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PAPER TRADE JOURNAL

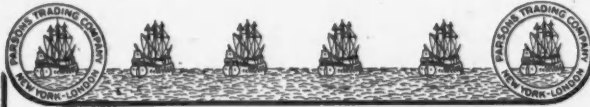
THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY.

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Vol. LXVI. No. 14

NEW YORK AND CHICAGO, APRIL 4, 1918

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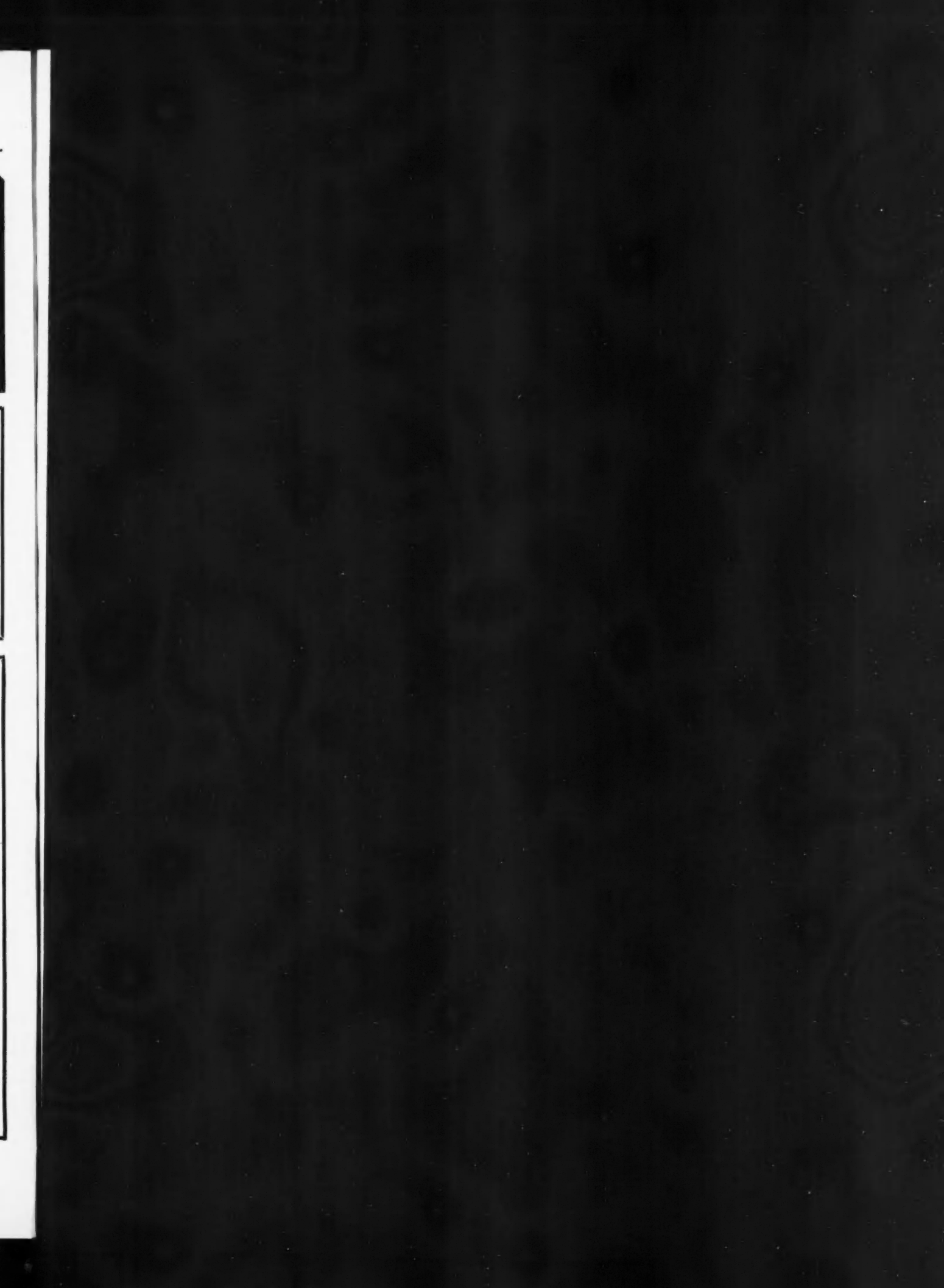
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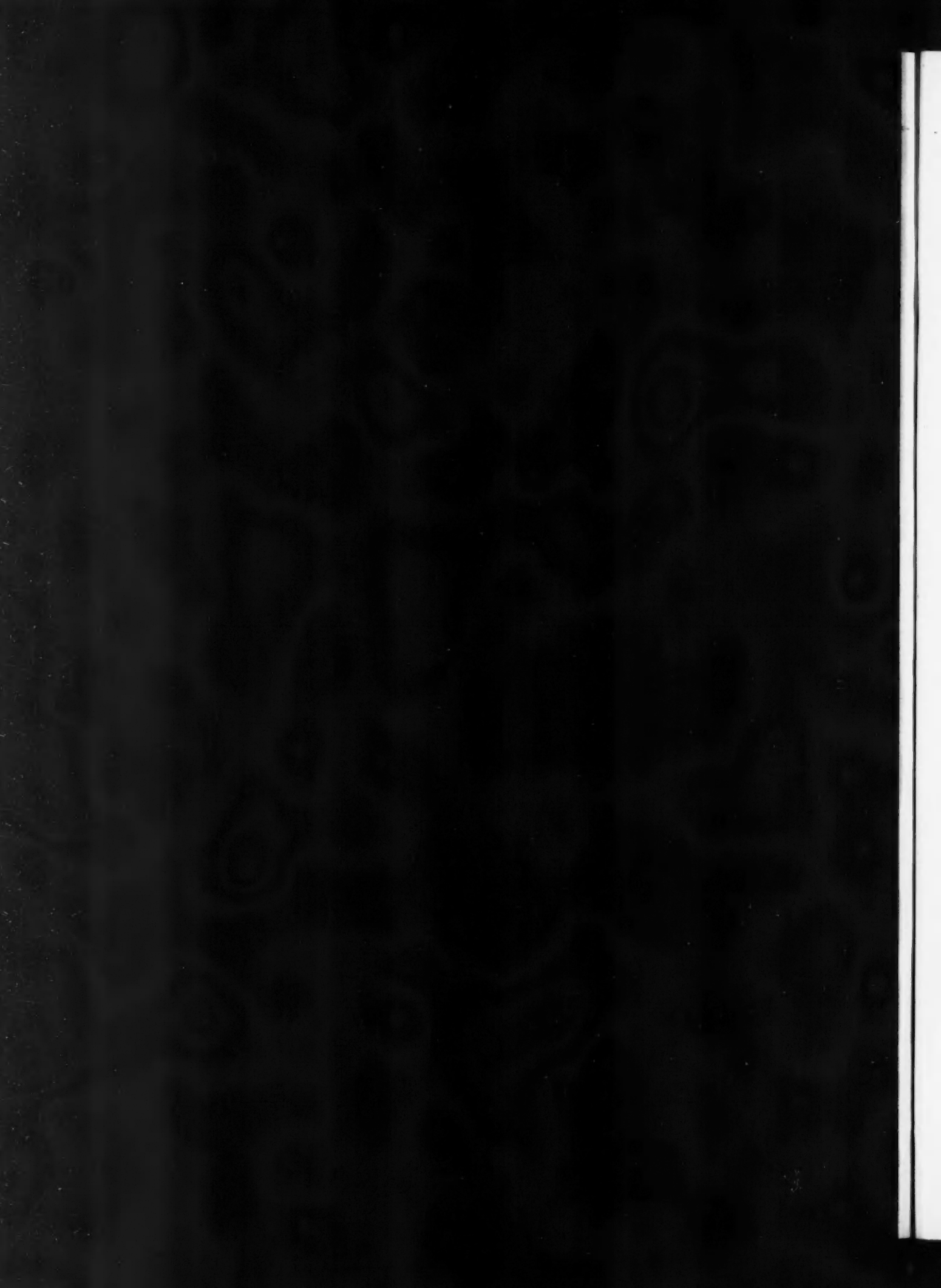
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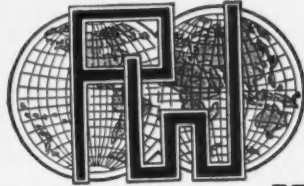






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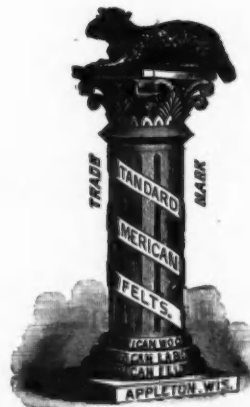
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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FORTY-SIXTH YEAR

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NEW YORK AND CHICAGO

Thursday, April 4, 1918

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FOREIGN CLAY IMPORTS MAY BE RESTRICTED

Meeting at Washington Called by War Industries and Shipping Boards—Paper Mills and Other Industries Represented—Outlook Grave as Drastic Ruling Will Affect Industry in No Small Degree—Aim to Avoid Delay in Shipping Caused by Loading and Unloading of Clays—Clay Men Urge Development of the American Clay Industry

Last Wednesday, at Washington, D. C., a meeting was called by the War Industries Board of the Council of National Defense to take up the question of importation of foreign clays. The meeting was presided over by Professor S. A. Tucker and representatives of the Shipping Board and other Government departments and agencies were present, as well as men from the large paper mills, the pottery and oilcloth industries and others.

The idea of the meeting was to have all parties interested in foreign clays submit their cases before the board. There was no decision reached at the meeting, but a ruling is expected shortly.

The testimony submitted by the various representatives covered the entire situation. It was brought out that the War Industries Board and the Shipping Board are working in conjunction with the English Shipping Board so that shipping space and delay may be cut down to an absolute minimum in order to make troop movements more efficient. It was contended that great delay was incurred in the loading and unloading of English clay on both sides of the water—a delay of seven or eight days over the usual time required with water ballast.

Say They Cannot Do Without English Clay

The various industries represented stated it was impossible to get along without English clays and in the final analysis it was a question of whether these industries would have to shut down because of their inability to obtain the clay.

The coating mills stated that it was imperative for them to use the foreign clays. The fillers set forth that their industries were using all of the American clays possible, but there was a limit to the percentage usable. It was stated that there is an inherent superiority of the English over the American clay, and that the washed domestic clays might be used for filling but not for coating purposes.

How Railroads May Be Affected

The Railroad Board was represented also. In the event that the curtailment of the importation of foreign clays is ordered, the mills will have to turn to the domestic mines for their product, and in this situation the railroads would play a heavy part. It was pointed out that the railroads are carrying every pound of freight possible at the present time, and if they are ordered to carry clays it will mean that something else will have to be dropped that may be more vital to the carrying on of the war. At the present time it is practically impossible to ship Southern clays to New England; shipments to points West, however, are fairly easy.

Clay Importers Alarmed

Prominent clay men who were interviewed by the PAPER TRADE JOURNAL representative viewed the situation with alarm. They took the position that a fairly drastic ruling for clay may be expected, as the need of space is so great that even the welfare of the paper mills of the country can't stand in the way.

It was pointed out that last year there were, roughly speaking, 200,000 tons of Southern clay mined, of which probably 40 or 50 per cent. was pottery clay and not used for paper making. It was calculated that during 1917 the importation of foreign clays reached 200,000 long tons of white clay. In a normal year the importation figures were 300,000 tons of this grade. Therefore the seriousness of the situation is apparent, they say, if a reduction in half the importation is made. A scramble for clay will result that will have no

precedent, with many mills unable to obtain their supplies. Prices will go very high; in fact, higher prices have already been asked in order to stimulate production. Should the importation of foreign clays be restricted an apportionment plan will probably be followed.

The clay men sound a warning that a larger proportion of domestic clays must be used, especially for filling purposes. They point out that the American clay industry is as yet comparatively undeveloped and affords a great field for supplying the future needs of the mills. Regardless of what ruling is made, say they, smaller foreign shipments will be made in the future because of the coal shortage and labor situation in the English mines and higher prices will as a matter of course come both for the clay itself and shipping charges. Therefore they urge that especially for filling a large proportion of domestic clays be used.

Ask Wage Increase at Kalamazoo

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., April 2, 1918.—What practically amounts to an ultimatum was delivered to the paper mill managers of Kalamazoo by the members of Kalamazoo Local International Paper-makers Saturday evening. The members demand an increase in salaries for all workers on the basis of a 20 per cent. advance for all those receiving over \$4 a day and 30 per cent for all under the \$4 schedule. The mills are given until May 1 to make reply.

While the membership of the Kalamazoo local is said to be between 500 and 600, several thousand employees will be directly effected should any trouble arise.

Fred C. Hotelling, business agent of the International Paper-makers, has served notice of the demand for the increase on all local mills, with the single exception of the King Paper Company. The concerns involved are the Bryant Paper Company, Rex Paper Company, Hawthorne Paper Company, Monarch Paper Company, Kalamazoo Vegetable Parchment Company, Kalamazoo Paper Company, book, specialty and writing mills, and the Standard Paper Company and the Western Board & Paper Company, board mills. In controversies in the past, the two board mills have not been involved, though they have always provided the same pay increases and concessions granted by the other concerns. The King Paper Company is now operated as a strictly non-union mill.

Every mill in the city operates under the three tour system and in the past two years all mills have granted substantial increases in pay and done much to improve the general welfare of their employees.

As far as is known none of the mills at Otsego, Plainwell, Watervliet and Vicksburg are involved in the present ultimatum, though it is expected that locals in those towns will take similar action at an early date.

Paper is now being utilized for a multitude of purposes that would have caused wonder only a few years ago, from car wheels in this country to boots in Germany, and now it is reported that a gear admiral of the Japanese Navy has invented a collapsible life boat. The *Scientific American*, in describing the invention, says it weighs a few pounds and can be folded up into a very small compass.

SEN. SMITH INQUIRES ABOUT LACK OF BIDS ON M. F. PAPER

Chairman of the Joint Printing Committee Is Solicitous About Failure of Book Paper Manufacturers to Respond to Requests of the Government For Bids and Wants to Know What Has Caused This Situation—Directs Attention to Fact Government Has Commandeered News Print Paper and Intimates That Similar Action May Be Taken on Book Paper—Some Evidences of Patriotism.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 1, 1918.—Senator Smith, of Arizona, chairman of the Joint Congressional Committee on Printing, is sending the following most important letter to paper manufacturers, relative to supplying the Government Printing Office with machine finish printing paper. The letter, which asks for the co-operation of the trade, also contains a threat of commandeering if the co-operation is not forthcoming. The letter is of great importance and reads as follows:

Some Measure of Relief Wanted

"The Public Printer has advised the Joint Committee on Printing of the great difficulty he is having in obtaining proposals for furnishing machine-finish printing paper for necessary Government work. He has appealed for some measure of relief from a situation that threatens to seriously embarrass certain war activities of the Government. Before taking any action in the matter, the committee would be pleased to consider any suggestions that the paper trade may desire to submit with a view of co-operating with the Government in this emergency.

"It has been especially noticeable that since early in January there has been little or no real competition in the bidding for book paper required by the Government Printing Office. The most of the requests for proposals were answered by only two or three bids. A number of the larger mills, which could be of splendid service to the Government in this crisis, have rendered little or no aid to the Public Printer, failing either to bid at all or else submitting such paper proposals as to indicate no serious effort on their part to assist the Government Printing Office in the essential work it has to do. The situation stands out in marked contrast to the number of competitors for Government business in former years.

"The committee would like to know what, if anything, has brought about this change in the situation, and would appreciate a full and frank statement from you as to the reasons, if any, that have restricted bidding on the Public Printer's proposals.

Paper Weight Is Reduced

"In an effort to co-operate with the paper manufacturers in the conservation of paper-making materials, particularly wood pulp, the committee reduced the weight of the bulk of machine-finish paper used by the Government from 40 to 35 pounds to the ream, 25 x 38 inches. There had been strong representations made to the committee of the scarcity and high cost of wood pulp, and it was believed that this effort to effect a substantial economy in the use of such pulp would meet with hearty co-operation on the part of the paper makers. It was hoped that this economy on the part of the Government would lead to a similar reduction in the weight of substantially all paper, in which the American people seem to have been especially wasteful by the use of unnecessarily heavy weights. But this effort to assist the paper manufacturers in the conservation of paper-making material has been largely nullified through the failure of nearly all the manufacturers to submit bids on the lighter-weight paper.

"Will you kindly advise the committee whether there are any reasons, mechanical or otherwise, why you cannot manufacture

or bid on 35-pound paper; also what economy, if any, there is in the manufacture of this lighter-weight paper, and the practicability of its general use, particularly at this time of high priced wood pulp?

Committee Desires Prompt Response

"The committee desires a prompt response to these inquiries as it seems that some step must soon be taken to relieve the situation, if the paper trade itself fails to meet the requirements of the Government. Personally, I am hopeful that it will not be necessary to do more than suggest to the paper manufacturers their duty to the Government in this emergency. I am inclined to believe that substantially all, if not all, of the paper required by the Public Printer may be classed as a necessary war material, since all the activities of the Government are now more or less directly connected with the prosecution of the war, and that such paper, therefore, could, by order of the President, be commandeered at a price fixed by the Government under Section 120 of the National Defense Act. News print paper for necessary war printing has already been so commandeered on the recommendation of this committee. Such drastic action would undoubtedly be somewhat disturbing to the book paper trade, and I do not believe it ought to be taken except as a last resort. Accordingly, before calling for further action on the part of the committee, I desire to make this appeal to the loyalty of the paper trade, feeling confident of their patriotic response.

Some Evidences of Patriotism

"In this connection, permit me to call your attention to the patriotic and voluntary assurances which the committee received from certain large paper companies at the beginning of the war. One company telegraphed the committee:

"In the event of the war or any emergency our mills are at your disposal for their entire product of 250 tons daily."

"Another big paper manufacturer wrote:

"After the declaration of war we shall submit bids on Government proposals for paper that may be furnished at our cost of manufacture. It is our intention to make no profit whatever on paper so furnished."

"Still another message to the committee stated:

"We feel very strongly that it is our duty to do our utmost to relieve our Government from embarrassment during the war. We feel it is the duty of all persons who can afford to do so to avoid making a profit from the Government during such time. If a profit must be made it should be exceedingly small. No one concern should bear all the burden, but every concern should do its share. We propose to do our share without any profit whatsoever."

What Are Paper Makers Going to Do?

"Are the paper manufacturers of the country ready to make good these patriotic offers?

"The Government does not ask that paper manufacturers shall furnish their product without a fair and reasonable profit to them, but it has a right to expect the fullest co-operation from everyone who can render service in this great crisis."

Lawrence Paper Mills Increase Wages

LAWRENCE, Mass., March 31, 1918.—The Champion International Paper Company has posted notices in its mills that wages will be increased in these mills from March 25. The Merrimac Paper Company has also increased wages in both of its mills. The Munroe Felt & Paper Company granted increases to its employees. These increases approximate 10 per cent. Edward Quinn has resigned his position with the Champion International Company to accept a position with the Martin and William H. Nixon Paper Company of Philadelphia, Pa.

NEW PLANT AT KALAMAZOO IS STARTED MAKING PAPER

Harper Fourdrinier Made by J. H. Horne & Sons Co. Begins Operations Last Week at the New Mill of the Kalamazoo Vegetable Parchment Co.—Pusey & Jones Fourdrinier Also Will Be Running by End of This Week—Is a Model Paper Mill in Every Respect—Company Will Build Homes for Employees and Beautify Property—Standard Paper Co. Makes Improvements.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., April 2, 1918.—They are making paper at the new plant of the Kalamazoo Vegetable Parchment company. The 116 inch Harper Fourdrinier, manufactured by J. H. Horne & Sons Company, was started last week, and President Jacob Kindleberger is delighted at the quality of paper so far produced.

"I believe it is a better sheet for our purposes than we have been able to purchase in the past," said Mr. Kindleberger.

The immense Pusey & Jones Fourdrinier, 165 inches in width, is now being hooked up and will be running regularly by the end of this week.

Many residents of Kalamazoo are taking the opportunity of running out to the plant and inspecting it. They are greatly pleased at the appearance of the splendid plant. From every standpoint of construction and equipment it is one of the banner establishments of this district, already noted for its fine mills. Like the new Riverview mill, its white enamelled interior and sustained color scheme is most pleasing. Particular interest is being taken in the drive for the great Pusey & Jones Fourdrinier. It is an innovation in this section, being located directly under the machine and is a rope drive instead of being belted. The rope is made of Georgia long fiber stable cotton. This rope was manufactured in England and it was necessary to send an expert mechanic all the way to Kalamazoo to properly install it. While very expensive, it is claimed that it will wear for many years and is a great saving in the end. The variable speed engine attached to this machine allows a variation in speed of from one to four and insures satisfactory production of paper at any speed resorted to.

Practically all the equipment of the mill is in place and all that now remains is the finish of odd and end tasks here and there. All rubbish is being removed and the grounds will be graded and then artistically planted to grass, with flower beds placed here and there. Employees will be insured attractive surroundings for their daily labors. In various parts of the grounds are located ten wells. These are being hooked up and joined to the main supply pipe and will furnish 5,000,000 gallons of pure spring water daily for the mill's requirements.

The Kalamazoo Vegetable Parchment Company has opened an eastern office at 200 Fifth avenue, New York City. It is in charge of Don H. Ross.

To Build Homes for Employees

Now that the mill is completed, President Kindleberger is turning his attention to the task of erecting suitable homes for his employees. The company owns twenty building lots available for this purpose and it is the intention to have several houses put up this year and ready for occupancy in the fall. Deserving employees will be assisted in acquiring their own homes on a basis that will be convenient for them.

"I don't know just how far we will go," said Mr. Kindleberger. "It all depends on how our money holds out. We have expended close to a million dollars the past 18 months, and there will be a limit to the outlay for new houses. We will put up a half dozen anyway and possible more. At the present time the company owns eight houses, all being occupied by our workers."

The policy adopted by the company of beautifying the property all about the mill and removing as rapidly as possible all objectionable landmarks is doing much to make this locality most desirable for living purposes. President Kindleberger's own home is right in the mill's front yard, and it is commonly known that he is always on the job. He hopes in years to come to gather all his workers about him and make Parchment a live suburb of Kalamazoo.

Bryant and Monarch Companies Sued

Suit to recover \$2,000 from the Bryant and Monarch Paper companies was started in the Circuit Court, Saturday afternoon, by the City of Kalamazoo through City Attorney Marvin J. Schaberg and by instruction of the city council. The amount is asked because of the destruction by high water in June, 1916, of the Reed street bridge over Portage creek.

The complainant alleges that the dams and gates owned and operated by the Bryant and Monarch Paper companies were inadequate and not in the proper repair to hold back the excess of water in case of a heavy rain. It also alleges that on the afternoon and evening of June 23 and the early morning of June 24, 1916, a heavy rainstorm filled the mill ponds; that the dams and gates went out allowing a large volume of water to flow into Portage creek and wash out the bridge, causing the damage which is placed at \$2,000.

Standard Paper Co. Improvements

The Standard Paper Company is erecting a large coal handler for the more efficient care of the mill's fuel supply. It is located just north of the power plant and is supported by heavy concrete piers. The company is also building a modern wash room and locker room for boiler room employees. A contract has been awarded for a new roof on the beater room. One of the improvements contemplated, but as yet unauthorized, is a covered unloading dock along the east side of the mill. If erected this will facilitate the handling of incoming raw stock.

B. C. Dickinson, president of the company, reports that business is exceptionally good at this time. The slight slump in January and the shut-downs produced by the fuelless days, has passed and the big mill is several weeks behind in orders and forced to work at capacity.

Satisfied with Coal Zoning System

Paper mill managers in the Kalamazoo River valley district are generally well satisfied with the coal zoning system put in effect by Dr. Garfield, national fuel commissioner. The fact that West Virginia and Kentucky coal is available for Michigan makes it possible to secure a supply of first class steam coal. It was feared at one time that Kalamazoo would be denied this product and forced to rely solely on Indiana and Illinois mines.

Mr. Dickinson Heads Liberty Loan Drive

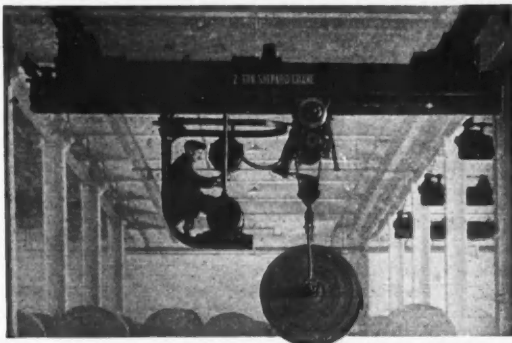
The third Liberty loan drive has opened in this city, Bartlett C. Dickinson, president of the Standard Paper company, is chairman of the corporations committee, and has been invested with the task of raising about three-fourths of the entire amount allotted to this city. Felix Pagenstecher, secretary and general manager of the Riverview coated division of the Kalamazoo Paper company, is supervisor of work in the second ward.

Returning to Kalamazoo

Kalamazoo's paper mill colony is returning to the city after spending many weeks in warmer climes. John F. King, president of the Rex Paper Company, and W. M. Loveland, president of the Watervliet Paper Company, are home from California. Mr. and Mrs. Frank H. Milham and daughter, Mrs. Allen Potter Knight, have returned from an extended stay at Palm Beach, Fla.

Caleb B. Forsythe has returned from an extended business trip to eastern points.

George P. Wigginton, president of the Kalamazoo Loose Leaf Binder Company, has returned from a trip to California.



