagging, 7s.; coil rope, 12s.; white rope, 9s. to 10s.; jute cuttings, 12s.

Wastepapers.—Best cream shavings, 30s.; mixed ditto, cream and blues, 16s. to 18s.; blues, 16s.; seconds, 14s. to 16s.; thirds and mixed, 4s. to 6s.; strong brown papers, 5s. to 6s.; mixed ditto, 3s.; ledger paper, 14s.; letter ditto, 10s. to 12s.; black news, 5s.; railway tickets, 5s.; rubbish and sweepings, 2s.

In esparto trade has been very dull during December. Nothing has occurred to break the monotony of the quietness of this market. There are some very heavy stocks and remnants of stocks in the hands of consumers through bad trade, and this must have an effect and stay demand for a time. The quality of the grass has greatly deteriorated and picking, selecting, sorting, &c., and other tiresome hand operations have to be borne by the consumer in order to get a decent sample for use. The prices are as follows: For Spanish, £8 to £10; Algerian, £5 5s. to £6 10s.; Susa, £7 10s.; Mogador, £5; Sfax, Gabes and Tripoli, much the same, £5 to £5 5s. Aise and palm-leaves, nominal sales at £4 to £4 10s.

In Pulp, the Gottenberg Chemical Company, of Mincing Lane, quote: Bleached chemical wood or straw pulp, dry, in sheets, at £23 to £24; unbleached ditto, £19 to £21; dry pine pulp, £10 to £10 10s.; dry aspen, £11; moist 50 per cent. pine pulp, £5, in sheet or cake; moist 50 per cent. aspen, £5 15s. In this market there is a little activity always observable at the time preceding the closing of the navigation of Scandinavian ports. There is, however, no scarcity to meet the demand.

Chemicals.—Messrs. Cooper, Bros. & Co. report that there is no change to notice in either the Newcastle-on-Tyne or Liverpool market, business continuing much depressed. Prices are: Refined alkali, 50 to 52 per cent., 1½d. per per cent.; soda ash, 48 to 52 per cent., prompt delivery, 1½d. per per cent., less 6 per cent. discount; soda crystals, gross, £3; bleaching powder, 35 to 36 per cent., £5 5s.; foreign antichlor, £9; English ditto, £10 5s.; Jarrow caustic soda, 74 per cent., £14. For 1878—Soda ash, 45 to 52 per cent., 1½d., less 5 per cent. discount; bleaching powder, 35 to 36 per cent., £6, less 5 per cent. discount—all f. o. b. the Tyne, less the usual discount.

In Liverpool, prices are: White caustic soda, 70 to 74 per cent., £13 5s.; white caustic soda, 60 to 62 per cent., £11 5s.; cream caustic soda, 60 to 62 per cent., £11; caustic soda bottoms, £8; bleaching powder, in hard wood casks, 35 to 36 per cent., £5 7s. 6d.; ditto, in soft wood casks, £5 5s.; soda ash, 48 to 52 per cent., 1½d. per per cent.—all less 2½ per cent. discount, and f. o. b. Liverpool in Mersey. W. F. C.

13 PATERNOSTER ROW, LONDON, E. C., }
January 12, 1878. }

Trade and orders are like trade news—scarce. The minds of most people are now upon politics, and discussions over the great problem of peace or war are plentiful among people who ought to be too busy to "talk politics." The eventful 17th January, 1878, will, I am truly thankful to say, be over and past before my next letter to you. Everybody is awaiting its advent, I most anxiously. I consider a grave crisis is at hand which will decide the question of business for this year. Our trade has suffered very severely, and our shipping business—one of our strongest points—was never known to be in such a low state. If then the cloud can be dispersed, and a ray of sunshine let in upon our expectant gaze, what a relief it will be. As I remarked, there is nothing stirring in our trade. Orders are rather scarce, and get worked off much as usual. Prices are yet low and likely to be for some time. I

think, indeed, all our markets exhibit a tendency to firmness at present quotations, and I do not think they will move either way for the time.

There is no excitement, no change, either in demand or supply or price. This is what I call being very steady.

I was rather astonished to hear an account of one of the discussions at the Society of Arts after a lecture on paper-making.

Talking of bamboo reminds me of other wood fibres. I saw a splendid sample of chemical wood pulp last week, but it was 25s. per cwt.

How wonderfully trade journalism is progressing! We have scores (almost) of trade journals here.

I notice your correspondent's inquiry relative to the use of wire netting here in place of the ordinary drying felt.

Home Markets.—Coals.—Prices at close of market were: Wallsend—Hetton, 18s.

Fibres are all the same as last week, and chemicals also.

Philadelphia Notes.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, January 24, 1878. That business not only in the paper trade, but in all other lines, is more than ordinarily quiet is evident wherever we go.

The Free Pipe Line bill in our Legislature, the silver question, and the tariff on iron are all of vital interest to the business of this city and of every other section of the country.

Our paper manufacturers are generally moderately active on orders, but at very low prices. There seems to be no remedy at present, as the supply is fully equal, if not in excess of, the demand.

Paper stock remains stationary in the price, but is held firm nevertheless. There has been a good representation of the paper trade in this city during the past week.

Among the early pleasant recollections of the writer is that connected with Wm. H. Filtcraft, then a clerk in the extensive paper house of Charles Magarge & Co.

Philadelphian white rags are quoted stiff, but without material advance. Leghorn and Russian rags are as low in present quotations as they will be offered at.

Chemicals.—The characteristics of the market the past week have been dullness, but steady prices. Fair stocks in store, but holders do not seem anxious to sell.

The Standard Wire Works. Eastwood Buchanan & Smith, Belleville, N. J., report that they have built a new brick factory, two stories high, 100x30 feet.

Having the benefit of experience and all of their own improvements, they are enabled, with their fine machinery, to produce Fourdriner wires, which they assert will give great satisfaction to the paper-maker.

amount of work for which they receive orders, and are now doubling up their plant. They have received letters patent for "Safety Edge" Fourdriner wires, which they regard as a benefit to paper manufacturers.

Taking into consideration their business and practical experience, together with their fine machinery, they feel confident that they will continue to turn out fine grades of goods and look to the present year with great hopes.

New Patents.

No. 198,469. Machines for Lining Paper-Boards.—J. F. Seiberling and Monroe Seiberling, Akron, Ohio.

1. In a machine for lining pasteboard, the combination of an adjustable depressing roller and paste-box, or their equivalents, in combination with paste-spreading rollers and a drying-roller.

