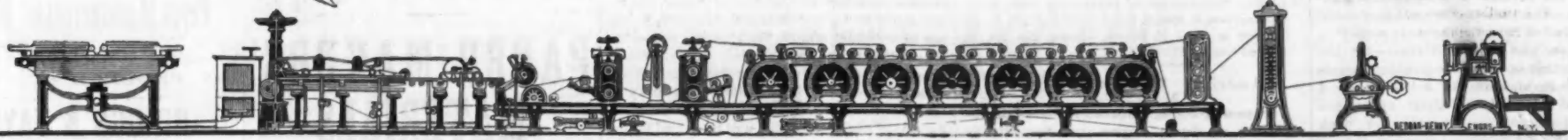


The Paper Trade Journal.



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

VOLUME VII.—NO. 30.

NEW YORK, JULY 27, 1878.

WHOLE NUMBER 221

Trade Topics.

Alkali Manufacture.

SOME RECENT IMPROVEMENTS IN THE PROCESSES CONNECTED THEREWITH.

By James Maclear, F. C. S., F. I. C.

(Continued.)

TABLE V.—LITRES OF GASES.

	Total.	Centimally.	Per 100 of SO ₂ .
Gases entering denitrating tower:			
SO ₂	69,754	6,325	100,000
O for conversion of SO ₂ into SO ₃	34,790	3,155	49,875
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	45,306	715,527
O of air in excess.....	103,815	9,414	148,831
N of air in excess.....	395,294	35,846	566,697
	1,102,752	100,000	1,480,930
Gases entering first chamber:			
SO ₂	69,754	6,318	100,000
O for conversion of SO ₂ into SO ₃	34,790	3,151	49,875
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	45,306	715,527
O of air in excess.....	103,815	9,403	148,831
N of air in excess.....	395,294	35,833	566,697
N ₂ O ₄	1,315	119	1,885
	1,104,077	100,000	1,482,815
Gases entering second chamber:			
SO ₂	47,782	4,461	100,000
O for conversion of SO ₂ into SO ₃	23,776	2,220	49,759
N equal to O fixed in Fe ₂ O ₃ and SO ₂	409,109	46,508	1,044,554
O of air in excess.....	103,815	9,693	217,308
N of air in excess.....	395,294	36,905	827,287
N ₂ O ₄	1,315	129	2,752
	1,071,091	100,000	2,141,630
Gases entering third chamber:			
SO ₂	27,365	2,630	100,000
O for conversion of SO ₂ into SO ₃	13,542	1,302	49,496
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	47,971	1,829,896
O of air in excess.....	103,815	9,978	379,372
N of air in excess.....	395,294	37,993	1,444,524
N ₂ O ₄	1,315	126	4,895
	1,040,440	100,000	3,702,083
Gases entering fourth chamber:			
SO ₂	14,314	1,402	100,000
O for conversion of SO ₂ into SO ₃	7,000	686	48,908
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	48,892	3,486,859
O of air in excess.....	103,815	10,169	728,369
N of air in excess.....	395,294	38,722	2,761,590
N ₂ O ₄	1,315	129	9,187
	1,030,847	100,000	7,031,808
Gases entering fifth chamber:			
SO ₂	7,115	704	100,000
O for conversion of SO ₂ into SO ₃	3,389	336	47,674
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	49,415	7,014,884
O of air in excess.....	103,815	10,278	1,459,100
N of air in excess.....	395,294	39,137	5,555,704
N ₂ O ₄	1,315	130	18,482
	1,010,040	100,000	14,085,944
Gases entering sixth chamber:			
SO ₂	2,616	261	100,000
O for conversion of SO ₂ into SO ₃	1,136	113	48,425
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	49,748	19,079,090
O of air in excess.....	103,815	10,347	3,968,462
N of air in excess.....	395,294	39,400	15,110,627
N ₂ O ₄	1,315	131	50,888
	1,003,285	100,000	38,251,873
Gases entering absorbing towers:			
SO ₂	349	35	100,000
O for conversion of SO ₂ into SO ₃	174	17	48,425
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	49,917	143,011,175
O of air in excess.....	103,815	10,392	29,746,418
N of air in excess.....	395,294	39,534	113,384,757
N ₂ O ₄	1,315	132	876,791
	999,992	100,000	286,399,141
Residual gases leaving absorbing towers:			
SO ₂	349	35	100,000
O for conversion of SO ₂ into SO ₃	174	17	48,425
N equal to O fixed in Fe ₂ O ₃ and SO ₂	499,109	49,978	143,011,175
O of air in excess.....	103,815	10,395	29,746,418
N of air in excess.....	395,294	39,534	113,384,757
N ₂ O ₄	1,315	132	876,791
	998,666	100,000	286,399,141

The nitrous compounds have throughout been calculated for the sake of simplicity as N₂O₄, and no notice has been taken of the amount of nitrous compounds absorbed by the acid in the various chambers. This is, however, a considerable element when dealing with the loss of nitrous compounds, as the amount in the acid run from the chambers under the more usual conditions of working varies from about 15 per cent. to 30 per cent. of the nitrate of soda used, depending on the strength of the acid in the chambers, and the more or less rich character of the gases in nitrous compounds.

In the set of chambers such as we are now con-

sidering, worked under normal conditions, with the last chamber containing acid of say 90° to 100° Twaddell, it will be found that a very large proportion of the nitrous compounds in the acid exist in a state of oxidation equal to N₂O₄. It is chiefly to this we owe the wear and tear of the last chamber, more especially when excess steam has been carelessly allowed to enter the chamber and dilute the acid, the lead in such cases being often cut round the surface line of the acid as with a knife.

It is after consideration of facts and figures such as these that I have introduced the following improved system of working the chambers, which, extremely simple as it is, has shown great promise of reduction in the wear and tear of the lead of the chambers, and has also resulted in a considerable saving in the amount of nitrate of soda required.

The improvement consists in causing the acid in the series of chambers to be kept in constant circulation towards the inlet of sulphurous acid gas. I prefer to attain this object by the use of a self-acting apparatus, which, designed many years ago by Mr. Blair, deserves to be more generally known. A very good description of the apparatus and its mode of operation can be seen in Richardson and Watts' *Chemical Technology*, vol. I, part V, page 217. By means of this or other convenient apparatus, the acid of the first chamber, which contains SO₂, is thrown into the last chamber, and we have the N₂O₄ in the acid in its decomposed, and N₂O₄ thrown off; we are therefore able to reduce to an extremely small amount the nitrous compounds in the acid of this chamber, and not only so, but it is found that the quantity of nitrate of soda required to work a set of chambers upon this system is considerably less than under the usual method is required. Further, the acid may be safely kept at a considerably higher degree of concentration, to the extent of 10° to even 15° Twaddell, and the danger of loss of nitrous compounds in the lower forms of oxidation produced by the action in the last chamber of aqueous vapor and dilute acid on the N₂O₄ and N₂O₃ is reduced very greatly.

GROUP II.—DECOMPOSITION OF COMMON SALT.

In connection with this group of processes, I have no completed improvements to lay before you, unless it may be the application of the testing apparatus described under sulphuric acid for checking the escapes. By means of this apparatus daily and weekly average tests are easily obtained, and found most useful and satisfactory.

GROUP III.—DECOMPOSITION OF THE SULPHATE OF SODA WITH CARBONACEOUS MATTER AND CARBONATE OF LIME INTO CARBONATE OF SODA AND SULPHIDE OF CALCIUM.

Notwithstanding the immense number of methods which from time to time have been proposed for the production of alkali, the process invented and worked out by Leblanc and his associate Digh, still holds its own for the simplicity of its operations, and the low cost and abundance of its primary raw materials. That it has remained almost without alteration during over three-quarters of a century, is due to a large extent to the elaboration of a theory of its decomposition by Dumas, which, based on the quantities of the various substances used in practical working, and founded on the idea of the incompatibility of carbonate of soda and of sulphide of calcium in presence of water, unsupported by one reliable experiment, has acted as a bar in the way of advancement in this direction. Dumas reduced the composition to a formula:

$2 Na_2 SO_4 + 3 Ca CO_3 + 12 C$
 $2 Na_2 CO_3 + 3 CaO + 10 CO + 3 C$

corresponding to a proportion in the mixture for decomposition of:

Sulphate of soda.....	100 parts
Carbonate of lime.....	102 "
Carbon.....	92.8 "

This theory and decomposition formula have been discussed and disputed times without number, the insoluble calcium compounds having been variously described as:

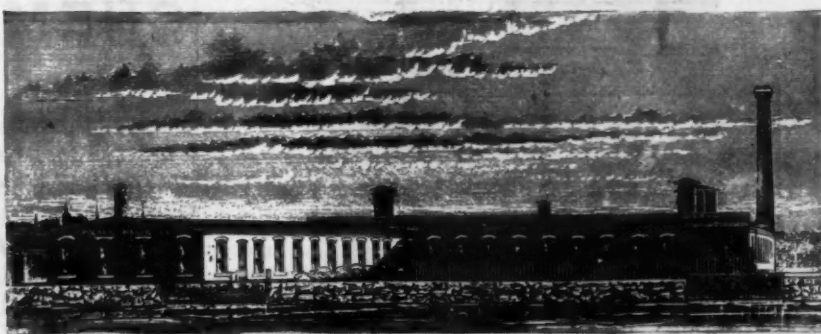
3 CaS, CaO.	CaS, CaO, HO.
2 CaS, CaO.	CaS.

[To be Continued.]

Holyoke and the Paper Trade.

(Continued.)

The visitor to Holyoke, passing down Canal street, will find just beyond the great bridge, which crosses the river below the dam, the mills of the Crocker Manufacturing Company. The building known as the Crocker Mill, No. 1, was built in 1870 by D. H. and J. C. Newton, and was originally intended for the manufacture of collar paper only. The following year it was bought by the Crocker Manufacturing Company, which was organized with a capital of \$60,000, and I. S. Crocker as President and S. S. Crocker as agent and treasurer. The new company added new calenders, super-calenders, and a new machine, and continued the manufacture of



CROCKER MANUFACTURING COMPANY, NO. 1.

collar paper and engine-sized flat card, bristol, &c. The No. 1 mill, which is a T-shaped building, has its motive power supplied by three turbines, and is arranged as follows: On the upper floor is the engine-room, with ten 250-pound engines, and in another room is the machinery for dusting and thrashing. The lower floor contains, besides the office, a fine 76-inch Fourdrinier, and a cylinder-machine, together with the rag-room, store-room and repair shop. Not having room enough in Newton's Mill, the Crocker Company bought an adjoining building, known as the old Albion Mill. This mill, which is a capacious structure, two and a half stories high, built of wood, is devoted to the manufacture of book, news and colored medium papers, and, like the other, is driven by three turbines. It is known as the Crocker Manufacturing Company's No. 2 Mill. In the attic are two thrashers. The next, or second story, is used as a rag-room,



CROCKER MANUFACTURING COMPANY, NO. 2.

and contains two of Daniel's cutters and another duster. Seven engines, one of them a Jordan, are on the lower floor, and prepare the pulp used in this mill, which is afterward run through a 62-inch Fourdrinier machine. The same floor also contains one rotary bleach, a set of super-calenders, two cutters, a trimmer and other machinery.

