

MEMBER OF THE A. B. C.  
FIFTIETH YEAR

# PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

ESTABLISHED IN 1872

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(Single Copy, 10 Cents)

John Aspegren, Pres. B. Lindell, Treas.  
J. A. Millar, Gen. Mgr.

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(Established 1907)

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WOOD PULP PAPER

# PAGE 21!



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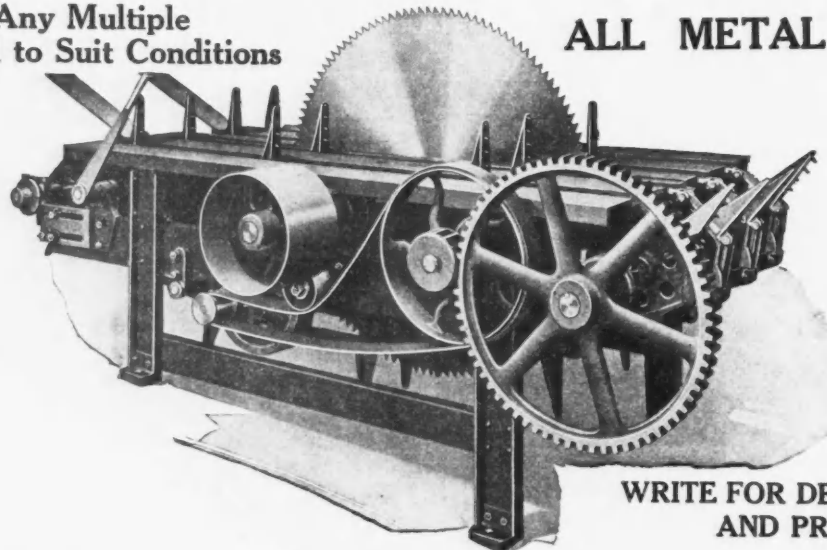
**DANA T. McIVER**  
*High Grade Printing Paper*  
116 So. Michigan Avenue  
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BOOK AND COATED PAPER  
Car Lot and Tonnage Contracts

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**Paper Company**

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*Satin style Felts  
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1863

1922

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 NATH'L L. MILLER, Secy-Treas.

**Craig-Becker**  
**Company**

INC.

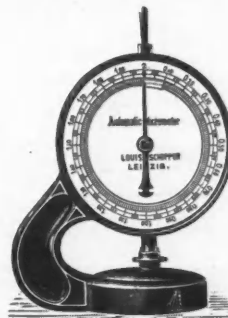
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 ARE THE BEST

11" high

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*They last a life time.*  
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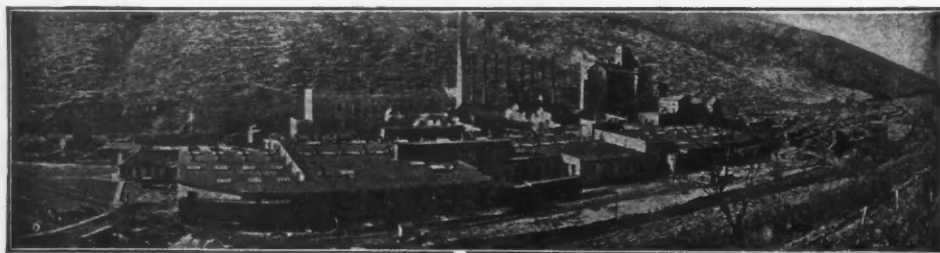
- |                              |                    |
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| Folding Testers              | Desk Micrometers   |
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You can place full confidence in the LaBoiteaux organization to serve you promptly, efficiently and above all intelligently.

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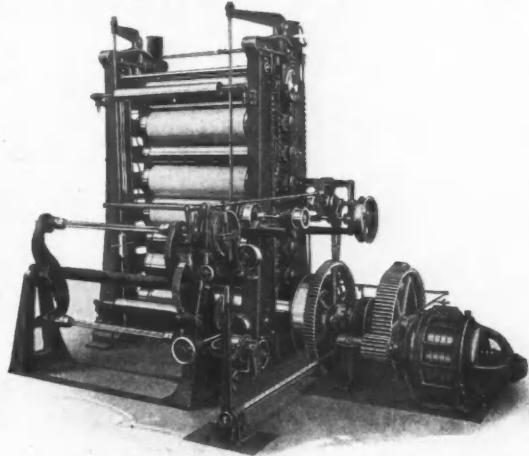
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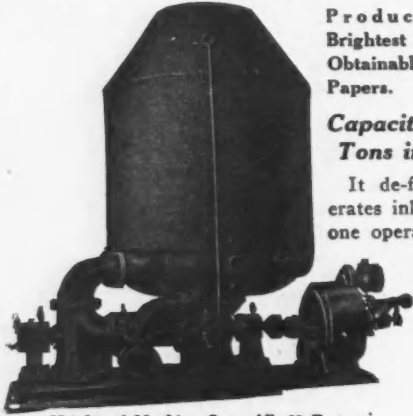
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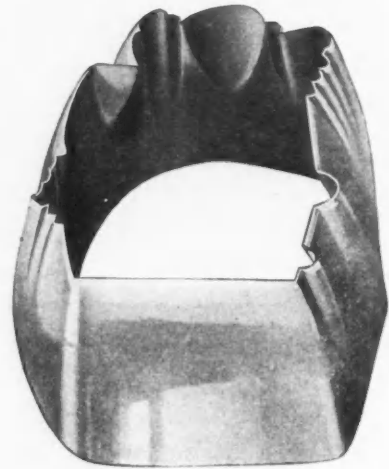
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**N**O matter how intricate or involved the design is, we'll make it and make it right. Every die of carefully selected steel, guaranteed flawless and warranted to give long, satisfactory service. The more difficult your die-cutting problems the more we'll enjoy helping you solve them. Send us a rough sketch or description of what you want and we'll tell you if it is practically possible to produce it.

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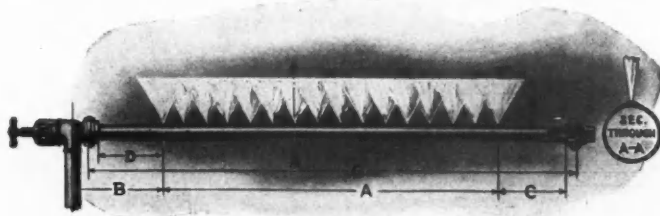
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Quality Paper  
Quantity Production  
is another way of saying  
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## APPLETON WOOLEN MILLS

APPLETON, WIS.

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*A Complete Line of  
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2

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 REG. U. S. PAT. OFFICE.

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Help to secure a more uniform product and improve plant efficiency.

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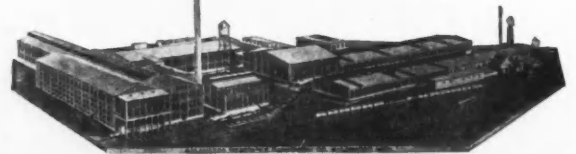
OUR SOURCE OF SUPPLY  
**SANDOZ CHEMICAL WORKS**  
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Genuine Vegetable Parchment  
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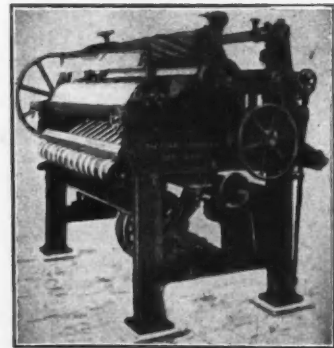
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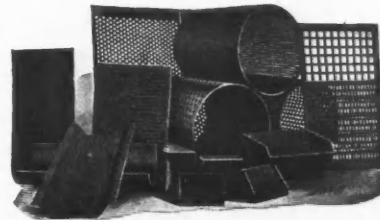
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1

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For Pulp and Paper Mills



Elevator Buckets, Conveyor Flights  
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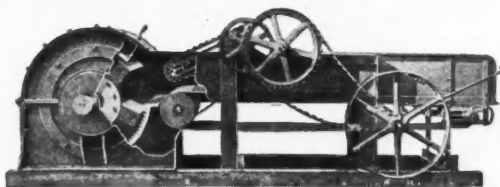
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**PAPER BAG MACHINES  
TUBERS and BOTTOMERS for**

**Printed Glacine Bags,  
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Vats for  
Every Paper  
Mill Purpose



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**FINNISH WOOD PULP UNION, HELSINGFORS, FINLAND**



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

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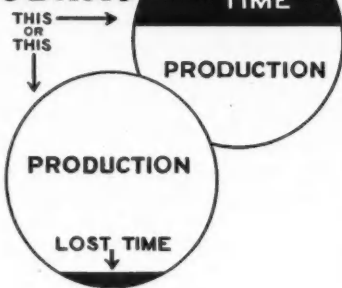
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**LOFT DRIED PAPERS  
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BONDS  
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**Mill:** North Wilbraham, Mass.

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a Jacket**



*Do you lose Production when  
a jacket is first put on?*

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are ready for MAXIMUM production  
IMMEDIATELY they are shrunken on.

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- 5—Use only the necessary pressure of guard board against jacket.

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**Felt Rolls**

that do not corrode,  
rust, nor pick up  
stock, neither are  
they affected by  
acids



*Enquire of*  
**Beloit Iron Works**



MEMBER OF THE A. B. C.

# PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

## FIFTIETH YEAR

PUBLISHED EVERY THURSDAY BY THE  
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J. W. VAN GORDON, Vice-President

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Vol. LXXIV. No. 7

NEW YORK AND CHICAGO

Thursday, February 16, 1922

## Table of Contents

### News of the Trade:

	PAGE
Production of Pulp Wood During Month of December	16
To Prevent Mandatory Forestry Policy	17
Charles W. Bell to Be Consulting Specialist	17
Richmond Honors Paper Man	17
Business Is Improving in Philadelphia Market	18
S. Walter & Co., Philadelphia, in New Quarters	18
General News of Philadelphia Trade	18
Zellerbach Has New Los Angeles Headquarters	19
Home Supply of News Print for Australia	19
Restrains Canaça Paper Co. in Disagreeable Odor Suit	20
Laurentide Power Company's Annual Report	20
Pulp and Paper Mill for Louisiana	20
Paper Trade in Toronto Shows More Improvement	22
Provincial Paper Mills, Toronto, Annual	22
Strathcona Company Extending Activities	22
General News of Toronto Trade	22
Water Power Improvements for N. Y. Paper Mills	24
News of the Michigan Trade	24
Somewhat Brighter Outlook Reported in Boston	26
American Writing Paper Shows Loss	26
International Paper Company Sued	26
General News of Boston Trade	26
Bids and Awards for Paper	26
Tomahawk Pulp & Paper Co. Bond Issue of \$500,000	28
Purchasing Agents Association to Meet	28
Now the Trimbey Machine Works	28
Improved Paper Demand in the Chicago Market	30
General News of Chicago Trade	30
May Start Glazed Plant at Great Barrington	32
Paper Trade Using New Paper Divisions	32
New York Trade Jottings	34
Trade Marks Department	34
Lincoln Paper Company Elects Officers	34

	PAGE
The World's Production of Paper	36
J. A. Miller to Manage Scandinavian-American	38
New York Waste Paper Merchants Meet	38
R. S. Kellog Speaks at Yale Forest Club	43
Paper Imports for December	56
Paper Exports for December	58
Improvement Looked for by Pulp Trade in Sweden	60
Imports and Exports of Paper and Paper Stock	64

### Editorial:

Need for New Forest Station	42
The Net Price List	42

### Technical Section:

The Utilization of Jack Pine in the Manufacture of News Print	45
Decay of Wood Pulp Can Be Prevented	47
Favors Modified Process of Cooking Pulp	47
Pumps and Pumping Machinery	48
Alkali Recovery in the Sulphate Process	50
Current Paper Trade Literature	53

### Obituary:

Louis F. Valentine	32
James A. Emerson	32
William C. Cook	32
Richard H. Thompson	32

### Market Review:

New York Market Review	62
Market Quotations	63
Miscellaneous Markets	66

Want and For Sale Advertisements, Pages 68, 69 and 70

## PRODUCTIONS OF PULPWOOD DURING MONTH OF DECEMBER

According to Statistics Just Furnished by the Federal Trade Commission the Stocks on Hand at the Mills at the End of the Month Equaled Twenty-Six Days' Average Output of Ground Wood, Nine Days' Average Output of News Grade Sulphite, Four Days' Average Output of Bleached Sulphite and Three Days' Average Output of Easy Bleaching Sulphite—Stocks of Other Grades.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 14, 1922.—In connection with the 1922 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 December, 1921. 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 December, 1921, compared with December, 1920, for the operating mills. The average production is based upon the reports covering the years 1917, 1918, 1919, and 1920, and the average stocks are based upon the stocks carried for the years 1919 and 1920.