No. 198,496. Vulcanized Rubber Fabrics for Belting.—John Murphy, Brooklyn, assignor to the Gutta Percha and Rubber Manufacturing Co., New York, N. Y.

An extra strip of sheet-rubber inserted between the outer and the adjoining inner ply or inner plies of the belt, and right under the butt-joints of the outer ply.

No. 198,519. Paper Cutting Machines.—J. G. Morgan, Appleton, Wis.

1. Uprights provided with grooves for guiding the knife plate, and bearings for the camshaft, combined with a cap having bearings or supports for the projections of the yokes.

2. A binder having side bearings in the frames and operated from a central shaft and gear by means of vertical screws and gears.

No. 198,671. Apparatus for Recovering Alkali from Waste Solutions.—Martin Nixon, Philadelphia, Pa.

A heating and evaporating apparatus, consisting of a furnace and a heater adapted to be rotated within the furnace, the heater, through which the solution is caused to pass.

No. 8,030. Paper-Box Machines.—Henry R. Heyl and August Brehmer, Philadelphia, Pa., assignors to the Novelty Paper Box Company.

The combination of a traversing grinding mechanism, and yielding bearings for supporting the object to be operated upon.

United States Treasury Department.

1878.—Department No. 1.—Secretary's Office.—Circular Exhibiting the Values in United States Money of the Pure Gold or Silver representing, respectively, the Monetary Units and Standard Coins of Foreign Countries.

TREASURY DEPARTMENT, WASHINGTON, D. C., JANUARY 1, 1878.

The first section of the Act of March 3, 1873, Statutes at Large, volume 17, page 602, reproduced in Section 3,564 of the Revised Statutes, provides "that the value of foreign coin, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value."

The estimate of values contained in the following table has been made by the Director of the Mint, and is hereby proclaimed in compliance with the above stated provisions of law:

Table with 4 columns: Country, Monetary unit, Standard, Value in U.S. money.

The above rates will be taken in estimating the values of all foreign merchandise made out in any of said currencies, imported on or after Jan. 1, 1878.

I am, very respectfully, JOHN SHERMAN, Secretary of the Treasury.

Manufacturing News.

EASTERN STATES. A new "shaker" or separator has been put into Chase & Longley's wood pulp mill at Curtisville, Mass., for the purpose of improving the pulp for working into the finer grades of paper.

MIDDLE STATES. The new pulp mill at Hadley, N. Y., is reported to have made in a twelve hours' run on the night of January 22, with one set of machinery, 1,400 lbs. dry-weight, poplar pulp.

SOUTHERN STATES. The Bath Paper Mill, Bath, S. C., is not running at present, but expects to start up on full time shortly.

The Falls of Neuse Manufacturing Company, Neuse, N. C., is making at present 3,500 lbs. book and news daily.

The Richmond Paper Manufacturing Company, Richmond, Va., is running full time on book and news.

The Savannah Paper Company, Savannah, Ga., has turned to its full capacity on straw wrapping paper, made from rice straw.

Hydrogen, without any trace of sulphur, arsenic, antimony or carbon, has been prepared by Varenne and Herbe, by passing the gas through a solution of 1,000 grams of water, 100 of bichromate of potassa, and 50 of sulphuric acid.

Don't judge a man by his failure in life, for many a man fails because he is too honest to succeed.

CABOT, BOWLES & CO., New York, BROTHERS IN Jute Butts, Bagging & Rope

Our facilities for buying or importing are unequalled. The large business we do enables us to make the best possible arrangements for freight.

PETER HERDER, Paper Warehouse, Fine Manillas, Pure Rope, Bag and Tag, Book and News Paper, Mailing Paper.

ALL KINDS OF PAPER MADE TO ORDER AT SHORT NOTICE. No. 75 JOHN STREET, NEW YORK.

RICH'D LACEY & CO., 133 Pearl Street, New York, BROTHERS IN JUTE BUTTS AND REJECTIONS.

J. HENRY BLANCHARD, Chemical Broker, NO. 42 BATTERY MARCH ST., BOSTON, MASS.

MANUFACTURERS OF WOOD PULP. SUPERIOR QUALITY Wood Pulp. For price and samples address, J. HENRY BLANCHARD, Boston, Mass.

A.H. GERE & Co., 73 Walnut Street, Cincinnati, Dealers in Paper-Mill Supplies.

We keep constantly on hand a full stock of all Dye Stuffs and Chemicals used by Paper Manufacturers.

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.:

Table of book titles and prices: AUERBACH—Anthracene: Its Constitution, Properties, Manufacture and Derivatives. \$5 00

HOWARD LOCKWOOD, Box 5514 P. O., New York.

RUBBER BELTING GOODS. Warranted best quality, at lowest prices. Heavy 8 and 6 ply Belts a Specialty. R. LEVICK, SON & CO. 734 CHESTNUT ST., PHILADELPHIA.

DIRECTORY.

Cards under this heading will be charged for at rate of \$10 per annum for each card.

NEW YORK HOUSES.

BLOOMINGTON PAPER AND BAG CO., Corner Greenwich & Chambers sts., N. Y.

CLARK, N. E., Mfg. Machine-made Paper Bags, 172 Fulton st., N. Y.

GORDON & GILBERT, Mfrs.—Paper and Printers, 7 College place, N. Y.

Paper and Paper-Makers' Supplies.

ANDERSON, J. F., Jr., & Co., 34 Beekman st. BARRETT, THOMAS, 113 Fulton st.

Rags and Paper Stock. ATTERBURY BROS., 253 & 255 Front st. BRIGGS & TAYLOR, 60 Duane st.

Oils. BINNS & LEA, 35 Fulton st.

Paper-Makers' Chemicals and Colors. GANTZ, JONES & CO., 176 Duane st.

Paper-Makers. ORRS & CO., Printing and Hanging Mills at Troy.

Jute Butt Brokers. CABOT, BOWLES & CO., 85 Beaver st.

Straw Boards. BUTTERFIELD, H. A., 548 Pearl st., near Broadway.

HAYES, JAMES E. & CO., 75 Duane st.

OUT OF TOWN HOUSES. Belt Hooks. WILSON, GREENLEAF, Lowell, Mass.

Leather Belting. DAVIS, JAMES & SON, Manufacturers of Leather Belting and Patent Lace Leather.