The total number of hands employed by this company is 105, of which about one third are females. Since April of this year the company has increased its capital stock to \$80,000, and its products enjoy a reputation which is fairly earned. It engages largely in the manufacture of a peculiarly colored and ornamental paper, under a patented process which it owns. This paper is used for safety tickets and other purposes. The company is supplying a number of railway companies with a special design of ticket paper, each company being protected in a style for its exclusive use.

Paper-Makers in Olden Times.

(Continued.)

A regular code of laws and punishments was in force among the German paper-makers. No person was allowed in the trade who had committed theft. Somewhat more impracticable nowadays was the exclusion of men who had committed adultery or of any one who had married a girl of immoral character. No matter what injury might be done one workman by another it was forbidden to have recourse to the law under penalty of expulsion. All disputes between masters and men had to be set-

tled in the nearest mill. Anybody refusing to comply with these rules was placed under a virtual ban, and even when masters could not find workmen. The way of settling trade disputes was somewhat more primitive than those adopted in these days, but probably more efficacious. One certain mill was selected as a place of meeting, and here very important questions in those days were discussed with as much vivacity as ever exhibited at a straw board makers' convention, an envelope makers' conclave, or a wood pulp gathering. If one mill offered more for rags than the regular price, or tried to get in with those aristocrats, the rag-pickers, there was an immediate uproar, and a general council had to be called to decide on the merits of the case. If there was trouble between

masters and men, the congress "ran" the mill or mills until matters were arranged. These congresses lasted sometimes a week and longer, and the proprietor of the mill in which it was held received the magnificent rent of one thaler per day. A protocol was read; the testimony was carefully written down, and the session generally lasted five hours. The vote

of the majority formed the decision. This was anything but a free performance—the gentleman whose mill was in trouble had to pay all the expenses, and these were not slight. A large number of members were generally present, and they had to be well "treated" in the mill or in a neighboring inn.

The meeting at Lissen in Thuringia in 1698 was composed of more than 100 masters and journeymen, and that held at the mill of Petershütten, near Ostend, in 1745, of 84 members. It was hard times for the masters; the journeymen who took part in these meetings were, of course, sure of a good time, while those who stayed at home had to be paid and fed extra well owing to the scarcity of hands. In fact we are told that if the journeymen left they were sure of food, shelter and entertainment wherever they went. They had, therefore, to be petted. Paper-makers of the present day will therefore see that troubles were not unknown to their predecessors.

If the mill owner spoke against the moral conduct of the journeymen they went in a body to his house, asked for lodging, and formally ate him out of house and home. If he complained to the authorities he could get no workmen afterwards. The initiation fees for apprentices ranged from \$30 to \$200. This sum was spent in a general carousal. These high fees and the spreading tendencies of the mill

hauls brought the trade into disrepute among parents. The abuses came to such a pass that the Chamber of Glogau resolved to form paper-makers into a separate guild which could only hold its meetings in presence of a royal commissioner. In 1731, however, these fees were abolished in Prussia. As early as 1700 meetings of the mill owners were held in Augsburg for the purpose of abolishing these ruinous customs, but the Emperor paid no heed to the recommendations of the manufacturers.

[To be Continued.]

New Soda Process.

Mr. Bazin has a new mode of obtaining caustic soda from the sulphate. By calcination with charcoal he transforms this salt into sulphide of sodium; this is dissolved in boiling water and treated either with oxide of copper, or peroxide of iron at a boiling heat. The metal unites with the sulphur and remains insoluble, while the sodium of the sulphide takes up oxygen in place of sulphur, and a strong solution of caustic soda is the result. It is questionable whether this process would answer on a large scale, as it appears probable that the decomposition would be incomplete between the metallic oxide and the sulphide of sodium. But the author of the invention believes it to be quite feasible and that it will prove a more economical process than that which is now in use.—*London Monthly Mag. of Chem.*

Characters never change; opinions alter; characters are only developed.—*Disraeli.*

Correspondence.

British Notes.

[FROM OUR REGULAR CORRESPONDENT.]

15 PATERNOSTER ROW, LONDON, E. C., }
 July 18, 1878. }

The past week has seen no change in trade. Markets are a trifle stiffer, if anything, but it is a mere temporary movement which always takes place at the half year. Many paper-makers contract for six months, and as July progresses these contracts fall out and have to be renewed. At present there is an undoubted rise in chemicals, and it may be owing to this. Paper is still very low and likely to continue so. I cannot see any prospect of a change at present. Certainly the Eastern question, the bugbear of months' duration and the fruitful source of all the commercial woes of the past year, is on the point of being settled, and next week will see our Prime Minister and colleague back again from the Congress, where a true trump card was played in the Cyprus affair. Business, if the war were the cause of the dullness, ought to improve now, but I do not think it will yet awhile. Our raw material markets are much the same as last week. Rags are steady, with not a great many foreign inquiries. Strong linens are well looked after, but white linens and cottons are somewhat slow of sale. Seconds are in fair demand for home consumption. Gunny is still scarce, and what can be had is bought for your side at market rates. Waste papers are quiet and trade generally is dull. Chemicals have risen a figure and are firmer. Bleaching powder has gone up to 25 f. o. b. Liverpool, and cream caustic can't be had at anything under £10 f. o. b. Liverpool. Ash keeps steady.

There are still about twenty paper mills in the market, and considering the wretched state of trade this is a fair number. Some of the number have been to sell for long enough. Nobody seems inclined to try Ilford Mill. There is some talk of starting a new London daily in the liberal interest. It is proposed to introduce a journal differing in size and matter from the present newspapers of the day. Such a change will be very welcome indeed.

The paper trade abroad is not flourishing. A correspondent says that in Italy the state of affairs in the paper line is disastrous, bad trade and ruinous competition being the prime agents. More than one paper-maker in Piedmont is said to have purchased printing machines in Germany, intending to print for nothing such works as stereotyped lesson books, in order to get rid of some portion of their large stocks.

I notice one of our trade journals, in speaking of the Paris Exhibition, says: "There appears to be but a very languid interest taken by the paper trade generally in the Paris Exhibition." I quite believe it. I do not believe one of our trade journals has a notice of the Exhibition except the *Bookseller*.

The Berlin exhibition of paper and stationery opens on Tuesday next. I am afraid our trade takes a particularly and especially languid interest in this exhibition. From all I hear, I think very few English people will exhibit. But if possible, I intend going over to the *JOURNAL* may be seen there even in humble form.

The fibre controversy goes on apace here. Wood is being pushed hard everywhere, notwithstanding the chances of bamboo. I saw some very good press boards made of wood, German goods, last week. A New York gentleman saw them too, but said he could beat them at the price. With all due respect to your citizen and your nation generally, I think he told a cram. I also think there are a good many crams told in the trade, and especially by foreigners.

As an instance of what "whoppers" are going about, I will mention foreign straw. There is a large business doing over here in foreign straw. I thought I should like to have a piece of this cake, so I bothered about a good deal and found out the following facts (1): First, that Mr. A. could buy any amount of straw in France at 48 fr. per ton. This means 40s., now add to this, say, 15s. for freight and behold 55s. per ton delivered in London. I was told by an English paper-maker that the foreign straw was being bought at about 70s. per ton. I thought there was business there, and I pushed the matter home and made offers. Mr. A. referred me to Mr. B., who at once said that the lowest price of French straw delivered in a French port was 70 fr., and unless 1,000 tons were to be had at one go nothing could be done even at 70 fr. I was then told by the same paper-maker that he was only giving 56s. per ton for straw delivered in the Thames. Another paper-maker said he only gave 48s., and so on. The French merchant said that some French paper-makers were paying from 90 to 100 fr. per ton for straw to be de-

livered at their mills. This would put the straw up to our own standard. Now, here is a pack of crams about a simple thing like straw. Good business could be done here, especially in these times, if there were not so much cunning and smartness and sharp practice, which are supposed to distinguish a good man of business. What nonsense it is to say that French straw can be bought in any quantities at 48 fr. when French paper-makers are actually giving 100 fr. on the spot for it. Also I made a specially low offer of caustic to a Paris firm. This offer was direct from the makers—a most reliable Lancashire firm. The Paris people said they could buy it delivered at Paris for the same money—a very deliberate and barefaced cram—for the simple reason that nobody here would sell goods and take the responsibility of delivering them in Paris, and especially at about £1 per ton below actual current market value for bank bills. It is so stupid to expect people to believe in such nonsense.

Markets.—Coals—Steady at following prices: Wallsend, Hetton, 17s.; Lambton, 16s. 6d.; Tees, 16s. 9d.; Hetton Lyons, 15s. 3d.; South Hartlepool, 15s. 6d.; Thornley, 16s.; Tunstall, 15s. 3d.; Wear, 15s.; Boner's West Hartley's, 15s.; East Wylam, 16s. Ships at market, 34; sold, 17; contracts, gas, &c., 13-30; unsold, 4; at sea, 10. Metals—English iron, pig, £17 to £17 2s. 6d.

Rags and other Fibres—Firmer, but prices much the same. New linen cuttings, 27s. 6d.; new cotton cuttings, 27s.; linen, S. P. F. F. F. (No. 1), 26s. 3d.; S. P. F. F. F. (No. 2), 21s. 6d.; S. P. F. (No. 3), 18s. 6d.; F. F. (No. 4), 16s. 3d.; white cotton, 15s. 6d.; blue linen (No. 1), 17s.; do. (No. 2), 14s. 6d.; blue cotton, 14s.; gray linen (No. 1), 14s.; do. (No. 2), 11s. 6d.; colored prints, 11s.; jute taggings, 8s. These prices are free on board at Hamburg. Esparto as dull as ever, and all wood pulps as usual.

Chemicals.—Market firmer and prices up a little. Cream caustic soda, 60 to 62 per cent., £10 to £10 5s.; soda ash, 25% per cent., 45 to 52 per cent. A parcel of 50 tons of bleaching powder was refused sale at £4 17s. 6d. this week, so we must quote this article at £5 free on board in hard wood casks—all free on board Liverpool. W. F. C.

Manufacturing News.

EASTERN STATES.

The employees at the Cumberland Mills paper mill, Cumberland Mills village, Me., have had another reduction in wages.

The Winnipisogee Paper Company, Franklin, N. H., is having an addition of ten feet built on the front end of the machine-room at its No. 2 mill.

The Keith Paper Company, of Turner's Falls, Mass., pays an annual tax rate of \$3,185, and the Montague Paper Company, of the same place, an annual tax of \$3,852.

The corporation valuation of the property of the Southworth Paper Company, of Westfield, Mass., is \$102,200, and of the Agawam Paper Company, of the same place, \$67,500.

The L. L. Brown Paper Company, South Adams, Mass., is putting a new wall around its mill pond on Commercial street.

The Seymour Paper Company, of Windsor Locks, Conn., has reduced wages 10 per cent., but will pay every Saturday night, instead of monthly as heretofore.