	Num-ber of Mills	On Hand First of Month	Produc-tion for Month	Used During Month	Shipped During Month	On Hand End of Month
	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons	Net Tons
<b>Ground Wood Pulp:</b>						
December, 1921	163	115,363	121,804	104,150	9,937	123,080
December, 1920	163	108,529	146,718	115,914	9,707	129,626
December, 1919	172	140,129	132,795	119,616	13,347	139,961
Average			122,746			137,165
<b>Sulphite, News Grade:</b>						
December, 1921	64	21,643	59,939	53,799	6,543	21,240
December, 1920	64	17,034	62,357	52,674	8,733	17,984
December, 1919	66	21,249	66,782	57,283	10,375	20,373
Average			64,922			19,800
<b>Sulphite, Bleached:</b>						
December, 1921	33	5,150	34,154	19,872	12,684	6,748
December, 1920	32	4,331	41,911	22,848	16,783	6,661

December, 1919	32	8,636	47,844	25,583	24,087	6,810
Average			44,096			8,710
<b>Sulphite, Easy Bleaching:</b>						
December, 1921	8	841	4,992	4,110	855	868
December, 1920	8	1,192	4,369	3,215	1,212	1,134
December, 1919	8	1,577	5,126	3,539	1,850	1,314
Average			6,474			1,555
<b>Sulphite, Mitscherlich:</b>						
December, 1921	6	1,065	5,961	3,824	2,074	1,128
December, 1920	7	1,627	6,349	3,643	1,765	2,768
December, 1919	7	1,974	6,670	4,163	2,672	1,809
Average			6,708			1,655
<b>Sulphate Pulp:</b>						
December, 1921	21	7,979	15,531	13,018	2,835	7,657
December, 1920	20	7,075	9,804	8,071	958	7,850
December, 1919	22	7,771	15,356	9,408	6,072	7,647
Average			13,832			5,908
<b>Soda Pulp:</b>						
December, 1921	27	6,306	29,825	14,185	12,922	9,024
December, 1920	26	6,938	30,179	18,053	12,537	6,507
December, 1919	28	7,248	31,232	17,198	15,610	5,672
Average			32,968			5,938
<b>Other Than Wood Pulp:</b>						
December, 1921	5	208	629	613	46	178
December, 1920	4	192	640	713	0	119
December, 1919	6	280	812	747	105	240
Average			910			159
<b>Total—For All Grades:</b>						
December, 1921		158,555	272,835	213,571	47,896	169,923
December, 1920		146,968	302,527	225,131	51,715	172,649
December, 1919		188,864	306,617	237,537	74,118	183,826
Average			292,656			180,880

### 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, 1918, 1919 and 1920, the figures show that:

- Ground wood pulp stocks equal 26 days' average output.
- News grade sulphite mill stocks equal 9 days' average output.
- Bleached sulphite mill stocks equal 4 days' average output.
- Easy bleaching sulphite mill stocks equal 3 days' average output.
- Mitscherlich sulphite mill stocks equal 4 days' average output.
- Sulphate mill stocks equal 14 days' average output.
- Soda pulp mill stocks equal 7 days' average output.
- Mill stocks of "other than wood pulp" equal 5 days' average output.

Total mill stocks of all grades equal 15 days' average output.

### Loss of Production

The idle machine time of grinders and digesters reported to the Commission for the month of December, 1921, is shown in detail in the attached tabulation. The reasons tabulated for lost time are lack of orders, lack of power and repairs. "Other Reasons" include water conditions, etc. The time lost in December, 1920, is shown by grades and reasons for purposes of comparison. These figures do not include 12 mills not in operation.

Grade	Orders 1921a	Repairs		Other Reasons		Total	
		1921	1920	1921	1920a	1921	1920
<b>Ground Wood Pulp:</b>							
Number of grinders	49	243	144	705	227	997	371
Total hours idle	13,189	16,754	22,445	156,319	67,363	186,262b	89,808
<b>Sulphite, News Grade:</b>							
Number of digesters	17	27	6	64	35	108	41
Total hours idle	4,776	1,520	1,037	3,644	5,551	9,940	6,588
<b>Sulphite Bleached:</b>							
Number of digesters	60	30	4	34	55	124	59
Total hours idle	13,105	915	430	2,952	6,587	16,972	7,017
<b>Sulphite, Easy Bleaching:</b>							
Number of digesters	7	0	5	7	12	14	17
Total hours idle	2,136	0	500	1,013	2,723	3,149	3,223
<b>Sulphite, Mitscherlich:</b>							
Number of digesters	0	17	5	9	9	26	14
Total hours idle	0	959	30	1,728	504	2,687	534
<b>Sulphate Pulp:</b>							
Number of digesters	5	22	8	24	37	51	45
Total hours idle	1,448	1,446	1,451	1,190	8,632	4,084	10,083
<b>Soda Pulp:</b>							
Number of digesters	90	9	1	78	108	177	109
Total hours idle	18,480	24	192	5,985	8,896	24,489	9,088
<b>Other Grades:</b>							
Number of digesters	0	2	0	2	5	13	5
Total hours idle	2,196	128	0	648	411	2,972	411
<b>Total number of grinders and digesters</b>	237	350	173	923	488	1,510	661
<b>Total hours idle</b>	55,330	21,746	26,085	173,479	100,667	250,555	126,752

a Lack of orders 1920 included in "Other Reasons." b Includes 127,826 hours due to water and power conditions.



### Plans for A. P. & P. A. Convention

The official call was sent out last week for the forty-fifth annual convention of the American Paper and Pulp and affiliated associations at the Waldorf-Astoria, New York, the week beginning April 10. Several of the meetings of the affiliated associations have been tentatively scheduled, and there is every prospect of a record-breaking attendance. In fact, the preliminary announcement contains a caution that it may be necessary to limit the number of guests allowed each member, though members of the Association will, of course, be given preference.

Applications for reservations are already being received at the offices of the American Paper and Pulp Association, and all requests for reservations must reach the office not later than Wednesday, April 5.

The dates for the meeting of the American Paper and Pulp Association have been definitely fixed, while the meetings scheduled by the affiliated associations are tentative, but will probably be unchanged in most cases. The list as at present announced follows:

#### TUESDAY, APRIL 11, 1922

10:00 A. M.—Glassine and Greaseproof Manufacturers' Association, Waldorf-Astoria.

10:00 A. M.—Book Paper Manufacturers' Association, Waldorf-Astoria.

10:30 A. M.—Salesmen's Association of the Paper Industry, Waldorf-Astoria.

2:00 P. M.—Vegetable Parchment Manufacturers' Association, Waldorf-Astoria.

2:00 P. M.—Salesmen's Association of the Paper Industry, Waldorf-Astoria.

7:00 P. M.—Annual Banquet, Salesmen's Association, Waldorf-Astoria.

#### WEDNESDAY, APRIL 12, 1922

10:00 A. M.—Waxed Paper Manufacturers' Association, Waldorf-Astoria.

10:00 A. M.—Writing Paper Manufacturers' Association, East Room, Waldorf-Astoria.

2:00 P. M.—Sulphite Bond Division, East Room, Waldorf-Astoria.

National Paper Trade Association meetings and banquet, Waldorf-Astoria.

#### THURSDAY, APRIL 13, 1922

10:30 A. M.—Annual meeting, American Paper & Pulp Association, Waldorf-Astoria.

2:00 P. M.—Annual meeting, American Paper & Pulp Association, Waldorf-Astoria.

7:00 P. M.—Annual banquet, American Paper & Pulp Association, Waldorf-Astoria.

#### FRIDAY, APRIL 14, 1922

11:00 A. M.—Toilet Paper Converters' Association, Hotel Astor.

2:30 P. M.—Tissue Paper Manufacturers' Association, Hotel Astor.

6:00 P. M.—Tissue Paper Manufacturers' and Toilet Paper Converters' Association Annual Dinner, Hotel Astor.

Dates for meetings of Cardboard, Glazed and Fancy, Gummed, Binders' Board, Pulp and Wrapping Associations will be announced later.

### To Prevent Mandatory Forestry Policy

WASHINGTON, D. C., February 14, 1922.—A vigorous fight was made by George W. Sisson, Jr., former president of the American Paper and Pulp Association, in an effort to prevent a mandatory forestry policy report from the recent Agricultural Conference at

Washington through the organization of a committee which might from its make-up be suspected of having been intended to drive through a recommendation for radical legislation.

The fight was successful to the extent that the proposed program was greatly modified, and the final report of the general conference, while emphasizing strongly the need for a national forestry policy, did not include the proposal to impose federal mandatory control upon the owners of private timberlands.

Mr. Sisson was present at the conference as former president of the New York State Agricultural Society, and a prominent figure in the Jersey cattle breeding industry, and was placed upon the forestry committee because of his place as chairman of the Forestry Committee of the American Paper and Pulp Association. He spoke strongly in behalf of the paper industry and timberland owners, in repudiating the charge that they were ruthless devastators of forest land.

After this conference, when the committee of paper manufacturers was in Washington at Secretary Hoover's invitation, a committee also called upon Secretary Wallace to express approval of the work being done by the Forestry Service, to state the interest of the industry in the forestry problem, and its willingness to do its share in solving the problem, but to register opposition to mandatory federal legislation. Since that visit the sentiment of the committee has been sent to Secretary Wallace in a letter from Dr. Baker, secretary of the association, stating that the paper industry stands for co-operation between Federal and State authorities and private owners in the settlement of this question.

### Charles W. Bell to Be Consulting Specialist

Charles W. Bell, after an experience of forty years in all departments of the paper board industry, has established an office at 1047 Grand avenue, Dayton, Ohio, as a consulting specialist in the manufacture of paper box board, test board, fiber board and straw board and their fabrication into corrugated and solid fiber shipping containers, folding boxes, etc. He will be open for consultation in equipment, processes, formulæ, trade customs, management, order and planning system, markets, sales, estimating, prices, contracts, materials, supplies, collections, arbitration, receivership and valuations.

Among other prominent connections Mr. Bell was western sales manager of the National Folding Box and Paper Company, secretary and general manager of the U. S. Board and Paper Company, vice-president and general manager of the American Straw Board Company, manager of sales and director of manufacture of the United Box Board and Paper Company, president and general manager of the Norwich Paper Mills Company and assistant secretary and general manager of the Fort Wayne Corrugated Paper Company. In 1897 he organized the Straw Board Manufacturers' Association and was sent by this organization to Europe to investigate that market for the surplus production of the United States. In 1909 he again visited Sweden, Norway, Holland, Germany, France, England and Scotland to investigate the pulp markets of Europe for the Bell Paper Company, a Hearst subsidiary.

Mr. Bell's most recent connection was as assistant secretary of the O. B. Andrews Company, directing the planning, building and operation of the concern's paper mill at Chattanooga, Tenn., manufacturing all grades required for shipping containers and folding box.

As may be seen from the foregoing record Mr. Bell is excellently equipped for the new work in which he is engaging and his services will be certain to be in wide demand.

### Richmond Honors Paper Man

RICHMOND, Va., February 14, 1922.—I. J. Marcuse, vice-president of the Bedford Pulp and Paper Corporation with mills at Big Island and Colemans, Va., has been elected president of the Chamber of Commerce of Richmond.

