

MEMBER OF THE A. B. C.
FIFTIETH YEAR

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PAGE 23!



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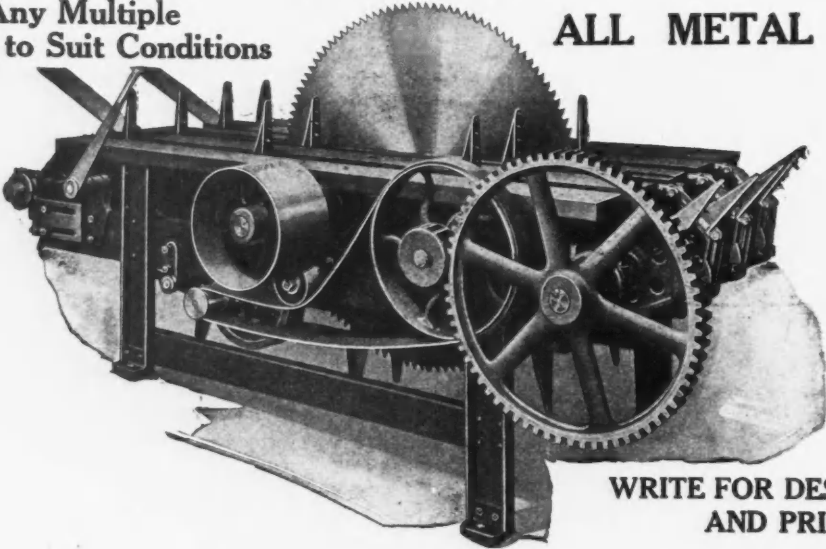
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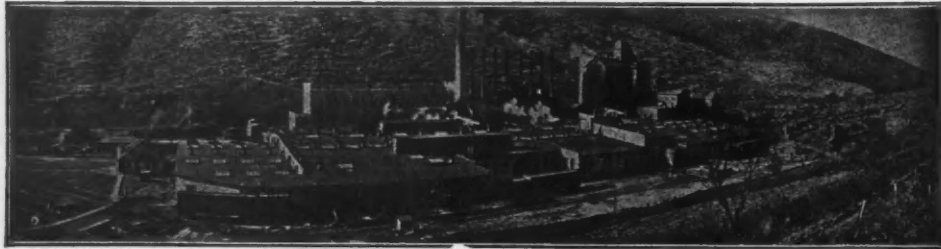
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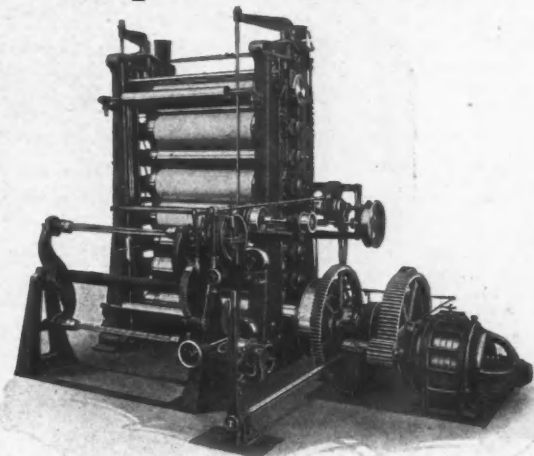
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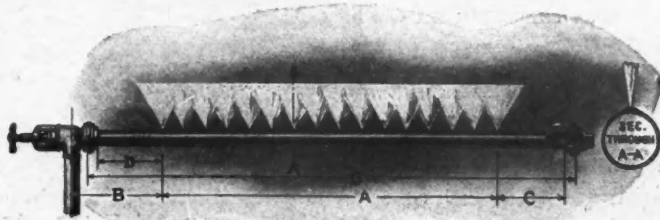
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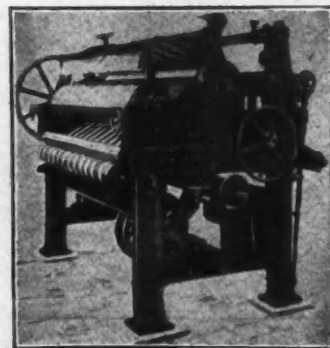
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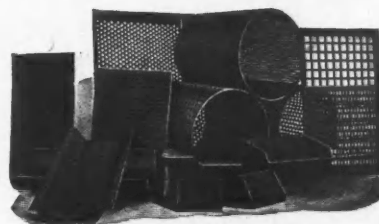
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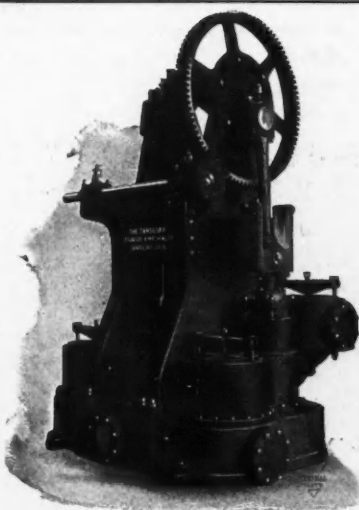
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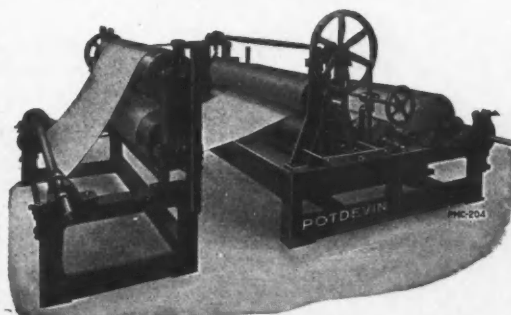
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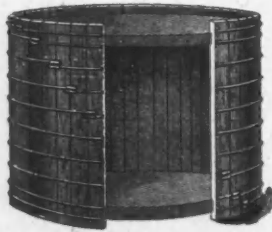
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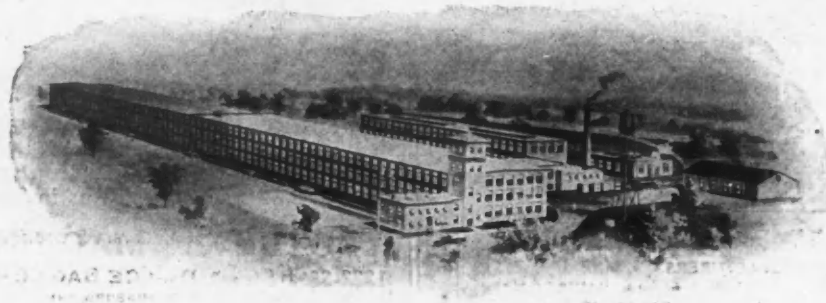
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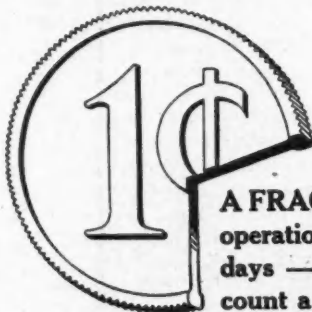
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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTIETH YEAR

PUBLISHED EVERY THURSDAY BY THE

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LESLIE R. PALMER, President

J. W. VAN GORDON, Vice-President

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NEW YORK AND CHICAGO

Thursday, March 30, 1922

Table of Contents

News of the Trade:

	PAGE
Production of News Print for the Month of February....	16
Now Nilsen, Lyon & Co.	17
Book Paper Makers Oppose Duty on Casein.....	17
Forest City Paper Co. Shuts Down.....	17
Some Improvement Noted in Philadelphia Market.....	18
Brisk Paper Demand in Damascus.....	19
Felt Paper Co. Makes Improvements.....	19
Abitibi Co. Report Shows Decreased Profits.....	20
Fraser Company's Annual Statement.....	20
Laurentide Power Raises Dividend.....	20
News Print Plant for Bathurst, N. B.	20
Riordon's Export Business.....	20
Bids and Awards for Paper.....	21
Canadian Pulp and Paper Exports.....	21
Committees Appointed for the Kalamazoo Convention....	22
Union Bag and Paper's Annual Report.....	22
Paper Demand in Toronto Showing Some Improvement..	24
Presentation of Safety Rewards at Toronto.....	24
Sales Book Co., Toronto, Had Good Year.....	24
General News of Toronto Trade.....	24
Bryant Paper Co. Awarded \$32,500 in Suit.....	26
Bagly & Sewall Furnish Many Machines for Japan.....	28
No German Competition in Japan.....	28
Floyd L. Carlisle Returns from Florida.....	28
Big Safety Convention in Toronto.....	28
G. M. Jones to Head Financial Division.....	28
Paper Trade News In and About Appleton.....	30
To Allow Gatti-McQuade to do Business as Usual.....	32
Provincial Company Erecting New Mill.....	32
Trade Marks Department.....	36
Recent Incorporations.....	36
Practical Questions and Answers.....	38
New York Trade Jottings.....	40

News of the Boston Trade.....	40
Kennedy Bag Co. Resumes Operations.....	40
Seventh Annual Convention T. A. P. P. I.	43
Critical Points in Pulp and Paper Making.....	43
Barton, Duer & Koch Open Book Department.....	43
Wauregan Division Resumes Operations.....	50
Use of Flax Straw in Great Britain.....	50
January Imports of Paper and Paper Stock.....	58
January Exports of Paper and Paper Stock.....	60
Imports and Exports of Paper and Paper Stock.....	64

Editorial:

Foreign Trade Statistics.....	42
The Long Price List.....	42

Technical Section:

Calculating the Power Consumption of Heaters.....	45
The Paper Machine Hood As An Investment.....	48
Proportioning Chart for Paper Makers.....	50
Uniform Basis to Compute Yield of Chemical Pulp.....	50
Waste Bark for Fuel.....	51
Stop the Leaks.....	51
Current Paper Trade Literature.....	52
Manufacture of Special Paper and Boards.....	54

Obituary:

Robert W. Evans.....	34
Young S. Walter.....	34

Market Review:

New York Market Review.....	62
Market Quotations.....	63
Miscellaneous Markets.....	66

Want and For Sale Advertisements, Pages 68 and 69

PRODUCTION OF NEWS PRINT FOR THE MONTH OF FEBRUARY

According to Statistics February of this Year Compared with February of Last Year Showed a Decrease of Five Per Cent for Total News Print and Four Per Cent for Standard News—Mill Stocks of Both Total News Print and Standard News Increased During February, 1922—Average Price of Standard News in Carload Lots Delivered to Publishers Was \$3,629 Per 100 Pounds.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 29.—The following is a tabulation of the reports received by the Federal Trade Commission from domestic manufacturers of news print paper, from jobbers buying and selling news print paper and from publishers using news print paper. Import and export statistics of the Department of Commerce are also included in the review. Whenever possible the figures for 1922 are compared with those for the corresponding period of 1921, 1920, 1919 and 1918.

The figures which follow show the results of the Commission's tabulation for February, 1918, to 1922, inclusive:

	Number of mills	Stock on hand 1st of month	Production		Shipments		Stock on hand end of month
			Net Tons	Net Tons	Net Tons	Net Tons	
TOTAL NEWS PRINT:							
February, 1922	65	26,550	97,786	96,521	27,815		
February, 1921	88	32,417	103,040	96,281	39,176		
February, 1920	84	16,934	114,235	103,214	27,955		
February, 1919	66	21,219	103,248	98,996	25,471		
February, 1918	66	28,928	93,504	94,418	28,014		
Total (2 mos.), 1922	..	23,934	203,594	199,713	27,815		
Total (2 mos.), 1921	..	24,763	226,870	212,457	39,176		
Total (2 mos.), 1920	..	15,369	243,898	231,312	27,955		
Total (2 mos.), 1919	..	19,408	219,402	213,339	25,471		
Total (2 mos.), 1918	..	31,713	199,204	202,903	28,014		
STANDARD NEWS:							
February, 1922	53	21,784	91,050	89,936	22,898		
February, 1921	67	27,109	94,823	88,639	33,293		
February, 1920	69	14,576	105,342	95,123	24,795		
February, 1919	51	16,489	94,224	91,170	19,543		
February, 1918	50	27,232	83,474	85,820	24,886		
Total (2 mos.), 1922	..	19,607	189,752	186,461	22,898		
Total (2 mos.), 1921	..	19,573	208,587	194,867	33,293		
Total (2 mos.), 1920	..	12,338	220,299	207,842	24,795		
Total (2 mos.), 1919	..	15,656	200,226	196,339	19,543		
Total (2 mos.), 1918	..	26,482	180,560	182,156	24,886		

NOTE: Above figures for total news print do not include hanging paper.

The average production of total news print and standard news, based upon the total combined production for the years 1918 to 1921, inclusive, amounted to 101,200 tons of total news print and 91,724 tons of standard news, for a period corresponding to February. The actual production amounted to 97,786 tons of total news print and 91,050 tons of standard news, which, for total news print was 3 per cent below the average for the four-year-period and for standard news less than 1 per cent below the average.

The production of news print for February, 1922, compared with February, 1921, shows a decrease, amounting to about 5 per cent for total news print and 4 per cent for standard news.

The production for February, 1922, compared with February, 1920, shows a decrease of 14 per cent for total news print and a decrease of about 14 per cent for standard news.

The decrease of production for February, 1922, compared with February, 1919, amounted to about 5 per cent for total news print and 4 per cent for standard news.

The production of total news print for February, 1922, was about 5 per cent more than for February, 1918, and an increase of 9 per cent for standard news.

Mill stocks of both total news print and standard news increased during February, 1922.

Loss of Production'

The following tabulation shows idle machine time reported to the Commission for the month of February, 1922. This does not include mills shut down during the entire month:

Reasons	Number of machines	Hours idle
Lack of orders	17	4,338
Repairs	9	937
Other reasons	10	1,102

Imports and Exports

The imports and exports of printing paper not dutiable (practically all news print) and of wood pulp for the month of January, 1922, compared with the month of January, 1921, were as follows:

	Jan., 1922 Tons	Jan., 1921 Tons
IMPORTS of News Print (total)	82,482	69,448
From Canada	70,212	54,422
Sweden	5,452	1,992
Finland	839	2,913
Germany	3,476	4,061
Norway	2,376	5,612
Other countries	127	448
EXPORTS of News Print (total)	2,537	2,247
To Cuba	631	897
Philippine Islands	67	26
Argentina	1,327	986
Other countries	512	338
Imports of Groundwood Pulp (total)	20,920	13,826
IMPORTS of Chemical Wood Pulp (total)	95,637	25,872
Unbleached Sulphite	44,676	16,197
Bleached Sulphite	24,848	4,179
Unbleached Sulphate	24,527	5,205
Bleached Sulphate	1,586	291
EXPORTS of Domestic Wood Pulp	2,694	3,396

The imports of news print for January, 1922, were 13,034 tons more than for January, 1921. The exports for January, 1922, were 290 tons more than for January, 1921.

The tonnage to "other countries" under "exports of news print" for January, 1922, includes 103 tons to Newfoundland, 47 tons to Japan, 71 tons to Colombia, 48 tons to Mexico, 58 tons to China, 43 tons to Peru, and 50 tons to Hong Kong.

Jobbers' Tonnage

The following tabulation shows the news print tonnage reported by jobbers during the month of February, 1922, compared with February, 1921, February, 1920, February, 1919, and February, 1918, together with commitments to buy and sell.

	On hand first of month		Received during month		Shipped during month		On hand end of month		Commitments to buy		Commitments to sell	
	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	
Rolls, February, 1922	1,882	9,960	10,200	1,642	38,344	41,685						
Rolls, February, 1921	2,913	5,397	5,779	2,531	25,355	32,407						
Rolls, February, 1920	1,718	6,166	5,905	1,979	43,829	53,796						
Rolls, February, 1919	3,375	2,566	2,569	3,372	55,054	65,769						
Rolls, February, 1918	2,922	3,368	3,418	2,872	53,133	78,532						
Sheets, February, 1922	4,111	2,572	2,441	4,242	1,875	1,398						
Sheets, February, 1921	6,321	1,480	2,038	5,763	2,969	2,303						
Sheets, February, 1920	3,701	2,914	2,946	3,669	5,844	4,078						
Sheets, February, 1919	8,261	1,821	2,148	7,934	1,534	1,646						
Sheets, February, 1918	6,372	2,730	2,742	6,360	5,214	4,324						
TOTAL News Print:												
February, 1922	5,993	12,532	12,641	5,884	40,219	43,083						
February, 1921	9,234	6,877	7,817	8,294	28,324	34,710						
February, 1920	5,419	9,080	8,851	5,648	49,673	57,874						
February, 1919	11,636	4,387	4,717	11,306	56,588	67,415						
February, 1918	9,294	6,098	6,160	9,232	58,347	82,866						

Stocks of rolls in the hands of jobbers at the end of February were 240 tons less than the stocks in the hands of the same jobbers at the beginning of the month. Stocks of sheets were 131 tons more at the end of February than at the beginning of the month. The net decrease in the total stocks of news print in the hands of jobbers at the end of February amounted to 109 tons.

Commitments to sell roll news were 3,341 tons greater than commitments to buy. Commitments to sell sheet news were 477 tons less

than commitments to buy. Total commitments to sell both rolls and sheets were 2,864 tons greater than commitments to buy.

Publishers' Tonnage

Monthly tonnage reports from 664 (a) of the most important newspaper publishing concerns and associations, grouped according to the principal business sections of the United States, together with a separate tabulation for the agricultural publications, show the following results for February, 1922:

Location of Publishers (b)	Number of Concerns	On hand first of month Net tons	Received during month Net tons	Used and sold during month Net tons	In Transit end of month Net tons	
					On hand end of month Net tons	Net tons
New England States...	80	18,083	12,937	13,556	17,464	2,069
Eastern States	174	44,232	68,571	56,360	56,443	8,345
Northern States	129	48,336	31,219	32,968	46,587	6,971
Southern States	76	7,679	9,458	8,135	9,002	2,101
Middle West States ..	148	27,422	23,074	24,203	26,293	5,159
Pacific Coast States..	30	11,417	13,301	13,296	11,422	2,328
Farm Papers (c)	27	6,327	1,318	1,344	6,301	110
Total	664	163,496	159,878	149,862	173,512	27,083

(a) This number represents a much larger number of publications.

(b) *New England* includes Connecticut, New Hampshire, Maine, Massachusetts, Rhode Island and Vermont; the *Eastern States* include Delaware, the District of Columbia, Maryland, New Jersey, New York and Pennsylvania; the *Northern States* include Illinois, Indiana, Michigan and Ohio; the *Southern States* include Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia; the *Middle West* include Arkansas, Arizona, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wisconsin and Wyoming; the *Pacific Coast* includes California, Oregon and Washington.

(c) The farm papers for the most part use special grades of news print instead of standard news.

Publishers' stocks increased 10,016 tons during the month. Average daily tonnage used during February was 267 tons more than the average used in January.

Publishers' stocks and transit tonnage on February 28, represented 38 days' supply at the existing rate of consumption.

The domestic consumption of standard news by metropolitan dailies using between one-half and three-fourths of a million tons annually for February, 1922, when compared with February, 1921, shows an increase of 14 per cent and an increase of 6 per cent when compared with February, 1920.

The above metropolitan dailies held 64 per cent of the tonnage on hand at the end of the month.

Average Prices Paid by Publishers

The weighted average price of contract deliveries from domestic mills to publishers during February, 1922, f.o.b. mill in carload lots for standard news in rolls was \$3.629 per 100 pounds. This weighted average is based upon February deliveries of about 41,000 tons on contracts involving a total tonnage of approximately 670,000 tons of undelivered paper manufactured in the United States.

The weighted average contract prices based on deliveries from Canadian mills of about 27,000 tons of standard roll news in carload lots, f.o.b. mill in February, 1922, was \$3.479 per 100 pounds. This weighted average is based upon the February deliveries on contracts involving about 297,000 tons of undelivered Canadian paper.

The weighted average market price for February of standard roll news in carload lots f.o.b. mill based upon domestic purchases totaling about 6,000 tons was \$3.581 per 100 pounds.

Now Nilsen, Lyon & Co.

Nilsen, Rantoul & Co., Inc., wood pulp importers and dealers, will here after be styled Nilsen, Lyon & Co., Inc. The corporation will continue as in the past to represent, in this country, Anth. B. Nilsen & Co., Ltd., of Christiania, Norway, and, in addition thereto, becomes exclusive representative in America for the well-known firm of John Lyon & Co., Gothenburg, Sweden. Under this new arrangement Nilsen, Lyon & Co., become selling agents for a number of the leading brands of Scandinavian wood pulp. There will be no change in the affairs of the corporation other than those mentioned. S. C. Willey will continue as manager and the address will remain the same, 140 Nassau street, New York.

Book Paper Makers Oppose Duty on Casein

WASHINGTON, D. C., March 29, 1922.—One of the big American industries has come out definitely against the tariff plan of the agricultural bloc of Congress, in the filing of a protest by the paper industry against the placing of a proposed duty of 4 to 5 cents a pound on casein. The fact that to produce three pounds of casein takes 100 pounds of skimmed milk which would make nine pounds of powdered milk available for food is featured in the formal protest which was filed Monday by the American Paper and Pulp Association against the duty.

Casein is absolutely essential to the making of high-grade coated papers, the protest says, and it is impossible for the United States to make sufficient casein to meet the demands which are growing daily. There is available for use by domestic mills between five and eight million pounds of domestic casein a year, while in 1920 there was imported 21,238,822 pounds.

"The book paper group of the paper industry," says the protest, "because of high cost of labor in printing, is in a very serious condition, running not much more than 50 per cent of normal. With the market so dull in this country that many book paper mills are running a third to half time only and then at a loss, the addition of a tariff on raw materials would put many of the mills out of business, giving German and other European mills a greater advantage even than that they already possess over the American mills."

That dairymen have endeavored to discourage production of casein as an economic waste, compared with the amount of powdered milk that can be produced from the same raw material, is pointed out as an additional reason why no duty should be imposed to increase the prices, which rose from 7 and 10 cents a pound in 1914 to 22 and 30 cents during the war.

Forest City Paper Co. Shuts Down

PORTLAND, Me., March 27, 1922.—The Forest City Paper Company mill at Yarmouth was shut down for an indefinite period on March 18, this being necessary on account of a lack of business. The mill has a normal capacity for producing 70 or 75 tons of wood pulp per day, and last November, on account of the business depression and a falling off in orders in the open market, the capacity was cut one-half in order to keep as many men as possible employed. It was found that the mill could not be made to pay running on half capacity, or producing at the rate of 35 tons a day, and it was recently decided to shut down the pulp-making plant for an indefinite period, or until business warrants starting up again.

When the decision to shut down the plant was made by the management of the Forest Paper Company, which is owned by S. D. Warren & Co. of Westbrook, the offer was made to all the employees giving them the opportunity to work on wood in the yard at a stated price per cord. This work consists of peeling, stripping and piling the pulpwood. Many of the employees accepted this and went to work this morning in the yard. Others have gone to other places in search of work. All employees absolutely needed in looking after the mill have been retained. When in operation at full capacity the mill gives employment to 265 workers.

J. S. McElwain Celebrates 94th Birthday

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., March 20, 1922.—John S. McElwain, dean of Holyoke manufacturers, and for many years prominently connected with the paper industry in this city, celebrated his 94th birthday on March 17. Mr. McElwain is one of Holyoke's oldest residents. He took charge of the office of the Parsons Paper Company in February, 1867, and had his first experience in the paper industry under the late J. C. Parsons. He was among those who gained control of the Valley Paper Company, the Nonotuck paper mills and later the Linden paper mills. Mr. McElwain is a director of the City National bank.

SOME IMPROVEMENT NOTED IN PHILADELPHIA MARKET

While the Number of Orders, However, Show an Increase They Continue Individually of Small Size—Fine Paper Division of the Philadelphia Paper Trade Association Again Discusses the Matter of Handling Small Orders—Paper and Rag Stock Continues Without Change and With Hardly Enough of a Market to Establish Prices—S. Kardon to Build Five-Story Warehouse.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., March 28, 1922.—Had orders increased in size in something like the same ratio they did in number during the week, the distributors would be in much better humor than they are; but it is not to be assumed that they are not in good humor. There was by no means a sudden boom, but there was, according to the reports spontaneously offered by such representative establishments as the Beck Company, Garrett-Buchanan Company and the Paper House of Pennsylvania, a very perceptible betterment of conditions and by no means negligible increase in terms of dollars and cents of business activity. If there can be an unfavorable view taken of the developments of this and immediately preceding weeks, it must be confined entirely to the matter of the smallness of individual orders, a theme which has engaged the attention of the Fine Paper Division and subsequently of the Paper Trade Association at its quarterly meeting and which again was taken up at the meeting of the Fine Paper Division on Thursday of last week, under the chairmanship of William S. Wilcox of the D. L. Ward Company.

Hope to Crystallize Sentiment

So much attention is being given to this problem, that there may be developed a clearcut expression of the attitude of Philadelphia's position and that with undivided counsels it can go to New York to the National meeting, where it is hoped sentiment can be crystallized nationally to bring about improvements which the distributors believe will be quite as much to interest of their chief customers, the printers, as of themselves. While individual houses have had individual experiences, they run very closely together and almost without exception it has been found that something like 60 per cent of the number of orders taken are of such small size as, when delivery charges and other proper items of overhead are deducted from the margin between the actual cost and selling price, that they represent an actual loss. The estimate has been made that including everything that can properly be charged to sales service and delivery, the average transaction represents an overhead cost of almost a dollar and consequently where the orders aggregate but \$2 or \$5 or \$10, the nominal profit is wiped out and an actual loss is incurred, which must be made up from the large orders.

The distributors are fully cognizant of the fact that anything like a service delivery charge must be more than individual, must be more than local, actually to be successful, must be national and under any circumstances, can only be adopted and enforced with the co-operation of the printing, engraving and allied crafts which are the main consumers for fine paper. The program which is being worked on, therefore, is to get exact and definite facts, to base these on national experience and then in a broad businesslike and co-operative way, work out a solution which will benefit all, whether as buyers or as converters or consumers of paper. It is felt that the proposition has no unsurmountable obstacles to overcome so far as the fine paper business is concerned, but that the pathway is beset with difficulties for the coarse or wrapping paper trade. The fine paper houses deal almost entirely with one class of trade; the coarse paper houses look to their consumers in all the divisions of commercial life. There are in this city, engaged in the coarse

paper business, a number of small firms and certainly a much larger proportion of organizations not connected with the association than in the fine paper trade, and it is believed to be doubtful whether the smaller firms, not attached, would join in a general movement; however, it is just to bring out clearly all the facts in the case that the present earnest discussions are bringing out.

The Price Situation

In the fine paper business of the week there was no quotable change in prices, all being steadily maintained. In addition to the increase in number of orders, there were received more inquiries forecasting future business than had been enjoyed for some time. In the wrapping paper business, one or two Kraft mills made readjustments of prices, more to bring their quotations in harmony with the others than in the way of reduction, and save for this, prices remain unchanged. Both paper and rag stock dealers report an absolutely unchanged condition of affairs and with hardly enough of a market to establish prices.

In the allied paper bag business, announcement was made by the Union Bag and Paper Corporation, Drexel building, and the Huff Paper Company as representatives of the Continental Bag and Paper Mills, Denckla building, of a 15 per cent reduction from the list.

S. Kardon To Erect Warehouse

S. Kardon is planning to erect on the property owned by him at 207 Vine street, a five story warehouse of modern construction and equipment with electrical elevators and the latest appliances to be used in connection with his paper bag manufacturing plant, developed in recent times at the northeast corner of Second and Vine streets. The large frontage on both streets is owned by him and recently he completed renovations and extensions for a bag plant operating on a large scale. There are to be further extensions of equipment when the stock is transferred to the new warehouse upon its completion. The firm manufactures general grocery sacks, coal sacks, shopping bags and allied articles. A printing department for the bags has been established. The present quarters of Mr. Kardon were purchased from James Dyson about a little over two years ago and since then has been remodeled into a modern bag manufacturing plant, one of the largest in the city. Julius J. Zimmerman, manager of the American Bag and Paper Company, under which title Mr. Kardon operates the bag manufacturing plant, returned this week accompanied by Mrs. Zimmerman, who before her marriage on March 9 was Dorothy Kardon, oldest daughter of the proprietor. The bridal couple were on a honeymoon trip to Bermuda, New York and Atlantic City, and will be at home at 6201 Washington avenue.

General News of the Trade

The Parkside Press at West Collingswood, N. J., in which many paper distributors are interested financially, will close its doors on Thursday, the entire equipment having been sold to the George F. Lasher Company of this city. The Parkside Press had no separate legal existence, but was merely the printing department of the Myers Manufacturing Company, and the assurance by its officials that all financial obligations will be met in full has very much relieved the local trade.

A. S. Datz & Son, 14-18 South Marshall street, in getting out the current issue of its price-list, makes special prices on its complete line of printing papers, cardboard and boxmakers' lithos, blotters and cover papers. The firm recently became the Philadelphia distributors for the Gibraltar cover papers made by the Peninsula Paper Company of Ypsilanti, Mich.

Colonel Charles Carter, sales representative of the McAndrews & Forbes Company, Gloucester, and a noted dog fancier, has entered three setters for the contest of the English setter club of America, which is to be held in the near future at Medford, N. J.

Harry Weitzman has been added to the sales force of the Saxe Paper Company, Fourth and Race streets. He will cover Phila-

delphia and New Jersey. Other additions to the sales force shortly are to be made.

M. Harris, who for the past fifteen years has been purchasing agent for A. Rose & Son, 2527 E. York street, has resigned to take a position with Heyman Feldman Company, Delaware avenue and Pine street. The Feldman firm previously, although it has been established for the last twenty-five years, did not devote much attention to the paper stock business, carrying it in a small way as a side line to its rag and waste shredding business, but Mr. Harris proposes to develop it and to take a larger space in the five-story Feldman warehouse at 324-326 South Delaware avenue. The future business of A. Rose & Son will be conducted by Harry Rose, who also will take over the duties of purchasing agent, the former position held by Mr. Harris.

Changes in the personnel of the recently incorporated H. J. Fleming Paper Company, 1017 North Front street, are announced. Frank Sayres and Harry R. Axelroth, who had merely a financial interest, have withdrawn and their place has been taken by Walter J. Hackett, formerly of the Raymond & McNutt Company, who has been elected vice-president and secretary and who will act as general sales manager of the coarse paper division. H. J. Fleming continues as president and treasurer. Through the sales organization there has been added T. Stanton Shelton, formerly of Dill & Collins, who will travel through the coal regions with specialties. The Fleming Company has just taken a jobbing agency for the "Say it with Flowers," a watermarked tissue made by the Marathon Paper Company of Wisconsin.

President Norbert A. Considine of the Paper House of Pennsylvania has returned from a swing through the Southern states, going as far as New Orleans and making a study of the import printing paper sales field. He found conditions in the South fairly good and with most of the cities, save perhaps Savannah, rather active. He ascertained that ocean freights through Southern ports like New Orleans were advantageous and that at the present time a very large amount of foreign made news paper was being consumed. It is within the realms of possibility that the Paper House of Pennsylvania may open a Southern branch in the near future.

Schwartz & Co., formerly at 215 Church street, of which Samuel Schwartz is the proprietor, has removed to new quarters in the five-story building at 3 Bank street. The firm does a general wrapping paper business and its proprietor formerly was associated in a sales capacity with Wilder Brothers.

The Sayford Paper Specialty Company and its associate, the Frank M. Sayford Company, have removed from the third floor of the Drexel building to the second floor, occupying larger offices in the suite, 269. Philip J. McCoy, Philadelphia representative, is seriously ill at his home in Atlantic City from an attack of influenza. The firm manufactures lace paper specialties.

Robert R. Drummond, Philadelphia salesman for the Seaman Paper Company, with offices in the Land Title building, has severed his connections with the Seaman Paper Company and has accepted another with the Oxford Paper Company in their New York headquarters, 200 Fifth avenue. Before becoming permanently attached to the New York offices he had gone to the Rumford Mills in Maine in order to become familiar with the manufacturing end of the business. His association with the New York office will be that of purchasing agent. Willard M. Pringle, Philadelphia manager, attended a meeting of the stockholders in the New York office.

The Ginger Club, made up of the Beck Paper Company business family, held its winter function on Saturday afternoon of last week. The members partook of a buffet luncheon in the offices of the company, danced up and down the aisles to the music of a victrola and then headed by Leon and Charles Beck, sales manager Meinecke, purchasing agent Simon, service representative Rees and advertising representative LeDuc, proceeded in a body to Keith's Theatre for an afternoon of vaudeville.

The fine paper distributors generally are looking forward with interest to the address which will be made under the auspices of

the Typothetae of Philadelphia at the Meridian Club tomorrow afternoon by Joseph A. Borden of the American Writing Paper Company.

Although invitations to the seventeenth annual banquet of the Philadelphia Stock Dealers' Association went out only a week ago for a function to take place the latter part of next month, quite a number of acceptances have been received and special efforts will be made to have in attendance a large delegation from the New York National conventions.

The sales force of the Whiting-Patterson Company was addressed at its meeting on Saturday morning by Charles F. Clarksen of the Charles Eneu Johnson Company. Sales manager C. H. Peoples has been invited to go to the convention of the National Association of Credit Men at Indianapolis as a representative of the Paper Trade group. The chairman of this group is J. P. Cree of the Alling & Cory Company.

Sales representatives who called during the week included G. Stanley Morse of the Valley Paper Company, Joseph Poppe of the Robertson Paper Company, Inc., Bellows Falls, Vt., and William P. Schweitzer of the Peter J. Schweitzer Company, New York.

Brisk Paper Demand in Damascus

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 27, 1922.—G. M. Jones, chief of the Paper Division of the Bureau of Foreign and Domestic Commerce has received the following report from the American Consul in Syria, regarding the demand for paper in Damascus:

"A brisk demand exists in Damascus for all kinds of plain paper, blotting paper, carbon paper, cardboard, commercial ledgers, ink, erasers, mucilage, slates, and other stationery supplies. The principal source is Germany, which, it is estimated, furnishes 70 per cent of the total imports. It should be noted, however, that a considerable portion of the imports credited to Germany actually comes from Scandinavia, Holland, Switzerland, or Italy, being credited to Germany because they are believed to be of German origin. The imports of paper—writing, printing, wrapping, blotting, etc.—are estimated to be 2,000 tons per annum. France, Great Britain, and Austria are also suppliers.

"Quality is not an important consideration, and no really first-class articles of stationery will find a ready sale. Business stationery is almost exclusively of the "cross-ruled, medium quality," either cut to 9 by 11 inches or folded book fashion to make four pages of this size. The 'plain, good quality' paper is considered appropriate for official stationery and is supplied to the Government bureaus, in addition to being used by the more important business houses. Envelopes are invariably of a much lower quality than the paper which they inclose, and there is a preference for the 4¼ by 6¼ inch size."

Felt Paper Co. Makes Improvements

ROWLANDVILLE, Md., March 27, 1922.—During the depression in business the plant of the Felt Paper Company has been completely rebuilt, the company adding a complete new wet end by the addition of three new vats and cylinders.

The company has also built a complete new roofing plant for the manufacture of prepared roofings and saturated felts. The company will also manufacture asbestos paper, building papers and deadening felts, also dry saturating felts, for its own use, converting them into prepared roofing.

The plant is owned outright by John W. Moore, formerly of the Moore & White Company, who heads the company. O. R. Emigh is the general manager in charge of operations and the selling of the output of the mill, Clark P. Moore is mill manager, and Dean Moore, treasurer and purchasing agent.

The company will manufacture high-grade roofings, asphalt paints and roof coatings, in addition to the other lines.

ABITIBI PAPER CO. REPORT SHOWS DECREASED PROFITS

Gross Earnings for the Year Were \$8,861,810 as Compared With \$10,580,142 for the Previous Year—President Anson in His Remarks to Shareholders Says the Company Has Closed Contracts During the Current Year Sufficient to Operate at Practically Full Capacity—Annual Statement of the Fraser Companies, Ltd., Shows Net Profits for Year of \$1,001,459.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., March 27, 1922.—The eighth annual report of the Abitibi Paper and Paper Company, which has just been sent out to shareholders, shows that during the year surplus was drawn upon to the extent of over \$2,000,000 to provide for depreciation of inventories and for wiping out of an item of nearly \$500,000 for Government taxes for the years 1919-20.

Gross earnings for the year were \$8,861,810 as compared with \$10,580,142 the previous year. After operating expenses of \$4,183,637, net operating revenue stands at \$4,678,172 as compared with \$5,043,133 in 1920, the latter having been the highest in the history of the company. The new bond issue is reflected in the increased charge for bond interest at \$849,743, the deduction of which leaves a balance of \$3,828,429 as compared with \$4,541,186 in 1920. The deduction of \$989,762, which provides for depreciation, depletion, bad debts, and the 1921 income tax, leaves a surplus of \$2,838,666, as against \$3,683,592 at the end of 1920. Deduction of \$70,000 for preferred dividends leaves applicable to common stock \$2,768,666. The latter figure represents an earning of slightly over \$11 per share on the 250,000 no-par-value common shares of the company.