The Whiting Paper Company, Holyoke, Mass., sent off thirty-five tons of fine paper one day last week, supposed to be the largest single shipment ever made from any mill in Holyoke.

The Montague Paper Company is experimenting in the manufacture of paper for newspapers made wholly of wood pulp.

MIDDLE STATES.

The Flat Rock Mills, Philadelphia, Pa., will shut down on August 1.

S. A. Rudolph will begin next week to erect a two-story machine and millwright shop at his Ashland Paper Mill, Philadelphia, Pa.

A portion of the Silver Lake Paper Mill, at Gibsonville, N. Y., was demolished on Thursday, July 11. The mill was running at the time, when an addition to the main building, 40 feet long, 12 feet wide, and four stories high, fell with a terrible crash over the falls, carrying with it about 30 feet of the machine-room and about half of the machine. Two sons of the proprietor, G. W. West, narrowly escaped with their lives by leaving this room a few seconds before it fell to get a drink of water. Mr. West was away from home at the time of the accident, and on his return commenced to remove the debris and make preparations to rebuild, which will take about six weeks. The wall was built at the water's edge, and is supposed to have become undermined.

The Spring Lawn Mill, at Lewisville, Pa., has been shut down two weeks on account of dull business and to enable the hands to take advantage of the harvest work.

FOREIGN.

The Mita Paper Mill, Tokio, Japan, is in good condition, and is making "title deed" paper under orders from the Government. The product is 4,000 pounds in twenty-four hours. These works are also making hand-made paper from bamboo. The Vice-President of the company owning this mill is Ichiro Murata, who studied paper-making at Holyoke and other points in this country for some time.

The exhibits of De Naeyer & Co., at the Paris Exhibition, are said to be very fine. They consist of samples of wood or other vegetable substances, and of pulp made from the different succedaneums. This firm is engaged in the manufacture of pulp and paper at Willebroeck and Cranheim, Belgium.

I am convinced that men do more harm to themselves than ever the devil could do to them.—Lord Byron.

New Patents.

No. 204,363. Moth-Proof Barrels and Boxes.—M. L. Thompson, Brooklyn, N. Y.

REISSUES.

No. 4,256. Manufacture of Paper-Pulp from Wood.—Harrison B. Meech, Chatham Village, N. Y., assignor to Benj. F. Brown.—Patent No. 106,710, dated August 23, 1870.

No. 4,257. Manufacture of Paper-Pulp from Wood.—Harrison B. Meech, Chatham Village, N. Y., assignor to Benj. F. Brown.—Patent No. 106,710, dated August 23, 1870.

No. 4,258. Manufacture of Paper-Pulp from Wood.—Harrison B. Meech, Chatham Village, N. Y., assignor to Benj. F. Brown.—Patent No. 106,710, dated August 23, 1870.

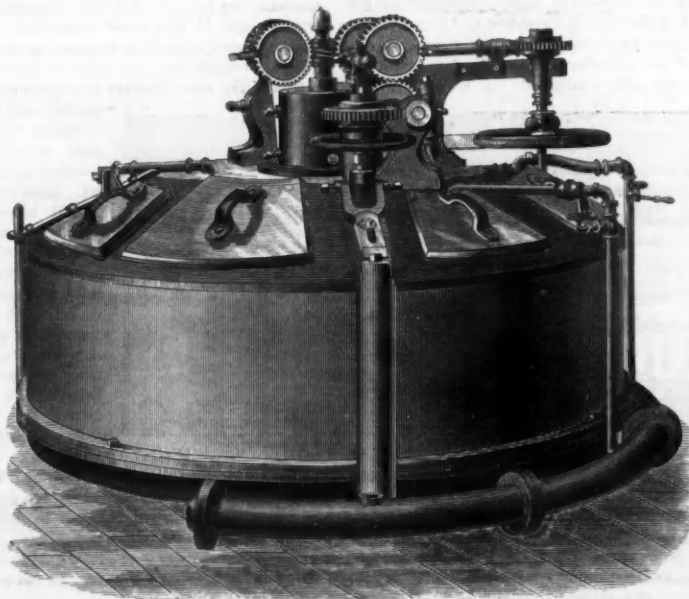
American Wood-Pulp Engine.

The accompanying illustration shows the design of a wood-pulp engine manufactured by the American Wood-pulp Engine Company, of Hartford, Conn. This is a new and improved engine for grinding and disintegrating the fibres of wood and reducing it to a suitable form for use in the manufacture of paper. It is asserted that this machine possesses advantages over others in that it requires less power to drive it; that its capacity for producing is unequalled, and that the quality of the product is unsurpassed by any grinding pulp engine.

The company's facilities for the manufacture of these engines are such that it can, at short notice, complete any order that may be given. The materials used are of the very best quality, the workmanship is guaranteed to be of the highest order—strength, durability and capacity of production being the chief objects sought—and the makers say that the machine can be fur-

posed for the purification of waste engine and machine waters. Let the fact that the mill-owners of the North Esk—who have already adopted every "practicable and reasonably available means" of purification—are going forward in the present session of Parliament with a bill to empower them to take a pipe to the sea at a cost of over £100,000, testify to the insufficiency of them all. No doubt much has been accomplished on the stream referred to. I have myself devoted nearly four years to the problem, and considering the extent of the industry and the smallness of the flow of water, the result is not to be despised; still, however, as the law of Scotland stands, the riparian properties are entitled to demand absolute purity, even at the expense of stopping the industry altogether. So long as common law is allowed full sway in this direction the Rivers Pollution Prevention Act of the year before last will be a dead letter. The old law is far more powerful and certain in its action than the new. The latter aims at the purification of streams from manufacturing refuse, having a care that the industries involved are not unduly harassed, whereas the former comes down unreservedly upon all polluters, demanding immediate and complete cessation of the pollution at any cost.

I am convinced that no process of filtration is applicable to the purification of the waste discharges referred to until at least the grosser portion of the impurities are removed, either by simple subsidence or by precipitation with chemical agents, and I am further convinced that purification by precipitation with chemical agents is a delusion. No doubt the sedimentary matter may be very thoroughly separated, and an apparently pure discharge be the result;



AMERICAN WOOD PULP ENGINE.

nished on terms which will make it for the interest of manufacturers to use no other.

One of these engines can be seen in operation at the Lake Mahkoneas Mills, Curtisville, Stockbridge, Mass., upon order from the company. The manufacturers have put a low price on these engines, and do not charge a royalty or compel the buyer to take a license.

Technology of the Paper Trade.

By W. ARNOT, F.R.S., EDINBURGH.

(Continued.)

The estimation of alumina is a matter of some nicety and not to be undertaken by any but experienced chemists. It cannot be done by any simple volumetric method, such as I have described as suitable for soda and chlorine, and even when estimated by a trained chemist in a well-appointed laboratory great care must be taken to secure strictly accurate results. Alumina is precipitated from the filtered solution by ammonia, but the precipitate is liable either to be too light or too heavy just as certain precautions are observed or neglected. For details of the process I must refer to Fresenius, or any of the other leading analytical authors.

Of the minor chemicals we need only briefly notice hyposulphite of soda, or antichlor, used to neutralize the acidity of the bleached half-stuff. The action of this agent has already been described. The agent itself is composed of a sulphur acid containing a relatively large proportion of sulphur to the oxygen combined with it, and sodium oxide, with the constitution of which we are already familiar. Like most other crystalline bodies its composition does not vary very much; if contaminated to any serious extent it will be by the admixture of foreign crystalline substances deliberately added to reduce its value.

The strength of the oil of vitriol supplied to the mill will be ascertained by an ordinary hydrometer, while its freedom from color will sufficiently indicate its purity for all paper-making purposes.

Before discussing the question of the disposal of the impure water discharged from various parts of the paper process, I may state that a laudable effort has been made by Wm. W. Ladelle to return the waste lime resulting from the causticizing process and the preparation of bleaching liquor. I have seen the process in operation, and while it has not yet established its claim to be a complete success, it is an effort in the right direction, and will, I trust, ultimately accomplish all that can be desired. The disposal of these waste products is really a vexing question, and I am sure we must all wish Mr. Ladelle and his co-workers success in their efforts to convert what is at present a gigantic nuisance into a useful agent.

Many and varied have been the schemes pro-

posed for the purification of waste engine and machine waters. Let the fact that the mill-owners of the North Esk—who have already adopted every "practicable and reasonably available means" of purification—are going forward in the present session of Parliament with a bill to empower them to take a pipe to the sea at a cost of over £100,000, testify to the insufficiency of them all. No doubt much has been accomplished on the stream referred to. I have myself devoted nearly four years to the problem, and considering the extent of the industry and the smallness of the flow of water, the result is not to be despised; still, however, as the law of Scotland stands, the riparian properties are entitled to demand absolute purity, even at the expense of stopping the industry altogether. So long as common law is allowed full sway in this direction the Rivers Pollution Prevention Act of the year before last will be a dead letter. The old law is far more powerful and certain in its action than the new. The latter aims at the purification of streams from manufacturing refuse, having a care that the industries involved are not unduly harassed, whereas the former comes down unreservedly upon all polluters, demanding immediate and complete cessation of the pollution at any cost.

Better than all the schemes of purification to which I have alluded, however, is that which begins in the mill itself. Let the boiling, cooling, and bathing liquids be so worked that the boiled material may go into the engines so clean as to require little further washing; a better out-turn will be the result, and one half of the pollution obviated; and let almost the whole of the machine water be collected and rinsed, which will often be done at a profit, and will also conserve the purity of the streams. If precautions are taken under each of those heads the volume and intensity of the polluted liquids to be purified will both be reduced and the object aimed at made more easy of accomplishment. An efficient settling system should be capable of containing from 24 to 36 hours' flow of the discharge; if the liquids are longer in the system they are apt to putrefy, especially in hot weather, with a result which is certainly no improvement upon the original condition of things. Every settling system should be provided with the means of discharging and draining the sludge as it accumulates. If the drainers be well constructed the sludge should lift in a caked form, easy of removal to the rubbish heap.

ALFA AND RAMIE FIBRE IN ALGERIA.—British Consul-General Playfair, in his last report on the trade and commerce of Algiers, states that the traffic in alfa continues to increase, several establishments being in course of erection for reducing it to pulp on the spot, thus saving carriage and freight. The largest quantity of alfa is gathered in the subdivisions of Sidi-bel-Abbes and Nascara, and almost the whole of it is shipped at Oran. The latest return (namely, that for 1876) shows that 58,759 tons were exported in that year to England, France, Spain, Portugal, and Belgium. The ramie plant (*Boehmeria nivea*) promises to become one of the staple products of the country. The experiments made with it in the province of Oran, especially near Relizane, and in the plain of the Habra, have been satisfactory.

When men grow virtuous in their old age they are merely making a sacrifice to God of the devil's leavings.—Swift.