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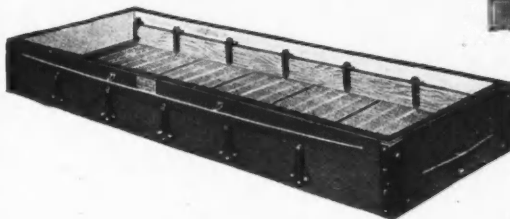
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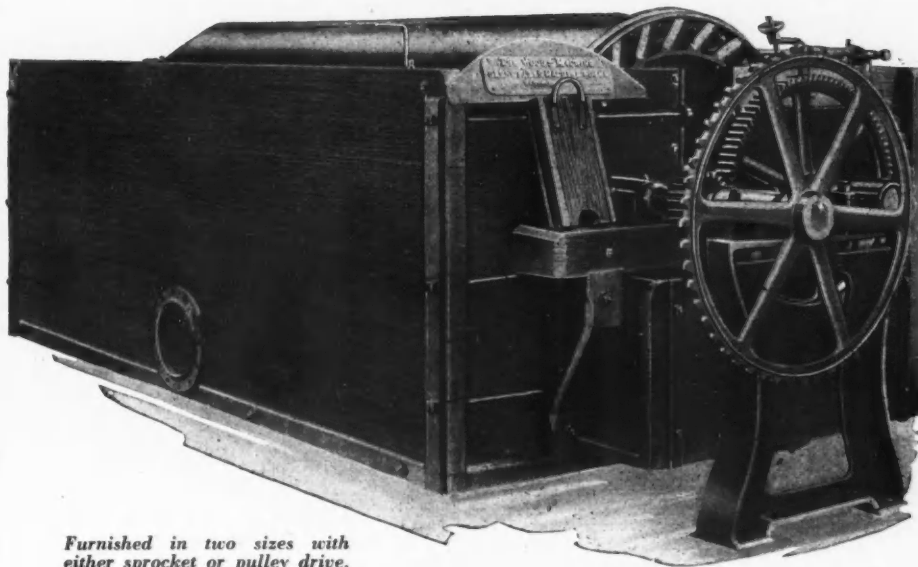
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QUESTIONNAIRE FOR BOOK PUBLISHERS TO BE ISSUED

Federal Trade Commission to Secure Data From Publishers and Lithographers in Connection with Fuel Administration Work—Wages Increase in Paper Mills—News Print Statement for First Two Weeks in March is Made Public—Paper Situation in Washington Discussed—Republic Bag & Paper Case Aroused Much Interest—Not Yet Known Whether Case Will Be Retried.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 1, 1918.—In connection with the work it is doing for the United States Fuel Administration, the Federal Trade Commission is today sending the following questionnaire to book publishers. A very similar one is also being sent to lithographers all over the country. The book publishers' questionnaire follows:

Owing to the necessity of saving coal, reducing the volume of non-war traffic offered the railroads and releasing the labor needed for war purposes, the Fuel Administration has found it necessary to curtail the production of a number of non-war industries, and has requested the Federal Trade Commission to make a survey of the paper industry, with the view of ascertaining what curtailment in production and consumption of the different grades of paper is desirable and the best method for accomplishing such curtailment. In order to secure the detailed information regarding the consumption of the various grades of paper used in the publication of books, the commission has prepared the enclosed questionnaire, which you are requested to fill out and return not later than April 10, 1918.

It is the desire of the Fuel Administration that the survey be made as complete and comprehensive as possible. Will you, therefore, give this matter your best attention.

Kindly make your answers as accurate and complete as possible and return this schedule not later than April 10, 1918. If the space provided is not sufficient, attach additional sheets.

1. Name and address of concern.
2. Give in order of importance the kinds of books you print.
3. Give in order of tonnage consumed the grades of paper you use in printing books.
4. Give in order of importance the grades of paper used by you which you regard as most essential, and reasons.
5. State on what grades of paper used by you the consumption could be curtailed and the estimated percentage of curtailment that you think, possible for each grade.
6. Name any forms of waste in the book publishing business that ought to be eliminated.
7. State what saving could be made by standardizing the size and quality of paper used in your publications and by reducing the weight of paper, etc.
8. Is it not possible for you to dispense entirely with coated or other high-grade papers requiring English clay?
9. Are you in favor of having a committee of book publishers appointed to co-operate and advise with the Government? If so, name three persons whom you think would be best qualified to serve on such committee.
10. What other suggestions can you give that will be helpful?

Increasing Wages in Paper Mills

The Bureau of Labor Statistics has just completed its figures showing the employment in selected industries for January.

There were 51 paper mills answering inquiries relative to January last year and this year. In these 51 mills there were 28,550 persons employed in January, 1917, as against 28,638 in the same month this year, or an increase of 0.3 per cent. The payrolls, on

the other hand, increased from \$429,448 in January of last year to \$452,163 this year, same month, or an increase of 5.3 per cent.

Comparative figures are also given for December, 1917, and the following month, January, 1918. Replies were received from 49 mills for both of these months. In December there were 27,756 persons employed in these 49 mills, decreasing very slightly to 27,312 in January, or a decrease of 1.6 per cent. The payrolls, however, decreased from \$471,314 in December to \$429,928 in January, or a decrease of 8.8 per cent.

News Print Statement

The Federal Trade Commission, the latter part of the last week, gave out the following news print statement covering the production and stocks for the first two weeks of March.

Reports from thirty-five domestic companies operating 53 news print mills show the following results of operations for the first two weeks of March, 1918:

	Week Ending	
	March 10	March 17
Production:		
Total Print	Tons 25,464	Tons 24,854
Standard News	23,402	22,415
Shipments:		
Total Print	26,460	26,233
Standard News	24,140	23,758
Mill Stocks:		
Total Print	29,460	28,327
Standard News	24,254	22,923

Production for the week of March 10 was the largest since the beginning of the year. Production for the week of March 17 showed some falling off. During both weeks, shipments exceeded production so that mill stocks continued to decline.

Loss of Production

The principal causes of loss of production for the first two weeks of March were strikes on the Pacific Coast, car shortage affecting one mill in New York, lack of fuel affecting two mills and the closing down of several mills at Niagara Falls by Government order.

The production from January 1 to March 17, 1918, compared with the corresponding period last year was as follows:

	Total Print	
	Paper	Standard News
Production from January 1 to March 17, 1918.	242,462	222,195
Production for corresponding period, 1917....	260,839	239,454

The Paper Situation in Washington

Local paper men who have had so much trouble the past winter with the freight embargo and congestion state that the situation is well in hand, and that little trouble is now being experienced with the freight situation here.

Government business among the paper men still holds the lead over everything else. Because of the great growth here, due to war work, the local business the past winter has been unprecedented. Just at present the local business is reported as a little slow.

Republic Bag & Paper Case

The greatest amount of interest was evidenced here last week in the announcement in the PAPER TRADE JOURNAL of the winning of the Government's appeal by the Republic Bag & Paper Company. It was predicted in this paper, following interviews with several prominent Government attorneys, that the case would end that way. The case was appealed against the better judgment of some of the attorneys.

While nothing definite has been settled it is understood on good authority that the matter is to be put up to the Attorney General as to whether or not the case shall again be appealed, this time to the Supreme Court of the United States.

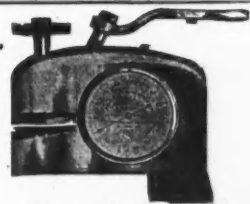
It is probable that no decision as to this will be made for some weeks yet anyhow.

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MORE CHANGES AT MILLS OF AMERICAN WRITING PAPER CO.

Henry P. Carruth, Head of the Department of Test, Who Is Also President of the Technical Association of the Pulp and Paper Industry, Resigns to Go in an Executive Capacity with the Mead Pulp & Paper Co. at Dayton, Ohio—Ross Campbell Is Made Acting Manager of the Department of Research and Tests—Numerous Other Important Changes Are Made at Big Holyoke Mills.

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., April 1, 1918.—The past week brought about a number of changes in the personnel at the American Writing Paper Company that will have much influence in the affairs of the company in the future. Old faces leave, and old and new faces have come, or will come during the next few days. So many changes have occurred recently that almost a complete reorganization of the personnel of the company will be effected.

The Coming of Mr. Alexander

The announcement in last week's issue of the PAPER TRADE JOURNAL of the coming of Harry W. Alexander, as assistant to the president on sales, marks, probably, what is the first step of Mr. Galliver to put the sales department of this large paper-making combine on a stronger basis. From the very first, Mr. Galliver realized that the sales department was inadequate. What the department needed was reinforcement, and with this end in view, president Galliver has now brought here Mr. Alexander. The strengthening of the sales department will also result in an intensification of nationalizing the products of the company.

James B. Stewart Returns

James B. Stewart was last week appointed superintendent of the Norman Paper Company division, to succeed Harold E. Walker, who recently resigned. Mr. Stewart will join the American Writing Paper Company on April 8.

In undertaking the superintendency of the Norman Paper Company division, Mr. Stewart again enters the mill in which he made a high reputation for himself and for that particular division.

From the Norman division, Mr. Stewart was brought to the head office and made general assistant superintendent of the American Writing Paper Company coarse mills, from which position he resigned to accept an interest in, and the superintendency of the Storm King Paper Company, Cornwall-on-the-Hudson, New York.

The American Writing Paper Company feels particularly gratified in adding Mr. Stewart to its organization, as he is a man of wide knowledge and experience in the class of papers made at the Norman division.

The resignation of Superintendent Walker was due to his acceptance of a similar position with the mills of the Jessup & Moore Paper Company at Wilmington, Del.

Departure of William J. Reardon

William J. Reardon, former superintendent of the Albion division, has been appointed superintendent of the Mount Holly Paper Mills, Inc., of Mount Holly Springs, Pa. Mr. Reardon has already assumed his new duties and will move his family to Carlisle, Pa., about five miles distant from the Mount Holly Paper Mills, Inc. Mr. Reardon has been a life-long Holyoker and is known intimately in the local paper field. He is the son of the late William Reardon, former general superintendent of the American Writing Paper Company. For 17 years he was superintendent of the Albion division, but retired a few years ago with the change in management of the company. His new position affords opportunities for steady advancement.

Resignation of H. P. Carruth

Another important change in the affairs of the company last week was the resignation of Henry P. Carruth, head of the Department of Tests. As manager of this department, Mr. Carruth enjoyed a wide acquaintance in the chemical and technical end of the paper industry, and is known throughout the East and Middle West. He is also president of the technical association of the Pulp and Paper Industry.

Mr. Carruth has been connected with the American Writing Paper Company for the past 12 years. There are many expressions of regret at his announced leaving. Mr. Carruth leaves Holyoke to go with the Mead Pulp & Paper Company at Dayton, Ohio, where he will serve in an executive capacity.

Mr. Campbell New Man in Charge

Ross Campbell fills in the vacancy made by the going of Mr. Carruth, having been appointed acting manager of the Department of Research and Tests.

Mr. Campbell is a graduate of the Massachusetts Institute of Technology, having taken a special course in chemistry, and has been with this department of the American Writing Paper Company since his graduation four years ago. He has been assistant manager for a period of over two years. Just what the plans are regarding the personnel of this department, the American Writing Paper Company is not at this time ready to state.

This department has become one of the most important of the American Writing Paper Company, and the PAPER TRADE JOURNAL has been able to learn that the company is planning to install additional researching and testing equipment in order to enlarge the scope of its work.

Mr. Campbell, as acting manager, is assisted by the following graduates in chemistry: A. J. Dempsey, of the University of Maine, who is research chemist; Charles W. Reiser, of the Massachusetts Institute of Technology; Miss Helen W. Kelly, of Smith College; J. J. O'Connor, in charge of laboratory; and Miss Sullivan, librarian, in charge of records, all of whom have been with this department some time.

Blackmer Superintendent at Hurlburt Division

Charles J. Blackmer, a veteran paper maker, has now reentered the employ of the American Writing Paper Company as superintendent of the Hurlburt division at Lee, Mass. He succeeds Mark T. Robbins, who resigned recently because of ill health. Superintendent Robbins had been associated with the American Writing Paper Company since its formation.

Mr. Blackmer was for 16 years employed as superintendent at the Mount Tom, Nonotuck, Holyoke and Dickinson division mills. Illness forced his retirement four years ago, and after a prolonged rest he accepted the superintendency of the Mount Holly Paper Mills, Inc., at Mount Holly Springs, Pa. He now comes back to the American Writing Paper Company, while William J. Reardon, formerly of the American Writing Paper Company, takes the superintendency at the Mount Holly Paper Mills, Inc.

New Engineer Takes Hold

John Moles, successor to John W. Brassington, as chief of the Engineering Department of the company, assumed his new duties during the past week. Mr. Moles comes from Erie, Pa., and has charge of all engineering, mechanical, maintenance, upkeep and construction work of the mills and properties of the company. Mr. Moles has had considerable experience along these lines through his connection with the General Electric Company and others.

Personal Notes

A wedding of much interest to the paper trade of this vicinity took place Saturday evening in the celebration of the nuptials of Miss Harriet Elizabeth Ball and Herbert F. Cowan, superintendent

(Continued on page 16.)

STRONG SULPHITE OF HIGH QUALITY! KRAMFORS AA!

NOW ON DOCK

Value of Swedish Kronor during week ending April 2d. Normal rate of exchange: 1 Krono = 26.80 cents.

Mar. 27th—33.90 cents—increased value	26.49%
" 28th—34.00 " " "	26.87%
" 29th—34.00 " " "	26.87%
" 30th—34.00 " " "	26.87%
Apr. 1st—34.00 " " "	26.87%
" 2nd—34.00 " " "	26.87%

A. J. PAGEL & CO.

Incorporated

61 Broadway : New York

Michigan Agent—CALE B. FORSYTHE, Kalamazoo

BIDS AND SPECIFICATIONS FOR GOVERNMENT PAPER

Purchasing Officer of the Government Printing Office Opens Bids for Various Lots of Paper—Quartermaster of the United States Marine Corps Will Open Bids on April 15 for the Annual Supply of Paper and Stationery—Some of the Items of Special Interest—Purchasing Officer of the Panama Canal Calls for Bids on Various Lots of Paper to Be Opened April 11—Other Bids.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 1, 1918.—Bids will be opened at the Government Printing Office on April 5 for furnishing 200,000 pounds of 24 x 36, 32, basis white news print paper in 38" rolls.

Bids will also be opened on the same date for 25,500 pounds (250 reams) of Quaker drab and buff bristol board, 21 x 31—102.

The following paper bids were opened last week at the Government Printing Office:

500,000 pounds of No. 1 white M. F. printing paper, in 38-in. rolls, basis of 25 x 38—40; Maurice O'Meara Company, at \$.0675 per pound; Bryant Paper Company, at \$.065; Smith-Dixon Company, at \$.0674; Jessup & Moore, at \$.065; Dill & Collins, at \$.08; George W. Millar & Co., at \$.067; R. P. Andrews Paper Company, at \$.0663; and Seaman Paper Company, at \$.0675.

7,000 pounds (100 reams) of 27 x 38—70 pounds kraft wrapping paper; Maurice O'Meara Company, at \$.065; J. P. Nawrath & Co., at \$.0785; George W. Millar & Co., at \$.07; Republic Bag & Paper Company, at \$.0682; H. P. Andrews, of New York City, at \$.0715; and S. D. Walton Company, at \$.0714.

200,000 pounds of 24 x 36—32 white news print paper, in 48-in. rolls; Megargee-Hare Paper Company, at \$.0357; and Hudson Trading Company, at (a) \$.03425, (b) at \$.03525.

The Old Dominion Paper Company has been awarded the contract for furnishing the Government Printing Office with 19,000 pounds (300 reams) of 27 x 38—95, kraft wrapping paper, at \$.06298 per pound, bids for which were opened on March 18.

Bids are to be opened on April 8 for 142,500 pounds of various sized rolls of white machine-finish printing paper. Also, on the same date, for 222,000 pounds of white machine-finish printing paper, various sizes.

Bids were opened today at the Government Printing Office for 13,000 pounds of 17 x 28 in. and 21 x 32 in., No. 11, blue-glazed bond paper, as follows: Maurice O'Meara Company, at \$.1545 per pound; and George W. Millar & Co., at \$.15½.

Bids are to be opened at the Government Printing Office on April 10 for 15,000 pounds (500 reams) of 21 x 32—30, wood manila paper.

Bids for Marine Corps

Bids are to be opened on April 15 by the Quartermaster of the United States Marine Corps for the annual supply of paper and stationery. Among some of the items of special interest are the following:

88 dozen, black enameled large hand blotters; 30 reams of various colored, 10 x 24—100, blotting paper; 4,375 boxes of 8 x 10½ in. carbon paper; 3,125 boxes, 8 x 13 in. same; 250 boxes, 8½ x 14 in. same; 125 boxes, 16 x 20 in. same; 625 reams of 8 x 10½ in. white wove impression paper; 625 reams of 8 x 13 in. same; 1,250 reams of 8 x 10½ in. chrome yellow manifold paper; 2,500 reams, 8 x 10½ in. same green; 7,500 reams, 8 x 10½ in. same white; 3,750 reams, 8 x 12½ in. same; 10,000 reams of 8 x 10½ in. white typewriter paper; 500 reams of 8 x 12½ in. same; 2,500 reams of 16 x 21 in. same; 62 reams of Crane's unglazed note paper; 1,250 reams of Crane's Dresden white note paper; 25,000 pounds of 30 x 40—50, kraft wrapping paper; 6,250 pounds

of 36 x 40—100, same; 6,250 pounds of 13½ x 30—16, same; 375,000 rolls toilet paper.

Bids for Panama Canal

Bids will be opened by the Purchasing Officer of the Panama Canal on April 11 for paper as follows:

80 reams of 17 x 22 in., No. 28 white ledger paper; 72 reams of various colors index bristol board, 22½ x 28½ in. On April 12 bids will be opened as follows: 1,200 sheets of 32 x 44 in., 5/32 in. thick heavy bonders board; 80 reams of 19 x 24 in., No. 28 white ledger paper.

Awards by Panama Canal

The Dennison Manufacturing Company has been awarded the contract for furnishing the Panama Canal with 1,000,000, 6¼ x 3½ in., No. 8, manila tags, at \$650.00. Bids were opened on March 12.

MORE CHANGES AT HOLYOKE

(Continued from page 14.)

of the White & Wyckoff Manufacturing Company. Both are well known locally.

Henry C. Avery, an official of the Japanese Tissue Mills, returned last week from a 13,000 mile business trip. Mr. Avery visited the paper trade in both the Middle Western and Southern States.

Harry Taylor, for the past 10 years purchasing agent of the White & Wyckoff Manufacturing Company, and for more than 18 years a member of that company, resigned from his position last week to accept a position of salesman for the Petrequin Paper Company, of Cleveland, Ohio. Prior to leaving his office, Mr. Taylor was presented by his associates with a beautiful gold watch and chain on which was engraved their appreciation of him, their sorrow at his leaving and the date of departure.

Arthur C. Hastings, of this city, president of the Cliff Paper Company at Niagara Falls, and former president of the American Writing Paper Company, was one of the two local men appointed by Federal Judge Dodge as one of the receivers for Barney & Berry, Inc., skate manufacturers of Springfield. Each appointee furnished bonds of \$25,000.

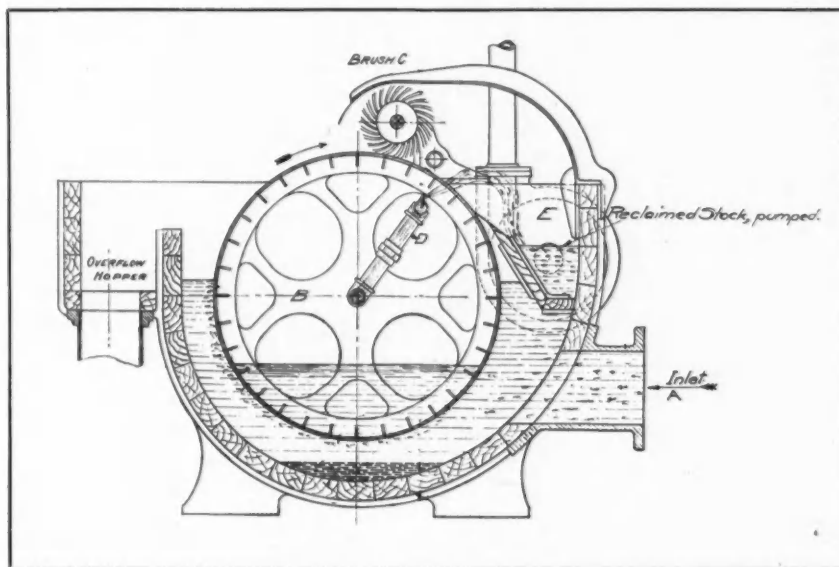
John W. Brassington, until last week chief engineer of the American Writing Paper Company, whom the United States Government picked from this district as the man to put more ginger into the ship-building program, left Holyoke last night to start work on his new duties for the Emergency Fleet Corporation.

Mr. Brassington, in speaking with the PAPER TRADE JOURNAL's correspondent, said that his orders were to proceed directly to New York and there begin an investigation and make a thorough inspection of the ship-building yards and all industries connected with the shipping program. His trip of inspection will take in the entire Atlantic Coast. Mr. Brassington's position is one that carries with it considerable responsibility. He is eager to do his "bit" for Uncle Sam and make the world safe for democracy, and is bubbling over with enthusiasm to get in the thick of work.

Poor Deliveries Disturb Boston Market

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., April 2, 1918.—From general reports of the members of the local paper trade, it is not the matter of orders which is disturbing them but the ability to get goods to fill the orders. Embargoes have been "on" and "off" as frequently as the days arrive and when relief was apparently in sight, it has been upset by poor freight service. Mills are turning out their normal production, but are handicapped in shipments. Their busy condition is indicated in the increased demand for raw materials, the prices, for which have been firm with the exception of waste paper for which there is little demand.



Procrastination is the Thief of Dividends

Every day you operate without a Save-All means a distinct loss in white stock—a loss that continues day in and day out—till the total loss in the course of a year is enormous. This loss can be readily eliminated by the installation of a

BIRD SAVE-ALL

Then why procrastinate? Install one now—since every day you delay costs money and robs you of dividends.

A Bird Save-All is an effective trap between the paper machine and the river, saving immense quantities of stock otherwise lost by leakage. Its construction and its principle of operation are shown above.

In the new Bird catalog complete details are given. A copy is yours on request.

BIRD MACHINE COMPANY

East Walpole, Massachusetts

General Sales Representative, T. H. SAVERY, Jr., 1630 Republic Building, Chicago, Ill.

CANADA'S PAPER EXPORTS SHOW DECIDED INCREASE

Record for the Ten Months Ending with January Is a Very Impressive One—Foreign Sales of Chemical and Mechanical Pulp Also Reach Big Figures—Abitibi Power & Paper Co. Puts Out New Issue of \$1,000,000 in Bonds—Mills Report Considerable Increase in the Demand for Kraft Pulp—Some Additional Facts in the Success of the Riordon Pulp & Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., April 1, 1918.—The following table gives the details of the progress of the exports of paper and pulp in Canada for the past ten months:

	Jan., 1918	10 months to Jan. 31, 1918
Paper		
Paper bonds	\$ 243,999	\$ 1,395,225
Felt and roofing	37,263	287,705
Wrapping	128,722	1,125,038
Printing (mainly news)	2,415,791	27,254,818
Other paper	16,394	127,065
	<u>\$2,842,171</u>	<u>\$30,189,851</u>
10 months ending Jan., 1917		20,051,794
Increase for 1917-1918		<u>\$10,138,057</u>
		10 months to
Pulp	Jan., 1918	Jan. 31, 1918
Chemical	\$1,328,823	\$15,963,707
Mechanical	289,496	5,664,149
	<u>\$1,618,319</u>	<u>\$21,627,856</u>
10 months to Jan. 31, 1917		16,703,748
Increase for 1917-1918		<u>\$ 4,924,108</u>
Grand total paper and pulp, Jan., 1918	<u>\$4,460,490</u>	<u>\$51,817,707</u>
Increase (for 10 months)		<u>\$15,062,165</u>

A New Forest Product

The Forest Products Laboratories in Montreal, a Federal Government institution, has discovered that pine oil can be produced from Canadian trees. This is important to the metal mining industry, because this oil is used for carrying out the famous oil flotation process for the extraction of ore. The supply of pine oil from the southern United States is so limited that it is practically all required for United States mines. The Forest Products chemists not only discovered how to make pine oil in Canada, but they found that a by-product, creosote oil, of the hardwood distillation industry could take the place of the more expensive pine oil. This means much to the mining industry of Canada.

Abitibi's New Issue

The Abitibi Power & Paper Company's new issue of \$1,000,000 in bonds, is being offered here at 87 and accrued interest. These bonds are 7 per cent. convertible mortgage debenture stock, and the yield is over 8½ per cent. It is convertible at the holder's option into common stock at par at any time after March 1, 1921, and for this purpose a further \$1,000,000 ordinary shares has been authorized and is reserved. At the company's option the debenture

stock may be called at 110 per cent. and accrued interest at any time on or before March 1, 1921. The present capacity of the pulp and paper mills per annum is about 62,000 tons of news print; 21,000 tons surplus sulphite pulp, and 22,500 tons surplus mechanical pulp. After the present plans of extension have been completed, it is estimated that the annual production will be 120,000 tons news print, 6,000 tons surplus sulphite and 3,900 tons surplus wrapping paper.

Kraft Pulp Demanded

A considerably increased demand for kraft pulp is reported. Big orders are being received by both the Wayagamack Pulp & Paper Company and the Brompton Pulp & Paper Company, and arrangements are being made to cope with a still bigger export demand. The increased demand comes through the American Government's order that all parcels shipped by the Government or received by the Government for war purposes be wrapped in kraft manila where possible.

Riordon Company's Success

It is stated here that the highly satisfactory annual report of the Riordon Pulp & Paper Company, recently summarized in these columns, did not tell all the story of the company's success. In the record of sales and profits, there was not included some 7,000 tons of high-grade pulp that was stored at the time at the Hawkesbury mill, unable to be moved owing to lack of cars. With the opening of the spring and the clearing of the railways, this surplus has been sent forward to markets, for the most part, and all will shortly be cleared out. At the same time, the company has been keeping up the average production. Another favorable factor for this company is the advance in the price of sulphite pulp, which has advanced from the winter figure of \$70 a ton to \$75 f. o. b. mill. Some of the larger sulphite mills are stated to be working away behind orders.

North American—A Denial

Last week the financial papers throughout Canada gave details of the annual report of the North American Pulp & Paper Company. This week the president, J. E. A. Dubuc, has given an emphatic denial of the figures published. The report stated that the gross income for the year fell from \$2,304,329 to \$2,099,294, and that the profit and loss surplus fell from \$672,253 to \$313,903. Mr. Dubuc says the statement of the company is still in the hands of the auditors and will not be ready for publication for some time. The figures quoted are stated to be entirely inapplicable to the company's operations.

Bureau of Standards Makes 363 Paper Tests

During the month of February there were 363 tests made at the paper laboratory, Bureau of Standards, according to the February report just made. Of this number 232 were for the Public Printer, 86 for executive departments, and 45 for outside parties.