Here the profit and loss account departs somewhat from the beaten track. To the balance of \$2,518,666 left after the deduction of the disbursement of \$250,000 on common, is added the previous profit and loss balance of \$3,688,571, making a total of \$6,207,237. From this balance is deducted reserve for depreciation of inventories as at January 1, 1921, to the amount of \$2,177,144 and provision for Government taxes for the years 1919 and 1920, to the amount of \$482,000. This leaves at credit of profit and loss account a balance of \$3,548,092 as compared with \$3,688,571 the previous year, the latter figure, however, being subject to the Government taxes provided for in the statement under review.

In his remarks to shareholders, President Anson says:

"The completion of the extensions to the plant was considerably delayed, and no part of the product from the new machines was available until July. Since then, however, the new machines and the Twin Falls power plant have both been in successful operation and a production of over 11,000 tons of news print per month obtained.

"The company has closed contracts for paper during the current year sufficient to operate at practically full capacity.

"The construction of the company's extensions is now completed, and all liabilities on this account are shown on the balance sheet. Ample reserves have been made for all Government taxes and for depreciation of wood and other inventories."

Fraser Companies' Annual Statement

The annual statement of the Fraser Companies, Limited, of New Brunswick, for the year ending December 31, 1921, is now in the possession of shareholders. The net profits for the year amounted to \$1,001,459, from which was deducted \$199,227 for bond interest and \$333,073 for other interests, leaving a balance of \$468,359. Then came special deductions in an effort to discount absolutely depreciation in inventories and to bring the balance sheet down to a rock bottom basis as dictated by a conservative management.

Depreciation was taken off amounting to \$445,572; depletion of \$235,463, annual proportion of discount on securities sold, \$31,500, and for payment of Dominion Government taxes for previous years, \$249,462. Then as a further measure of safety the directors decided to provide \$1,000,000 for depreciation of inventories in view of the decline in replacement value of logs and manufactured lumber, pulpwood and supplies. These deductions made from the balance at profit and loss of \$2,745,141 at the end of the year left a balance to carry forward of surplus account of \$783,142. In spite of the heavy write-offs it is gratifying to note that the net working capital of the company amounted to \$2,504,406 at the end of the year, an actual increase over the total of \$2,431,681 at the end of 1920. In addition during the year the company redeemed and cancelled \$250,000 par value of its first mortgage 6 per cent bonds, leaving the general mortgage issue of \$2,000,000, which was distributed during the year, that much nearer a first mortgage position. This amount it is proposed to cancel every year.

The president, Archibald Fraser, in his report states that the company's operations were steadily carried on throughout the year, thus carrying out the process of liquidation of high priced inventories. "Since the first of this year," he states, "there has been some improvement in business conditions. Your company's pulp mills have operated full since January first and your woods operations now being carried on will result in delivering at your mills in the spring a large quantity of logs at low prices.

"It is felt that your company's position from now on will show steady improvement and that the combined effect of writing down inventories to market values and the influx of raw materials at low prices will result in a satisfactory showing for the current year."

Laurentide Power Raises Dividend

At a meeting of the board of directors of Laurentide Power Company a dividend of one and one-quarter per cent was declared, payable on April 15, 1922, for the quarter ending March 31, 1922, placing the stock on the five per cent basis. This increased dividend has an important bearing on the Laurentide Paper Company, which owns \$7,200,000 of the power company's stock, which at 5 per cent means revenue of \$360,000 per annum to that company. This will more than pay the interest on any money they are borrowing, leaving the net earnings of the company applicable to the dividend on the common stock.

News Print Plant for Bathurst, N. B.

A despatch from Bathurst, N. B., states that Bathurst is soon to have a paper mill added to its other industries, the Bathurst Company, Limited, having decided to build one. Present preparations call for construction of the new plant to start about June 1 next, and by early in 1923 it is believed that the Bathurst Company will be turning out a supply of news print paper. Plans for the new plant have been completed, and it is said authority has been given by the company to proceed with the construction of the new plant. Under normal conditions the Bathurst Company, Limited, employs about 1,000 men and the addition of a news print paper plant will provide employment for upward of 500 more. The capacity of the present mills of the company is 100,000 pounds of sulphite pulp per day and 100,000 pounds of sulphate per day. The company also has one 138 inch board machine.

Riordon's Export Business

It was announced in the papers here this week that Sir Frederick Becker, who last week negotiated a large pulpwood contract with the Saguenay Company, was now negotiating another large contract with the Riordon Company, Limited, which would take a big percentage of the total pulp output of the Kipawa mills. I. W. Killam, one of the officials of the Riordon Company, in denying the truth of this rumor, pointed out that a very vital reason why the Kipawa mill would not be likely to enter the overseas export busi-

ness lies in its geographical position in relation to the seaboard. Mr. Killam further stated that under normal conditions the established clientele of the Riordon Company would require the entire pulp output of the mill in question for the manufacture of high class papers and artificial silk. Mr. Killam stated that the Kipawa plant had been running from half to full capacity all this year, and that, at the present time, it is running at capacity.

Mr. Killam's references to the demand of the company's product for the purpose of manufacturing artificial silk is interesting, as it is the first public reference to what it is hoped will eventually become a very important part of the company's business. For some time past the company has had under observation an improved process for the manufacture of artificial silk from cellulose obtained from wood pulp and important developments in this connection are said to be not unlikely.

Bids and Awards for Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 29, 1922.—The Purchasing Officer of the Government Printing Office has received the following bids:

3,150 pounds of rope manila paper, 24 x 38—63: Maurice O'Meara Company, \$1.043 per pound; Domestic Mills Paper Company, 11 cents; Dobler & Mudge, \$1.046; Whitaker Paper Company, \$1.043; R. P. Andrews Paper Company, \$1.048; Old Dominion Paper Company, \$1.069; George W. Millar & Co., Inc., \$1.09.

400 sheets overlay board 18 x 23: R. P. Andrews Paper Company, 35 cents per sheet; Mechanical Chalk Relief Overlay Process, 41 cents; A. M. Collins Manufacturing Company, 38 cents.

3,100 pounds of white glazed bond paper 17 x 28—20½: The Aetna Paper Company, \$1.125 per pound; The Whitaker Paper Company, 14 cents; Old Dominion Paper Company, \$1.1549; R. P. Andrews Paper Company, \$1.1425; Dobler & Mudge, \$1.1725; Lee Paper Company, \$1.1835.

300,000 white envelopes 3½ x 6½—28: Whiting-Paterson Company, \$1.02 per thousand; R. P. Andrews Paper Company, \$1; Mathers-Lamm Paper Company, \$1.1655, \$1.197, \$1.4175, \$1.071; D. L. Ward Company, \$1.35; Sheppard Envelope Company, \$1.33; Sherman Envelope Company, \$1.05.

50,000 manila envelopes 10 x 14—40: R. P. Andrews Paper Company, \$7.75 per thousand; D. L. Ward Company, \$6.05; Sheppard Envelope Company, \$11.21.

50,000 pounds of chip board, 26 x 38—No. 50: Whitaker Paper Company, \$35.97 per ton; R. P. Andrews Paper Company, \$32.85; Mathers-Lamm Paper Company, \$36.45; Dobler & Mudge, \$34.95; C. L. LaBoiteaux Company, \$37.30; LaFayette Box Board and Paper Company, \$42; United Paperboard Company, \$37.50; George W. Millar & Co., Inc., \$38; Philip Rudolph & Sons, Inc., \$34.70; Old Dominion Paper Company, \$43.80; Reese & Reese, \$35.67.

The Mathers-Lamm Paper Company has been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 15,000 pounds (10,500 sheets) of 24½ x 34—No. 35 box board at \$0.2975 per pound.

Dobler & Mudge will furnish 9,600 pounds (200 reams) of 20 x 25—48 smooth granite cover paper at \$0.919 per pound. Bids for these items were opened on March 13.

The Mathers-Lamm Paper Company will furnish 3,000,000 wood manila envelopes at 67 cents per thousand, and the Whitaker Paper Company will furnish 10,400 pounds (100 reams) of 26½ x 41—104 India tinted coated cover paper at 9 cents per pound, bids for which were opened on March 17.

The Whitaker Paper Company has been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 1,500 pounds of back lining paper at \$0.391 per pound, bids for which were opened on March 15. The same firm will also furnish 3,150 pounds (50 reams) of 24 x 38—63 rope manila paper at \$1.043 per pound, bids for which were opened on March 22.

Canadian Pulp and Paper Exports

MONTREAL, Que., March 27, 1922.—Canada's exports of pulp and paper for February, 1922, were valued at \$8,049,208 compared with \$8,831,480 in January and \$8,668,815 in February, 1920, thus showing a decline of \$782,272 from the previous month and of \$619,607 from last year.

News print exports were greater than in January, being 70,729 tons compared with 67,701 tons in the previous month and with 52,835 tons in February, 1921.

Total wood pulp exports were less than in January, 1922, but considerably above the total for the corresponding month of 1921. In February, 1922, pulp exports amounted to 43,519 tons valued at \$2,447,488 compared with 62,006 tons valued at \$3,454,015 in January and 18,538 tons valued at \$1,628,976 in February, 1922.

Pulpwood exports showed a total of 98,429 cords compared with 66,094 cords in January and 195,037 cords in February, 1922.

Comparative details are shown in the following tables:

FEBRUARY, 1922		
Paper	Tons	Value
News print	70,729	\$5,040,244
Book paper	56	9,850
Other paper	551,626
		\$5,601,720
Pulp	Tons	Value
Sulphate (kraft)	11,437	\$690,757
Sulphite (bleached)	8,715	756,457
Sulphite (unbleached)	10,145	594,625
Mechanical	13,222	405,649
Total	43,519	\$2,447,488
FEBRUARY, 1921		
Paper	Tons	Value
News print	52,835	\$6,256,050
Book paper	288	89,220
Other paper	694,569
		\$7,039,839
Pulp	Tons	Value
Sulphate (kraft)	5,176	\$471,722
Sulphite (bleached)	3,281	431,750
Sulphite (unbleached)	5,758	481,455
Mechanical	4,323	244,049
Total	18,538	\$1,628,976

The principal countries of destination during February were:

Paper:—United Kingdom, \$199,050; U. S. A., \$4,782,942; Other Countries, \$619,728.

Wood Pulp:—United Kingdom, \$66,682; U. S. A., \$2,240,820; Other Countries, \$139,986.

For the first eleven months of the fiscal year the value of the exports of pulp and paper has been as follows:

	Paper	Pulp	Total
1922	\$62,075,520	\$32,710,443	\$94,785,963
1921	82,217,694	69,030,174	151,247,868
1920	56,022,212	36,945,893	92,968,105

Want Sulphite Pulp on Free List

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 29, 1922.—There are a number of newspaper publishers in Washington making a last minute effort to have sulphite pulp put on the free list. This matter has been taken up very strenuously by the publishers with members of the committee, but so far this pulp has not been transferred to the free list.

COMMITTEES APPOINTED FOR KALAMAZOO CONVENTION

Complete Lists Is Announced for the Joint Meeting June 1-3 of the American Pulp and Paper Mill Superintendents' Association and the Cost Associations of the Pulp Industry—Next Joint Meeting of the Superintendents and Cost Associations to Be Held April 7, When It Is Expected that the Main Portions of the Program for Both Individual and Joint Meetings Will Be Completed.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., March 25, 1922.—The joint international convention of the American Pulp and Paper Mill Superintendents' Association and the Cost Association of the Paper Industry will be piloted by Kalamazoo committees. That was made evident at a joint meeting of the local associations, held Friday evening, at the Park-American Hotel, when J. H. O'Connell, international president, announced that he intended to have his committees made up so that he can put his finger on the workers at any minute, thus keeping things moving until time for the big gathering here, June 1, 2 and 3, next.

Practically every committee member is a resident of the Kalamazoo valley. "We are going to give a Kalamazoo show in Kalamazoo," said Mr. O'Connell. "It is up to Kalamazoo to make or break on the results obtained."

He added there will be work enough for everybody, but favorable results will well repay the work done.

The complete list of committees follows:

General

Superintendents: J. H. O'Connell, International president; E. T. A. Coughlin, Allied Paper Company; N. M. Brisbois, Sutherland Paper Company.

Cost Association: Harry C. Bradford, Allied Paper Company; Thomas J. Burke, New York City; A. E. Reilly, American Writing Paper Company.

Resolutions

Superintendents: Ed. T. A. Coughlin, Allied Paper Mills; Michael Redmond, Kalamazoo Paper Company; Clarence Harter, Rex Paper Company.

Cost Association: George Ferguson, Watervliet Paper Company; Ralph Clark, Kalamazoo Vegetable Parchment Company; Paul H. Broesamle, Allied Paper Mills.

Reception

Superintendents: Jacob Parent, Western Board and Paper Company; W. H. Wightman, Lee Paper Company; Frank A. Johnson, Allied Paper Mills; C. H. Gilman, Bryant Paper Company; Clinton W. Ulrich, Wolverines Paper Company; S. A. Simpson, Allied Paper Mills; Clarence Thorne, Watervliet Paper Company.

Cost Association: Paul Broesamle, Allied Paper Mills; George Jubb, Kalamazoo Paper Company; R. L. Strong, Lee Paper Company; Adrian VanderLinden, Sutherland Paper Company; George Ferguson, Watervliet Paper Company; C. E. Spangler, Eddy Paper Company; A. E. Endy, MacSimBar Paper Company; C. V. Kean, Jr., Handley-Knight Company.

Registration

Superintendents: George Pountain, Allied Paper Mills; Alfred Bryant, Bryant Paper Company; Clarence Harter, Rex Paper Company; Harry E. Ulrich, MacSimBar Paper Company; Otto Fisher, Bryant Paper Company.

Cost Association: Harry Barney, Allied Paper Mills; Clare Crowley, Allied Paper Mills; Jay F. Bachelder, Standard Paper Company; F. Brown, Michigan Paper Company; J. C. Handy, Michigan Paper Company; William Badour, Eddy Paper Company.

Transportation

Superintendents: Jacob Kuss, Allied Paper Mills; Charles Noble, Stamscott Fibre Company; Fred A. Smith, Mullen Paper Company; Luther A. Parker, Bryant Paper Company; Michael Redmond, Kalamazoo Paper Company.

Cost Association: William Allen, Bryant Paper Company; W. H. Oliver, Allied Paper Mills; Ralph Clark, Kalamazoo Vegetable Parchment Company; Platt Glezen, Allied Paper Mills; R. C. Simpson, MacSimBar Paper Company; E. T. Metcalf, Standard Paper Company; Robert L. Wall, Standard Paper Company.

Luncheon

Superintendents: A. W. Wightman, Hawthorne Paper Company; Peter F. Denner, Kalamazoo Paper Company; Albert H. Parker, Allied Paper Mills; William Reynolds, Kalamazoo Paper Company; C. G. McClellan, Kalamazoo Vegetable Parchment Company.

Cost Association: Elbert G. Milham, Bryant Paper Company; Allen Milham, Bryant Paper Company; G. T. Ingling, Kalamazoo Paper Company; Peter F. Bosker, Rex Paper Company; L. N. Russell, Wolverine Paper Company; Harold Westenheiser, Allied Paper Mills; Harry Hummell, Sutherland Paper Company.

Press

Howard P. Hall, Harrison Merrill, *Gazette*; L. D. Post, John Cornell, *Paper Mill and Wood Pulp News*; H. K. Vinton and A. A. Tanyane, *PAPER TRADE JOURNAL*.

It was decided to have the next joint meeting Friday evening, April 7, at which time it is expected that the main portions of the program for both individual and joint sessions will be completed.

Bound To Be a Big Success

If there was ever the slightest doubt that mill executives of the Kalamazoo valley would not be interested in the success of the coming joint gathering, that was completely dispelled when President O'Connell announced that William J. Lawrence, vice-president of the Western Papermakers' Chemical Company, had officially invited members of both organizations and their friends to be his guests at the annual banquet, which will be held Thursday evening, June 1.

Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, also extended to the convention the use of the new Parchment Community House, just completed and perfectly appointed to handle all joint meetings. Luncheons and dinners, Thursday and Friday, will be held there. The main dining hall will seat 500 guests comfortably, while there is also an assembly hall of similar capacity, spacious rooms for divisional meetings and committee meetings and every convenience for personal comfort of the visitors.

Union Bag Report for 1921

The Union Bag and Paper Corporation reports for 1921 a loss of \$723,397 after charges and inventory adjustments in contrast to net profits of \$3,474,926, or \$23.20 a share, earned on the \$14,977,850 of its capital stock outstanding in 1920. After payment of dividends there was a deficit of \$1,888,263 against a surplus of \$2,393,030 in 1920.

The company's balance sheet shows an increase in cash from \$612,882 in 1920 to \$802,599 and a decrease in accounts receivable from \$952,746 in the preceding year to \$840,218. Inventories were reduced from \$4,683,306 in 1920 to \$3,804,635. Accounts payable increased from \$549,550 in the preceding year to \$3,192,864. The surplus, which for 1920 was \$1,874,305, decreased to \$1,186,042.

Mills of the Union Bag and Paper Company are now operating at capacity. The current month has shown a noticeable increase in buying which is expected to continue. As an indication that business is over the crisis, the earnings of the company so far this year have been in excess of requirements on the \$14,977,850 capital stock for \$5 annual dividend.

ROBERTSFORS A.-B. ROBERTSFORS, SWEDEN

We have on dock at Boston and Baltimore
for immediate shipment, limited quantities
of this mill's production of

EXTRA PRIME AND PRIME

STRONG

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For Samples and Quotations, Write or Wire

A. J. PAGEL & CO., Inc.

347 Madison Avenue

New York City

PAPER DEMAND IN TORONTO SHOWING SOME IMPROVEMENT

While Business Is Still "Spotty" There Has Been a Considerable Betterment Noticeable in the Past Few Days—Reductions Are Made on Some Varieties of Fine Papers—Don Valley Paper Mills Presented With Trophies for Low Accident Record in 1921—George Carruthers, President of Ontario Pulp and Paper Makers Safety Association, to Preside at Safety Convention in Toronto.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., March 27, 1922.—While business in the paper line may be "spotty" the "spots" are getting farther apart and the improvement in trade has been quite noticeable during the past few days. There are several features of interest to report and one of them is the reduction of a cent and a half on all lines of bond papers, while writings are down a cent and all grades of book papers half a cent. The new schedule of values went into effect last week. The reason for the decrease is the lessening of the exchange rate on United States funds, which would permit similar lines of paper being imported from across the border to come in competition with the Canadian product; and also a general revision in costs, most mills having all their high priced materials pretty well used up while pulp continues to sell at a low figure. It is expected that the new schedule of quotations will stimulate buying considerably. The change in prices does not apply to any other lines. Coated stock is commanding the same figure as formerly. It is understood that the mills are going to try and turn out a superior product for the direct-by-mail advertising now being done by many houses. As several loose folds are required in the paper, producers, so it is said, will see that it stands up better in tests than it has in the past. In other lines, the improvement continues in business. Paper box plants are getting more active and the price of boards has been guaranteed to remain unchanged until May 1. In the rag and paper stock market, the demand is about the same, with collections low. No. 1 white shirt cuttings are in more active requisition. There has been a slight reduction on printed manilas and soft white book shavings. Manufacturing stationers, envelope makers, toilet and tissue mills and other allied commodities are in fair requisition and all plants are pretty busy.

Container Company Has Been Expanding

The Ross Can Company of Bowmanville, Ont., manufacturers of fiber and other containers, is very busy and is now working a night shift. Additional equipment has been installed. The units of production during the past year showed an increase of 44 per cent over the previous twelve months and the number of new accounts showed a gain of nearly 100 per cent.

Presentation Made of Safety Awards

An interesting event took place at the plant of the Don Valley Paper Mills, Toronto, last week when the shield and silk Safety flag won by that company for having the lowest accident record during 1921 among the mills in Ontario employing less than two hundred hands, were presented. The flag becomes the permanent property of the mill and the shield will be held for one year. The wood of the shield is of pine and was taken from a beam in the first paper mill ever put in operation in Ontario, being the original plant of the Don Valley Paper Company at Thorncliffe. There was only one accident in the Don Valley mill during 1921, involving the absence of an employee for one day. George Carruthers of Toronto, president of the Ontario Pulp and Paper Makers' Safety Association, presided. A. P. Costigane, safety engineer and secretary of the association, made the presentations, which were handed over to

J. F. McKenzie, superintendent of the mill, who accepted them in an appropriate speech. Addresses were also delivered by C. Nelson Gain, sales manager, J. G. Worts, president of the Don Valley Mills, and others. The Dryden Pulp and Paper Company of Dryden, Ont., winner of the trophy in Class "A" mills employing over two hundred hands will receive similar awards, which will be presented in a few days.

Sales Book Company Had Good Year

The American Sales Book Company, of which S. J. Moore of Toronto is president, has just closed a very satisfactory year, the profits being \$515,891 as compared with \$602,679 for the previous year. Together with a balance of \$253,796 brought forward, there is available the sum of \$769,687 as compared with \$851,384. The showing is a good one in view of the depression of 1921. Mr. Moore stated that the company was in a strong financial position, with ample working capital and no borrowing. The plants have been developed to a high state of efficiency while the field for the company's products is steadily widening. At the annual meeting of the F. N. Burt Company held in Toronto last week, of which S. J. Moore is also president, all the old officers were re-elected except that Miss M. R. Cass, manager of the Buffalo plant, was added to the directorate.

General Jottings and Personals

It is expected that the Consolidated Water Power and Paper Company of Wisconsin Rapids, Wis., which recently bought the plant of the Kaministiquia Pulp and Paper Company at Fort William, Ont., will start up the forty ton groundwood mill early next month.

Norman J. Ratcliff, secretary of the Ratcliff Paper Company, Toronto, is receiving the congratulations of his friends on his recent marriage to Miss Henderson of Ottawa.

It is understood that relief has been accorded the settlers in Northern Ontario along the line of the National Transcontinental Railway in the matter of reduced rates on shipments of pulpwood, as considerable hardships have been reported among the settlers owing to inability to market their product. As a result of this action it will not be necessary to bonus settlers who have been getting out pulpwood.

Fire, which broke out recently in the block on Simcoe street, Toronto, occupied by the Allen Manufacturing Company, caused considerable damage due to water coming through to the stock of paper carried by the Allen Paper Company and to the Toronto Paper and Twine Company.

Cameron & Fraser, wholesale dealers in wrapping papers, Toronto, have taken over the stock and lease of the ground floor of the building at 112 Bay street, occupied by the Lincoln Paper Mills Company, which is closing its warehouse in Toronto and will maintain only a sales office in the city.

Joseph Kilgour, president of the Canada Paper Company, and Mrs. Kilgour, who have been spending the past few weeks in Florida, have returned to Toronto.

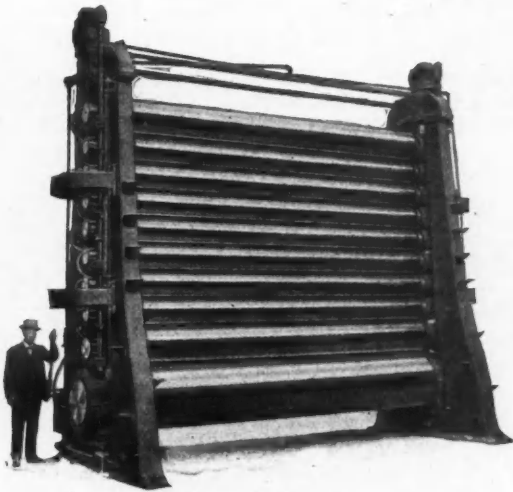
H. A. Doughty of Montreal, who for some years has been the traveling representative of the Canada Paper Company throughout the maritime provinces, has joined the sales staff in Toronto and entered upon his new duties.

E. H. Wilkinson of the Wilkinson Paper Company, Toronto, who has been spending the past few weeks in England, where he was called owing to the illness of his father, has returned.

Charles Johnson of C. H. Johnson & Sons, Montreal, was in Toronto during the past week calling upon the paper trade.

I. D. Bradshaw of Bradshaw's, Limited, and wife, of Toronto, are members of the party representing the Canadian Manufacturers' Association who are touring the West Indies. Mr. Bradshaw has for many years been one of the leading manufacturers of waxed papers.

Since 1848



You know that, however good your calender rolls are, it takes care to keep them true and fit to produce the quality you demand in your paper. The rolls become worn and perhaps scored with usage.

We are, therefore, offering Farrel roll grinders as the most economical method for you to keep your rolls in shape.

Farrel grinders are precise machines—they play their part in the quality of Farrel rolls in the manufacture, and will play the same part in regrinding your used rolls.

We had to buy our rolls in England then, because they were not made in this Country. In 1848 Franklin Farrel founded the Farrel Foundry and Machine Company. He built machinery to carry rolls and it was one of his ambitions to make his own rolls instead of buying them abroad.

About 1865, therefore, we began to make chilled rolls and Mr. Farrel lived to see the day when, instead of importing rolls for his machines, he exported Farrel chilled rolls to Europe and all over the world.

We have specialized on paper calender rolls and have made more of them than any other chilled roll manufacturer. We know the chilled roll proposition and you can benefit by our experience by specifying Farrel rolls.

FARREL

Established 1848

Foundry and Machine Company
Ansonia, Conn.

Branch Plant:

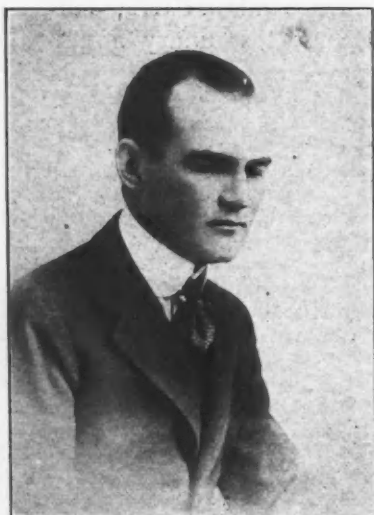
Buffalo, N. Y.

BRYANT PAPER CO. AWARDED \$32,500 IN SUIT FOR DAMAGES

Case Was Result of Water Damage Sustained by the Bryant Paper Co., as the Result of the Carrying Away of the Monarch Paper Co.'s Dam June 16, 1916—Counsel for Defense States That It Is Altogether Likely That the Case Will Be Appealed—Merrill B. King Succeeds His Father, the Late John F. King, as President and General Manager of the Rex Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., March 27, 1922.—Damages to the extent of \$32,500 are awarded the Bryant Paper Company against the Monarch Paper Company, as result of a decision handed down Thursday by Judge Ira W. Jayne, in the Wayne County Circuit Court.



MERRILL B. KING

At the same time petition for a new trial was denied and interest charges of \$8,192.50 were thrown out.

The decision was the outgrowth of a hearing on December 2, at which time motion was made, following the original case of the Bryant Paper Company vs. the Monarch Paper Company.

The case was for water damage sustained by the Bryant Paper Company, June 16, 1916, as a result of the carrying away of the Monarch Paper Company's dam, following a terrific downpour of rain, amounting almost to a cloudburst. The Bryant Paper Company brought suit for \$300,000 and was represented by E. M. Irish and Marvin J. Schaberg. A. J. Mills and Mason & Sharpe appealed for the Monarch Paper Company.

The jury returned a verdict last fall of \$32,500 damages, with \$8,192.50 as interest. In taking the case under advisement, Judge Jayne ruled that the plaintiff had established a case of negligence and was entitled to the damages, but the added award for interest was thrown out.

"I cannot say what action will be taken as a result of Judge Jayne's decision," remarked A. J. Mills, counsel for the defense. "It is altogether likely the case will be appealed to the Supreme Court, as there are several points of law involved, demanding that the case be tried on its merits."

The importance of the case is generally recognized. There are

24 cases by individual property owners pending against the Monarch Paper Company and the Bryant Paper Company, also the case of the Illinois Envelope Company against the Monarch Paper Company for \$100,000 damages, all involving practically the same points that were brought out in the Bryant-Monarch case.

M. B. King Heads Rex Paper Co.

Merrill B. King, son of the late John F. King, was advanced to the post of president and general manager of the Rex Paper Company at a meeting of the directors held Monday of this week.

Mr. King is the youngest paper mill executive in the Kalamazoo valley district. His first work was with the King Paper Company. In 1915, he resigned to accept the position of treasurer of the Rex Paper Company, just organized by his father. He was elected to the post of treasurer, a position he has since held.

He is well schooled in papermaking, due to his steady contact with his father.

Clarence A. Bradford is vice-president and assistant general manager, while Edwin H. Hacking assumes the duties of treasurer, in addition to those of secretary.

The vacancy on the board of directors was filled by electing Harry Creamer, of Minneapolis, son-in-law of Mr. and Mrs. John F. King. The other members of the board are Merrill B. King, C. A. Bradford, E. H. Hacking, W. M. Loveland, Kalamazoo; A. Aldrich, Beloit, and William Irwin, Columbus, Ind.

Milton Hopfenmaier Visits Kalamazoo

Milton Hopfenmaier, Washington, D. C., who inherited the businesses established by Lewis Hopfenmaier, his father, is a visitor in Kalamazoo for a day or two. While here he is the guest of Samuel Graff, of D. Graff & Son.

The Hopfenmaier interests are distributed in eleven lines of business, among the number being the paper industry. For years this company has been among the leaders in selling paper supplies to the government printer and other federal departments. For a majority of the years during its business career, this concern has held the contracts for the purchase of all waste papers from the government departments and has handled annually thousands and thousands of tons of stock of all grades.

"I have found Kalamazoo concerns among my best customers," said Mr. Hopfenmaier. "Mills in this valley specialize in the use of old papers and we have shipped trainload after trainload to the local mills. Higher grades and sorted papers have been delivered direct to the mills, while D. Graff & Sons have been heavy buyers of mixed papers. I can say that practically all the good paper from government offices is shipped to Kalamazoo."

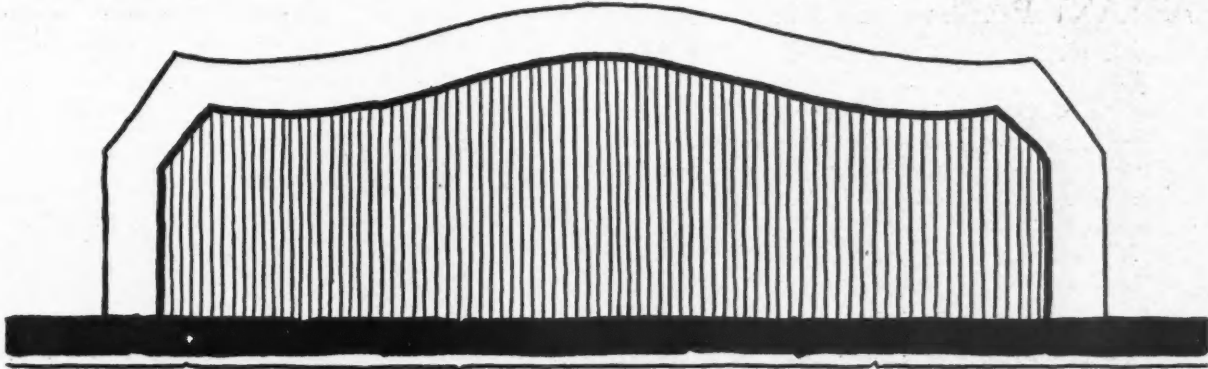
Mr. Hopfenmaier, during his stay here, is improving the opportunity to visit all the local mills. He has a wide acquaintance, not only on account of sales of stock but also because he has so frequently acted as agent for various Kalamazoo concerns in placing huge orders for government business.

"There are no fixed prices in the East," said Mr. Hopfenmaier, speaking of business conditions generally in the paper industry. "That is particularly true among the board mills, where cutting and slashing is the regular order. They are apparently willing to take business at any price to maintain their organizations. That custom is not nearly so prevalent in this valley."

The conversation then reverted to numerous interesting and remunerative government contracts held by Kalamazoo mills in the years past, notably the Bryant Paper Company, Kalamazoo Paper Company and the Hawthorne Paper Company. For many years the Kalamazoo Paper Company has manufactured all the government stamp paper and revenue paper, though the contract for this half of 1922 is held by another mill. Mr. Hopfenmaier predicted that this contract would again be taken over by the local concern. The requirements are for from 75 to 100 cars a year and it is one of the attractive government contracts.

Reference was also made to the Hawthorne Paper Company's

(Continued on page 28)



It never lags behind

The Bird Rotary Screen is valued by its users because it maintains a continuous flow of clean stock to the paper machine wire. Production is continuous, for the screen is self-cleaning, and needs no washing through the week. Quality is uniform throughout the run.

The Bird Rotary Screen is one of the strongest links in your production chain.

Let us tell you more about it.

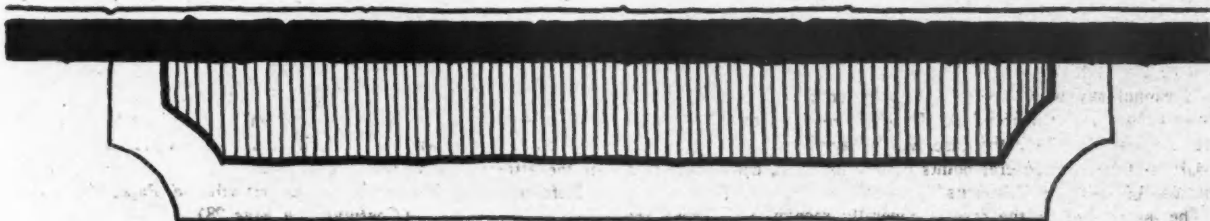
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BIRD ROTARY SCREENS



BAGLEY & SEWALL FURNISH MANY MACHINES FOR JAPAN

Ginjiro Fujihara, President and General Director of the Oji Paper Mfg. Co., who Is Entertained by Stuart D. Lansing, President of the Bagley & Sewall Co., Says This Fact Has Made Watertown One of the Most Widely Known American Cities in Japan—President Fujihara Says There Is No German Competition in Japan But That Some Scandinavian Paper Is Being Received There.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., March 27, 1922.—“Watertown is better known in Japan than is New York City,” said Ginjiro Fujihara, president and managing director of the Oji Paper Manufacturing Company, Ltd., of Tokio, Japan, who reached this city Wednesday morning with four other officials of his company to visit the Bagley & Sewall Company here. “The Bagley & Sewall Company has made Watertown the big city of America in the minds of those connected with the allied paper manufacturing industry in Japan. We are very proud of Watertown.”

Accompanying Mr. Fujihara on the trip is Yasunosuke Fukukita, purchasing manager of the company, a labor official of the concern, an engineering and another department head. The president speaks English but slightly, but his purchasing manager, Mr. Fukukita, is a graduate of Leland Stanford University with a Phi Beta Kappa key and a postgraduate of Harvard and is able to interpret what he cannot find words to express in English.

Mr. Fujihara came to America last year with the Japanese Business Commission, which went to England and the continent and has just returned. While in London he met Stuart D. Lansing, president of Bagley & Sewall, and arranged to come here at this time. Since the commission finished its survey he has been devoting his travels to his company interests. He came to Watertown for the first time Wednesday morning, although representatives of his company have visited the local plant annually for years.

“All the paper manufacturing industry in Japan has accomplished it owes to Bagley & Sewall,” said Mr. Fujihara. “Our company is the largest in Japan, manufacturing 100,000 tons of paper a year and 60,000 tons of sulphite. We manufacture mostly news print paper, but also make considerable wrapping, book and cigarette tissue papers. We have 12 Bagley & Sewall paper machines in our 13 plants, with the largest mills located in the northern island of Japan called Hokkaido.

“There are 20 large daily papers in Tokio, the largest of which has a daily circulation of 2,000,000 copies and our company furnishes 65 per cent of all the news print paper used in Japan. It is all made on Bagley & Sewall machines. All the latest American methods and processes are used in the mills.”

No German Competition in Japan

Asked concerning industrial conditions there and if German paper was being shipped there, President Fujihara said that there is no German competition but that some Scandinavian paper is being received. He said that the daily papers of Tokio formerly charged 60 cents a month for subscriptions and now the price has been reduced to 50 cents a month. This is made possible by a 20 per cent drop in the price of news print paper. “The news print paper industry in Japan is rapidly expanding. There has never been a surplus of paper and the demand has continued strong. More mills are being built each year. We have purchased our machines from Bagley & Sewall and while we are not announcing any orders at this time, I would say that we will probably not forget Mr. Lansing when we need more machinery.”

Clarence E. Kinnie made a visit to Japan in 1916-1917 and while

there passed some time at the mills of the Oji Paper Company. He was escorted in his travels by Mr. Fukukita, whom he characterizes as his bodyguard and guide while there.