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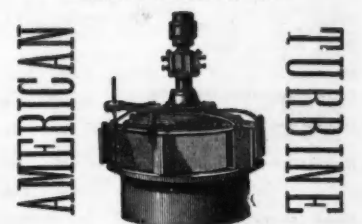
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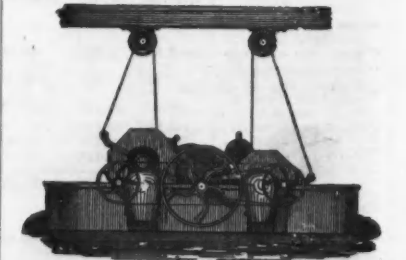
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BLOCK & POLLAK, Paper Stock, 306 to 236 West Third st., and 39 to 57 McFarland st., Cincinnati, O.

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

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FRANZEN, WM., Wholesale Paper, Paper Stock and Woolen Rags, 60 Oneida st., Milwaukee, Wis.

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MASSACHUSETTS PAPER COMPANY, Paper and Paper Stock Dealers, 259 Main st., Springfield, Mass.

MAYER, A. B., Rags and Paper Stock Dealer, 1014, 1030 & 1022 N. Twelfth st., St. Louis, Mo.

SNIDERS, LOUIS' SONS, Manufacturers and Wholesale Paper Dealers, 121 Walnut st., Cincinnati, O.

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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 July 19, 1878. Quantity given in packages when not otherwise specified.

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

TOTAL IMPORTS. General Merchandise, for the week ending July 19, 1878, \$4,572,398.

Table showing imports of Paper, Paper Stock, &c. for various weeks ending from May 23, 1873, to July 12, 1878.

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 with columns for Port, Rags, Paper Stock, and Total. Lists ports like Alexandria, Antwerp, Bremen, Bristol, Cardiff, Catania, Copenhagen, Glasgow, Hamburg, Havre, Hiogo, Hong Kong, Hull, Leghorn, Liverpool, London, Marseilles, Newcastle, Rotterdam, San Francisco, Trieste.

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

BOOKS, cases, to Hamburg, 1; to Bremen, 5; to Liverpool, 17; to Argentine Republic, 1; to British West Indies, 6; to Australia, 34; to Havre, 19; to Hayti, 5; to Africa, 2; to Cuba, 1; to United States of Colombia, 13.

PAPER, to Guiana, 1,000 rma.; to Brazil, 1,000 do.; to Cisplatine Republic, 2 pkgs.; to British West Indies, 2,054 rma.; to Hayti, 74 pkgs.; to Cuba, 807 do.; to Porto Rico, 227 do.; to United States of Colombia, 87 pkgs.; to Venezuela, 2,300 rma.

STATIONERY, to Liverpool, 10 cs.; to London, 2 cs.; to Dutch West Indies, 3 cs.; to Cisplatine Republic, 2 cs.; to Hayti, 17 cs.; to United States of Colombia, 27 cs.

AGGREGATES AND VALUES.

Table with columns for item name and value. Includes Paper, reams; Paper, pkgs.; Paper, cases; Books, cases; Rosin, bbls; Stationery, cases; Totals.

TOTAL EXPORTS. General Merchandise, for the week ending July 23, 1878, \$7,018,127.

Table showing exports of Paper, &c. for various weeks ending from May 27, 1873, to July 16, 1878.

NEW YORK IMPORTS. From July 20, 1878, to July 26, 1878, inclusive.

Rags, &c. N. Semoni, Christiana, Leghorn, 70 ba. rags. Jonas Phillips, by same, 274 ba. rags. W. H. Parsons & Co., Elysia, London, 156 ba. paper stock.

Briggs & Taylor, by same, 125 ba. paper stock. M. A. Ring & Sons, by same, 63 ba. paper stock. John W. Mason & Co., by same, 76 ba. rope junk. E. Storey Smith, Bruno, Alexandria, 579 ba. rags. John W. Mason & Co., England, Liverpool, 62 ba. gunny rags.

W. H. Parsons & Co., City of Richmond, Liverpool, 57 ba. rags. W. H. Parsons & Co., Alba, Leghorn, 125 ba. rags. N. Semoni, Josephine, Leghorn, 75 ba. rags. W. I. Clark, Holland, London, 46 ba. paper stock. Recknagel & Co., by same, 185 ba. rags. John W. Mason & Co., Thessaly, Liverpool, 191 ba. old rope.

W. I. Clark, Lepanto, Hull, 115 ba. paper stock. S. W. Packer, by same, 58 ba. rags. Campbell, Hall & Co., by same, 40 ba. rags. A. Moller & Co., Othello, Hull, 30 ba. rags. N. Semoni, Alba, Leghorn, 30 ba. rags.

Banatt Bros., Donau, Bremen, 1 cs. colored. G. H. Barbey, Labrador, Havre, 1 cs. hangings. Hester Bros., by same, 10 cs. hangings. L. Marotte, by same, 2 cs. hangings. F. J. Emmerich, by same, 3 cs. W. Schaus, by same, 9 cs. Chas. Cooper & Co., Lessing, Hamburg, 3 cs. C. A. Coffin, Holland, London, 5 cs. Leissner & Louis, Victoria, Glasgow, 1 cs. hangings.

BOSTON IMPORTS. FROM JULY 19, 1878, TO JULY 25, 1878, INCLUSIVE.

Books. Boston Athenaeum, Parthia, Liverpool, 2 cs. Little, Brown & Co., by same, 4 cs. E. A. Snow, by same, 1 cs. Dartmouth College, by same, 1 cs. J. Alexander, by same, 4 cs. E. P. Dutton & Co., Batavia, Liverpool, 3 cs. Harvard College, Victoria, Liverpool, 1 cs. Estes & Lauriat, Canopus, Liverpool, 2 cs. Chas. Gray, Istrian, Liverpool, 1 cs.

T. Groom, Parthia, Liverpool, 3 cs. W. C. Thairwall, Bohemian, Liverpool, 1 cs. manufactured. H. Partridge, Istrian, Liverpool, 3 cs. manufactured. Train, Hoaford & Co., Bohemian, Liverpool, 71 ba. paper stock. Morey & Co., by same, 70 ba. paper stock. J. T. Lodge & Co., Juan, London, 28 ba. paper stock. T. J. Jones & Co., Mary Alice, John's Island, 2 cwt. junk.

Jute Butts. Howe, Goodwin & Cole, Lyra, Calcutta, 5,108 ba. R. S. Wills, by same, 1,574 ba. Soda Ash. Linder & Mey r, Bohemian, Liverpool, 45 cks. Warren & Co., Canopus, Liverpool, 23 cks. Linder & Meyer, Istrian, Liverpool, 74 cks. Bleaching Powder. Morey & Co., Bohemian, Liverpool, 342 cks. Caustic Soda. E. Hill, Istrian, Liverpool, 50 drums. Hide Cuttings. T. Groom & Co., Bohemian, Liverpool, 70 ba. China Clay. C. B. Darling & Son, from South Carolina, 15 cks.

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Third—Are your policies correctly worded, so that you are positively insured?

Fourth—Are you sure all the companies in which you hold policies are sound and solvent?

These questions and many others of like character are such as are being asked us constantly by paper-makers. Worthless insurance is worse than none. Badly worded policies lead to litigation. Business centers of course have the largest number of insurance companies, hence, better facilities for placing large lines of insurance.

When we have property valued at some forty millions of dollars 40,000,000 and find some of the largest and best known paper mills in the United States and have yet to learn of any paper maker who has become dissatisfied with our way of doing business.

Should be pleased to send you a Paper Mill Survey, and to hear from you regarding any insurance which you may desire for your mill property, and you can rest assured that it will receive careful attention at our hands. Please write us before renewing any of your policies.

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BOOKS OF REFERENCE.

THE following is a list of Books of Reference on subjects connected with Paper Making, Chemicals, Colors, Machinery, Hydraulics, &c.:

Table listing various books with authors and prices. Includes Auerbach—Anthracen: Its Constitution, Properties, Manufacture and Derivatives; Baird—Standard Wage Computing Tables; Benson—Principles of the Science of Color; Besant—A Treatise on Hydro-Mechanics; Box—A Practical Treatise on Heat as applied to the Useful Arts; Box—A Practical Treatise on Mill-Gearing; Bresse—Hydraulic Motors; Brown—Five Hundred and Seven Mechanical Movements; Burnell and Law—Hydraulic Engineering; Calvert—Dyeing and Calico Printing; Craik—The Practical American Millwright and Miller; Crookes—Handbook of Dyeing and Calico Printing; Cullen—Practical Treatise on the Construction of Horizontal and Vertical Water Wheels; Downing—The Elements of Practical Hydraulics; Fairbairn—The Principles of Mechanism and Machinery of Transmission; Fairbairn—A Treatise on Mills and Millwork; Fanning—A Practical Treatise on Water Supply Engineering; Francis—Lowell Hydraulic Experiments on Hydraulic Motors; Fresenius—Manual of Qualitative Chemical Analysis; Fresenius—System of Instruction in Quantitative Chemical Analysis; Glynn—A Treatise on the Power of Water; Herring—Paper and Paper Making, Ancient and Modern; Hoffman—A Practical Treatise on the Manufacture of Paper in all its Branches; Hughes—American Miller and Millwright's Assistant; Jackson—Hydraulic Manual; Jacob—The Designing and Construction of Storage Reservoirs; Johnson—The Practical Draughtsman's Book of Industrial Design and Machinist's and Engineer's Drawing Companion; Kingzett—The History, Products and Processes of the Alkali Trade; Kirkwood—Report on the Filtration of River Waters for the Supply of Cities; 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; Kutter—The New Formula for Mean Velocity of Discharge of Rivers and Canals; Leffel—The Construction of Mill Dams; Munsell—A Chronology of Paper and Paper Making; Neville—Hydraulic Tables, Co-efficients and Formulae for finding the Discharge of Water from Orifices, Notches, Weirs, Pipes and Rivers; Allett—The Miller's, Millwright's and Engineer's Guide; Protriaux—A Practical Guide for the Manufacture of Paper and Boards; Rankine—A Manual of Machinery and Millwork; Reid—A Practical Treatise on Concrete and How to Make It; Reimann—On Aniline and its Derivatives; Riffault—A Practical Treatise on the Manufacture of Colors for Painting; Roper—Use and abuse of the Steam Boiler; Roscoe—Lesson in Elementary Chemistry, Inorganic and Organic; Rose—The Complete Practical Machinist; Routledge—Bamboo, considered as a Paper making Material; Slater—The Manual of Colors and Dye Wares; Smith—The Dyer's Instructor; Sporn—Workshop Receipts for the use of Manufacturers and Mechanics; Squier—Tropical Fibres; Sutton—A Systematic Handbook of Analytical Chemistry; Thorpe—Quantitative Chemical Analysis; Thorpe and Muir—Qualitative Chemical Analysis and Laboratory Practice; Tomlinson—Manufacture of Paper, with Specimens; Ure's Dictionary of Arts, Manufactures and Mines; Von Bezold—The Theory of Color in its Relation to Art and Art Industry; Weisbach—Hydraulics and Hydraulic Motors; Wagner—A Handbook of Chemical Technology; Watts—Dictionary of Chemistry and the Allied Branches of other Sciences.