Paper Boxes. COZINE & CO., 293 and 295 Broadway, Albany, N. Y.

Paper Bags and Flour Sacks. RAYMOND BAG CO., Mfg. Raymond Pat. Machine-made Paper Flour Sacks.

Paper Makers' Chemicals and Colors. BLANCHARD, J. HENRY, Chemicals and Wood Pulp.

MITCHELL, WM. H., Paper-Makers' Chemicals, 43 North Front st., Philadelphia, Pa.

NEVINS, SAMUEL, Paper-Makers' Chemicals and Colors, 110 South Front st., Philadelphia, Pa.

Paper-Making Machinery. ALLEN IRON WORKS, Improved Filter, South Adams, Mass.

DANIELS MACHINE CO., Rag-Cutters, Woodstock, Vt. GAVIT PAPER MACHINE WORKS, 224 to 230 North Broad st., Philadelphia, Pa.

HOLYOKE MACHINE CO., Holyoke, Mass. SMITH, WINCHESTER & CO., South Windham, Ct.

CAPRON, E. P. H., Improved Turbine, Hudson, N. Y.

Rags, Paper and Paper Stock. BAKEWELL, ALLAN C. & CO., Printers' Supplies and Paper Warehouse, 75 Wood st., Pittsburg, Pa.

BARBER, J. & J. S., Paper Stock and Binders' Boards, 621 and 623 Commerce st., Philadelphia, Pa.

BLOCK & POLLAK, Paper Stock, 936 to 938 West Third st., and 39 to 37 McFarland st., Cincinnati, O.

BOYNTON & PERKINS, Paper and Twine, Mfrs. of Cotton Twines and Cordage, Providence, R. I.

BUTLER, THOMAS, Dealer in Paper Stock, Woolen Rags, &c., 249 Causeway st., Boston, Mass.

ELLIOT, A. G., Paper & Paper Stock, 26 S. Seventh st., Philadelphia, Pa.

GARVAN, P., successor to E. J. Carroll & Co., Wholesale and Retail Dealer, Hartford, Ct.

GILBERT, WM. & CO., Paper and Woolen Mfrs' Materials, 11 & 13 Market st., Chicago, Ill.

GRAHAM & BRO., H. B., Paper Warehouse and Stock Dealers, St. Louis, Mo.

GRAVES & BROWN, Wholesale Dealers in Rags, Corner Church and Arch sts., Albany, N. Y.

HALL, WM., & CO., Wool Stock & Mfg. of Shoddy, 25 No. Front st., Philadelphia, Pa.

HARRISON, JAMES, Dealer in Paper and Rags, 102 Second av., Pittsburg, Pa.

KNIGHT, REEVE L., Jr., Book and News Paper and Paper Stock, 923 Commerce st., Philadelphia, Pa.

MCARDLE & HART, Cotton and Woolen Rags and Paper Stock, Newburg, N. Y.

MURDOCK, L. A., Commission Merchant, Front st. (Bigelow Court), Worcester, Mass.

SIMMONS, JOHN, Wholesale Dealer in Paper and Rags, 20 & 22 Decatur st., Philadelphia, Pa.

Straw Boards and Straw Wrapping. ROGERS, H. W., Straw Wrapping Mill at Philmont, Columbia Co., N. Y.

Straw Boards and Straw Wrapping. TUCKER'S, E., SONS, Straw Boards, Paper and Paper-Box Mach'y, 160 Trumbull st., Hartford, Ct.

Wire-Cloth Manufacturers. STANDARD WIRE WORKS, Belleville, N. J.

FOREIGN HOUSES. Wood Pulp and Wood Pulp Boards. THE GOTHENBURG COMMERCIAL CO. (Limited) Market Buildings, 29 Mincing Lane, London, Eng.

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

IMPORTS of Paper and Paper Materials, Books, &c., at the Port of New York, for the week ended Jan. 18, 1878.

Table listing various paper and chemical products with columns for quantity, price per unit, and total value.

TOTAL IMPORTS. General Merchandise, for the week ending Jan. 18, 1878, \$3,638,672.

Table listing imports of Paper Stock, Books, and Chemicals at the Port of New York, with columns for quantity and value.

IMPORTS of Rags and Paper Stock at the Port of New York, since Jan. 1, 1878, from the following Ports, showing quantities from each Port.

Table showing import quantities for various ports including Antwerp, Bremen, Bristol, Cardiff, Glasgow, Hamburg, Havre, Hoga, Hull, Leghorn, Liverpool, London, Newcastle, San Francisco, and Trieste.

EXPORTS of Paper, Books, &c., from the Port of New York to Foreign Ports, for the week ended Jan. 23, 1878, with Aggregates and Values.

Table showing export quantities for various countries including British West Indies, British Guiana, Cuba, Porto Rico, Mexico, United States of Colombia, Argentina Republic, Brazil, British Australia, and Venezuela.

TOTAL EXPORTS. General Merchandise, for the week ending January 22, 1878, \$5,366,962.

NEW YORK IMPORTS. FROM JAN. 18, 1878, TO JAN. 24, 1878, INCLUSIVE. Rags, &c. E. Storey Smith, Harvest Queen, Newcastle, 116 bs. rags.

PHILADELPHIA IMPORTS. Books. J. B. Lippincott & Co., Illinois, Liverpool, 8 cs. Soda Ash. Brown Bros. & Co., Illinois, Liverpool, 26 tcs.

BALTIMORE IMPORTS. Books. A. Schumacher & Co., Ohio, Bremen, 1 cs.

BOSTON IMPORTS. IMPORTATIONS of Paper Stock, Chemicals, &c., at Port of Boston, from January 18, 1878, to January 24, 1878, inclusive.

Books. Little, Brown & Co., Siberia, Liverpool, 18 cs. Mass. State Library, by same, 1 cs.

Paper Stock. J. G. Hall & Co., Victoria, Liverpool, 140 bs. oakum.

M. A. Ring & Sons, Istrian, Liverpool, 35 bs. rope. J. T. Lodge & Co., by same, 33 bs. paper stock.

M. A. Ring & Sons, Siberia, Liverpool, 113 bs. paper stock. H. L. Chase, by same, 16 bs. rags.

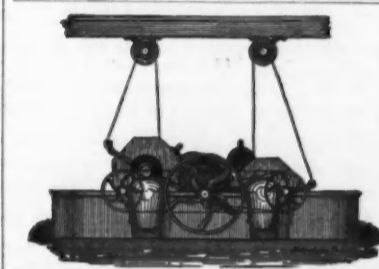
Warren & Co., Massachusetts, Liverpool, 359 cs. E. Hill, Bohemian, Liverpool, 280 cs.