President Stuart D. Lansing entertained the Japanese men at a dinner at his home in Clinton street Wednesday evening. Besides officers of the Bagley & Sewall Company present were G. S. Knowlton of Knowlton Brothers, George F. Clark of the Brownville Paper Company and Samuel A. Upham of the Brownville Paper Company.

After two days visiting local mills the party left for New York City and will later visit mills in Canada. They plan to sail for home on April 20 from Vancouver on board the *Empress of Asia* of the C. P. R. line.

B. B. Taggart To Go To Bermuda

Byron B. Taggart, president of Taggart Brothers Company, and Henry A. Hickok, vice-president of the Northern New York Trust Company, will go to Bermuda on a two weeks' trip. They leave this city Thursday for New York City and on Saturday will board the steamer for Bermuda. They expect to remain on the island for about ten days and reach home about April 14.

Floyd L. Carlisle Returns

Floyd L. Carlisle, president of the St. Regis Paper Company and of the Northern New York Trust Company, returned Friday night from a few weeks' vacation at Bellair, Fla. He said that his family would return home some time in about a week. He stopped off in New York to visit his Wall street investment office before coming here. Asked if he now expects to remain in Watertown he said that he would probably be here now indefinitely.

BRYANT PAPER CO. AWARDED DAMAGES

(Continued from page 26)

bid several years ago for government bank note paper. Mr. Hopfenmaier stated that the Hawthorne lost out due to a slight technicality, thus being prevented from acquiring business that has been held continuously by Crane & Co., of Dalton, Mass.

“I am confident that had the Hawthorne Paper Company secured the contract at that time, it would have been holding it today,” said Mr. Hopfenmaier. “Held over a period of, say, five years or longer, it is very desirable business.”

During the period of the great war, Mr. Hopfenmaier was able to throw several large government orders to the Bryant Paper Company. It was then that he became intimately acquainted with the late Frank H. Milham and spoke feelingly of his superior qualifications as a citizen and business man.

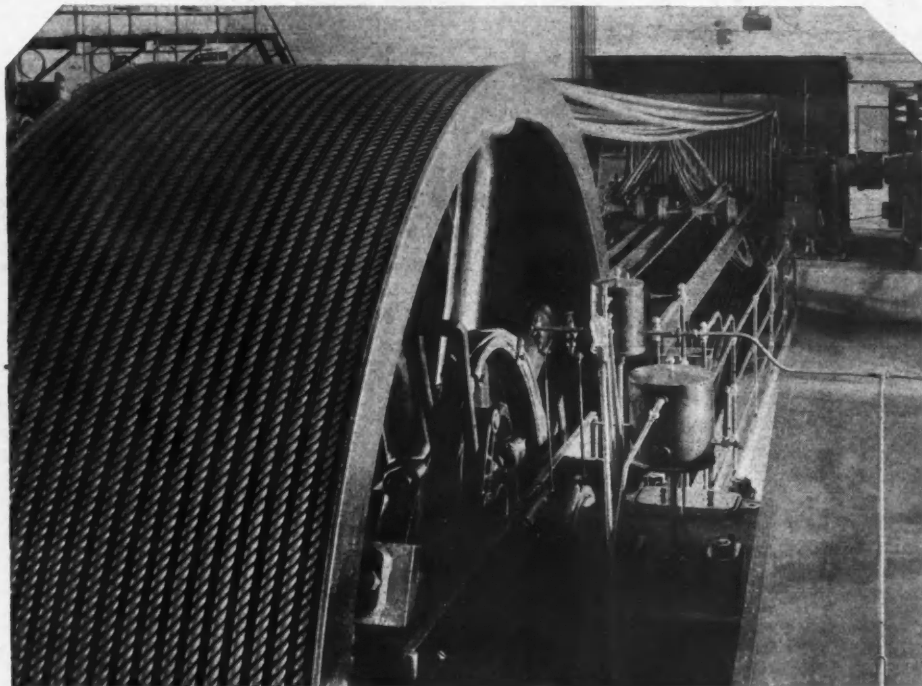
Big Safety Convention in Toronto

An important Safety Convention will be held in Toronto on April 4 and 5, at which addresses will be delivered by S. Price, chairman of the Workmen's Compensation Board for Ontario, and other leading representatives. On the second day of the gathering, George Carruthers, president of the Ontario Pulp and Paper Makers' Safety Association, will preside. The annual meeting of the latter body will be held in Toronto on Thursday, April 6. A. P. Costigane, safety engineer of the association, recently paid a visit of inspection to the mills in the Niagara district and reports great interest in the safety movement both on the part of the managements and men.

G. M. Jones to Head Financial Division

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 29, 1922.—Grosvenor M. Jones, chief of the Paper Division of the Bureau of Foreign and Domestic Commerce, will be made chief of the new Financial Division of that Bureau after July 1, when the new Congressional appropriations become available, according to information obtainable on high authority. So far no new head of the Paper Division has been mentioned.



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The words "Guaranteed Rope" appearing on this *Tape-Marker* are certified by the signature "Columbian Rope Company" also appearing thereon.

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NEWS OF THE PAPER TRADE IN AND ABOUT APPLETON

Wood Grinders at the Plant of the Consolidated Water Power & Paper Co. at Wisconsin Rapids Placed in Operation Last Week for the First Time in Several Months—Judson G. Rosebush Speaks on Unemployment Insurance at Meeting of the Fox River Valley Industrial Relations Association of Green Bay—Thilmany Pulp & Paper Co. Reduces Wages—More Water for Power.

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., March 28, 1922.—Wood grinders at the Consolidated Water Power and Paper Company mill at Wisconsin Rapids were placed in steady operation last week for the first time in several months. About thirty additional men have been given employment. Production of wood pulp was greatly reduced during the period of low water.

Pulp now is being made at the Wisconsin Rapids mill and is being transferred to a new pulp shed erected at the plant. The stock is sent by gravity from the screens near the grinders to the wet machines in the storage sheds. A large overhead crane has been installed to facilitate handling of the dried pulp.

A new type of wet machine has been installed in the pulp shed. It is known as a four-cylinder type and has a greater capacity than machines formerly used. A large set of electric grinders have been transferred from the Stevens Point plant to the Wisconsin Rapids division plant.

Unemployment Insurance

Unemployment insurance, and more specifically the bill on this subject introduced in the Wisconsin legislature, was the subject of an interesting address by Judson G. Rosebush, prominent Fox River valley papermaker, at a meeting of the Fox River Valley Industrial Relations Association in Green Bay. Mr. Rosebush discussed the causes for unemployment insurance and the way it would work out.

"One of the most difficult problems that papermill executives have is the matter of dealing with casual laborers," Mr. Rosebush said. "Magnus Alexander, of the General Electric Company, has figured that it costs from \$39 to \$150 to educate one of these laborers in the basic principles of an occupation. In cases where the labor turnover ranges from 50 to 200 per cent annually, the expense of training these workers is enormous.

"Several remedies have been suggested to meet the unemployment problem. The employment bureau has received a great deal of attention on the theory that the work is not properly distributed, and if the man can be taken to the job over there, the problem will be solved.

"Another remedy rests on the theory that men are thrown out of work because they are unskilled. The vocational training idea that the problem will be met if training is given that interests the child before other habits are formed, and that the man will be led into profitable and constant employment, is to me a hopeful plan.

"Another plan, that of unemployment insurance, rests on the belief that as society is constructed there are many seasonable employments necessary.

Lumber camps, wheat fields, cotton fields and other industries require a floating population of labor.

"The unemployment insurance idea has an added interest at this time because a bill was introduced in the Wisconsin legislature last year providing for that kind of insurance. Roughly the bill provided that a man who worked for an employer for eight months a year must be supported by the employer for thirteen weeks in the event that he is unable to secure employment and is willing to work

Men earning more than \$1,500 a year and farmers are exempted under the provisions of the bill."

Mr. Rosebush said employers vigorously attacked the bill because they are not responsible for unemployment. He pointed out that a manufacturer of farm implements told the legislature that he has a warehouse full of machinery and he cannot force farmers to buy this machinery so that he can employ men to make more. "Insurance men pointed out," Mr. Rosebush said, "that unemployment insurance really was not an insurance, since it was not a voluntary act on the part of the man paying the premium, and the man who paid the premium did not receive the benefit, and that in other ways there is no real analogy between the proposal and insurance.

"There is no telling how far the thing may go, or how and when it will stop, if we once enter on such a plan. Logically, if an employer must support a man for 13 weeks, there is no reason why he should not support him for six months or for an entire year.

"Men in positions of power must see that there is greater stability in industry. I am frank to say that I do not know just what is to be done in this matter, but one of the most hopeful things that I know about is that some companies are setting aside sums in times of prosperity to take care of their employees in times of adversity. The married men with families and the aged can be cared for in this way. I would suggest that in your meetings in the future you make a study of profit sharing, old age insurance and the distribution of stock to employees."

Pulp Plants Make Good Showing

According to the Wisconsin Industrial Commission, the paper pulp plants of the state are among the very few which do not show substantial decreases in the number of employees as compared with July, 1920, indicating, it is said, that the paper industry has recovered from the period of depression to a considerably greater extent than many other industries.

Thilmany Paper Co. Reduces Wages

The Thilmany Pulp and Paper Company has posted notices in its mills at Kaukauna and Appleton announcing a slight reduction in wages on April 1. It is said the cut amounts to about 4 cents an hour in most cases.

100 Per Cent Water for Power Purposes

Paper manufacturers in the Fox River valley now are permitted to draw water for power purposes to the extent of 100 per cent. This is the first time that has been permitted for many months. Most of the manufacturers are fairly well stocked with coal in case of a strike of miners April 1. Large shipments of coal have been received at some of the mills to protect them against a shortage.

Buckeye Paper Co. Starts at Zanesville

ZANESVILLE, Ohio, March 22, 1922.—H. R. Onstott, who for a number of years past has been with the State Paper Company, as bookkeeper, has resigned his position with that firm and will shortly embark in a similar business with William W. Cunningham, who has been connected with the Brush-McCoy Pottery for the past several years.

Mr. Onstott will have charge of the buying and managerial end, and Mr. Cunningham will have charge of the selling end of the business.

The new company will be known as the Buckeye Paper Company, and will handle a general line of wrapping paper, bags and twine.

A temporary warehouse and office will be established on Meade street, but the firm will soon establish an office and warehouse in the business district. The new concern will appreciate being placed on the mailing lists of the various mills.

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MANUFACTURED BY

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Sole Agents for United States for

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Three Rivers, Canada

TO ALLOW GATTI-McQUADE TO DO BUSINESS AS USUAL

High Compliment Paid Joseph Gatti at Meeting at Which Are Present Sixty-five Representatives of the Creditors Representing Upwards of \$600,000 of the Total of About \$900,000 of Unsecured Liabilities—Concern Is to Be Allowed to Carry on Its Business Until March 8, 1926, Without Creditors Attempting to Enforce or Collect Their Claims—Alvah Miller Is Chairman of Meeting.

The financial embarrassment of the Gatti-McQuade Company comes merely as another indication of the unprecedented business depression from which the paper industry is now almost free. Those who have followed the career of Joseph Gatti from his humble beginning at an early age through remarkable success, say that he stands out pre-eminently among men who have made their mark in the paper line. The entire trade has the highest regard for Mr. Gatti by reason of his honest and straightforward business principles and his consistent application of them, and his creditors are going to see him through the crisis and assist in rebuilding the business he represents.

Creditors Meet

In response to a request from the Gatti-McQuade Company outlining the condition of things, the creditors met in the assembly room of the Merchants' Association, 233 Broadway, on March 23. Sixty-five representatives of the creditors were present representing upwards of \$600,000 of the total of about \$900,000 unsecured liabilities.

The tone of the meeting was one that gave only encouragement to the embarrassed company, for if there was one dissenting voice it was completely lost in the sympathetic attitude and the general desire of those present to co-operate in setting things right.

After the meeting was called to order, upon motion unanimously adopted, Alvah Miller was appointed chairman and Edgar G. Barratt secretary of the meeting.

Statement from Mr. Bowman

Mr. Bowman, attorney for Gatti-McQuade Company, was called upon for a statement and briefly outlined the principal causes for the present financial situation of the company, naming (1) the endeavor to live up to contracts fully although some extended over a long period, and the heavy loss imposed thereby, (2) the repudiation or cancellation of contracts at hand for the sale of merchandise, (3) the failure of several concerns owing from \$75,000 to \$100,000, (4) the depreciation in value of a large stock of merchandise on hand, (5) the losses in enterprises accessory to the regular business, (6) the total losses and shrinkages aggregating upwards of \$200,000.

Proposed Agreement

Mr. Bowman read a proposed creditors' agreement later adopted which stated (1) that the debtor shall continue the regular prosecution of its business from date to March 8, 1926, without the creditors, except as thereafter provided, attempting to take legal action to collect or enforce their claim until after March 8, 1926, (2) that the creditors' committee be as follows: Arthur C. Hastings of H. G. Craig & Co., Frank C. Overton of Castle, Gottheil & Overton, Alton Faunce of Price & Pierce, Ltd., Patrick McMeel of Wm. Hughes & Co., and Robert H. Krueger of the New York American, (3) that the debtor will pay all creditors the full amount of the several debts actually due as of February 28, 1922, with interest at the rate of six per cent per annum from January 1, 1923, and payable semi-annually thereafter on or before the expiration of four years next following March 1, 1922, (4) that the debtor shall report its financial condition to the creditors' committee every month, (5)

that the extension shall terminate if (a) at any time during the period of four years next following the financial condition of the debtor shall appear to be more unfavorable to the extent of at least \$75,000 than such financial position shall appear from the statement of March 31, 1922, if (b) Joseph Gatti, now the president and treasurer of the debtor shall, during the period, cease to be owner by sale of 60 per cent of all the authorized capital stock, shall die within the period, or shall be adjudged a bankrupt, (6) etc.

It was further stated that the net earnings of the company had been as follows: 1916, over \$300,000; 1917, over \$90,000; 1918, over \$54,000; 1919, over \$82,000; 1920, over 84,000; with a loss in 1921 of over \$334,000.

The financial statement of the company estimated as approximately as possible is as follows:

Assets	
Cash	\$286.86
Accounts receivable (good)	192,808.94
Uncollected fire loss	48,014.74
Notes receivable	250.00
Negotiable bonds	2,654.30
Inventories (liquidating value)	225,000.00
Real estate (no equity)	
Furniture and fixtures (liquidating value)	25,000.00
Automobiles	2,000.00
Investments	216,000.00
	\$712,014.84

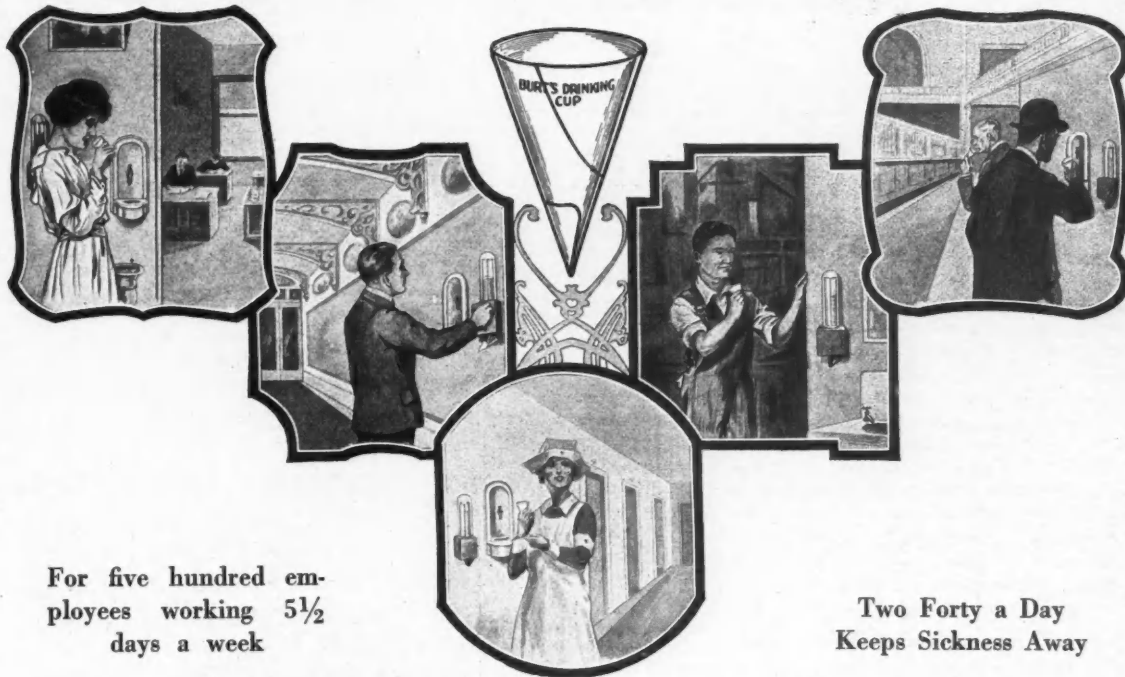
Liabilities	
Trade payables (net)	\$342,202.81
Notes and acceptances (net)	466,587.66
Accrued items	29,115.43
Overdraft	4,657.86
Due officer	15,427.00
Contingent liabilities absolutely payable	35,000.00
	\$892,990.76

Future of the Company

The Gatti-McQuade Company has always made money in the past and under the same supervision of its able executives should be able to prosper in the future now that the most trying time in all the history of the paper trade is over. It is significant that the creditors have the utmost faith in the ultimate working out of all present difficulties and by their unanimous action they not only show the bigger and better spirit that exists throughout the trade but appreciation for interests that are temporarily embarrassed in spite of the utmost in honesty and sound policy by reason of circumstances beyond their control.

Provincial Company Erecting New Mill

Work was started this week on the new book mill of the Provincial Paper Mills Company at Port Arthur, Ont. The contracts have all been awarded, J. C. Trimble of Toronto having the work for the building. The mill will be completed by May of next year and will be equipped with one 146 inch book machine, while there will be room for the installation of a second unit when required. The cost will be about \$1,500,000. It is understood that the Port Arthur Shipbuilding Company has been given the contract for the paper machine, which will have a capacity of about thirty tons a day. The Provincial Paper Mills Company, of which I. H. Weldon is president and S. F. Duncan, secretary, are the largest producers of book papers in Canada with mills at Thorold, Georgetown, Mille Roches, and a sixty ton sulphite mill at Port Arthur, which has been in operation for several years under the management of A. G. Pounsford. Bonds were recently sold to provide the revenue for the new construction. The main market for the new book mill at Port Arthur will be Western Canada.



For five hundred employees working 5½ days a week

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Handsome Profits for You Saving Employers Sick Payments

who are glad to pay you \$2.50 per thousand or \$2.40 a day to keep epidemics away from 500 employees, through the purchase of Burt's Drinking Cups.

the prevalence of grippe, influenza, quinsy, pneumonia, or just bad colds—all known to be spread through the use of common drinking cups and fountains, with their lip touchers and mouth washers at times of low water pressure.

Now is a particularly good time due to

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Made of finest white paper for the purpose.
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 No danger of soiling inside when opening—they're open.
 Trebly reinforced, so won't close in hand.
 Fit the hand.
 No wax to make drink taste.

Will stand hot drinks.
 No bottom to unexpectedly drop out.
 Or to invite setting aside for re-use.
 Have ample capacity.
 They add enjoyment by looking clean.
 Price is surprisingly low.

Better Write for Territory at Once

for these wonderfully low-priced cups with their dozen points of superiority and their new dispenser have been remarkably successful in this country, although only recently introduced.

Paper merchants will be given every selling aid and backed by a well established company—known all over the world.

F. N. BURT COMPANY, LTD.

Paper Cup Division
 Buffalo, N. Y.

Obituary

Robert W. Evans

CHILlicothe, Ohio, March 27, 1922.—Meade employees and the many friends of Robert W. Evans were deeply grieved to learn of his sudden death, Saturday evening, March 4, at 6.40 o'clock, following a brief illness with pneumonia.

Mr. Evans had been ill at his home at 158 North High street, Chillicothe, Ohio, for only a few days previous to the time of his sudden death, which came as a distinct shock to his many friends both in the mill of the Meade Pulp and Paper Company, where he was at the head of the chemical department, and in the city.

Mr. Evans was one of the most universally liked and respected of the younger men of his community. He was a member of the Technical Association of the pulp and paper industry. He was clean, upright and honorable in all his dealings, always faithful in whatever duty he undertook, with a strong sense of responsibility, and a young man of the highest principles. His loss was a matter of deep regret to all of his business associates and to his many warm personal friends—which he numbered by the scores.

Mr. Evans is survived by a widow and two small children, and also by his mother and four brothers, to whom the sympathy of the trade is extended in their great loss. As a last mark of respect to the deceased, the main office at the Meade Mill was closed on the afternoon of the funeral from 2 o'clock until 3.30, and the whole office force attended the services at the church in a body.

Young S. Walter

Young Singleton Walter, 41 years old, of 205 Ocean avenue, Flatbush, vice-president and treasurer of Clement & Stockwell, paper merchants, of 75 Beckman street, Manhattan, died Sunday of last week at his country residence, 144 Washington avenue, Neponsit, Long Island.

Mr. Walter was born in Mauch Chunk, Pa., the son of Alfred and Janett Walter. He received his early training at the Montclair Military Academy in Montclair, N. J., and graduated from the University of Pennsylvania in the Class of 1901. He had been a resident of Brooklyn nearly 20 years, was an all-around athlete, and a member of the Crescent Athletic Club, and of the Montauk Club. He is survived by his wife, Mrs. Anna Clement Walter, a daughter of the late James B. Clement, and two sisters, Mrs. Edward Steiner, of Boston, Mass., and Mrs. Leon Kimberly, of Manhattan.

Perpetual Inventory on Store's Control

WASHINGTON, D. C., March 22, 1922.—The perpetual inventory, or stores control system, is strongly urged by the Fabricated Production Department of the Chamber of Commerce of the United States as a better method in manufacturing establishments than the annual physical inventory, with its general disorganization and shutting down of the plant.

A practical treatise on the subject, which has just been issued by the Department under the title of "Perpetual Inventory or Stores Control," goes at length into the advantages of perpetual inventory and carries a series of illustrative forms.

Doing away with the annual inventory of materials is only one of a number of benefits derived from the system as set forth by the Department. Of this particular boon, it says:

"The perpetual inventory test is an important link in a chain that makes less frequently necessary the burdensome and often inaccurate annual physical inventory. The annual physical inventory entails a general dislocation of plant and frequently a shut-down lasting as long as three to seven days; and the results are not dependable. Hence the desirability of eliminating the annual physical inventory as far as possible.

"This is accomplished by independent checking of the material indicated as on hand on the perpetual inventory and bin tag records through a physical count of selected items of stores, and noting and correcting any discrepancies between stock actually on hand and the quality shown by the bin tag and perpetual inventory records. These inventory tests are made periodically and systematically, preferably at times when the material selected is lowest, and the attempt is made to cover each item of supply at least once a year and important items oftener. It is possible by these tests, as supplementary to the bin tag and perpetual inventory records, to secure an accurate count of material without the burdensome annual inventory."

Copies of the pamphlet may be had in limited quantities free of charge from the Chamber of Commerce of the United States, Mills Building, Washington, D. C.

On 29,000 Mile Tour of the Orient

SAN FRANCISCO, Cal., March 22, 1922.—C. J. Bastedo, sales manager of the Paper Box Board, Fiber Shipping Case and Carton Division of the Paraffine Companies Inc. of San Francisco, re-



C. J. BASTEDO

cently sailed from Seattle on a 29,000 mile business trip through the Orient for the purpose of extending the company's trade relations. His mission will require eight months' travel taking him to most of the Company's long and regularly established offices throughout Japan, China, India, Burma, Straits Settlements, Ceylon, French Indo China, Dutch East Indies, Australia, New Zealand, etc.

Julius Seidel Co. Opens Building Paper Dept.

ST. LOUIS, Mo., March 27, 1922.—A building specialties department by the Julius Seidel Lumber Company has been opened, with a view of serving the lumber yards of St. Louis and vicinity with quick deliveries and shipments of such commodities as wall board, roofings, waterproof and insulating papers, sheathings, etc.

This department is under the management of Claude L. Dans who has been identified with the building material trade of St. Louis for the past fifteen years, having been manager of the building materials department of the Graham Paper Company for a number of years, leaving that position to open a district sales office for The Beaver Board Companies.

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Glazed and Unglazed Newsprint

M. G. and Unglazed Kraft No. 1

M. G. and Unglazed Sulphite

Pure Grease Proof

Unglazed Imitation Parchment

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Sole Agents in the U. S. A. for:

Fernstrom & Co., A.-B.

(General Paper Exporters)
Stockholm, Sweden

Follum Traesliperi

(Annual production 12,000 tons printing papers)
Honefoss, Norway

Trade Marks Department

CONDUCTED BY NATIONAL TRADE MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to paper and pulp field pending in the United States Patent Office which have been passed for publication and are in the line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister building, Washington, D. C., or Bush building, 130 West Forty-second street, New York, trade-mark specialists.

As an additional service feature to its readers, the PAPER TRADE JOURNAL gladly offers to them an advance search free of charge, on any mark they may contemplate adopting or registering.

STAMSO in white letters upon black diamond—No. 158,059. The Stamsocott Company, Incorporated, Hopewell, Va. For paper pulp.

KANT TEAR on rim of circle with picture of feather passing through circle and word **FEATHER** thereon and word **KRAFT** on lower rim of circle—No. 156,036. Victory Bag and Paper Company, Marinette, Wis. For paper bags.

CAPI—No. 149,285. C. A. P. Ivens, Nymegen, Netherlands. For photographic developing papers.

ANGORA—No. 146,535. Marshall Field & Company, Chicago. For toilet paper.

ORANGE BLOSSOM—No. 158,807. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

CAMEL—No. 158,661. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

GLENWOOD—White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper. No. 158,660.

RED MILL—No. 158,659. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

LUXURY—No. 149,968. Linton & Scott, New York, N. Y. For toilet paper.

FLAVORSEALED on white panel across two white circles upon black background and words "WRAPPING PAPER" below. No. 156,993. Graham Paper Company, St. Louis, Mo. For wrapping paper.

FANCIFUL picture of girl smelling a paper with one hand and holding a rose in the other within an oval wreath with words "ESSENCE DE L'AME" at top. No. 151,313. Essence De L'Amé Perfume Company, Inc., New York, N. Y. For perfumed paper, writing paper, envelopes and visiting cards.

HOME TOWN—No. 158,943. New England Stationery Company, Boston, Mass. For stationery—namely, letter paper, envelopes and writing tablets.

SHAKESPEARIAN—No. 158,944. New England Stationery Company, Boston, Mass. For stationery—namely, letter paper, envelopes and writing tablets.

W. & T. Co., Inc. as monogram in white letters upon a black shield—No. 149,877. Wallace & Tiernan Co., Inc., Newark, N. J. For textile and paper bleaching apparatus.

OMNIGRAPH—No. 156,799. The Omnigraph Company, Des Moines, Ia. For printing machines, address printing machines, parts of printing machines, paper cutting machines, paper handling machines, inking devices for printing machines.

SONCO—No. 141,911. J. Meyers Stationery and Printing Company, Inc., New York. For legal paper, letter paper, writing pads, notebooks, blank books, rubber or rubber composition erasers, lead pencils, and school rulers.

News of the Miami Valley

[FROM OUR REGULAR CORRESPONDENT.]

DAYTON, Ohio, March 27, 1922.—George Challes, of the Riordon Company, Montreal, Que., is visiting among the mills in the Miami Valley this week.

P. A. Harris, of St. Louis, Mo., has accepted the position of general manager of the Aetna Paper Company of Dayton, Ohio, and of the Howard Paper Company of Urbana, Ohio.

Z. W. Ranck, president of the Crystal Tissue Company, Middletown, Ohio, is vacationing in California.

Recent Incorporations

B. & H. PAPER BOX CORPORATION, Manhattan, New York. Capital, \$5,000. Incorporators: M. and R. Bookspan, N. Honigo. Attorney, S. Honig, 799 Broadway.

FRANC GRAHAM PAPER COMPANY, Manhattan, New York. Capital, \$15,000. Incorporators: J. and B. S. Franc and W. Graham. Attorney, M. C. Goldman, 7 Beekman street.

THE PULP PRODUCTS COMPANY, Kalamazoo, Michigan. Capital, \$100,000.

NATIONAL WALL BOARD COMPANY, San Francisco, California. Capital, \$100,000.

ROCHESTER BOX COMPANY, Rochester, New York. To make insecticides. Capital, \$50,000. Incorporators: C. P. H. Schoellkopf and E. Knapp. Attorney, G. F. Thompson, Middleport.

Typhotetæ Denies Charge of Monopoly

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 29, 1922.—The United Typhotetæ of America denies the charge of monopoly alleged in an amended complaint issued by the Federal Trade Commission. In answer to the complaint Nathan B. Williams, of Washington, D. C., attorney for the Typhotetæ, declares that its cost finding system has been approved by the Federal Trade Commission and is not a device to establish a uniform scale of prices in the printing industry nor that its standard price list has a tendency to suppress competition in the printing business or to create a monopoly in interstate commerce. Declaring that the United Typhotetæ of America is not a corporation carrying on business for profit within the meaning of the statute creating the Federal Trade Commission, the jurisdiction of the Commission over the United Typhotetæ, and its branch and affiliated local organizations, is denied.

Paper Secretaries Not to Attend Hoover Conference

The paper industry will not be represented in the trade association conference with Secretary Hoover, scheduled for April 12, because that is the week of the annual series of paper conventions to be held in New York City. Nearly every association in the paper industry will hold its annual meeting in New York City that week, and several on the day set for the Washington conference.

Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, the federation of associations of manufacturers, has wired Secretary Hoover telling him that while the paper industry is anxious to participate in the proposed conference, the fact that it comes during "Paper Week" will make it impossible for any of the secretaries to attend.

It is feared there is little chance of securing a postponement, although some of the best known trade secretaries in the American Association of Trade Secretaries are with the paper industry.

Franc-Graham Paper Co. Expanding

In order to handle increasing business with its usual efficiency the Franc-Graham Paper Company has leased the store and basement at 25 West Fifteenth street, New York, and will move thereto as soon as alterations are completed. To maintain the Franc-Graham brand of service has been an ever-growing problem with warehouse, manufacturing and office departments separated from one another, and now, to make for greater efficiency, they will all be assembled under one roof.

Announcements will soon be forthcoming of new lines being added, and sample books and price list are now in course of preparation. For about two or three weeks longer business will be conducted at the old address, 132 Nassau street. After April 1, the Franc-Graham Paper Company will be located at 25 West Fifteenth street.

**GROUND WOOD
CHEMICAL PULPS**

PERKINS-GOODWIN CO.
NEW YORK

PAPER

ALFRED LEEDS, President
KARL BECKER, Vice President

ERNEST R. COLLINS, Secretary
EDWARD M. MILLER, Treasurer

Becker Paper Corporation

350 Madison Ave., New York, N.Y.

317 Main Street, Springfield, Mass., Branch Office for New England States

Dealers in All Grades of Paper

SPECIALISTS IN

**BOOK PAPER, GLASSINE and EMBOSSED
GLASSINE PAPERS**

Exclusive Distributors for

**WESTFIELD RIVER PAPER COMPANY
RUSSELL, MASS.**

PRACTICAL QUESTIONS AND ANSWERS FOR MILL MEN

A Department for the Solution of the Troubles, Large and Small, That Are Encountered by the Workers in the Mills in the Course of Their Duties in Making Paper and Pulp — All Mill Men Are Invited to Send in Both Questions and Answers—A Free Exchange of Ideas Is Desired—By Active Co-operation This Department Can Be Made a General Clearing House for Information in Regard to Practical Paper Making.

Corrugation of Calendar Rolls

QUESTION No. 2558.—We will be pleased if you can give us some information in your "Practical Questions and Answers" column in your next edition relative to the corrugation of calendar rolls in the making of water-finish papers.

We have considerable trouble with the rolls on which the water is applied regarding this corrugation. What we mean by corrugation is, the rolls become ridged all the way across, as well as entirely around the roll, and this causes the roll to mark the paper. In fact, if we were not to change it this condition would become so bad that it would cut the sheet in two.

In this connection we have done everything imaginable in order to overcome this difficulty, but thus far have not been successful.

Any information you may give us as to what causes this corrugation, and also how to remedy it, will be very much appreciated. We also find we have more trouble along this line in the winter than during the summer.

ANSWER No. 2558.—W. O. Davis, general manager of the Susquehanna Pulp and Paper Company, Northumberland, N. H., writes as follows: Replying to question No. 2558 referring to calendar rolls that become corrugated when making water finished papers. I had some trouble in the past of that nature which was overcome by changing the so-called water roll as I found that the chill was gone from the roll. As a large amount of size and alum is used in water finished papers it acts as a continual grind, therefore the chill is ground off. By using a new roll I found that our troubles were practically over. I have worked on water finished papers for about thirty years and have followed the advice that I am forwarding very successfully.

Waste in Distribution

Any improvement in distributive methods will have as its ultimate result the elimination of waste, in the opinion of Alvin E. Dodd, manager of the Domestic Distribution Department of the Chamber of Commerce of the United States, as expressed before the Editorial Conference of the New York Business Publishers' Association at a recent meeting here.

Mr. Dodd explained that his department is making a study of the waste in distribution and in doing so has outlined "seven questions," not unlike the seven deadly sins, which must be answered before the solution of the problem is found. The questions are:

"What are the stocks of certain selected commodities produced in each month of the year, by quantity?"

"What are these stocks in suspension at the end of each month, by quantity?"

"What are these stocks which enter into consumption each month, by quantity?"

"What is the average price received by the producer for each selected commodity each month?"

"What is the average price paid by the retailer for each of these commodities each month?"

"What is the average price by the consumer for each of these commodities each month?"

"What is the ratio between expenses and profits in each spread each month?"

"There is at present no answer to any of these questions, except in a very few commodities, which can be relied upon as even approximately correct; and even in these few the answers are open to more or less doubt. Yet every one of these answers is of vital importance to business men who cannot expect stabilization in any material respect until the answers have been secured and their significance understood.

"It is the only effective guide to balanced production and distribution. It is the only means for accomplishing constant production and uninterrupted employment. Its results would be felt by every human being in the country from the individual owner of the largest factory down to the humblest worker in the field."

Raw Paper Materials of East African Coast

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 27, 1922.—The scarcity of paper and the abundance of suitable raw materials warrant consideration of the prospects for the local manufacture of pulp, according to an article appearing in *Industrial South Africa* of recent date. Since the erection of complete paper mills has begun in this country the raw materials of the east coast belt are of especial importance. The area in which the raw materials are found extends from the Transkei to territories in the southeast as far as Beira, with Pietermaritzburg about at its center. This belt contains vast resources of Andropogon, as the various species of grass are called, as well as wattle, wood, and fibrous products. The grasses known as tambookie, papyrus, and dodo, according to a careful estimate, alone yield about 6 tons per acre, and vary from 5 to 16 feet in height. There are altogether in the native territories about 100 square miles of these grasses, which would furnish thousands of tons annually for paper manufacturing.

Water for power, transport, and washing the pulp is available in this section, as is also fuel. Howick Falls, with its hydroelectric power plant and its proximity to Durban, is regarded as an ideal location from the standpoint of power and transport facilities.

The grass itself cannot stand sea transportation, which, together with the fact that it cannot compete in international trade with esparto grass, which is of better quality and nearer to Europe, makes it necessary that it be converted locally into pulp, if it is to be utilized. Cheap labor, Zulu and Indian, is available for the purpose. A small experimental plant should first be erected in order to test the market value of the product.

Ample Supply of Coal in Holyoke

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 27, 1922.—Even though the threatened coal strike should develop, there is enough coal in Holyoke for industrial purposes to last until the latter part of July. P. J. Dowd, manager of the traffic bureau of the Chamber of Commerce, is authority for this statement.

Quality—it means more than price



“HAFSLUND BEAR” } Bleached
and **“FORSHAGA”** } Sulphite

“KLARAFORS” } Easy Bleaching
Sulphite

STRONG UNBLEACHED SULPHITE

“HURUM” and “BAMBLE”
Extra Strong Kraft; Bleached and Bleachable Sulphate

“EDSVALLA” and “DEJEFORS”
(50% Moist) (Dry)
White Spruce Ground Wood

Tonnages available on dock for prompt shipment

**THE
BORREGAARD COMPANY**

Inc.

200 FIFTH AVENUE,

NEW YORK CITY

New York Trade Jottings

Harry Caplin of the Union Card and Paper Company returned Tuesday the 21st from a three weeks' trip to California.

W. M. Wilkenson, sales manager of the Union Sulphur Company, returned Saturday from a three days' trip to Montreal.

The American Paper and Pulp Association is arranging to have an exhibit of paper in the making at Sloan's School, Indianapolis.

George M. McKee, president of the Canadian Pulp and Paper Association and president of the Donnacona Paper Company, is in town for a few days this week.

The moving picture films distributed by the American Paper and Pulp Association were used at a meeting of the employees of Carthage, N. Y., last Wednesday evening.