## BUSINESS IS IMPROVING IN PHILADELPHIA MARKET

The Volume of Sales, However, Continue Below What the Trade Expected It to Be at this Time—Paper Stock Markets Continues Decidedly Slow—S. Walter & Co. Occupy New Home at 144-146 North 5th Street—Sylvester S. Garrett Adds to Sales Force—Printers Meet to Urge Adoption of the Long Price List—John O'Leary Starts Paper Stock Business.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., February 14, 1922.—With February half gone, the paper trade generally finds business decidedly better than when the month began, but sales are still below what even rather conservative members of the trade believed they would be. While there is nothing approaching pessimism, the fine paper distributors particularly point out that a rather quiet market has been made more so by the persistence of the printing trade in maintaining high prices still virtually at the war-time peak and to a lesser extent by endeavoring to hold back all orders which possibly can be deferred in the hope that this action will have some beneficial effect in keeping alive the propaganda for the long list and that there still may be some price recessions. So far as the latter element is concerned, the paper distributors are as one man of the opinion that with a record of unchanged prices maintaining now for many weeks, and with the known condition that paper mills are operating at an actual loss, there is hardly a possibility that the market will weaken. As to the long price list, so far as the paper distributors are concerned, that is now a dead issue. In possible realization of its deace or at least of its approach to the grave, the Typothetæ of Philadelphia made valiant efforts on Friday afternoon of last week to galvanize vitality into its members at a luncheon and long list rally held at the Kugler Cafe, Fifteenth and Chestnut streets.

### Paper Stock Market Continues Slow

Paper stock dealers report last week a duplicate of the preceding in their business experience. There are not enough sales of either class of stock, rag or paper really to constitute a market, and this is true, too, of the only kind of stock which is moving with a semblance of activity. That sort is soft white. This grade is causing some interest on the part of the mills and they are buying at around 3 cents about all that is being offered, but because of the dullness in the ranks of the producers of this class, the offerings on the market are very limited. Commons are hardly in call at all by the mills, but there is no accumulation in the warehouses because prices are so low that there is no inducement at all for their collection.

### S. Walter & Co. in New Quarters

The firm of S. Walter & Co., Inc., is now comfortably installed in its new business home at 144-146 North Fifth street, corner of Quarry, and one of the largest strictly wrapping paper houses in the city, although it is not improbable that within a month when another large coarse paper firm concludes pending negotiation for the purchase of a centrally located property, the new Walter establishment will have a duplicate. The building, formerly a cigar factory, is located close to the heart of the Philadelphia paper district and is six stories in height with a basement, affording for the continuance for a long time of the rapid growth which the company in late years has been making. It is well designed and located for a paper warehouse, having three fronts, one on Fifth street, now the most important artery of traffic east of Broad street, and smaller fronts on Quarry street on the north side and on Reese street in the rear. The firm will occupy the front two-thirds of the first

floor for its executive and clerical offices and the remainder of the building for stock and storage, carrying a much larger volume than heretofore. The first floor offices have all been partitioned off and have been attractively appointed, being thus in marked contrast with the offices in the old headquarters at Fourth and Cherry streets.

### F. P. Miller to Retire

Authoritative information was received in the city during the week that Frank P. Miller, founder of the paper mill at East Downingtown, Pa., bearing his name and long actively identified with its management, has retired from direct participation in its affairs. The mill is one of the best known in Pennsylvania. For many years it produced binder's board, but recently has been producing a full line of patent coated folding box, vat lined, chip and pasted board, being rated as having a capacity of 100 tons daily.

### Additions to S. S. Garrett Sales Force

There has just been added to the sales organization of Sylvester S. Garrett, coarse paper and twine jobber, Third and Spruce streets, a salesman who had a notable record in events in which all the world was interested. He is Alfred Allison and he is one of the 1,000 survivors of the first army which Great Britain raised when it was plunged into the World War. These 1,000 are all that are left of the 200,000 men who went into battle. Mr. Allison, who was wounded four times, recently came to this country and is now selling the Garrett line of wrappings. Another addition is Terrence A. Dermott, a former instructor of mechanical engineering in the Young Men's Christian Association.

### Meet for Long Price List

The long list question having become almost dead sentimentally among the rank and file of the printers as it is actually among the distributors, the ringleaders of the dying cause made heroic efforts at a meeting held on Friday afternoon last in the Kugler Cafe, and at which it is alleged sixty printers, or less than half of the Typothetæ membership and only a small proportion of those engaged in the business in this city, were present. After a luncheon the meeting resolved itself into a general criticism and denunciation of all who could not look at the subject through the red glasses of the small coterie who are leading in the movement. But the piece de resistance of the meeting was the distribution of an appropriately green covered "suggested retail price list of standard mill brand papers manufactured and marketed with mill guarantees," purporting to be issued by the Typothetæ of Philadelphia but actually published in New York, in whose footsteps the Philadelphians are following. It is identical with that circulated through New England and in New York City, the only distinction being the separate index of the Philadelphia merchants carrying the mill brands listed therein. These are, Chas. Beck Company, C. H. Clinton Paper Company, A. S. Datz & Son, Dill & Collins, Garrett-Buchanan & Co., Edward R. Grossman, A. Hartung & Co., E. Latimer, Jr., Lindsay Brothers, Inc., Molton Paper Company, Osburn Paper Company, Paper House of Pennsylvania, Penn Card and Paper Company, Thomas W. Price Company, Raymond McNutt Company, Riegel & Co., Inc., S. Walther & Co., D. L. Ward Company, Whitaker Paper Company, Whiting Paper Company, Whiting-Patterson Company.

### General News of Philadelphia Trade

Frank Hicking, who for several years past has been confining his activities almost entirely within the walls of the S. Austin Bicking Paper Company, at East Downingtown, Pa., made a tour of the trade during the week and let it be known that hereafter he would be a frequent visitor, it being his intention, henceforth, to go on the road.

Among trade callers of the week were C. W. Gamble of the Brownville Board Company, and C. K. MacAlpine of New York, importer of Swedish krafts.

The veteran, S. S. Shryock, Jr., one of the oldest board makers in the country and still keenly interested in the business, although much over fourscore years of age, has recovered from a recent illness and is again about the mills at East Downingtown. His son, O. A. Shryock, who also was afflicted with grip, has recovered and has resumed his activities. The firm has just added to its delivery service a powerful auto truck which will make frequent trips from Downingtown to Philadelphia.

President George W. Ward of the D. L. Ward Company during the week was appointed by President Alba B. Johnston, president of the Chamber of Commerce, as a member of its own membership committee.

Reports were received in the city during the week that the West Virginia Pulp and Paper Company had posted notices in its plant at Williamsburg, near Altoona, of an average reduction effective February 14 of the wages of all employees.

John O'Leary, for many years associated in a general capacity with Daniel I. Murphy & Son, rag paper stock dealers, has severed his connection with that firm and is now engaged for himself in a general brokerage business in waste and rags. At the present time he is conducting business from his residence in Glenside, a suburb of Philadelphia, but proposes in the near future to open an office here. Mr. O'Leary began his association with the industry in 1900 in the employ of Thomas Smith & Son, New York City. After that he went with John Sinnott, paper stock company, New York. Coming to Philadelphia a decade ago, he entered the business of Morris Weil's Sons and three years and a half ago, the D. I. Murphy & Son Company.

Harry H. Haeberly, formerly connected with Henry Lindenmeyr & Sons, New York, has just taken a position on the fine paper sales force of E. Latimer, Jr., 126 North Fourth street, which, he says, as a result of the firm's pioneer adoption of the long price list rapidly is expanding.

Victor A. Arndt, for fifteen years on the sales force of the Charles Beck Company, principally on fine paper lines, has resigned his position but has not yet announced a new connection.

Pedlow & Harriman are about to open at 210 South Eighth street a distributing point for the A. M. Collins Manufacturing Company's specialties.

The wreck of the British steamer "Thistlemore" off of Cape Cod has a particular interest for the Paper House of Pennsylvania, because in the stranded vessel are many thousand dollars' worth of paper consigned to it from England. On his recent trip abroad President Norbert A. Considine, in addition to making many desirable connections for news print, secured the Philadelphia agency for the celebrated Crompton English Stereotype Tissue and it was a consignment of this paper which was aboard the "Thistlemore" and which it is believed will be a total loss. The "Thistlemore" left Boston February 7 for New York to finish unloading a cargo of freight from Liverpool and was stranded a total wreck on Cape Cod beach. She registers 4,146 tons.

The S. D. Warren Company and the D. L. Ward Company, as its representatives, began during the week a newspaper publicity campaign which will continue during the next quarter-year. While the quarter-page advertisements appearing in the evening newspapers of course refer to the Warren lines, the appeal is on a very broad basis for better paper, better printing and better business.

A. Hartung & Co., 506-512 Race street, have just received the first large shipment from Germany of red glazed papers imported by it since the war. It consists of 500 reams and is said to be of excellent quality. Elmer S. Moore, formerly connected with the Philadelphia office, has been appointed as manager of the New York office at 318 Broadway to succeed Robert Miles, who has retired. Mr. Moore will travel through New York State and adjacent territory visiting the box and printing trades. The meeting of Hartung stockholders for the election of officers will take place next week.

The salesmen and demonstrators of the Stokes & Smith Company are still enjoying the memory of the dinner given by its executives at a celebrated shore cafe here for the general purpose of bringing each into closer relationship with all, and this end successfully was attained. Owing to illness, Walter C. Trafton of the management was unable to be present. Those who attended were the following: J. B. Stokes, W. E. Buswell, P. Russell, G. H. Nitsch, C. E. Schaeffer, L. G. Smith, S. Brown, G. W. Shertzer, L. W. Findlay, C. Evans, D. Maxfield, N. V. Dunning, J. S. Dunn, J. Mager, F. Guest, G. Z. Sutton.

### Zellerbach Has New Los Angeles Headquarters

[FROM OUR REGULAR CORRESPONDENT.]

LOS ANGELES, Cal., February 9, 1922.—The Zellerbach Paper Company has provided its Los Angeles division with a new building, which is located at 220 South Los Angeles street.

In arranging for this new location, a building was purchased and was entirely rebuilt in the interior. It was designed especially for the special needs of a paper distributing warehouse and offices.

The facilities, which are of the most modern type in every respect, were planned with the idea of handling paper in the most convenient manner for the giving of better service to the buyer and with the minimum of room required, also with the new idea of low cost in mind.

The facilities outside of the building are a part of the general scheme of moving paper quickly. A special driveway is provided and a spur railroad track leads right into the building itself.

Leading directly from the basement to the roof is a large double spiral chute. This chute serves every floor and is easily accessible from every part of the building. A smaller spiral chute takes care of waiting orders. A system of conveyors carries the paper from the basement to the sidewalk. Four fast elevators run from the basement to the top story. Provision is made so that all the stock is piled to the most convenient height for rapid moving and machinery is provided for this purpose.

Every possible facility has been provided to save steps and time. A Lamson system carries the sales checks. The Kodekall system of communication is used throughout the building. A dictagraph installation is used for communicating with all portions of the warehouses and offices. A complete battery of power paper cutters is provided. Machinery for rewinding rolls of paper is a part of the equipment.

The comfort of the employees is provided for by commodious rest-rooms equipped with cooking utensils and many other conveniences.

The sales activities are aided by a very handsome display room of which showings of printing and advertising are a feature. There is ten thousand square feet of office space on the first floor devoted to general office work and sales. The building is the last word in convenience, comfort and utility.

The formal opening took place on January 23. A very handsome announcement was sent to the printing trade.

### Home Supply of News Print for Australia

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 14, 1922.—An inspection of bleached wood pulp in the State Timber yards of New South Wales, Australia, by the State Treasurer and Government Printer, says a report to the Department of Commerce by Consul Norton at Sydney, reveals the likelihood of a generous supply of news print for Australia from home sources. This pulp is made from Mountain Gum, which grows abundantly in New South Wales, and which had heretofore been considered of small commercial value. The pulp is said to be of extra good quality, and if tests being made by Australian paper manufacturers prove satisfactory, it is predicted that there will be a sufficient amount of news print produced from this wood for the requirements of the country.