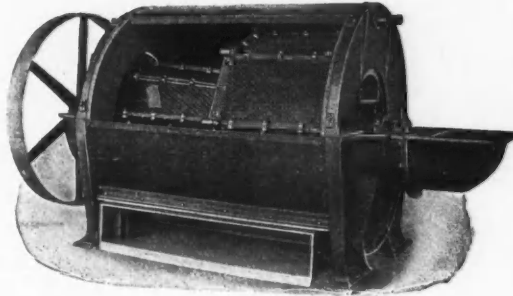
During the month representatives from several branches of the military department visited the laboratory regarding information and suggestions for special paper and paper products. In connection with wall board work the report says:

"A member of the paper section visited a number of western mills who are manufacturers of wall boards, to consult with those manufacturers having Government contracts and to assist in the inspection of the finished product. The amount of wall board which the Government is now purchasing has grown to such importance that the paper section has found it necessary to proceed carefully not only in the study of the details of testing wall board, but also in the study of manufacturing methods and conditions. The visit was for the purpose of becoming more closely into contact with the actual manufacturing conditions in order that the paper section may have all possible information to draw up the necessary specifications."

"IMPROVED" KNOTTER

for the first screening of sulphite, sulphate or ground wood pulp

We shall be glad to furnish data and samples of the work this machine will do in actual use.



Knotter Design No. 2

The cost of power and upkeep is extremely small and the results are very satisfactory.

WE ASK A THOROUGH INVESTIGATION

IMPROVED PAPER MACHINERY CO.

NASHUA, N. H., U. S. A.

PAPER

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FOREIGN BRANCHES:

- LIMA, PERU
- BARRANQUILLA, COLOMBIA
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- CIUDAD de GUATEMALA, GUATEMALA
- HABANA, CUBA
- SANTO DOMINGO, R. D.
- MAYAGUEZ, PTO. RICO
- SAN JUAN, PTO. RICO
- FORT de FRANCE, MARTINIQUE
- PORT au PRINCE, HAITI
- LA PAZ, BOLIVIA
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PAPER

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| News | Label |
| Book | Music |
| Writing | Embossed |
| Coated | Kraft |
| Ledger | Manilla |
| Bond | Fibre |
| Litho | Lining |
| | Cardboard |

TISSUES

- | | |
|--------------|-------------|
| Interleaving | White |
| Carbon | Manilla |
| Pattern | Colors |
| | and |
| | Specialties |

SPECIALTIES

- in Embossing and Hanging
- Stocks for Wall Paper Mfra.

MILL SUPPLIES

- | | |
|----------------------|---------------|
| Foreign and Domestic | |
| New Cuttings | Old Rope |
| Old Rags | Bagging |
| Wood Pulp | Cotton Waste |
| Jute Waste | Paper Stock |
| Flax Waste | Animal Sizing |
| | Gunny Bagging |

New York Jottings

Elmer Thomas, of Atterbury Bros., has enlisted in the infantry and will shortly go away to camp.

Vernon Brothers & Co. supplied the fifth name for their honor roll when Robert Becker enlisted recently in the Medical Service of the Army.

A quarterly dividend of one and one-half per cent has been declared on the preferred stock of the International Paper Company. The dividend is payable on April 15.

Henry Atterbury, of Atterbury Bros., Inc., 38 Park Row, was back at his desk for a brief period after a few weeks of illness. On Tuesday he left for Atlantic City for a further rest.

The Royal Card & Paper Company, of which Samuel T. Baron is treasurer, at 100-102 Worth street, has been elected to membership in the Merchants' Association of New York.

The offices of the International Paper Company, at 30 Broad street, are now in the final stages of a complete renovation. A new reception room has been provided and additional floor space taken for the various departments.

W. Lynn Saunders, Eastern representative of the Albemarle Paper Company, of Richmond, Va., with New York offices at 41 Park Row, has enlisted and is now in the Sanitary Corps, Gas Defense Service of the Medical Department of the National Army.

Daniel M. Hicks and James Rosenberg will represent the National Association of Waste Material Dealers at the next meeting of the Chamber of Commerce of the United States, which will convene at the Congress Hotel, Chicago, on Tuesday, April 10.

The American Newspaper Publishers Association will hold its annual convention at the Waldorf Astoria on April 24, 25 and 26. Editors and publishers from all over the country are represented at the convention, which is an event of considerable importance in the newspaper world.

The National Paper Trades Exchange, Inc., 33 West 42d street, has sent out its first list to the general trade, listing the paper it can now supply. This concern aims to act as a clearing house for jobber and consumer, where odd lots of paper can be listed and disposed of in their logical markets.

D. Spero has severed his connection with the firm of Vito G. Cantasano & Bros., with which he has been connected during the past few years, and has associated himself with Michael Stramiello, dealer in paper stock and mill supplies, at 281 Front street. His experience in the mill supply business has been varied and extensive.

Paul E. Vernon, who is a member of the Liberty Loan Committee, serving under A. G. Paine, Jr., reports that Mr. Dewitt, of the Publicity Committee of the Liberty Loan organization, Equitable Building, asks that all owners of automobile trucks display Liberty Loan posters on the sides of their trucks. These posters may be secured at the office of the Publicity Department in the Equitable Building.

Committees representative of the cotton, rag and waste paper trades have been organized in the waste material industry. The cotton rag committee is composed of Frank C. Overton, of Castle, Gottheil & Overton; Daniel M. Hicks, of Daniel M. Hicks, Inc.; James Rosenberg, of the American Woodpulp Corporation; David

Galloway, of the Gatti-McQuade Company, and Walter Clark, of the Maurice O'Meara Company. The waste paper committee consists of Andrew Ragone, of the Main Paper Stock Company, and Fred. Chase, of Chase & Norton.

Paper Industry in Liberty Loan Drive

Preparing to equal its past record in the raising of funds for the Third Liberty Loan, the paper industry is again being organized into a working committee. A. G. Paine is again the chairman of the committee, which is known as the Third Liberty Loan Distribution Committee, Paper Industry. A dinner will shortly be held as was the custom at the initiation of the work on the last Liberty Loan. This luncheon will be held at the Aldine Club.

The committee, which is organized to carry on the work of securing subscriptions in the paper industry, consists of the following: A. G. Paine, president, New York & Pennsylvania Company, chairman; Adam K. Luke, treasurer, West Virginia Pulp & Paper Company; vice-chairman; Franz Lewisohn, sales director; William C. Powers, sales manager of the Great Northern Paper Company; H. J. Chisholm, president, Oxford Paper Company; E. O. Dorman, Eastern manager, Champion Coated Paper Company; Thomas J. Moore, treasurer, Box Board & Lining Company; Paul E. Vernon, president, Paul E. Vernon & Co.; Alvah Miller, H. G. Craig & Co.; Charles F. Hubbs, president, Charles F. Hubbs & Co.; Stephen A. Powell, president, Stephen A. Powell & Co.; Leon Gottheil, Castle, Gottheil & Overton; J. Andersen, J. Andersen & Co.; Owen Shepherd, treasurer, International Paper Company; Jacob Nacht, Union Card & Paper Company; E. E. Gosling, Gosling & Farr; George A. McKinney, F. A. Flynn & Co.

The drive starts on April 6. There will be no fixed sum to strive for in this campaign, but the committee is nevertheless on its toes to make the campaign a stirring success.

To Standardize the Size of Catalogues

All catalogues intended for preservation by purchasing agents are to be limited to one size hereafter according to plans laid by the National Association of Purchasing Agents. A committee of that association has called a conference to discuss the matter of standardization of catalogues to be held in the La Salle Hotel, Chicago, on May 22, 1918.

At the Pittsburgh Convention of Purchasing Agents the size 8½ x 11 was tentatively adopted with the proviso that it should be adhered to unless good reasons appeared for changing it. The committee has had the matter up with 575 associations, representing various industries and trades, and 287 trade paper publications. There seems to be quite a difference of opinion as to the best standard size.

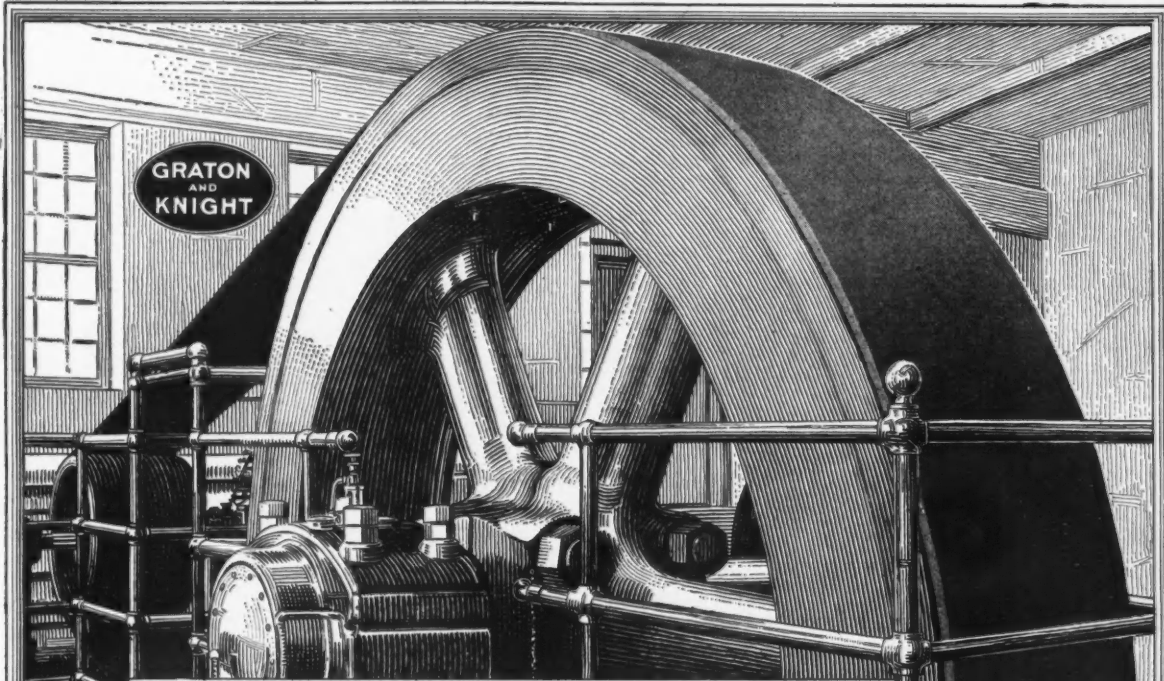
The first object will be to settle definitely upon the size for catalogues. After that has been accomplished if there is any time to spare some of these other subjects may be discussed to good advantage, because after all the purchasing agent is vitally interested in any thing that will reduce the cost of doing business. Standardization is bound to produce favorable results.

The catalogue conference is open to everyone. Every association representing industry in any form is invited to send representatives to discuss these various phases with the committee.

Beaver Board Co. Plant Damaged

[FROM OUR REGULAR CORRESPONDENT.]

NIAGARA FALLS, N. Y., April 1, 1918.—Damage estimated at \$15,000 was done to the Beaver Board Company plant in Buffalo last week when a tank of varnish exploded. The explosion was caused by sparks from a defective wire attached to a motor placed near the varnish tank. There were about 10,000 gallons of varnish in the tank. Fortunately the tank was in a fireproof building, and the flames gained little headway before the department arrived.



Three Belt-Buying Basics

LEATHER

Of all belting materials, leather is pre-eminent for long wear under hard usage; for frictional grip on pulleys; for standing the strain of main drives and the side-slap of shifters; for ease of repair and splicing; for minimum power-leakage; for that *light-weight* pliability, firmness, and elasticity which good belting must possess.

TANNAGE

Belting leather requires a special tannage. We tan nearly 300,000 hides a year for belting use, giving you two great advantages: All our belts are of leather of the best possible quality for belting requirements. Our enormous stock of hides enables us to maintain a uniformity throughout our product that can be assured in no other way.

STANDARDIZATION

Power transmission needs fall into comparatively few classes. For each one there is a Graton & Knight Standardized Belt. That means a belt which is scientifically built for exactly the class of duty to be performed. It is kept uniform. It pays us to make it standard for quality, because it pays mill-owners to make it standard for use.

Many of the best belted plants ask us to specify the belting for every pulley. Try the plan yourself. Then, when buying call for "Graton & Knight—Brand or equal." This won't commit you to buying our belts. It will put your buying on the one basic consideration—the work to be done.

Write for information about Standardization as applied to Belting

THE GRATON & KNIGHT MFG. COMPANY

Worcester, Mass., U. S. A.

Oak Leather Tanners, Makers of Leather Belting, Lace Leather, Leather Packings, and Specialties
BRANCHES AND DISTRIBUTORS IN PRINCIPAL CITIES

24-inch Spartan Double Leather Belt on Motor Drive at Bosch Magneto Co., Springfield, Mass.

GRATON & KNIGHT

Standardized Series
LEATHER BELTING

Tanned by us for belting use

Recent Incorporations

CHARLES H. PRIME COMPANY, Manhattan, New York. Cardboard and strawboard. Capital, \$50,000. Incorporators: J. K. Voorhees, P. H. Smeallie, C. H. Prime, 200 Fifth avenue.

CLOVER PAPER BOX COMPANY, Manhattan, New York. Capital, \$10,000. Incorporators: A. Wolff, H. and A. Kirschbein, New York.

CORNWALL PAPER MANUFACTURING COMPANY, INC., Cornwall-on-the-Hudson, New York. Manufacturing and selling paper and paper stock. Capital, \$50,000. Incorporators: A. G. Lutz, 687 West End avenue, New York City; F. B. Oldham, East Hartford, Conn.; L. Hecht, 403 Avenue C, Brooklyn.

CENTURY MILLS PAPER COMPANY, Manhattan, New York. Capital, \$10,000. Incorporators: J. N. Wallis, A. G. Halberstadt, H. S. Houghton, 13 West 129th street, New York.

NEW YORK WOMEN'S PUBLISHING COMPANY, Manhattan, New York. Capital, \$10,000. Incorporators: F. B. Ackerman, H. Todd, M. Sanger, 406 West 14th street, New York.

ATLANTIC BAG & PAPER COMPANY, Atlantic City, New Jersey. Capital, \$5,000. Incorporators: Bernard, Henry and Sadie Singer, Atlantic City.

RUSSIAN POPULAR PUBLISHING CORPORATION, Manhattan, New York. Capital, \$25,000. Incorporators: N. M. Koch, A. P. Anthony, S. Nelson, 1 East 107th street, New York.

An Interesting Pulp Auction at Baltimore

An auction of more than usual interest was held in Baltimore on March 28 when Woodrow & Lewis, of New York City, disposed of about 8,000 bales, 1,150 tons of sulphite and kraft pulp damaged in the disastrous fire of the Ajax Warehouse of that city, in November, 1917.

The following lots came up for sale:

1,483 bales, about 250 tons of Kramfors "AA"; 6,207 bales, about 900 tons of kraft pulp; a little out of 125 bales of an ordinary strong sulphite.

Among those present were the following paper manufacturers and importers:

H. C. Peters, of Marcellus Paper Company, Syracuse, N. Y.; D. J. Lawless, of Onondaga Paper Company, Marcellus Falls, N. Y.; T. A. Kenny, of Philadelphia Paper Manufacturing Company, Manayunk, Pa.; J. Cochran, of Durham Paper & Pulp Company, Durham, Pa.; H. J. Pierson, of Consumera Boxboard & Paper Company, Lititz, Pa.; M. J. Kelly, of P. H. Glatfelter Company, Spring Grove, Pa.; L. W. Baumohl, of American Wood Pulp Corporation, New York; Hans Lagerloef, of Lagerloef Trading Company, New York; Mr. Siegel, of M. Gottesman & Co., Inc., New York; N. Johaneson, of Scandinavian American Trading Co., New York; Mr. Sundblad and Mr. Enders, of H. B. Steffanson & Co., New York; Mr. Kelly, Jr., of Newark, N. J.; W. M. Hurley, of the B. & O. R. R., Baltimore, Md.; all told there were about forty people present, although only about six or seven bidders.

The auction covered thirteen lots of pulp; the first and best lot of sulphite being the Kramfors "AA" was bought by Mr. Pierson, of the Consumers Boxboard & Paper Company. The sulphite was burnt, but most of the bales were intact and went at \$8.25 a bale, costing the owner \$44 per short ton at the place of auction. Another lot of sulphite went at \$7.25 a bale or about \$38 per 2,000 lbs.

Mr. Kenny, of the Philadelphia Paper Manufacturing Company, and Mr. Lagerloef, of the Lagerloef Trading Company, bought more than two-thirds of the goods that came up for sale for account of the Philadelphia Paper Manufacturing Company, amounting to about \$50,000.

Outside of the pulp going to the Philadelphia Paper Manufacturing Company, other lots brought about \$16,000, and the auction as a whole realized about \$66,000. This was a remarkable price for goods in this condition, and conservative people thought the same

about \$15,000 to \$20,000 more than could have been anticipated. The auction was held on a lovely spring day and exhilarating air may account for the optimism prevailing.

The Philadelphia Paper Manufacturing Company paid \$9.25 for most of its goods and it is undoubtedly in a position to handle goods of this description.

There was also a lot of oakum disposed of which went at \$160 to Mr. Crooks, of the MacLean Contracting Company, where all these goods were stored and which is a ship-building concern. This was really the bargain of the day.

A feature of the auction was the special notice printed by the auctioneers. This was as follows: "Any agreement intended to prevent open competitive bidding being distinctly illegal will subject the parties thereto to such drastic remedial measures as are applicable. This announcement is made in consequence of an occurrence at the sale of December 21, 1917, repetition of which will bring the parties into conflict with the public authorities already advised in the matter."

To Co-operate with Fuel Administrator

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., April 1, 1918.—The paper manufacturers of northern New York are anxious to co-operate with the Government fuel administration in a manner that will give the best results to all concerned, and to that end a meeting was held at the Black River Valley Club here Saturday afternoon. After exhaustive discussion of all features of the subject, a special committee was appointed to investigate and take the matter up through the proper channels at Washington.

That the paper manufacturers are serious about the situation was evidenced by the attendance. James E. Campbell, of the Dexter Sulphite Pulp & Paper Company; George W. Sisson, of the Racquette River Paper Company at Potsdam, and Frank L. Moore, of the Newton Falls Paper Company, are members of the War Service Committee of the American Paper & Pulp Association which is co-operating with the government in an effort to handle business in the most satisfactory manner to all concerned. These men called the local manufacturers together Saturday to learn the sentiment in this section.

George W. Sisson, president of the American Paper & Pulp Association, was elected chairman of the meeting. There were present besides him, James E. Campbell of the Dexter Sulphite Pulp & Paper Company; Frank L. Moore, of the Newton Falls Paper Company; S. A. Upham and G. F. Clark, of the Brownville Paper Company; J. Munson Gamble, of the Brownville Board Company; F. L. Carlisle and C. C. Burns, of the St. Regis Paper Company; J. V. Barron, of the Taggart Paper Company; B. B. Taggart, of Taggart Brothers, Inc.; M. S. Wilder and R. M. Maltby, of the Remington Power & Paper Company; C. T. Wright, of the Champion Paper Company; Guy C. Jones and G. O. Comfort, of the Carthage Sulphite Pulp & Paper Company; E. B. Sterling, of the West End Paper Company, Kirk M. Sweet, and Mr. Ash, of Phoenix, and Edward N. Smith, Jefferson County Fuel Administrator.

Several of the men present expressed at length their views on the coal saving proposition. The general conclusion reached seemed to be that all industries should be handled in a manner to conserve capital, in a manner that would permit industry to pay war taxes and buy Liberty Bonds.

Floyd L. Carlisle, president of the St. Regis Paper Company, was appointed chairman of a committee to investigate, and he was given authority to appoint his associates.

Hinde & Dauch Addition Completed

SANDUSKY, Ohio., April 1, 1918.—The \$175,000 addition to the Hinde & Dauch Paper Company's plant here, has been turned over to the company for acceptance.



PROMPT FOR SHIPMENT
SULPHITE
AND

Ground Wood

APPLY
Perkins-Goodwin Co.
33 WEST 42nd STREET
NEW YORK



UNIQUE MACHINE FOR MAKING PAPER CUPS

One of the most interesting as well as unique articles ever introduced to the paper trade has been announced by the Germproof Cup Machine Company, of 220 Broadway, New York.

This is a small machine for making paper cups from a roll of paper. The same size as the ordinary paper cup container now in general use, the germproof cup machine is attached to any wall. A roll of paper is inserted and a turn of the handle makes the cup and delivers it to the individual. Each roll of paper will make 500 non-leakable drinking cups.

Two styles of machines will be manufactured for use wherever paper cups are now being distributed, one for free distribution and



NEW MACHINE FOR MAKING PAPER CUPS.

the other with a penny-in-the-slot attachment. The machines are enclosed in beautiful oxidized copper finish cases and will be sold to paper cup consumers at a very nominal figure.

The germproof cup machine is made entirely from steel stampings. It is simple of operation, there are no adjustments, nothing can get out of order, and it is fully guaranteed.

This machine is the invention of James Powers, the inventor of the widely used Powers accounting and tabulating machine, and has been in process of commercial development for over two years. The president of the Germproof Cup Machine Company is W. E. Johnson, formerly consulting engineer, The Winchester Arms Company, while Benj. B. Avery, formerly President of the Powers Accounting and Tabulating Machine Company, is chairman of the board. The sales and advertising policies will be directed by men long experienced in the paper trade, and associated as directors and stockholders are some of the most prominent business men in the country.

The company claims that through the use of its machines every consumer will be able to more than cut his present paper cup costs in half. It will mean the difference in cost of a roll of paper, as compared with the present cost of paper cups already manufac-

tured. In fact, this machine enables every concern using paper cups to be its own manufacturer, at the cost of the raw material—a roll of paper.

The chief sales slogan of the company, therefore, will be economy. And, in addition to this, the fact that each cup is handled for the first time by the user, as it is manufactured from the roll of paper, will make absolute sanitation an added sales argument.

The present sales plan is to distribute these machines and the paper rolls which they consume through the leading paper houses on an exclusive territorial basis. In addition to offering an exclusive article, extensive sales promotion plans are being completed which are sure to be a vast aid to every distributor in securing a rapid sale for these products. From the large number of applications for exclusive territory which have already been filed by the leading jobbers, it would appear that the company's outlook for a large business from the outset will be fully justified.

Continental Paper Bag Co. Has Annual Meeting

The annual meeting of the stockholders of the above company was held in Portland, Maine, on Tuesday, March 12, F. B. Jennings of Stetson, Jennings & Russell was elected to the Board. The following other directors were re-elected: A. N. Burbank, Philip T. Dodge, Herman Elsas, Theodore Hawley, I. Kuhe and Chester W. Lyman.

Chester W. Lyman was elected treasurer; Thomas Fynes was elected secretary, and David W. Snow was elected clerk.

At the annual meeting of the Board of Directors held at the offices of the Company, 17 Battery Place, New York City, on Wednesday, March 27, Herman Elsas was re-elected president and general manager, and I. Kuhe was re-elected vice-president and manager of sales.

The following officers were reappointed: Thomas Fynes and Frank P. Mills, as assistant treasurers; J. Gold, assistant secretary; J. C. K. Jordan, cashier, and D. D. Bradish, assistant cashier.

Herman Elsas, I. Kuhe and Chester W. Lyman were appointed as the Executive Committee.

Less Paper for Great Britain

The weight of paper suitable for newspaper and other printing to be imported into Great Britain during the year beginning March 1 must not reach more than one-half the total imported during the previous year, ending February 28, says an order of the British Paper Commission. The situation has been continuously assuming more serious proportions and the newspapers of Great Britain are anxiously awaiting developments.

In the year just ending, paper imports were reduced to 33½ per cent. of the imports of 1914. Thus the amount of paper available in the coming year will be only one-sixth of what it was before the war.

The newspapers are recognized as a national necessity, but further tonnage has to be saved, and food, raw materials and munitions must have priority. Most of the papers are reducing their size, increasing their price, or both.

G. L. Rodier Leaves Stone & Andrew, Inc.

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., April 2, 1918.—It will be interesting news to his many friends in the trade to learn that George L. Rodier has severed his connections with Stone & Andrew, Inc. Mr. Rodier was for eighteen years with the Strathmore Paper Co., then with the Kimberly-Clark Company of Chicago, leaving the latter about three years ago to become vice-president of Stone & Andrew, Inc.



Paper Dealers and Manufacturers

will find the Cameron Universal Type 6 Slitting and Rewinding Machine the best kind of an investment.

This machine will add its pile to the year's earnings as it will enable you to give profitable service to customers in a way impossible without this machine in your plant.

Comparatively small rolls, such as counter rolls, hand rolls of all sorts, and host of other requirements in the roll paper line is something fierce these days and the prices people are willing to pay are up to the limit.

Why not save time and money by converting regular machine roll sizes into any imaginable size the customer wants, charge him accordingly, and give him quick service.

The following list of roll products are only a few of the things you can do with a Cameron Machine:

Abrasive Tape Paper and Cloth
 Adding Machine Rolls
 Asbestos Paper
 Autographic Register Rolls
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 Barber Headrest Polls
 Blasting Rolls
 Blueprinting Paper
 Bond Paper
 Carbon Paper Rolls
 Carbon Tissue Paper Rolls
 Cartridge Paper Rolls for Gun Cartridges
 Cash Register Rolls
 Checks for Key Register Rolls
 Cigarette Paper Rolls
 Coppered Gilt Paper in Rolls
 Counter Rolls
 Embossed Paper in Rolls
 Grease Proof Paper
 Glassine Paper Rolls

Glazed Papers
 Gummed Kraft Paper Tape in Rolls
 Hand Rolls for wrapping Auto Tires, etc.
 Insulated Paper of all kinds for insulated wire manufacturers
 Jumbo Rolls
 Kraft Paper, all weights
 Kraft Paper Rolls for tire wrapping
 Labels
 Lining Paper Rolls
 Lace Paper
 Manila Rope Paper in Rolls
 Manila Wrapping Paper
 Music Rolls
 Multigraph Tape
 Midget Rolls
 Onionskin Paper
 Parchment Paper Rolls
 Paper Rolls for tube manufacturers
 Paper Yarn
 Photographic Paper
 Railroad Tickets in Rolls

Ribbon Paper in Rolls for silk ribbon blocks
 Roofing Paper in Rolls
 Roll Printing Machine Paper
 Safety Papers for checks
 Sales Register Paper in Rolls
 Sand Paper in Rolls
 Sanitary Paper Towels in Rolls
 Serpentine Paper in Rolls
 Sheathing Paper in Rolls
 Soda Checks in Rolls
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 Soap Wrappers
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 Tube Manufacturers Paper
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 X-Ray Photo Paper

Cameron Universal Type 6 Machine will turn out an amazing quantity of work in the course of a day in the hands of an operator of no previous training. On receipt of word from you we will be glad to send you catalog and other literature covering these machines.