George J. Hoffman, representing the paper department of Seggerman Brothers, Inc., 93 Hudson street, New York, importers and exporters, is on a business trip through the West.

J. A. Carpenter of the Kansas City Paper House was in New York for the first of the week and will stay on in the East until after the Paper Convention to be held April 10 to 13.

T. J. Burke, secretary-treasurer of the Cost Association of the Paper Industry, attended a meeting of the executive committee of the Cost Association at Springfield on Monday, March 27.

The adjourned meeting of the creditors of the Gatti-McQuade Company will be held Monday, April 3, 1922, at 2.30 p. m., at the assembly room of the Merchants' Association, 233 Broadway.

The Eddy Paper Company has established Eastern sales offices at 135 Broadway, where inquiries for coated and plain cardboard, blanks, bristols, etc., may be addressed. Telephone Rector 9957-8-9.

A. B. Recknagel, secretary of the Empire State Forest Products Association, visited the offices of the American Paper and Pulp Association during the week and discussed the woodland situation.

The A. P. W. Paper Company, 200 Fifth avenue, is conducting an extensive selling campaign of its line of Bob White paper. The product is being advertised by the use of cardboard Bob Whites displayed in the 210 Sheffield Farm Stores.

The Union Card and Paper Company has improved its regular line of Deerlake wedding paper with the addition of a panel sheet. A sample book will be issued in the near future showing the new line of Coinage bond in white and eight colors.

A New York salesmen's luncheon was held last Wednesday noon at the Arkwright Club at which plans for the salesmen's convention to come April 11 were discussed. Congressman Dan A. Reed of Dunkirk, N. Y., will be the speaker at the salesmen's banquet.

The American Paper and Pulp Association furnished the slides used last week in teaching chemistry to the students of the high school at Abington, Mass. The slides this week were provided by the American Writing Paper Company and showed the manufacture of fine paper.

The C. L. LaBoiteaux Company, distributor of boxboard, has distributed to its clientele a celluloid slide rule box board gauge that is probably the only gauge of its kind ever produced. It is

simple in operation and should be of considerable service to paper box manufacturers.

O. M. Porter, secretary-treasurer of the Woodlands Section of the American Paper and Pulp Association, is to take a leading part in a forest conservation play to be given in the near future at the Selwyn Theatre under the auspices of the New York Federation of Women's Clubs. The play will be given in celebration of forest conservation week.

The annual meeting of the Union Bag and Paper Corporation will be held at its office, No. 15 Exchange place, Jersey City, N. J., Tuesday, April 11, at 11 o'clock, for the purpose of electing directors and for the transaction of such other business as may legally come before the meeting. The question of mortgaging its property as provided in the resolution of the Executive Committee adopted March 9, 1922, will be submitted to the stockholders at that time.

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., March 27, 1922.—Boston's outlook for "better business" received a slight setback this week when business in all branches fell off considerably. Once more the market is "spotty" with little demand for any particular line of goods.

March, according to many of the salesmen here, has always been a poor month, but in view of the good business which has prevailed during the past three weeks it was hoped that the customary quiet spell would pass by this year.

There is some improvement in the box business and fine grades, however. Prices remain about the same. Reports from industrial centers are encouraging and it is hoped that with the revival, in part, of allied trades affecting the paper business, that industry itself will share in the upward trend.

Printers continue to come into the market for small quantities. Some houses are doing a good catalogue business and concerns supplying stationery firms are getting good business.

On the whole the condition is not as bright as has been predicted by several leaders. "There still remains a lack of confidence in the market—in more respects than one—and before the paper industry in this section becomes anywhere staple at all many things of national importance must be adjusted," stated one of the best known men in the trade here.

A new plan of distribution of B. D. Rising Company's well known mill brands of bonds, ledgers, linens, covers and bristols has been completed.

From now on, A. Storrs & Bement Company, Carter Rice & Co. Corp., and Cook-Vivian Company will act as representatives for the complete line, and among the three all brands will be carried in stock in Boston in all popular items.

A unique and beautiful line of cover papers, with a metallic finish, is being put on the market by A. M. Collins Company. The exclusive New England agency has been awarded A. Storrs & Bement Company of Boston, Providence and New Haven.

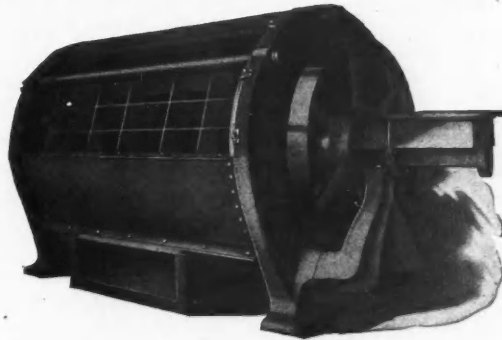
Kennedy Bag Co. Resumes Operations

GREENSBURG, Ind., March 27, 1922.—The local branch of the Kennedy Car Liner and Bag Company will resume the manufacture of paper bags in its factory on East Main street. It is the intention, according to J. E. Sosbe, the manager of the plant, to employ at least 25 girls at the outset and later as business improves to increase the number of employees.

The Kennedy Car Liner and Bag Company started a branch in this city several years ago. The company expended a large sum remodeling its building to render it suitable for manufacturing purposes and now has a fine plant completely equipped and ready for the resumption of operations.

“IMPCO” TAILING SCREENER FOR SCREENING GROUND WOOD TAILINGS

Very Low
Power
and
Upkeep Expense



Delivers
Rejections Free
from Good
Stock

ANOTHER UNIT OF OUR CLOSED SYSTEM FOR PULP SCREENING
WRITE FOR FULL DETAILS *CORRESPONDENCE A PLEASURE*

IMPROVED PAPER MACHINERY CO. **Nashua, N. H.**
SHERBROOKE MACHINERY CO., LIMITED, SHERBROOKE, CANADA

WHALEN SULPHITE PULPS

Made from the SITKA SPRUCE of BRITISH COLUMBIA
Noted for Fibre, Color and Strength

**SNOWWHITE
BLEACHED
SULPHITE**

**GLACIER
EASY BLEACHING
SULPHITE**

**SWAN
STRONG
SULPHITE**

As exclusive Sales Agents for all of the products of the WHALEN PULP & PAPER MILLS, LTD., in addition to stocks at the mills, we will carry large stocks of the above well-known brands in New York, thus insuring prompt deliveries.

Your inquiries addressed to any of our offices will bring prompt quotations by wire.

CANADIAN ROBERT DOLLAR CO., Limited
VANCOUVER, B. C.

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Robert Dollar Co., 15 Moore Street, New York, N. Y.
Robert Dollar Co., Harris Trust Bldg., Chicago, Ill.
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Robert Dollar Co.,
Shanghai, Hong Kong,
Hankow, Tientsin,
Ichang, Chungking, and
Pekin, China; Kobe,
Japan; Calcutta, India;
Manila, P. I.; Singapore,
S. S.

Editorial

Vol. LXXIV New York, March 30, 1922 No. 13
FIFTIETH YEAR

Foreign Trade Statistics

The figures for the exports of paper for January just sent out by the Department of Commerce have been delayed somewhat, which apparently is explained by the fact that the form of the statistics has been added to and changed in some degree. The new form is, on the whole, an improvement as figures are given of a number of varieties of paper and paper products that were not previously listed or were grouped in a general class. Among these entirely new listings or papers listed under new designations are included bible or India paper, cover paper, Kraft wrapping, writing paper except in papeteries, surface coated papers, tissue and crepe paper, toilet paper, bristols and bristol board, sheathing and building paper, cigarette paper and books, photographic paper, envelopes, indurated fiber ware and papeteries.

The exports of paper for January continued to show a heavy decrease, being valued for the month at only \$1,810,413 as compared with \$7,205,645 for January a year ago. The exports of paper for the seven months ending with January amounted to \$10,653,704 as compared with \$43,570,781 for January of last year.

The decrease was especially noticeable in news print, the figures for January amounting only to \$216,254 as compared with \$144,336 for December, and \$394,995 for January of last year. The exports of news print for the seven months ending with January amounted only to \$927,791 as compared with \$3,561,052 for the same period last year.

The exports of paper board and straw board for January amounted to \$140,856 as compared with \$163,444 for December and \$637,597 for January of last year. The exports of paper board and straw board for the seven months ending with January were valued at \$831,332 as compared with \$3,896,041 for the same period of last year.

The exports for the first time separately classified were for January: Bible or India paper, \$1,596; cover paper, \$18,054; Kraft wrapping paper, \$4,928; other wrapping paper, \$144,537; writing paper, except in papeteries, \$115,844; surface coated paper, \$47,721; tissue and crepe paper, \$36,129; toilet paper, \$32,886; bristols and bristol board, \$11,970; sheathing and building paper, \$7,244; cigarette paper and boards, \$24,065; photographic paper, \$182,751; envelopes, \$43,864; indurated fiber ware, \$3,919 and papeteries, \$6,158.

The exports of wood pulp for the first time subdivided into their natural classifications were as follows for January: Mechanical wood pulp, \$59; sulphite, \$89,200; soda, \$40,966; Kraft, no exports and other wood pulp, \$6,559.

The exports of paper and pulp mill machinery, also subdivided for the first time, were for January: Pulp mill machinery, \$27,413, and paper mill machinery, \$558,577.

The imports of paper and manufactures of paper for January were \$6,788,137 as compared with \$7,039,290 for December, and \$10,155,212 for January of last year. The imports of paper for the seven months ending with January were \$50,195,249 as compared with \$59,875,508 for the same period in 1921.

The imports of news print for January amounted to \$5,941,351 as compared with \$6,078,663 for December, and \$8,763,375 for January of last year. The imports of news print for the seven months ending with January were valued at \$43,392,546 as compared with \$48,931,227 for the same period last year.

The imports of rags for January were valued at \$538,402 as compared with \$340,322 for December, and \$240,310 for January a year ago. The imports of rags for the seven months ending with January were valued at \$1,573,893 as compared with \$4,813,148 for the same period of last year.

The imports of all other kinds of paper stock for January were valued at \$282,357 as compared with \$397,641 for December, and \$211,533 for January of last year. The imports of all other kinds of paper stock for the seven months ending with January were valued at \$1,691,445 as compared with \$4,276,420 for the same period last year.

The imports of ground wood for January amounted to \$470,310 as compared with \$656,481 for December, and \$804,476 for January of last year. The imports of ground wood for the seven months ending with January were valued at \$3,925,832 as compared with \$11,202,977 for the same period last year.

The imports of unbleached sulphate for January were valued at \$1,296,092 as compared with \$2,031,074 for December, and \$570,449 for January of last year. The imports of unbleached sulphate for the seven months ending with January amounted to \$8,283,268 as compared with \$12,182,974 for the same period last year.

The imports of unbleached sulphite for January were valued at \$2,142,323 as compared with \$2,685,986 for December, and \$1,905,898 for January a year ago. The imports of unbleached sulphite for the seven months ending with January amounted to \$10,925,366 as compared with \$26,933,054 for the same period of last year.

The imports of bleached sulphate for January amounted to \$89,813 as compared with \$75,383 for December, and \$29,364 for January a year ago. The imports of bleached sulphate for the seven months ending with January amounted to \$247,375 as compared with \$1,175,932 for the same period of last year.

The imports of bleached sulphite for January were valued at \$1,801,676 as compared with \$1,349,326 for December, and \$707,784 for January of last year. The imports of bleached sulphite for the seven months ending with January amounted to \$6,655,917 as compared with \$13,555,632 for the same period in 1921.

The Long Price List

The wisdom of the paper trade in "making haste slowly" in its consideration of the adoption of the long price list as urged by the United Typothetae of America, is beginning to be increasingly apparent.

In this connection Mr. William C. Ridgway, secretary of the National Paper Trade Association draws attention to a statement of the American Fair Trade League by its counsel, the Hon. Joseph Davies, formerly commissioner of corporations and chairman of the Federal Trade Commission which deserves the careful attention of every one interested in the matter of the long price list. This statement is as follows:

"In considering the findings and order of the Federal Trade Commission, issued March 3, 1922, against the Mennen Com-

pany, it is necessary to remember that the order is based upon both the 'Federal Trade Commission Act' and the 'Clayton Act.'

"Under the findings, as drawn, two elements are introduced into the situation: First—The respondent is found to have discriminated in price, regardless of quantity or quality, between the ordinary wholesaler and the co-operative, mutual, or buying club 'wholesale distributor'; and, Second—The respondent is found to have adopted this policy after protest by the regular wholesalers against respondent's previous policy of selling 'co-operatives' on 'wholesaler' terms, and with the approval of the regular wholesaler and upon the understanding that such wholesalers should push the sale of respondent's products more vigorously than those of other manufacturers.

"Although the law with reference to each of these issues is still in the formative state, the question of price discrimination standing alone is, it seems to me, one to be determined under the wording of Section 2 of the 'Clayton Act' inasmuch as that law was passed subsequent to the passage of the 'Federal Trade Commission Act,' and is presumed to express the legislative intent as concerns price discrimination standing alone.

"Any price discrimination, therefore, not based upon a difference in grade, quality or quantity, or upon a difference in cost of selling or transportation, would be permissive only if made in good faith to meet competition, or where the effect of such discrimination may not be to substantially lessen competition, or tend to create a monopoly.

"With reference to the second element, the Courts might well take the view that if the respondent's acts constituted a restraint contrary to public policy, and that this were accomplished by the respondent by co-operative methods, in conjunction with regular wholesalers, it would come within the purview of the recent decision of the Supreme Court in 'Federal Trade Commission v. Beech Nut Packing Company' and constitute an unfair method of competition, in violation of the 'Federal Trade Commission Act.'

"I do not agree with the suggestions which have been made from time to time that this order of the Commission, if sustained by the Courts, would make it compulsory upon the manufacturer to sell to a consumer in wholesale quantities at wholesale prices. The order carries with it the same or similar provisos contained in Section 2 of the 'Clayton Act,' expressly declaring that the order does not prevent discriminations made in good faith to meet competition or the selection of customers in good faith and not in restraint of trade. There is nothing in the existing body of law to compel a manufacturer to sell to a consumer at any price, if he chooses not to sell."

Secretary Ridgway states that until this decision of the Federal Trade Commission is reviewed by the Courts, the National Paper Trade Association, or its individual members, would be most unwise to ignore this ruling by adopting the long list method of pricing merchandise in any of its forms. Its application to a state of facts differing in any way from those on which it is based will undoubtedly be the subject of difference of opinion but, nevertheless, the Long List method cannot be adopted by the paper merchandising industry without serious risk of violating the law.

Seventh Annual Convention T. A. P. P. I.

Business meetings of the Technical Association of the Pulp and Paper Industry will be held in the Waldorf-Astoria, April 11 to 13, 1922, with special sessions on Tuesday morning and Wednesday afternoon, while the meetings of the standing committees under their respective chairmen will be held on Monday, April 10. The following is a partial list of the papers to be presented at the convention:

HEAT, LIGHT AND POWER:

Kurlander—Illumination of Paper and Pulp Mills.
Rogers and Darling—The Power Plant of a Paper Mill.
Williamson and Derry—Economizers.

SODA PULP:

Griffin—Some Factors Influencing Yield and Strength.
Collins—The Use of the Continuous Centrifugal.
Spence—Recovery and its Control.

GROUNDWOOD:

Baker—Relative Efficiency of Magazine and Pocket Grinders.
Meyers—Governors for Grinders.
Munro—The Freeness Test and Temperature.

SULPHITE-PULP:

Barsky—Sulphur in Sulphite Waste Liquor.
Genberg—Testing of Reclaimed Acid.
Wood—A New Idea in Chip Breaking.

PAPERS OF MORE OR LESS GENERAL CHARACTER:

Littlefield—Drying of Roofing Felt.
Jacobs—Development in the Use of Liquid Chlorine.
Seaman—Cotton Linters.
Carruth—An Analytical Method of Determining Wage Rates.
Baird—A System of Records to Maintain Uniformity of Basis Weights of Paper.
Bidwell—Hydrating Machinery for the Paper Mill.
Gilbreth—The Technical Man and the One Best Way of Doing a Job.

At the banquet at the Hotel Astor on Tuesday evening, April 11, 1922, Judge Charles F. Moore has consented to act as toastmaster. The principal speaker is to be Dr. Otis W. Caldwell, director of the Lincoln School, New York City, and the subject of his address is "The Scientific Mind." The entertainment features will be in charge of Frank T. E. Sisson.

Arrangements are being made to have the papers preprinted for use of members at the meetings in order to facilitate discussion. A full program of the arrangement of the convention session is being prepared and, it is hoped, will be placed in the hands of members at an early date.

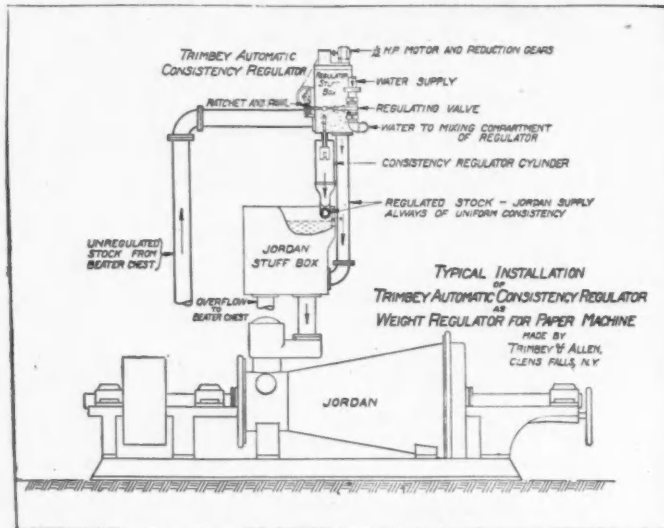
Critical Points In Pulp and Paper Company

The Bird Machine Company, of South Walpole, Mass., manufacturer of paper mill specialties, including Bird screens, Bird save-alls, Walpole screens, and carton filling and sealing machines has issued a small book about their business entitled "Critical Points in Pulp and Paper-making." The contents in ten chapters gives the story of the Bird Machine Company and information with regard to the application of its products in the manufacture of pulp and paper which should be of much interest to the trade.

Barton, Duer & Koch Open Book Dept.

WASHINGTON, D. C., March 27, 1922.—The Barton, Duer & Koch Paper Company, Baltimore and Washington, has opened a special book paper department which will be in charge of William H. Tapscott as manager. The company is selling agent for the Kimberly-Clark Company's brands of light weight catalog and standard weight book papers, also high grade English finish and eggshell books, Hamilton enamel, Aigrette enamel, Hingefold coated, Litho one side, etc.

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This is the machine that will regulate your paper stock to a uniform consistency, thus insuring **UNIFORM BRUSHING ACTION** at the Jordan. Given stock of uniform character and consistency going on to the wire you will get **UNIFORM WEIGHTS** and **UNIFORM RUNNING CONDITIONS**.

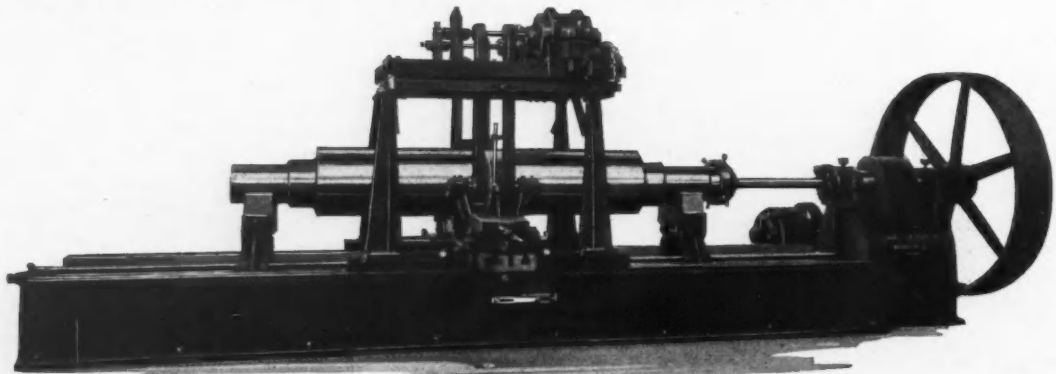
This regulator will also cause to be delivered at Beaters, Mixers or Bleachers, stock of a set, uniform consistency.

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Glens Falls, N. Y.

M. G. TIBBITTS, *Sales Manager*

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Section of the

Technical Association of the Pulp and Paper Industry



AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.



Conducted by W.G. Mac NAUGHTON, Secretary

CALCULATING THE POWER CONSUMPTION OF BEATERS*

By F. M. BOUVIER

The power consumption of a beater is an essentially variable quantity and depends on a certain number of factors, of which only the most important will be studied. We shall assume that the whole of the power absorbed is used up as follows:

- 1°—Raising the stock to the height of the backfall (W_1).
- 2°—Triturating the fibers (W_2).
- 3°—Circulating the pulp (W_3).
- 4°—Friction between the shaft and bearings (W_4).

I—Raising the Stock to the Height of the Backfall

To calculate the work done in this operation we must know the velocity of the stock in the beater. It can be measured directly; but it is advisable to be able to calculate it from theoretical principles to see if the circulation is as it should be. And, on the other hand, when designing a beater we have nothing but theoretical considerations to go by.

When the pulp is in the spaces between the bars of the roll it is carried around in a circular path and develops a centrifugal force which acts at the center of gravity of the portion of pulp under consideration and which depends on the velocity of the roll.

Suppose we have a body of weight P , traveling at n revolutions per minute, around a circle of diameter D , then the centrifugal force developed is

$$F = \frac{mv^2}{R} \dots \dots \dots (1)$$

in which $m = \frac{P}{g}$

v is the linear velocity and is equal to $\frac{\pi Dn}{60}$

R is the radius of the circle and equals $\frac{D}{2}$

Substituting in (1) we have

$$F = \frac{\frac{P}{g} \times \left(\frac{\pi Dn}{60}\right)^2}{\frac{D}{2}} = \frac{\pi^2}{g} \times \frac{PDn^2}{1800}$$

But $\frac{\pi^2}{g}$ is practically equal to 1 (g is evidently taken in meters, and therefore equals 9.81), so that the expression reduces to

$$F = \frac{Pdn^2}{1800} \dots \dots \dots (2)$$

(F and P being expressed in kilos and D in meters.)

The stock contained in the space between any two adjacent bars is subjected to the pressure of the surrounding medium. Assuming that the specific gravity of the stock is equal to that of water, and that the height of the stock in the beater above the bottom of the roll is h , we can then calculate the pressure p on the stock between any two bars if we know the dimensions of the spaces.

Let l be the width of the roll, and e the distance between two successive bars;

$$\text{then } p = 1,000 \text{ e.l.h.} \dots \dots \dots (3)$$

(p being expressed in kilos, and e, l, h in meters.)

Now if t is the thickness, in meters, of the stock between the bars, measured radially, the weight will be

$$P = 1,000 \text{ e.l.t.} \dots \dots \dots (4)$$

It is evident that the centrifugal force exerted by any given portion of the stock is balanced by the pressure to which it is subjected. Hence, substituting in (2) the value of P found in (4), we have

$$F = \frac{1000 \text{ e.l.t.D.n}^2}{1800} \dots \dots \dots (5)$$

and equating F and p we finally get

$$1000 \text{ e.l.h} = \frac{1000 \text{ e.l.t.D.n}^2}{1800}$$

or,

$$h = \frac{t.D.n^2}{1800} \dots \dots \dots (6)$$

$h, D,$ and n can be measured, so that we can calculate t from

$$t = \frac{1800h}{Dn^2}$$

But $n = \frac{60v}{\pi D}$, so that

$$t = \frac{1800h}{D \times \left(\frac{60v}{\pi D}\right)^2} = \frac{1800h}{60^2 \times v^2} \cdot \pi^2 D$$

* (Translated from *Le Moniteur de la Papeterie Française*, LII, 788-790, December 15, 1921, by A. Papineau-Couture.)

$\frac{1800\pi^2}{60^2}$ is approximately equal to 5, so that we finally have

$$t = \frac{5hD}{v^2} \dots \dots \dots (7)$$

It should be noted that the spaces between the bars will be more completely filled as D and h increase, while they will be less completely filled the higher the velocity of the roll.

We shall now calculate the amount of stock raised by the roll in unit time.

First, let us assume that the thickness of the layer of stock carried around by the roll is equal to the height of the bars; then the amount of stock carried per revolution will be

$$q_1 = \left(\frac{\pi D^2}{4} - \frac{\pi D_1^2}{4} \right) \times l$$

D and D_1 being the diameters of the rolls through the bars and through the spaces, respectively, and l the width.

As the height a of the bars is equal to $\frac{D}{2} - \frac{D_1}{2}$, we can write

$$q_1 = \pi \left(\frac{D}{2} + \frac{D_1}{2} \right) \left(\frac{D}{2} - \frac{D_1}{2} \right) l$$

$$= \pi \left(\frac{D}{2} + \frac{D_1}{2} \right) a.l$$

But $\frac{D}{2} + \frac{D_1}{2}$ is practically equal to d; and hence

$$q_1 = \pi.D.a.l$$

The amount of pulp carried per second will be

$$q_2 = \pi.D.a.l \cdot \frac{n}{60} = a.l.v \dots \dots \dots (8)$$

since $v = \frac{\pi D n}{60}$

To determine the value of q we must take into account the thickness of the bars, which we will assume to be evenly spaced around the roll. If N be the number of bars, x the combined width of a bar and space, and y the thickness of a bar, then the portion of the periphery actually used in carrying the stock is only $N(x - y)$; and to obtain the exact amount of stock carried per second, the value of q_2 found in (8) must be multiplied by

$$\frac{N(x - y)}{Nx} = \frac{x - y}{x}$$

so that we have

$$q_3 = a.l.v \cdot \frac{x - y}{x} \dots \dots \dots (9)$$

But the spaces are not completely filled with stock, and we must therefore replace a by t, which gives us

$$q = t.l.v \cdot \frac{x - y}{x} \dots \dots \dots (10)$$

q being expressed in cubic meters per second.

But from (7) we have $t = \frac{5hD}{v^2}$. Hence,

$$q = \frac{5hd}{v^2} \cdot l.v \cdot \frac{x - y}{x} = \frac{5hDl}{v} \cdot \frac{x - y}{x} \dots \dots \dots (11)$$

It is thus seen that an increase in the velocity of the roll causes a decrease in the amount of stock carried by it. Knowing the amount of stock passing under the roll per second, and also the capacity C of the beater (which can be measured), the time in seconds required for all the stock to pass once under the roll will be given by

$$S = \frac{C}{q}$$

If L is the developed length of the beater, the velocity of the stock in meters per minute will be

$$U = \frac{60L}{s} = \frac{60L}{C} = \frac{60Lq}{C} \dots \dots \dots (12)$$

If A is the width of the trough in meters, and B the height of the stock, the weight Q of stock which comes to the roll every second will be given by

$$Q = 1000.A.B. \frac{U}{60}$$

This weight must be raised through a height H over the backfall, and the power (in horsepower) required to do this work will be

$$W_1 = \frac{1000.A.B.U}{60 \times 75} H$$

$$= 0.222.A.B.U.H \dots \dots \dots (13)$$

in which A, B, and H are in meters and U in meters per minute.

II—Trituration of the Stock

The amount of power which must be supplied to the beater to do this work is of the greatest importance. The fibers in themselves do not offer any great resistance; but the roll must be sufficiently close to the bedplate, which results in a certain amount of friction between the two parts.

In order to make the calculations easier, we can consider the bedplate as a bearing having a diameter equal to that of the roll.

Let S be the area (in square centimeters) of the contact surface of the roll and bedplate;

p the pressure (in kilos per square centimeters) of the roll on the bedplate, which can be varied by suitable means;

f the coefficient of friction between the two parts.

The tangential force required to move the roll will then be $F = p.S.f$.

As the point of application of this force is at the circumference of the roll, the distance through which it moves in 1 second is evidently equal to the linear velocity of the periphery of the roll;

that is, it is equal to $\frac{\pi D n}{60}$. The work (in kilos) required per

second is therefore $T = p.S.f.v$ and the equivalent horsepower is given by the equation

$$W_2 = \frac{p.S.f.v}{75} = \frac{p.S.f. \pi D n}{75 \cdot 60}$$

$$= 0.0007.p.S.f.Dn \dots \dots \dots (14)$$

For any given beater S and D are constant, n can easily be measured, but p and f can vary.

The value of p varies according to the degree of beating and may be taken as equal to

- 0.45 kilos per square centimeter for hard beating
- 0.30 kilos per square centimeter for medium beating
- 0.15 kilos per square centimeter for light beating

As to f, it varies within wide limits, according to the nature of the stock, degree of beating, distance of the roll from the bedplate, etc. According to Kirchner, the coefficient has a value ranging from 0.1 to 0.25.

III—Circulation of the Stock

As the stock comes to the roll it is taken up in the spaces between the bars and acquires a velocity of v meters per second. It leaves the roll at this velocity, travels around the midfeather and finally comes back to the roll with a velocity v_0 , which is lower than v.

Now, the amount of work required to change the velocity of a body of mass m from v_0 to v is given by

$$T = \frac{m}{2}(v^2 - v_0^2).$$

We have already shown that the amount of stock which passes under the roll per second was

$$Q = 1000.A.B. \frac{U}{60} = 1000.A.B.v_0.$$

Hence

$$m = \frac{Q}{g} = \frac{1000.A.B.v_0}{g}.$$

The power (in horsepower) required to circulate the stock will therefore be

$$W_s = \frac{1000.A.B.v_0(v^2 - v_0^2)}{75g} \dots\dots\dots (15)$$

This shows that the power required for circulating the stock depends on the value of the factor $v_0(v^2 - v_0^2)$, so that W_s will be a minimum when $v_0(v^2 - v_0^2)$ is a minimum. If we consider v as constant and put the derivative of $v_0(v^2 - v_0^2)$ equal to zero, we shall have

$$v^3 - 3v_0^2 = 0$$

and
 $v\sqrt{3}$

$$v_0 = \frac{v\sqrt{3}}{3}, \text{ for which value } W_s \text{ will be a minimum.}$$

As v_0 never reaches this value in practice, every effort should be made to increase the speed of circulation.

IV—Friction Between the Shaft and Bearings

The total pressure on the bearings is made up of

- (a) the weight of the shaft.
- (b) the weight of the roll.
- (c) the weight of the pulley.
- (d) the tension of the belt.

If T is the total load on one bearing, and d the diameter of the shaft in meters, the power absorbed by friction is given by

$$W_f = \frac{T \times u \times d \times \pi \times n}{60 \times 75} \dots\dots\dots (16)$$

in which u is the coefficient of friction, which may be taken as 0.02 or 0.03, and W_f is given in horsepower.

V—Total Power

The total amount of power absorbed by the beater is

$$W = W_1 + W_2 + W_3 + W_4 \dots\dots\dots (17)$$

VI—Work Required for Beating the Stock

The power consumption of a beater is not constant during the whole of the time that the stock is being treated. For instance, during "breaking" or "defibering" we have

$$W' = W_1 + W_3 + W_4,$$

while for the "beating" proper we have

$$W = W_1 + W_2 + W_3 + W_4 = W' + W_2.$$

And, moreover, in the beating itself a light, medium, or hard brush may be given, and W_2 will vary accordingly. It is thus seen that W_2 is the only factor that makes W vary.

Suppose our beater is furnished with stock of such a consistency that on calculating we obtain the following figures:

$$W_1 = 3 \text{ horsepower.}$$

$$W_2 = \begin{cases} \text{light brush } 6 \text{ h.p.} \\ \text{medium brush } 9 \text{ h.p.} \\ \text{hard brush } 12 \text{ h.p.} \end{cases}$$

$$W_3 = 5 \text{ h.p.}$$

$$W_4 = 1 \text{ h.p.}$$

We shall now find the work absorbed in beating a flax pulp which is to be given the following treatment:

Defibering	0.5 hour
Light brush	1 hour
Medium brush	2.5 hours
Roll right down.....	4 hours

The power consumption for the various stages of the work will be:	
(3 + 5 + 1) h.p. for 0.5 hour	= 4.5 h.p. hrs.
(3 + 5 + 1 + 6) h.p. for 1 hour	= 15.0 h.p. hrs.
(3 + 5 + 1 + 9) h.p. for 2.5 hours	= 45.0 h.p. hrs.
(3 + 5 + 1 + 12) h.p. for 4 hours	= 84.0 h.p. hrs.

TOTAL, 148.5 h.p. hrs.

As the whole operation lasts eight hours, the mean power consumption will be $W_m = \frac{148.5}{8} = 18 \text{ h.p.}$

At times the notion of "mean power consumption" can be useful to a certain extent; for it can be used to determine the power of a motor for driving a set of beaters when we know beforehand that when some are working hardest the remainder will absorb a smaller and known amount of power.

VII—Influence of Consistency on Power Consumption

When the consistency of the stock is low, the fibers can move around one another very freely, and consequently v_0 will be lower. We have shown that the power required for circulating the stock

decreases as v_0 approaches the value $\frac{v\sqrt{3}}{3}$. It therefore follows

that the greater the consistency of the stock the smaller the amount of power required to circulate it. The following figures were obtained in testing an ordinary 60-kilo beater:

	Roll raised	Roll lowered
Water only	12.5 h.p.	22 h.p.
Beaten stock	9.5 h.p.	12 h.p.

[Error's NOTE: It would be advisable for American engineers to check the accuracy of the mathematical calculations given, and especially to check the practice used in modern beaters used in American mills against the theoretical calculation, after making the necessary changes of figures due to size of particular equipment. Having a theoretical basis established on the correct premises it would serve as a "bench mark" by which the measure of power efficiency of beaters could be compared.]

Program for Salesmen's Convention

The program for the annual convention of the Salesmen's Association of the Paper Industry has been practically completed, with Congressman Dan A. Reed of Dunkirk, N. Y., as the speaker at the annual dinner, his subject being, "Business and the Government."

The salesmen's convention will be held Tuesday, April 11, and after the annual address of the president, and the report of secretary-treasurer Laurence H. Sloan of the Standard Statistics Service of New York, will speak on "The Salesman as an Evangel of Good Business," followed by a representative of the Cost Association on "Cost and Selling." Herman L. Schamberg, managing director of the National Council of Traveling Salesmen's Associations, Inc., will be the last speaker before the noon luncheon, though there will be a round table discussion of conditions in the paper industry.

After luncheon Prof. Harry R. Wellman of the Amos Tuck School, Dartmouth College, Hanover, N. H., will discuss "Problems of Marketing in the Paper Industry," and will be followed by a representative of the Commercial Standards Council on "Does It Pay to Be Honest in Business?"

The annual dinner will be a ladies' night function, with dancing during the dinner and after the speaking. Every salesman's ticket will entitle him to bring a lady guest, and tickets for additional ladies can be secured.

THE PAPER MACHINE HOOD AS AN INVESTMENT

BY H. S. TAYLOR AND H. T. BAKER, MANAGEMENT ENGINEERING AND DEVELOPMENT CO., DAYTON, OHIO.

In the operation of modern high speed paper machines the removal of water evaporated from the sheet must be seriously considered. In the earlier days with slow running machines the moisture content was not of sufficient volume to require special study for its removal, but with production increasing 100 per cent or more, the volume of moisture has reached such proportions that a serious condition within the room is at once noticeable unless the moisture laden air is removed and its volume replaced with air of a proper degree of temperature and humidity.

If the removal of this water through the medium of air was of interest only as regards its mechanical removal, the study of the situation would end with the installation of positive and exhaust fan equipment of proper capacity for the volume of moisture to be removed, but the fact that the air carrying this moisture must be kept above the dew point adds an expensive element to our study, namely, heat units, which must be supplied to hold a temperature that would otherwise be lowered due to the absorption of moisture, and we all know that heat is a most expensive item, whether in the paper mill, home, or elsewhere.

That the removal of moisture content from a sheet of paper on the dryers is a large item of expense is perfectly understood by all paper manufacturers, but the fact that the proper removal of this moisture from the room itself is also a serious item of expense is not so clearly understood, and with good reason, for until very recent years very little attention has been paid to the subject, and even today with many satisfactory systems of removal in operation, cost figures for such removal are practically impossible to find.

The Cost in Dollars and Cents

The purpose of this article is to show in dollars and cents what it should cost for removal of moisture after evaporation from the sheet through a system that, in addition to the actual removal, will supply the proper volume of incoming air of a degree of temperature and humidity that will maintain conditions within the room that are suitable for workmen and structures.

There can be little doubt in the mind of anyone familiar with machine room operation that the system of removal should be so arranged that vapor arising from the sheet on the dryers be conducted to the outside air by the shortest and most direct route and with the least possible delay, and furthermore, that the temperature of the water evaporated from the sheet should be held as near the boiling point as possible throughout its passage to the outside air, this drop demanding an additional volume of heated air to prevent the dew point being reached and resulting drip.