Bleaching Powder. S. D. Austin, Istrian, Liverpool, 69 cs. W. F. & F. C. Sayles, by same, 55 cs.

Venetian Red. Hobbs, Pope & Co., Siberia, Liverpool, 85 bbls. Soda Ash. S. D. Austin, Istrian, Liverpool, 62 cs.

Hide Cuttings. T. Groom & Co., Bohemian, Liverpool, 71 bs. China Clay. J. Henry Blanchard, Carroll, Savannah, 48 cs.

NEW ORLEANS IMPORTS. Soda Ash. Order, St. Louis, Liverpool, 138 tcs. Caustic Soda. Order, St. Louis, Liverpool, 30 drums.



THE PATENT CONE WASHER.

ITS ADVANTAGES: It will wash faster than any washer ever put before the public.

It requires only one instead of two in an engine for washing rags, and washes much faster. It reduces expense of wire covering one-half.

J. T. EMERSON, Claremont, N. H. PATENTEE AND SOLE MANUFACTURER.

TISSUE PAPERS.

of the CELEBRATED ENGLISH MAKE, Trade Mark, No. 682, White, Colored and Silver Tissue, manufactured expressly for Jewelers' and Silver-Platers' use.

STOUT, MILLS & TEMPLE.



AMERICAN Turbine Water Wheel,

GEARING & SHAFTING, Rag Engines, Wood or Iron Tubs, RAG-CUTTERS, DUSTERS, Pumps, &c.

THE AMERICAN TURBINE, as recently improved, utilizes a higher average percentage of power than any Turbine ever known.

STOUT, MILLS & TEMPLE, DAYTON, OHIO.

THE SIBLEY MACHINE CO., NORWICH, CONN.,

Manufacturers of Modern Improved Paper Machinery, RAG ENGINES, DUSTERS AND THRASHERS, RAG AND ROPE CUTTERS, ROLL BARS, BED PLATES AND ROTARY BOILERS, HUNT'S TURBINE WATER WHEELS, MILL GEARING, SHAFTING, PULLEYS AND MILL JOBBING.

ARE YOUR MILLS Fully Insured In SOUND Companies?

A prominent paper-maker writes: "As stated before, we want to get out of the hands of our local agents, who omit no opportunity to make us feel that we are paper manufacturers, and that paper mills are burning up at the rate of one a minute."

We can refer to some of the leading Paper Mills, for whom we are SOLE AGENTS.

We can Save you Money.

Blank surveys sent by mail upon application. ADDRESS,

ANDERSON & STANTON Insurance Brokers. 152 BROADWAY.

Geo. P. Rowell & Co. CONDUCT AN AGENCY

FOR THE RECEPTION OF ADVERTISEMENTS FOR AMERICAN NEWSPAPERS. The Most Complete Establishment of the Kind in the World.

8,000 NEWSPAPERS ARE KEPT REGULARLY ON FILE OPEN TO THE INSPECTION OF CUSTOMERS.

EVERY ADVERTISEMENT IS TAKEN at the HOME PRICE of the PAPER, Without any Additional Charge or Commission.

IS SENT FREE to ANY ADDRESS ON APPLICATION. Persons at a distance wishing to make contracts for advertising in any town, city, county, State or Territory of the United States, or any portion of the Dominion of Canada, may send a concise statement of what they want, together with a copy of the ADVERTISEMENT they desire inserted.

Orders are taken for a single paper as well as for a lot. For a single dollar as readily as for a larger sum. Office—Times Building, 41 Park Row, And No. 10 Spruce St., New York.

NATRONA POROUS ALUM, FOR PAPER MAKERS' USE.

FREE FROM IRON AND FROM EXCESS OF ACID. Two pounds of it will size as much paper as three pounds of Potash or Ammonia Alum.

Pennsylvania Salt Mfg. Co.

140 South Delaware Ave., Philadelphia, Mo. 212 Washington Ave., St. Louis, Mo.

AGENTS: W. M. ELLICOTT & SON, Baltimore. MOREY & CO., Boston. E. L. EMBREE New York.

WATERPROOF LEATHER BELTING

Expressly adapted to Paper Mills. Oak Tanned Leather Belting, Hydraulic Packing Leather, Fulled Raw-Hide Lace Leather.

MANUFACTURED BY ANTON HEIM, 33 Ferry Street, New York.

THE SIBLEY MACHINE CO., NORWICH, CONN.,

Manufacturers of Modern Improved Paper Machinery, RAG ENGINES, DUSTERS AND THRASHERS, RAG AND ROPE CUTTERS, ROLL BARS, BED PLATES AND ROTARY BOILERS, HUNT'S TURBINE WATER WHEELS, MILL GEARING, SHAFTING, PULLEYS AND MILL JOBBING. In the last twenty-five years having furnished machinery to some of the best mills in the country the subscriber feels confident of giving the best satisfaction.

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, 1878.

Advertisements cannot be received for insertion in the current week later than 9 A. M. on Friday.

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.

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, 8 thalers.

Communications on matters of interest to the trade are earnestly solicited from all quarters, and if used will be liberally paid for.

HOWARD LOCKWOOD,

Publisher and Proprietor, No. 74 Duane street, N. Y.

Philadelphia Office: No. 506 Chestnut st.

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.

Subscribers to THE JOURNAL can be supplied with the best cloth binder in the market. Deliverable at the publication office. Price, \$1.25.

SOME of the paper-makers, if, indeed, not all of them, have been making money. We do not assume that they have been turning over the surplus acquired in former years, although it is possible; but we note that several companies have been paying dividends to the shareholders.

THERE is a good sign in the trade. It is remarked that many would-be buyers cannot fill their orders to the extent they would like to, and that dealers are using more care in limiting their sales.

THE first page illustration to-day is of a new paper cutting machine invented by W. P. Hill. This apparatus is specially intended to cut paper angularly and into diamond shaped sheets suitable for working into envelopes.

THE newspapers and periodicals of the world are, outside altogether of their moral influence, of great importance in the industrial world. The total number of periodicals now published is certainly not under 23,000.

prints 400 papers and magazines. In the Austrian Empire there are some 1,200 papers and magazines, one-half of which are in German. Switzerland, with a small population and territory, counts up 450 periodicals, of which number 280 are in German, 130 in French, and the remainder in the Italian and Romance languages.