CAMERON MACHINE COMPANY
57-61 Poplar Street **Brooklyn, N. Y.**

CONSTANT TEMPERATURE AND HUMIDITY ROOM

Interesting Room for the Testing of Paper, Is Described in *The Journal of Industrial and Engineering Chemistry*—All Physical Testing of Paper Done by the Bureau of Chemistry, United States Department of Agriculture, Has Been Conducted for Some Years Past in a Specially Constructed and Automatically Controlled Constant Temperature and Humidity Room.

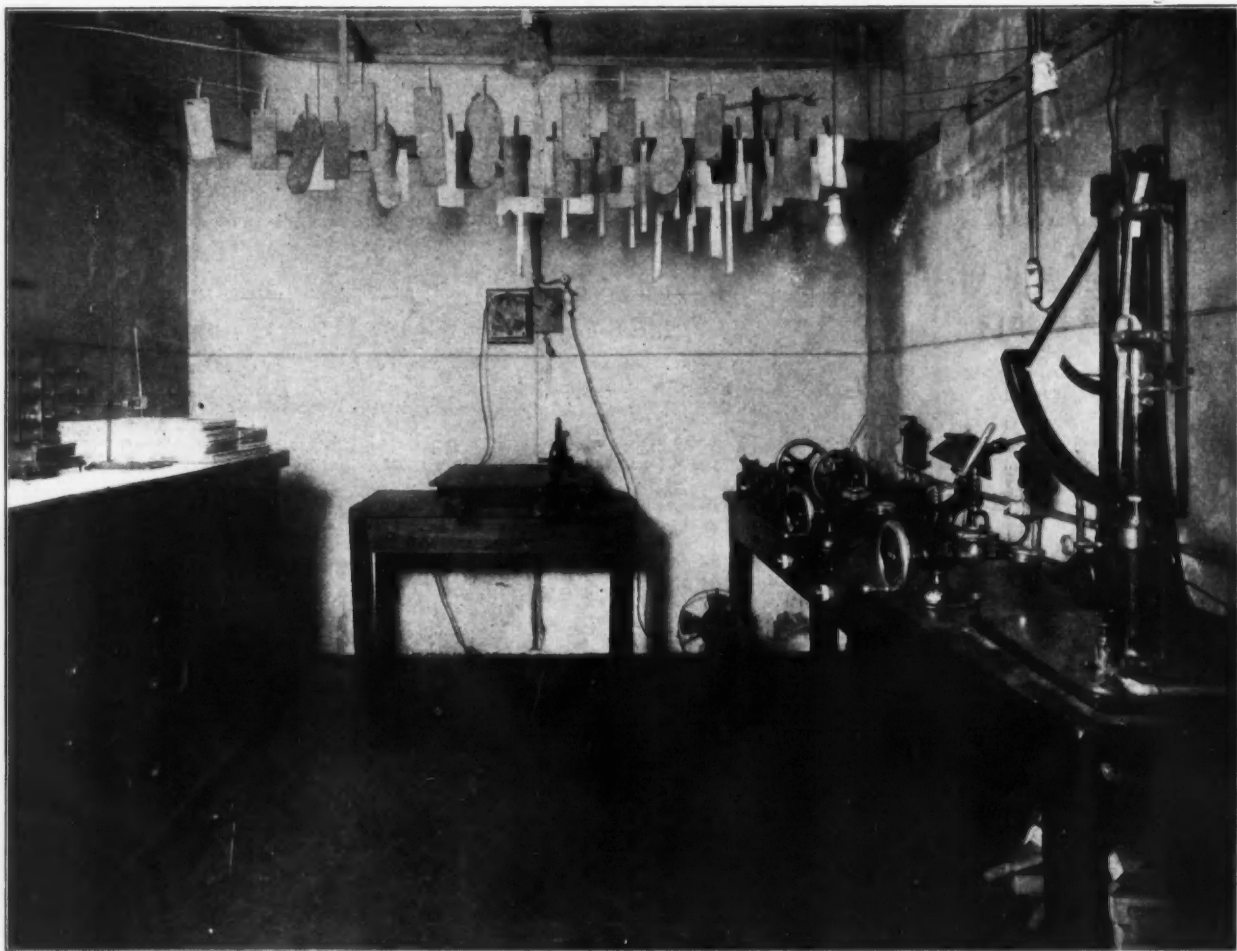
WRITTEN BY F. P. VEITCH AND E. O. REED, OF THE LEATHER AND PAPER LABORATORY.

Variations in the relative humidity of the atmosphere have a decided effect on the physical properties of paper. The results of all physical tests on paper are affected to a greater or less degree by the ordinary variations of the relative humidity in the testing room, and certain tests are valueless unless conducted under uniform temperature and humidity conditions. Especially is this true with the determination of the folding endurance, a most important test for indicating the flexibility and probable durability of paper. Though it is generally understood that the physical qualities of paper are affected by changes in humidity conditions, there is but little appreciation of the rapidity with which these changes affect it. Paper is so exceedingly sensitive

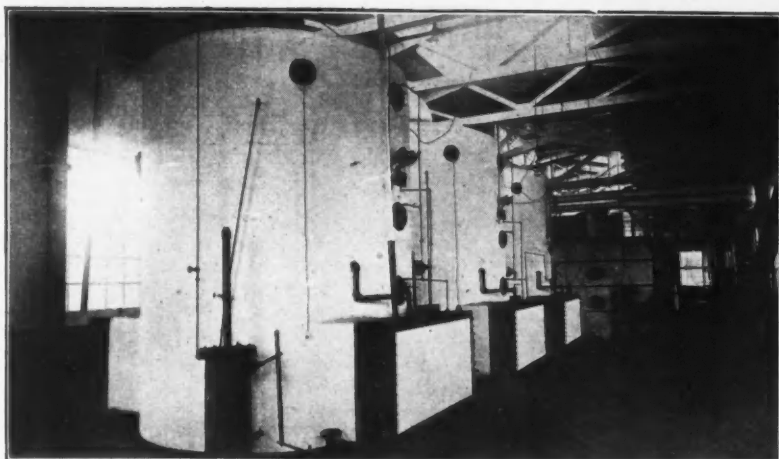
to changes in atmospheric humidity that in order to obtain concordant results, which may be duplicated at other times and by other laboratories, it is necessary to make all physical tests upon it in a room where both uniform temperature and relative humidity are maintained.

All physical testing of paper done by the Bureau of Chemistry, United States Department of Agriculture, has been conducted since December, 1909, in a specially constructed and automatically controlled constant temperature and humidity room. So far as is known, this laboratory was one of the first in this country to maintain uniform temperature and humidity conditions in the

(Continued on page 28.)



VIEW OF INTERIOR OF ROOM TAKEN FROM THE DOORWAY. ON THE FLOOR IN THE REAR WILL BE SEEN ONE OF THE FANS FOR KEEPING THE AIR UNIFORM WITHIN THE ROOM AND ALONG THE LEFT SIDE AND BACK OF THE ROOM, NEAR THE CEILING, IS THE OUTLET FLUE. THE METHOD OF EXPOSING SAMPLES TO BE TESTED BY SUSPENDING WITH CLAMPS FROM WIRES STRETCHED ACROSS THE ROOM ARE ALSO SHOWN.



ZAREMBA PATENT EVAPORATOR

***With Caustic Selling for
Twice as Much—***

as it did a few years ago, be careful to choose an evaporator that will not lose any of this valuable material through "Entrainment loss."

When Caustic sold for *half* of what it does now, the Zarembo Patent Evaporator, in one instance, replaced another make, and paid for itself the first year by the saving of Caustic which the other evaporator was losing because of "Entrainment."

With Caustic prices at present figures, it would pay you well to look into this matter of "Entrainment loss" before selecting an Evaporator.

The Zarembo Crystallizing Evaporator is widely used in paper mills for the production of Electrolytic Caustic, which is particularly profitable at this time of high prices for Caustic and Bleach.

ZAREMBA COMPANY

BUFFALO, U. S. A.

EVAPORATOR — OF — INSTALLATIONS MERIT —
ZAREMBA
 A TYPE FOR — EVERY PURPOSE



CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 26.)

testing of paper, textiles, leather and numerous other articles.

Measurement of Humidity

Humidity is expressed either as relative or absolute. Absolute humidity is the weight in grains of the water vapor in a cubic foot of air, while relative humidity is the percentage of saturation of the air at any particular temperature and pressure. Saturation at the designated temperature and pressure is taken as 100 per cent. The higher the temperature of the air the more moisture required to give the same percentage of saturation or relative humidity.

The measurement of humidity¹ is preferably made with a United States Weather Bureau sling psychrometer. Thermometers graduated to 0.1° F. should be used, since every degree difference between the wet and dry bulb temperatures gives from 4 to 6 per cent. in variation in relative humidity at the ordinary temperatures of from 50° F. to 80° F. At lower temperatures this variation increases, as for instance at 32° F., one degree gives a difference of 10 per cent. relative humidity. The sling psychrometer, method of handling and tables necessary for calculating relative humidity and dew point from the readings of the wet and dry bulb temperatures are described by the United States Weather Bureau.² There are many instruments for recording the temperature and humidity on charts, but these instruments must be frequently checked with a standard sling psychrometer or other accurate form of wet and dry bulb instrument.

Indoor and Outdoor Humidity

During the six to nine months of the year, when artificial heat is required in most localities, the average relative humidity indoors is as low as 20 to 40 per cent., unless mechanical means for humidifying have been installed, while the average outdoor relative humidity in most localities in the United States is over 65 per cent. These facts are not generally appreciated and erroneous statements on this subject are often made. Wilson³ states that during the winter months the normal outdoor relative humidity over the more populous portions of the United States, especially east of the Missouri and north of the Ohio rivers, is 72 per cent., and that the average diurnal range is from 60 to 85 per cent.

In Table I are given the indoor temperatures and relative humidities for Dayton, Ohio, and Washington, D. C., recorded by this laboratory and the outdoor readings for the same localities taken from the Annual Reports of the Weather Bureau.

TABLE I.
AVERAGE MONTHLY OUTDOOR AND INDOOR TEMPERATURE AND
RELATIVE HUMIDITY.

	DAYTON, OHIO.			
	Outdoor		Indoor*	
	Tem- perature. °F.	Relative Humidity. Per Cent.	Tem- perature. °F.	Relative Humidity. Per Cent.
1911,				
November	38.	83	74.5	29
December	37.8	80	74.5	28
1912.				
January	18.4	78	75.	19
February	23.2	75	75.	21
March	34.4	79	74.5	26
April	53.6	75	75.	35
May	64.4	75	75.5	43

¹Final report of the Committee on Standard Methods for the Examination of Air.—*American Journal of Public Health*, Vol. 7, No. 1, p. 54.

²Psychrometric tables.—*U. S. Weather Bureau Bulletin No. 235*.

³Atmospheric Moisture and Artificial Heating.—Proceedings of the convention of Weather Bureau Officers, 1898.

June	68.4	69	75.	44
July	74.9	76	79.5	58
August	71.	80	78.	60
September	68.2	76	77.	56
October	56.6	71	72.5	41
Aver. for 12 months	50.7	76	75.5	38

*Readings taken by the Bureau of Chemistry in the Mercantile Corporation Factory.

	WASHINGTON, D. C.			
	Outdoor		Indoor*	
	Tem- perature. °F.	Relative Humidity. Per Cent.	Tem- perature. °F.	Relative Humidity. Per Cent.
1912.				
August	73.4	72	83.5	49
September	70.4	82	76.5	65
October	59.3	75	75.	46
November	46.9	67	74.5	39
December	40.4	69	74.0	35
1913.				
January	43.6	72	73.0	35
February	36.6	63	74.5	31
March	49.	66	74.0	31
April	55.5	60	76.5	33
May	64.4	65	77.5	41
June	72.8	66	80.	49
July	77.6	66	87.	44
Aver. for 12 months	57.5	68.5	77.1	41.5

*Readings taken in laboratory room Bureau of Chemistry. As open steam baths are located in all rooms used for laboratory purposes, the indoor humidity is somewhat higher than was found in other buildings.

The results given in Table I are representative of the average indoor conditions at Dayton, Ohio, as determined by observations made during several years. It has been observed in Washington, in several of the different government bureaus and in offices using large amounts of paper that the average yearly indoor relative humidity during working hours is between 35 and 40 per cent. The average yearly indoor relative humidity is close to 40 per cent. both in Dayton, Ohio, and Washington, D. C., but in no case does it approach the average outdoor relative humidity averaging from 30 to 40 per cent. less. These results are in close agreement with those quoted by Wilson,³ to the effect that the indoor relative humidity in heated buildings in several widely separated parts of the country on the coast and in the interior varies from 24 to 33 per cent. and that during the winter months the indoor relative humidity is about 42 per cent. lower than the outdoor.

The average winter indoor humidity in the United States is lower than that of the driest climate known.⁴ This fact has led to investigations as to the physiological effects of temperature and humidity for the purpose of setting standards for the best living and working conditions. Such work has been conducted by the New York State Commission on Ventilation for several years.⁴

Standard Testing Conditions

The German Imperial Testing Laboratory at Gros-Lichterfelde found the variations in atmospheric humidity to produce such a decided effect on the results of physical tests of paper that it was necessary to make all tests under constant relative humidity conditions.⁵ About 1890, they accordingly adopted 65 per cent. rela-

⁴Some Results of the First Year's Work of the New York State Commission on Ventilation.—*American Journal of Public Health*, Vol. 5, No. 2, p. 85.

⁵Nittheilungen a. d. K. Technischen Versuchungsanstalten—7 (1889), page 2; 8 (1890), pages 8 to 19.

(Continued on page 30.)



Modernize to Economize

With direct connected G-E motor drive, each machine is always kept running at full productive capacity without regard to adjacent machines, thus reducing pro-rata labor cost.

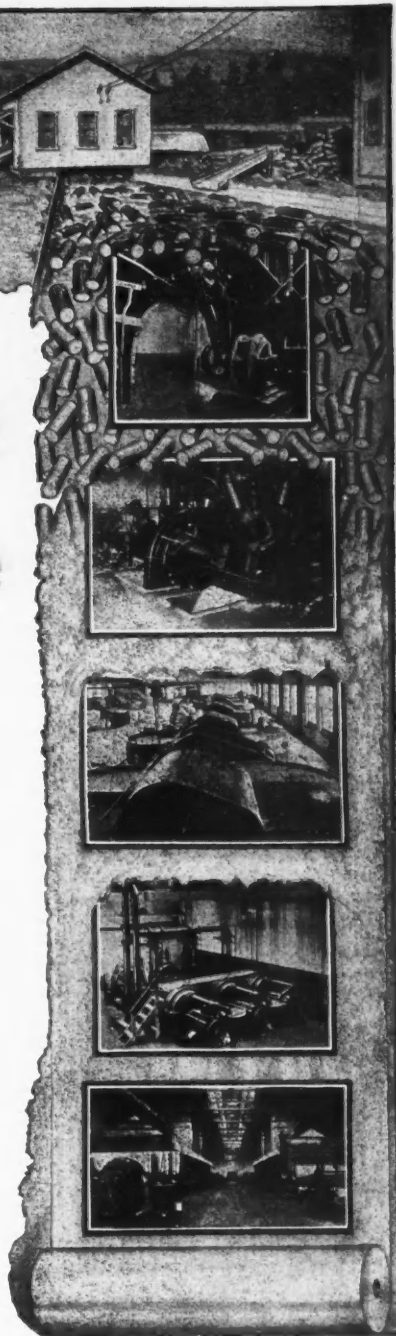
Absence of over-head belting, counter shafts and hangers, leaves entire headroom clear and unobstructed, easy to clean and keep clean, easy to ventilate.

The overtime operation of a single machine or group of machines is possible without operating the whole power equipment.

Where current is obtained from outside sources, as a central station, the power cost stops when the machine stops.

But why try and tell in this small space, of the many advantages of electric power in your industry, when this company is maintaining an engineering specialist in your district qualified to give you detailed information on the subject?

Consult him—his knowledge is yours for the asking.



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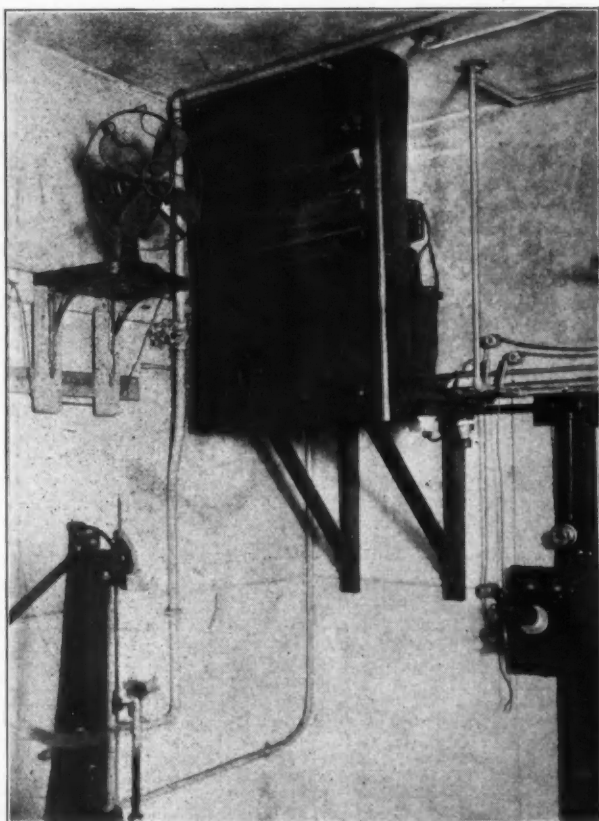
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 San Francisco, Cal.
 Schenectady, N. Y.
 Seattle, Wash.
 Spokane, Wash.
 Springfield, Mass.
 Syracuse, N. Y.
 Toledo, Ohio
 Washington, D. C.
 Youngstown, Ohio

*Southwest General Electric Company. For CANADIAN BUSINESS refer to Canadian General Electric Company, Ltd., Toronto, Ont.
GENERAL FOREIGN SALES OFFICES: Schenectady, N. Y.; 120 Broadway, New York City; 83 Cannon St., London, E. C., England.

CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 28.)

tive humidity for all physical testing of paper. It is not made clear why 65 per cent. relative humidity was selected, but it appears to have been taken because of the fact that, since the average outdoor relative humidity is more than 65 per cent and the indoor humidity somewhat lower, it was easier to add moisture to the air than to remove it.



VIEW OF THE AIR INTAKE WHICH SUPPLIES TEMPERED AIR AND MOISTURE TO THE ROOM. BACK OF THE BAFFLE PLATE WILL BE SEEN THE MOTOR OF THE SIROCCO FAN, WHICH SERVES TO CIRCULATE AIR THROUGH THE SYSTEM. IN FRONT OF IT IS THE OTHER FAN WHICH IS USED TO DISTRIBUTE THE AIR THROUGHOUT THE ROOM.

This condition has been generally accepted in this country, apparently without investigation. Since the average yearly indoor humidity in this country is, according to the data available, but 35 to 40 per cent., it does not seem rational to test paper at a relative humidity rarely obtained indoors. The testing should be done under humidity conditions more nearly like those under which the paper is used. It is doubtful, however, if it would be advisable to set the relative humidity for such work as low as 40 per cent. or even as low as 45 per cent., because it will be quite difficult to maintain this humidity during the summer months without refrigerating machinery or other de-humidifying device. For these reasons a relative humidity of 50 per cent. will probably be most satisfactory. No final conclusion on this point can be reached, however, until after a conference of those having experience in this work.

Not only has humidity a marked effect on the results of physical tests, but also on the handling and use of paper. The printer, engraver, stationer, librarian and others using large quantities should standardize their working and storing conditions to secure the best and most satisfactory results at all times of the year. The most suitable humidity conditions for their respective purposes should be determined by investigation and means should then be taken to maintain these conditions throughout the year. The paper maker and consumer would undoubtedly profit by the maintenance of uniform humidity conditions most satisfactory for their purposes. Suggestions from the Bureau of Chemistry have led to the elimination of a number of difficulties in the government printing and engraving establishments caused by variations in atmospheric humidity.

In most texts on paper testing it is suggested that certain definite humidity conditions may be had by placing the samples in small containers, in which the definite temperature and humidity required are maintained, for twelve to twenty-four hours, then removing from the containers and testing under the atmospheric conditions prevailing in the room. Accurate results cannot be obtained in this way, especially with the folding endurance tester. As will be seen from Table II, results made with this machine are valueless unless made under uniform humidity conditions. Nor has it been found possible to apply accurately a formula for correction where the tests have been conducted at a different humidity than 65 per cent, as no two kinds of paper or even runs of the same kind of paper will necessarily permit the application of the same correction factors. A fact that is clearly shown by comparing the results in Table II, columns 2 and 3 with columns 6 and 7, respectively.

The results in Table II show that the physical qualities of the paper change very rapidly with changes in the relative humidity of the air. They show that papers should not be exposed to a certain humidity condition and tested under other conditions, even

(Continued from page 32.)

TABLE II.
RESULTS SHOWING RAPIDITY WITH WHICH THE FOLDING ENDURANCE IS AFFECTED BY HUMIDITY.
SAMPLES OF UNCOATED BLUE PRINT PAPER.

Paper Number	Exposed 12 hrs. at 71° F. and 30% relative humidity and tested.		Exposed at 71° F. and 30% relative humidity. Tested immediately at 65° F. and 65% relative humidity.		Exposed 12 hrs. at 65° F. and 65% relative humidity and tested.		Exposed at 65° F. and 65% relative humidity. Tested immediately at 74° F. and 28% relative humidity.	
	Long. Double Folds	Trans. Double Folds	Long. Double Folds	Trans. Double Folds	Long. Double Folds	Trans. Double Folds	Long. Double Folds	Trans. Double Folds
28541.....	316	411	852	804	1,431	1,298	468	347
28538.....	104	186	229	269	843	416	329	214
28519.....	305	296	373	440	1,561	641		not tested

NOTE: These results are the averages of ten tests each.

Bleached and Unbleached
WOOD PULP
 of every description

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18 East 41st Street

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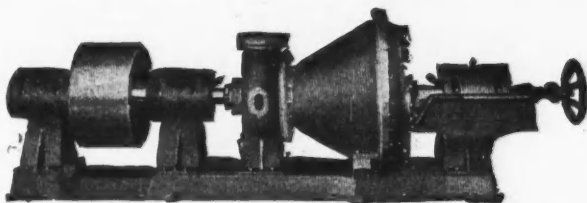
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Increase Your Production

Three Claflin Continuous Beaters will handle as much stock as six tub-beaters. The six tub-beaters will cost three times as much as three Claflin Continuous Beaters. Six tub-beaters will occupy four times the floor space required for three Claflin Continuous Beaters. These facts have been demonstrated daily for the past nine years in some of the best mills in the country.

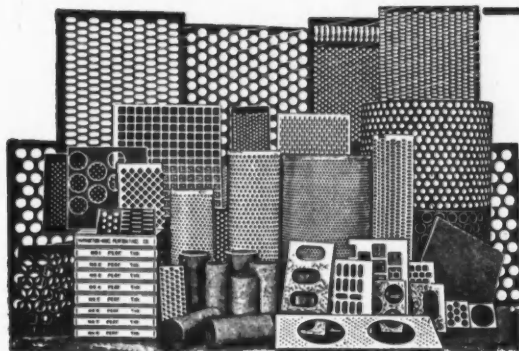


It has also been demonstrated beyond question that the Claflin Continuous Beaters do better beating and brushing, produce a finer, stronger and more uniform pulp than the tub-beaters.

We also have many customers, who prefer our Continuous Beaters to Jordan engines, because the fillings never break or tear out, and they obtain a better product than from a Jordan.

If you manufacture Kraft Paper, and are having trouble with tub-beaters, Jordans and other refining engines, write us for special information on Kraft stock.

The Claflin Engineering Co. : Lancaster, Ohio



PERFORATED METALS

Paper and Pulp Mill Screens
STEEL, IRON, COPPER, BRASS, BRONZE

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Centrifugal and Rotary Screens—Drainer Bottoms—Filter Plates—Pulp Washers, etc. All sizes and shapes of holes in many thicknesses and dimensions of sheets. Accuracy in all details and excellence of quality at lowest consistent prices.

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CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 30.)

though the tests are made at once. They indicate further that paper loses moisture faster in passing to a lower relative humidity than it gains moisture in passing to a higher relative humidity. The length of time for which it is necessary to expose a paper to a certain humidity condition before it reaches equilibrium can be definitely determined by means of the folding endurance tester as well as by weighing the paper. Articles dealing with the effects of humidity on paper are in preparation and will be published in the near future.