From a number of tests the average temperature of the vapor just over the surface of the dryers is from 115° to 120° F. and 90 per cent humidity, whereas for proper working conditions air should not be above 80° F. and 50 per cent humidity for at least 8 feet above floor level, and in that there is but a few feet difference between this 8 foot level and top of dryers there immediately arises the problem of holding a temperature head of from 35° to 40° the difference between the temperature over the dryers and just outside this dryer section. This 80° temperature must not be increased, and it is therefore evident that unless some means are taken to form a separation, the temperature over the dryers must be lowered considerably to prevent a rise in temperature above 80° at working levels. As the lowering of the temperatures over the dryers means additional heat units, the first stage of our problem centers about a means for holding a temperature over the dryers as far above the outside temperature as possible.

To hold this high temperature over the dryers and separate it from the lower temperature on either side, one would immediately suggest enclosing the areas just above the dryer section, and through

this enclosure conducting the hot vapor to the outside, thus preventing this vapor from coming in contact with the working temperature outside the machine. This, of course, is a common practice in paper machine rooms, a hood forming the enclosure and heated vapor being conducted from this hood through vents to the outside air. With a properly designed hood installed the temperature head can be held to the best advantage, and it is self evident that the less conductive the hood walls are, the greater the head that can be held; a saving in heat units that must otherwise be supplied. This non-conductivity of the hood structure is again essential to prevent the escape of heat from within to the lower outside temperature in sufficient quantity to lower the temperature of the vapor within, and thus cause drip from the under side of hood, a condition noticeable under many paper machine hoods, that is due to the lowering of the temperature within through insufficient insulation of hood structure.

Use of Hood Decreases Expense

The paper machine hood, however, cannot be said to be popular throughout the industry, there being many manufacturers who greatly prefer to do without it, no doubt for reasons of interference with access to dryer section through overhead cranes or trolleys. As we will show hereafter the removal of water from the room and replacement with dry air can be accomplished without the hood as well as with it, but we will also show that the cost of removal of water and holding working degrees of temperature and humidity are greatly increased in case the hood is not installed. In other words, the manufacturer, providing his machine room is kept in proper condition, expends each year a sum of money that is far in excess of any benefit that he can receive by seeing his room clear of what he may call an unsightly structure over the dryer section. The following figures indicate what this saving would be, and the data upon which they are founded has not been assumed, but is from actual tests taken in a number of different machine rooms.

An Example

For example let us take a machine room wherein are installed two paper machines each with a production of 60 tons per twenty-four hours, or a total production of 120 tons. This production is equivalent to 240,000 pounds per twenty-four hours, 10,000 pounds per hour, and 167 pounds per minute.

The moisture content removed through evaporation within the dryer section for different grades of paper varies from 1½ pounds to 2½ pounds of water per pound of paper. For the two machines in question we will take this content at 2.2 pounds, making a total of 264 tons of water to be removed per twenty-four hours, or 367 pounds per minute. In other words the water that must be removed from this machine room each twenty-four hours would fill a tank 50 ft. square to a depth of 3.4 ft., a considerable quantity, if one visualizes it in such surroundings.

As this 367 pounds of water per minute must be removed in the form of moisture-laden air, we must next consider the volume of in-coming air that must be continuously supplied as the removal agent; and also the number of heat units that must be introduced with it, to compensate for the drop due to saturation and hold the mixture above the dew point. There is a point of difference, however, in that as the weight of water to be evaporated from the sheet must be constant per ton of product, so should the volume of air supplied be constant irrespective of outside temperatures, but the number of heat units to be introduced with this incoming supply must depend upon its initial temperature; thus with the outside air at a low temperature a greater number of heat units must be intro-

duced than for a summer day when the outside air is at a much higher degree.

Hood Over Machine

With the machine installation as described, producing 120 tons per twenty-four hours, we will assume an outside temperature of zero degrees; 2.2 pounds of water per pound of paper is equivalent to 2,570,000 grains of moisture per minute that must be removed. With a hood over machine, air will leave at 115°-90 per cent humidity, each pound of air at this temperature carrying 425 grains of moisture and containing 90.5 B. t. u.; 425 grains per pound compared with total of 2,570,000 grains per minute calls for 6,040 pounds of air, and at 90.5 B. t. u. per pound, 546,000 B. t. u. per minute must be supplied. From tests it is shown that about $\frac{1}{2}$ B. t. u. is given off from dryers for each grain of moisture evaporated, a total of 430,000 B. t. u. supplied within machine room. This number deducted from 546,000 leaves 116,000 B. t. u. per pound of air, this air being delivered in the room at a temperature of 80° F.

6,040 pounds of air at 80° is equivalent to 82,500 cubic feet per minute, approximately 700 feet per minute per daily ton. This supply, however, provides only for the dryer section, and we must add an additional supply to take up the moisture arising from wire, showers and hose connections at wet end, and from tests we find that 25 per cent added will remove all moisture and also provide for roof insulation. This additional quantity would increase the supply to 104,125, or, say, 108,000 feet per minute, equivalent to 900 feet per minute per daily ton.

Heat units to be added from outside sources with this additional supply are increased from 116,000 to 150,000, and to replace heat loss through walls and roof with an outside zero temperature, 20,000 additional should be added, or a total of 170,000 B. t. u. per minute, equivalent to 10,500 pounds of steam per hour, or 305 boiler horsepower at 34.5 pounds per hour, with outside temperature at zero.

Without Hood Over Machine

So much for an installation with a hood. For one without a hood the limiting feature is the temperature and humidity of the moisture-laden air under roof slab, this moisture being carried to a great extent throughout the entire room. Under this condition temperature over dryers under roof slab must be reduced from 115°-90 per cent to about 105°-80 per cent humidity, a well-insulated roof permitting 105° to be carried and mixture held above the dew point.

Air at 105°-80 per cent humidity will carry 282 grains of moisture and 67 B. t. u. per pound, with a total of 2,570,000 grains at 282 grains per pound; 9,120 pounds per minute of dry air is the theoretical supply indicated, but in that without a hood the removal process is almost entirely one of absorption, the entire volume of this theoretical supply cannot come in contact with the moisture. An additional volume must, therefore, be added, and it has been found that with the theoretical supply representing $\frac{2}{3}$ of the total demand the best results are obtained; 9,120 pounds will, therefore, represent $\frac{2}{3}$ of the supply demanded for dryers alone; 9,120 pounds at 67 B. t. u. per pound, or a total of 613,000 B. t. u., therefore, represents $\frac{2}{3}$ of air supply. The 2,570,000 grains given off from the dryers will contain 430,000 B. t. u. as in the case with hoods, the difference to be supplied from outside sources will be 183,000 B. t. u. per minute for $\frac{1}{3}$ supply, equivalent to 19.9 B. t. u. per pound of incoming air, or at a temperature of 81°. With 9,120 pounds representing $\frac{2}{3}$ supply, total supply will be 13,700 pounds, containing a total of 274,000 B. t. u., and equivalent to 187,000 cubic feet, or 1,560 cubic feet per daily ton. As in the case with hoods, 25 per cent must be added for wet end and heating effect, making a total of 235,000 cubic feet per minute, or 2,000 feet per daily ton.

Heat units to be added from outside sources with this additional

supply are increased from 274,000 B. t. u. per minute to 340,000 B. t. u. per minute, equivalent to 610 B. H. P. in place of 305 for hoods, a difference of, say, 300 B. H. P.

Therefore, for a day with outside temperature of zero, 300 B. H. P. would represent at 30 pounds per hour 216,000 pounds of steam, and at say 80 cents per 1,000 pounds, represents an expenditure of \$172.80 per day, this figure representing cost of removal with hoods, and also the additional cost if hoods are not installed. On a yearly basis an average temperature of 40° F. can be taken for Maine, northern New York and southern Canada, 40° F. representing 150 continuous B. H. P., or \$25,920 per year, expended for heat to replace hoods. Considerably less than half this amount would buy and install two hoods, and no better saving on an investment can be shown elsewhere in the mill.

The system of removal on which the above figures are based are of standard equipment, including positive blower equipment with heating coils for replacement air and exhaust fans for removal, these exhaust fans in case of installation with hood being installed in vents, and without hood in roof or wall openings. It may be said that costs can run much in excess over those above tabulated, and without doubt do run higher in many machine rooms where either volume of delivery air is greater than necessary, requiring an additional quantity of heat units, or where a system of direct radiation is used to protect roof slab, providing room is kept dry. We must also state that for figures given above, building walls and roof must be of good construction, without excessive glass area, and roof well insulated, otherwise heat losses through walls and roof will be increased, and additional heat units must be introduced with incoming air to compensate for loss, thus increasing the cost of removal.

Briner Economizer System

A question may be brought up here with reference to a system of heat conservation now on the market, known as the "Briner Economizer." This system being designed to transfer heat in the outgoing vapor to the incoming air supply, thus greatly reducing heat units that must be supplied through outside sources, and without doubt this system will show excellent savings, but it will not lower the differential between cost of removal with and without hoods, and this element of cost is that referred to in this article. This economizer system, as with any similar system, must depend to a great extent on hoods for its success, and without doubt the manufacturers will agree in the statement that the differential of removal with and without hoods will be greater with their system than without it, although showing an extremely attractive saving in either case.

No Distinct Disadvantages

In as far as the paper machine hood is concerned, any distinct disadvantages will be difficult to find in a properly designed installation. Hood may be so built to allow access to any part of the dryer section and vents so built that an overhead crane will have free travel to any part of the room. It is true that it would be much more difficult to remove a dryer with a hood installed, but the actual removal of a dryer only happens once in years, and should this occasion arise the section of the hood over the dryer in question can be removed.

Many manufacturers will doubtless say that it is not costing them anywhere near the figure given above to keep their machine rooms from dripping, and this statement may be perfectly true. There is a difference, however, between keeping the machine room dry and keeping it without actual drip. In the first case, moisture is removed from the room and is not present to saturate the roof and wall structure, and be the cause of high degrees of humidity throughout the entire room, whereas in the latter case the entire structures become moist, and either saturated or partially saturated, thus greatly reducing their life and causing high maintenance costs,

as can be shown by the number of machine room roofs that are replaced in a comparatively few years after original installation.

Little Attention Paid to Hood Structure

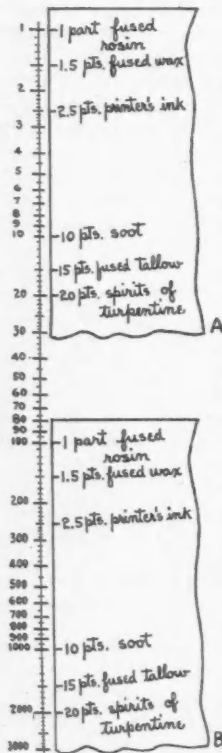
Very little attention has been paid to the hood structure itself. You can find them built of anything from paper to scrap iron, and many of them are highly inflammable. The dryer section is the one location in the paper machine where there is always the greatest fire hazard, with the result that they are generally well sprinkled, the piping on the under side being a more pronounced source of condensation and resulting drip. This hood structure can be de-

signed to cause practically no interference whatever with the machine, and if it is true that it will cause no interference and will represent a considerable saving, why should it not be considered as much a part of the machine room structure as the wall, floor or roof, and be constructed of durable, fireproof material that is sufficiently non-conductive to hold the maximum temperature head. Such a structure can be installed that will fulfill these conditions, and at the same time be of such an appearance that it cannot in any way disfigure any modern machine room, and will show a saving that must be attractive to any owner from an investment standpoint.

Proportioning Chart for Paper Makers

By N. G. NEAR

Here is a proportioning scale that will be found useful for multiplying or dividing any formula by paper manufacturers and others who must frequently use formulas or recipes in making mixtures



or combinations of any kind. The scale will be found extremely simple and applicable to many of the problems that confront the paper maker nearly every day.

To use the scale or chart simply lay a slip of paper alongside it in position A as indicated and then on the slip write out the formula just as has been done here. For example, I have written out the formula: 1 part fused rosin, 1.5 pts. fused wax, 2.5 pts. printer's ink, 10 pts. soot, 15 pts. fused tallow, 20 pts. spirits of turpentine. This formula is sometimes recommended for the manufacture of carbon papers and is typical of problems that the chart will handle with ease.

Now, to multiply this formula by 100 simply move the slip of paper down to position B so that the 1 part fused rosin falls opposite the 100. That is all there is to it. We can now read off the results: 100 parts fused rosin, 150 pts. fused wax, 250 pts. printer's ink, 1,000 pts. soot, 1,500 pts. fused tallow and 2,000 pts. spirits of turpentine.

I have purposely used a very simple case here merely to show how to use the chart. The value of the scale will become more evident to the user when it is applied to formulas involving fractional amounts and when the formula is to be multiplied by 97, 76, or some such odd number that would be handled with

greater difficulty mentally than when multiplying by 100.

The number of elements, chemicals, or compounds in the formula makes no difference to the chart. The greater the number and the greater the complexity of the formula the greater the value of the chart to the user.

To multiply a given formula move the slip of paper downward. To divide the formula or to make the amount smaller the method is the same as described above with the exception that the slip is moved upward. The proportions are always the same no matter where the slip is placed.

Wauregan Division Resumes Operations

HOLYOKE, Mass., March 27, 1922.—The Wauregan division mill of the American Writing Paper Company resumed operations today. Operations in the Gill division was suspended on Saturday.

Uniform Basis to Compute Yield of Chemical Pulp

As a practical basis to compute yields of chemical pulp from wood, the volume of chips in cubic feet is suggested.

Some mills have weightometers and with the moisture test use the bone or air dry weight of the chips as a basis. Few mills, however, are so equipped but all have chip storage bins and digesters.

Many mills use "yield of pulp per digester" as a check on the cooking process and also as a means of checking possible stock waste by accident or negligence that otherwise might be overlooked. Many also have a record of "cords per digester" which serves as a sort of check against the wood room. In few cases, if any, is consistent use made of such records as a basis. Yield records are based on "pound per cord" with "wood received" as a basis.

By introducing the "cubic feet of chips" by volume, it would secure the separation not now obtained between the wood room and the chemical pulp mill proper, that is greatly to be desired. In many cases the wood room serves both the chemical pulp mill and the groundwood mill and the separation of the proportion of wood to each is obtained by estimation with, at best, an indifferent check as to accuracy. The chip volume would give not only the quantity of prepared wood produced by the wood room for the chemical pulp mill, but would also provide a much more accurate basis on which to compute the yield of pulp. Where a wood room serves the chemical pulp mill exclusively, the chip volume would serve as a check against the entire wood room operation, the quantity of the wood received, and possibly the system of measurement of the rough wood. The output of the wood room for a given period would include the total digester capacity together with the difference in the content of the chip storage bin between the beginning and the end of the period.

As to yield of chemical pulp it is absolutely necessary to know the quantity produced. To base the production, ultimately, on the paper made in the paper mill or on the beater room furnish by the formulas of the orders, is, in too many instances, the standard practice in cases where the product of the chemical pulp mill is slushed to the paper mill. The pulp must either be weighed and the quantity calculated from the moisture tests or, if in slush form, metered after being regulated as to consistency. With the consistency regulators and stock meters that have been developed, there is no excuse for the too prevalent practice of having no separation between the woodpile and the finished paper.

Use of Flax Straw in Great Britain

WASHINGTON, D. C., March 27, 1922.—The principal paper making firms in London, according to a report to the Department of Commerce, are not aware that flax straw is being seriously taken up in Great Britain in the manufacture of paper. This report has been forwarded to the department, it is understood, because of inquiries emanating in the United States to the effect that flax straw was being utilized in Great Britain to a considerable extent. A report was also being circulated that a London firm of analytic chemists had developed a process for converting straw into pulp which could be used not only for straw board but for certain kinds of printing paper.

WASTE BARK FOR FUEL

By G. D. BEARCE

An important paper mill problem that has received little attention during the last few years is the use of bark as fuel. The development of the drum barker has altered the problem of burning the bark and refuse in the wood room. The fact that a majority of barking drums are continually revolving in water results in a waste bark of very high moisture content and low fuel value. Because of this, the main object of many mills has been to dispose of the wet bark in the easiest possible way, usually by running it into the river. A few mills have found it impossible to dispose of their waste bark in such manner and have attempted to burn it in Dutch

B. T. U. per lb. of wet bark. If it is possible to eliminate one-third of this excess water and deliver the waste bark to the boilers 50 per cent dry, the heat value per lb. of refuse is about 3,500 B. T. U., an increase of 250 per cent per lb. of material fired. Assuming 15 per cent barking loss in a mill that consumes 200 cords of wood per day, there will be available as fuel 30 cords of bark. Assuming that a cord of bone dry bark weighs 2,000 lbs., the weight of 30 cords of bark plus water is 240,000 lbs. for a 75 per cent moisture condition and 120,000 lbs. for a 50 per cent moisture condition. 240,000 lbs. of wet refuse with a value of 1,000 B. T. U. per lb. is equivalent to 9 tons of coal (13,000 B. T. U.).

120,000 lbs. of refuse with a value of 3,500 B. T. U. per lb. is equivalent to 16½ tons of coal.

This indicates a saving of the equivalent of 7½ tons of coal by pressing the bark to 50 per cent dry. With coal at \$5 per ton the gross saving would be \$44 per day. This amount would cover the cost of removing the excess moisture in the bark and leave an appreciable balance. Mills that do not attempt to burn this refuse bark would be able to utilize the equivalent heat value of 16½ tons of coal.

There are several makes of bark presses on the market which are claimed to remove a large amount of excess water. However, there is some question as to the amount removed in the ordinary operation of a mill because of the knots and lumps that are mixed with the wet bark. But they undoubtedly increase the fuel value of the bark and it will burn much easier under the boilers. Further developments of bark pressing apparatus will undoubtedly secure better results so that in the near future we can expect to consistently obtain bark that is at least 50 per cent dry. Considering the great amount of bark removed every year, this will make possible the utilization of considerable material that is now wasted.

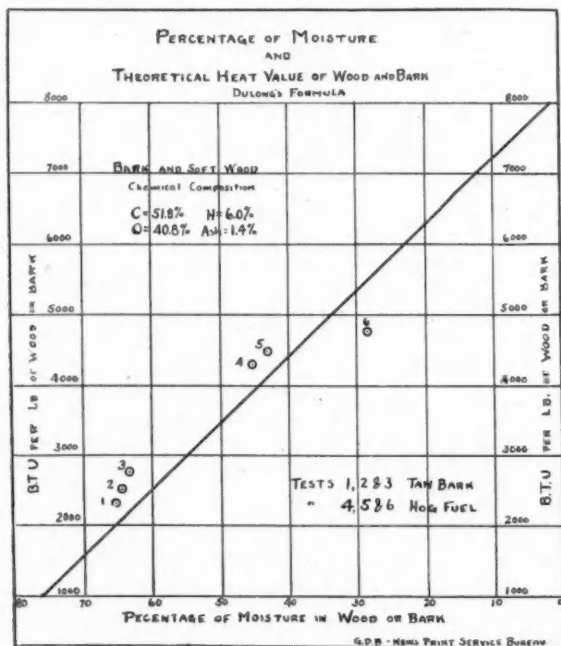
Stop the Leaks

A very striking poster is displayed in conspicuous places by the Rock Island Railroad system. The possible loss in air, steam and water systems is illustrated in an impressive manner. The volume lost under different conditions is computed and converted into dollars and cents to emphasize the importance of repairing any small leaks, as shown below:

SIZE OF OPENING	AIR		STEAM		WATER	
	NO. OF CU FT. WASTED PER MO. 100 LB. PRESSURE	TOTAL COST OF WASTE PER MONTH @ 60¢ PER CU FT.	NO. OF POUNDS WASTED PER MO. 100 LB. PRESSURE	TOTAL COST OF WASTE PER MONTH @ 60¢ PER LB.	NO. OF GALLONS WASTED PER MO. 40 LB. PRESSURE	TOTAL COST OF WASTE PER MONTH @ 15¢ PER M. GALS.
3"	9,979,200	\$997.92	460,000	\$276.00	692,400	\$108.00
2"	4,449,600	444.96	203,000	121.80	307,700	48.00
1 1/2"	1,114,560	111.46	50,500	30.30	76,900	12.00
1"	278,640	27.86	12,750	7.65	19,200	3.00
3/4"	69,552	6.96	3,175	1.91	4,800	0.80

**AIR STEAM & WATER COST MONEY
DONT WASTE THEM
SHOVEL LESS COAL**

There is often a tendency in paper mills to overlook unnecessary waste of water or a leaky steam valve because of the large volume of water and steam used. A similar "Stop Leak" sign worked out for pulp and paper mill conditions should be of great value. A poster of this type shows the workmen what financial loss may be incurred because of a leak that can be easily detected and repaired.



ovens by adding a small amount of coal, assuming that practically no heat value has been derived from the bark by this method of disposal.

Dry hog fuel and comparatively dry bark has been burned to a large extent by many mills. One of the most recent examples of this utilization of waste wood is in a large power plant in Portland, Ore. At this plant the steam is made entirely from the heat derived from waste hog fuel which is obtained by nearby lumber mills. Of course this type of hog fuel is comparatively dry and the fuel value is high.

The problem of the utilization of waste bark is dependent to a large degree upon the method of removing the excess water. The heat value of this fuel is directly dependent upon the moisture content, as is shown by the following theoretical curve of heat value by fuel worked out from Dulong's formula.

Evaporative tests of different types of bark and hog fuel are indicated on the curve. Tests 1, 2 and 3 are of considerable importance because they were made upon tanbark and carefully conducted in accordance with the recognized Boiler Test Code of the A. S. M. E. All of the tests indicate that the theoretical heat values are supported by actual operating figures, thus proving the comparative accuracy of the curve.

Assuming that ordinary bark comes out of the drums carrying 75 per cent water the curve gives a theoretical heat value of 1,000

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Rosin Sizing.—Frano.—*Monit. Papeterie Française*, lii, 443-444, (July 15, 1921); 481-482, (Aug. 1, 1921); 505-507, (Aug. 15, 1921); 541, (Sept. 1, 1921). Translation by A. Papineau-Couture in *Paper*, xxix, 9-15, (Dec. 7, 1921). A review of the theories of Würster and Sembritzki on the mechanism of rosin sizing and of their application in the paper mill.—A. P.-C.

The Use of Ball Bearings in the Paper Industry.—*Papier*, xxiv, 346-348, (Aug., 1921).—Brief discussion of the merits of ball bearings on paper machines.—A. P.-C.

The Paper Industry in Russia.—Rafael Forss.—*Pappers Trävaru och Industritidskrift för Finland; Papier*, xxiv, 351-353, (Aug., 1921).—Analysis of the present status of the paper industry in Sovietic Russia.—A. P.-C.

The Long Price List for Paper.—Robert J. Hausauer, President Buffalo Typotheta. *Pulp and Paper*, xix, 947-949, (Sept. 15, 1921).—Address delivered at the Second District Typotheta Convention, discussing the "long price list" for paper and showing that the printer is entitled to favored classification because of the service he performs in the merchandizing of paper.—A. P.-C.

Specifications for Limestone and Lime for Sulphite.—*Pulp and Paper*, xix, 977-978, (Sept. 22, 1921).—Tentative specifications suggested by the U. S. Bureau of Standards for both calcitic and dolomitic limestone and lime for the preparation of sulphite liquor, covering definition, quality, composition, impurities, packing, marking, sampling, testing, and retesting.—A. P.-C.

Automatic Stokers.—H. Drouot and F. Verdeaux.—*Technique Moderne*, xiii, 337-343, 376-383, (Aug. and Sept., 1921).—A description of the various types of automatic stokers together with a brief description of their merits and the conditions under which they give best results.—A. P.-C.

French Dyes for Coloring Paper.—L'Homme and Argy.—*Papeterie*, xliii, 511-514, 554, 692-699, 782-786, (June 10, 25, Aug. 10, Sept. 10, 1921). A list is given of a large number of colors put out by the "Compagnie Nationale des Matières Colorantes et de Produits Chimiques" for the coloring of paper, together with the corresponding names under which the most important German firms put out the same or similar colors.—A. P.-C.

Ivory Paper for Memo Pads.—*Rev. Chim. Ind.; Papier*, xxiv, 348, (Aug., 1921).—Ordinary writing paper is moistened and then coated with an emulsion consisting of gelatin 12 g., kaolin 2 g., potassium dichromate 0.65 g., water 30 cc. When the coat is dry, the paper is cut to suitable size. Pencil takes well on this paper, and the marks are easily erased.—A. P.-C.

What It Costs to Plant Artificial Forests.—*Pulp and Paper*, xix, 956, (Sept. 15, 1921).—A few of the figures obtained by the Woodlands Section of the American Pulp and Paper Association in its investigation into the cost of commercial planting of forests are given, indicating that costs are much lower than have customarily been estimated. The figures given show a cost of \$5 to \$15 an acre in several States of the Union, while one big Canadian company planting much closer than is the custom in the United States found its cost to be \$15.12 an acre.—A. P.-C.

The Cottrell Electric Precipitation Process.—Application to the Pulp Industry.—I. Lazennec.—*L'Age de Fer*, xxxvii, 1212-1215, (Sept. 25, 1921).—A very brief outline of the principle of the Cottrell process and some of the various chemical industries in which it is being used (mainly in the U. S.). Amongst other applications, it is mentioned that a Quebec pulp company (not

named) uses it for precipitating the dust in the gases from its soda recovery plant. It recovers daily nearly 6.5 tons of dust having the following composition: sodium sulphate 81.6 per cent, sodium carbonate 2.1 per cent, sodium bicarbonate 7.6 per cent, carbon 8.7 per cent.—A. P.-C.

The Paper Industry in Canada.—Ch. Groud.—*Papier*, xxiv, 390-394, (Sept., 1921).—A discussion of the paper industry in Canada in 1918.—A. P.-C.

The Manufacture and Consumption of Mechanical Wood Pulp in France To-Day and To-Morrow.—G. Fresnaye.—*Papier*, xxiv, 394-395, (Sept., 1921).—A discussion of the possibility and probability of expansion of the mechanical wood pulp industry in France.—A. P.-C.

A National French Paper Industry.—*Papeterie*, xliiii, 770, (Sept. 10, 1921).—A brief discussion of the possibility of manufacturing in France part or all of the paper pulp which is at present imported.—A. P.-C.

Hints on the Care of Drier Felts.—*Papeterie*, xliiii, 781, (Sept. 10, 1921).—Steam should be shut off from the driers when the machine is shut down. When the machine stops, the felt should be loosened, and then gradually tightened when the machine starts up again. The section of the driers nearest the winders should be supplied with a felt drier. Care should be taken that the felt is put on straight and is under even tension across the whole width. The bearings of all the felt rolls should be frequently inspected to see that there is not excessive wear.—A. P.-C.

Nettles and Ramies as Paper Making Materials.—Ch. Groud. *Papeterie*, xliiii, 829-830, (Sept. 25, 1921).—A brief description of nettles and ramies and of their suitability as a raw material for paper making.—A. P.-C.

Meeting of the Cellulose Section of the American Chemical Society.—*Paper*, xxix, 11-13, (Sept. 14, 1921).—Abstracts of the papers presented at the Cellulose Section of the American Chemical Society, at the Convention held in New York, Sept. 6-10, 1921.—A. P.-C.

Forestry Legislation.—George Ostrander, President of the Empire State Forest Products Association. *Paper*, xxviii, 17-19, 28-29, (Aug. 17, 1921).—Ostrander discusses and criticizes the Snell bill on the ground that it gives too large and ill-defined power to the Secretary of Agriculture and the Forest Service. Forestry legislation should be based on the following principles: (1) Adequate protection to prevent the destruction or injury of standing forests by fire, the burden of such protection to be shared by the public and the owner of the land; (2) Extension of public ownership, especially of protective areas and cut-over and denuded lands, by both Federal and State purchases; (3) Reforestation on public lands and liberal inducements to owners to reforest private lands; (4) Forest surveys and the classification of lands suitable for forest production; (5) Forest perpetuation and renewal with public assistance, commensurate with the public benefit, of all burdens imposed on the owners of private timberlands.—A. P.-C.

Strong Plea for Reforestation.—*Paper*, xxix, 13-14, (Sept. 14, 1921).—The American Paper and Pulp Association has issued a report analyzing the condition of the American pulp industry and showing the urgency of reforestation.—A. P.-C.

Treatment of Trees as Forest Crops for Pulp Wood.—*Paper*, xxix, 15-16, (Sept. 14, 1921).—The American Forestry Association urges the treatment of forest lands so as to give regular

crops to ensure a permanent supply of pulp wood for the pulp and paper industry.—A. P.-C.

Seasoning Pulp Stones.—*Paper*, xxix, 26, (Sept. 7, 1921).—A brief explanation of the importance of the proper seasoning of pulp stones, with a brief description of the characteristics of a good pulp stone.—A. P.-C.

Paper Mill Engineering.—William F. Thiele, Superintendent, Consolidated Water Power and Paper Co., Grand Rapids, Wis. *Paper*, xxix, 14-16 (Sept. 7, 1921). An outline of the functions of the civil engineer, steam engineer, chemical engineer, and maintenance engineer in the paper mill.—A. P.-C.

Importance of Seasoning Pulp Stones.—*Paper*, xxix, 26, (Sept. 7, 1921). A brief explanation of the importance of the proper seasoning of pulp stones, with a brief description of the characteristics of a good pulp stone.—A. P.-C.

Measuring Pulpwood and Paper Supplies.—*Paper*, xxix, 22, (Sept. 14, 1921). Brief sketch of the method described in Bulletin 44 of the News Print Service Bureau for finding the amounts of pulpwood, lapped pulp, coal, lime, limestone, sulphur, and clay in piles of the respective materials. It consists essentially in finding the cubical contents of the pile and dividing by the number of cubic feet per ton, which value should be determined experimentally in each mill.—A. P.-C.

Books for a Paper Mill Library.—*Paper*, xxix, 17-18, (Sept. 14, 1921). A short list of books and pamphlets (English, French, and German) useful for study or reference purposes by paper mill technologists.—A. P.-C.

Notes on the Paper Industry of Czecho-Slovakia, Esthonia, and Finland.—*Paper*, xxix, 24-25, 30, (Sept. 14, 1921).—A. P.-C.

Suitability of Bamboo as a Paper Making Material.—*Paper*, xxix, 17-18, (Sept. 21, 1921). According to Raitt, at a moderate estimate, the bamboo which is available under possible manufacturing conditions in Burma, Bengal, and South-West India could produce 10,000,000 t. of pulp annually, and the Savannah grasses in Assam about 3,000,000 t. R. A. Horsburgh states the difficulty is to get the bamboos from a suitable site.—A. P.-C.

Problems Encountered in the Development of the Laurentide News Print Machines.—George D. Kilberry.—*Paper*, xxix, 15-18, (Sept. 28, 1921). A fairly detailed description of the two news print machines recently installed at the Laurentide Co.'s mill at Grand 'Mère, Québec, by the Dominion Engineering Works, Montreal, which are designed to, and have, run at 1,000 ft. a minute.—A. P.-C.

Relations of Managers to Employees.—Roy G. Murbach, The Gardner-Harvey Paper Co., Middletown, O. *Paper*, xxix, 19-20, 33, (Sept. 28, 1921); *Paper Industry*, iii, 1118-1120, (Nov., 1921). Outline of the psychology of handling men to get the best out of them.—A. P.-C.

Dyeing and Tinting of Paper.—J. Merritt Matthews.—*Paper*, xxxix, 21, (Sept. 28, 1921). Description of the dyes used and methods of applying them.—A. P.-C.

Available Pulpwood in Canada.—*Paper*, xxix, 30, (Oct. 5, 1921). A study of the pulpwood situation of Eastern Canada by the Dominion Commission of Conservation gives a total estimate of 501,000,000 cords of spruce and balsam in the Eastern Provinces, of which about 306,000,000 are actually available, and a further 38,000,000 will be made available if the Temiskaming and Northern Ontario Ry. is extended to Hudson's Bay. The total resources of Canada at the present time are estimated at 901,000,000 cords of coniferous pulpwood species; and there are also large amounts of popular and jack line in all the Provinces, which are to a certain extent being used in the manufacture of certain papers.—A. P.-C.

Spreading Safety Ideas by Photography.—A. Ellis Frampton, Hammermill Paper Co., Erie, Pa. *Paper*, xxix, 9-12, (Oct. 5, 1921). A description of the many uses to which the camera can be put to aid safety ideas in the mill.—A. P.-C.

American Paper Making Through French Eyes.—Paul Jouanneau. *Paper*, xxix, 23-25, (Oct. 5, 1921); *Pulp and Paper*, xix, 1021-1023, (Oct. 6, 1921). Also, *Papier*, xxiv, 529-531, (Dec., 1921). Impressions of Jouanneau's tour of Canadian and American paper mills, comparing paper making practice on this continent with that in France.—A. P.-C.

Beater Room Hazards.—Charles Walker, Employment Manager, Eastern Mfg. Co., Bangor, Me. *Paper*, xxix, 9-10, (Oct. 12, 1921); *Paper Trade J.*, lxxiii, 46, (Oct. 6, 1921). Present-day beating engines are very nearly fool-proof, so that except when a beater roll is being removed by the repair crew there is little danger of a man being killed or seriously injured. But there are always minor dangers present in the beater room. These are pointed out and hints are given on their elimination.—A. P.-C.

Billingham Waste Paper Recovery System.—*Paper*, xxix, 16-18, (Oct. 12, 1921). U. S. patent No. 1,384,987, July 19, 1921. Also, Can. patent No. 213,090, (Aug. 23, 1921), claims allowed 16. After the sorted magazines are shredded they are conveyed to a blower where solid soda ash is added to the amount of 2.5 per cent of the weight of the paper under treatment. The mass is then blown into a softening tank where dry China clay is added, subsequent to the addition of warm water sufficient for efficient pump operation. Being sufficiently softened at a temperature of 165 degrees F., the stock is pumped to the tank of a defibering machine. In this tank two streams of pulp are kept impinging on each other from separate nozzles. Fifteen minutes of this treatment serve to loosen coloring matter, pigments, and ink vehicles. The charge is then pumped to washers in the beater room from which it passes through the usual routine processes to the book paper machine.—A. P.-C.

Idle Time as a Manufacturing Loss.—H. A. Wingate, Assistant Secretary, C. H. Dexter & Son, Inc., Windsor Locks, Conn. *Paper*, xxix, 11-12, (Oct. 12, 1921); *Paper Trade J.*, lxxiii, 19-20, (Oct. 13, 1921). Brief outline of the problems of cost finding in the pulp and paper industry, especially of the manner of charging up loss due to idle time.—A. P.-C.

Uniform Mill Cost System.—C. Oliver Wellington.—*Paper*, xxix, 13-15, (Oct. 12, 1921); *Paper Trade J.*, lxxiii, 17-18, (Oct. 13, 1921). A discussion of the requirements and advantages of a uniform cost system for the pulp and paper industry.—A. P.-C.

Fundamental Chemistry in Paper Making.—J. L. A. MacDonald, D. S. O., D. Sc. *Paper*, xxix, 12-18, (Oct. 19, 1921); *Pulp and Paper*, xix, 1067-1069, (Oct. 20, 1921), 1120, (Nov. 3, 1921); *Paper Industry*, iii, 1112-1116, (Nov., 1921). A discussion of fundamental chemical research in the paper industry, taking as examples the importance of the constitution of cellulose in the cooking processes, and the importance of the mechanism of sizing and of the hydration of pulp in the beater.—A. P.-C.

The Renaissance of Straw Pulp and Paper.—Martin L. Griffin, North Dighton, Mass. *Pulp and Paper*, xix, 899-900, (Sept. 1, 1921). Owing to the rapid depletion of pulpwood resources, it is becoming more and more imperative to find some substitute which can at least tide over the scarcity until proper reforestation shall have secured a permanent supply of wood. The advantages of straw for this purpose are dwelt upon, not the least of them being that its suitability for the purpose is well known, as it already has been extensively used for paper making.—A. P.-C.

The Structure of Cereal Straws.—Francis E. Lloyd, F. R. S. C., McGill Univ., Montreal. *Pulp and Paper*, xix, 953-954, 973-976, 1002-1004, 1025-1026, 1047-1050, 1071-1075, (Sept. 15, 22, 29, Oct. 6, 13, 20, 1921). A description of the structure of the "straw" of the barley (*hordeum*), oat (*avena*), rye (*secale*), and wheat (*triticum*), based upon samples from single localities and of ordinary ripeness or degree of development. Minor structural differences such as characterize various races of these cereals, and even a single race grown in different localities, are beyond the scope of this article. The purpose of this study was to determine (a)

the character and length of the fiber, and (b) the possibility of distinguishing the elements (cells) of each in a macerated product, or in a straw paper. The findings on the four specimens were checked by comparison with pure (or nearly pure) strain material, and some of the conclusions had to be revised. A thorough-going study of this sort must embrace a large array of materials, failing which the results must of necessity be to some extent equivocal and subject to revision. However, it is possible, by careful inquiry, to determine the origin of the materials in a given straw paper, or other straw product, with considerable certainty.—A. P.-C.