## RESTRAINS CANADA PAPER CO. IN DISAGREEABLE ODOR SUIT

**Injunction Against the Company in Long Time Suit Is Confirmed by the Higher Court—Construction Is Started on Plant at New Westminster, B. C. for the Extraction of Seed from Cones to Have Capacity of Half a Ton of Cones Every Six Hours—Large Schemes for Development of Power Submitted to Provincial Legislature for Approval—Abitibi Makes New Record.**

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 14, 1922.—The Supreme Court of Canada has disallowed the appeal of the Canada Paper Company against the decision in favor of A. J. Brown, K. C., by Mr. Justice MacLennan, confirmed by the Court of King's Bench. By his decision, now confirmed by the Supreme Court, Mr. Justice MacLennan granted a perpetual injunction against the Canada Paper Company from using any chemical substances of a nature to throw off or emit disagreeable smells or odors or vapors, and especially to refrain from the further use of sulphate of soda, salt cake, or nitre cake or any other obnoxious compounds, in its mills in the town of Windsor Mills.

This case arose from the operation of a sulphite pulp mill by the Canada Paper Company at Windsor Mills. In 1905, A. J. Brown, K. C., purchased a farm property at Windsor Mills in which were three houses and outbuildings. Mr. Brown converted these buildings into a summer residence. In 1908 the Canada Paper Company, which up to that time had manufactured its paper by the carbonate of soda process, converted its plant into a sulphite mill. In 1916, eight years afterwards, Mr. Brown complained in a letter to Mr. Kilgour, the president of the company, of the offensive odors emanating from the mill, and claimed that Mr. Kilgour a year previous had promised to remove the nuisance. In 1918 Mr. Brown applied to the Superior Court of Quebec for an injunction against the use of sulphite by the company. Mr. Justice Duclos, who heard the case, refused the application but granted leave to apply again. Mr. Brown renewed his application for an injunction in July, 1919, and also asked for \$15,000 damages. Mr. Justice MacLennan granted the injunction and also costs to the plaintiff. On an appeal to the Court of King's Bench, that court affirmed the judgment of the court below with costs, Hon. Chief Justice Lamothe and Hon. Mr. Justice Guerin dissenting. The Supreme Court handed down judgment sustaining decision of Mr. Justice MacLennan and the Court of King's Bench.

### Seeds of Forest Trees

Construction has been started at New Westminster, B. C., of a plant for the extraction of seed from cones. The plant is the most modern of its kind. It will combine drying of the cones and extraction of the seed in a single process, and will handle half a ton of cones every six hours. The British Columbia Forestry Service has undertaken to collect 120 tons a year. The requirements of the British Government at present are: 3,000 pounds of seed of the Douglas fir, 3,000 pounds of Sitka spruce, and a smaller quantity of other species, yearly. The fir cones are collected in the Fraser Valley and the spruce cones on the Queen Charlotte Islands.

### Large Power Schemes in Quebec

Special attention has been drawn to the power situation in the Province of Quebec during the week by the fact that large schemes for the development of power have been submitted to the Provincial Legislature for approval. The most spectacular of these is one put forward by interests allied to the Montreal Public Service Corporation for the development of the Carillon Falls on the Ottawa river 25 miles from Montreal. A development is possible here of

250,000 horsepower and it is proposed to proceed at once with the development of this power and to complete it within two years. If this is done it will be the largest single undertaking ever carried out in the province, as other power developments have always been done progressively in small units. The estimated cost of the scheme is around \$25,000,000.

Of course, the immediate effect of the development of this power would be the invasion of the market now enjoyed by the Shawinigan Water and Power Company and the Montreal Light, Heat and Power Company, which latter distributes Shawinigan power in Montreal and in addition distributes its own power generated at the Cedar Rapids plant. The Shawinigan Water and Power Company evidently intends to meet the threatened competition, for it has applied to the Legislature for permission to increase its authorized capital from twenty million dollars to forty million dollars in order to proceed with large development schemes.

The Shawinigan Water and Power Company is now proceeding with extensions which when completed will give a total development of 373,700 horsepower. It is understood that the company has a possible further development at Shawinigan of 250,000 horsepower. How much of this it is commercially practicable to develop is not known. In addition to its own development, the Shawinigan Water and Power Company distributes the power developed by the Laurentide Power Company, which now has a capacity of 165,000 horsepower.

Although there is some talk of a huge merger in the power field, this is emphatically denied by all parties and the prospects are that the next few years will see keen competition between powerful companies for the supply of hydro-electric power in the province. Incidentally, the developments now planned on such a huge scale will mean an abundant supply of cheap power that should prove very attractive to new industries.

### Laurentide Power Company's Annual Report

The annual report of the Laurentide Power Company, whose annual meeting will take place here next week, has just been sent out to shareholders. The total revenue for the year from all sources amounted to \$1,237,561 as against \$1,040,887. The net earnings amounted to \$570,740 as against \$432,225 for the previous year. Dividends absorbed \$420,000. Loss on sale of Victory Loan Bonds, \$4,868; sinking fund for redemption of bonds, \$85,000; fire insurance reserve, \$20,000; reserve for income tax, \$27,555, leaving a balance carried forward to profit and loss account of \$16,659.

The president in his report states that the earnings for the past year are based upon the sale of 112,500 average horsepower for the year. The earnings will be considerably increased during the present year owing to the fact that the company's development has now been brought up to 165,000 horsepower.

### Record Production in Abitibi Mill

The Abitibi Power and Paper Company has just scored a record as far as production goes, the seven machines in their mill at Iroquois Falls turning out an average of over 449 tons of paper per day for a whole week. The individual daily record was 456 tons. The record was made under difficulties owing to coal and wood supplies being tied up by snowstorms and it is confidently expected that this record can be eclipsed.

### Pulp and Paper Mill for Louisiana

MONROE, La., February 14, 1922.—Representatives of Eastern capitalists, according to press reports, are in Monroe negotiating for the purchase of a site on which to erect a pulp and paper mill.

There is every indication that the mill will be erected. A corporation with a capital stock of \$500,000 is planned and about 200 men will be employed. This will be the first mill of the kind erected in this section of the south.

# MO och DOMSJÖ AKTIEBOLAG

STOCKHOLM, SWEDEN

We have for immediate shipment from dock at Boston and Baltimore limited quantities of the Mo and Domsjö



1st QUALITY  
STRONG  
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### A. J. PAGEL & CO., Inc.

347 Madison Avenue

New York City

## PAPER TRADE IN TORONTO SHOWS MORE IMPROVEMENT

**Return of Confidence During the Past Few Days Has Been Marked and Some Firms Are Quite Enthusiastic About the Future—Provincial Paper Mills, Ltd., Presents Favorable Statement for the Past Year—Strathcona Paper Co. Expanding—Pulpwood Men Making Strong Efforts to Have Freight Rates Reduced—Ideal Box & Paper Specialties Gets Charter.**

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, ONTARIO, February 13, 1922.—Many dealers report an improvement since the first of the month. There is a return of confidence during the past few days which has been most marked and some firms are quite enthusiastic about the future. They base their optimism on the fact that supplies in all lines of papers are low with both the consumers and the distributors and that now firms, which have been holding aloof for months, have to come into the field for needed supplies. Prices remain firm. Among the last lines to pick up is the coated paper trade. Toilet and tissue mills are busy and kraft is having a fine sale. Box makers are rather quiet as yet but are of the opinion that the delay in the resumption of activities cannot be prolonged. The board business, which has been very good since the first of the year, showed a falling off during the last few days but it is felt that this is only temporary. Collections are reported to be improving and, while some wholesalers have lost money owing to the failure of certain retailers, there is not much to complain about.

### Provincial Paper Mills Annual

The annual meeting of the Provincial Paper Mills, Limited, was held in Toronto this week at the head office. I. H. Weldon, of Toronto, is president of the company, T. A. Weldon, vice president, and S. F. Duncan, secretary-treasurer. The annual statement of the company for the past year closing on December 31st last shows that the profits were not as great as the previous year. They amounted to \$728,775 as compared with \$1,225,775 during 1920 and after addition of other income of \$32,620; deduction of interest, \$33,500, depreciation of \$150,000; income taxes of \$60,000, preferred dividends of \$119,000; common dividends of \$245,000, there remained a surplus for the year of \$153,844, as against \$633,403 in 1920 bringing profit and loss surplus to \$787,248. The net earnings available on the common stock outstanding of \$3,500,000 were equal, to 11.4 per cent. Current liabilities, after allowing for dividends due January 3, 1922, amounting to \$82,250 stand at \$476,159 compared with \$724,053 the previous year. This leaves a surplus asset of approximately \$968,000 over current liabilities. The capital account shows a slight change as \$350,000 was spent on improvements to plants and equipment. New boilers were installed at the mill in Thorold and a new store room built during the year. There was installed at Port Arthur new fire protection system for the protection of the pulp wood pile and also a new waterworks system for the sulphite mill of the company at Port Arthur.

### Big Firms Report Outlook Better

At the annual meeting of W. J. Gage & Co., manufacturing stationers, Toronto, and the Kinleith Paper Mills of St. Catharines, held in Toronto recently very good reports were presented for the past year, all things considered. At the latter plant several improvements were carried out during the year, one of the machines being lengthened and additional presses, beaters, and rotary boiler installed, increasing the capacity of the plant by about thirty per cent. H. F. Kent, who is the new vice president of

the Canadian Pulp and Paper Association, was re-elected president of the Kinleith Paper Mills; H. H. Love, vice president; A. G. Parker, treasurer, and George H. Jefferson, secretary. H. H. Love was re-elected president of W. J. Gage & Co., H. F. E. Kent vice president and managing director, and A. G. Parker, secretary-treasurer. The usual bonuses to the employees of the firm were paid and business was reported to be steadily gaining in the manufacturing stationery and envelope line during the past few weeks.

### Strathcona Company Extending Activities

W. J. Finlay of the Strathcona Paper Company, Strathcona, Ont., was in Toronto this week and reports that the demand for building paper has been evidencing a much better tone since the first of the year. The company is turning out about ten tons a day at present. In July last the mill began the manufacture of chip board, pulp board and solid news board and will in the near future add folding and vat lined boards. The new machine of the company, which was manufactured by the Dominion Engineering Works, Montreal, is a four cylinder, with 82 inch trim, three granite press rolls, thirty-six, four foot dryers, two stacks of calendars, driven by a Brownell variable speed engine and has a capacity of thirty tons a day. Extra stuff chests and Jordans are being installed for the new lines which the company will soon turn out in the board market. Continuous stokers are also being placed in the boiler house.

### High Freights Killing Pulpwood Trade

Pulpwood men, lumbermen and others of Ontario are making a strong effort to have the present freight rates reduced, and a special hearing will be granted them by the Board of Railway Commissioners in Ottawa in the near future. It is said there are large amounts of pulp and lumber ready for shipment from the north but the owners will not send it to market until a lower rate makes it advisable to do so. Buyers it is declared, are also reluctant to encourage the shipments.

### General News of the Trade

John Martin, of Winnipeg, former president of the Canadian Paper Trade Association, was in Toronto this week calling upon his many friends in the trade. He intends leaving for England on a trip. Mr. Martin reports that business in the west in the paper line is improving and the outlook is good. Another caller upon the trade in Toronto during the last few days was Fred Smith of Smith, Davidson & Wright, wholesale paper dealers of Vancouver, B. C.

F. A. Ritchie, of the firm of Ritchie & Ramsay, coated paper manufacturers, Toronto, left this week on an extended holiday trip to England, which country he has not visited for some years. It is the usual custom of Mr. Ritchie to take a winter holiday and on this occasion he is accompanied by his wife and family. They will spend some time in Europe.

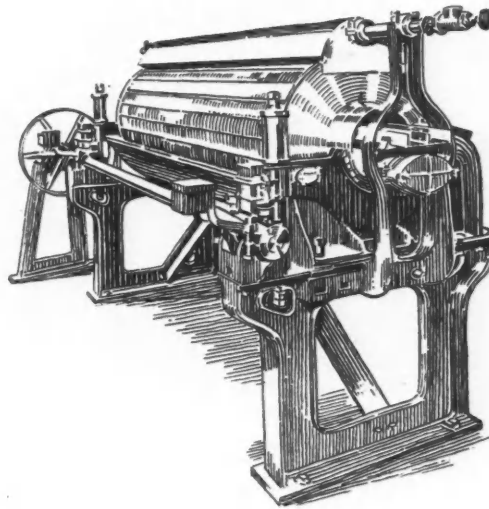
The International Burr Company of Watertown, N. Y., will locate a plant in Bellsville, Ont., during the coming year. The product of the concern is largely used in pulp and paper mills.