Description of the Bureau of Chemistry Constant Temperature and Humidity Room

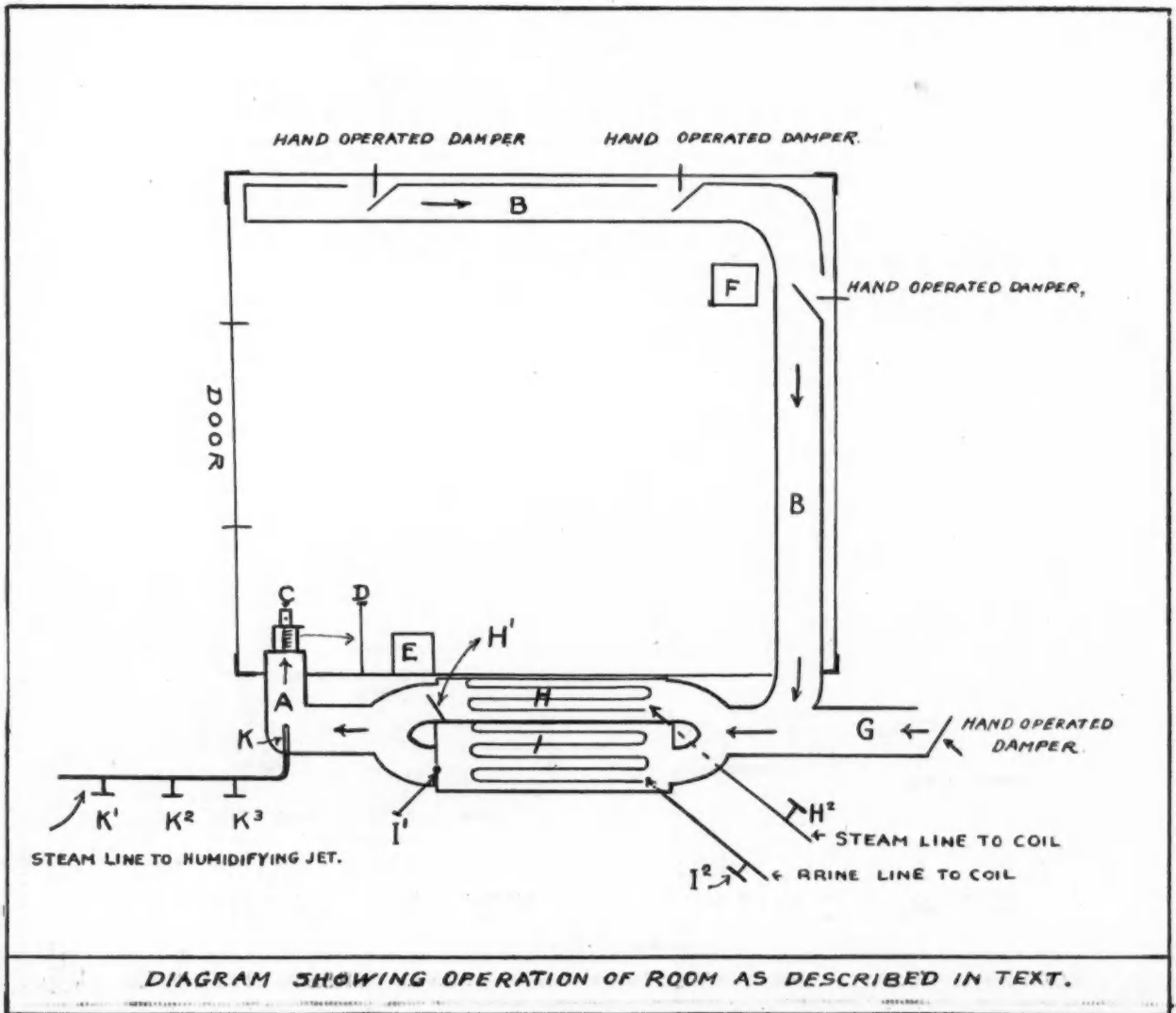
For general testing work this room has been operated up to the present at 70° F., and 65 per cent relative humidity. The temperature was at first set at 65° F., with 65 per cent relative humidity. At 65° F., the workmen were decidedly uncomfortable and developed frequent colds. It was, therefore, deemed advisable to adopt 70° F., as the standard temperature, with the relative humidity at 65 per cent. The room can be operated automatically

at any relative humidity from 20 to 85 per cent and any temperature from 40 to 95° F. Investigational work has been carried on at different humidities and temperatures, to show the effects on paper and on tests made with various testing machines.

The room is 10' 6" by 14' 3" and 9' 3" in height, and contains 1,410 cubic feet. It was constructed in connection with the refrigeration plant of the bureau. The walls and ceiling of the room are 8 inches thick and consist of an outside sheathing; 4 inches of ground cork; a thin partition, two layers of sheet cork, each 1½ inches in thickness, the inner layer finished on the inside with cement, which is painted to prevent absorption of moisture. The floor is insulated in the same manner, cemented and covered with linoleum. The door is of the regular cold storage type. The insulation of the room is such that when the automatic controls are turned off the temperature will remain constant for several hours.

Air is drawn into the room by means of a Sirocco fan (C), from the intake flue (A), through which the tempered air and

(Continued on page 38.)



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Nashua Silfoils and Silver Papers

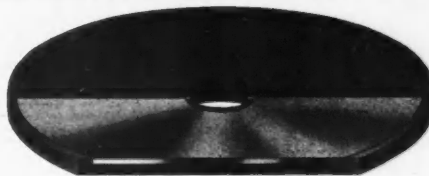
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E d i t o r i a l

Vol. LXVI. New York, Thursday, April 4, 1918 No. 14
FORTY-SIXTH YEAR

Canada's Growing Paper Industry

Outside of purely war-time projects, there is not a single industry in Canada which is progressing at the rate of the pulp and paper industry. The figures for exports during the ten months ending January 31 of this year, show that there was a 50 per cent. increase in the export of paper, as compared with the 10 months ending January, 1917, the total being \$30,189,851, against \$30,051,794. The export of pulp in the same period was \$21,627,856, as compared with \$16,703,748, an increase of 30 per cent. The relatively larger increase in the export of paper marks the growing tendency to manufacture raw materials on the spot. American firms, apparently, are turning largely to Canada, and American capital, instead of being invested in new mills or extensions in the United States, are being invested in new mills in Canada. It is a remarkable fact that a large proportion of the new mills and mills that are projected are financed by American capital, under the direction of American paper makers.

The paper exported in January last—the latest month for which official figures are available—was valued at \$2,842,171, and the pulp at \$1,618,319, or a total of \$4,460,490. For the 10 months ending January 31 this year the total was \$51,817,707, or, if the average were kept up for the full year, the export value would be \$62,181,248, a rather remarkable increase over the record for the full year ending March 31, 1917, when the total exports were \$46,476,699.

For a Woodlands Division

In printing the considerable amount of matter regarding the annual convention of the American Paper and Pulp Association held a few weeks ago, less prominence than it deserved was given to the resolution providing for the formation of a new division of the organization to be known as the Woodlands Division. This resolution was urged by Mr. A. B. Recknagel, forester of the Empire State Forest Product Association, who believed that America ought not to lag behind Canada in this commendable move. This resolution seems so important that with the hope of emphasizing the need for the action suggested it is reprinted here-with in its entirety.

Whereas: In 1915 there was started in the American Paper and Pulp Association a Technical Division now known as the Technical Division of the Paper and Pulp Industry, wherein the men in the operating departments of mills exchange experiences and discuss their problems, and

Whereas: There has been no such opportunity provided for the men working at the most vital point in the industry, the woods end, and

Whereas: The pulp and paper industry is growing faster than any other that is based on a natural resource and the problems pertaining to the future supplies of raw material are immense, and

Whereas: Such essential matters as kinds of trees, growth and yield, reforestation and other methods of forest management, methods of logging, new woods machinery, and fire protection are deserving of special recognition.

NOW, THEREFORE: BE IT RESOLVED that there should be promoted a new Division of this Association, known as the Woodlands Division, to deal with the whole question of wood production for the making of pulp and paper, and that a committee of five be appointed by the President of the Association to act with him in preparing a Constitution and otherwise laying out the lines of development for such a Division.

The resolution, it is understood, has been referred to the council of the American Paper and Pulp Association, from which it is to be hoped that it will receive the early and favorable attention that it deserves. The matter of raw material for paper making is becoming an increasingly important subject that must as the years go by receive more attention from the serious-minded men in the paper trade than it has in the past. The projected Woodlands Division of the American Paper and Pulp Association should early become an important influence in handling the problem of reforestation.

The Third Liberty Loan

The time for placing the Third Liberty Loan opens Saturday, April 6, the anniversary of the entry of America into the great war to make the world safe for democracy. Good citizens throughout the country will join earnestly and unreservedly in the work of making this loan an unprecedented success. The amount to be raised is only about one-half as large as it had been thought would be asked for and it should be raised in record time.

It is the business of every business and business man in the United States to see that the Liberty Loan does not fail. They should buy Liberty Bonds; they should encourage and assist others to buy them. No business in the United States is going to succeed if the Liberty Loan fails—if the Nation fails.

It is better business to buy Liberty Bonds than to pay indemnities to a victorious Germany; it is better business to win this war than to have our foreign commerce subject to the dictation of the Potsdam Government.

The welfare, the success, the prosperity, the liberty, and the happiness of every true American is bound up in the Nation's success. We are not fighting alone for material interest, for annexations or indemnities. We are fighting for freedom and justice and humanity and civilization. But we are also fighting for the maintenance of our commercial rights, for the rights of our citizens to pursue their lawful journeys on the seas and transport their commerce to foreign markets.

It is patriotic, and a duty, to buy Liberty Bonds. It is also good business to do it.

The proceeds of the Liberty Loan, including the greater part of that loaned to our Allies, are being spent for American products—the products of our factories, our farms, our mines, and other industries. In lending to the United States the people of the United States are lending to their best and largest customer and obtaining the safest investment in the world.

A \$1,000 bond will buy six cases of operating instruments for a

base hospital, or furnish pistols for a rifle company, or one motor kitchen.

One thousand five hundred dollars of Liberty Bonds will buy a motor ambulance, or a motor car for a machine-gun battalion.

Two \$1,000 bonds will buy a motor truck; three \$1,000 bonds will buy rifles for a Field Artillery battery, or supply horses for a Field Signal battalion.

Four \$1,000 bonds will buy a tractor; five \$1,000 bonds will buy one Liberty truck, or seven Lewis machine guns, or equip a rifle company with rifles.

Six \$1,000 bonds will buy a Liberty motor; seven \$1,000 bonds one training plane; nine \$1,000 bonds one observation balloon.

Ten thousand dollars of bonds will fully equip three hospital wards of 50 beds each, with all linen, clothing, and other necessities, or buy six large wholesale sterilizing outfits, or six motor ambulances.

The cycle of money invested in Liberty Bonds is short and complete. The people lend the money to the Government, the Government lends some to our Allies, and our Government and our Allies straightway spend the money, or the greater portion of it, among the people of the United States. In some instances the money paid in by wage earners on one installment of Liberty Bonds is paid by the Government to their employers, and by their employers paid back to them in the way of wages before the next Bond installment is due.

The various divisions of the paper trade may be depended upon to support this latest loan as patriotically as they did the earlier ones. Buy your Liberty Bonds early.

"After the War Trade"

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 1, 1918.—William C. Redfield, Secretary of Commerce, has recently made some very interesting observations relative to "after the war" trade which will bear much thought. He says:

"I have reflected for a long while on what is to be done 'after the war' and let me say that the more I think of it the less I think of it. I have about come to the conclusion that we ought not to think very much about 'after the war,' but confine ourselves to thinking for the present of how to win the war. There are three reasons for this, which are:

"First, if we do not win the war we shall do business after the war under the control of someone besides ourselves.

"Second, we do not know when 'after the war' will be or what will happen before that time, or the conditions which will exist at home or abroad when that time arrives. It is impossible to plan for an unknown quantity.

"Third, if we do devote ourselves to winning the war with a mind single to that one great purpose, it seems to me to provide the only certain steps which we can say will be useful after the war.

"First, then, if Germany wins she proposes to dominate the seas. Her trade journals definitely stated that freedom of the seas means for her domination of the seas. The Emperor has expressly stated that no high decision will be made on our side of the Atlantic without consulting the German Government and the German Kaiser. If this is to be our fate, which God forbid, our plans will be made by others.

"Second, we do not know what is going to happen before the war ends, and what may happen may be controlling. For ex-

ample, two years ago it looked as if Russia would be one of the greatest future markets for American goods and many merchants made plans on that basis which now they wish they had not made. No plans made up to a year ago for Russian business are worth anything now, nor are conditions such that any plans can be made for business in that country at any known time in the visible future. If the war lasts long enough to bring Germany to exhaustion, plans which are based upon their active competition will need revision. If England and France are fought to a finish plans based upon their active competition may need revision. We do not know what the facts will be and how to make plans about unknown effects at an unknown time is more than I can say.

"In the third place, the country needs the united effort of everybody on the job we have got, namely, the winning of the war. Looked at in a business sense this means for every factory and business concern the avoidance of waste, the cutting down of every useless expense, the making of the largest possible product, the working in harmony with labor; in short, the making of every business into an economic athlete that it may do its part in the struggle. But this process, well done, is precisely the thing that will fit us for the period 'after the war.' We need not worry as to what will then happen if we are sure that America can face it with a commercial organization made up of trained industrial and economic athletes. That will be the greatest possible act of preparatory things.

"Finally, I do not mean that we should be blind. We ought clearly to do what we can, if we see it clearly. The Webb Bill ought to pass and be made law. Anything within our own power to do that will make our commercial and financial organizations more flexible and effective at home and abroad should be done, but further than this, without any desire to speak with finality or to make excathedra utterances, I find myself more and more reluctant to dwell upon the future and more and more forced to deal with the urgent present."

Forsythe-Harding Partnership Dissolved

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, March 30, 1918.—The Forsythe-Harding Paper Company, not incorporated, of Chicago, announces the retirement on April 1 of J. E. Harding from their firm. The partnership under which this well-known and deservedly popular concern has operated has been formally dissolved. Mr. Harding's wide circle of acquaintance in the paper field will await with interest announcement of the future plans. A. N. Forsythe will continue the business.

EDWIN BUTTERWORTH & CO.

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OUR TIGHT FITTING, DIAMOND "W" JACKETS
WILL NOT LICK UP AT ANY SPEED

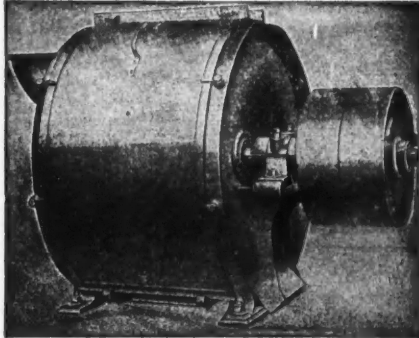
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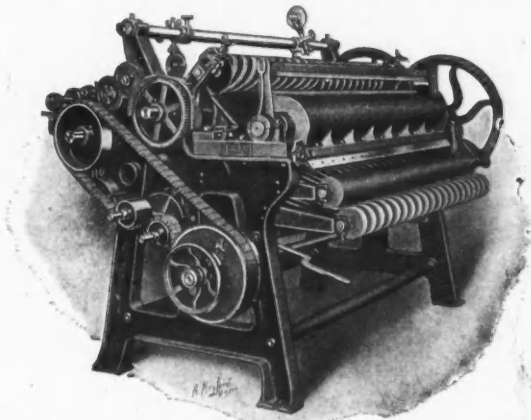
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CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 32.)

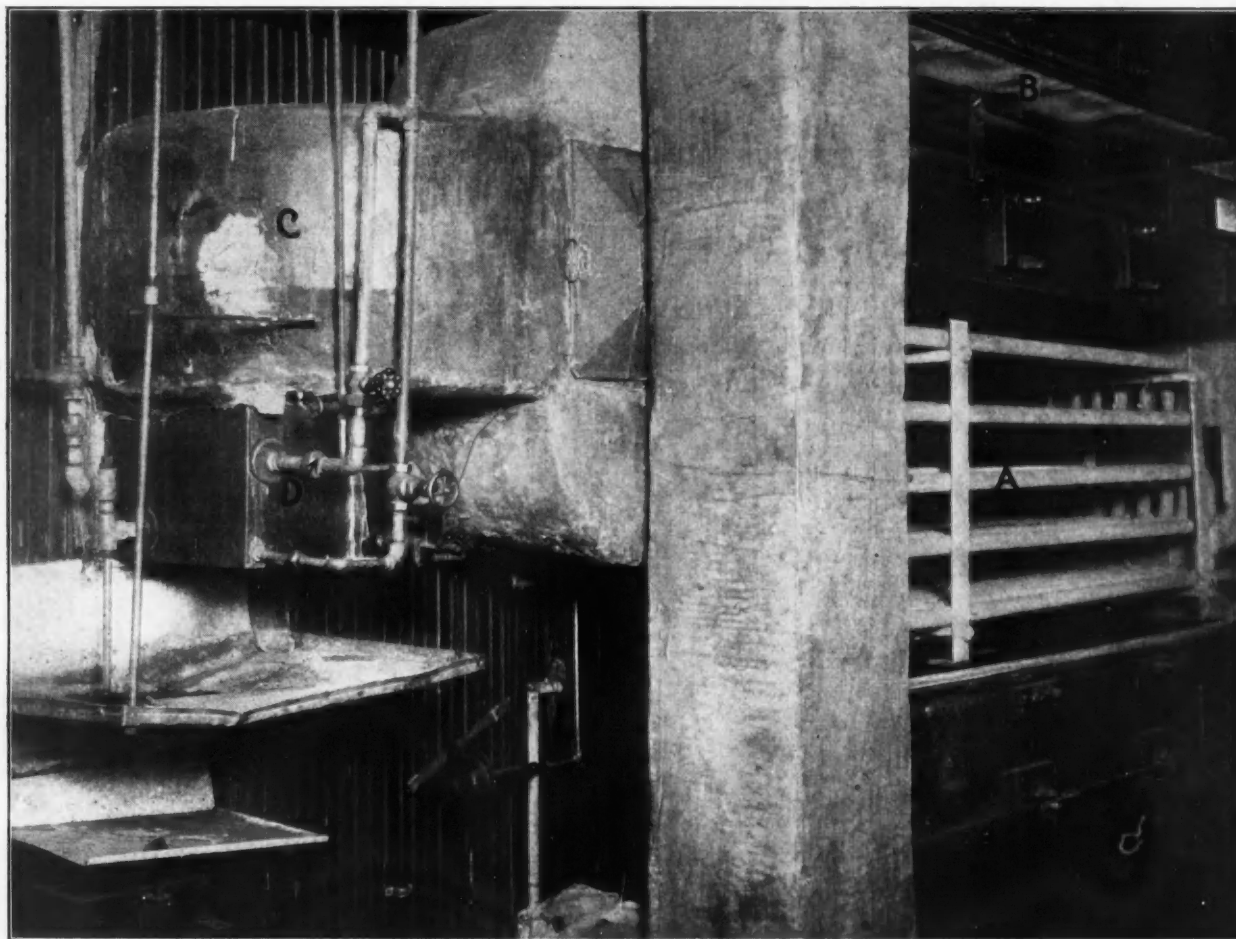
moisture are supplied. It is delivered into one corner of the room near the ceiling, against a slotted baffle plate (D). Two fans are located within the room to keep the air uniform throughout; one (E) is placed in front of the baffle plate where the air enters, and the other (F) on the floor in the diagonally opposite corner. These fans are essential in order to prevent the air from stratifying. The outlet flue (B) is located near the ceiling along the two sides of the room opposite the intake, and has three openings, each with an adjustable hand damper, through which air is removed from various parts of the room. This flue is connected with a fresh air flue (G) outside of the room, which supplies air to the tempering coil chambers (H and I). The Sirocco fan located in the intake flue maintains the air circulation, drawing air into the room and forcing it out through the outlet flue. Careful experiment shows that the two fans as placed within the room insure even humidity throughout the room.

The tempering coils, steam and refrigerated brine are located in well insulated chambers on the outside of the room and are connected, both with the inlet and outlet flues. All air supplied to the room is drawn over one or the other of these coils as the de-

mands of the room may require. The steam coil (H) contains approximately 28 square feet of heating surface, and the brine coil (I) approximately 113 square feet of cooling surface. They have been found ample at all seasons of the year for maintaining any temperature within the range of the controlling thermostat, 40 to 95 deg. F. In order to obtain maximum efficiency it is necessary to keep the brine coil free from ice and this is accomplished by opening the chamber once every two or three weeks and allowing the ice to melt off.

The automatic operation of the plant is obtained by means of air pressure, and automatic air pumps maintain a pressure of approximately 12 pounds. The operating valves and dampers are worked by diaphragms. Automatic diaphragm operated valves are located on the pipe lines leading to each of these coils; the brine valve (12) opens when air pressure is supplied to the diaphragm operating it and the steam valve (H²) when the air pressure is released from the operating diaphragm. Each coil chamber is fitted with an automatic diaphragm operated damper (I' and H') leading into the main flue to the room. These dam-

(Continued on page 40.)



VIEW OUTSIDE OF THE ROOM SHOWING BRINE (a), AND STEAM (b) COILS AND CHAMBERS, THE INTAKE FLUE (c) AND THE HUMIDITY SUPPLY LINE (d).

START
Inquiry
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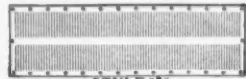
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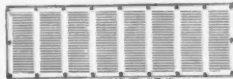
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Made of HARDY BRONZE, Rolled Brass
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STYLE "A"

Grooved or beveled for any kind
of fasteners.

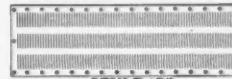


STYLE "B"

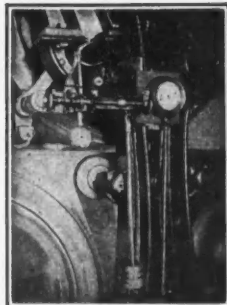
PLATES

Acid-Resisting Bronze Castings, Suction
Plates, Babbitt Metal, Hardy Bronze
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Old Plates Recut
to Accurate
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STYLE "C"



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will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES, Buckland, Conn.

CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 38.)

pers work by means of their respective diaphragms at the same time as the corresponding brine and steam valves on the coils. The automatic operation of these valves and dampers is controlled by a thermostat within the room to be described later. The two valve diaphragms and the two damper diaphragms are all on the same air pipe line, the air pressure of the line being controlled by the thermostat within the room, which makes and breaks the circuit of air.

Moisture for humidifying is supplied by means of a steam jet (K), located immediately outside of the room in the intake flue. This steam jet consists of a brass pipe about 8 inches in length, perforated and wrapped with cotton wicking, which removes any water which may be in the steam. This produces a finely divided steam vapor, which has been found the most satisfactory method of humidifying. Two automatic diaphragm operated valves are located on the steam line leading to this humidifier. One of these valves (K¹) is operated by the hygostat within the room and opens when the hygostat releases the air pressure on the diaphragm. The other (K²) is a safety valve which closes with the release of the air pressure to its diaphragm and is connected with the main air supply line of the system. Since the valve controlled by the hygostat opens with the release of air pressure, in case of a break in the main air supply line of the plant this valve would not close and an excessive amount of steam would be supplied to the room. The safety valve is to prevent an accident of this kind. The supply of steam to the humidifying jet is controlled by a needle valve (K³). It is important that the supply to the jet be regulated according to the capacity of the room so as not to furnish an excessive amount nor an insufficient amount of moisture

for the room. A steam trap for removing the water in the steam is placed in the line in front of the valves.

Automatic Control

The room is automatically operated by two separate controls, one for maintaining temperature and the other humidity. Both controls are located within the room itself.

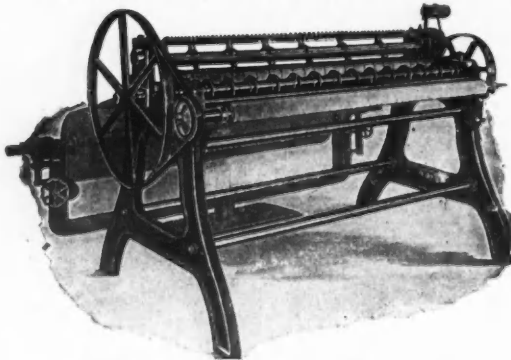
The temperature control was installed at the time the room was constructed and has given entire satisfaction. The temperature in the room varies less than one degree F. This thermostat operates the valves on the brine and steam coils and the dampers leading from these coil chambers into the room, previously described. When the room requires warm air, the thermostat releases the air pressure and the valve on the steam line and the damper to the steam coil chamber are opened, while at the same time the valve on the brine line and the damper to the brine coil chamber are closed. When cool air is required the above operations are reversed, the thermostat permitting the air pressure to be on the operating diaphragms. The above describes the principle of operation of the equipment. As a matter of fact, the action of the thermostat is gradual, allowing the room to be supplied with both warm and cool air at the same time.

Several makes of equipment for automatically controlling the humidity of the room have been tried. The hygostat now used controls the relative humidity within less than 2 per cent. variation. The room has been operated fairly well by means of other controls, but none, so far used, has proved as reliable as the instrument now in use in giving uniform and accurate automatic

(Continued on page 42.)

The "Dietz" Toilet Paper Machines

For making Toilet Paper Rolls with or without perforations



Self-Adjusting—Easy to Operate

WE ALSO MANUFACTURE

AUTOMATIC TUBE MACHINES

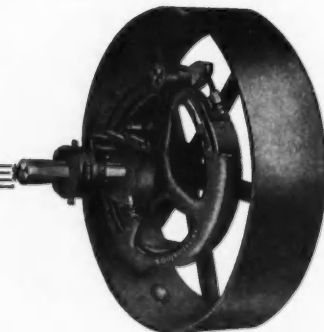
FOR MAKING TUBES FOR TOILET PAPER ROLLS
CAPABLE OF PRODUCING 3,600 WIRE STITCHED
TUBES PER HOUR

Also machines for making Sanitary Crepe Paper Towels, Slitting and Rewinding Machines, Drop Roll Slitters, Side and Center Seam Merchandise Envelope Machines, Photo Mount Beveling Machines, Candy Bag Machines, Punch Presses for Playing Cards, Rotary Card Cutting and Collating Machines, Etc. CORRESPONDENCE SOLICITED.

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The Caldwell Clutch is simple, strong and compact, its important parts are made of steel and the whole clutch is built on correct mechanical principles.

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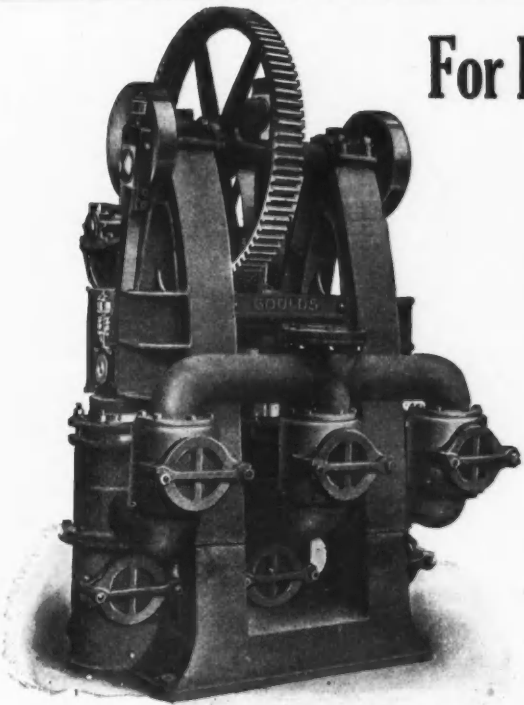
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The excellent service these pumps are giving in prominent mills in all parts of the country will commend them to you for use in your mill.