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NEW YORK: SATURDAY, JULY 27, 1878.

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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.

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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.

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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 suggestions upon paper-making topics are especially valuable, and manufacturing news and personal items are equally acceptable.

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

Readers of this paper who avail themselves of the information obtained from its columns, by advertisement or otherwise, are requested to notify their correspondents of the source of their information.

ATTENTION is called to a notice and illustration of a new and improved wood pulp engine on our second page.

THE Mita Paper Mills, Japan, send us a sample of their product. It is styled "title deed" paper, but of course is different from the kind of paper used in this country for that purpose. The sample before us is a nice sample of book paper, of good color and finish and very well closed. It is certainly creditable to the manufacturers.

RUSSIA is now preparing to follow a system of protection similar to that which in this country has so powerfully—if not too powerfully—stimulated our manufactures. The paper trade is already beginning to look up there. One firm in Moscow employs more than eighty workmen in the manufacture of boxes for apothecaries, and is now to add the manufacture of paper bags.

THE Paris correspondent of this paper can be reached by our friends and readers abroad by addressing THE PAPER TRADE

JOURNAL, care of the Yale Postal Bureau, American Section, Paris Exposition. Files of THE JOURNAL will be found in the collective exhibit of American publishers at the Exposition.

HOUSEWIVES are in growing fear of the little bug which commits such depredations upon carpets and makes them worthless. The moth appears quite innocent beside it. The paper trade, however, are coming to the rescue, and—so great and diversified are the uses of paper—propose to put a stop to the ravages of the insect. A carbolized paper is now in the market, and promises to be an effectual lining to carpets, thereby preventing loss and vexation of spirit.

THE movement looking to a conference of the paper trade has at length taken more form, and there is some prospect that a convention will be called. What such a meeting will do is another thing, and the question invites the attention and careful reflection of every member of the trade. We are informed that there was a preliminary meeting of paper-makers at the Massasoit House, Springfield, on last Saturday. This was an informal gathering to discuss the situation, and to consider whether to call a general convention of the book, news, manilla and writing paper makers. There was a general and decided expression of opinion in favor of it, but it was thought expedient to leave the subject to the deliberation of a committee consisting of Messrs. Whiting, of the Whiting Paper Company; Marshall, of the Montague Paper Company; Crocker, of the Crocker Manufacturing Company; Brown, of the Carson & Brown Company, and Chapin, of Chapin & Gould. These gentlemen were intrusted with power to decide and to designate the time and place. The decision of the committee will be given on or before the 30th inst., and will be announced in our next issue. The feeling of the trade ought to be so responsive that the committee cannot hesitate to take the final step suggested. We need not reiterate our argument as to the condition of the market and the necessity for bettering trade. It is enough to say that if the paper-makers would be helped they must take the remedy in their own hands and apply it, otherwise they need not look for relief.

MINOR BRANCHES OF PAPER-MAKING.

One of the greatest consolations of those cheerful souls who do not believe the prophecies of there being soon not enough work to do in this world is to point to the continually new branches which are shooting out from every trade and manufacture, and to the endless new wants of fashion and progress. It is in many of those minor walks of trade that fortunes are more surely made. In time, however, these get overrun or are superseded by others, but they serve their purpose. The ephemerides have, in every sense of the word, their day. Some years ago a few artisans began to manufacture on a small scale in this city, and their modest quarters were soon insufficient for their trade. The modest little factories of paper boxes, artificial flowers, and a hundred other articles grew up to immense proportions, which were only equaled in some cases by the self-importance and dignity of their possessors.

The Papier Zeitung—which follows one of the great aims of a true trade paper, to make known new discoveries in the trade and to give useful suggestions to its readers—had a recent article on the manufacture of "artificial" papers—that is, papers imitating various substances and used for purposes outside of stationery. These subsidiary papers have in the aggregate a large sale, and some of them would, if popularized, have an extensive use in this country. Among them are test paper for wine; mineral ivory paper, which is much used by painters, &c.; mirror paper, which enables us to remedy the bare spots on looking-glasses; mother-of-pearl paper, which gives all the outward show of the original article, and whose use ought to be of the most multifarious; iodized paper, which is sold by the apothecaries at apothecary prices, but which by right should be made by the paper-maker and sold by the stationer.

In these days of political and commercial aggressiveness it will not do for stationers to allow druggists to supersede them, and to use the sodawater fountain and Lubin's perfumery as adjuncts to some stationery purchase. The tendency of the times is to concentrate, and the shop of the period is evolving into a bazaar. "Who's to be who?" being the question, it is evident that the stationer can tack on more new articles than any other, and that most people will prefer to give him their custom than to patronize the dry-goods man or the pharmacist, where paper and cognate matters are given that amount of attention which a disciple of Isaac Walton gives to the worm which he puts on the hook.

Answers to Correspondents.

H. H., Zanesville.—We do not know of any work that treats specifically of the construction you speak of. Rules of this sort are rather general. We may at some early day take up the subject, and "lay down the law."

M. & A., Bellows Falls.—Hand & Elsworth, 51 Beekman street, New York, furnished the samples of South American fibre. The other fibre came from John Roberts, Toronto, Dominion of Canada.

M. L. H., Waterbury.—It would be rather invidious for us to discriminate in the way you ask. Prices, too, are open to negotiation. Consult Lockwood's Directory or our advertising columns, and you will be able to make a selection of paper-makers who will supply all of your wants.

W. W. H., Somerset.—We cannot advise any one. You must exercise your own judgment. If your facilities are as you state, you might work profitably, although the business is very largely engaged in at present. There are a number of processes. Consult Edward Conley, 5 Beekman street, New York.

Changes, Removals, and New Firms.

H. W. Jenkins, printer, Reed City, Mich., has sold out.

W. M. Keith, printer, Smith's Falls, Ont., has sold out to Thompson, & McLeod.

Joseph Lyght & Co., stationers, Hamilton, Canada, are selling out at auction.

Mayfield, Otley & Patton, stationers, Nashville, Tenn., have dissolved partnership.

Salisbury & Co., publishers of the Enquirer-Sun, Columbus, Ga., have sold out to John King.

Winnifrieth Bros., booksellers and stationers, Toronto, Ont., have dissolved partnership. H. Winnifrieth continues.

Robert G. Pike, publisher of the Sentinel and Witness, Middletown, O., has sold out to Ernest King & Son.

Florence Alspaugh & Co., stationers, Jacksonville, Fla., have dissolved partnership. Florence Alspaugh continues.

The copartnership heretofore existing between Z. C. Warren, C. W. Barnes and John W. Hull, under the firm name of Warren, Barnes & Co., has been dissolved by mutual consent. Acting under the advice of their principal creditors, they decided to dissolve partnership, and a liquidation is to be effected on or before November 1. Mr. Barnes, alone, is to sign in liquidation, and will, without doubt, continue the business in his own name after the date mentioned.

Chattel Mortgages.

[In the appended list E. signifies a renewal of a pre-existing mortgage; b. s., bill of sale; and real, a mortgage on real estate.]

Table with columns: Mortgagor, Mortgage, Amount. Includes E. Kearns, Lockport, \$108; G. W. Fitch, Rochester, \$1,100.

Table with columns: Mortgagor, Mortgage, Amount. Includes Otto Stulzbach, Paterson, \$100.

Table with columns: Mortgagor, Mortgage, Amount. Includes Oliver A. Libby, Lowell, Mass., \$250; John Reid, Worcester, Mass., \$2,000; J. O. Peavy, Littleton, N. H., \$650.

Table with columns: Mortgagor, Mortgage, Amount. Includes N. Frederickson, Chicago, Ill., b. s., \$1,300; W. H. Tyler & Co., Chicago, Ill., \$118; Sentinel Company, Milwaukee, Wis. (Real), \$3,000; Maynard & Tedford, St. Louis, Mo., \$1,000; Louis Bros., Cincinnati, O., \$36.

Failures.

Albert R. Tupper, stationer, Boston, Mass., is in bankruptcy.

Levi Adam, dealer in books and stationery, Louisville, Ky., has failed.

McFarland & Bro., wholesale paper dealers, Philadelphia, Pa., have compromised at 60 per cent.

W. L. Dillon & Co., manufacturers of paper bags, at No. 95 Barclay street, New York, have failed, with liabilities amounting to \$3,000, and assets, \$300.

Roman & Co., stationers, San Francisco, Cal., are reported to have suspended. The failure is said to have been caused by the suspension of the house of Slote, Woodman & Co.

The Dillingham Paper Company, 31 Federal street, Boston, has failed. According to the statement to its creditors the liabilities are \$7,950.33, and the assets \$1,475.25. The offer is made of 15 cents on the dollar, and a settlement will probably be effected on this basis.

A meeting of the creditors of Alvord & Kel-

log, of Jacksonville, Fla., was held at the rooms of the Stationers' Board of Trade on Thursday afternoon to receive an offer of composition to be submitted by the firm. Geo. L. Pease, of Boorum & Pease; David Scott, of Vernon Bros. & Co., and John Bentley, of Farmer, Little & Co., were appointed a committee to investigate their affairs.

In the case of the assignment of Slote, Woodman & Co., the assignee, Geo. W. Davids, with a large clerical force, has been busily engaged during the past week in making up schedules of liabilities and assets, and it is thought they will be ready to be presented to a meeting of their creditors to be held next week, the day for which meeting has not been definitely named, but it is stated that it will occur about Wednesday.

Personal.

Chas. H. Ludwig, printer, New York city, is dead.

J. J. Le Count, of the firm of Le Count Bros., wholesale stationers, San Francisco, Cal., is dead.

In the case of Thomas Manahan, U. S. Commissioner Osborn on Tuesday last rendered the following decision: "The accused is charged with having secreted or concealed property belonging to his estate, and attempting to account for any of his property by fictitious losses or expenses, contrary to subdivisions first and eighth of section 5,132 of the Revised Statutes of the United States. Counsel for accused claimed that the principle laid down in the case of the United States vs. Lewis Fox, decided by the U. S. Supreme Court, controlled the facts and the law in this case. The eighth subdivision of section 5,132 is clearly without the scope of the Fox decision. After carefully considering the proofs and the argument of the respective counsel, I am forced to the conclusion that there is probable cause to believe that the expenditure of \$2,000, alleged to have been made by the accused in his present (second) wife for nursing his first wife for six weeks, and managing his household during that period, before the death of his then wife, was not made at the time, or if made, it was not a genuine transaction made in good faith, but it partakes of the nature of a fictitious loss or expense. The testimony in the case of Margaret E. Manahan justifies me in this conclusion. As to whether the alleged transactions of the loans made to the accused by his present wife after their marriage are to be considered actual transactions, though fraudulent or otherwise, and therefore cannot be inquired into in a criminal proceeding, it is not necessary now to determine. I did not pass on a similar state of facts in the Philip Stiner case, for the reason that the U. S. District Attorney withdrew the charge before I was enabled to give my views on the question. The accused is held to await the action of the Grand Jury." Later in the day Mr. Manahan was rearrested and gave bail.