THE annual circular of Dun, Barlow & Co. presents, as might be expected, some interesting figures as to the commercial situation during the year last ended. The failures were 230 less in number than for the year preceding, but the liabilities were barely half a million of dollars less.

From the close imitation this new process has to some of Nature's more perfect work to ward off injury from or resistance to water as familiarly exemplified in the covering of some of the feathered organizations, I have thought it not inappropriate to give it the anomalous name of "Gooseback paper."

Personals.

William McDonald is notified that there is a letter for him at Shawassaw, Mich. Major Craig, at one time president of and manager for the Bath Paper Company, Bath, South Carolina, died recently at Columbia, S. C.

In Town.

J. S. Ely, Norwich, Conn.; B. F. Williams, Phoenixville, Pa.; Mr. Mudge, Baltimore, Md.; L. C. Woodruff, Buffalo, N. Y.; D. Alexander, Ashley Falls, Vt.; D. B. Fenn, South Lee, Mass.; S. S. Rogers, Lee, Mass.; J. T. Emerson, Claremont, N. H.; T. Gilbert, Waterford, N. Y.; J. W. Wheelwright, Boston, Mass.; S. A. Parks, Glen's Falls, N. Y.

Correspondence.

[Communications are solicited from everyone who has anything of value or interest to impart. Items of news, trade gossip, and personal information will be gladly received.]

Important to the Paper Industry.

Inventions and new discoveries, more or less practical, will never cease so long as the elasticity of that subtle thing which men call mind holds supremacy; but even mind has its varied terminal points of power and practical application.

Now for the practical application of this novel process. Will it open up new avenues for the consumption of the products of the paper industry? Will it introduce into the market for daily use a new and useful article for the prevention of waste of valuable material?

From the close imitation this new process has to some of Nature's more perfect work to ward off injury from or resistance to water as familiarly exemplified in the covering of some of the feathered organizations, I have thought it not inappropriate to give it the anomalous name of "Gooseback paper."

Failures.

J. Latham, publisher, Boston, Mass., has failed. Leon Schaap, news dealer, Richmond, Va., has failed. H. C. Bagley, stationer, &c., Portland, Me., is reported failed.

C. L. D. Crockwell & Son, stationers and book dealers, Council Bluffs, Iowa, are asking an extension.

F. M. Taylor, book dealer, &c., Maquoketa, Iowa, is offering to compromise, and has sold out his business.

The committee appointed by the creditors of Frothingham & Co., stationers, Boston, Mass., to consider the proposition of that firm to pay forty cents on the dollar, met Wednesday and agreed to reject the proposition.

John G. Hodge, of the firm of J. G. Hodge & Co., San Francisco, Cal., arrived in this city on Tuesday, and submitted to the committee appointed by the Stationers' Board of Trade the proposition which he had spoken of, offering some time ago to pay fifty cents on a dollar in six, nine and twelve months' notes.

The committee, composed of Geo. L. Pease, Edmund McLaughlin, Gavin Houston and W. C. Horn, appointed by the Stationers' Board of Trade to inquire into and report upon the affairs of the Gray-Baker Book and Stationery Company, St. Louis, Mo., have reported to the cred-

itors that an extension should be granted on condition that payments of ten per cent. of the amount due should be made on the first days of March, of May and of July respectively; payments of fifteen per cent. on the first days of October, of November and of January 1879 respectively; ten per cent. on March 1, 1879; and five per cent. on the first days of May, of July and of September 1879.

Chattel Mortgages.

NEW YORK CITY.

Table with columns: Mortgagor, Mortgagee, Amount. Includes entries for W. B. Bromell, W. Brown, H. De Mariel, etc.

BROOKLYN.

Table with columns: Mortgagor, Mortgagee, Amount. Includes entries for Henry M. Gardner, John S. Murphy, Charles Bunce, etc.

NEW JERSEY.

Table with columns: Mortgagor, Mortgagee, Amount. Includes entries for W. E. Besser, A. W. Collins, C. F. Brocke, etc.

EASTERN STATES.

Table with columns: Mortgagor, Mortgagee, Amount. Includes entries for E. K. Dunbar, George H. Ellis, W. B. Gorham, etc.

WESTERN STATES.

Table with columns: Mortgagor, Mortgagee, Amount. Includes entries for J. S. Elwell & Co., Williams & Co., Edward Keogh, etc.

Changes, Removals, and New Firms.

George Wooley, stationer, Waltham, Mass., has sold out. M. S. Hunt, printer, Manchester, N. H., has sold out to A. J. Hoyt.

G. W. Lowery, stationer, &c., Geneva, Neb., has sold out to John A. Dempster.

P. D. Wolfenberger, stationer and book dealer, Princeton, Ill., is closing up his business.

Alfred Hindle, news dealer, Wilmington, Del., has been succeeded by Mrs. Annie E. Green.

George J. Titus & Co., printers, Chicago, Ill., have dissolved partnership; George J. Titus continues.

A. W. Lang & Co., printers, Hartford, Conn., have dissolved partnership. Finlay Brothers succeed.

Edward J. Pennypacker, publisher of the Pendleton News, Franklin, W. Va., has removed to Monterey, Va.

J. M. Hopsen, printer and publisher of the Valley Index, Waterbury, Conn., has sold out to Isaac A. Mattoon.

L. Waldenberg & Co., fancy stationers and dealers in notions, St. Louis, Mo., have dissolved partnership; M. Evans succeeds.

John C. Yorston & Co., publishers' agents, Cincinnati, O., have sold out to J. C. Yorston. The firm name remains unchanged.

Chamberlin, Whitmore & Co., 41, 43 and 45 Beekman street, have secured additional room, to be occupied February 1, for the better arrangement of the new and improved machinery which they are putting in.

Dunning & Sawyer, books, stationery, drugs, &c., Allegan, Mich., have dissolved partnership, Mr. Sawyer retiring. H. M. Dunning, who has been in the same line of business, has united his stock with that of the remaining member of the late firm, and the style of the new house will be Dunning Brothers.

It is expected that the St. Gothard tunnel will be completed in the spring of 1880. Its successful accomplishment is now believed to be simply a matter of expense, as the chief engineering difficulties have been overcome.

An Open Letter.

DAYTON, O., January 17, 1878.