Descriptive Bulletins Sent on Request

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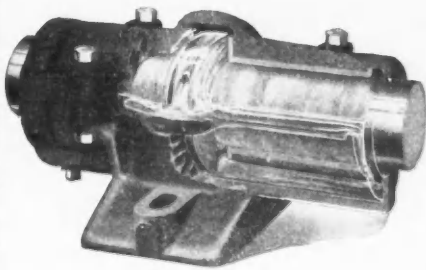
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You can't get away from testimony like this from a concern that knows by actual experience. Read the letter again, and then write us for catalog and further details. Our equipment will prove just as satisfactory in your plant.

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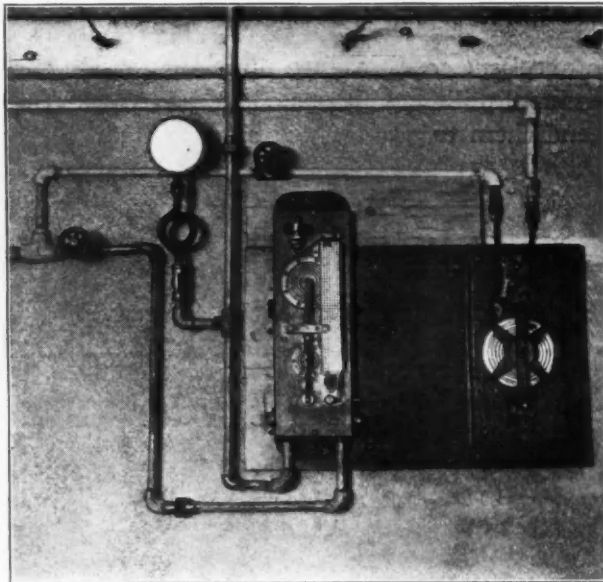
New York Office, 50 Church Street

CONSTANT TEMPERATURE AND HUMIDITY ROOM

(Continued from page 40.)

control at all seasons of the year. The instrument is a Type F Hygrostat, in which the actuating material is silk fiber. This instrument operates the diaphragm operated valve (K') on the steam line to the humidifying jet. When the need of more moisture is indicated by contraction of the silk fiber the air pressure to the diaphragm is released, opening the valve and admitting steam to the jet, until the set humidity is reached, whereupon the valve is closed with the expansion of the silk fiber.

Previous to the installation of the present humidity controller the room was operated by passing all air from the tempering coils over a vaporizing pan, in which a constant temperature was automatically maintained. This system usually gave fairly satisfactory results, but when sudden changes in the outdoor temperature or humidity occurred these were not automatically taken care of



VIEW OF TEMPERATURE AND HUMIDITY CONTROLLING INSTRUMENTS LOCATED WITHIN THE ROOM. THE THERMOSTAT IS LOCATED ON THE RIGHT AND THE HYGROSTAT ON THE LEFT.

within the room. The vaporizing pan was 12 x 18 inches and built immediately outside the room in the intake flue. The pan contained 2 inches of water in which was located a thermostat connected with an automatic diaphragm operated valve placed in the steam line to an open coil in the pan for heating the water. By this method moisture was uniformly and continually added to all air passing into the room. It was impracticable to take much fresh air into the room under these conditions, and consequently the same air was continually recirculated, which facilitated maintaining very constant conditions, but did not permit proper ventilation. The thermostat regulating the temperature of the vaporizing pan required frequent attention to allow for the changing outdoor conditions of temperature and humidity. In summer the temperature of the water in the vaporizing pan was held at 120 to 160 degrees F., and in winter 160 to 185 degrees F. in order to maintain 65 per cent. relative humidity within the room. With the present system it is possible to take all air directly from outdoors or to add any amount of fresh air to that exhausted from and to be returned to the room without seasonal resetting of the controlling instrument.

As has been previously stated the room has been uniformly maintained at the desired temperature and humidity with only regular inspection to insure the proper mechanical condition of the operating equipment. It is not unusual for both temperature and relative humidity to be maintained constant for several weeks at a time as shown by the accompanying copies of the autographic records, which by the way are confirmed several times each day by wet and dry bulb readings.

Conclusion and Suggestions

Seven and a half years' experience with and in developing a constant temperature and humidity room has lead to the following conclusions and suggestions.

Owing to the intimate relation between temperature and humidity, both should be controlled, especially where exact testing conditions are desired. It is much easier to maintain uniform humidity conditions when the temperature remains constant.

Uniform conditions within a room can only be maintained by the use of a number of properly located small fans. Without these the air will be stratified.

Humidity may be controlled within limits in almost any room or building. It is unnecessary, even for testing laboratories, to construct such an elaborately insulated room as has been described, although a well insulated room is a great advantage. However, the best results will be obtained when the room has no outdoor exposure or windows. It is believed that a room constructed within another, leaving an air space of at least 12 inches between the walls can be maintained at constant temperature and humidity by the control system described herein. The walls of the room may be of 7/8-inch lumber and should be practically airtight.

Humidity and temperature systems must be controlled more closely in paper and textile testing laboratories than in most factories, and for laboratories more or less difficulty may be experienced with many automatic systems, which are entirely satisfactory for commercial and manufacturing plants. It is therefore advisable to submit any installation to a thorough trial before reaching a conclusion as to its efficiency. As temperature and humidity are so closely related, a temperature effect on the actuating material of a humidity control instrument must be properly compensated for. Naturally if a humidity control is installed in a room in which the temperature is closely controlled this practically eliminates the effect of room temperature on the humidity controller. All materials used for humidity controls are subject to temperature changes to a greater or less degree.

Not only is the control of humidity of importance in the testing of materials, but also in many industrial lines as well. Many of the troubles and complaints of the pressman and engraver are due to humidity effects on paper and could be remedied by maintaining more uniform humidity conditions in the press and storage rooms. Low indoor humidity in winter is the cause of much inconvenience in printing, causing the paper to curl and shrink and thus interfere greatly with the work of the presses. Paper is more flexible at high humidity. This fact is of direct importance to the manufacturer of envelopes and in the folding of paper, the humidity of the room determining whether the folding is smooth or cracked. The humidity of the drying loft and the calendering end of a paper machine, undoubtedly plays an important part in the finishing of paper. The expansion and contraction of the sheet caused by variations in atmospheric humidity are of controlling importance in map and chart making and in certain special uses of paper. This could be easily overcome by keeping the paper at a uniform humidity from the time it is received until the work is finished.

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MEANS FOR MAKING SULPHITE ACID LIQUOR

A patent has just been granted to Cunnar Darre Jemssen, of New York for making sulphite acid liquors and the like which is interestingly described by the inventor as follows:

The invention consists essentially of the novel construction and arrangement of parts, whereby the function of the absorption towers may be changed at will without affecting the efficiency of the operation, and the quality of the liquor is maintained.

In the production of acid liquor by absorption of the sulphur dioxide, it has always been necessary in the past practice of this art to shut down the towers for washing purposes and the objects of this invention are to eliminate this necessity and thereby increase the capacity of a plant and effect economy in regard to labor, to enable the charging of a tower with the required contents during the operations, to insure the quality of the product, to regulate the percentage of free sulphur dioxide in the finished acid liquor and generally to provide a plant for the purposes of gas absorption processes and such like, in which the continuous operation need not be interrupted in the ordinary course of events.

The drawing shows a vertical sectional plan view of the various parts.

Referring to the drawing, the plant is here shown with two towers 1 and 2, though the invention is not limited to any particular number, so long as the salient features are included. One or other of the towers 1 and 2 is fed with water at the upper end through the inlet pipes 3 and 4. A quantity of limestone in pieces, customarily used in such processes, is supported in the tower 1 on the upper grate 5 and in the tower 2 on the upper

grate 6 and above the limestone in the tower 1 the spray box 7 is situated and similarly in the tower 2 the spray box 8. The lower grates 9 and 10 are situated in the towers 1 and 2, respectively a reasonable distance above the bottom and spaced from the grates 5 and 6, and the said grates 9 and 10 support blocks of hard wood, tile rings or other insoluble material, which fill up the greater part of the space between the upper and lower grates.

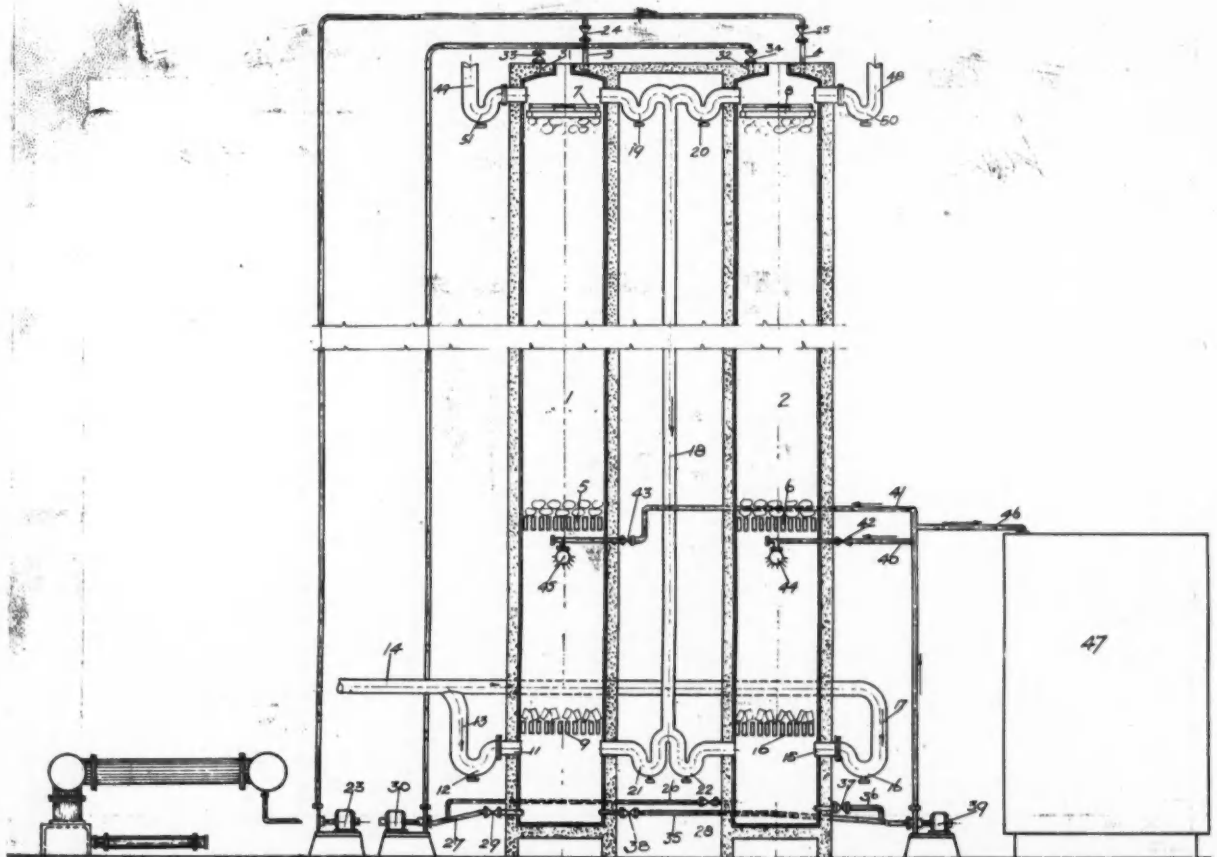
The supply gas pipe 14 leads from the sulphur dioxide plant a and the said pipe 14 is connected to the inlet pipe 11, leading into the tower 1 below the grate 9, through the trap 12 by the pipe 13. The inlet pipe 15 below the grate 10 in the tower 2 is connected to the pipe 14 through the trap 16 by the pipe 17.

The gas feed pipe 18 between towers is connected to the upper end of the tower 1 by the outlet trap pipe 19 and to the upper end of the tower 2 by the outlet trap pipe 20, and to the lower part of the tower 1 just below the grate 9 by the inlet trap pipe 21 and to the lower part of the tower 2 below the grate 10 by the inlet trap pipe 22.

The water pump 23 forces water up the water supply pipe b to the inlet pipes 3 and 4, the feed to the towers 1 and 2 being controlled by the cut off valves 24 and 25 introduced in said inlet pipes 3 and 4.

The water trickles down through the limestone pieces on the lower grates and the blocks on the lower grate in the particular tower being fed with water and reaches the lower end of said tower and if that tower happens to be the tower 2, this weak

(Continued on page 46.)





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MAKING SULPHITE LIQUOR

(Continued from page 44.)

acid liquor flows out through the pipe 26, and if the tower 1, through the pipe 27, the cut off valve 28 controlling the outlet through the pipe 26, and the cut off valve 29 controlling the outlet through the pipe 27.

The weak acid liquor thus delivered from a tower reaches the pump 30, and said pumps forces it up the pipe *c* to the inlet acid liquor pipes 31 and 32, these inlet pipes leading into the upper end of the towers 1 and 2 respectively and having the cut off valves 33 and 34 introduced thereinto and controlling the feed of acid liquor to said towers.

The strong acid liquor is discharged from the tower 1, if it happens to be used for that purpose, through the pipe 35 and from the tower 2, if the uses of the towers are reversed, by the pipe 36, the cut off valve 37 controlling the flow from the outlet pipe 36 leading from the lower end of the tower 2, and the cut off valve 38, controlling the flow from the outlet pipe 35 leading from the lower end of the tower 1.

The pipes 35 and 36 lead to the acid liquor pump 39 and this pump forces the strong acid liquor up the pipe *d* to the pipe 40 or pipe 41, controlled by the cut off valves 42 and 43, respectively, and leading to the spray nozzles 44 and 45 respectively in the towers 1 and 2 and immediately under the grates 5 and 6. The pipe *d* also leads to the pipe 46 and the latter to the acid storage tank 47, so by closing the valves 42 and 43 all the discharge from the strong acid liquor towers will go into said tank, but by opening one of said valves 42 or 43 a quantity of acid liquor will be returned for further absorption of gas, so that the strength of the acid liquor may be readily determined.

The vent pipe 48 for the escape of the spent gas is connected to the upper end of the tower 2, through the trap 50 and the vent pipe 49 is connected to the upper end of the tower 1 through the trap 51.

It may be said that the traps 12, 16, 19, 20, 21, 22, 50 and 51 are all constructed so as to be closable respectively, at will for cutting off inlets and outlets as desired.


Briefly the operation of the invention is as follows:

In operating the system with the tower 1 as a strong acid liquor tower the traps 16, 20, 21 and 51 are closed, also the valves 24, 34, 37, 28 and 42, and the traps 12, 19, 22 and 50, are opened, also the valves 25, 33, 38, 43, 29.

The gas flows into the pipe 13, through the trap 12 and inlet pipe 11 to the tower 1 under the grate 9 and the said tower 1 thus becomes part of the communicating passage from the gas plant for the initial and following flow of gas to the tower 2; which is the primary tower in the process of producing the acid liquor. The gas reaching the tower 1 rises in said tower through the blocks on the grate 9 and through the limestone pieces on the grate 5 and flows out of said tower through the trap 19 into the pipe 18 and down said pipe and through the trap 22 into the tower 2 under the grate 10 and rises in said tower 2 through the blocks on the grate 10 and limestone pieces on the grate 6 meeting the water being fed into the tower through the inlet pipe 4 as the said water trickles through the limestone and blocks. The spent gas exhausts through the trap 50 and pipe 48, being during the continuation of the process used in the two towers previous to its escape to the atmosphere.

The weak acid liquor in the lower end of the primary tower is discharged through the pipe 26 to the acid liquor pump 30, from which it is forced up to the inlet pipe 31 and this weak acid liquor trickles down through the limestone pieces and blocks in the tower 1 and is met by the rising gas, which it largely absorbs, materially strengthening said acid liquor. The acid liquor flows out from the lower end of the tank 1 through the pipe 35 to the acid liquor pump 39, from which it is forced up to the pipes 41

(Continued on page 48.)



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MEANS FOR MAKING SULPHITE LIQUOR

(Continued from page 46.)

and 46, a considerable quantity of the liquor flowing again into the tower 1 above the blocks and missing the limestone and thus apart from the latter absorbing the sulphur dioxide, so that the percentage of sulphur dioxide can be accurately gauged, this being regulated by the valve 43.

To reverse the functions of the towers, 1 becomes the weak acid liquor tower and 2 the strong acid liquor tower, therefore the traps 16, 20, 21 and 51 are opened, also the valves 24, 34, 37, 28 and 42, and the traps 12, 19, 22 and 50 are closed, also the valves 25, 33, 38, 43, 29. Now the water is fed into the tower 1, and 2 becomes a communicating gas passage to tower 1 in the initial and following flow of gas thereto.

The primary tower 1 receives its charge of gas from 2 which gas is absorbed by the trickling water and the weak acid liquor produced pumped into tower 2, from whence it flows to the acid pump 39 through the pipe 36 and from there it is pumped up to the pipes 40 and 46, the sulphur dioxide strength being regulated by the valve 42 as already explained hereinbefore.

It will now be seen that in this invention the process in certain parts follows out well known and practical knowledge in this art, but it also is a radical departure from common practice, as there is always an intervening tower between the sulphur dioxide plant and the primary tower and yet the towers may be reversed at will, thereby eliminating the necessity of shutting down the plant for washing the towers, as they are flushed regularly in use by the systematic change over of their functions. Then again each tower is provided with the means of regulating the percentage of sulphur dioxide, which may be used no matter how the towers are changed in regard to their functions and this is important both in the duplication of the parts and the novelty of the means employed to accomplish this important result.

It may be noted that another advantage in this system is the facility with which the towers may be charged with limestone during the operation, for being reversible any one tower can always be changed to or remain for the time being as the primary tower in the operation for this purpose.

It must be understood that without departing from the spirit of the invention, changes may be made in the construction of this plant for the specific use mentioned herein and for any other purpose to which it may be applied, so long as it remains within the scope of the claims for novelty following.

What I claim is:

In an apparatus for making bisulphite liquor, a plurality of towers having suitable inlets and outlets and in the interior a material supported intermediate of their height from which an ingredient of the liquor is obtained and a material supported intermediate of the distance between the support of the aforesaid material and the lower ends solely for retarding the liquor in its downward course to the lower ends of said towers, a sulphur dioxide plant and pipes forming connections from said dioxide plant, between towers and to and from said inlets and outlets and controlled by valves, certain of said pipes being adapted to direct the acid liquor over said lower retarding material for retreatment.

In an apparatus for making bisulphite liquor, a sulphur dioxide plant, a water pump, a transfer acid liquor pump, a discharge acid liquor pump, a main feed gas pipe leading from said gas plant, a pair of towers containing on a second stage limestone in pieces and on a lower stage blocks of acid proof material, a pair of inlet pipes communicating with said towers below said lower stage and connected to said main feed pipe through closable traps, a pair of inlet gas pipes communicating with said tower below said lower stage and connected through closable traps to a main gas transfer

pipe, a pair of outlet gas pipes communicating with said towers at the upper end and connected with said transfer pipe at the upper end through closable traps, a pair of vent pipes connected with said towers at the upper end through closable traps, a pipe from said water pump connected to said towers at the upper end, valves in said water pipe, a pipe connecting the upper ends of said towers with said transfer acid liquor pump, valves in said acid liquor pipe, pipes connecting said towers at their lower ends to said transfer acid liquor pump, valves in said lower liquor pipes to the pump, discharge pipes from the lower ends of said towers to said discharge acid liquor pump, an elevating pipe from the latter pipes leading from said elevating pipe to said towers beneath the limestone stages, spray nozzles on the ends of said pump, a storage tank connected to said elevating pipe, return pipes, and valves, in said return pipes.

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OSWEGO, N. Y., April 1, 1918.—The Granby Pulp & Paper Company, of Fulton, is receiving here from twenty to thirty carloads of pulpwood daily. It comes from Canada over the New York Central lines to Ogdensburg and from this city is sent to Fulton over the Lackawanna lines. It is not known just how much of the wood is to come, but the annual supply is said to be in the neighborhood of 25,000 cords.

In the past the wood was brought here by boat to the Lackawanna coal trestle and then loaded into cars and shipped to Fulton. The scarcity of boats this year makes it necessary to bring the wood all of the way by rail, which increases its price to the paper makers.

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WANTED—One machine tender and one back tender for tissue mill. Address Box 181, care Paper Trade Journal.

WANTED—Machine tender for light weight wrapping in specialty mill in Connecticut. Steady work and good pay. Address Box 185, care Paper Trade Journal.

WANTED—Steady, reliable Yankee machine tender. Mill runs steady, three-tour day. Address Box 182, care Paper Trade Journal.

WANTED—Steady, reliable Yankee machine tender, three mould machine on tags, bristles and covers. Three-tour day. Address Box 183, care Paper Trade Journal.

WANTED—Back tender, finisher and beater boss in board mill running chip, news and combination board. Address Box 184, care Paper Trade Journal.

BACKTENDERS AND THIRD HANDS **WANTED** in New England mill making ground wood, book paper, three shifts, \$3.00 and \$2.40. Address Box 170, care Paper Trade Journal.

WANTED—Cylinder machine tender, eight-hour, Canadian mill, rate 60c. per hour. Address Box 147, care Paper Trade Journal.

WANTED—Foreman, binders' board mill located in New York City. Good chance for right man. Address Box 149, care Paper Trade Journal.

WANTED—A first class superintendent for a one-machine mill in middle west, making test boards. Should have a good education, a knowledge of mechanics and be a good tonnage man. Give full detail of your experience for the past ten years, naming references, etc. Also salary desired. Address Box 151, care Paper Trade Journal.

WANTED—Back tenders and third hands, fourdrinier machine two tours, Eastern mill, fine location, good wages. Address Box 152, care Paper Trade Journal.

WANTED THREE CYLINDER MACHINE TENDERS on tissues. Edwards attachment, three shifts, highest wages paid to competent men, who are sober. Send references with first letter stating experience and if married or single. Address Box 153, care Paper Trade Journal.

WANTED—First class tissue machine tender and beaterman to run on 8-lb. white, manila, colored, kraft and waxing tissue. Good wages for sober and capable men. Give experience and references. Address Crystal Paper Co., Middletown, Ohio.

WANTED—A beaterman for rag stock. Address Box 154, care Paper Trade Journal.

(Continued on page 51.)

FOR SALE

PAPER MACHINES—One 84" Double Cylinder Machine, first and second presses, 36 dryers, calenders, Reel and Winder, Marshall Drive. One 60" Fourdrinier, first and second presses, 18 dryers, 3 stacks of calenders, reel, slitter, Marshall Drive.

WET MACHINES—Two 48" Wet Machines for Board, one 72" Sandy Hill, one 84" Bagley & Sewall.

PAPER CUTTERS—One 112" Horne; 44", 41" Finlay; 76" Hamblit.

RAG CUTTERS—One Taylor Heavy Type Rag Cutter, triplex bed knife.

REAM CUTTERS—One 48" Acme; 76", 38", 48" Cranston; 55" Seybold; 42" Sheridan.

BOARD CALENDERS—One 45" Farrel; 65" Downingtown.

SUPER CALENDERS—Two 62", one 53", four 45" stack super calenders.

PRESSES—Six Hydraulic Presses, one Boomer & Boschert Screw Press, one Filter Press.

JORDANS—One Jordan Refining Engine.

PUMPS—One 9" x 12" Goulds Triplex, several triplex stuff and suction pumps; two triplex Hydraulic Pumps.

SLITTERS—One 50" Black & Clawson, 110" Kidder, 40" Kidder.

Two Shredders.

Two 7" x 25" Rotary Boilers, complete with drive.

Two Kollergangs with stones.

One Lombard Governor.

Two Centrifugal, two Wandell Screens, twelve

Three Pocket Grinders.

One 36" x 14 9/16" Millspauch Suction Roll.

Two Trombley & Paul Sulphur Burners.

Four Barkers.

FRANK H. DAVIS

175 Richdale Ave., Cambridge, B Branch, Mass.

FOR SALE

BEATERS—40x36" with iron tub, 17' long, two 65x54, one 42x42, one 48x48, 4 Clafina. New Umphersons.

CALENDERS—Five roll 48", 9 roll 63", 7 and 9 roll 72", 3 roll 80", 9 roll 80", 9 roll 84", 7 roll 86". Four roll friction.

COATER—One 43" double Waldron coater.

CUTTER—100" Finlay, 72" Dillon, 68" Black & Clawson, 84" Moore & White, 48" Holyoke, One T & S rag cutter. Several ream cutters.

CYLINDER MOULDS—Two moulds 30" dia., 78" face.

DRIVES—One Moore & White No. 9 A.

DRYERS—25 new shells 36" dia., 124" face; 3 new shells 36" x 76"; also three 36 x 36 with frames, etc.; four 28 x 62" all ready to set up. Lot of odd dryers.

DUSTERS—One 6 bowl Holyoke revolving, also two railroad dusters.

JORDANS—Emerson & Horne type Jordans.

MACHINES—One 72", 2 cylinder machine.

PUMPS—One triplex self-contained suction pump, one 1,000 gal. Worthington, tank pump 10 x 16 x 18 Knowles, fifteen fan pumps. New stock pumps, single and duplex.

ROTARIES—About ten horizontal rotaries; three Globe rotaries.

SCREEN—One Wandel screen.

Also a lot of other machines which have not yet been listed. Write us for anything you want.

Lot of new split pulleys, sprocket chains, cone pulleys. Some new wooden pulleys with friction clutches.

Mills Machine Company
LAWRENCE, MASS.

(Continued from page 50.)

HELP WANTED

WANTED—Young man with knowledge of running board machine to make couch rolls, cover cylinder molds and act as spare back tender and machine tender. Good opportunity for advancement. Married man preferred. State wages expected. Address Box 155, care Paper Trade Journal.

WANTED—First class beaterman to look after six beaters in container board mill. Married man preferred. Wages forty cents per hour. Address Box 156, care Paper Trade Journal.

WANTED—On or about May 1st, one machine tender, one back tender, one beater engineer, for cylinder mill, making rope papers for flour and cement sacks, three tours, good wages and steady positions for reliable men. Only men experienced on rope sack papers will be considered. Give references and past experiences, stating in what mills you have worked. Apply to Box 115, care Paper Trade Journal.

WANTED—Beater engineer on sulphite stock, one who is good on colors. Address Box 128, care Paper Trade Journal.

BEATERMAN—Desire first class beaterman, on ledger, writing and book papers. Beating for two machines making 24 tons per 24 hours. Rate 49c. per hour—8 hours per day. Address Box 63, care Paper Trade Journal.