In Town.

P. C. Baird, Lee, Mass.; Mr. Chaffee, Lee, Mass.; L. C. Woodruff, Dansville, N. Y.; J. T. Outterson, Sandy Hill, N. Y.; J. H. Gell, Portland, Oregon; H. S. Crocker, San Francisco, Cal.; M. Colton, La Crosse, Wis.; T. J. Brown, Toledo, Ohio; C. H. Read, Pittsburg, Pa.

Paper and Stationery at the Exposition.

The Monteur de la Papeterie Francaise has the following remarks on the above subject: The classification and installation of articles in the Champ de Mars being now finished, we shall begin a regular review of them. We shall first examine the specimens sent by home and foreign manufacturers of papers and paper boards, we shall afterwards pass rapidly in review blank-books, office and other stationery, binding and art materials, beginning with the foreign sections. Finally we shall speak of paper machines and paper stocks, and if we have space shall devote a little to some mechanical appliances and motors of interest to paper-makers. Without associating ourselves with the remarks which have been made on the composition of the jury we must still express our regret that no practical man has been placed in Class 10, especially devoted to blank books, office furniture, &c. The same may be said of Class 60, which includes paper materials and printing. Setting out from the vestibule of the Ecole Militaire we first meet the exhibit of:

Holland.—The only paper mill represented is that of Van Gelder Sons, of Amsterdam, whose mills are situated at Apeldoorn and at Wormermeer, near Sandaam. These mills have kept up the old traditions of Dutch paper-making. Hand-made papers tub sized, for bank checks, &c., are more remarkable for their strength and good sizing than the fineness of the watermark. Messrs. Van Gelder also exhibit magnificent vellum papers for printing and engraving. To make these large, size hand-made papers requires experienced workmen, who are becoming scarcer every day. Their exhibit is completed by specimens of imitations of Japanese and Chinese papers which are in great favor among publishers. The representation of this house, however, gives a very incomplete idea of the state of the manufacture in Holland, and it is regrettable that the mills of Maestricht have not sent specimens of their machine-made papers, which are very much like the Belgian. Hoofies & Benhema, of Hoogezaand, show specimens of straw and other boards. M. B. Cramer, of Ootmarsum, exhibits large boards which are calendered for finishing shawls and stuffs.

Portugal.—Paper manufacturing is here mostly confined to the neighborhood of the town of Aveiro. Seven of the principal manufacturers have sent specimens of their production to the Exposition. Mostly all are hand-made and common, the consumption of them is limited to local wants and to export to the Portuguese colonies. Portuguese publishers have to import paper principally from England.

Denmark.—Has only one exhibitor—the paper

mills of Maglemoele, near Naestved, which sends very good specimens of white and colored papers.

Greece.—Though hardly a manufacturing country, sends a few reams of common writing and packing paper.

Belgium.—Has a few exhibitors who have displayed great taste in the arrangement of their wares. Foremost among them is the house of E. L. Godin & Fils, whose mills are situated at Huy and Andennes. The mills have been long established, and have in a high degree the characteristics of Belgian paper mills—large output, thorough system and good quality of pulps. The exhibits consist of vellums and water-marked papers (machine made), writing and machine-ruled, colored for book covers and all sizes of printing papers, and also blotting and tarred papers. Olin & Fils, of Brussels, show news paper in rolls and reels, and plain and colored wall papers, and also tapes for telegraphic indicators. The Anonymous Society of the Union of Paper-Makers of Mont Saint Guibert displays, besides printing papers of all kinds, and writing papers which are remarkable for their good manufacture and cheapness, white and colored parchment papers known as "impermeable vegetable parchment." These vitreous papers are very useful for various purposes, and can in many cases, as in binding, be substituted for real parchment. They can also be employed for osmosis apparatus.

[To be Continued.]

Cellulose.

The Wochenblatt für Papierfabrikation says: If we are to believe the estimates of future and possible uses of cellulose not less than 300,000 centners will be annually used. At present, however, the entire production is not more than 100,000 centners, which are by no means of easy sale. This fact is owing to various causes. A great many paper mills do not care about using cellulose. A great many others are arranged for straw pulp and though this is dearer than wood cellulose they do not care to transform their machinery. The cellulose is not pure and bleached enough for medium and superior papers, and is too dear for those of inferior qualities. The prices of paper are at present so low that it is not profitable to buy cellulose. At the same time there are other uses for cellulose besides making paper. It can be used as wood imitation ornaments, as a substitute for leather cloth, and for fillings for shoes, &c. Furniture decorations, picture frames, &c., can be pressed, and the price is only 1-10 to 1-20 that of wood work.

Newspaper Intelligence.

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

NEW NEWSPAPERS.

Table with columns: DAILY, Size. Includes Oakland (Cal.) Citizen, 24 x 36; Hornellsville (N. Y.) Hornell Times, 19 x 26; Philadelphia (Pa.) Tageblatt, 27 x 40.

Table with columns: WEEKLY, Size. Includes Fort Collins (Col.) Courier, 24 x 35; Norwich (Conn.) Banner, 24 x 36; Harmony Grove (Ga.) Northeastern Progress, 24 x 36; Chicago (Ill.) News, 20 x 30; Compton (Ill.) News, 20 x 34; Golconda (Ill.) Pop. Co. Democrat, 24 x 34; Lee (Ill.) Monitor, 20 x 34; Paris (Ill.) Republican, 28 x 44; Paw Paw (Ill.) Lee Co. Times, 20 x 34; Pontiac (Ill.) Ford's Livingston Co. Democrat, 26 x 41; Monrovia (Ind.) Register, 22 x 30; Oxford (Iowa) Journal, 20 x 35; Eagle Lake (Minn.) Independent, 20 x 35; Gainesville (Mo.) Oark Co. News, 20 x 37; Kansas City (Mo.) Herald des Westens, 28 x 42; Keytesville (Mo.) Chariton Courier, 26 x 40; St. Louis (Mo.) Grocers' Trade Circular, 9 x 12; Pawnee City (Nebr.) Enterprise, 24 x 35; Exeter (N. H.) Greenback Lever, 24 x 36; Bloomville (Ohio) Seneca Co. Record, 24 x 35; Deiance (Ohio) Greenback Era, 26 x 40; Fremont (Ohio) National Mail, 26 x 40; Mount Vernon (Ohio) National Advocate, 26 x 40; Bradford (Pa.) Era, 24 x 37; East Stroudsburg (Pa.) Gazette, 24 x 36; Elk City (Pa.) National New Era, 22 x 31; Pittston (Pa.) Sunday Plain Dealer, 26 x 38; Wilkesbarre (Pa.) Sunday Herald, 24 x 36; Williamsport (Pa.) Star of Hope, 22 x 32; Dallas (Tex.) National Greenback Standard, 26 x 40; Fort Worth (Tex.) Tarrant Co. Tribune, 26 x 40; Petersburg (W. Va.) Grant Co. Gazette, 23 x 35.

Table with columns: SEMI-MONTHLY, Size. Includes Waco (Tex.) Central City Advertiser, 22 x 32.

Table with columns: MONTHLY, Size. Includes Cleveland (Ohio) Home Companion, 22 x 30; West Salem (Ohio) Erwin's Musical Cosmos, 11 x 13.

Table with columns: QUARTERLY, Size. Includes Cleveland (Ohio) American Antiquarian, 7 x 10.

CHANGES. The Evening Democrat, Oakland, Cal., has merged into the Citizen.

The Santa Ana Valley News, Santa Ana, Cal., has merged into the Herald.

The Pilot, Chicago, Ill., has changed to the Irish Leader and Pilot.

The Ledger, Olney, Ill., has changed to the Richmond Co. Republican.

The Independent Journal, Holyoke, Mass., has merged into the News.

The Western Citizen, Brookfield, Mo., has merged into the Western Monitor.

The People's Independent, Turtle Creek, Pa., has moved to Greensburg.

CONSOLIDATION. The Morning Times and Weekly Times, Lockport, N. Y., have been consolidated with the Union.

SUSPENSIONS NOT PREVIOUSLY ANNOUNCED. The Daily Argus, San Jose, Cal.; Dining Room Magazine, New York, N. Y.; Commercial, Oneonta, N. Y.; Daily Register, Norristown, Pa.; Sunday Morning News, Wilkesbarre, Pa.; Free Press, Woodbridge, Ont.

Peter H. Morris, whose name has been connected with rumors about the establishment of a new paper house in this city, denies that he has ever had any such intention, and that the rumors are entirely without foundation as far as he is concerned.

General Notes.

The owners of the Voelter patents for making wood pulp have obtained an injunction for infringement against Steinberger & Co., Wauwega, Wisconsin.

The number of exhibitors at the Berlin Paper Exposition is now upwards of 500. The approaching elections in Germany interfere somewhat with previous arrangements, and it is proposed to have the meetings of the trade from August 5 to August 11.

Briggs & Taylor, 60 Duane street, New York, are large importers of foreign paper stocks of good packings, and are also agents for Dundee paper stock, as selected and packed by John S. Bradford, of Dundee, Scotland. The trade should call upon this house.

According to the Bulletin de l'Imprimerie the duty on the manufacture of French paper in the budget scheme for 1879 has been retained, the Government being made to dispense with this item of revenue, amounting, for 1877, to 10,500,000 francs. This duty raises the cost of books, &c., an average from one to two per cent. The chief items of dissatisfaction are the ten per cent. duty on white paper, and five per cent. on "lilles," and inferior qualities. In the fourth-teenth congress of paper manufacturers this subject was specially considered, when a committee was appointed to wait on the Government to urge an amelioration.

Edmondo di Amici, an Italian, in a book on Constantine, says that during the fast of the Ramadan it is amusing to stand upon the bridge of the Sultana Valide a few minutes before the sun goes down. About a thousand boatmen may be seen coming and going or sitting still in their caiques. They have fasted since dawn, and are wild with hunger. Their little suppers lie before them, and their eyes constantly move from the food to the sun, and from the sun to the food. When the sun becomes half hidden, they take the food in their hands, and all, with one accord, fix their eyes on the luminary. At last the fiery point vanishes, the cannon thunders, and a thousand mouths bite enormous morsels from a thousand pieces of bread.

In an interesting article on "Book-making in Germany" in the Times of the 20th ult., some interesting statistics are given of the German publishing trade:—According to the Leipzig Catalogue, 14,000 independent works, containing over 20,000 volumes, were published in Germany in 1877. Leaving anonymous publications out of account—a species of literature abounding in Germany—these books were written by 10,000 authors. A classification according to subjects gives the following results:—Encyclopedias, bibliography, and science of literature, 372; theology, 1,253; law, politics, and statistics, 1,329; medicine, 755; natural science, chemistry, and pharmacy, 740; philosophy, 163; school books and pedagogy, 1,629; books for the young, 485; classics, Oriental languages, and antiquities, 520; modern languages, 445; history, 739; geography, 311; mathematics and astronomy, 166; military works, 347; commerce and industry, 525; architecture, engineering, mining, and navigation, 378; shooting, hunting, fishing, and the management of forests, 103; agriculture and horticulture, 392; belles-lettres, 1,126; popular works, 540; masonic books, 17; miscellaneous, 507; maps, 336; total, 13,925. Deducting from this table school books and linguistics—the latter serving in many cases as school books for riper years—there remain 12,000 books on various subjects. The practice of the German publishing trade fixing the average edition at 2,000 copies, we obtain 2,400,000 copies as the figure at which we may set down last year's production. This estimate is rather above than below the reality.