A. P. Costigane, secretary and safety engineer of the Pulp and Paper Makers' Safety Association of Ontario, is removing his office from the Manning Arcade, to the Aladdin Building, 208 King street west, Toronto, where he will have much larger quarters.

The Pontiac Lumber and Pulp Company, whose pulp mill was destroyed by fire over a year ago at Makamick, Abitibi County, Que., intends rebuilding. Eugene Rouleau is the manager of the company.

Manley Chew, M. P., of Midland, Ont., proprietor of Fibre Board, Limited, and a widely-known dealer in forest products, was married recently to Miss Marjorie Byrne, of Midland. He is receiving the congratulations of many friends.

**Built on the  
Rotary Principle**



## The Square Peg for the Square Hole

The Walpole Screen fills a definite need in any mill which makes paper from long-fibred stock.

It is designed particularly for screening high-grade rag-stock papers.

The Walpole Screen delivers uniformly clean stock.

It increases average production by maintaining continuous production without breaks or shut-downs for washing up.

Let us tell you more about the Walpole Screen.

### BIRD MACHINE COMPANY

South Walpole

Mass.

*Western Representative:*  
T. H. Savery, Jr., 1718 Republic Bldg.  
Chicago, Ill.

*Canadian Builders of Bird Machinery:*  
Canadian Ingersoll-Rand Co., Ltd.  
260 St. James St., Montreal, Canada

# WALPOLE SCREENS

## WATER POWER IMPROVEMENTS FOR NEW YORK PAPER MILLS

Numerous Paper Men Appointed On Committee to Investigate a Proposition to Establish a River Generating District on the Oswegatchie River—Extensive Improvements Being Made to the Dams Which Supply Power for the Continental Paper and Bag Mills and the Hinde & Dauche Paper Co.—Falling Off of 20 Per Cent In Consumption of News Print Is Affecting Mills.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., February 14, 1922.—A committee of eleven large power owners on the Oswegatchie river was appointed at a meeting at Gouverneur on Wednesday, February 8, to investigate and report on a proposition to establish a river regulating district on that river. The plan involves the establishment of a big reservoir on the inlet of Cranberry Lake. There were 30 power owners at the hearing and it was proposed to have the special committee report its finding at a meeting to be called later.

Joseph E. Fell of Ogdensburg, a member of the present Oswegatchie Commission which controls the Cranberry Lake development, presided at the meeting and named the following committee: Celestin C. Burns of Watertown, who represents the Northern New York Utilities, Inc.; Nelson R. Caswell of Gouverneur, representing the Aldrich Paper Company; H. D. Ellison of Newton Falls, representing the Newton Falls Paper Company; W. L. Sykes of Cranberry Lake, representing the Emporium Forestry Company; Michael Doyle, of Rochester, representing the International Pulp Company; Charles Lord, superintendent of water works of the City of Ogdensburg; K. B. Castle of Rochester, attorney for the International Pulp Company; E. C. Bancroft, Edwards; W. D. Clark, Halesboro; Mark S. Wilder of Watertown, representing the Diana Paper Company at Harrisville; W. B. Carr, of Potsdam, representing the St. Lawrence Transmission Company.

Under the wording of the resolution the committee has full power to investigate the development of power on all branches of the Oswegatchie, while the present commission controls only the main stream. The West branch, on which are located the Aldrich Paper Company and the Newton Falls Paper Company, are not under the jurisdiction of the present commission. The committee will hold its first meeting on Tuesday, February 21, at 10:30 in the morning in the Citizens Club in Gouverneur.

There were two views expressed at the meeting. One favored the legislative expansion of the powers of the present commission and the other favored the establishment of a regulating board under the Machold law, similar to the Board of the Black River Regulating District.

E. S. Cullings, secretary of the Board of the Black River Regulating District, appeared at the meeting and gave data on the cost of the proposed reservoir above Cranberry Lake. He pointed out that the reservoir would not be expensive because of the purchase of property rights. His estimates placed the total cost at \$353,000, divided as follows: \$202,000 for the dam, \$87,000 for clearing the land, \$5,000 for the erection of a dwelling for the keeper, and 20 per cent or \$59,000 as a contingent fund for unexpected expenses. The capacity of this reservoir would be 2,000,000,000 cubic feet.

Delos M. Cosgrove, attorney for the Black River Regulating District board, explained that the cost would be retired by the issuance of 50 year five and one half per cent bonds, two per cent of which would be paid off each year. Attorney Cosgrove also gave an outline of the workings of the Machold law.

### Extensive Dam Improvements

Extensive improvements to the dams which supply the power for the Continental Paper and Bag Mills, the Excelsior Carriage Company, and the Hinde & Dauche Paper Company at Sewells Island under leases from the International Paper Company, are now being executed. The Domill Construction Company holds the contract for the work.

The most important improvement is the installation of a concrete dam within the wooden "crib dam" used by the Continental Paper and Bag Mill and the Excelsior Carriage Company. The work was started on December 1 and will be completed within the next two weeks. Captain T. E. Loney is superintendent of the work and G. A. Cunningham is construction engineer.

This dam is 80 feet across the South channel. It had become leaky and it was feared might not withstand the spring floods. Instead of attempting to repair it a concrete base about 32 feet wide was spread, and back of the wooden structure, and attached thereto, was constructed a concrete dam 10 feet wide at the bottom and tapering to two feet at the top.

As soon as this job is completed, Mr. Cunningham said the 300 foot dam in the other channel will be completely repaired. This work is being financed by the International Paper Company and the Hinde & Dauch Paper Company. This dam was also leaking and it was felt that proper repairs should be made this winter before the wooden structure was again subjected to the pressure of the spring freshet.

### Falling Consumption Affects News Print Mills

A 20 per cent falling off in the consumption of news print paper is having a noticeable effect upon operations in mills of Northern New York. In some instances reduced production has resulted while in other cases the production has continued as reserve paper is being placed in storage.

The Norwood mill of the Hanna Paper Corporation was started again Tuesday following a shut down of five days. It was at first reported that the mill was closed down for an indefinite period, but this was not the case. At the mill it was given out that the cause of the shut down was the necessity for repairs, but officials of the company have admitted that a shortage of demand had much to do with the shut down.

C. C. Burns, general manager of the St. Regis Paper Company, was asked concerning the situation in his mills. He said that the mills are being run at 100 per cent capacity, but of late it has become necessary to place some of the paper in storage. He admitted that the demand has fallen off about 20 per cent and said that under such conditions it will be necessary for production to follow suit. This means that unless there is a decided improvement in conditions some of the mills of the United States and Canada must close temporarily.

### News of the Michigan Trade

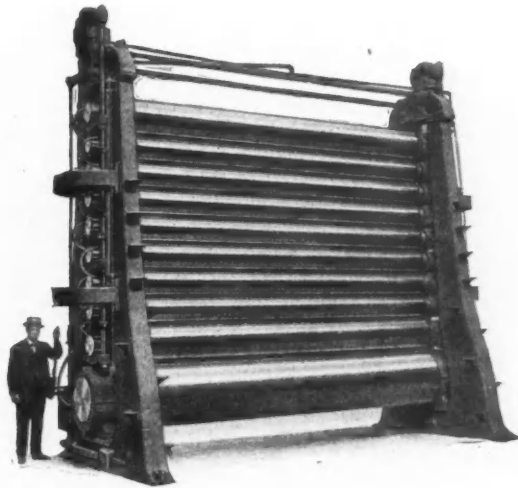
[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 11, 1922.—Work is progressing rapidly on the community building for the Kalamazoo Vegetable Parchment Company and there is talk now of the grand opening some time in March. The exterior is practically completed, workmen being engaged on the interior finish and laying the floors.

The Baker-Vawter Company, Benton Harbor, one of the largest users of paper in western Michigan, has elected as president, W. A. Vawter II, to succeed his father, W. A. Vawter, deceased. George H. Vawter is secretary and V. W. Switzer treasurer. W. A. Vawter II and George H. Vawter, Benton Harbor, and A. D. Sheridan, Chicago, were added to the board of directors.

The Consumers Power Company will completely rebuild the power house at Stanwood, Mich., recently destroyed by fire. Allis-Chalmers equipment will be installed and the capacity of the plant increased about 25 per cent.





## Have You a Calender?

You want the best rolls you can get because your calender holds an important place in your paper machine.

As to the quality of Farrel rolls we can refer you to the paper mills all over the world.

We have been manufacturing chilled rolls for over 50 years and have successfully encountered the intricate problems involved. We have a foundry experience in chilled castings and a shop devoted solely to machining chilled rolls. In this shop we have made more paper calender rolls than any other manufacturer.

You will be helping the quality of your product by specifying your calender rolls to be "Farrel."

*Every Farrel roll is crowned and tested for the exact work it is to do.*

*Different classes of paper need different crowns of rolls. We make them all—each roll or roll stack for its particular purpose.*

### Farrel Foundry & Machine Company

Established 1848

Ansonia, Conn.

**Branch Plant:**  
BUFFALO, N. Y.

## SOMEWHAT BRIGHTER OUTLOOK REPORTED IN BOSTON MARKET

Many of the Inquiries Which Have Been Coming Into Boston Houses for Some Weeks Past Are Materializing Into Orders—Although These Are Not Large in the Aggregate Still They Have Been Sufficient to Instill a Bit of Courage Into the Trade in General—Financial Report of the American Writing Paper Co. for 1921 Shows a Considerable Deficit—General Trade News.

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., February 16, 1922.—A few branches of the paper industry in this section showed a somewhat brighter outlook during the past week but it was far from expectations. Many of the inquiries which have been coming into Boston offices for weeks past materialized into orders this week—not substantial—but enough of them to instill a bit of courage into the trade in general.

The best barometer of conditions is a comparison of business a year ago and at the present time. Most houses during January did a far better business this year than they did in 1921. Details accompanying inventory taken are over. The policies for the year have been outlined to the salesmen and now—everybody is out for the business.

Houses handling fine grades report a fair trade despite the somewhat quiet condition in the printing trades. Commercial paper is in big demand and with a general increase in advertising papers of all grades are selling well. Stationers are making a steady demand for bonds and engraving and announcement houses are doing a brisk business.

The strike of 40,000 textile workers throughout New England, resulting in a shutdown of scores of big mills, hit the paper trade in this section a cruel blow this week as a large quantity of paper is used in the rolling, packing and shipping of textile goods.

The board and paper box men are receiving the first of their spring orders and every indication points to a splendid March and April, not only in this branch but in all divisions of the business. Paper stock shows a bit more life than for many weeks and with reports coming in from the road that certain mills are getting a few more orders and are running nearer to normal capacity than for some time, better activity is looked for in this line.

According to a financial report which reached the city this week, the American Writing Paper Company for the year 1921 shows a deficit of something over \$1,500,000. This is in contrast with the remarkable showing of 1920, when the manufacturing profits were about \$5,000,000 and the net divisible income exceeded \$3,000,000. The 1921 figures, it is stated, is the result of inevitable consequences of heavy inventory losses.

Notwithstanding these figures the company today, according to the report, is in easy financial condition. It has cash and receivables of more than \$2,600,000 with accounts payable of around \$500,000 and notes payable of less than \$400,000.

At present, the report says, the company is not operating its mills over 50 per cent capacity and naturally no satisfactory profits can be shown on such operations. The management, however, has written off its losses and has put itself in a strong cash position. The Gill division of the company at Holyoke has resumed operations producing about 60 tons of paper daily, the report states.

### International Paper Co. Sued

Suit for \$1,000,000 was brought this week against the International Paper Company for alleged breach of contract by the Boston Oil Company of this city. The suit was filed in the Superior Court. It is alleged that the paper company contracted to purchase for fuel from this particular oil concern at the rate of 500,000 barrels a year at \$3.50 a barrel, for ten years, beginning January 21, 1921;

that defendant accepted 281,197 barrels, but refused to accept the balance due for delivery this year.