UPER CALENDER MAN—Desire a first class super calender man. Rate 35c. per hour—10 hours per day. Address Box 64, care Paper Trade Journal.

POSITION OPEN FOR GOOD SOBER MACHINE TENDER AND BACK TENDER in writing mill, located in good city in middle west. Address Box 719, care Paper Trade Journal.

WANTED—Machine tender to run Harper fourdrinier machine, on crepe toilet paper, no changing, good wages to right man. Address Wyoming Valley Paper Mills, Pittston, Pa.

WANTED—Two back tenders, for cylinder board machines. Wages \$4.45 per day of 12 hours. Steady work. Address Box 139, care Paper Trade Journal.

WANTED—Two machine tenders and back tenders for cylinder machine running specialties. Also beaterman on combination stocks. Three tours, also millwright. Steady employment and good pay. No booze fighters need apply. Address Box 140, care Paper Trade Journal.

SITUATIONS WANTED

MACHINE TENDER WANTS POSITION on tissue, also Harper machine. Have considerable experience on Edwards and cylinder. Married, steady and reliable. Address Box 184, care Paper Trade Journal.

WANTED—Position as assistant superintendent, night or four boss. Experienced on all grades of box, test boards and roofing. Will run machine for present. Now employed, married. Best of references. Address Box 185, care Paper Trade Journal.

MARRIED MAN, 17 years' experience, familiar with selling and office work, thoroughly acquainted with paper, twine, bags, etc., seeks position with one who appreciates good, honest, progressive man. Best references. Address Box 107, care Paper Trade Journal.

PAPER MAKER, college graduate with 10 years' practical experience, wishes position as paper mill chemist. Address Box 186, care Paper Trade Journal.

POSITION IN PURCHASING DEPARTMENT DESIRED BY COMPETENT MAN. Several years' experience large Canadian news print concerns. Thorough practical knowledge Canadian and American markets. Address Box 187, care Paper Trade Journal.

SITUATIONS WANTED

WANTED POSITION by an Austrian with 10 years' experience on cutting machine and calenders. High grade writing and book papers. Will start at anything if there is a chance of advancement. Address Box 166, care Paper Trade Journal.

IF YOU WANT A crackerjack boss-beaterman and colorman, expert on all grades. State location and salary to Box 159, care Paper Trade Journal.

POSITION WANTED as superintendent or assistant on tag, manilas, colored specialties, tube papers, board and wrapping. Good on repairs, references. Address Box 160, care Paper Trade Journal.

SUPERINTENDENT NOW EMPLOYED WISHES TO MAKE A CHANGE. Practical experience in the manufacture of high test container and combination box boards. Can handle help, increase production and keep plant in first class general repair. Married man with family and strictly temperate. Address Box 161, care Paper Trade Journal.

SUPERINTENDENT OR ASSISTANT on board; at present employed but would like to make change. Thoroughly understands all kinds of board. Can furnish the best of references. Address Box 162, care Paper Trade Journal.

SALESMAN EXPERIENCE IN BOOK AND LABEL PAPERS, uncoated and coated, is open for position with mill or aggressive jobbing house. Address Box 164, care Paper Trade Journal.

HIGH GRADE SUPERINTENDENT DESIRES TO MAKE CHANGE, used to making boards, news, kraft, specialties and wrapping. Know how to get results, good on repairs, construction and remodelling. Sober and reliable. Will go anywhere. Good references. Address Box 55, care Paper Trade Journal.

SUPERINTENDENT WISHES to make change, 16 years' practical experience on book envelope covers, papers and specialties. Has had wide experience on colors. Can give first class references. Address Box 100, care Paper Trade Journal.

WANTED—Position as traveling salesman on paper making machinery line, commission basis. Now employed earning \$8,000 a year on limited machinery line. Want more extensive and profitable connection. Address Box 143, care Paper Trade Journal.

MISCELLANEOUS

TEN NEW UNION BRONZE SCREEN PLATES, 12 x 40", 3/8" thick B cut 9/1000, drilled for screws. Will sell for 20% off regular price. Address Box 192, care Paper Trade Journal.

FOR SALE—One 72" second hand chipper for slab wood. Chipper now running, if one wishes to see it in operation. Address Box 188, care Paper Trade Journal.

PROFITABLE AND LONG ESTABLISHED PAPER CONCERN, doing approximately \$1,000,000 a year, available account owners' other interests. \$200,000 cash required. Address Box 189, care Paper Trade Journal.

FOR SALE—Slitters and Rewinders: If you are in the market for a 2nd hand or thoroughly overhauled slitter and rewinder, of any description, do not fail to call upon us, as we always have a selection of such Kilder machines available. Address Gibbs-Brower Co., 261 Broadway, New York City.

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., April 1, 1918. Sealed proposals are invited to furnish Postage Stamp Paper and Internal Revenue Paper, Check Paper, Castings, and for the sale of Waste Paper, Pulp, Shredded Trimmings, Ink Scrapings, Scrap Metal and for the Cleaning of Windows during the fiscal year beginning July 1, 1918. The right is reserved to reject any or all bids or parts of bids. Samples of Check Paper must be received at the Bureau of Engraving and Printing not later than 2 p. m. Monday, May 6, 1918. Blank forms with specifications for proposals, giving dates on which the bids for the several schedules will be opened and further information will be furnished on application to James L. Wilmeth, Director.

MISCELLANEOUS

ST. LOUIS MANUFACTURER dealing with jobbing trade throughout the West wants complete line twine cordage paper; ample storage and shipping facilities if desired. Address Box 165, care Paper Trade Journal.

BINDER BOARD MILL FOR LEASE OR SALE in running condition. Address P. O. Box 22, Scotch Plains, N. J.

FOR SALE—Two Black & Clawson duplex paper cutters, practically new, 82" wide. One Hamblet 60" wide. Address Box 142, care Paper Trade Journal.

Treasury Department, Office of the Secretary, Washington, D. C., March 16, 1918.—Sealed proposals will be received at this office until 2 o'clock p. m., Wednesday, April 17, 1918, from manufacturers of bond, banknote and other fine papers for furnishing bank-note paper of the highest quality containing the distinctive feature now in use by the Department, for the printing of United States currency and other securities, national and Federal reserve bank notes, Federal reserve notes, etc., for the fiscal year beginning July 1, 1918. Blank forms for submitting proposals, with specifications and further information will be furnished intending bidders upon application to this office where samples of the paper required may be examined.—W. G. McAdoo, Secretary of the Treasury.

PAPER MILL FOR SALE

90" Fourdrinier machine, 80" trim. Millspaugh Suction Couch. All Stone buildings, slate roofs. Ample beater capacity. Fourteen miles from Philadelphia. Address Box 125, care Paper Trade Journal.

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This is IT



The Best
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ROLL
in the
U. S.

Write us for samples and prices. Salesman Wanted.

THE H. NORWOOD EWING CO. Woolworth Bldg. New York

Your wants are quickly supplied through the use of the classified columns of the **PAPER TRADE JOURNAL**

Thousands testify to these facts.

COLLINS MANUFACTURING COMPANY

SAMUEL R. WHITING, Pres. and Treas.

Manufacturers of
LOFT DRIED PAPERS
LEDGERS
BONDS
WRITING PAPERS

Mill: North Wilbraham, Mass.
Main office:
208 Race Street,
Holyoke, Mass.



**SAVE
WITH
PAPER**

**Get
be-
hind
it!**

Paper is needed to win the war and to help us fight business battles in the "War after the War." Don't content yourself with glancing at the words. Get behind them!
Get out and boost this constructive idea. Products of nature—perishable foods especially—need to be saved. That's the big reason for

Kalamazoo Vegetable Parchment and Waxed Papers

—They save food. They save tin. They save time and money. GET BEHIND AND PUSH!
Glad to send you the PRATTLER if you want to keep informed—and smiling!

Kalamazoo Vegetable Parchment Company
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STRATFORD PAPER CO.

MANUFACTURERS OF :: :: JERSEY CITY, N. J. :: ::
Fourdrinier Tissues, White and Colored, G. B. Silver, Manifold, Celluloid and Specialties

FOURDRINIER WIRES

In All Widths Up To And Including 250 Inches

CYLINDER FACES
And
WASHER WIRES

In Brass, Bronze And Phosphor Bronze

THE W. S. TYLER COMPANY
CLEVELAND, OHIO

*Also Manufacturers of
TYLER "Double Crimped" Wire Cloth and Mining Screen*

PAPER BAG MACHINERY

Flat and Square
Satchel Bottom

Single and Duplex all Rotary Machines

We guarantee very high production and very low percentage of waste.

Jobbers supplied with Bag Machines anywhere in the United States, any number, part payment down, balance of payment from one to five years, to responsible parties.

We claim to have the fastest machines made.

LOCKPORT MACHINE CO., Wm. Muirhead, Prop.

Lockport, N. Y.
TORONTO TYPE FOUNDRY CO., 70 York St., Toronto, Canada

Agents for Canada
CANADIAN-AMERICAN MACHINERY CO., London, England
Foreign Agents

PAPER STOCK PACKERS OF ALL GRADES

Mendelson Bros. Paper Stock Co.

900 Michigan Blvd.

Chicago, Ill.

When you want quantity and quality and lowest prices, write us.
Packing Houses and Warehouses, Chicago, Ill.

Directory

Cards under this heading will be charged for at the rate of \$30 per annum for each card of three lines or less, payable in advance. Each additional line \$10.

Architects and Engineers.

CAREY, JAMES L., Paper Mill Architect and Engineer, 208 North Laramie Ave., Chicago, Ill.

CHAPMAN, C. A., Inc., Paper Mill Architects and Engineers, 28 Jackson Boulevard E., Chicago, Ill.

FERGUSON, HARDY S., M. Am. Soc. C. E., Consulting Engineer, 200 Fifth Ave., New York.

LJARDY, GEO. F., M. Am. Soc. M. E., Consulting Engineer, 309 Broadway, New York.

SNOW, S. M., Mill Architect, Engineer, Paper and Pulp Mills, Steam and Water Power plants, 55 Kilby street, Boston, Mass.

JOSEPH H. WALLACE & CO., Industrial Engineers, Temple Court Building, New York Manufacturing Plants and Power Developments, Reports of Industrial Properties, Appraisals, etc.

Bale Ties.

WILSON, H. P. & H. F., Manufacturers of Steel Wire Bale Ties, for baling all compressible material, 544 West 22nd Street, New York City.

Boards.

MILLER PAPER CO., FRANK F., high grade specialties, Boards, East Downtown, Pa.

Metal Skylights and Ventilators

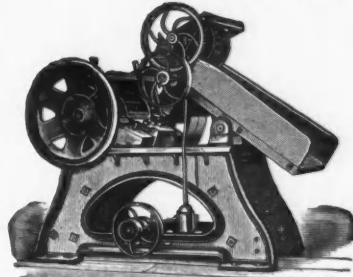
WE manufacture metal skylights and ventilators for paper and pulp mills. **E. VAN NOORDEN CO.**, 944-52 Mass. Avenue, Boston, Mass.

Patent Attorneys.

BALDWIN & WRIGHT, 25 Grant Place, Washington, D. C. Experienced in securing patents on paper machinery.

H. C. CLARK & SON MACHINE CO.

Manufacturers of **Paper Mill Machinery,**
LEE, MASS.



*Revolving Paper Cutters,
Rag Cutters,
Cylinder Paper Machines,
Washing and Beating Engines,
Chilled Iron and Paper Calenders,
Fan and Stuff Pumps,
Engine Roll Bars and Bed Plates,
Cylinder Molds, Marshall Drives,
Slitters and Rewinders, Reels,
Dryers with Improved Packing Boxes,
Wet Machines,
Gun Metal and Rubber Rolls,
Rolls Reground.*

Rags, Paper Stock, etc.

BERLOWITZ, PAUL, 132 Nassau Street, New York. Importer of Rags, Bagging, New Cuttings.

BOYLE, LUKE, 390 West Broadway, New York.

CHASE & NORTON, High Grade Shavings and Book Stock a specialty, 277 Water Street, New York.

FLYNN, MICHAEL, 54 Columbia Street, Brooklyn, New York

GOLDSTEIN, R. & SON, Baltimore, Md. Cotton Rags and Paper Stock

GRUNDY & SONS, LTD., JAMES, Chorley, England, supply new and old rags of highest quality for paper makers. Enquiries solicited.

HILLS, GEO. F., 108-112 Cliff Street, New York

JACOB & CO., Alexander, Wapping, London, England. Supply all classes Waste Papers and Shavings, Paper Making, Rags, etc. Correspondence Solicited. Paris Office, 3 Cite d'Hauteville.

LIVERPOOL MARINE STORE CO., Liverpool England. L. M. S. Wood Tag, Manilla, Rope and Star Brands (Registered).

MCGUIRE, MICHAEL, 100 and 102 Tenth Avenue, New York

ROSENBAUM, INC., L., 316 Lafayette St., New York City. Packers exclusively of new cuttings.

SIMMONS, JOHN, SONS, Paper and Paper Stock, 28 and 30 South Marshall Street (formerly Decatur Street), Philadelphia, Pa.

Special Machinery.

DIETZ MACHINE WORKS, experienced builders of special machinery with well equipped modern shop, can quote low prices in machine building. Send drawings, 126-128 West Fontaine Street, Philadelphia, Pa.

SWIFT, GEORGE W., JR., Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods. Bordentown, N. J.

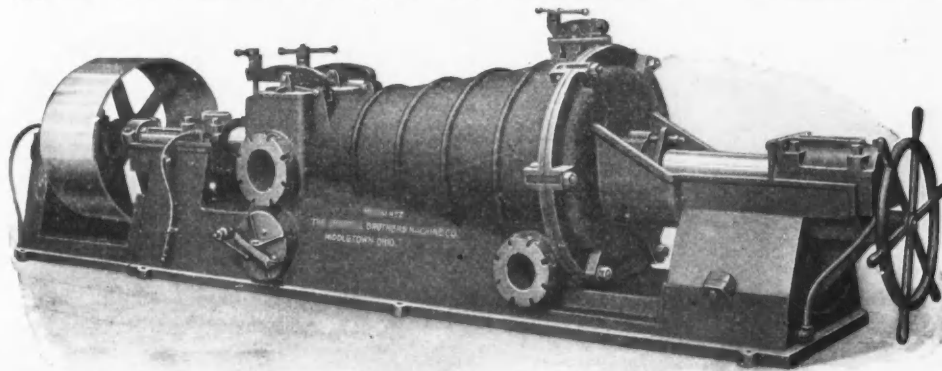
Straw Pulp.

SCANDINAVIAN-AMERICAN TRADING CO. Produce Exchange, New York. All other kinds of Pulp.

PAUL C. ZÜHLKE
320 BROADWAY
EXPORT NEW YORK, N. Y.

Job Lots, Rejections, Side Rolls Wanted

SPOT CASH paid for jobs in bond paper, white or colors, any grade that will cut down to 11 x 17, any weight. Send samples, with lowest spot cash prices. No lot too small, and none too large.
MIDWEST PAPER CO., 732 Federal St., Chicago, Ill.



The
Shartle Bros.
Machine Co.
Middletown
Ohio

New York Market Review

Office of the PAPER TRADE JOURNAL,
WEDNESDAY, April 3, 1918.

Embargoes have proved the bugbear of the paper industry for no small period of time. This week a sort of climax has been reached when for a period of 10 days, beginning March 27, no shipments will be accepted on the New York Central lines, east of Buffalo, excepting one grade of paper, that is, news print, food and Government supplies. It is stated as the basis for this action that the stringency of freight cars is so great that only this remedy can cure it.

It goes without saying that this action will influence the manufacture of paper, as it stands to reason if paper cannot be shipped it will not be made. Perhaps it is going too far to say that the mills will shut down, but as many mills have only limited storing space, it will mean a serious problem. The jobber, too, will be affected to no small degree.

The trend in the market is still strongly inclined toward higher prices. During the past week the range was steady and some grades of paper and pulp were extremely strong.

There was a slight reduction in the price range prevailing in the board market, but this reduction was only a very minor one. It was accounted for perhaps by the fact that as the mills were now able to run full time there would be an accumulation that had to be taken care of by a slightly lower range. The board market, however, has great inherent strength.

Kraft paper continued to be in good demand. There were no changes in the market for this grade to speak of, although the tendency is for the price of this paper to increase.

In tissues the market is getting better. Some grades though have eased off somewhat in demand. White No. 1 tissue is held at 90c.@\$1.

In news there is increasing evidence that the Trade Commission can but increase the price for news when it reaches a decision as to the future price of news print. With the demands of labor coming to a head shortly, it will again be impressed upon the commissioners, if it has not been done before, that in order to meet all these demands it is absolutely necessary that a fair and profitable price be fixed for news print.

The export market is being restricted in the quantities being shipped out to other countries. Licenses are harder to get and when they are obtainable, exporters are asked to reduce their space requirements as far as possible. It is perhaps interesting to point out in this connection that the freight rate to Brazil for paper is \$1 per cubic foot, with the chances very much in favor of an increased rate being asked. In spite of all the handicaps, natural and artificial upon the export trade, exporters of paper and pulp say that considerable quantities are leaving this country for Brazil, Argentina and other South American countries.

Mechanical Pulp

With an increase in demand noted during the week the market seems to be again going forward. The past two months have seen little activity in the market for ground wood, but as the market situation is now shaping up a change seems to be in sight. The demand is broadening out to take in buyers other than the ones who have the habitual customers and grinders are now working very nearly up to normal. Some of the mills grinding wood are on ragged edge as regards their coal supply.

The supply of wood from Canada is a matter of grave concern to some in the trade and will be a serious question unless the rail situation improves.

The price range continues to be exceedingly firm, because of the costs and scarcity of labor, increasing costs of grinding, etc. The range during the week was \$30@34 f. o. b. mill in the East.

Chemical Pulp

The market in all grades of pulp was very strong with in-

creased prices noted for some grades. Kraft continued to be very strong, with large commitments being taken, where available. The price level for prime domestic kraft was \$95@100 per ton with Canadian kraft of first grade procurable at \$95 per ton f. o. b. mill in Canada. The market for domestic sulphites is strong.

The market in foreign pulps shows little activity. Higher prices than the market can yet afford to pay are being asked by importers. Substitution of domestic is and has been resorted to where high grade foreign pulps were used before. Kraft from Scandinavian mills was quoted at \$125 per ton, ex dock. There has been considerable interest evidenced in foreign screenings which have brought \$3.40 ex dock. This grade is of a much higher quality than the domestic grade of screenings.

The outlook in the chemical pulp market is toward higher prices all around, based on advancing costs.

Rags

The interest in new rags has toned down a little, although prices are exceedingly firm, due to the scarcity of new rags. Shirt cuttings are extremely scarce and are quoted when obtainable at a figure close to 12.50c. per pound. Some in the trade predict very fancy prices for shirt cuttings.

Old rags are held at prices prevailing some weeks ago as the demand has not been particularly strong for these grades. However, the collection of old rags in the country districts have not been up to normal and there may be some difficulty in securing the normal amount of these grades. The labor question is also a very great factor in the market situation. In the past where men have been content to get \$12 per week for a certain class of work they now demand \$20 per week and get it. The amount of sorting done during the winter was also very much below normal.

Bagging

The market in bagging has a strong undertone with some grades very scarce. Wool tares are very scarce and are being diverted to other purposes. Tares when obtainable are quoted at 4@4.25c. Burlap cutting stocks are very scanty. Scrap bagging is very high in price and scarce.

If it were possible to get at the amounts of bagging arriving from foreign sources, it is believed that a remarkable decrease in the amount of bagging coming over would be shown.

The outlook in the market for bagging is that this raw material, as is true of all raw material in fact, will appreciate in price indefinitely.

Paper Stock

Old Krafts continue to be in very good demand and have advanced in price. The reason for the interest being displayed in this grade has been pointed out in these columns and is largely due to Government demand. Old Krafts are quoted at 2.75@3.00c. Hard white shavings have shown considerable strength during the week and are quoted now at 3.80@4.10.

In general the higher grades of stock are not being called for as strongly as are some of the cheaper grades.

Twines

The market in twines continues exceedingly strong, with high prices prevailing for all grades and with many exceedingly scarce.

Bonding Co. Pays Bond

An article appeared in the PAPER TRADE JOURNAL recently to the effect that the Congressional Joint Committee on Printing had ordered the Public Printer to sue the bonding company which bonded the National Contracting Company of New York, for alleged default of a contract with the Government Printing Office.

The statement was true, but it now appears that the bonding company had paid the \$5,000 bond to the Public Printer and, therefore, no case will be filed against the company. The Joint Committee had apparently not been informed of the payment when they took the action reported.

IMPORTANT

The paper quotations presented herewith are more or less nominal, as most of the mills have withdrawn quotations, due to unusual conditions.

Market Quotations

NEW YORK

Trade Securities

Bids and asked quotations of securities listed on the Stock Exchange of companies engaged in the manufacture of paper as reported on April 3, 1918, follow:

Table of Trade Securities with columns for Bid and Asked prices for companies like American Writing Paper Company, International Paper Company, etc.

Paper

Table of Paper products including Bond, Ledgers, Writing, News, Book, Coated, Lithograph, Tissues, Manila, and Fibre Papers.

Table for Kraft (Domestic) and Soda Bleached paper with Bid and Asked prices.

Domestic Rags

Table of Domestic Rags including Shirt Cuttings, Whites, Repacked, and Roofing Stock.

Foreign Rags

Table of Foreign Rags including New White Cuttings, Unbleached Cottons, and various Linens.

Bagging

Table of Bagging products including Gunny No. 1, Domestic, and Foreign Bagging.

Mechanical Pulp

(f. o. b. Pulp Mill.) No. 1 f. o. b. Mill. \$30.00 @ \$34.00

Chemical Pulp

(Ex-Dock, New York.)

Table of Chemical Pulp products including Sulphite (Foreign), Bleached, and Kraft (Foreign).

Table of Manila Rope products including Foreign, Domestic, and Hessian Jute Threads.

Twines

Table of Twines including India, Dark, Light, B. C., Italian, Finished Jute, and Paper Makers' Twine.

Old Waste Papers

(f. o. b. New York.)

Table of Old Waste Papers including Shavings, Flat Stock, and Manila.

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Table of Paper products in Chicago including Sulphite Bonds, Cheap Ledgers, Writing, Book, and Manila.

Old Papers

Table of Old Papers in Chicago including Shavings, No. 1 Hard White, No. 2 Soft White, etc.

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Table of Paper products in Philadelphia including Bonds, Ledgers, Writings, and Manila.

Bagging

Table of Bagging products in Philadelphia including Gunny No. 1, Foreign, Domestic, and Manila.

Old Papers

Table of Old Papers in Philadelphia including Shavings, No. 1 Hard White, No. 2 Hard White, etc.

(Continued on page 58.)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

FOR THE WEEK ENDING APRIL 2, 1918.

SUMMARY.

Cigarette paper 175 cs.
Miscellaneous paper 287 cs.

PAPER.

Herman Lips, Bordeaux, 265 cs.
American Express Company, Marseilles, 22 cs.

CIGARETTE PAPER.

American Tobacco Company, Bordeaux, 75 cs.
R. J. Reynolds, Bordeaux, 100 cs.

PAPER STOCK.

Castle, Gottheil & Overton, Bristol, 232 coils old rope.
Bemis Bag Company, Bristol, 229 coils old rope.
Brown Brothers & Co., Bristol, 192 coils old rope.
E. J. Keller Company, Glasgow, 280 coils white manila rope.

CASEIN.

Atterbury Brothers, Buenos Aires, 420 bags.
T. M. Duche Sons, Buenos Aires, 400 bags.

CHINA CLAY.

H. Moncroft, Bristol, 100 tons.
Moore & Munger, Bristol, 118 tons.
G. Knowles & Son, Bristol, 295 tons.
Hammill & Gillespie, Bristol, 200 cks., 204 tons, 870 bags.

BAGGING.

E. J. Keller Company, Havre, 326 bs. gunny bagging.
E. J. Keller Company, Havre, 261 bs. burlap bagging.

Trade News from the Miami Valley

[FROM OUR REGULAR CORRESPONDENT.]

DAYTON, O., April 1, 1918.—James M. Stone, a Cincinnati attorney, has brought suit in the United States District Court in behalf of himself and the United States of America against the Germless Paper Cup Company of this city for the recovery of penalties aggregating \$200.

Attorney Stone in his petition alleges that the defendant has put out two paper novelties under the names "Magic" sundae dish and "Cone Shaped" soda or phosphate holder, marked "Patented," when it was known to the defendant that neither device is patented.

The petition recites that under Section 9447 of the Revised Statutes of the United States it is an offense to mark non-patented articles "patented," and it is provided further that any citizen of the United States may enter suit for the recovery of a penalty of \$100 and costs for each offense, the penalties recovered to be divided between the plaintiff and the Government.

It is declared that this is the first suit of the kind to be filed in the United States Court in this vicinity, if, indeed, such a proceeding in court ever has been instituted in the State.

Arrangements are going forward for the meeting of the Technical Association of the Pulp and Paper Association in this city early in May. Secretary J. T. Nielson, of the Greater Dayton Association, has been advised that Thomas J. Keenan of New York will call this week to confer on the subject. It is expected that Mr. Keenan will meet some of those interested in this phase of the pulp and paper business. A number of prominent visitors will come to Dayton when the Association meets and the proper entertainment will be afforded. It may be well to remark in passing that hotel accommodations in Dayton are, and have been, inadequate in the past few months, and that any steps taken in the matter of arranging for hotel service should be among the first considerations, once the exact date of the gathering is announced.

The City Factory bowling tournament started in Hamilton this week with a number of paper and allied concerns represented. Among those sending teams to the tournament were the Champion Coated Paper Company, the Niles Tool Works, the Hooven, Owens & Rentschler Company, the Beckett Paper Company, the Black-Clawson Company, the Hamilton Foundry & Machine Company, the Columbia Machine Tool Company and the Sterling Paper Company. The prizes will be gold, silver and bronze association bowling medals, and the matches will be rolled on the Y. M. C. A. alleys.

News of the Philadelphia Trade

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, April 2, 1918.—Despite the fact that the paper market in this district is still reported to be "sluggish" owing mainly to shipping difficulties, dealers here say orders are still coming in with fair volume, while in some instances dealers report an unexpected increase within the last week to ten days.

Some dealers are now inclined to believe that there may be a drop in the market during the summer months. It will depend, they hold, upon just how far the Government goes in controlling business during the war.