In an article in the Oest. Buchdrucker Zeitung on the Austrian Catalogue at the Paris Exhibition, we see the following figures on the state of the printing and other trades at the present time compared with a few years previous. The headquarters of the printing trade in the dual empire are in Kermo and Prague. Since 1860, printing, especially in the first-named city, has extraordinarily developed in respect of the number, extent, and capabilities of the firms, and quality of work. While in 1865 there existed in Vienna 53, and in Prague 17 taxed printing offices, in 1876 their number had increased to 112 and 31 respectively. In the countries joined to the monarchy great advances have likewise taken place. The newspaper press has especially contributed to the increase of business. In 1875 periodicals and newspapers appeared to the number of 876, of which 293 dealt with politics. The greater part of these appeared in Lower Austria, including Vienna, i. e., 359, Oben Bohemia, 195. 391 were printed in the German language. The paper trade has participated in the advance of the preceding industry. The annual production reaches about 700,000 net cwt., and in its production are employed: rags (of which an export duty of 4 fl. per met. cwt. is imposed), and various substitutes, as Voelter wood stuff for middling fine to ordinary paper, chemically prepared wood stuff, or cellulose, and straw stuffs. Imports—1872, 52,499 cwt.; 1877, 51,451. Exports—1872, 91,777; 1877, 190,933. Chromo lithography, oleography, and the manufacture of maps and plans, &c., have made noteworthy progress. In materials for printing, machines, &c., there are nine principal firms, mostly in Vienna, engaged. The lithographic firms in Vienna, which numbered 67 in 1865, have increased to 140 in 1876. There are many small offices in different parts of the empire working a single hand press. The headquarters of the engraving trade is in Vienna, which works largely for exportation, seven principal firms being thus engaged.

Spending your time in nothing which you know must be repented of. Spend it in nothing which you could not review with a quiet conscience on your dying bed. Spend it in nothing which you might not safely and properly be found doing if death should surprise you in the act.

SPECIAL NOTICES.

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

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Market Review.

OFFICE OF THE PAPER TRADE JOURNAL, FRIDAY EVENING, JULY 26, 1878.

THE MONEY MARKET.—There is no change in the monetary situation. Loanable capital is in abundant supply throughout the week, call borrowers obtaining all they needed at 1 1/2 to 2 1/2 per cent. on ordinary stock collateral, and 1 to 1 1/2 per cent. on pledge of Government securities. In the discount market the rates are almost entirely nominal. Prime mercantile paper was in demand at 3 to 4 per cent., but there is little doing, as the offerings of first-class paper are light.

Government bonds were strong and active, with an improvement of 1/2 per cent. in nearly all the issues. The foreign advices reported a strong market at London for United States bonds, which advanced 1/2 to 3/4 per cent. Sales of the new 4 per cents. by the Treasury have recently been very large, the total amount disposed of thus far amounting to over \$26,000,000. The Secretary issued a call on Wednesday for another \$5,000,000 of the 5-20's, interest to cease October 17, leaving the amount of that issue outstanding \$66,856,050.

The gold premium since our last has remained very steady. This steadiness of the price comes mainly from the demand with which to pay for 4 per cent. bonds purchased from the Treasury. The range of quotations for the week has been between 100 1/2 and 100 3/4. The following are the quotations for the week:

Table with columns: Opening, Highest, Lowest, Closing. Rows for July 20, 21, 22, 23, 24, 25, 26.

The posted rates for bankers' Sterling remain unchanged at \$4.83 for 60-day and \$4.86 for sight, and the market is dull. The following are the rates to-day: Sterling, 60 days, \$4.83; sterling, sight, \$4.86; cable transfers, \$4.85 1/2 to \$4.87; commercial sterling, prime long, \$4.81 to \$4.83; commercial sterling, good long, \$4.79 to \$4.81; Paris, bankers', 60 days, \$5.30 to \$5.17 1/2; do. sight, 5.16 1/2 to 5.15 1/2; Antwerp, bankers', 60 days, 5.21 1/2 to 5.18 1/2; do. sight, 5.17 1/2 to 5.16 1/2; Swiss, bankers', 60 days, 5.20 to 5.17 1/2; do. sight, 5.16 1/2 to 5.15 1/2; Reichs marks (4), bankers', 60 days, 94 1/2 to 95; do. sight, 95 1/2 to 95 1/2; Guilders, bankers', 60 days, 40 to 40 1/2; do. sight, 40 1/2 to 40 1/2. Paris dispatches quote exchange on London at 25 fr. 13 1/2 c.

THE PAPER TRADE.—Continues to present a very dull appearance. There is scarcely any trade at all beyond an ordinary jobbing description, and while the local demand is very limited the export movement is slower than for several weeks previous. The present dull state of business is not unusual for the season of the year, and at the proper period an improvement is looked for. At the present time a large number of business men are absent from the city seeking recreation, and those who remain put forth very little effort to push sales. The change from the intense heat of last week to an enjoyable temperature has given a slight impetus to some branches of trade, though it is too early yet to expect much improved activity. About the middle or last of next month, according to former precedents, a revival may be expected, though the fall season will hardly get under full headway until September. There is now certainly a bright business prospect, unless all indications are illusive. In Writing Papers the general market is without change; the demand continues slow and irregular, and the movement is mainly of a jobbing character, with quotations nominally unchanged. Book Papers are inactive, and there is only a limited business doing on local account for lots for immediate use, the quality most in request being Extra Machine Finished. Prices are very weak, but quotably as before. The market for News Papers shows very little strength, and the recent reduction in the price of wood pulp has had its effect on the price of News Papers, and we hear of sales of ordinary qualities at 6 1/2 c., with a tendency to a still further shading in the price. In Manila the market is very dull and weak, and shows no signs of improvement. The supplies are very full, with only a very moderate demand. There

is some little call for Flour Sacks, but for Bogus Manila the call is very light, with the market overstocked. Straw Wrappings have undergone little or no change. The market is very dull and weak, and prices have a still further downward tendency. The production keeps up pretty full, only a fractional number of the mills having shut down. The manufacturers last week failed to take any action, and the movement looking to a general closing down to half time, as was proposed, after August 1, has been abandoned. In Binders' Boards there is only little doing, and prices rule very low, and continue without change at our former quotations. Straw Boards are still quoted on the basis of \$43 to \$45 per ton for State and Pennsylvania Air-dried. The local demand is light, but there is some little export business in progress.

JUTE BUTTS.—Market past week has ruled quiet but steady at former prices, viz., 2 11-16c. to 2 13-16c., cash and time. Arrivals have been as follows: Allahabad, New York, 4,500 bales; Gavelock, do., 4,688 bales; Idomene, do., 3,039 bales; Star of Albion, do., 4,642 bales; total, 16,869 bales, of which a large portion were bought by manufacturers to arrive. The market closes quiet and steady at former quotations. It remains to be seen if the late heavy arrivals will induce holders to make any concessions.

WOOD PULP.—The demand is rather less, owing to a number of the mills having closed down for repairs, yet the sales of the combination have been free at their reduced price of 3c., and sales are reported of about 75 tons of combination Pulp at this quotation, while offerings of stock made outside of the combination have been reported as low as 2 1/2 c., and several sales at 2 3/4 c.

FOREIGN RAGS AND PAPER STOCK.—Transactions are very limited, and the market is generally dull, and values are without any material change. The arrivals for the week foot up 1,503 bales Rags; 554 bales Paper Stock, and 529 bales Manila.

DOMESTIC RAGS.—The market continues very quiet, with only a light call for stock, and prices remain on the line of our former quotations. There is some inquiry for City Seconds. The sales reported include 10 tons No. 2 City Whites at 3 1/2 c., and 125 bales City Seconds at 1 1/2 c. to 1 3/4 c.

BAGGINGS, &c.—The business doing is mostly in small lots. The market continues dull and weak. The sales reported to us embrace 8 tons Manila Rope at 3c., 12 tons No. 1 Gunny Bagging at 2 9-10c., and 6 tons Jute Bands at 2 1/2 c.

OLD PAPERS.—There is nothing of particular note to say of this market, except that the low prices of Rags have a corresponding effect in the price of Paper Stock. The transactions the past week were small, and prices are nominally unchanged. We note sales of 7 tons Book Stock at 2 1/2 c.

STRAW.—Generally prices remain pretty much as last week. We quote: 40c. to 45c. for Long Rye; 40c. to 45c. for Short Rye, and 30c. to 35c. for Oat.

ROBINS.—There is a better demand for good grades, prices for which hold steady; Strained is quiet and rather easy. The quotations are: C Strained at \$1.55; D Good Strained at \$1.60; E at \$1.70; F Good No. 2 at \$1.80; G Low No. 1 at \$1.90; H No. 1 at \$2.30; I Good No. 1 at \$2.45; K Low Pale at \$2.60; M Pale at \$3; N Extra Pale at \$3.25.

CHEMICALS.—The market for Bleaching Powders and Soda Ash is very firm, and prices are higher, owing to their scarcity. Sales occurred as follows: 75 cks. Bleaching Powders, at 1.50c. currency; 50 tons Soda Ash, 48 per cent. at 1.75c. gold; 25 drums Caustic Soda, 60 per cent. at 4c. gold; 25 tons Sal Soda, at 1.30c. gold; 50 barrels Lump Alum at 2 1/2 c. currency; 75 barrels Ground Alum at 2 1/2 c. currency; 100 barrels Potash Alum at 2 1/2 c. currency; 50 bbls. Concentrated Alum at 2 1/2 c. currency; 100 barrels Natrona Porous Alum at 2 1/2 c. currency; 25 tons Aluminous Cake at 2c. currency; 10 casks Yellow Prussiate at 23c. currency; and 50 casks Bichromate at 13c. to 14c. currency; 10 tons English China Clay at \$12 per ton, and 15 tons South Carolina do. at \$12 per ton.