GENTLEMEN—In your last issue, we notice our name among those charged with bad faith toward the late "Straw Board Association."

We object to this for a number of reasons, among them the following: We were not members of said association, and under no promise or agreement to observe its prices in the sale of our goods.

The statement that Mr. Jaeger, of New York, sold fifteen tons of our board at \$48 9-10 is simply false. He never had that quantity on hand at one time.

At the time of its organization, and repeatedly during its short life, we were solicited to cast our lot with the association, and by its President threatened with annihilation if we did not "come into the fold," but our reply was uniformly that we had no faith in it, and should wait until its members gave evidence they were living up to its requirements.

As to whether our course in the matter is justifiable or not from the facts in the case, we simply refer your readers to the President's own confessions. Very respectfully C. L. HAWES.

Newspaper Intelligence.

The following is a list of new newspapers, furnished from the advance sheets of the American Newspaper Reporter and Printers' Gazette:

Table with columns: NEWSPAPERS, WEEKLY, Size. Includes entries for Benicia (Cal.) New Era, Callstoga (Cal.) Independent Callistogan, Anita (Iowa) Times, etc.

MONTHLY. Tuscaloosa (Ala.) Southern Law Journal, 8vo., pp. 68. Minneapolis (Minn.) Ariel, 9x12.

ENLARGEMENTS. The Appeal, Leavenworth, Kan., has enlarged to 28x42. The Daily Gazette, Elmira, N. Y., has enlarged to 27x41.

CHANGES. The Golden Dawn, San Francisco, Cal., has merged into the Mission Mirror. The Herald, Chicago, Ill., has changed to sixteen pages, 13x17.

CONSOLIDATIONS. The Horry News, Conwayboro, S. C., has consolidated with the Georgetown Comet under the title of the Georgetown Comet and News.

Improvement in Rag-Washing Machines for Paper-Making. Frank A. Cloudman, of Cumberland Mills, Maine, has patented a new rag-washing machine, which is designed as an improvement in the interior construction of cylinders of rag-washing engines used in paper manufacturing.

The cylinder is arranged at the inside with a number of curved buckets, that extend in a spiral from the circumference toward and slightly past the central outlet, terminating at their inner edges in angular flanges. The buckets are also inclined toward the longitudinal axis, from the rear toward the front, and made of a continuous piece of wood, as preferable to metallic buckets.

He employs a cylinder washer as used in the manufacture of paper in rag-washing engines. The periphery of the cylinder is covered with wire-cloth, in the usual manner, to admit the water but exclude the rags.

This cylinder is revolved by a central shaft, secured to its rear end or head, and, by radial arms, to a cylindrical casing around the central outlet of the front head.

The inner edges of the buckets terminate in flanges, placed at right angles thereto, so that the water cannot flow from one bucket into the one next following until the latter has left the water-line of the tub, or, in other words, has ceased to dip water for that revolution of the cylinder. The buckets are also secured to the cylinder at an angle of inclination to the longitudinal axis of the cylinder from the rear head toward the outlet. This inclination of the buck-

Table of market prices for various commodities including Potash, Soda, Sulphuric Acid, and other chemicals.

PHILADELPHIA MARKET.

Table of market prices for Paper Market, Paper Stock, and Leghorn Rags.

Table of market prices for Russian Rags, Chemicals, and other goods.

Table of market prices for various types of Rags and Paper Stock.

CINCINNATI MARKET.

Table of market prices for Paper Stock and Rags in Cincinnati.

CHICAGO MARKET.

Table of market prices for Rags and Paper Stock in Chicago.

FOREIGN MARKETS.

London Market Report. LONDON, January 12, 1878. Business on the whole was but quiet during the week.

Fine White Linens and Cottons were but in very limited request at last prices. Middle and low classed Linens and Cottons were more inquired after, and some orders from America for these grades were declined on account of too low a limit.

The French Market.

PAPER AND PAPER STOCK.—There is no doubt that most of the manufacturers of fine and fancy papers have heavy stocks on hand, but the expected revival of trade will doubtless enable them to easily dispose of them.

Advertisements.

WANTED.—A SITUATION AS FOREMAN IN A fine Manila Mill on Jute and Manila Rope, and Spencer Ground Pulp or fine Leather Board.

WANTED.—A SITUATION AS ENGINEER BY a man experienced in Bank-note, Bond, and all kinds of fine papers.

WANTED.—BY A YOUNG MAN WHO HAS some knowledge of the paper stock business, a position as salesman with some well established house.

A THOROUGHLY EXPERIENCED PAPER-MAKER, capable of superintending the building and management of a mill successfully.

TRUSTEE SALE.

By order of the Court of Probate for the district of Clinton I will sell at public auction on Wednesday, the 20th day of February, 1878, at ten o'clock A. M., the equity of redemption in the following described property and estate of the Clinton Paper Manufacturing Company.

Aluminous Cake, currency. Alum, Concentrated, Red Star. Alum, lump, currency.

Paper Mill for Sale PERTH AMBOY, N. J.

Containing one 72-inch Single Cylinder Machine, Five Dryers, 36 inches; three Mashers, 800 pounds each, and one Kingsland Engine; one 50-horse power Engine to drive the Mill, and one 20-horse power for the Machine, two Steam Pumps, two Boilers, ample supply of water, and has its own dock frontage.

Apply to J. C. M., P. O. Box 28, New York City, N. Y.

FOR SALE.

One Iron Tub 300 lb. Engine, with Iron rolls, 28x32 in good order, with washer and pulley.

FITZGIBBONS, MESSER & CO., Agents for Manufacturers of Straw Boards and Lining Papers.

Straw Boards Lined to order. Paper Box Makers' Machinery. All Sizes and Numbers on hand or made to order with dispatch.

GLENS FALLS Marble Lime The best bleaching Lime known for PAPER-MAKERS' USE.

Osborn & Robinson, AGENTS, 87 Dey Street, N. Y.

JARVIS' PATENT FURNACE For the Setting of Steam Boilers,

Will save twenty-five per cent. in fuel, or make an increase of twenty-five per cent. in Steam Power. Will burn screenings with small mixture of soft coal, tan, saw dust, green wood, and WET GREEN PEAT, mixed with screenings.

A. F. UPTON, GENERAL AGENT, No. 239 CONGRESS STREET, BOSTON, MASS.

CONLEY'S Mill and Machinery Agency.