### General News of the Trade

A party of Boston paper merchants including representatives of the Hollingsworth & Whitney offices attended the funeral services at Gardiner, Me., this week of the late Frank E. Boston, for many years manager of the Hollingsworth & Whitney mills in Maine, and one of the best known paper men in New England. More than 200 persons attended the services.

Alfred J. White of the Bicknell Fuller Company this week was elected chairman of the New England Division of the National Paper Box Manufacturers' Association.

Herbert Kimball, consulting engineer, will remove his offices on February 20, from his present location, 79 Milk street, to 177 State street, Boston, Mass.

### Bids and Awards for Paper

WASHINGTON, D. C., February 8, 1922.—The purchasing officer of the Government Printing Office has received the following paper bids:

10,000 Pounds 26½ x 41—100 lbs. India Tint Coated Cover Paper: Whitaker Paper Company at \$.094 per pound; R. P. Andrews Paper Company, \$.0943; Mathers-Lamm Paper Company, \$.1025; Dobler & Mudge, \$.092, and Old Dominion Paper Company, \$.1039.

3,000 15¼ x 9¾" Rope Manila Filing Jackets: Security Envelope Company at \$38.30 per M.; Mathers-Lamm Paper Company at \$27.60; R. P. Andrews Paper Company, \$24.65; U. S. Paper Goods Company, \$42.30; Union Envelope Company, \$23.95; United States Envelope Company, \$25.70.

25,000 4 x 7¾" Wood Manila Filing Jackets: R. P. Andrews Paper Company, \$5.70 per M.; Mathers-Lamm Paper Company, \$6.00; United States Envelope Company, \$3.05.

200,000 3¾ x 8¾" White Envelopes: Mathers-Lamm Paper Company at \$2.10 per M.; D. L. Ward Company, \$1.65, and Dobler & Mudge, \$1.63.

The purchasing officer of the Government Printing Office has received the following paper bids:

50,000 Pounds 25 x 30", No. 20, Binders' Board No. 2: Dobler & Mudge at \$52.00 per ton; R. P. Andrews Paper Company, \$44.80; Mathers-Lamm Paper Company, \$49.70; the Whitaker Paper Company, \$66.20; B. F. Bond Paper Company, \$49.60; Geo. W. Millar & Co., Inc., \$62.10; the American Paper and W. Company, \$60.00; the Denison-Pratt Paper Company, \$58.80; Republic Bag and Paper Company, \$60.60.

100,000 5¼ x 2½" White Linen Shipping Tags, No. 6: Knickerbocker Supply Company, \$3.79; R. P. Andrews Paper Company, \$3.65; the Whitaker Paper Company, \$3.74; Dennison Manufacturing Company, \$3.06; the Denney Tag Company, Inc., \$2.40; American Tag Company, \$3.65; International Tag Co., \$4.61; Old Dominion Paper Co., \$3.99; Campbell Paper Box Company, \$3.65.

Dobler & Mudge have been awarded a contract by the Purchasing Officer of the Government Printing Office for furnishing 10,000 pounds (100 reams) of 26½ x 41—100 India tint coated cover paper at \$.092 per pound, bids for which were opened on February 1.

The Mathers-Lamm Paper Company will furnish 15,000 pounds (10,500 sheets) of 24½ x 34" box board at \$.02975 per pound, bids for which were opened on February 3.

The purchasing officer of the Government Printing Office has received the following paper bids:

1,810 pounds 22½ x 28½—1818 Buff Index Bristol: Dobler & Mudge, at \$.19 per pound; R. P. Andrews Paper Company, \$.184; Old Dominion Paper Company, \$.199, and Maurice O'Meara Company, \$.1975.

**OUTLINE DOOR-MOULDER DRIVE**

Maximum Horsepower Required — 10  
 Speed of Drive Pulley — 1000 R.P.M.  
 Belt Speed — 6283 F.P.M.

**SPECIFIED:- GOODYEAR BELT**  
 5" 4 PLY GLIDE

PACIFIC DOOR & SASH COMPANY,  
 LOS ANGELES, CALIFORNIA

Blue print sketch and insert photograph of Goodyear-Glide-equipped door-moulder drive in the plant of Pacific Door & Sash Co., Los Angeles, Calif.

Copyright 1921, by The Goodyear Tire & Rubber Co.

## The Door-Moulder Drive—and the G.T.M.

**The superintendent believed** the belts they were using in the plant of the Pacific Door & Sash Company, of Los Angeles, California, could not be improved upon; for they were the best of many kinds the company had tried.

**But he was reasonable** about it, and he could see the point made by the G. T. M.—Goodyear Technical Man—that the most economical and long-lived belt was the belt that was *specified to its work*. So he agreed to test the Goodyear Analysis Plan on a single drive.

**The drive he picked out** was the plant terror—the door-moulder drive—a hard, high-speed, belt-eating drive, with an action that subjected its belting to an unusual amount of flexing. Four months was the longest any belt had stood up to the door-moulder punishment.

**The G. T. M. noted** every fact about the drive. The superintendent co-operated by supplying data on operating conditions peculiar to the plant. A Goodyear Glide Belt, 5-inch, 4-ply, which is specially constructed for fast, hard work, was recommended.

**The Goodyear Glide** hung to the door-moulder for nine months—more than double the life of the best previous belting. Moreover, because of its pulley-gripping qualities, slippage was reduced to a minimum.

**Goodyear Belts** sometimes cost more to buy, but this one had the added virtue of costing only two-thirds the price of the belt it replaced. So, considering its long life, its economy was nearly four times greater than its predecessor's. That convinced the superintendent. He had the G. T. M. analyze every drive in the mill. Another Glide is now mastering the door-moulder, and 25 other drives are equipped with Goodyear Belts.

**If you want better belting**, at lower actual cost, for a single drive or an entire plant, it will pay you to call in the G. T. M. There is one in your neighborhood. For further information about the Goodyear Analysis Plan or about the reliable performance of Goodyear Conveyor and Transmission Belts in your particular industry, write to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR

## TOMAHAWK PULP & PAPER CO. MAKES BOND ISSUE OF \$500,000

**Issue Is Created to Finance Expenditures Incidental to Recent Large Improvements in the Plants Which Have Greatly Increased Production—Company Signs Large Contract Which Practically Disposes of Its Entire Output to Montgomery, Ward & Co. for a Period of Five Years—Northern Paper Mills at Green Bay Operate to Full Capacity With Indications That They Will Continue Busy.**

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., February 14, 1922.—The Tomahawk Pulp and Paper Company which operates large paper mill properties at Tomahawk, Wis., has announced, a bond issue of \$500,000, dated February 1, 1922, and due, February 1, 1932, of \$500,000, which now is selling 99 and accrued interest. The securities are 10-year first mortgage 7 per cent sinking fund gold bonds on which interest is payable semi-annually. They are subject to call on any interest bearing date prior to maturity at 107½ up to and including February 1, 1927, and thereafter at a premium of 1 per cent for each year or portion thereof prior to maturity.

The bonds are secured by a first mortgage on all of the property of the Tomahawk Pulp and Paper Company; by a pledge with the trustee as collateral security of a mortgage of \$279,000 and upwards of two-thirds of the stock of the Tomahawk Land and Boom Company which owns the dam and waterpower from which the plant derives its hydraulic power.

It was announced that bond issue has been created to finance expenditures incidental to recent large improvements in the plants by which the production was greatly increased.

Since 1910 practically the entire output of the company's mill has been sold to Montgomery, Ward & Co. of Chicago and a new contract, dating five years from March 1, 1922, has been signed which disposed of practically the entire product to the Chicago mailorder house on a cost-plus basis.

Based on valuation of the American Appraisal Company, the company's property and its interest in water power is appraised at \$1,257,606.93. Net quick assets at the end of last year totalled \$326,606.78. An audit showed that the net earnings available for interest charges and income taxes for the last five years averaged \$134,488.35 a year. Such earnings for 1921 were \$72,441.72.

The company has a capital stock of \$150,000, surplus of \$962,544.92. C. B. Pride is president and B. A. Pride is vice-president and general manager of the company.

### Northern Paper Mills Elect Officers

The plant of the Northern Paper Mills at Green Bay is operating at full capacity and there is every indication that it will continue to do so, it was stated in reports read at the annual meeting of stockholders. The following directors were named: W. P. Wagner, Judson G. Rosebush, Appleton; Louis Schrieder, Oshkosh; Charles A. Goodman, Marinette; Earle Murray, Green Bay.

Directors named these officers: W. P. Wagner, president; Earle Murray, vice-president; Judson G. Rosebush, treasurer; Homer H. Benton, secretary.

### Peshtigo Paper Co. Elects Officers

The annual report of the Peshtigo Pulp and Paper Company read at the stockholders' meeting showed that plant to be operating at capacity with good prospects for the new year. The company has not suffered very seriously by the business depression, it was stated.

These officers were elected: John Kittell, Green Bay, president; T. J. Tippler, Green Bay, vice-president; C. W. Collier, Green

Bay, treasurer; H. M. Lord, Peshtigo, secretary; Joseph Nugent, Peshtigo, manager.

The directors include the officers and the following: Fred Miller and W. Sauben, Green Bay; Nick Dohr, Appleton; John Enz, Sheboygan; A. Spengler, Bonduel; S. D. Woodward, Peshtigo; F. J. Lauerman, Marinette.

### Purchasing Agents' Association to Meet

The National Association of Purchasing Agents will hold its annual convention in Rochester, New York, May 15-20, 1922.

The association at present has a membership of almost 5,000 and has local associations in practically every large city in the United States and Canada. Its main objects are to foster and promote friendly relations between members, the interchanging of ideas and opportunities and the familiarizing of its members with the products they buy, the securing of more uniform purchasing routine and methods of standardizing and specifications, classifications, etc., the gathering and dissemination of data relative to the general subject of buying, the improving of existing methods by the defusing of information and the holding of regular meetings at which specialists in various commodities address the members on topics of interest and importance to the purchasing profession.

Among the interesting features of the association is its commodity committees and groups who are interested in certain subjects and who meet and talk over these particular commodities. Paper is included among these commodity committees. In connection with this committee, it may be said that the National Association appoints a chairman with three or four sub-chairman located geographically to work with him. Each local association has its own paper committee which takes in anyone interested in this subject. This committee is headed by a chairman selected by the local president. These committees meet once or twice a month and talk over the general situation, particularly market conditions, and a report of the committee is sent to the National Chairman, after which all the reports are gone over and put into a general report which is distributed to the members at large. It is aimed to go into the manufacturing side and keep posted on the various materials entering into the manufacture of paper regarding their cost and production as a guide for the placing of future business.

In connection with the National Convention, the association will hold an annual exhibit which will be known as the "Informashow," and it is stated that a large number of paper users intend to exhibit.

### Now the Trimbey Machine Works

[FROM OUR REGULAR CORRESPONDENT.]

GLENS FALLS, N. Y., February 14, 1922.—Announcement is made that the partnership of Trimbey & Allen has recently been dissolved. The business has been purchased by E. J. Trimbey and will be continued by him under the name Trimbey Machine Works. M. G. Tibbitts continues as sales manager with Harold D. Wells and T. A. Gastonquay as salesmen and erecting engineers. The company is now making the Allen & Trimbey Automatic Continuous Mixing System, Wells Improved Rotary Sulphur Burner, Trimbey & Tibbitts Soft Stock Meter, Allen Cooking Control for Chemical Pulp, Trimbey Automatic Consistency Regulator, Allen Constant Level Stuff Box and Trimbey Pulp Thickener. Among the recent installations of continuous regulators are those in the mills of George Wheelwright Paper Company, North Leominster, Mass.; Marathon Paper Mills, Rothchild, Wis.; Northern Paper Mills, Green Bay, Wis. Minnesota and Ontario Paper Company has two regulators and a mixing machine in its Fort Frances mill. The company states that these installations made possible the elimination of nine members of the beater room force besides a saving of over three hundred horsepower. A mixing machine and four regulators are now ready to ship to the Pride Pulp and Paper Company, Tomahawk, Wis.