COAL.—During the week under review we have to report a quiet trade doing in Anthracite coal. Seward's Coal Trade Journal says: "There is considerable moving forward from tide water points, to go on stock, which proves at least a portion of the dealers are going to be in a position to reap a pretty good harvest this fall and winter, if there is any reliance to be placed in the signs of the times. They report, however, that buyers still hold off, from one cause or another, and thus there is little activity in the business. After August is now said to be the time when we may expect that grand rush for coal, and not enough to supply the demand. The regular monthly meeting of the Board of Control was held in Philadelphia on the 23d inst., and upon a careful consideration of the condition of the market and the outlook for the future it was decided to make the allotment for August 2,000,000 tons, as against 1,500,000 tons for July, and a business of 1,391,396 tons in August last, and an average business of 1,808,110 for the month of August for five years from 1873-7. One of the very peculiar conditions of the Anthracite trade is found in the fact that while the dealers in certain grades find difficulty in selling their coal, except at shaving rates, the Lehigh coals, all of them, go off at good stiff rates, for all sizes excepting nut; some of the figures claimed to be realized are very flattering indeed. At the Eastward there is a very quiet market prevailing—no large sales, and receipts very much less than had been anticipated. The freights in this direction are, as a matter of course, very low just at present, but they are bound to advance when the active trade sets in. The Bituminous trade continues to move along in regular order. The output of Cumberland is

increasing somewhat, and Clearfield is gradually picking up; both of these districts fall short of the total to the same time last year. The low prices at which these coals can be put on the market is bound to keep the price of Anthracite steam sizes down to a fair level. It is really surprising that the Bituminous coals do not form a larger part of the steam supply for the Atlantic coast mills and factories. They are certainly more valuable at anything like an even price, than Anthracite; certain parties claim as high as 25 per cent. better results." The quotations at tide-water, Perth Amboy, N. J., are: Lump, \$4.10; Broken, \$3.90; Egg, \$3.90; Stove, \$4.10, and Chestnut, \$3.50.

PRICES CURRENT.

NEW YORK MARKET.

Table of market prices for Paper Market, Woolen Rags, Rags, Rope and Bagging, Shavings and Old Paper, and English Rags, &c.

English Old Papers and Shavings.

Table listing prices for Hard Shavings, Soft Shavings, White and Colored Shavings, Paper-collar Cuttings, etc.

Hamburg Rags, &c.

Table listing prices for Line Cuttings, S P F F F square bale, S P F F F long bale, etc.

Shirt Cuttings, square, cross.

Table listing prices for Shirt Cuttings, square, cross, C S P F F F square bale, etc.

Rope.

Table listing prices for T R (tarred), W R (white), M R (manilla), etc.

Old Papers.

Table listing prices for Old Book Paper, Old Printed Books, Imperfections, etc.

Leghorn and Genoa Rags.

Table listing prices for P P, No. 1 Lines, S S, No. 2 Lines, T T, No. 3 Lines, etc.

Alexandria Rags.

Table listing prices for Whites, Blues, Colors.

Memel Rags.

Table listing prices for S P F F F, S P F F, F F, F G, L F B.

Trieste Rags.

Table listing prices for S P F F, S P F, S F B.

Konigsberg Rags.

Table listing prices for S P F F, S P F, F F, L F B.

Japanese Rags.

Table listing prices for Whites, Blues, Colors.

Chemicals, Coloring Materials, &c.

Table listing prices for Alum, lump, Alum, ground, Alum, porous, Alum, potash, etc.

BOSTON MARKET.

General trade continues rather quiet. Prices of goods are firm for most descriptions.

Paper Stock.

Table listing prices for Mill Assorted Whites, Cotton Canvas, Gunny Bagging, etc.

Leghorn Rags.

Table listing prices for P P, No. 1 Lines, S S, No. 2 Lines, etc.

Alexandria Rags.

Table listing prices for Whites, Blues, Colors.

Table with columns for Smyrna Rags, Constantinople Rags, and New Papers. Includes items like Whites, Blues, Reds, Mixed, and various paper grades.

Table with columns for Chemicals. Includes items like Alum, Potash, Soda, and various salts.

Table with columns for Philadelphia Market. Includes items like Paper, Chemicals, and various market goods.

Text describing the Philadelphia market, mentioning paper prices and chemical supplies.

Table with columns for Paper Stock. Lists various types of paper and their prices.

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HANWELL PAPER MILLS. MACHINERY, &c. FOR SALE. The undersigned, whose lease from the Commissioners of Fairmount Park on the property now occupied by Hanwell Paper Mills, on the Wissahickon, will expire during the present month, offers at Private Sale all the following Valuable Machinery, now in use at said Mills:

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, without using blower.

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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 62-in. and one 84-in. Fourdrinier Machine. One hundred and twenty-seven Skeleton Dryers, 36 in. by 80 in., with pulleys, gears, &c., all complete and nearly new, used in drying animal-sized writing papers.

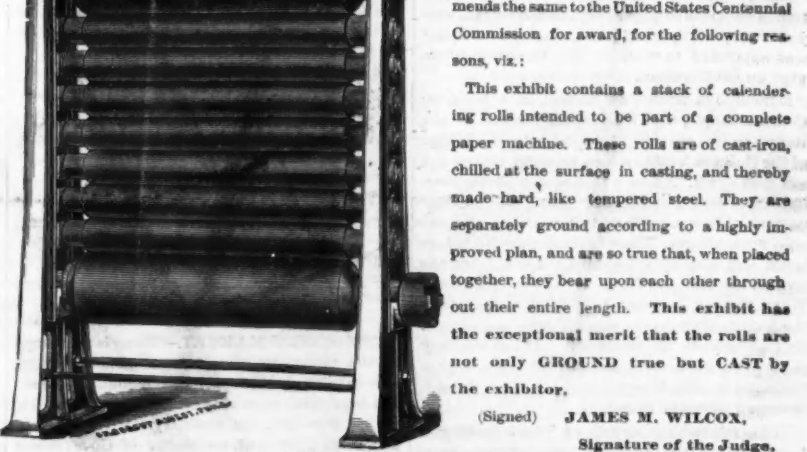
Three Hydraulic Presses—one 32 x 50 platen, 8 in. piston, 9 1/2 feet opening; two 28 x 45 platen, 10 in. piston, 6 to 10 feet opening.

One 62-in. Chilled Calendar Rolls, 12 in. diameter, 28 in. long on face. Five stacks Super-calenders—one six rolls, 36-in. face; one six rolls, 24-in. face; one five rolls, 24-in. face; one four rolls, 24-in. face.

BELT HOOKS. The Best Metallic Belt Hook in the Market for LEATHER OR RUBBER BELTS. These Hooks have been thoroughly tried for eight years in all places—in Machine Shops, Cotton, Woolen and Paper Mills and all who use them admit that they are the best and cheapest fastening in use, taking into account the durability of the Hook, wear and tear, and time in mending belts.

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EXTRACT OF AWARD ON CHILLED ROLLS. The undersigned having examined the product herein described respectfully recommends the same to the United States Centennial Commission for award, for the following reasons, viz: This exhibit contains a stack of calendering rolls intended to be part of a complete paper machine. These rolls are of cast-iron, chilled at the surface in casting, and thereby made hard, like tempered steel. They are separately ground according to a highly improved plan, and are so true that, when placed together, they bear upon each other throughout their entire length. This exhibit has the exceptional merit that the rolls are not only GROUND true but CAST by the exhibitor.

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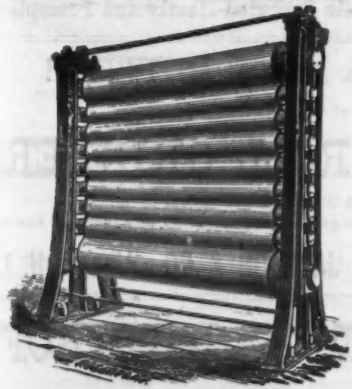
We warrant every Felt to work well, and if
it does not, it can be returned.

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
long felts. GRAY, O'FERRALL & Co. are supplying
the best cylinder long felt I have ever had any ex-
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cidedly excel. They keep their width under a reason-
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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
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means to do so if there is a necessity for fast running.
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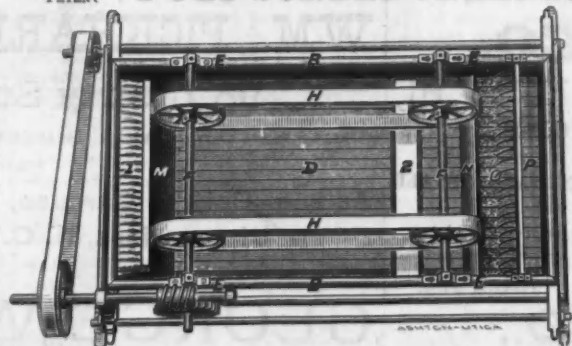
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its merits: 1. It is not neces-
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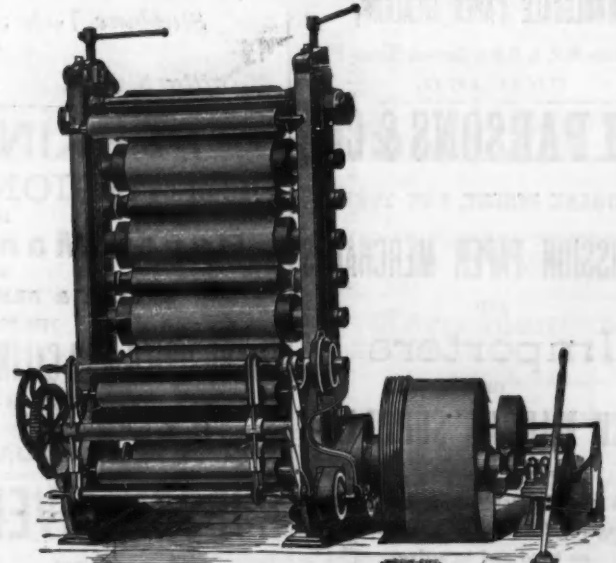
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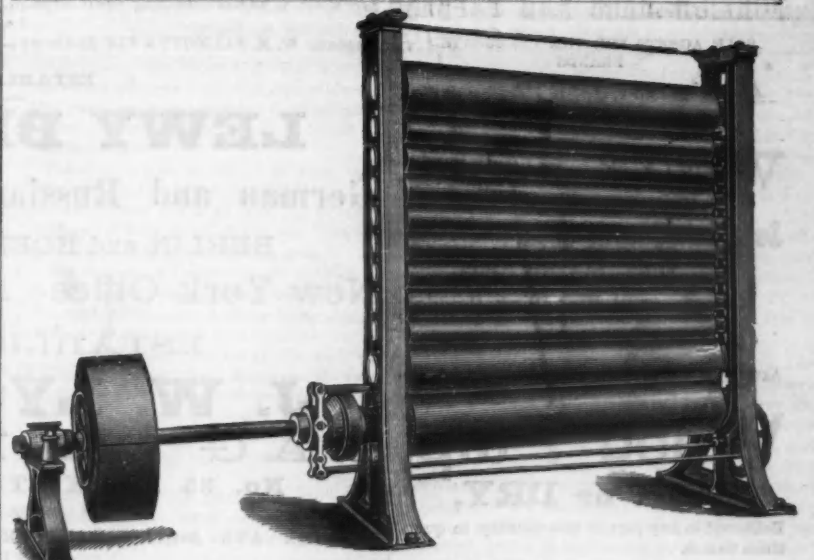
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AFTER the heads have been riveted in, thus insuring parallelism of the bearings, a very
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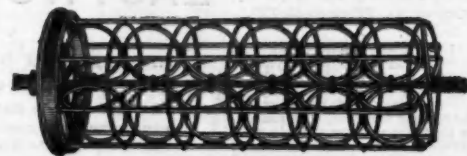


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