Selling Scientifically and Manufacturing Methodically.—T. J. Burke, Secretary-Treasurer, Cost Association of the Paper Industry. *Paper*, xxviii, 11-13, (Aug. 31, 1921); *Paper Trade J.*, lxxiii, 52, 56, (Sept. 1, 1921); *Paper Industry*, iii, 853-857, (Sept., 1921); *Pulp and Paper*, xix, 997-998, (Sept. 29, 1921). A discussion of the importance of a proper cost system for the fixing of the selling policy, especially in unsettled conditions such as those

which we are at present going through.—A. P.-C.

Industrial Welfare Work in the British Paper Mills.—*Pulp and Paper*, xix, 999-1001, (Sept. 29, 1921). Brief and general outline of what is being done in some of the British paper mills to cement the good feeling between employers and workers.—A. P.-C.

The Personal Equation in Moisture Testing of Pulp.—T. Linsey Crossley. *Pulp and Paper*, xix, 1040, (Oct. 6, 1921). Most of the troubles which have (Page 6 missing)

List of Abbreviated and Full Titles and of Addresses of Journals From Which Abstracts Have Been Prepared for This Issue

PaperPaper. 251 West 19th St., New York City.
 Paper Industry.....The Paper Industry. 356 Monadnock Block, Chicago, Ill., U. S. A.
 Paper Trade J.....PAPER TRADE JOURNAL. 10 East 39th St., New York City.
 PapierLe Papier. 16 Rue du Rocher, Paris (8°), France.
 Pulp and Paper.....Pulp and Paper Magazine of Canada. Gardenvale, Que., Canada.

MANUFACTURE OF SPECIAL PAPER AND BOARDS

Volume 5 of the Text Book being prepared by the Pulp and Paper Industry includes a section entitled the "Manufacture of Special Papers and Boards." Previous sections in the volumes devoted to the discussion of manufacturing operations, will have explained the manufacture and testing of each kind of wood pulp and the following paper mill operations:

The Preparation of Rag and Other Fibres; Treatment of Waste Papers; Beating and Refining; Loading and Engine Sizing; Coloring; Paper Machines and Their Operation; Tub Sizing and Finishing Operations. It will be seen that these sections describe the equipment and the processes for conducting the fundamental paper making operations. For the manufacture of the different products of the paper mill, it is necessary to vary a number of factors. There are a great many different varieties of paper and this number is so large that it would be impossible in the scope of our text book to cover them all intimately. We think it possible, however, by tabulating the information, to give the fundamental factors relating to the manufacture of each of the more important ones. The amount of this information that can be given in the text book will depend on the ability and inclination of paper manufacturers to furnish it. It is recognized at the outset as being quite impossible to give all the details of manufacture, but the editor hopes through the co-operation of the industry to bring the more important factors to the fore.

The student will have obtained from the study of the sections mentioned, an understanding of the ordinary or average procedure and will understand the meaning of most of the common paper mill terms such as slow stock, rosin sizing, filler, kraft pulp, etc. The aim of the section under discussion is to present or indicate variations from the average procedure which may be required to produce the desired product.

Outline of Subject

While the following outline can hardly be regarded as complete, it will serve as a subject for discussion, criticism and comment either by correspondence with the editor of the text books or at the annual meeting of the Technical Association of the Pulp and Paper Industry in New York next month. The classes suggested are: 1. Boards, 2. Book printing papers, 3. Bristol boards, 4. Building papers, 5. Cover papers, 6. Newspaper, 7. Tissue papers, 8. Wrapping papers, 9. Writing papers, 10. Industrial papers. Under each of these it is suggested to include the following information: A. Raw material for fiber. B. Loading. C. Sizing. D. Coloring. E. Manner of preparing fibre for the beater, that is, whether cooked at the paper mill and if so what chemical, what length of time and what steam pressure and whether bleached. F. Treatment in the beater, i. e., whether beaten short, long, free or slow with aver-

age length of time, whether with stone, steel or bronze tackle, also whether Jordaned. G. Paper machine. Kind of machine used, ordinary speed, whether much or little suction, whether elevated, level or depressed wire, whether tendency to crush, whether water-marked. Mesh of wire, character of jacket and felts, whether suction couch used, whether pressed hard or light in the wet process, whether dried gradually or with high temperature at wet end of driers. H. Sizing. If tub sized what substance used, whether loft, festoon or machine dried. I. Finishing. Machine finished (number of stacks, number of nips), water finished, machine glazed, super-calendered, cut in rolls or sheets, pasted, sheet calendered, plated. J. Treatment. Pasted, moulded, corrugated, coated, saturated, reinforced, vulcanized, etc. K. Treated with. (State chemical or substance applied to the paper.) L. Use. (State common use or uses of each grade.) M. Principal qualities.

Opinions Solicited

Please state whether in your opinion these classifications should be sub-divided and if so what sub-divisions would you suggest.

Would it be advisable to include in this section a brief discussion of such special process as vulcanizing, saturating, making adhesive carbon, or sensitized papers?

Sub-classes Suggested

The following sub-classes of boards and papers have been suggested and the advice of the industry is desired as to whether some of these should be omitted and whether there are others that should be included.

BOARDS—Box; card middles; counter; leather; manila; patent coated; press spahn; trunk; illustrating or album; waterproof sign.
BOOK PRINTING—Bible; coating stock; book; mimeograph; music; offset; text; photogravure.

BRISTOLS—Index; mill; rope; playing card.

BUILDING—Felts; deadening felts; gypsum and plaster boards; wood pulp; sheathing; asbestos.

COVERS—Box; manuscript; pamphlet; photomounts; black or red paper for photo purposes; special coating; facing.

NEWS—News print; hangings.

TISSUE—Carbon; copying; stereotype; toilet; toweling; pattern; wrapping; cigarette; textile.

WRAPPING—Bogus manila; cartridge; glassine; kraft; mill wrappings; paraffine rope; vegetable parchment; wood manila.

WRITING—Bond; drawing; envelope; fines; ledger; manifold; chart and map; papeterie and wedding; linen; safety.

INDUSTRIAL—For chemical process; for electrical process; absorbent process; sensitizing; printing process (not printed); calender rolls.

PRODUCTION OF WOOD PULP FOR MONTH OF FEBRUARY

According to Figures Just Issued by the Federal Trade Commission Stocks on Hand at the Mills at the End of the Month of Groundwood Equaled 27 Days' Average Output, of News Trade Sulphite 10 Days' Average Output, Bleached Sulphite 5 Days' Average Output, Easy Bleaching Sulphite 3 Days' Average Output and of Mitscherlich Sulphite 7 Days' Average Output.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 29, 1922.—In connection with the Federal Trade Commission's current statistics of the paper industry, a summary of the monthly reports from manufacturers of wood pulp and other kinds of pulp used in paper making is submitted herewith for the month of February, 1922. The table shows the kind of pulp, the stocks, production, pulp used and shipments for the month. The pulp shipped during each month represents only pulp shipped to a concern different from the one producing it. Loss of production is shown by giving the idle machine time reported by each company for each kind of pulp.

Pulp Production

The following is a tabulation of the production, pulp used by the company producing it, shipments to outside concerns, and stocks of finished pulp, in tons of 2,000 pounds, on an air-dry basis, for February, 1922, compared with February, 1921, for the operating mills. The average production is based upon the reports covering the years 1917, 1918, 1919, 1920 and 1921, and the average stocks are based upon the stocks carried for the years 1919, 1920 and 1921:

	Number of mills	On hand first of month	Production for month	Net tons Used during month	Shipped during month	On hand end of month
Groundwood Pulp:						
February, 1922.....	153	125,298	98,742	91,966	6,349	125,725
February, 1921.....	165	146,964	117,884	99,609	9,242	155,997
February, 1920.....	168	121,205	102,141	106,235	9,559	107,552
February, 1919.....	157	131,885	101,009	98,712	5,038	129,144
Average.....			105,938			147,073
Sulphite, News Grade:						
February, 1922.....	62	21,847	55,550	48,037	5,666	23,694
February, 1921.....	63	20,930	55,148	44,010	9,340	22,728
February, 1920.....	63	19,373	64,476	53,849	9,451	20,549
February, 1919.....	63	20,551	53,576	43,417	7,142	23,568
Average.....			55,315			20,685
Sulphite, Bleached:						
February, 1922.....	31	7,463	33,648	23,213	9,931	7,967
February, 1921.....	32	11,102	27,931	18,890	6,914	13,229
February, 1920.....	32	6,256	41,317	22,582	18,764	6,227
February, 1919.....	33	7,393	35,627	18,181	13,260	11,579
Average.....			36,616			9,507

Sulphite, Easy Bleaching:						
February, 1922.....	9	667	4,993	3,971	992	697
February, 1921.....	7	1,482	5,590	3,056	2,242	1,774
February, 1920.....	7	1,124	4,922	3,337	1,662	1,047
February, 1919.....	8	2,241	5,140	3,129	1,743	2,509
Average.....			5,520			1,346
Sulphite, Mitscherlich:						
February, 1922.....	6	1,549	5,502	3,277	2,174	1,600
February, 1921.....	7	3,034	4,412	2,983	473	3,990
February, 1920.....	7	1,756	6,690	4,382	2,642	1,422
February, 1919.....	7	1,714	6,432	4,136	2,278	1,731
Average.....			5,635			1,831
Sulphate Pulp:						
February, 1922.....	21	8,700	16,155	13,380	3,168	8,307
February, 1921.....	21	8,619	8,409	5,920	1,754	9,354
February, 1920.....	22	5,537	14,583	10,815	4,212	5,093
February, 1919.....	19	6,560	8,712	5,416	3,100	6,756
Average.....			12,006			6,499
Soda Pulp:						
February, 1922.....	27	10,444	27,386	17,246	9,985	10,599
February, 1921.....	26	8,551	23,960	14,619	8,514	9,378
February, 1920.....	29	3,734	31,178	18,367	13,232	3,313
February, 1919.....	28	4,305	27,262	15,688	10,375	5,504
Average.....			27,416			6,931
Other Than Wood Pulp:						
February, 1922.....	5	145	1,334	1,359	0	120
February, 1921.....	4	135	463	442	0	156
February, 1920.....	5	211	884	727	219	149
February, 1919.....	4	114	470	494	0	90
Average.....			736			154
Total—For all Grades:						
February, 1922.....		176,113	243,310	202,449	38,265	178,709
February, 1921.....		200,817	243,797	189,529	38,479	215,606
February, 1920.....		159,196	266,191	220,294	59,741	145,352
February, 1919.....		174,763	238,228	189,173	42,937	180,881
Average.....			249,182			194,026

Total stocks of all grades of pulp in the mills on February 28 amounted to 78,709 tons. Mill stocks of Sulphate and of Other than Wood Pulp decreased during the month.

Ratio of Stocks to Average Production

Comparing the stocks on hand at the domestic pulp mills at the end of the month, with their average daily production based on the reports covering the years 1917-1921, inclusive, the figures show that:

- Groundwood pulp stocks equal 27 days' average output.
- News grade sulphite mill stocks equal 10 days' average output.
- Bleached sulphite mill stocks equal 5 days' average output.
- Easy bleaching sulphite mill stocks equal 3 days' average output.
- Mitscherlich sulphite mill stocks equal 7 days' average output.
- Sulphate mill stocks equal 16 days' average output.
- Soda pulp mill stocks equal 9 days' average output.
- Mill stocks of "other than wood pulp" equal 4 days' average output.
- Total mill stocks of all grades equal 16 days' average output.

Loss of Production

The idle machine time of grinders and digesters reported to the commission for the month of February, 1922, is shown in detail in the attached tabulation. The reasons tabulated for lost time are lack of orders and repairs. "Other Reasons" include water conditions, etc. The time lost in February, 1921, is shown by grades and reasons for purposes of comparison. These figures do not include 17 mills not in operation.

Grade	Lack of Orders		Repairs		Other Reasons		Total	
	1922	1921	1922	1921	1922	1921	1922	1921
Groundwood Pulp—								
Number of grinders.....	39	76	148	142	439	332	726	550
Total hours idle.....	12,482	11,991	20,429	24,402	149,044*	76,996	181,955	113,389
Sulphite, News Grade—								
Number of digesters.....	33	30	12	21	23	8	68	59
Total hours idle.....	6,864	4,303	422	2,290	4,315	510	11,601	7,103
Sulphite, Bleached—								
Number of digesters.....	33	45	12	26	20	16	65	89
Total hours idle.....	8,410	5,605	975	3,946	1,562	967	10,947	10,518
Sulphite, Easy Bleaching—								
Number of digesters.....	3	6	1	3	0	0	4	9
Total hours idle.....	612	999	68	282	0	0	680	1,281
Sulphite, Mitscherlich—								
Number of digesters.....	0	16	17	6	0	0	17	22
Total hours idle.....	0	5,588	2,310	1,555	0	0	2,310	7,144
Sulphate Pulp—								
Number of digesters.....	12	24	0	1	13	8	25	33
Total hours idle.....	612	4,815	0	51	2,280	3,642	2,892	8,508
Soda Pulp—								
Number of digesters.....	76	90	4	0	19	18	99	108
Total hours idle.....	9,098	15,463	384	0	1,597	2,521	11,079	17,984
Other Grades—								
Number of digesters.....	3	2	2	0	1	0	6	2
Total hours idle.....	786	868	68	0	48	0	902	868
Total number of grinders and digesters.....	199	289	196	201	615	382	1,010	872
Total hours idle.....	38,864	49,632	24,656	32,527	158,846	84,636	222,366	166,795

*Includes 136,698 hours due to water and power conditions.

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MARCH 25, 1922

SUMMARY

News Print 106 rolls
 Printing Paper 80 cs., 493 rolls, 211 bls.
 Cigarette Paper 3,316 cs.
 Hangings 43 bls., 7 cs.
 Wall Paper 26 bls., 6 cs., 1,050 rolls
 Packing Paper 387 bls., 113 cs., 2,989 rolls
 Wrapping 698 bls.
 Tissue 15 cs.
 Surface Coated Paper 266 cs.
 Glass Paper 21 cs.
 Filter Paper 60 cs., 10 bls.
 Parchment Paper 9 cs.
 Writing Paper 48 cs.
 Blue Print Paper 38 cs., 24 rolls
 Colored Paper 20 cs.
 Miscellaneous Paper, 663 cs., 251 bls., 1,886 rolls,
 1,430 pgs.

CIGARETTE PAPER.

R. J. Reynolds Tobacco Co., East Side, Bordeaux,
 1,710 cs.
 American Tobacco Co., East Side, Bordeaux,
 1,470 cs.
 Atlantic Forwarding Co., Chickasaw, Hamburg,
 2 cs.
 P. J. Schweitzer, Bankdale, Marseilles, 50 cs.
 P. J. Schweitzer, Syria, Marseilles, 50 cs.
 A. Newman & Co., New Amsterdam, Rotterdam,
 1 cs.
 British-American Tobacco Co., Cedric, Liverpool,
 33 cs.

PAPER HANGING.

W. H. S. Lloyd & Co., Cedric, Liverpool, 5 bls.
 W. H. S. Lloyd & Co., Mesaba, London, 16 bls.
 W. H. S. Lloyd & Co., Mesaba, London, 7 cs.
 A. C. Dodman, Jr., Bcnic, Liverpool, 22 bls.

WALL PAPER.

A. Murphy & Co., Bonic, Liverpool, 14 bls.
 Cowan & Sons, Homeric, Southampton, 1 cs.
 A. Murphy & Co., Mesaba, London, 4 cs.
 A. Murphy & Co., Mesaba, London, 8 bls.
 R. F. Downing & Co., Mesaba, London, 2 bls.
 R. F. Downing & Co., Mesaba, London, 5 cs.
 The Prager Co., Gothland, Antwerp, 1,050 rolls.
 A. Murphy & Co., Cedric, Liverpool, 2 bls.

PACKING PAPER.

Wilkinson Bros. & Co., Inc., Haverford, Ham-
 burg, 387 bls.
 Japan Paper Co., Watsness, Hamburg, 113 cs.
 Republic Bag & Paper Co., Watsness, Hamburg,
 2,989 rolls.

WRAPPING PAPER.

M. M. Cohen, Atlantic, Gothenburg, 10 rolls.
 D. S. Walton & Co., Atlantic, Gothenburg, 1,447
 rolls.
 D. S. Walton & Co., Atlantic, Gothenburg, 78 bls.
 Coy, Hunt & Co., Atlantic, Gothenburg, 298 bls.
 Coy, Hunt & Co., Atlantic, Gothenburg, 1,326
 rolls.
 Wilkinson Bros. & Co., Inc., Independence Hall,
 Rotterdam, 174 rolls.
 Wilkinson Bros. & Co., Inc., Independence Hall,
 Rotterdam, 422 bls.

TISSUE PAPER.

Meadows, Nye & Co., Cedric, Liverpool, 4 cs.
 C. H. Wyman, Cedric, Liverpool, 11 cs.
SURFACE COATED PAPER.
 Defender Photo Supply Co., Hudson, Bremen,
 266 cs.

PRINTING PAPER.

J. L. N. Smythe & Co., Haverford, Hamburg,
 12 rolls.
 F. G. Prager Co., Penn State, Bremen, 391 rolls.
 H. Lindemeyer & Sons, Mesaba, London, 14 cs.
 Chemical National Bank, Mt. Clinton, Hamburg,
 100 bls.
 J. & J. Scott, Ltd., Mt. Clinton, Hamburg, 63
 rolls.
 Chemical National Bank, Georgian, Hamburg, 111
 bls.
 Agar-Bernsson Corp., Watsness, Hamburg, 21
 rolls.
 F. B. Vandegrift & Co., Watsness, Hamburg, 66
 cs.

NEWS PRINT.

Agar-Bernsson Corp., Chickasaw, Hamburg, 68
 rolls.
 Chemical National Bank, Modica, Hamburg, 38
 rolls.

GLASS PAPER.

J. L. N. Smythe Co., Haverford, Hamburg, 11
 cs.
 J. L. N. Smythe Co., Dallas, Hamburg, 10 cs.

FILTER PAPER.

American Express Co., Bankdale, Marseilles, 2
 cs.
 American Express Co., Mt. Clinton, Hamburg,
 12 cs.
 G. Lueders & Co., Vaulin, Bordeaux, 10 bls.
 E. Fougera & Co., Vaulin, Bordeaux, 46 cs.

PARCHMENT PAPER.

Irving National Bank, Gothland, Antwerp, 9 cs.
WRITING PAPER.
 Chemical National Bank, Mt. Clinton, Hamburg,
 48 cs.

BLUE PRINT PAPER.

Keuffel & Esser, Mt. Clinton, Hamburg, 10 cs.
 Keuffel & Esser, Georgian, Hamburg, 24 rolls.

DRAWING PAPER.

Keuffel & Esser, Georgian, Hamburg, 28 cs.

COLORED PAPER.

C. N. Williams, Sutherland, Antwerp, 20 cs.
PAPER.
 D. C. Andrews & Co., Bonic, Liverpool, 5 bls.
 Republic Bag & Paper Co., Hudson, Bremen, 606
 rolls.

Ladenburg, Thalman & Co., Watsness, Hamburg,
 213 bls.
 Perkins, Goodwin & Co., Colombo, Genoa, 14 cs.
 American Express Co., Breiz Izel, Havre, 7 cs.
 Sinclair & Valentine Co., Orleita, Hamburg, 8 cs.
 P. H. Petry & Co., Georgian, Hamburg, 9 cs.
 P. C. Zullke, Gothland, Antwerp, 78 cs.
 H. Reeve Angel & Co., Gothland, Antwerp, 4 cs.
 Republic Bag & Paper Co., Yorck, Bremen, 218
 rolls.

C. B. Richard & Co., Vaulin, Havre, 99 cs.
 Republic Bag & Paper Co., Chickasaw, Hamburg,
 1,333 pgs.
 Japan Paper Co., Chickasaw, Hamburg, 97 cs.
 White-Burbank Paper Co., Chickasaw, Hamburg,
 28 bls.

Favor, Ruhl & Co., Rochambeau, Havre, 14 cs.
 Globe Shipping Co., Rochambeau, Havre, 9 cs.
 J. J. Gavin & Co., Rochambeau, Havre, 3 cs.
 J. M. Lyon Co., Rochambeau, Havre, 5 bls.
 Pitt & Scott, Rochambeau, Havre, 3 cs.
 Herman Lips, Rochambeau, Havre, 50 cs.
 Chemical National Bank, Penn State, Bremen,
 481 rolls.
 Republic Bag & Paper Co., Penn State, Bremen,
 285 rolls.

Defender Photo Supply Co., Penn State, Bremen,
 216 cs.
 C. L. Robinson, Modica, Hamburg, 97 pgs.
 C. L. Robinson, Modica, Hamburg, 296 rolls.
 E. Dietzgen & Co., Haverford, Hamburg, 22 cs.
 C. B. Richard & Co., Haverford, Hamburg, 24
 cs.

F. L. Kraemar & Co., Haverford, Hamburg, 4 cs.
 Japan Paper Co., Haverford, Bremen, 12 cs.

RAGS, BAGGINGS, ETC.

W. Hughes & Co., New Amsterdam, Rotterdam,
 104 bls. paper stock.
 N. S. Lines, Penn State, Bremen, 138 bls. rags.
 Chemical National Bank, Penn State, Bremen,
 96 bls. rags.

L. P. Gaskell & Co., Penn State, Bremen, 267
 bls. rags.
 Mechanics' & Metals National Bank, Penn State,
 Bremen, 46 bls. rags.

P. Berlowitz, Penn State, Bremen, 396 bls. rags.
 Mechanics' & Metals National Bank, Potomac,
 Bremen, 34 bls. rags.
 Chemical National Bank, Potomac, Bremen, 304
 bls. rags.

Salomon Bros. & Co., Francisco, Hull, 15 bls.
 rags.
 Castle, Gottheil & Overton, Francisco, Hull, 228
 bls. rags.
 Basch & Greenfield Co., Francisco, Hull, 20 bls.
 rags.

Irving National Bank, Chickasaw, Hamburg, 10
 bls. rags.
 Irving National Bank, Chickasaw, Hamburg, 64
 bls. paper stock.
 Chemical National Bank, Chickasaw, Hamburg,
 47 bls. rags.

Ladenburg, Thalman & Co., Chickasaw, Ham-
 burg, 123 bls. rags.
 Reis & Co., Chickasaw, Hamburg, 69 bls. cotton
 waste.
 Reis & Co., Dallas, Hamburg, 104 bls. cotton
 waste.

M. O'Meara Co., Dallas, Hamburg, 32 bls. rags.
 E. J. Kellar Co., Inc., Dallas, Hamburg, 45 bls.
 rags.
 Ladenburg, Thalman & Co., Dallas, Hamburg,
 142 bls. baggings.
 Ladenburg, Thalman & Co., Rochambeau, Havre,
 55 bls. rags.
 Stone Bros., Sherwin & Co., Rochambeau, Havre,
 66 bls. rags.

Parsons & Whittemore, Rochambeau, Havre, 218
 bls. rags.
 D. M. Hicks, Inc., Rochambeau, Havre, 505 bls.
 rags.

P. Berlowitz, Rochambeau, Havre, 116 bls. rags.
 A. Katzenstein & Keene, Rochambeau, Havre,
 217 bls. rags.
 Castle, Gottheil & Overton, Rochambeau, Rouen,
 282 bls. rags.

International Acceptance Bank Chickasaw, Ham-
 burg, 31 bls. rags.
 Castle, Gottheil & Overton, Independence Hall,
 Rotterdam, 436 bls. rags.
 Jaffe & Co., Independence Hall, Rotterdam, 188
 bls. rags.

R. F. Downing & Co., Independence Hall, Rotter-
 dam, 139 bls. rags.
 American Express Co., Mesaba, London, 206 bls.
 waste paper.
 Irving National Bank, Gothland, Antwerp, 230
 bls. flax waste.

Castle, Gottheil & Overton, Vardulia, London,
 122 bls. rags.
 Irving National Bank, Vardulia, London, 193 bls.
 rags.

F. P. Gaskell & Co., Yorck, Bremen, 76 bls.
 rags.
 Castle, Gottheil & Overton Vaulin, Havre,
 273 bls. rags.

Castle, Gottheil & Overton, Vaulin, Bordeaux,
 89 bls. rags.
 Albion Trading Co., Vaulin, Bordeaux, 76 bls.
 rags.

Guaranty Trust Co., Vaulin, Bordeaux, 40 bls.
 rags.
 Guaranty Trust Co., Georgian Hamburg, 200 bls.
 rags.
 Chase National Bank, Georgian, Hamburg, 37
 bls. rags.

American Wood Pulp Corp., Georgian, Hamburg,
 549 bls. rags.
 American Wood Pulp Corp., Georgian, Hamburg,
 109 bls. baggings.

Chemical National Bank, Watsness, Hamburg,
 39 bls. rags.
 M. O'Meara Co., Watsness, Hamburg, 24 bls.
 rags.

Castle, Gottheil & Overton, Watsness, Hamburg,
 66 bls. rags.
 Reis & Co., Watsness, Hamburg, 48 bls. cotton
 waste.

Castle, Gottheil & Overton, Sutherland, Antwerp,
 66 bls. baggings.
 Castle, Gottheil & Overton, Sutherland, Antwerp,
 53 bls. rags.

P. Berlowitz, Sutherland, Antwerp, 125 bls. rags.
 American Woolstock Co., Sutherland, Antwerp,
 48 bls. rags.
 Cleveland Trust Co., Sutherland, Antwerp, 20
 bls. rags.

J. J. Patrikoff Co., Sutherland, Antwerp, 478 bls.
 rags.
 J. J. Patrikoff Co., Sutherland, Antwerp, 281 bls.
 baggings.

E. Butterworth Co., Sutherland, Antwerp, 70 bls.
 baggings.
 E. J. Keller Co., Inc., Breiz Izel, Bordeaux, 63
 bls. rags.

M. Farris Co., Ainess, London, 24 bls. flax waste.
 Stone Bros., Sherwin Co., Ainess, Liverpool, 41
 bls. rags.
 Stone Bros., Sherwin Co., Albania, Liverpool, 99
 bls. rags.

Mutnick Bros., by same, 77 bls. rags.
 Burman & Bolousky, by same, 25 bls. rags.
 B. D. Kaplan & Co., by same, 158 bls. rags.
 B. D. Kaplan & Co., Bonic, Liverpool, 1,507 bls.
 rags.

Mutnick Bros., by same, 145 bls. rags.
 American Express Co., by same, 43 bls. rags.
 Nat'l City Bank, by same, 91 bls. rags.
 Allison Trading Co., by same, 55 bls. rags.
 J. B. Morris & Co., by same, 150 bgs. hide cut-
 tings.

R. F. Downing & Co., by same, 20 bls. cotton
 waste.
 Ladenburg, Thalman & Co., Alpine Range, Dun-
 dee, 62 bls. thread waste.
 F. P. Gaskell & Co., Hudson, Bremen, 56 bls.
 rags.

Guaranty Trust Co., by same, 466 bls. rags.
 A. Katzenstein & Keene, Olympe, Marseilles, 42
 bls. rags.
OLD ROPE.
 International Purchasing Co., Bristol City, Bris-
 tol, 97 coils.
 Brown Bros. & Co., Breiz Izel, Havre, 84 coils.
 International Purchasing Co., Mesaba, London,
 183 coils.
 International Purchasing Co., Ind. Hall, Rotter-
 dam, 35 coils.

(Continued on page 64)

NILSEN, RANTOUL & CO., INC.

140 Nassau Street

New York, N. Y.

ANNOUNCES

Change of Name to

NILSEN, LYON & CO., Inc.

The Corporation Will Continue as Exclusive Agent for

Anth. B. Nilsen & Co., Ltd., Christiania, Norway

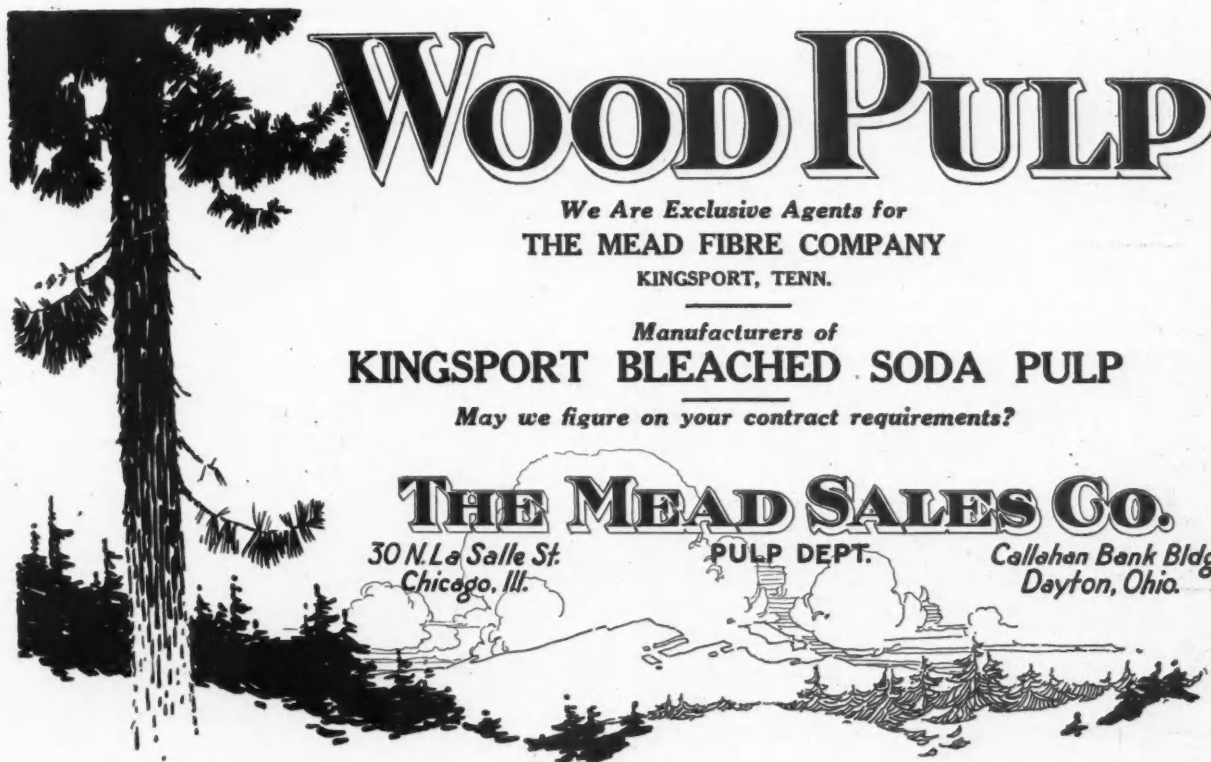
And in Future Will Act Also as the
Sole Agent in the U. S. A. for

John Lyon & Co., A-B, Gothenburg, Sweden

NILSEN, LYON & CO., Inc.

140 Nassau Street

New York, N. Y.



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THE MEAD FIBRE COMPANY
 KINGSPORT, TENN.

Manufacturers of
KINGSPORT BLEACHED SODA PULP
May we figure on your contract requirements?

THE MEAD SALES CO.
 30 N. La Salle St. Chicago, Ill. PULP DEPT. Callahan Bank Bldg. Dayton, Ohio.

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending January 31, 1922, and for the Seven Months Ended January 31, 1922, as Compared with Corresponding Months of Two Previous Years.

PAPER AND MANUFACTURES OF.	IMPORTS—PAPER.				Twelve Months Ended January 31—			
	January 1921.		January 1922.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Books, Music, Maps, Engravings, Etchings, Photographs, and other Printed Matter.....Free Dut.		\$339,771		\$221,250		\$3,227,491		\$2,182,966
Decalcomania paper, not printed.....Free		185,073		124,689		1,500,703		1,258,701
Lithographic Labels and Prints (except Post Cards).....lbs. Dut.	119,947	62,100	144,775	60,527	745,377	500,846	916,980	442,020
Paper Hangings.....lbs. Dut.		38,148		37,057		203,222		197,714
Photographic.....lbs. Dut.	217,456	31,571	139,151	33,845	879,423	249,704	1,233,392	218,508
Printing Paper—								
News print.....lbs. Free	138,896,868	8,763,375	164,964,408	5,941,351	913,268,926	48,931,227	1,040,240,968	48,392,546
All other.....lbs. Dut.	742,904	103,207	43,549	4,606	3,782,830	484,501	225,345	32,915
Post Cards, Souvenir.....Dut.		4,571		6,392		149,703		75,822
Pulp board, in rolls, not laminated.....lbs. Dut.	4,946,777	156,575	3,093,323	88,924	54,412,952	1,788,307	18,167,380	470,091
Surface-coated.....lbs. Dut.	168,166	33,803	141,968	18,144	803,292	227,302	370,336	53,616
Wrapping.....lbs. Dut.	718,130	33,924	2,278,868	81,335	3,414,827	314,787	8,945,366	248,126
All other.....Dut.		377,796		166,133		2,129,881		1,435,185
Total Paper, and Manufactures of.....		\$10,155,212		\$6,788,137		\$59,875,508		\$50,195,240
CRUDE PAPER STOCK.								
Rags (except woolen).....lbs. Free	6,832,972	\$240,310	32,753,836	\$538,402	122,633,665	\$4,813,148	106,572,223	\$1,573,868
All other kinds of paper stock.....Free	7,602,696	211,533	12,378,764	282,357	111,204,746	4,276,420	81,608,816	1,691,446
WOOD PULP.								
Mechanically ground.....tons. Free	12,345	\$804,476	18,679	\$470,310	143,134	\$11,202,977	152,682	\$3,925,832
Chemical—								
Unbleached—								
Sulphate.....tons. Free	4,647	\$570,449	21,809	\$1,296,092	95,468	\$12,182,974	139,558	\$8,233,298
Sulphite.....tons. Free	14,462	1,905,898	39,889	2,142,323	186,436	26,933,054	196,635	10,925,806
Total.....tons	19,109	\$2,476,347	61,788	\$3,438,415	281,904	\$39,116,028	336,193	\$19,208,634
Imported from—								
Norway.....	359	\$59,483	1,208	\$79,501	6,248	\$963,681	6,175	\$351,286
Sweden.....	8,976	1,066,365	33,777	1,815,327	74,061	10,705,714	114,778	7,662,891
Canada.....	6,994	837,934	20,850	1,247,962	179,332	23,978,847	140,843	8,909,048
Other countries.....	2,780	512,565	5,953	295,625	22,243	3,437,796	44,397	2,285,413
Bleached—								
Sulphate.....tons. Free	260	\$29,264	1,416	\$99,813	8,333	\$1,175,932	4,172	\$247,375
Sulphite.....tons. Free	3,731	707,784	22,188	1,801,676	70,255	13,555,632	77,447	6,655,917
Total.....tons	3,991	\$737,148	23,602	\$1,801,489	78,588	\$14,731,564	81,619	\$6,903,292
Imported from—								
Norway.....	975	\$250,676	4,922	\$433,535	8,544	\$2,072,792	9,463	\$386,036
Sweden.....	574	95,828	2,435	180,667	12,288	2,070,463	9,512	664,745
Canada.....	2,382	380,797	9,713	913,376	50,274	9,210,079	49,232	4,394,723
Other countries.....	60	10,147	6,532	368,891	7,482	1,572,230	13,412	947,178
CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.								
Colors or dyes, n.e.s.....lbs. Dut.	270,833	\$295,042	313,261	\$290,521	2,301,528	\$8,563,757	1,975,098	\$2,921,614
Imported from—								
Germany.....	95,163	\$89,113	245,345	\$182,347	944,980	\$1,387,377	942,515	\$1,422,890
Switzerland.....	61,781	76,809	33,430	78,637	632,966	1,358,418	711,256	1,065,433
United Kingdom.....	17,396	19,145	17,931	10,469	197,740	247,438	190,884	195,319
Other countries.....	96,513	109,975	16,555	19,068	525,822	569,524	130,443	178,032
Indigo—								
Natural.....lbs. Dut.	6,063	\$24,894			111,389	\$271,173	20,619	\$56,636
Synthetic.....lbs. Dut.			24,775	\$31,923	263,891	300,930	409,440	218,425
Alizarin and alizarin dyes.....lbs. Dut.	1,701	2,177	22,421	55,213	202,445	237,737	246,104	896,195
Lactarene or Casein.....lbs. Free	1,045,637	136,649	1,333,059	98,331	9,004,593	1,063,981	4,829,489	235,337
Lime, Chlor. of, or bleaching powder, lbs. Dut.	84,388	2,126	3,805,647	44,757	2,070,610	82,165	13,533,560	207,613
Magnesite, not purified.....tons. Free	4,365	45,519	4,854	111,320	30,707	497,232	33,327	522,000
Petash, Hydrate of.....lbs. Free	23,091	3,274	1,710,862	81,901	970,603	245,988	8,634,076	336,316
Sulphur or Brimstone.....tons. Free		12				30		120
China clay or kaolin.....tons. Dut.	20,713	218,322	13,515	146,710	209,636	2,359,112	101,053	1,081,715
PULP WOOD.								
Rough.....cords. Free	19,000	\$232,270	7,272	\$53,034	213,121	\$2,754,114	105,646	\$1,314,030
Peelcd.....cords. Free	135,884	2,212,127	60,566	653,950	683,274	9,959,626	268,714	3,073,830
Rosced.....cords. Free	8,206	146,808	2,000	27,060	133,751	2,505,306	44,990	711,588
Total.....cords	163,182	\$2,591,265	69,837	\$734,044	1,030,146	\$15,219,046	419,350	\$5,100,337

(Continued on page 60)

Howard Bond



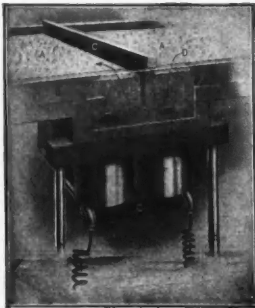
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TYPE "B" IRON EXTRACTOR

It consists of special magnetic surfaces of great power over which the paper stuff is made to pass. As a result, all the iron and many other foreign substances are completely extracted. Hundreds of these devices are in use daily and no one of them has failed to give complete satisfaction. Write us for Bulletins and full details.