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## IMPROVED PAPER DEMAND IN THE CHICAGO MARKET

**Mill Representatives and Jobbers Consider Business to Be on the "Uphill Climb."—Buying Still Conservative but Feeling Freer—Seaman Paper Co. Changes—K. I. Herman Chemical Corp. Organized With \$300,000 Capital to Manufacture Sulphate of Alumina—Paragon Paper Box Co. Incorporated for \$20,000—Chicago Association Announces Committee Appointments.**

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, February 14, 1922.—The consensus of opinion among the mill representatives and jobbers in Chicago last week was that business has started on the "uphill climb," and they claimed that they could see signs of this line of travel right now.

While buying is still being done in a conservative manner, and buyers are not placing heavy orders, they are in the market with a freer and broader feeling, it is said. One jobber last week said that he felt sure that the consumers were beginning to see signs of prosperity ahead, and that he believed this year would be the beginning of a long era of prosperity.

Some lines are moving much better than others, of course. Many of the local houses have recently put in a good stock of book papers to handle an expected good demand. It is expected that a great deal of advertising will be done during 1922 and this will take paper.

### Seaman Paper Co. Changes

Four changes have recently been made in the Seaman Paper Company, Chicago. Probably the most important of these is that this company has opened a stock department in Chicago where it will carry a fairly extensive line from which to serve its trade. Heretofore, this company has made the bulk of its shipments direct from the mills, and finding that by having a stock of papers on hand it could give quicker and better service to its customers, it has installed this department. A seven-story, concrete, fireproof warehouse building at 431 West Ontario street, owned by the company, is being used to house the new department. This warehouse is on a siding of the Chicago, Milwaukee & St. Paul Railroad, which gives switching facilities to all lines running out of the city.

C. H. Heeter, formerly Detroit manager of the Whitaker Paper Company, took charge of this department February 1.

The other changes effected are in the sales department. J. W. Tomassene, formerly with the Whitaker Paper Company, has identified himself with the Seaman force, and E. B. Bable, formerly of the American Multigraph Company, sales department, went with the Seaman company February 15. And R. N. McCreary, who was formerly Chicago sales manager of the Diamond State Fibre Company, has identified himself with the Seaman Paper Company, sales department, handling glassine papers.

### To Manufacture Sulphate of Alumina

K. I. Herman, secretary and general man of the Mid-West Box Company, Chicago, and George J. Kroeck, president of the Kroeck Paper Box Company, Chicago, after several years of separation, have again joined hands and launched a new company. About fifteen years ago these two men, both very well known to the trade, were in business together, operating the Kroeck & Herman Paper Box Company.

The new venture is to be known as the K. I. Herman Chemical Corporation, and a factory will shortly be erected on forty acres of land at Matteson, Ill., on the Illinois Central Railroad, where the company has purchased land and will manufacture sulphate of alumina for paper and board manufacturers.

The company has a capital stock of \$300,000, and due to the leading position Mr. Herman and Mr. Kroeck have held in the trade here, this is fast being subscribed to. Mr. Herman is president and Mr. Kroeck, vice-president and treasurer of the new firm.

Actual construction of the plant at Matteson will be commenced early in the spring, it is thought. The officers of the new company have said that building of the factory will be done just as soon as weather conditions will permit.

### General News of Chicago Trade

Clarence W. Collins, vice-president and sales manager of the Cherry River Paper Company, Richwood, W. Va., spent a few days in Chicago last week calling on the trade.

A petition for adjudication has been filed against the International Paper Box Company, 2003 South Halsted street, Chicago. One claim listed amounts to \$6,202.

To manufacture and deal in paper articles, specialties, etc., the Paragon Paper Box Company, 531 S. Peoria street, Chicago, has recently been incorporated and capitalized at \$20,000. The incorporators are: Samuel Levinson, Clarence A. Cohn and Howard B. Strassburg.

The Humboldt Paper Company, 1812-14-16 Milwaukee avenue, Chicago, has opened offices and stock rooms at that address and is putting in a stock of paper bags and twines, which it will carry together with other lines of merchandise for the retail trade. This company was recently organized and incorporated and has a capital of \$30,000. C. J. Wolf, Nathan Weill and J. Lefkowitz are the principals of the company.

The Capitol Paper & Envelope Company, 312 South Clark street, Chicago, has been incorporated, with a capital of \$15,000, to manufacture and deal in paper envelopes, etc. The principals of this new company are: V. H. Ritter, Elmer E. Beach, M. Fohlman, Guy W. Hawkins and H. G. Fohlman.

The following members of Chicago's paper, paper board and paper box industry have been appointed on the standing board of arbitrators of the Chicago Commerce Court, to serve as arbitrators in court hearings when cases are called: George J. Kroeck, Kroeck Paper Box Company; M. L. Twomley, Illinois Paper Box Company; Eugene U. Kimbark, The Paper Mills Company; George Olmsted, J. W. Butler Paper Company; L. L. P. Sine, Messinger Paper Company; J. W. Hastie, Western Newspaper Union; Robert H. Ritchie, W. C. Ritchie & Co.

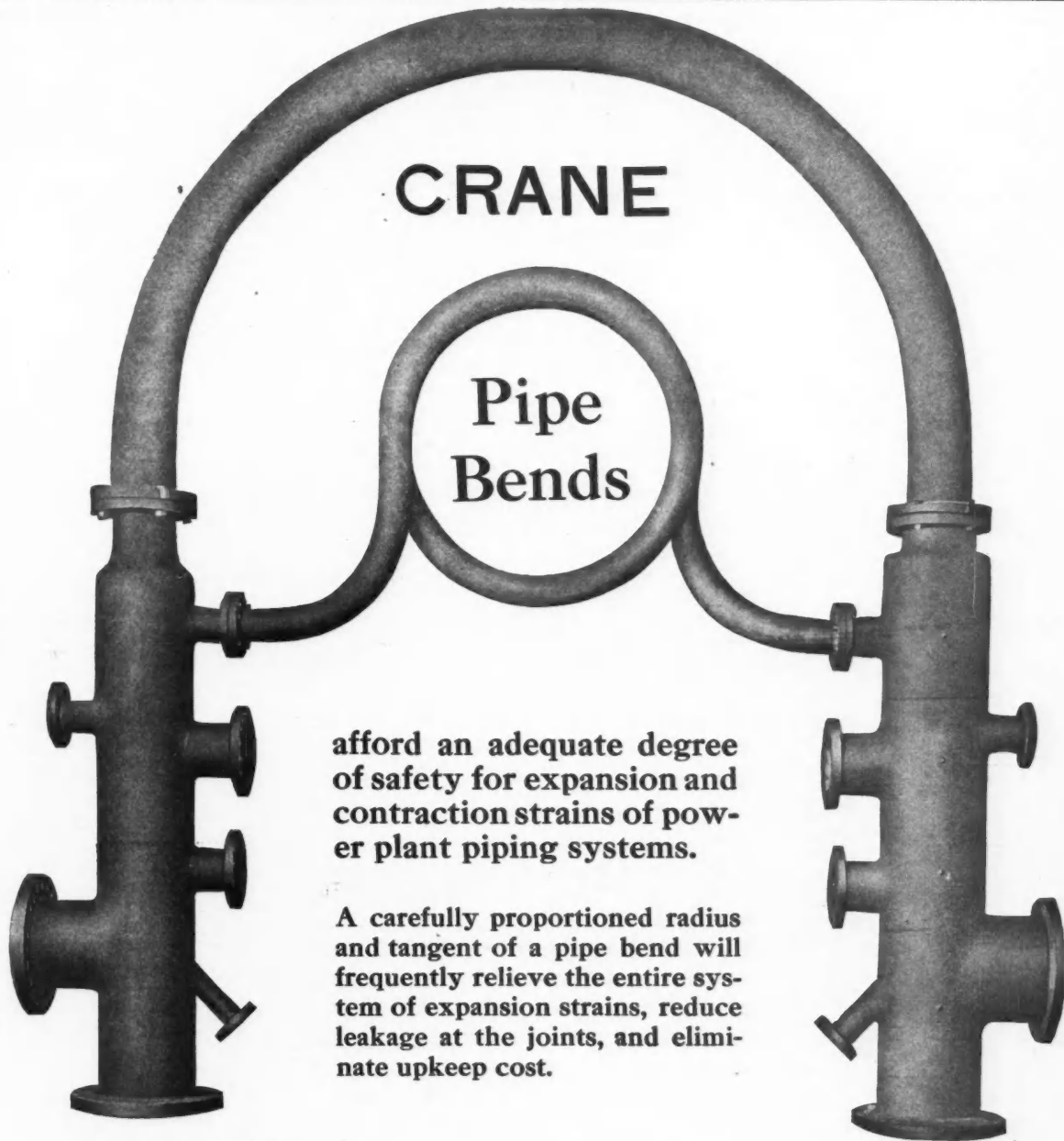
In making up its various committees for 1922, the Chicago association has announced the following appointments: Robert E. Kenyon, Sefton Manufacturing Corporation, on the executive committee; E. U. Kimbark, The Paper Mills Company, on the finance committee and senior council; R. E. Parker, Parker, Thomas & Tucker, ways and means council; W. E. Shoemaker, J. W. Butler Paper Company, commercial arbitration committee; W. W. Quimby, A. C. Allen Paper Company, reception committee.

### John Balch Goes With Horace P. Griffith & Co.

John Balch, who is well known in cost circles throughout the paper industry, has recently become associated with Horace P. Griffith & Co., Certified Public Accountants, Philadelphia.

Mr. Balch was for a number of years Cost Accountant for the Chemical Paper Mfg. Co. of Holyoke, Mass., and was the first secretary of the Connecticut Valley branch of the Cost Association of the Paper Industry. He has been a valuable contributor toward the advancement of better accounting in the paper industry, and has always been active in the association work.

The general cost accounting and installation work of Horace P. Griffith & Co. will be handled by Mr. Balch under the direct supervision of the members of the firm, and with the broad knowledge of cost work and very intimate knowledge of the problems attending Paper and Paper Board Cost Accounting which Mr. Balch possesses, he will be a most valuable addition to the staff of his present associates.



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NEW YORK	SYRACUSE	WICHITA
HARLEM	BUFFALO	ST. LOUIS
ALBANY	SAVANNAH	KANSAS CITY
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## Obituary

### Louis F. Valentine

WASHINGTON, D. C., February 14, 1922.—Louis F. Valentine, secretary and treasurer of the R. P. Andrews Paper Company, whose body was found beside that of his wife in the Knickerbocker Theater ruins and whose death was briefly noted in the PAPER TRADE JOURNAL last week, came to Washington about twelve years ago, going to work as a clerk with the company. He had been a boyhood friend of R. P. Andrews at their home in Warren, Pa.,



LOUIS F. VALENTINE

and came to Washington when the opportunity was offered of a position with his best friend. His work was of such a character that he rapidly made a name for himself with the firm.

Mr. Valentine was a member of Harmony Lodge, F. A. A. M., the Columbia Commandery and the Shrine. He was a life member of the Elks, retaining his membership in the Warren, Pa., lodge, and a member of the City Club.

Mr. Andrews, who identified both the bodies of Mr. and Mrs. Valentine, had promised to attend the performance at the Knickerbocker with the Valentines Saturday evening, but cancelled the engagement on account of an earlier one at the City Club.

Mrs. Valentine was, before her marriage fourteen years ago, Miss Fernie Kinnear of Youngville, Pa. Mr. Valentine is survived by two sisters, Miss Belle Valentine of Warren, Pa., and Mrs. Hattie Selden of Norristown, Pa. The double funeral was held at Shipert's Chapel, 2008 Pennsylvania avenue, and the bodies sent to Warren, Pa., for burial.

### James A. Emerson

GLENS FALLS, February 14, 1922.—James A. Emerson, president of the Schroon River Pulp and Paper Company, Warrensburg, and State senator for a number of years, died recently in the Long Island College Hospital.

Senator Emerson was stricken on the steamship Porto-Rico and when it arrived from San Juan he was taken from the ship to the hospital, where he expired a few hours later. Physicians attributed death due to heart disease. Mr. Emerson was born in Warrensburg, April 25, 1865, and was educated in the Warrensburg schools and the Boys' Academy of Albany. He and his brother, L. W. Emerson, also of Warrensburg, have been recognized as the Republican leaders of Warren county for many years. They were in-

terested in numerous business enterprises throughout this section.