FOR THE PURCHASE, SALE, OR EXCHANGE OF PAPER, COTTON, WOOL-EN, GRIST AND OTHER MILLS ALSO, MACHINERY, MILL SITES AND PRIVILEGES.

Estimates given for New Machinery at very much lower prices than can be obtained elsewhere.

Parties having any kind of Machinery or Mill Property which they desire to sell, will please send a list and description of the same to the undersigned, who offers for sale a large line of Paper-Making Machinery and Mills, including the following:

One 72-inch Rice, Barton & Fales Fourdrinier machine, carries 32 1/2 foot wire, and consists of 8 iron dryers, 36x38, sizing machine and lay-boy. Top size roll and both top press rolls are gun metal; bottom press rolls are covered with rubber.

One Hydraulic Press, made by the Holyoke Machine Co. and as good as new. Platform, 33 x 50 in., opening, 7 ft. 3 in. diameter of piston, 8 in., diameter of corn rods, 3 in.

Three Couch Rolls, one rubber and two copper, 12 in. by 48 in., wide. One Breast Roll, 12 in. by 68 in. One stack of six Super Calenders, 31-in. face.

Four stacks of Straw Board Calenders, from 30-in. to 40-in. face. One stack Chilled Calenders for boards; two rolls, 40 x 16 in.

Two Rag Cutters, two Rope Cutters, one Cane Cutter, one Wood Chopping Machine. Eight Iron Dryers, 14 in. by 36 in., in good order. Price \$150, each.

Twenty Steam Engines, from 10 to 300 H. P., including one 80 H. P., Putnam Machine Co. make. Four Double Fine Steam Boilers and one large Locomotive Boiler.

One No. 0, No. 1 and No. 2 Wright's Plunger Pumps; one No. 2 Holly Rotary; one No. 4 Bagley & Sewall Rotary Pump; one Holly Fire Pump; two Rotary Fire Pumps; one No. 10 Head & Sisco; one No. 6 Head & Sisco (brass); one 4-in. and one 12-in. Propeller Pumps; No. 2 Perry Centrifugal Pump; one No. 5 Holly Pump.

One Holly Centrifugal Pump, 4-in. pipe, for raising Pulp. One Rice, Barton & Fales Centrifugal Pump, 3-in. pipe, for raising pulp. A Brass Stuff Pump, plunger 4 x 10 inches.

Four Stourtevant blowers. One large Steam Pump (G. H. Dean & Co.); one 8-in. (Watson) Brass Pump for Artesian well, with 27 1/2 feet of rubber-lined pipe and all fixtures; cost, \$3,700; is nearly new, and will be sold cheap.

Two 48-in., one 54-in., one 62-in., and one 84-in. Paper Cutters; one 62-in. Hatch Cutter; one 72-in. Smith & Winchester Stop Cutter; one 62-in. Stop Cutter, built by Smith & Winchester. One new 50-lb. Engine, built by Stout, Mills & Temple.

One Gould Patent Engine. One Standing Press, with gun-metal screw, plate 34 in. by 48 in.; one Screw Paper Press, screw 8 feet long, follower, 31 x 60; one Screw Paper Press, screw 7 feet long, follower 31 x 60.

Twelve Cutting Presses, from 27 in. to 45 in. wide. Six Making Cylinders, of different sizes. Two 60 in. Case Water Wheels; nearly new. Ten Water Wheels, different sizes.

One Snow's Water-Wheel Governor. One 40-in. Leffel Water Wheel Case. One 48 in. Winder, with ninety-six Iron Spools, 2 in. by 28 in.; also, forty Wooden Spools, 7 in. by 28 in.

One set of three Reels, 62-in. face; one set of six Revolving Reels, 70-in. face; one set six Reels, 80 in. face; one Sizer for a 62-in. machine; one Winding Machine, one Sizer, Washer, together with an extensive list of Miscellaneous Machinery, including fifteen Rag Engines, including five 36-in. rolls, four Rotary Rag Rollers, 5x16 feet.

One Rotary Boiler, 1 1/2 feet by 24 feet. Three Wood or Straw Digesters. One set of Artesian Well Tools. One No. 8 Armstrong Heater.

One "Lift" or Elevator Wheel for Cylinder Machine, 48 in. diameter, 17 in. wide; new and complete. About 7,000 Spruce and Pine Loft Poles, 700 of them 10 feet long, the remainder 12 feet 4 in. long.

One W. O. Hickok's Pennsylvania Ruling Machine. Three sets of Press Bars, 15 feet long, 4 inches diameter, with spur-wheel and false bottom plate; all complete. Cost \$700, and is entirely new.

Five Wrought Iron Tanks, 9 feet diameter, 8 feet high, one eighth iron; good condition. Price, \$6,000. Copper Kettle, 425 gallons, 4 feet diameter, 4 1/2 feet high; as new.

One full set Paper Collar Machinery; capacity 50,000 to 100,000 collars per day. Two sets of Copland Power Elevators; capacities, 3,000, 2,000 and 1,000 pounds respectively. Ten Printing Presses, different sizes.

22.—A small Manila Mill, located in Maryland, containing 2 engines and 46-inch Fourdrinier machine in good condition, with 40 acres of land. Price, \$6,000.

23.—A Paper Mill Site and old Machinery, located in Massachusetts (the mill was burned within a year), consisting of 2 acres of land, with good water privilege, 3 buildings, the iron part of a 48-inch cylinder machine and 2 engines, 1 steam boiler and 2 water wheels. Price, \$2,000.

24.—A good Print or Manila Mill, located within 100 miles of New York City, consisting of 5 large stone buildings, 40 acres of land, good water power, and the following machinery: 1 56-inch cylinder machine, 2 50-lb. iron, 1 1,000-lb. engine; 1 Kingsland engine; rotary boiler, steam boiler, and everything complete and in good condition. Half-interest for sale for \$15,000.

25.—A large Book and News Mill, located within 100 miles of New York City, on an excellent water power, containing 6 rag engines, one Jordan engine, and an 84-inch Fourdrinier machine, and all the necessary machinery for such a mill. Price, \$30,000, on easy payments.

26.—A Mill privilege of 100 horse-power, within 25 miles of Springfield, Mass., well located for making Wood Pulp, and a very desirable piece of property. Price, \$5,500.

27.—A good Mill located in Connecticut, containing one 48-inch Cylinder Machine, three 400-lb. engines, one Kingsland Engine, one Rotary Boiler, and all the necessary machinery to make Manila Papers; also about eight acres of land and a good water power of 22 feet head; half interest for \$7,500.