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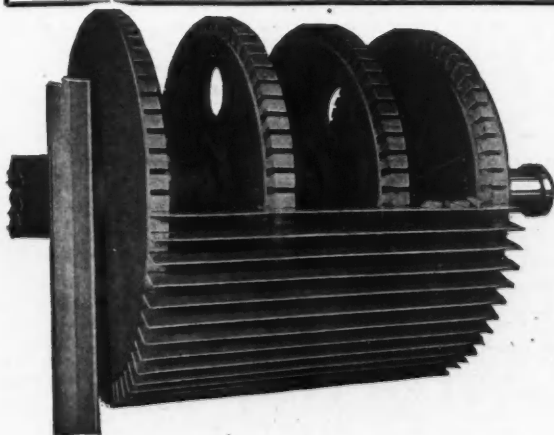
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**Super Calenders
Breaker Calenders
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**BEATING and WASHING ENGINES
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Our new **KEYED TYPE BANDLESS ROLL** is the final result of Many Years of Experience.

May we not tell you about its many advantages?

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 58)

EXPORTS—PAPER.

PAPER AND MANUFACTURES OF.	January				Seven Months Ended January 31			
	1921.		1922.		1921.		1922.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Paper, except printed matter (total).....		\$7,205,645		\$1,810,413		\$43,570,781		\$10,653,704
PRINTING PAPER—								
News Print.....lbs.	4,943,438	\$394,995	5,073,172	\$216,254	49,438,417	\$3,561,052	19,036,222	\$927,701
Exported to—								
Canada.....	43,738	\$3,596	60,066	\$4,204	961,588	\$76,531	146,973	\$11,168
Cuba.....	1,798,650	138,630	1,262,031	51,306	11,531,197	836,177	9,592,041	447,210
Argentina.....	1,971,722	140,559	2,653,574	105,248	20,920,650	1,208,812	2,860,109	113,294
Brazil.....	83,512	9,900	28,660	1,519	1,067,970	123,018	107,184	8,598
Uruguay.....			72,255	3,516	1,005,236	66,263	73,253	3,516
Other South America.....	433,884	45,118	274,322	13,902	4,128,063	380,534	1,074,302	55,994
China.....	100	19	116,501	4,424	1,529,556	158,796	394,621	18,806
Philippine Islands.....	51,140	5,020	134,296	6,508	2,013,648	129,055	1,949,443	101,211
Australia.....	1,154	195			563,172	62,352		
Other countries.....	564,538	51,967	470,477	25,537	5,717,347	533,944	2,838,174	167,999
Bible or India paper.....lbs.			7,145	1,596			7,145	1,596
Other book paper, not coated.....lbs.	11,421,465	\$1,930,926	1,760,592	\$188,810	59,242,387	\$9,733,843	11,127,645	1,256,540
Exported to—								
Greece.....	93,736	\$12,288			746,818	\$96,027		
United Kingdom.....	55,651	15,917	29,680	\$6,414	958,645	210,703	202,059	\$33,704
Canada.....	285,990	48,999	118,857	14,603	3,398,278	493,833	1,628,790	185,929
Mexico.....	416,132	83,336	85,171	11,000	1,262,176	243,637	1,928,888	239,231
Cuba.....	1,258,443	228,149	221,856	21,823	9,545,473	1,674,196	1,236,249	125,709
Argentina.....	2,434,633	327,947	10,705	866	9,446,302	1,298,905	253,977	34,972
Brazil.....	655,740	137,997	29,722	8,481	4,566,751	844,736	328,075	52,974
Chile.....	50,966	11,702	5,527	578	862,755	159,628	49,764	6,525
Colombia.....	845,010	67,788	27,849	2,788	1,190,565	206,035	172,587	17,408
Peru.....	374,695	62,846	6,446	1,707	737,504	127,865	272,910	25,918
Uruguay.....	444,205	39,384			1,808,024	251,785	355	43
Venezuela.....	147,308	32,103	28,963	5,327	1,170,701	213,843	388,997	47,170
British India.....	455,965	69,632			2,699,879	425,646	322,412	30,610
China.....	789,714	136,897	412,904	38,059	4,412,805	720,547	977,632	100,487
Dutch East Indies.....	192,506	35,994			1,075,498	174,332	7,186	914
Japan.....	12,585	2,375	502,672	50,249	965,858	143,064	1,324,694	129,012
Philippine Islands.....	1,009,503	222,733	89,187	7,963	3,268,450	560,408	679,183	75,088
Australia.....	1,548,962	205,041	88,207	8,509	5,312,342	767,697	379,696	37,912
Other countries.....	849,722	189,228	102,837	11,833	5,813,563	1,118,816	974,201	129,538
Cover paper.....lbs.			116,977	\$18,054			116,977	\$18,054
Grease-proof and waterproof paper.....lbs.		\$31,134	38,410	5,143		\$286,809		49,586
Writing paper.....lbs.	4,208,386	567,470			301,838	4,227,226	11,682,845	777,175
Kraft wrapping.....lbs.			56,767	4,928			56,767	4,928
Other wrapping.....lbs.			2,058,839	144,537			2,058,839	144,537
Writing paper and envelopes.....		1,372,442				6,283,012		1,033,994
Writing paper, except in paperies.....lbs.			689,203	115,844			689,203	115,844
Surface-coated paper.....lbs.			229,364	47,721			229,364	47,721
Tissue and toilet paper.....lbs.		111,978				1,321,252		498,118
Tissue and crêpe paper.....lbs.			119,424	36,129			119,424	36,129
Toilet paper.....lbs.			287,654	32,896			287,654	32,896
Paper towels and napkins.....lbs.		21,007	36,161	6,571		285,872		83,437
Bristols and bristol board.....lbs.			58,891	11,970			58,891	11,970
Paper board and straw board.....lbs.		637,597	3,295,487	140,856		3,896,041		831,832
Sheathing and building paper.....lbs.			245,947	7,244			245,947	7,244
Wall board of paper or pulp.....sq. ft.		154,794	684,378	29,478		1,030,297		209,832
Cigarette paper and books.....lbs.			61,208	24,065			61,208	24,065
Photographic paper.....lbs.			171,543	182,751			171,543	182,751
Paper hangings (wall paper).....yard		101,820	1,399,948	38,306		716,332		192,946
Paper bags.....lbs.		290,024	1,063,853	105,446		1,657,758		415,999
Boxes and cartons.....lbs.		274,627	554,558	42,181		1,532,032		649,095
Carbon paper.....lbs.		93,865	59,999	48,727		607,406		241,141
Envelopes.....lbs.			245,971	43,864			245,971	43,864
Indurated fiber ware.....lbs.			12,625	3,919			12,625	3,919
Playing cards.....pack		171,708	171,947	30,053		803,196		216,129
Cash-register and adding-machine paper.....lbs.		20,872	52,445	8,245		161,707		69,939
Paperies (writing paper in boxes).....lbs.			16,087	6,158				6,158
Other paper and paper products, n.e.s.....lbs.		1,060,386	1,804,487	268,677		7,466,946		2,620,524
Books, maps, pictures, and other printed matter.....lbs.		\$2,995,586				\$15,874,632		\$9,481,915
Books and Pamphlets.....lbs.			1,344,964	\$569,349			1,344,964	\$60,349
Maps and charts.....lbs.			19,871	30,436			19,871	30,436
Music in books or sheets.....lbs.			27,540	21,577			27,540	21,577
Souvenir post cards.....lbs.			214,186	27,638			214,186	27,638
Lithographically printed matter, except post cards and maps.....lbs.			157,584	60,754			157,584	60,754
Other printed matter.....lbs.			1,974,250	668,517			1,974,250	668,517

WOOD PULP AND PAPER STOCK.

	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Wood Pulp.....	3,032	\$290,598			16,509	\$1,880,804	11,740	\$614,068
Mechanical wood pulp..... tons			1	\$59			1	\$9
Sulphite wood pulp..... tons			1,578	\$9,200			1,875	\$9,200
Soda wood pulp..... tons			428	40,966			428	40,966
Kraft wood pulp..... tons								
Other wood pulp..... tons			96	6,559			96	6,559
Rags, and other paper stock..... lbs.	3,098,977	99,901	5,935,121	100,507	45,143,777	1,481,853	31,708,607	487,358

PAPER AND PULP MACHINERY.

	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Paper and pulp-mill machinery.....		\$361,576				\$2,312,578		\$1,376,074
Pulp-mill machinery.....lbs.			27,413	\$9,694			27,413	\$9,694
Paper-mill machinery.....lbs.			553,577	239,259			553,577	239,259

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PAPER

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It Advertises"*

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The *LiftAbout* is ideally suited for use in paper mills or warehouses, for it is easily and profitably adapted to practically every paper handling operation. Consider the advantages of the *LiftAbout* for your handling jobs in mill or storerooms or wherever there is lifting, carrying, and putting down to be done. The *LiftAbout* is low in price, because of quantity production, and is easily and economically installed.

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SHEPARD
ELECTRIC CRANES & HOISTS

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL.
WEDNESDAY, March 29, 1922.

The tone of the New York paper market has been more optimistic this week, although improvement in fundamental conditions is slow and only visible when past stages are recalled. The ranks of the more or less pessimistic are beginning to thin and those who are most conservative now believe that business is mending. They do not say that profits will begin to pour in on the first of April, and they do not anticipate superficial prosperity, of which enough has already been seen, but they state with confidence that the country is on the eve of a broad substantial increase in business. Paper interests have delt in red figures about as long as expected, and longer than could be borne in some instances, but now from many sources comes encouragement based on actual improvement, and it is understood that the worst is over.

The restless coal proposition clouds the paper horizon, for coal is an indispensable factor in the industry, and yet trouble from this source should not be prolonged, for it is believed that only a temporary suspension will result, since the miners intend to play directly into the hands of their employers. Freight rates will soon be adjusted to ameliorate the present condition that has the paper trade tied hand and foot. After those adjustments have been made it is to be hoped that Congress will pay attention to its own affairs and keep hands off legitimate business of which it knows nothing. There can be no real return to prosperity until an effective demand for goods is revived—until the buying power of the public is re-established in its normal strength. The farmer's buying power has been increased of late, and although too little time has elapsed for an effect to be observed on the general market, increased activity will doubtless be noticed in the near future. Now that a start has been made in re-creating the power of the people to buy, the task is half done and the entire country is bound to feel the influence in due course of time. There is no question but that 1922 will be the best business year since the war.

News print consumption is giving cause for much of the better feeling that now exists throughout the trade. In last December, January and February more news print was consumed than ever before in those months, not excluding the peak year of 1920, when the war lent artificial stimulus. In addition, each of those months has outstripped the preceding, so that an accumulative increase has been maintained. There is little reason to doubt that the demand will slack and so the news print market should remain active during the summer. Production is on the increase and at the same time publishers are eating rapidly into their low stocks, so that another period of activity approaches that may bear some resemblance to the boom days of 1920, only less panicky and more lasting. Although 70,000 tons of news print came from Canada into the states in January, arrivals from that source have diminished somewhat of late.

There are no new developments in the book paper market other than the gradual fundamental improvement that is too slow to be observed in weekly reports. More attention is being paid to the sales end of the business because the keen competition of the day promises business only to those who go after it hard. Manufacturers are doing their bit to satisfy the trade by creating new lines and keeping costs at a minimum in order to provide a better paper at the same or lower figure. Little price fluctuation is expected in the department for some months.

The fine paper market is doing better, but its condition is still far from satisfactory. The irregular demand keeps the market spotty and the manufacturers hard pressed, since they would far rather handle long term contracts than small orders received spasmodically. The cheaper grades of sulphite bonds are in best demand, while prices throughout the list show little revision in spite of moderate fluctuation.

There is very little action in the tissue market at present. Production was pushed so during the months of January and February that it was difficult at times to get a car of paper, and now that energy to artificially stimulate the demand is lacking, things are very quiet. Some business may be had if concessions are made in the price list, but dealers as a class are loath to strangle themselves.

A steady demand for normal amounts of kraft keeps this department in a healthy condition, with the mills operating at capacity and with their product spoken for some weeks in advance. Profits that are not accruing to manufacturers of other lines catering to a hand-to-mouth demand, are available for the kraft trade by reason of its ability to operate at capacity and cut the overhead by so doing. The kraft market is a truly bright spot in the paper field and its optimistic influence should soon spread throughout the other branches. Prices are steady and show little tendency to rise.

The board market has very little to boast of in spite of the fact that more mills are in operation than at the same time last year. While the demand is light and confidence lacking, the board industry is forced to remain quiet. Some betterment in the merchandising trades is felt in additional demand for board for boxes. Prices are still being cut slightly, but on the whole permit of little change.

Mechanical Pulp

The demand for mechanical pulp is steadier largely on account of the effort being made by the mills to fulfill the requests of their clientele for a cheaper grade of paper requiring a larger percentage of pulp and a smaller percentage of rag content. Arrivals from Scandinavia are very light at present, while the Canadian product is holding an important place in the domestic market. The price list shows little change in spite of pressure for downward revision.

Chemical Pulp

The chemical pulp market is still relatively less strong than the mechanical. The demand is light and apparently hampered considerably by the high freight schedules which are soon to be adjusted. Only advance is looked for in this market, where price revision will be slight until fall.

Old Rope and Bagging

The demand for old rope and bagging continues fair and steady. Inquiries are numerous from the mills, and while prices are fairly firm a goodly volume of business is conducted only after price shading has been indulged in.

Waste Paper

The consuming demand is taking more waste paper, and yet there is still room for improvement in the general condition of the market. Collections are slow and the narrow margin of profit allowed by the present scale of prices draws heavily on the vitality of the market. Prices are gradually being adjusted downward.

Rags

The rag market is experiencing most irregular times. The demand is highly erratic and changes in the price list come suddenly and without apparent cause. Inquiries continue in goodly volume and contribute a little toward the good feeling that has long been awaited.

Twine

The twine market is firming up steadily. It is impossible for a weekly report to reveal the slow changes for the better, but they may be clearly observed by glancing back and recalling the condition of the twine market six months or a year ago. Its position is much stronger now and tends to become more so. The demand is still unsteady and prices fluctuate a great deal.

Fred L. Ratcliff, president of the Ratcliff Paper Company, Toronto, has been elected president of the Toronto Rotary Club, being promoted from the position of vice-president of that organization.

Imports and Exports of Paper and Paper Stock

(Continued from page 56)

M. Schall & Co., Bankdale, Marseilles, 88 coils.
N. E. Bergen, Chickasaw, Hamburg, 47 coils.
International Purchasing Co., Francisco, Hull,
149 coils.

CASEIN.

A. Klipstein & Co., Alness, London, 380 bags,
41,731 lbs.

CHINA CLAY.

English China Clay Sales Corp., Bristol City,
Bristol, 50 casks.

WOOD PULP.

Tidewater Papermills Co., Nova Queen, Liver-
pool, N. S., 7,933 bales, 793 tons.

P. J. Kelly & Co., Atlantic, Gothenburg, 1,892
bales, 384 tons.

Mechanics & Metals Nat'l Bank, by same, 1,000
bales, 203 tons.

Castle, Gotthell & Overton, Ind. Hall, Rotterdam,
714 bales, 156 tons.

M. Gottesman & Co., Inc., Nieuw Amsterdam,
Rotterdam, 550 bales.

Guaranty Trust Co., Sudbury, Hamburg, 468
bales, 75 tons.

M. Gottesman & Co., Inc., Modica, Hamburg,
1,351 bales, 191 tons.

F. Enders & Co., by same, 1,000 bales, 203 tons.

WOOD FLOUR.

A. Kramers & Co., Penn State, Bremen, 443 bgs.
wood flour, 20,020 kilos.

PHILADELPHIA IMPORTS

WEEK ENDING MARCH 25, 1922.

E. Butterworth & Co., Sutherland, Antwerp, 147
bls. bagging.

Castle, Gotthell & Overton, Breiz Izel, Rouen,
53 bls. new cuttings.

Castle, Gotthell & Overton, Breiz Izel, Bor-
deaux, 766 bls. rags.

Castle, Gotthell & Overton, Breiz Izel, Bordeaux,
766 bls. rags.

Brown Bros. & Co., Breiz Izel, Rouen, 290 bls.
rags.

Castle, Gotthell & Overton, Lexington, Glasgow,
96 bls. rags.

Castle, Gotthell & Overton, Maryland, Bremen,
232 bls. rags.

Castle, Gotthell & Overton, Chappaqua, Ham-
burg, 344 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING MARCH 25, 1922.

Castle Gotthell & Overton, Breiz Izel, Rouen,
273 bls. rags.

Mechanics & Metals Nat'l Bank, Vauclin, Bor-
deaux, 880 bls. rags.

Old Colony Trust Co., by same, 263 coils old
rope.

Wood Pulp Trading Co., Ltd., H. W. Waage,
Havre, 4,250 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING MARCH 18, 1922.

Castle, Gotthell & Overton, Edam, Antwerp, 586
bls. rags.

Paper Production in Japan

OSAKA, Japan, March 1, 1922.—As a rule, the month of January should have resulted in an overproduction of paper as a reaction of the seasonal demands in the months of December and November, but the fact presented a different consequence. During the month of January, the participants in the Paper Association produced 46,487,760 pounds and sold 51,741,705 pounds, showing an excess of sales by 5,250,000 pounds. Even taking into consideration a more or less speculative buying on the part of dealers concerned, it is practically shown that demand is making a steady increase in general, especially so in news print, as well as colored paper, the details of which are as follows:

Descriptions	Manufactured	
	Pounds	Pounds
Superior printing paper	5,711,000	7,521,000
Common printing paper	7,480,000	7,478,000
Newspaper printing paper.....	23,651,000	25,085,000
Torinoko simili paper.....	513,000	1,614,000
Match paper	736,000	817,000
Colored paper	481,000	531,000
Wrapping paper	2,066,000	1,970,000
Renshi (mostly used in China).....	172,000	337,000
Miscellaneous	3,879,000	4,204,000
Total	46,487,000	51,741,000

Of the above the Fuji and Oji paper mills made and sold as follows:

	Manufactured	
	Pounds	Pounds
Oji paper mills	17,485,099	19,517,163
Fuji paper mills	16,310,244	18,299,099

American Writing Directors Meet

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., March 20, 1922.—A feeling of optimism was expressed at the annual meeting of the directors of the American Writing Paper Company held in New York last Wednesday. The directors organized with the following officials: President, George A. Galliver; vice-presidents, R. R. Campbell and John T. Wolohan; secretary, Dr. Ralph E. Rindfusz. Walter T. Rosen was made chairman of the executive committee and the advisory board. The following appointments were made: Controller, Paul R. Browne; acting treasurer,

W. C. Wharfield; assistant treasurer, Edwin F. Smith; assistant secretary, L. E. Loke; general purchasing agent, Martin L. Cramer; assistants, George A. Cadwell and Charles B. Foster; labor commissioner, Adam Wilkinson.

American Writing Paper Company Appointments

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., March 20, 1922.—Warren D. Thompson has been appointed by the American Writing Paper Company of this city, as assistant manager of its section of industrial papers, under Charles W. Mansfield. Mr. Thompson was born in St. Louis, Mo., and is a graduate of Harvard college.

Frederick H. Glover has been made manager of the specialties section of the company to succeed Oliver Young, who resigned.

Augustus C. Lamb, formerly sales manager of the company, is now again connected with the sales department of the company.

Sam Knode Returns From Far East

RICHMOND, Va., March 27, 1922.—Samuel C. Knode, vice-president of the Albemarle Paper Manufacturing Company, who has been looking after the interests of his company in the Far East since March, 1920, has landed in this country and is now en route to Chicago where, it is understood, he will entertain a gathering of jobbers with a few of his many experiences during the past two years.

Mr. Knode will attend the Annual Convention in New York, after which he will call on his many friends in the East, making his headquarters in Richmond and New York.

To Rebuild Vulcanite Roofing Co.

FRANKLIN, Ohio, March 21, 1922.—With the expected arrival from Buffalo of J. Logan, vice-president, and J. W. Quigley, production manager, plans for the reconstruction of the Vulcanite Roofing Company plant, which burned recently, with a loss estimated at \$250,000, probably will be made known. The Vulcanite mill is a branch of the Beaver Board chain, with which the two officials are connected.

It is said there is no basis for the rumor that the plant will not be rebuilt. Company officials are expected to decide that question.

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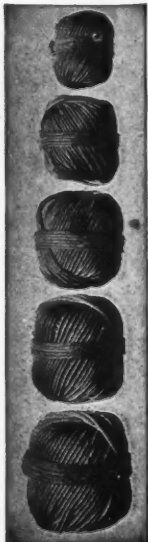
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CORDAGE

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL.
WEDNESDAY, March 29, 1922.

ALUM.—There has only been moderate activity in the alum market during the week. Money is not yet easy enough to permit of long contracts for large orders and so the trade continues to cater to a light but fairly steady demand. Prices are unchanged with ammonia alum quoted at 3.65 to 3.75 cents a pound for the lump, 3.75 to 4.00 cents a pound for the ground, and 4.15 to 5.25 cents for the powdered.

BLEACHING POWDER.—The mills are consuming more bleach and eating heavily into their stocks, which have been low for some months. Buying should become more active since general conditions are surely on the mend. Imported bleach sel's at 1.80 cents a pound and the domestic at 1.75 to 2.00 cents.

BLANC FIXE.—Blanc fixe continues to move with regularity in small lots. The market is spotty but a slow week is in most instances balanced by a more active one. Blanc fixe pulp is quoted at \$40 to \$50 a ton and powdered blanc fixe is quoted at 3.50 to 3.75 cents a pound.

CASEIN.—There is a ready demand for what small quantities of the commodity are now upon the New York market. Arrivals have been light for some time and although the demand is not yet normal, the market shows some strength. Casein is now quoted at 9.00 to 10.00 cents a pound.

CAUSTIC SODA.—The caustic soda market is firming up steadily both on account of the improved foreign demand and the strengthening of the domestic market. The contract price is 3.50 cents a pound slightly shaded in second hands.

CHINA CLAY.—Dealers in china clay are very optimistic for the future since a slightly stronger demand from the mills already indicates that their operation has improved. A large tonnage will be required this year, it is expected. Domestic unwashed sells at \$6 to \$8 a net ton, washed at \$8 to \$10, and imported at \$13 to \$18.

LIQUID CHLORINE.—Liquid chlorine is still quoted at 5.50 to 7.00 cents a pound, in 100 pound cylinders, depending upon quality, f. o. b. works. Consumers using large quantities can obtain lower prices.

ROSIN.—The rosin market is slightly more active with some inquiries coming from foreign quarters and a better demand from the paper mills. Grades E, F, and G are still quoted at \$5.35 per barrel of 280 pounds.

SALTCAKE.—The movement of saltcake is steady and in goodly volume, with the glass trade taking large lots and the demand from the paper industry a more important factor than formerly. Chrome-cake is now quoted at \$18 a ton and acid white at \$20.

SATIN WHITE.—The demand is for small lots of satin white only. Stocks are kept low in anticipation of firmer prices which it is hoped will be forthcoming soon. The price is 2.10 cents a pound but is shaded slightly when pressure is brought to bear.

SULPHUR.—The brimstone market holds fairly firm with the paper trade consuming more as production increases. The adequate supply should keep prices low through the summer months. Price is \$15 to \$16 a net ton at the mines and \$18 to \$19 f. o. b. New York.

STARCH.—Demand for starch from the mills holds steady and bids fair to increase if there is change in any direction. Prices are firm with bags quoted at 2.22 cents a pound and barrels at 2.50 cents a pound carload quantities.

SULPHATE OF ALUMINA.—This chemical continues in fair demand and is expected to move regularly throughout the summer without more than very slight fluctuation in price. The commercial grade now sells at 1.45 cents a pound and the iron free grade at 2.50 cents.

SODA ASH.—Soda ash is quiet with the consuming demand steady but light.

Market Quotations

(Continued from page 63)

Solid Ledger Stock.	2.00 @ 2.25	New Black Soft.	.03 @ .03 1/4
Writing Paper.	1.80 @ 2.00	New Light Sec-	
No. 1 Books, heavy.	1.50 @ 1.75	onds	.02 1/4 @ .02 1/2
No. 2 Books, light.	1.25 @ 1.50	Khaki Cuttings.	.02 1/4 @ .03 1/4
No. 1 New Manila.	2.75 @ 3.00	Corduroy	.02 @ .02 1/2
No. 1 Old Manila.	1.50 @ 1.75	New Canvas	.07 1/4 @ .08
Container Manila.	1.00 @ 1.10	New Black Mixed	3.00 @ 3.25
Old Kraft	1.90 @ 2.00	White, No. 1—	
Overique News.	.75 @ .80	Repacked	.06 @ .06 1/4
Old Newspaper.	.50 @ .60	Miscellaneous	.04 1/4 @ .04 3/4
No. 1 Mixed Paper.	.45 @ .50	White, No. 2—	
Common Paper.	.40 @ .50	Repacked	.03 @ .03 1/4
Straw Board, Chip.	.40 @ .45	Miscellaneous	.02 1/4 @ .03 1/4
Binders' Bd. Chip.	.40 @ .45	Thirds and Blues—	
Domestic Rags—New.		Repacked	1.85 @ 2.00
Price to Mill, f. o. b. Phila.		Miscellaneous	1.55 @ 1.75
Shirt Cuttings—		Black stockings.	1.75 @ 2.25
New White, No. 1.	.09 1/4 @ .09 3/4	Roofing Stock—	
New White, No. 2.	.05 @ .06	No. 1.	.90 @ 1.00
Silesias, No. 1.	.05 @ .06	No. 2.	.80 @ .90
New unbleached.	.08 1/4 @ .09	No. 3.	.70 @ .80
Washables	.03 1/4 @ .03 3/4	No. 4.	.75 @ .85
Fancy	.05 @ .05 1/4	No. 5A.	nominal
Cottons—according to grades—		B.	nominal
Blue Overall.	.05 @ .05 1/4	C.	nominal
New Blue.	.02 1/4 @ .02 3/4		

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Wood, Vat Lined.	47.50 @ 50.00
Bonds	.07 @ .08	Filled News Board.	40.00 @
Ledgers	.09 @ .09 1/4	Solid News Board.	42.50 @ 45.00
Writings	.04 1/4 @	S. Manila Chip.	42.50 @ 45.00
Superfine	.12 @ .13	Pat. Coated.	70.00 @ 75.00
Fine	.10 @	Old Papers	
Books, S. & S. C.	.07 @ .07 1/4	Shavings—	
Books, M. F.	.07 @ .06 1/4	No. 1 Hard White	.04 1/4 @ .05
Books, coated	.07 @ .07 1/4	No. 1 Soft White	.03 @ .03 1/4
Label	.09 1/4 @ .10	No. 1 Mixed	— @ .08
News sheets	4.00 @	Ledgers & Writings.	.02 @
News, rolls	.05 @	Solid Books	— @ \$1.35
Manila—		Blanks	— @ \$1.45
No. 1 Manila.	\$6.75 @	No. 2 Books Light.	.60 @ .70
No. 1 Fibre.	8.00 @	Folded News, over	
No. 1 Jute.	8.50 @ 9.00	issues	— @ \$11.50 @ 12.50
Kraft Wrapping	7.00 @	Mixed paper	.50 @
Common Bogus	3.00 @	Gunny Bagging	.80 @
		Manila Rope	.04 @ .04 1/4
Boards		Common Paper	8.00 @
(Per Ton Destination)		Old News	.80 @
Chip	\$37.50 @	Old Kraft	1.75 @
News, Vat Lined	39.00 @ 40.00		

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Sulphite bleached	90.00 @ 95.00
(Mill Prices to Jobbers f. o. b. Mill)		Sulphate	70.00 @
Bond—		Old Waste Papers	
Sulphite	11 @ 12 1/4	(In carload lots, f. o. b. Toronto)	
Light tinted	12 @ 13 1/4	Shavings—	
Dark tinted	13 1/4 @ 15	White Env. Cut.	4.00 @
Ledgers (sulphite)	— @ 13	Soft White Book	— @
Writing	10 1/4 @ 13 1/4	Shavings	3.15 @
News, f. o. b. Mills—		White Bl'k News	1.70 @
Rolls (carloads)	3.50 @	Book and Ledger—	
Sheets (carloads)	— @ 4.25	Flat Magazine and	
Sheets (2 tons or	— @ 4.50	Book Stock	
over)		(old)	1.45 @
Book—		Light and Crum-	
No. 1 M. F. (car-	9.50 @	pled Book Stock	1.30 @
loads)		Ledgers and	
No. 2 M. F. (car-	8.50 @	Writings	1.80 @
loads)		Solid Ledgers	1.80 @
No. 3 M. F. (car-	8.00 @	Manila—	
loads)		New Manila Cut.	2.00 @
No. 1 S. C. (car-	10.00 @	Printed Manilas	.90 @
loads)		Kraft	2.25 @
No. 2 S. C. (car-	9.00 @	News and Scrap—	
loads)		Strictly Overissue	.90 @
No. 1 Coated and	15.00 @	Folded News	.90 @
litho.		No. 1 Mixed Pa-	
No. 2 Coated and	14.00 @	pers	.60 @
litho.		Domestic Rags—	
No. 3 Coated and	13.25 @	Price to mills, f. o. b. Toronto.	
litho.		Per lb.	
Coated and litho.,	15.25 @	No. 1 White shirt	
colored		cuttings	.09 1/4 @ .10
Wrapping—		No. 2 White shirt	
Grey	4.75 @	cuttings	.05 1/4 @ .05 3/4
White Wrap.	5.25 @	Fancy shirt cut-	
"B" Manila	5.75 @	tings	.05 1/4 @ .05 3/4
No. 1 Manila	7.50 @	No. 1 Old whites	.04 @
Fibre	7.25 @	Thirds and blues	.02 @ .02 1/4
Kraft, M. F. or		Per cwt.	
M. G.	8.75 @	Black stockings.	1.75 @ 1.85
Pulp		Roofing stock	
(F. o. b. Mill)		No. 1.	1.25 @
Ground Wood.	\$25.00 @ \$32.50	No. 2.	1.15 @
Sulphite easy bleach-		Roofing stock	
ing	60.00 @ 65.00	Manila rope.	.04 1/4 @ .04 3/4
Sulphite, news grade.	50.00 @ 60.00	No. 2.	.01 1/4 @
		Gunny bagging	1.00 @ 1.25

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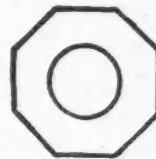
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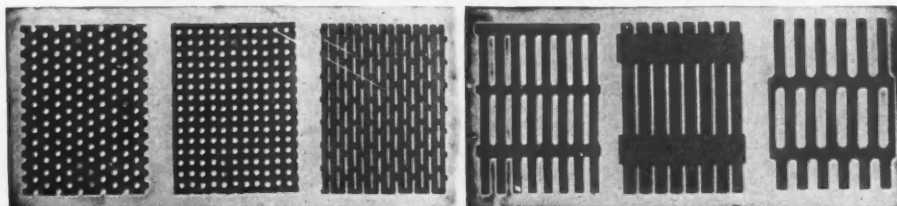
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SITUATION WANTED, 4 cents a word for first insertion and 2 cents a word for each subsequent insertion of same ad. No ad of less than 25 words accepted.

HELP AND MISCELLANEOUS WANTS, and small For Sale Ads, 4 cents a word for each and every insertion. No ads of less than 25 words accepted.

When answering advertisements, please address the Box Number given in ad.

Answers can be forwarded care Paper Trade Journal, and will be promptly forwarded without extra charge. All should be sent to the New York office, 10 East 39th street. And all should be addressed as the advertisement directs in every case and not simply to the paper.

All classified ads for the current issue must be in hand not later than Monday preceding date of publication.

HELP WANTED

WANTED—Machine Help and Beaterman. Mill in good location. Address, Box 4900, care Paper Trade Journal. M-30

BROKERS AND SALESMEN are wanted by a manufacturer of high-grade sulphite toilet papers, who sells exclusively to wholesale dealers. Commission of 5% is paid. Address, Box 4919, care Paper Trade Journal. M-30

WANTED—A High Grade Master Mechanic for a Southern Pulp and Paper Mill. Address, Box 4921, care Paper Trade Journal. A-6

EXPERIENCED MEN in Paper Industry. Our confidential and personal service limited to the Pulp, Paper and Allied Trades. Can be of valuable assistance to you in locating desirable connections. Address, The Industrial Service Bureau, 1502 Monadnock Block, Chicago, Illinois. tf

WANTED—Two first class Beater Engineers on new machine about to start up, familiar with beating Kraft Pulp. Also Boss Finisher. Address, Box 4937, care Paper Trade Journal. M-30

MACHINE TENDERS, Rodgers Wet Machine. Married man preferred, also Digester Cooks. Address, Box 4938, care Paper Trade Journal. A-13

WANTED—Two Beatermen, expert in Beating Sulphite and Rag Stocks and capable of matching Colors, eight hour day. Address, Box 4941, care Paper Trade Journal. M-30

WANTED—Sales Agency for Pacific Coast Territory representing manufacturer of fine or Coarse Paper, Tissue, Waxed, or Paper Specialties. Distributing to Dealers or Consumers. Personal interview can be arranged immediately. Address, Box 4942, care Paper Trade Journal. A-13

FIRST CLASS PAPER MILL MECHANIC—wanted by Mill near New York City. Must have thorough knowledge of electrical power equipment. State references, experience and salary expected. Address Box 4957, care Paper Trade Journal. M-30

SALESMAN WANTED—Familiar with Toilet Paper Market. Good salary to one who can produce results. State experience and salary expected by letter. Address, Saugouit Toilet Paper Co., New Hartford, N. Y. A-20

WANTED—Cylinder machine tender on tissues. Edwards attachment machine. 58½ cents per hour, for eight hours. Address, Box 4958, care Paper Trade Journal. M-30

WANTED—Man who is familiar with color mixing for coating plant. Give full details of experience, age, and salary expected in first letter. Address, Box 4959, Paper Trade Journal. M-30

HELP WANTED

WAX PAPER PRINTER—To run two-color Meisel Press. Steady position. State where last employed. In strict confidence with salary expected. Address, Box 4969, care Paper Trade Journal. M-30

SALESMAN—Familiar with Wax Paper Line to sell Printed Bread Wrappers to bakers. Commission basis. Address, Kuhmarker Mfg. Co., 149 West 24th St. M-30

WANTED—Experienced salesmen to handle as side line staple article of demonstrated merit. In large demand by paper and wood pulp mills. Attractive arrangement. Address, Box 4970, care Paper Trade Journal. M-30

SITUATIONS WANTED

PAPER SALESMAN in New York City who can produce a large volume of business with adequate co-operation, desires connection. Drawing account on Commission basis. Correspondence invited. Address, Box 4635, care Paper Trade Journal. tf

WANTED POSITION—As superintendent. Twenty-one years' experience; used to Specialties, Colors and Wrapping, all grades of Boards and Fibres. Knows how to handle help. Can keep up repairs. Used to Four-drummer and Cylinder Machines. Address, Box 4786, care Paper Trade Journal. tf

SITUATION WANTED—Engineering draftsman, technical graduate, 12 years' experience, Pulp and Paper Mills, Power House and Hydro-Electric Design. Thoroughly practical and reliable. Address, Box 4818, care Paper Trade Journal. TF

SULPHITE SUPERINTENDENT with twelve years' practical experience, combined with technical training desires position with a Progressive Concern where ability is recognized. Excellent references. Address, Box 4875, care Paper Trade Journal. M-30

WANTED POSITION—Superintendent open for a position. Have had fifteen years' experience on all grades of Box Boards. Tests, Containers, etc. Familiar with repairs, maintenance, and knows how to handle men. Address, Box 4818, care Paper Trade Journal. M-30

SULPHATE PULP SUPERINTENDENT—With proven ability for big production at lowest costs, desires position. Would consider offer from concern where production is below the average. Address, Box 4851, care Paper Trade Journal. A-6

THE INDUSTRIAL SERVICE BUREAU is prepared to assist you with your employment problems. Confidential intermediary service for the employer and employee of the pulp, paper and allied trades. Write or wire your requirements. 1502 Monadnock Block, Chicago, Ill. tf

MILLS MAKING

News, Novel, Catalog, Book Writing Specialties

Well organized firm of New York mill agents in excellent standing with the trade are ready to serve to advantage the right mill making above papers. Will finance orders if required. Box 4860, care The Paper Trade Journal. tf

SITUATIONS WANTED

WANTED—Position as Wood Room superintendent, familiar with drums and thorn barker systems. Competent on conveyers, wood machinery, wood stackers and good work. Address, Box 4907, care Paper Trade Journal. M-30

RAG MAN with 20 years' experience desires position. Expert on grading and cooking old or new stock. Can handle help and give production at low cost. Address, Box 4923, care Paper Trade Journal. M-30

GRADUATE ENGINEER, 29, thoroughly experienced in design, construction and maintenance of Pulp and Paper Mills, seeks position with opportunity to show ability. Address, 4929, care Paper Trade Journal. M-30

WELL KNOWN SALESMAN, about to open an office in New York, can satisfy mills manufacturing Writing, Book, Cover, or Specialties, of his qualifications to represent them and of his ability to get business. He would like to correspond with such mills with a view to handling their product on a commission basis in the principal Eastern Jobbing Centers. Address, Box 4931, care Paper Trade Journal. M-30

YOUNG MAN, experienced paper salesman, would like to represent eastern manufacturers of papers and specialties on Pacific Coast. Headquarters, San Francisco. Have had ten years' experience dealing with sixty western paper houses. Can furnish best references. Address, Box 4933, care Paper Trade Journal. M-30

WANTED—Position as Day or Night Ground Wood Superintendent. United States or Canada, by young man. Married man, twelve years' experience on all grades. Now employed. References. Address, Box 4943, care Paper Trade Journal. A-13

EXPORT EXECUTIVE with 17 years' activity in Paper Business here and abroad, thoroughly trained and experienced in Foreign Trade essentials, seeks managerial position with mill or exporter. Highest references. Permanent position wanted. Address, Box 4944, care Paper Trade Journal. A-6

WANTED—Position as Superintendent. Experienced on Rag and Wood Book and Bonds, Kraft and Sulphite light weight papers for twisting. Can give references. Address, Box 4945, care Paper Trade Journal. A-6

SUPERINTENDENT — Wants position, Ledger, Bond, Writing, colored specialties, hanging. Practical. Can make your mill pay. Go anywhere. Best references. Address, Box 4888, care Paper Trade Journal. A-12

SUPERINTENDENT, now employed, desires to make change. Varied experience on all grades of box boards, container, etc. Best of references from past and present employers. Address, Box 4949, care Paper Trade Journal. A-13

WANTED: WOOD PULP

To the wood pulp dealer or importer. If you are looking for efficient sales representation, this advertisement should not fail to interest you. A man, thirty-eight years of age, of recognized ability in sales circles and a splendid acquaintance with paper mill trade, is open for sales connection handling broad line all grades wood pulp. Will consider salary or commission offer that guarantees steady traveling east and west. If you have responsible pulp connections, let me hear from you. All communications strictly confidential. Address, Box 4930, care Paper Trade Journal. A-30.