The Whiting Paper Company, which has completed the installation of its office equipment at 619 Chestnut street, reports demand good and prices being maintained.

Repairs are being finished to the building of the Megargee-Hare Paper Company, on South Sixth street. The entire five-story structure is being painted white, on the front, while the downstairs offices are being finished in oak. Executive offices on the second floor were described some time ago. An ornamental iron stairway has been installed in the front of the building. It was announced by the firm this week that there will be no successor, at least for the present, to the late Elliott B. Silver, vice-president of the company, whose death was recorded last week.

Word has been received by the firm of Auer & Twitchell, Ninth and Chestnut streets, from Mr. Twitchell, who is in France. He has so far recovered from the attack of pleuro-pneumonia with which he was stricken some time ago, that he is now able to walk around a little. According to his letter to Mr. Auer, he also fell victim to the mumps during the beginning of the convalescent period.

Attorneys for the paper board makers in this district represented in the attempt by carriers to have the Inter-State Commerce Commission grant an increase in rates for this commodity left here early this week to attend the hearing by the commission on the report of the attorney examiner and the objections filed thereto by both defendants and complainants, as outlined in recent issues of the PAPER TRADE JOURNAL.

Market for Paper Rolls in Brazil

The difficulties of the paper market here, says Vice Consul Richard P. Momson, of Rio de Janeiro, owing to the lack of supplies from abroad has extended to many small articles of paper manufacture, including paper rolls for telegraph and similar service. Unfortunately the Brazilian statistics of importation do not classify the imports of this article separately, and it is therefore difficult to estimate the amount used here. This class of paper goods is principally consumed by the operating department of the Government-owned Brazilian Central Railway (Estrada de Ferro Central do Brazil), the Government-owned national telegraph lines (Reparticao Geral dos Telegraphos), and to some extent by die stampers and local newspapers. With the great increase in the use of cash registers in this country there is also a considerable demand for paper rolls for this purpose.

Paper Bag Co. Raises Pay at Rumford

RUMFORD, Me., March 31, 1918.—Maj. Theo. Hawley, general manager of the Rumford mill of the Continental Paper Bag Company of New York, stated today that the company has advanced wages 10 per cent, to take effect next pay day.

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
WEDNESDAY, April 3, 1918.

The steady demand that has characterized the market in paper making chemicals continued during the week, although the activity in any of the items is not very striking. Prices continue to be without change in the majority of instances, with spot stocks of some chemicals rather small. The movement of products to the mills from shipping point is uncertain and subject to delays and embargoes.

ALUM.—The market in this product has continued in a more or less fixed state for some weeks past with very little change in market conditions. Prices have held, as if they were pegged. The demand continues fair with spot stocks decreasing. Lump ammonia is quoted at 4@4.50c. per pound. Powdered ammonia is quoted at 4.50@5c. per pound. Lump potash holds at 9.25@9.50c. per pound, with chrome potash at 21@22c. and chrome ammonia at 18@19c. per pound.

BLEACHING POWDER.—The demand is described as being good with a steady volume of business. Manufacturers' quotations for domestic drums are not less than 2.50c. per pound with small export drums quoted at 3.25c. Material that is regarded as not up to standard has been offered at prices lower than the ones given above.

BRIMSTONE.—The market in this product is featureless because of the necessity of supplying war industries before private consumers in accordance with the expressed wishes of the government. Nominal prices for new business at the mines range from \$30@35 per long ton at the mines; prompt shipments range up to \$45 per ton, depending upon seller and purchaser's destination.

CASEIN.—The range continued about 18@19c. per pound for this product. The demand continued fair, with stocks still scanty. The stock of spot material will shortly be greatly enlarged as the flush season has now begun. Foreign casein comes in comparatively small lots. The outlook is toward higher prices and a strong market.

CAUSTIC SODA.—More interest is being displayed in the market for caustic soda and prices have gained steadiness. Large amounts of caustic are being offered at 4.50c. per pound. Contracts to cover 1919 have been made during the week at 3.25c. per pound for the 76 per cent. product.

CHINA CLAY.—The range of price in china clay continues as of last week with little material change in the general situation. For foreign clays in bulk \$9.75@17 per ton, ex dock, is the range at present. The demand for domestic clays is good, the price level being \$7.25@8 at the mines.

ROSIN.—There is still somewhat of a dull tone to the market in rosin. Prices have declined slightly as a consequence. Business is being transacted in small volume, according to local dealers. Grade E is quoted at \$6.40, F at \$6.45 and G at \$6.50.

STARCH.—For carload lots, freight prepaid to New York City, the following quotations are made per 100 pounds: Globe Pearl starch, in bags, \$4.96; in bbls., \$5.09. Buffalo corn starch, in bag, \$5.14; in bbls., \$5.27. Globe powdered starch, in bag, \$5.11; in bbls., \$5.24. Eagle finishing starch, in bag, \$5.36. Crystal T. B. starch No. 90, fluidity (hand packed), in bag, \$5.66; in bbls., \$5.93. Crystal T. B. Starch, No. 90, fluidity (machine packed), in bag, \$5.61; in bbls., \$5.78.

SODA ASH.—Trading continues rather quiet, although there is a perceptible stiffening, largely due to the market acting in sympathy with caustic soda. Resale lots have been offered at 2.85@2.90c. per pound in bags. The dense 58 per cent. product is scarce with some offers at 3.75@4c. per pound in bags on spot.

SULPHATE OF ALUMINA.—Because of the constantly increasing costs of production prices have stiffened for sulphate of alumina. The demand continues rather quiet with a steady turn-

over, however. Depending upon the quality desired sulphate of alumina may be had from 2.50@4c. per pound.

TALC.—Because of the uncertainty of shipments from the mines, consumers are hesitant in the present market. The spot market continues to be restricted with nominal prices being quoted.

Lack of Material Restricts Production

The Federal Reserve Board in its monthly survey of manufacturing and business conditions throughout the country has the following to say about paper in District No. 5—Richmond: "The production of paper is reported to be only about 50 per cent of normal, owing to lack of raw material and coal, but upon relief from these conditions the industry will return to activity."

Every buyer and seller of paper needs Lockwood's Directory of the Paper, Stationery and Allied Trades.

Market Quotations

(Continued from page 55.)

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Chip Board (ton) .. \$7.00 @ 60.00	
Bonds .....	.09 @	Straw Board (ton) ..	50.00 @ 55.00
Ledgers .....	.10 @	News Board (ton) ..	60.00 @ 65.00
Writings—		Wood Pulp Board ..	72.50 @ 77.50
Superfine .....	.18 @	Old Papers	
Fine .....	.15 @	No. 1 Hard White ..	3.25 @ 4.10
Fine, No. 2 .....	.10 @	No. 1 Soft White ..	2.75 @ 3.00
Books, S. & S. C. ..	.06 1/2 @	No. 1 Mixed	1.25 @ 1.40
Book, M. F. ....	.06 @	Ledger & Writings ..	2.25 @ 2.50
Book, Coated .....	.08 @	Solid Books	1.00 @ 1.25
Label .....	.09 @	Blanks	1.75 @ 2.00
News, Sheets .....	.03 1/2 @	No. 2 Books, light ..	.90 @ 1.10
News, Rolls .....	.03 1/2 @	Extra No. 1 Manila ..	1.75 @ 2.00
Manilas—		No. 1 Manilas	1.50 @ 1.75
No. 1 Manila .....	.05 1/2 @ .06	Folded News (over ..	1.00 @ 1.15
No. 1 Fibre .....	.05 1/4 @ .06	issues)	
No. 1 Jute .....	.10 @	Old Newspapers .....	.75 @ .85
Sulphite, No. 1 ..	.08 1/4 @	Mixed Papers .....	.30 @ .40
Kraft Wrappings ..	.07 @	Gunny Bagging	3.50 @ 3.75
Common Bogus ...	2.25 @ 2.75	Manila Rope	5.50 @ 5.75

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Sulphite, bleached .. 105.00 @ 110.00	
(Mill Prices to Jobbers)		Sulphate	
Bond—		80.00 @ 85.00	
Sulphite	11 1/2 @	Old Waste Papers	
Light tinted	12 1/2 @	(In carload lots, f. o. b. Toronto)	
Dark tinted	13 1/2 @	Price purely nominal; market dead.	
Ledgers	16 1/2 @ .30	Shavings—	
Writings	10 @	White Env. Cut. ..	
News, f. o. b. Mills—		Soft White Book ..	
Rolls (carloads) ..	\$2.85 @	Shavings	
Sheets (carloads) ..	3.25 @	White Blank News ..	
Sheets (over 2 ..		1.25 @	
tons)	3.50 @	Book and Ledger—	
Sheets (less 2 ..		Flat Magazine and	
tons)	4.00 @	Book Stock	
Book—		(old)	
No. 1 M. F. (car-		1.15 @	
loads)	9.25 @	Light and Crum-	
No. 2 M. F. (car-		pled Book Stock ..	
loads)	7.25 @	1.10 @	
No. 3 M. F. (car-		Ledgers and Writ-	
loads)	7.00 @	ings	
No. 1 S. C. (car-		1.65 @	
loads)	9.50 @	Solid Ledgers	
No. 2 S. C. (car-		2.00 @	
loads)	7.50 @	Manilas—	
No. 1 Coated and		New Manila Cut. ..	
litho.	12.25 @	Printed Manilas ..	
No. 2 Coated and		Kraft	
litho.	11.25 @	2.50 @	
No. 3 Coated and		News and Scrap—	
litho.	10.50 @	Strictly Overissue ..	
Coated and litho.		.80 @	
colored	12.50 @ 14.50	Folded News	
Wrapping (car		.70 @	
lots)	4.25 @ 6.50	No. 1 Mixed Pa-	
Pulp		pers	
(f. o. b. Mill.)		.45 @	
Ground Wood	\$30.00 @ 33.00	Domestic Rags—	
Sulphite, easy bleach-		Price to mills, f. o. b. Toronto.	
ing	70.00 @ 75.00	Per lb.	
Sulphite, news grade	55.00 @ 65.00	No. 1 White shirt cuttings ..	
		.08 1/2	
		No. 2 White shirt cuttings ..	
		.05 1/2	
		Fancy shirt cuttings	
		.05 1/2	
		No. 1 old whites	
		.04 1/2	
		Thirds and blues	
		.03 1/2	
		Per cwt.	
		Black stockings, nom.	
		2.25	
		Roofing stock No. 1	
		2.15	
		Roofing Stock No. 2	
		2.00	
		Roofing Stock No. 1	
		2.15	
		Gunny bagging	
		3.75	
		Manila rope	
		.45 1/2	

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48 per cent. and 58 per cent.

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60 per cent., 70 per cent., 72 per cent., 74 per cent., 76 per cent.; also 78 per cent. Our 78 per cent. Caustic Soda is an article of greater purity than has ever before been produced in a commercial way, analyzing 99.70 Hydrate of Soda

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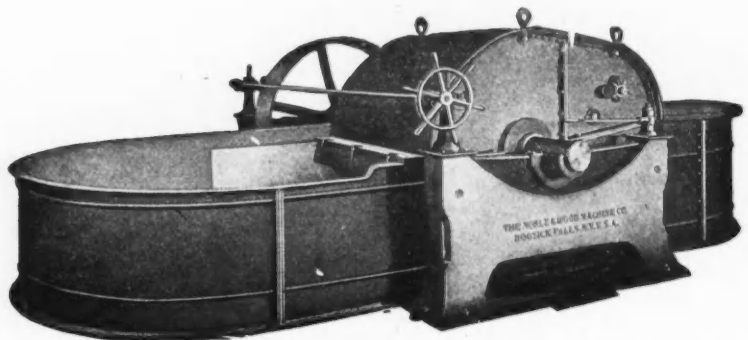
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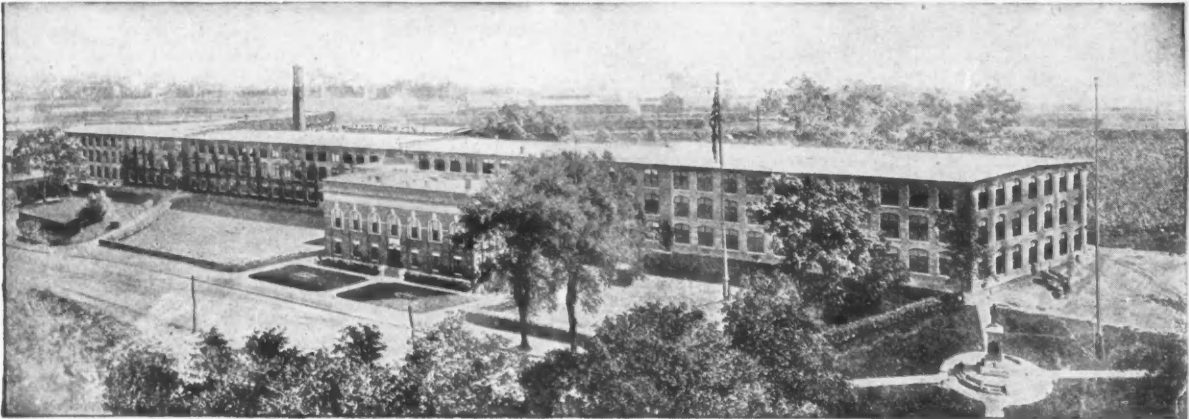
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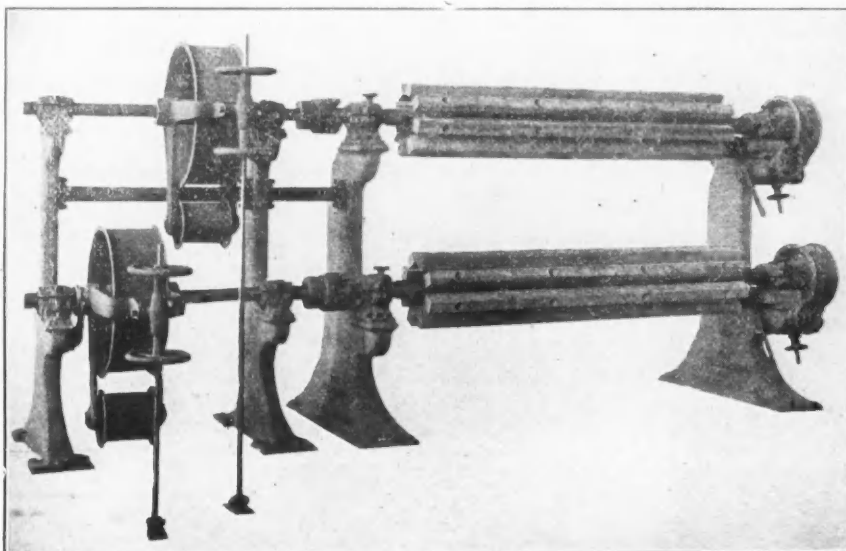
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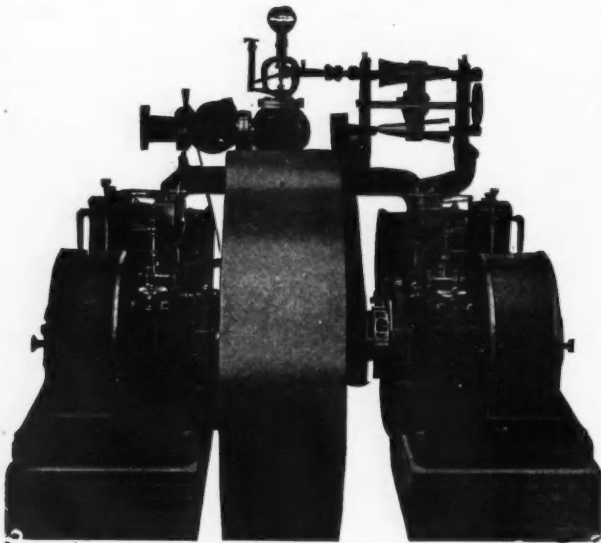
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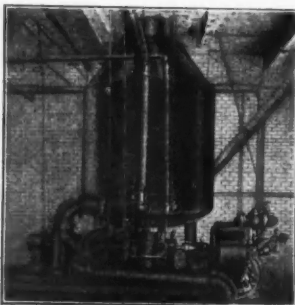
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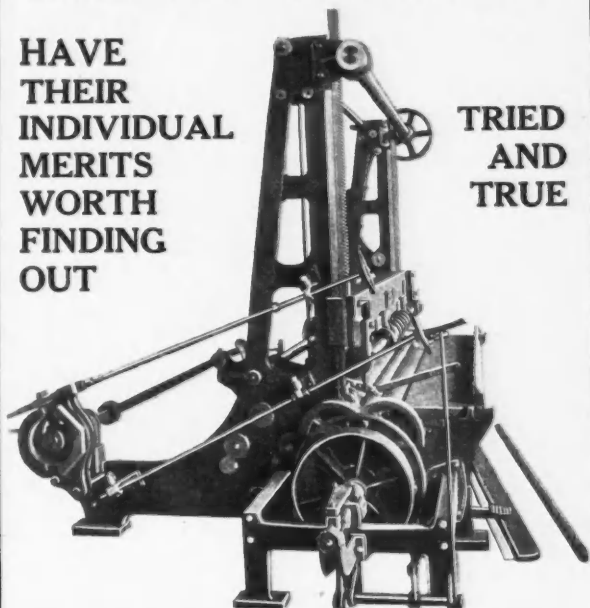
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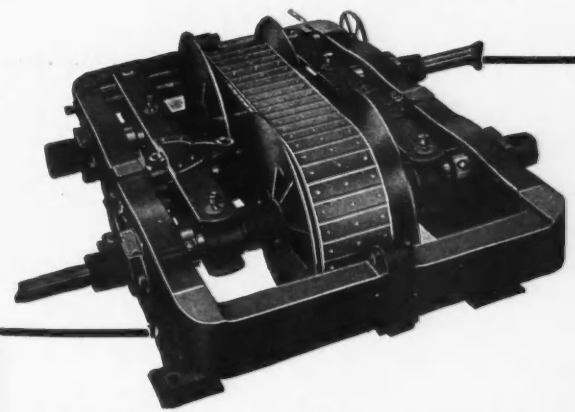
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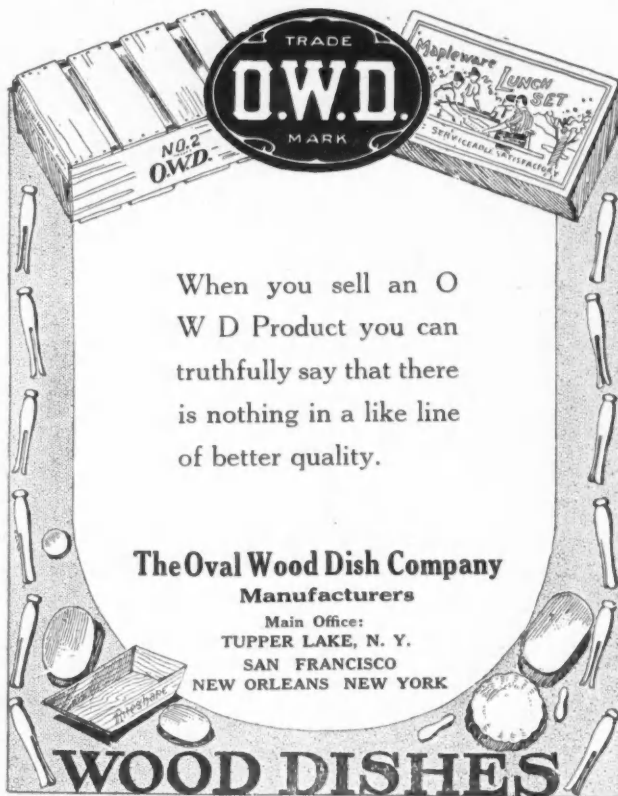
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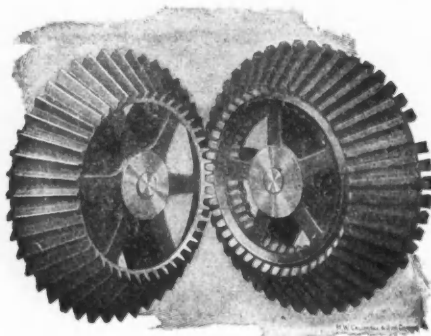
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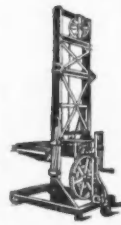
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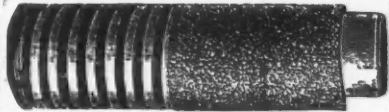
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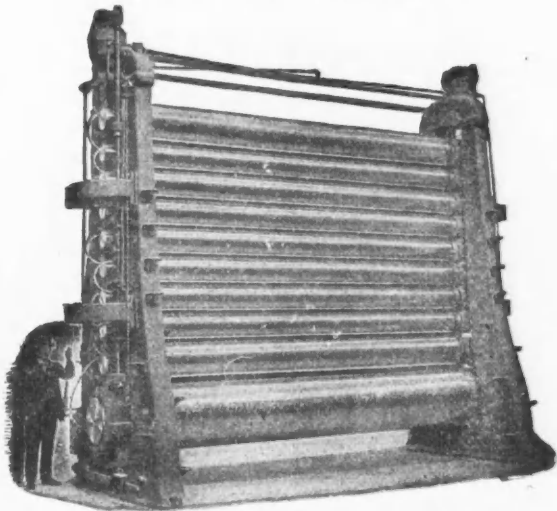
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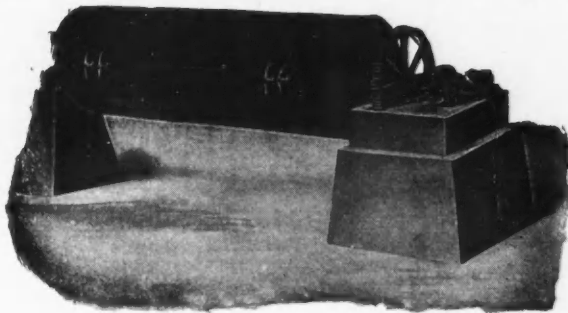
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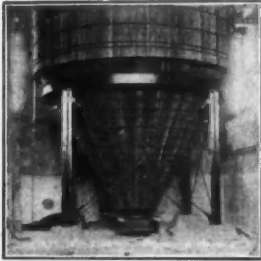
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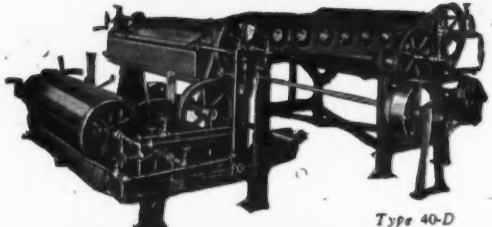
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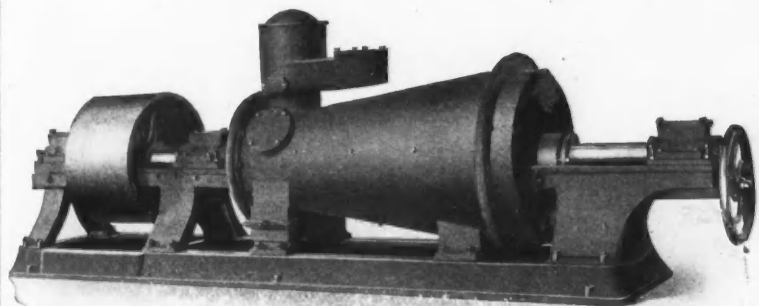


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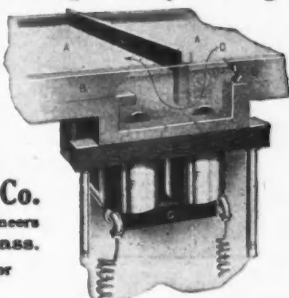
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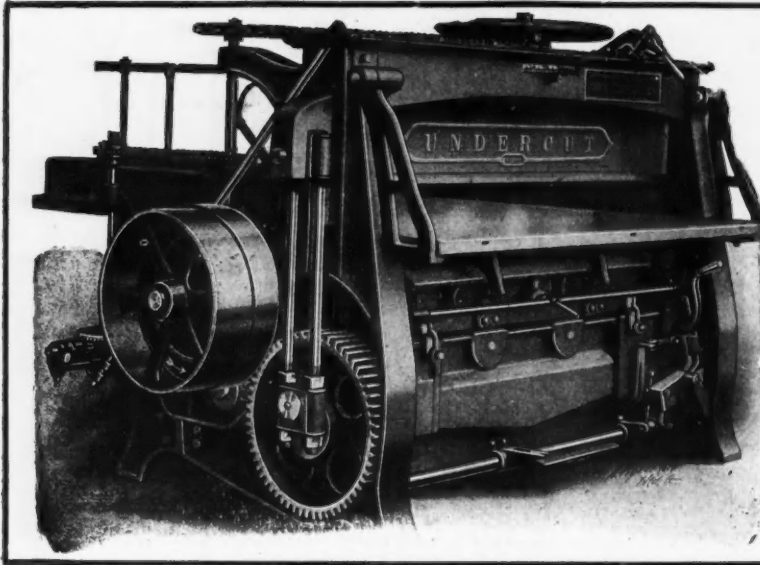
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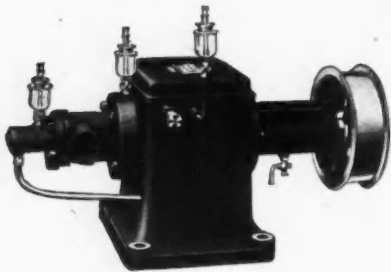
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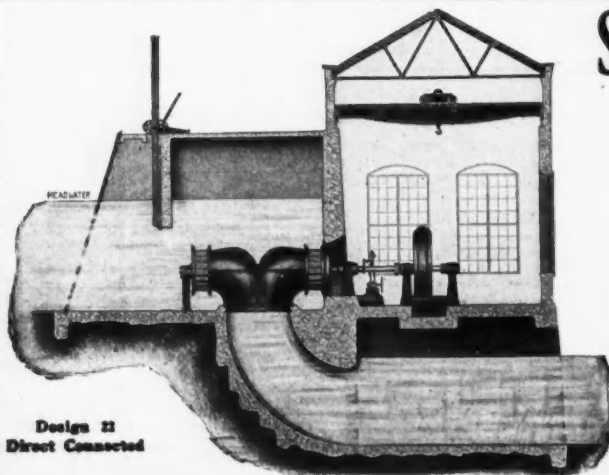
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