28.—A large tract of land in Missouri worth from \$7 to \$10 per acre, in exchange for Paper or a good Paper Mill.

29.—A valuable four-set Woolen Mill, situated near the City of Cincinnati, Ohio. A four-story Brick Building 100x25 feet, with two brick wings, and brick Engine House, Blacksmith Shop, &c. This mill contains four sets of Machinery, complete, including four Self-Operators; four Hand-Jacks, 24 spindles each; four sets Cards, No. 1, 48-inch; five Broad Crompton Looms, 10-inch, with Gigs, Twisters, Fulling Mill, Presses, Shears, Roll Cards, Grinders, and, in fact, a complete outfit to make first-class goods, all in prime order and for sale on easy terms.

30.—A good hardware and Manila Mill, located in Connecticut, containing a 42-in. Cylinder Machine, two 200-lb. Rag Engines, with other machinery to match; also, two dwelling houses and about two acres of land. This property is in good condition, being built in 1871; price, \$10,000.

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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 ROLLS.

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

This exhibit contains a stack of calendering rolls intended to be part of a complete paper machine. These rolls are of cast-iron, chilled at the surface in casting, and thereby made hard, like tempered steel. They are separately ground according to a highly improved plan, and are so true that, when placed together, they bear upon each other through 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.

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

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

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Paper Makers' FOURDRINIER FELTS. Coarse and Fine CYLINDER WET FELTS. Press Felts and Jacketing.

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Successors to F. GRAY, O'FERRALL & CO.,
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We warrant every Felt to work well, and if it does not, it can be returned.

SATISFACTION GUARANTEED.

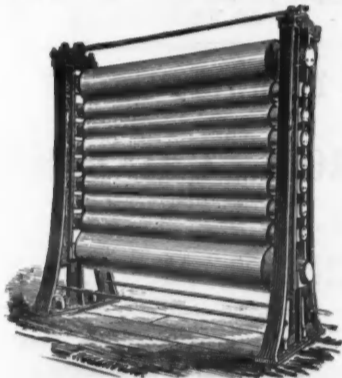
In ordering Felts, give kind of Stock used, and quality of Paper made.

[From The Paper Trade Journal of March 4, 1876.]
MIDDLETOWN, O., February 23, 1876.

To the Editor of The Journal:

Much has been said in former numbers of THE JOURNAL about the running and durability of cylinder felts. GRAY, O'FERRALL & Co. are supplying the best cylinder felts I have ever had any experience with for wide machines. I think they decidedly excel. They keep their width under a reasonable strain, and when kept clean never trouble with wind marks, never get slack in the middle or edges; in fact, they make paper, with ordinary care, until they are entirely worn out, and it would be well for any one who is troubled with an unsatisfactory working felt of any other make, to try one, and by all means to do so if there is a necessity for fast running.

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NEW YORK AGENT.



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Fourdrinier Machines, Cylinder Machines,
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Patent Cone Pulley Cutters, Heavy Rope and Rag Cutter with from one to three Knives.

Also on hand, ready to ship,

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Roll Bars and Bed Plates, both of Laid and Cast Steel.

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Super Calenders of all Sizes and Widths.

CHILLED CALENDER ROLLS
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This recent invention is one long sought for by the paper manufacturer, furnishing not only the MOST PERFECT SCREEN, but ridding it entirely of noise. All using them recommend them highly.

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EASTWOOD, BUCHANAN & SMITH.

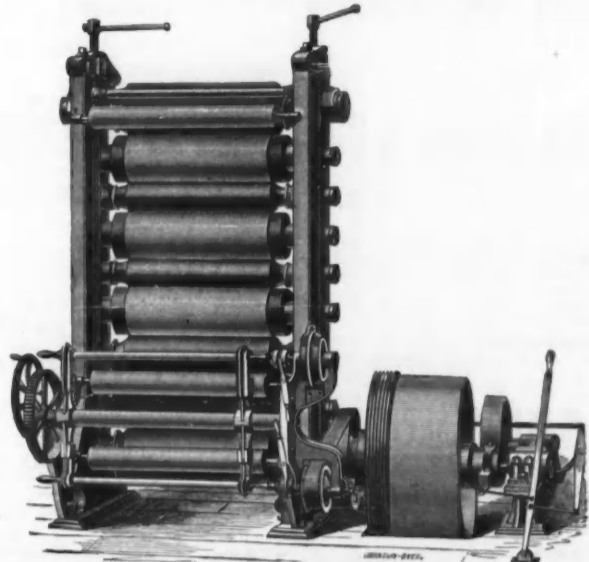
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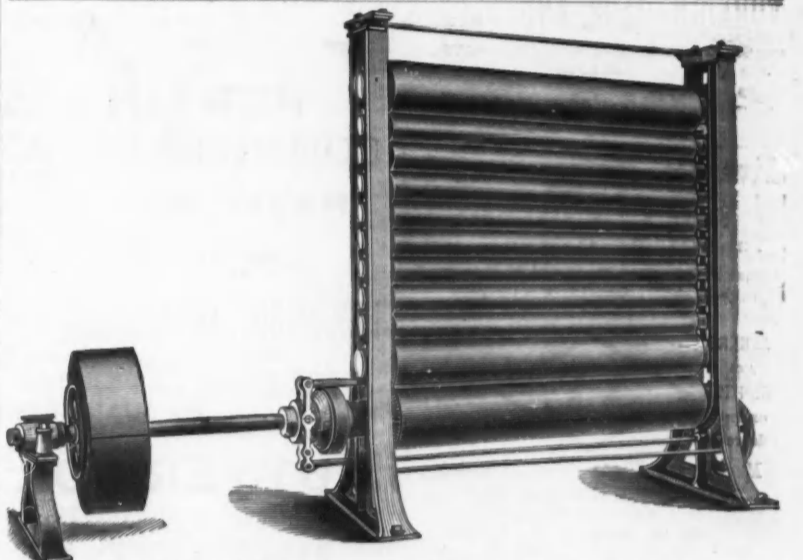
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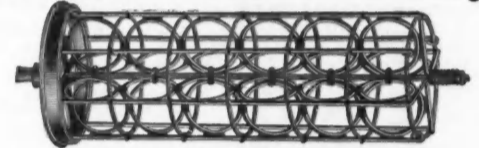
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