SITUATIONS WANTED

EXECUTIVE OPEN FOR ENGAGEMENT—Twenty years' experience Mill Manager, Sales Manager, etc. Box Board or Allied Lines. Address, Box 4951, care Paper Trade Journal. M-30

PRESS PAPER, Counter and Insulating Board Maker desires position as foreman or beaterman. Capable of producing results. Address, Box 4952, care Paper Trade Journal. A-6

A PAPER MAN possessing Executive Ability and Capacity for work desires connection with Paper House, or as Mill Representative in Eastern Territory. Most of his years of experience has been in fine Papers. Has wide acquaintance among mill men and consequent knowledge of their Products. Has always been and is now employed, but, for sufficient reasons, intends to change. While his past record is a good recommendation, his ambition for greater accomplishments is a better one. An interview, which can be arranged in New York, or elsewhere, be more convincing. Address, Box 4954, care Paper Trade Journal. M-30

WHAT HAVE YOU TO OFFER? Five years, selling experience in the city—in charge of export and advertising—knowledge of mills and their products. Added to these qualifications I am a young man and have several thousand dollars to invest in a meritorious proposition if necessary. Address, Box 4956, care Paper Trade Journal. M-30

WANTED POSITION — Superintendent; twenty-four years' experience making Book, Writing, Bond, Waxing and News. Knows how to handle help and build that old machine like new. Address, Box 4960, care Paper Trade Journal. A-6

SALESMAN in Chicago and Central States Territory desires good mill connection. Twelve years' successful experience selling jobbers, wholesale grocers, large printing, publishing and consuming trade. Have thorough knowledge of kraft, book papers, bag, coarse papers and boards. Can furnish best of references. Address, Box 4961, care Paper Trade Journal. A-6

PAPER MANUFACTURERS who would like proper distribution of their products in Porto Rico, communicate at once for an interview. Leaving the states within 2 weeks. Will establish myself permanently in Porto Rico. Address, Box 4962, care Paper Trade Journal. M-30

PAPER AND RAG STOCK MAN wants position in Paper Mill or Conversion Plant or Grading House, as manager or superintendent. Now employed, but would like to make a change. Address, Box 4963, care Paper Trade Journal. A-6

BOSS FINISHER with 20 years' experience on high grade writing papers, is looking for a position with a firm where experience and ability would be appreciated. Address, Box 4964, care Paper Trade Journal. M-30

SUPERINTENDENT now employed desires to make change. Have operated some board mills in the country. Have been in the game twenty-eight years. References furnished. Address, Box 4965, care Paper Trade Journal. M-30

OFFICE MANAGER—Young married man now employed desires a change. Can handle all detail work and assist busy executive. Past experience received at the mill. Address, Box 4966, care Paper Trade Journal. M-30

FIFTEEN YEARS' diversified experience in the paper industry and naturally equipped with knowledge of paper such as would be an asset to your organization. Young man, 22 years of age, married, desires connection with mill or reputable jobber. Address, Box 4971, care Paper Trade Journal. A-13

EXECUTIVE with managerial ability, trained office manager, accountant and cost expert. Student of Walton School of Accountancy, Alexander Hamilton Institute and Industrial Extension Institute; specially experienced in paper mill administrative problems, financial, cost and efficiency installations, seeks position of trust and responsibility. Highest references given. Address, E. J. B., P. O. Box 760, Cincinnati, Ohio.

FOR SALE

FOR SALE: DRYERS—3-60"x120" Dryers with bearings. A bargain. W. V. Sullivan, Call Bldg., San Francisco. tf

FOR SALE—1 used 10 feet North Save-all \$500.00. Consolidated Paper Co., Monroe, Michigan. M-30

STANDING PULPWOOD FOR SALE—I have a fine lot of standing spruce, Balsam and Hemlock Pulp amounting from 40,000 to 50,000 cords well located in New York State. Will sell the whole or half interest and join in the operation. All communications will be treated as confidential. Address, Box 4967, care Paper Trade Journal. A-6

ENVELOPE MACHINE—Excellent operating condition. Sacrifice. Mr. Dudley, McCall Co., 236 West 37th St., New York City. A-6

PRESSES (printing). Cottrell Rotary. Two No. 7 double colors. Six No. 7 single colors. Excellent operating condition. Sacrifice. Mr. Dudley, McCall Co., 236 West 37th St., New York City. A-6

FOR SALE—One five roll stack of calenders 82" face, 1-12" top, 3-10" intermediate and 1-14" bottom rolls, complete, in excellent condition. Can be seen running. Little Falls Paper Co., Newburgh, N. Y. M-30

FOR SALE—One 40" Kidder Press, sifting machine Model S. L. and one Undercut Paper cutter 38" wide, also 1-5 H. P. General Electric D. C. Motor and one 4 H. P. Sprague Electric D. C. Motor with controlling starting. Address P. O. Box 300, Emerson, N. J. M-30

FOR SALE—Paper machine reel 110" Face. Heavy pattern revolving reel for 4 drums. Marinette & Menominee Paper Co., Marinette, Wisconsin. tf

FOR SALE—Roofing and Saturating Machines, 72"x36" wide. Chilled steel rolls. Also Painter Mixing Machine, Grinders, etc. Address Box 4910, care Paper Trade Journal. tf

FOR SALE—14 Calendar Rolls, 58" face, 3" 14" diameter. 2 No. 1 Clafin Engines. 1 small Jordan Engine. 1 6" Horizontal Water Pump. 2 Air Fans. Complete triple-deck frames for 44 Dryers. Will arrange terms to suit. Chesapeake Paper Board Co., Baltimore, Maryland. tf

FOR SALE—Three Downingtown Beaters, 600 lbs. capacity on rope stock. Diameter of roll 52", width of roll 42". Complete with washers. Address, Box 4909, care Paper Trade Journal. M-30

COAL—Moshannon and "E Seam" bituminous coals, low sulphur, low ash. Lowest freight rate east and north. Prices and freight rates will be furnished on request. Halden-Kelley Coal Company, 309 Market St., Clearfield, Pa. tf

FOR SALE—Calender roll grinder, second hand Farrel Machine. Grinds roll 24" diameter by 136" face. Fairly good condition. Address, Box 4932, care Paper Trade Journal. M-30

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MISCELLANEOUS

WANTED—A single Drum Winder suitable for Winding Tissue, about 72 inch face. Address, Box 4948, care Paper Trade Journal. A-13

PULP WANTED—Will pay cash for any quantity Foreign Pulp on spot and to arrive. Send particulars with price. Address, Box 4832, care Paper Trade Journal. tf

SWIFT, GEORGE W., JR., Designer and Manufacturer of Special Machinery for manufacturing and Printing Paper Goods, Bordentown, N. J. 1-1-24

WANT TO PURCHASE a Paper or Card Board business in or near New York City. Address, Box 4968, care Paper Trade Journal. M-30

WANTED—Second-hand Kidder Paper Press, 40 to 48-cylinder length, curve casting box and hand scoup, curve plate routing machine, stereotype melting pot, 40" Seybold cutter. All or any material must be in good working condition. Address, Box 4972, care Paper Trade Journal. M-30

FOR SALE

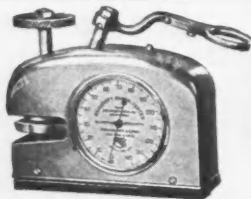
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PRESS PARTS FOR PAPER MACHINES—Pusey & Jones bell crank housing two sets 18"x96", Black & Clawson swing arm housings with rolls.
DRYERS—Four 48"x111", thirteen 36"x95", four 48"x68", one 84"x67", eleven 42"x66".
MARSHALL DRIVES—Two Black & Clawson self-contained stand with friction clutch cone pulley and 6" mortise gears. Mortise gears and pinions for Pusey & Jones Marshall drives 5" to 8" face.
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SLITTERS AND WINDERS—One 120" Warren, one 108", 36" Kidders.
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JORDANS—One Wagg Majestic, three No. 2 Dillon Improved, one Large Horne, four Monarch, one Jones Standard, two Pope Brushing engines.
SCREENS—Six 10 plate open side Packer, two 6 plate, one Moore & White auxiliary.
STUFF PUMPS—Deane triplex, 9"x8", Gould triplex 8"x10", Sandusky triplex 4"x6".
REVOLVING SHEET CUTTERS—One 104" Horne, five 61" Hamblet, four 61" Finlay, one 50" Hamblet diagonal, one 42" Finlay.
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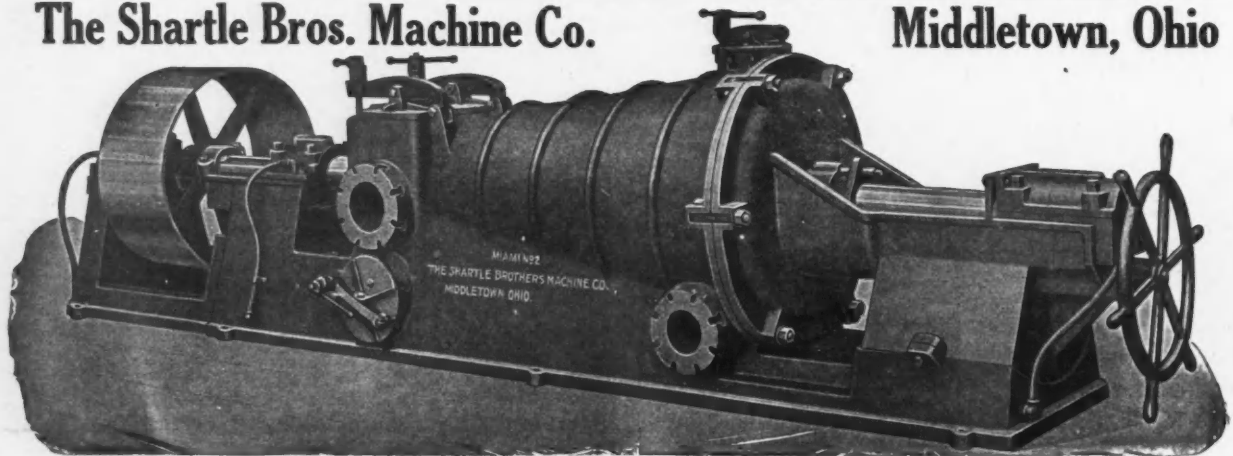
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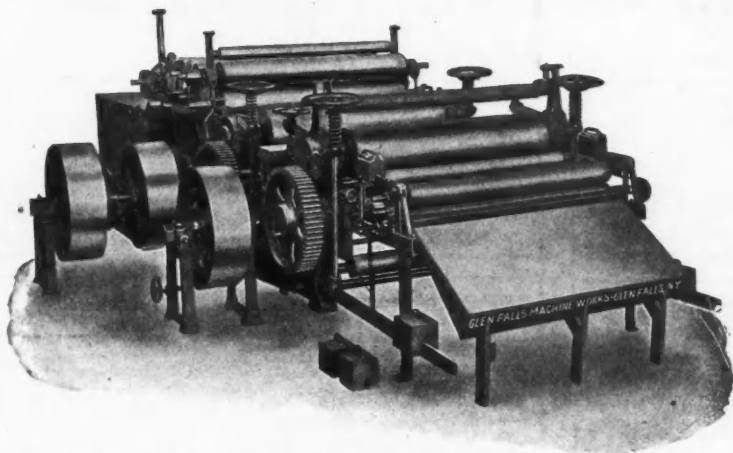


Illustration Shows Rogers Double Press Wet Machine

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TYPES—Single and Double Press 72" wide.

CAPACITY—either type 25-30 tons air dry stock per 24 hours.

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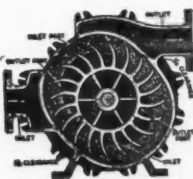
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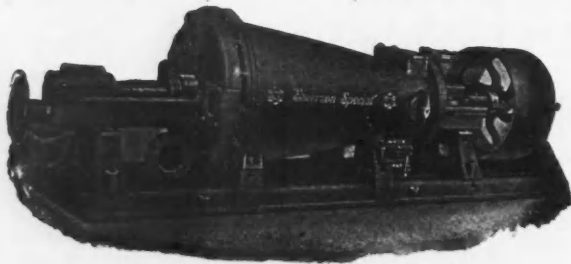


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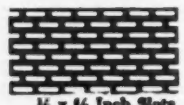
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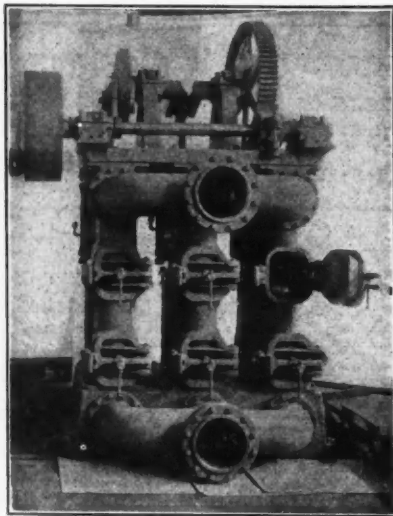
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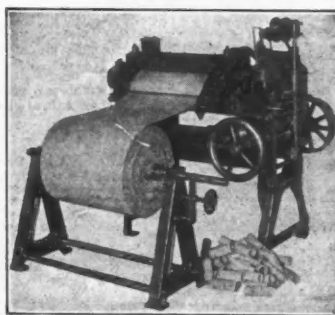
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For Making Tubes for Toilet
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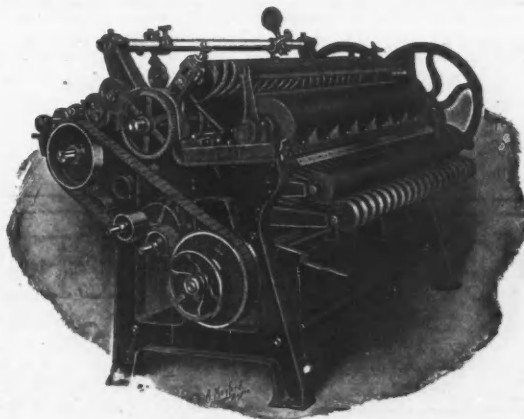
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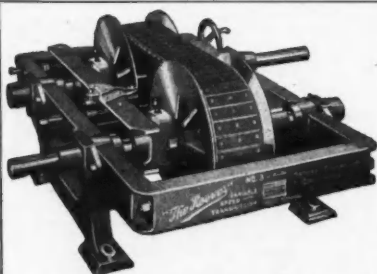
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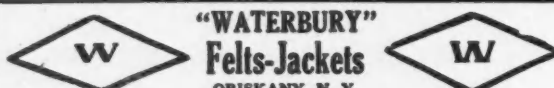
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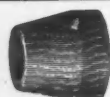
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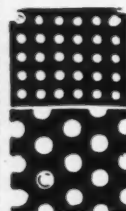
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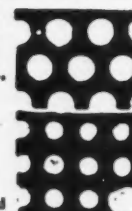
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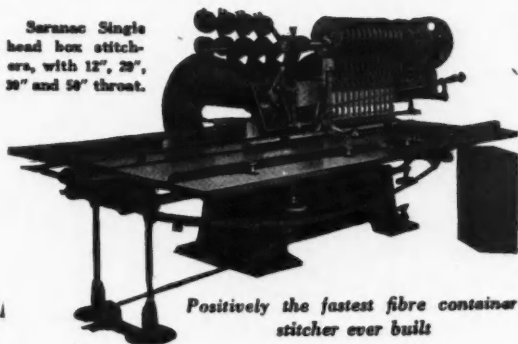
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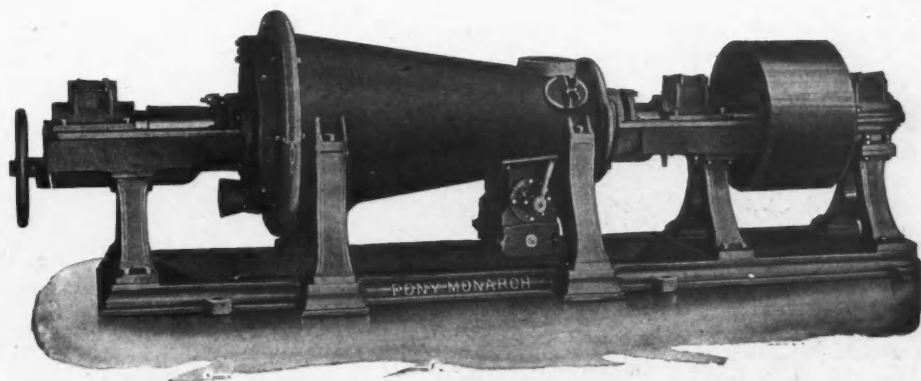
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TO 3000 LBS.



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CLASSIFIED INDEX TO ADVERTISEMENTS

ADDING MACHINE ROLLS.	Page	CLAY.	Page	FLOOR COVERINGS.	Page
Paper Manufacturers Co.	78	Atterbury Bros.	Front Cover	L. Sonneborn & Sons	—
AQUALITE.		John W. Higman Co.	4	FLOOR HARDENER (Concrete).	—
Union Talc Co.	78	Paper Makers Chemical Co.	84	L. Sonneborn & Sons	—
U. S. Talc Co.	78	Star Clay Company	84	FOURDRINIER WIRES.	
ALUM.		Western Paper Makers Chemical Co.	4	Appleton Wire Works	84
The Kalbfleisch Corp.	—	CLUTCHES (Friction, Etc.).		Buchanan Bolt & Wire Co.	67
Pennsylvania Salt Mfg. Co.	84	Hill Clutch Co.	—	Cable Excelsior Wire Mfg. Co.	84
Superior Chemical Co.	76	COGS.		Cheney, Bigelow Wire Works	82
Winkler Bros., Inc.	76	N. P. Bowsher Co.	84	Eastwood Wire Mfg. Co.	84
ARCHITECTS AND ENGINEERS.		Menasha Wood Split Pulley Co.	78	Green Bay Wire Works	—
George F. Drew	72	COMPRESSORS (Air).		Lindsay Wire Weaving Co.	74
Hardy S. Ferguson	72	The Nash Engineering Co.	73	Joseph O'Neill Wire Works	74
William T. Field	72	CONVEYORS (Pulpwood).		The W. S. Tyler Company	83
George F. Hardy	72	Jeffrey Mfg. Co.	71	FURNACES (Automatic).	
Management Engineering and Development Co.	73	CORDAGE.		Murphy Iron Works	72
F. L. Smith	72	Columbian Rope Co.	29	GAUGES (Calliper).	
Stebbins Engineering Co.	73	CUTTERS.		Farrel Foundry & Machine Co.	25
Thomas L. Tomlines & Son	72	Smith & Winchester Mfg. Co.	7	GAUGES (Pressure, Indicating and Recording).	
Vitale & Rothery	72	DIE CUTTERS.		Bristol Co., The.	7
Joseph H. Wallace & Co.	72	Hoggson & Pettis Mfg. Co.	—	GUMMING AND GLUING MACHINERY.	
ASBESTINE PULP.		Independent Die Co., Inc.	6	Potdevin Machine Co.	9
International Pulp Co.	Front Cover	DIGESTERS.		HEATERS.	
ASH-HANDLING MACHINERY.		American Welding Co.	—	Gordon Co., Inc., Roberts	—
Jeffrey Mfg. Co.	71	DRINKING CUPS.		IRON EXTRACTORS.	
BALL BEARINGS.		F. N. Burt Company, Ltd.	33	Oakes Co., Reland T.	59
S. K. Industries, Inc.	—	DRIVES (Gear).		IRON PIPE.	
BARKERS.		Farrel Foundry & Machine Co.	25	Reading Iron Co.	—
Valley Iron Works	—	DRIVES (Silent Chain).		KNIVES, ETC.	
BEARINGS (Collar Oiling).		Morse Chain Co.	72	Belton & Son, J. W.	9
Hill Clutch Co.	—	DRYER EXHAUSTS.		Machinery Co., of America	—
BEATER PADDLES.		The Nash Engineering Co.	73	LUBRICANTS.	
Menasha Wood Split Pulley Co.	78	DRYING SYSTEMS.		Vacuum Oil Co.	—
BEATING ENGINES.		Open Coil Heater & Purifier Co.	—	MICROMETERS.	
Beloit Iron Works	14	W. F. Pickles	12	Ashcroft Mfg. Co.	70
Claffin Engineering Co.	—	Ross Engineering Co., J. O.	72	E. J. Cady Co.	—
Dayton Beater & Hoist Co.	76	DYES, ANILINE.		Foreign Paper Mills, Inc.	3
Dillon Machine Company, Inc.	82	Calco Chemical Co.	—	MICROMETER CALIPERS.	
Dilts Machine Works, Inc.	59	Heller & Merz	12	Lobdell Car Wheel Co.	44
Downington Mfg. Co.	82	Mathieson Alkali Works	—	MILL COGS.	
Emerson Mfg. Co.	74	National Aniline & Chemical Co.	—	N. P. Bowsher & Co.	84
Noble & Wood Machine Co.	79	The White Tar Aniline Corporation	—	MILL INSTALLATIONS.	
Valley Iron Works	—	DYE STUFFS.		The Layne Ohio Co.	—
BELTING.		E. I. Du Pont de Nemours & Co.	—	MOTORS.	
Goodyear Tire & Rubber Co.	—	ELECTRIC HOISTS.		B. F. Perkins & Son, Inc.	11
R. D. Skinner & Co., Inc.	—	Shepherd Electric Crane & Hoist Co.	61	MOTOR TRUCKS.	
BRONZE CASTINGS.		ENVELOPE MACHINES.		Packard Co.	—
Hyde Windlass Co.	—	Potdevin Machine Co.	9	OILS AND GREASE.	
BUCKETS (Elevator).		F. L. Smith Machine Co.	74	Vacuum Oil Co.	—
Hendrick Mfg. Co.	9	EVAPORATORS.		PACKING.	
CALENDER ROLLS.		Zarembo Company	—	Jenkins Bros.	61
Farrel Foundry & Machine Co.	25	FAN PUMPS.		PAINTS AND VARNISHES.	
Lobdell Car Wheel Co.	44	Valley Iron Works	—	Du Pont de Nemours Co., E. I.	—
Norwood Engineering Co.	5	FELTS AND JACKETS.		PAPER BAG MACHINERY.	
B. F. Perkins & Son, Inc.	11	Albany Felt Co.	10	Potdevin Machine Co.	9
Textile Finishing Machinery Co.	59	Appleton Woolen Mills	6	Smith & Winchester Mfg. Co.	7
CARBON TOOLS.		Draper Bros. Co.	76	PAPER BAG MANUFACTURERS.	
Thomas L. Dickinson	78	Fitchburg Duck Mills	2	Hudson Bag Company	70
CASEIN.		F. C. Huyek & Son	13	Lawrence Bag Co.	11
Caslin Mfg. Co.	—	Lockport Felt Co.	—	Schersch & Co.	67
CENTRIFUGAL PUMPS.		Orr Felt & Blanket Co.	67	PAPER BOX BOARDS.	
Valley Iron Works	—	Shuler, Benninghofen Co.	84	C. L. La Briteaux Co.	5
CHAINS.		Waterbury Felt Co.	4	PAPER CUTTERS.	
Jeffrey Mfg. Co.	71	Waterbury & Sons Co., H.	78	Hamlet Machine Co.	77
CHEMICALS, COLORS, ETC.		FELT ROLLS.		PAPER DEALERS.	
Arnold, Hoffman & Co., Inc.	73	Rodney Hunt Machine Co.	—	Fernstrom Paper Co.	35
Du Pont de Nemours Co.	12	FILTERING SYSTEMS.		R. F. Hammond	Front Cover
Heller & Merz Co.	83	Norwood Engineering Co.	5	Midwest Paper Co.	78
Kutroff, Pickhardt & Co.	—			PAPER EXPORTERS.	
Mathieson Alkali Works	—			Hudson Trading Co.	2
The White Tar Aniline Corporation	—			Parsons Trading Co.	Front Cover
C. K. Williams & Co.	84			Fred C. Strype	61

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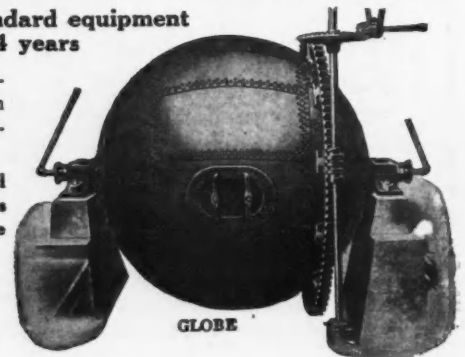


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CLASSIFIED INDEX TO ADVERTISEMENTS

PAPER MANUFACTURERS.	Page	PRESS ROLLS.	Page	SUCTION BOX COVERS.	Page
Bayless Mfg. Co.	4	Rodney Hunt Machine Co.	—	Menasha Wood Split Pulley Co.	78
Becker Paper Corporation	37	PLUGS.		SULPHITE, BLEACHED AND UNBLEACHED.	
Brown Company	5	Menasha Wood Split Pulley Co.	78	J. Andersen & Co.	4, 31
Collins Mfg. Co.	13	PLUGS (Wood).		The Borregaard Co., Inc.	39
Diamond State Fibre Co.	Front Cover	O. L. Bartlett	11	Brown Co.	5
Eastern Mfg. Co.	70	PULP PROCESS.		Butterworth & Co., Inc., E.	73
Eaton-Dikeman Co.	11	Castle, Gotheil & Overton	6	Canadian Robert Dollar Co.	41
Fort Howard Paper Co.	78	PULP STONES.		Craig-Becker Co., Inc.	3
Franklin Paper Co.	78	International Pulp Stone Co.	Front Cover	Eastern Manufacturing Co.	70
Hammernill Paper Co.	65	Lombard & Co.	83	Lead Sales Co., The	57
Hanna Paper Corporation	5	PUMPS.		Parsons Pulp and Lumber Co.	76
Howard Paper Co.	59	Frederick Iron & Steel Co.	—	Price & Pierce, Ltd.	Front Cover
Missisquoi Pulp & Paper Co.	3	Hayton Pump & Blower Co.	9	Pulp & Paper Trading Co.	4
Mountain Mill Paper Co.	4	The Layne-Ohio Company	—	SULPHUR.	
Poland Paper Co.	39	PUMPS (Vacuum).		Texas Gulf Sulphur Co.	13
St. Regis Paper Co.	78	The Nash Engineering Co.	73	Union Sulphur Co.	3
Sherman Paper Co.	73	PRESSURE BULKERS.		W. E. Caldwell Co.	—
Sratford Paper Co.	5	B. F. Perkins & Son, Inc.	11	New England Tank & Tower Co.	83
Wausau Sulphate Fibre Co.	8	RAG CUTTERS.		Stearns Lumber Co., A. T.	—
West Virginia Pulp & Paper Co.	8	B. F. Perkins & Son, Inc.	11	Tokheim Oil Tank & Pump Co.	—
PAPER AND PULP MACHINERY.		Taylor-Styles & Co.	—	G. Woolford Wood Tank Co.	10
Bagley & Sewell Co.	—	REAM CUTTERS.		TANKS (Water, Oil, etc.).	
Baker Mfg. Co.	79	Geo. T. McLaughlin Co.	—	TIMBER ESTIMATES.	
Beloit Iron Works	14	RECORDING INSTRUMENTS.		R. R. Bradley	72
Bird Machine Co.	27	Bristol Co.	7	P. T. Coolidge	72
Black-Clawson Co.	77	REGISTERS.		James W. Sewall	72
Clark-Aiken Co.	8	Standard Register Co.	—	TRANSMISSION MACHINERY.	
Frank H. Davis	69	ROLL GRINDERS.		H. W. Caldwell Co.	—
Downington Mfg. Co.	25	Farrel Foundry & Machine Co.	25	Hill Clutch Co.	—
Farrel Foundry & Machine Co.	82	Lobdell Car Wheel Co.	44	Reeves Pulley Co.	77
Glens Falls Machine Works	71	ROBIN.		TURBINES.	
Improved Paper Machinery	41	Hercules Powder Co.	—	S. Morgan Smith Co.	—
Sandy Hill Iron & Brass Co.	—	ROBIN SIZE.		TURPENTINE.	
Shurtle Bros. Machine Co.	70	Arabol Mfg. Co.	83	Hercules Powder Co.	—
Smith & Winchester Mfg. Co.	7	Paper Makers Chemical Co.	4	TWINES.	
Trimbey Machine Works	44	Western Paper Makers Chemical Co.	4	American Manufacturing Co.	65
Valley Iron Works	2	ROTARY BLEACHING BOILERS.		National Patent Reed Sales Co.	78
Waterville Iron Works	2	Biggs Boiler Works Co.	80	VALVES.	
PAPER MILL AGENTS.		SAVEALLS.		Crane Co.	78
Dillon & Barnes	70	Bird Machine Co.	27	Jenkins Bros.	61
McIver, Dana T.	2	SATIN WHITE.		VAPOR ABSORPTION SYSTEMS.	
Melby, E. C.	3	Kalbfleisch Corporation	—	Ross Engineering Co., J. O.	72
PAPER AND PULP MILL BROKERS.		Papers Makers Chemical Co.	4	VENTILATING FANS.	
Gibbs-Brower Co.	—	Western Paper Makers Chemical Co.	4	B. F. Perkins & Son, Inc.	11
PAPER SPECIALIST.		SCALES (Paper).		Ross Engineering Co.	72
Charles W. Bell	73	Fried Baker	—	VEGETABLE PARCHMENT PAPERS.	
PAPER STOCK.		E. J. Cady & Co.	—	Kalamazoo Vegetable Parchment Co.	8
Atterbury Bros.	Front Cover	Foreign Paper Mills, Inc.	3	WATER SUPPLIES.	
Butterworth & Co., Inc., E.	73	SCREENS.		The Layne-Ohio Company	—
Castle, Gotheil & Overton	76	Bird Machine Co.	27	WAXED PAPERS.	
Gumbinsky Bros.	84	Central Mfg. Co.	—	Dragon Paper Mfg. Co.	—
Hicks, Daniel M.	73	Wm. A. Hardy & Sons Co.	74	WOOD FLOUR.	
Mendelson Bros. Paper Stock Co.	73	Union Screen Plate Co.	81	Union Wood Flour Co.	73
Penn Paper & Stock Co.	78	SHREDDERS (Pulp and Paper).		WOOD PULP IMPORTERS.	
Salomon Bros. & Co.	78	Valley Iron Works	—	American Wood Pulp Corp.	3
Train-Smith Co.	Front Cover	SKYLIGHTS.		J. Andersen & Co.	4 and 31
PAPER TESTERS.		E. Van Noorden & Co.	83	Ira L. Beebe & Co.	83
Ashcroft Mfg. Co.	70	SLASHERS.		The Borregaard Co., Inc.	39
Foreign Paper Mills, Inc.	3	Ryther & Pringle Co.	—	M. Gottesman & Co.	—
B. F. Perkins & Son, Inc.	11	SLITTERS AND REWINDERS.		Hammond, R. F.	83
Thwing Instrument Co.	—	C. Benninghofen & Son	72	E. J. Keller Company	Front Cover
Valley Iron Works	—	Cameron Machine Works	78	Lagerloef Trading Co.	12
PAPER TUBE MACHINERY.		Dietz Machine Works	77	Mead Sales Co., The	57
Dietz Machine Works	77	Samuel M. Langston Co.	78	Nilsen, Lyon & Co., Inc.	57
Grissinger Machine Works	76	STARCH.		A. J. Pagel & Co., Inc.	23
PAPER WAXING MACHINERY.		Corn Products Refining Company	8	J. F. Patton & Co., Inc.	10
Farrel Foundry & Machine Co.	25	STEAM SPECIALTIES.		Perkins-Goodwin Co.	37
Potdevin Machine Co.	9	Crane Co.	78	Scandinavian-American Trading Company	Front Cover
PERFORATING MACHINES.		Open Coil Heater & Purifier Co.	—	WOOD ROLLS.	
Dietz Machine Works	77	STITCHING MACHINERY.		Rodney Hunt Machine Co.	—
PERFORATING METAL.		Saracnac Machine Co.	79		
Harrington & King Perforating Co.	67	STOCK REGULATORS.			
Hendrick Mfg. Co.	9	Trimbey Machine Works	—		
Charles Mundt & Sons	74				
Manhattan Perforated Metal Co.	78				

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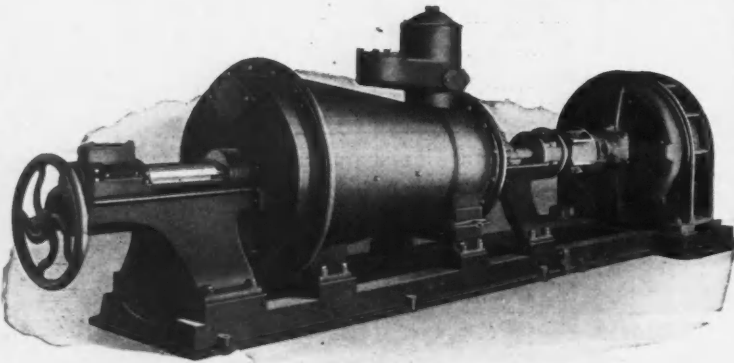
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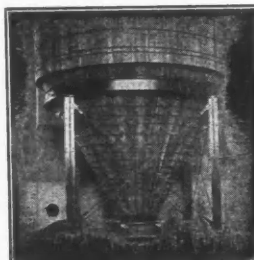
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