James A. Emerson was vice-president and cashier of the Emerson National Bank of Warrensburg, was half owner of the Warrensburg water system, one of the owners of the Schroon River Pulp and Paper Company, Empire Shirt Company, Warrensburg Woolen Company, president and general manager of the Schroon Lake Steamboat Company. He was a member of Glens Falls Lodge of Elks, the Fort Orange Club of Albany and the Albany Club.

Mr. Emerson was one of the first to conceive the idea of a trunk line highway between New York and Montreal, and it was largely through his efforts that an appropriation of \$2,000,000 was made by the legislature for that purpose.

Besides his brother he is survived by a son, Albert Emerson, a student at Dartmouth College. Mrs. Emerson died two years ago.

### William C. Cook

[FROM OUR REGULAR CORRESPONDENT.]

DETROIT, Mich., February 11, 1922.—William C. Cook, president and organizer of the Detroit Paper Stock Company, died in this city Tuesday morning, 46 years old.

He was born in Holt, Ingham county, Mich. He was admitted to the bar, practised law for several years and came to this city eleven years ago. He followed his profession for some time and then organized the company he headed at the time of his death. He had recently acquired all the stock outstanding and had just purchased an entire block of ground in Detroit for an extension of the plant.

Mr. Cook was also a director in the Detroit Fidelity and Surety Company, a Mason and a prominent member of the Board of Commerce.

### Richard H. Thompson

BUFFALO, N. Y., February 10, 1922.—Richard H. Thompson, president of the R. H. Thompson Company, 184-190 Washington street, died on Friday, February 10, following a long illness.

Mr. Thompson was well known in the paper business for a great many years past, and his loss will be mourned by a host of friends in the paper trade. Mr. Thompson is survived by his wife, Jessie B. Thompson, and one son, Richard H. Thompson.

### May Start Glazed Plant at Great Barrington

GREAT BARRINGTON, Mass., February 14, 1922.—Jeremiah H. Whitehouse of Springfield, formerly connected with the Springfield Glazed Paper Company, met with several citizens of the town at the Court Rooms recently in regard to the proposed location of a new plant in Great Barrington. Mr. Whitehouse presented his prospectus of the corporation in which he expects to become interested, and outlined the plans for the establishment of the plant. It is proposed to use the old stone mill property now owned by George A. Stevens on Upper Main street. The corporation, as suggested by Mr. Whitehouse, would start with a capitalization of approximately \$75,000. He is now in possession of \$35,000 worth of paper glazing machinery which could be moved here immediately.

### Paper Trade Using New Paper Divisions

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 15, 1922.—The paper trade is not slow in making use of the new paper division of the Bureau of Foreign and Domestic Commerce, as evidenced by numerous inquiries which are being received by Grosvenor M. Jones, chief of the new division. A great many inquiries are being received by Mr. Jones and these in spite of the fact that the paper trade generally is not yet cognizant of the many things which can be done for the trade by the Bureau. In the very near future Mr. Jones will visit Philadelphia and New York, where he will get in touch with various paper trade associations and other paper men.



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BOSTON

## New York Trade Jottings

The Interstate Pulp and Paper Company has brought suit for \$113,000 against the New York Tribune in four actions, three for breach of contract and one for damaged paper.

\* \* \*

R. S. Kellogg, secretary of the News Print Service Bureau, spoke in New Haven last Tuesday evening to the members of the Yale Forest Club on "The News Print Situation in the United States."

\* \* \*

J. A. Kinley, sales manager of the Matheson Alkali Works, has been laid up for several days with an attack of the grippe. It is expected that he will be able to return to his office some time this week.

\* \* \*

Michael Stramiello, dealer in paper stock, located at 821 Front street, New York, has incorporated under the name of Michael Stramiello, Inc., with a capital stock of \$10,000. M. and F. and C. Stramiello are the incorporators.

\* \* \*

Judge A. W. Moore of the Seaman Paper Company has been out two weeks with an attack of influenza. W. P. Leech, general manager of the Company has just recovered from a severe case of the same. The Seaman Company has been hard hit by the epidemic as many as eight salesmen being laid up with it at one time.

\* \* \*

The A. M. Collins Manufacturing Company is just about ready to market a new line of high grade covers to be known as Damascan which will include four shades and two sizes, and Algerian which will include seven shades and two sizes. The business of the company is on the increase. Among large buyers of their product of late is the Studebaker Motor Car Company.

\* \* \*

International Paper Company is increasing operations and two more machines at Niagara Falls mill will soon be put in operation. The company finds little difficulty in securing all the labor, skilled and unskilled, needed in spite of a technical state of strike. The International Paper Company's \$4,127,000 of first and refunding mortgage 5 per cent bonds was admitted to the list of the New York Stock Exchange February 9 by action of the board of governors.

\* \* \*

The Hudson Bag Company of Brooklyn, N. Y., manufacturing a full line of self opening, square and flat bags, and the Equitable Paper Bag Company, a new organization devoted to the manufacture of specialties such as millinery, glassine and confectionery bags and sacks, have opened a suite of offices at 516 Fifth avenue, corner of Forty-third street, for the convenience of their growing trade. Maurice Rosenfeld, for sixteen years with Schorsch & Co., and later as city sales manager, has been elected to the presidency of the Equitable Paper Bag Company and will be pleased to meet his many friends at the new offices of the company.

\* \* \*

The development of public sentiment for forestry in New York State will be the subject of the next meeting of the New York Forest Club, as a result of the February meeting held at the City Club, Tuesday, February 14, when the discussion centered upon the reorganization of the New York State Forestry Association, in which nearly every paper manufacturer in the State is a member. The club decided to take up a series of discussions of various forestry problems, such as the interest of the paper manufacturer in forestry, and at Tuesday's meeting there was informal discussion of the paper industry and the Alaskan forests, the possibilities of bamboo, and similar topics.

## Trade Marks Department

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

The following are trade-mark applications pertinent to paper and pulp filed pending in the United States Patent Office which have been passed for publication and are in 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.

AD PAX—No. 157,082. Fred C. Strype, New York, N. Y. For Wrapping Paper.

FABLEDOWNE—No. 156,980. John F. Auer, Philadelphia, Pa. For Toilet Paper.

BOVEEN FIBER with head of ox in center—No. 155,516. Newark Paraffine and Parchment Paper Co., New York, N. Y. For Wax Paper.

SEVEN FIFTY on black background within oval—No. 153,831. S. Walter, Inc., Philadelphia, Pa. For Toilet Paper.

ALGONQUIN—No. 155,519. Parsons Paper Company, Holyoke, Mass. For Printing and Writing Paper.

Two letters S crossed with "Scott" thereon up in a square—No. 156,177. J. & J. Scott, Ltd., New York, N. Y. For Paper for Printing and Writing Purposes, Wrapping Papers, Cardboard, Box Board and Mailing Envelopes.

ALETTA—No. 155,792. Whiting Paper Company, Holyoke, Mass. For Writing Paper and Mailing Envelopes.

INVESTMENT ANTIQUE—No. 155,354. E. E. Lloyd Paper Company, Chicago, Ill. For Writing Paper.

VIRGIN FOREST—No. 155,226. The John Hoberg Company, Green Bay, Wis. For Toilet Paper, Paper Napkins, Paper Towels, and Wrapping Paper.

WRAPRITE—No. 155,088. Dragon Paper Manufacturing Company, Inc., New York. For Waxed Paper.

OPTIMUS—No. 153,832. S. Walter, Inc., Philadelphia, Pa. For Toilet Paper, Wrapping Paper, Printing Paper, Writing Paper, Book Paper, Cover Paper, Parchment Paper, Wax Paper, Transparent Glassine Paper, Ledger Paper, and Blotting Paper.

630—No. 153,636. Britains Limited, Cheddleton, Staffordshire, England. Pottery Papers, Such as Pottery and Glass Printing Tissues, Including Sized and Unsized Papers for Roller Printing Machines; Lithographic Papers, Such as Lithographic Papers for Ceramic Transfers and Lithographic Skin Transfer Tissues; Electrical Papers, Such as Extra Thin Tinfoil Condenser Papers and Interleaving Condenser Tissues; Tissues, Particularly Adapted to be Made into Carbon Paper, Cigarette Papers, Stereotyping Tissues, and Copying Tissues.

LINWEAVE ENVELOPES TO MATCH on picture of paper carried by crier—No. 152,775. United States Envelope Company, Springfield, Mass. For Writing, Printing, Ledger, Record, Envelope, Book, Announcement, Invitation, and Cover Papers, Envelopes, Cardboards, and Bristol Board, and Tissue Paper.

PARALOID—No. 152,135. Process Engineers Incorporated, New York. For Sized Paper Made by a certain Process for Writing, Wrapping, News Print, Bristols and Book Papers.

EBRO—No. 148,332. Egon Hassinger, Barcelona, Spain. For Carbon Paper.

### Lincoln Paper Co. Elects Officers

[FROM OUR REGULAR CORRESPONDENT.]

ELKHART, Ind., February 14, 1922.—The Lincoln Paper Company at its annual meeting, Thursday, was able to report some business ahead. The mill is now running at full capacity at this time. The election of officers and directors resulted: President and treasurer, C. E. Frye; vice-president, Karl Simonton; secretary, Arthur Zigler; directors, H. L. Vanderhorst, W. E. Kidder, S. B. Monroe, A. B. Connable, A. G. Gilman, Kalamazoo; A. H. Beardsley, C. E. Frye, Karl Simonton, C. C. Colbert, C. E. Preston, Elkhart.



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Improved  
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Old Style  
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The very best that our organization can produce —which means: grocers' bags good enough for anybody. The line is so broad and inclusive that you can concentrate on LAWRENCE bags and make more progress than by "scattering your orders."

**? Why load your ware-  
house with many brands ?**

JAMES LAWRENCE, President

**THE LAWRENCE BAG COMPANY**  
MIAMISBURG, OHIO

# THE WORLD'S PRODUCTION OF PAPER

ABSTRACTED BY CLARENCE J. WEST.

A recent number of *Der Papierfabrikant* (1921, No. 41) contains a number of interesting statistics regarding the paper production of the world by countries, from which the following has been abstracted.

The growth of the paper industry in any country, since today the principal material used in its preparation is wood, is intimately related to the forest and water resources of that particular country. The mechanical production of wood pulp from wood depends, in the first instance, upon an extensive and readily accessible supply of wood, but also depends upon the streams, which are used by the paper mills as a source of power and also as a means of transportation. Therefore those lands which have large forest reserves possess a marked advantage, in pulp production, over the countries poor in timber.

## Forest Lands of Several Countries

The following survey, made by the statistical bureau "Farmand" in Norway, shows the forest lands of several countries:

Country	Forest, acreage in sq. km.*	Percent of total area	State forests in percent of total forest acreage
Finland	202,150	62	35
Sweden	213,902	49	33
United States	2,830,000	36	26
Germany	128,107	27	35
Norway	74,862	23	23
France	96,090	17	12
Canada	1,010,000	10	..
Netherlands	2,250	7	3
Great Britain	12,290	4	2

\*1 Sq. km. equals 0.3861 sq. mile.

The figures show that Finland and Sweden possess the largest forest area in relation to the total area of the country, while Germany, which is the largest producer of paper in Europe, takes fourth place with 27 per cent. Great Britain (4 per cent) and Netherlands (7 per cent) are the most unsuitable countries for paper manufacture as far as forest resources are concerned. In spite of these two countries play a considerable role in the paper industry. The explanation, in the case of England, is to be found in the importation of wood pulp to make up for this lack of raw material, while in the Netherlands straw is used as the basis of a strawboard industry. The development of the English paper industry to the second in Europe is due in large part to the rich coal deposits and the tremendous water power, especially in Scotland.

## Water Power

The water power, which is specially important in the growth of the paper and pulp industries of any country, is shown in the following table, taken from the "Canadian Yearbook of 1919":

Country	Potential water power in 1,000 h.p.	Power used in 1,000 h.p.	Percentage utilization
British Empire (without Canada)	40,446	501	1.2
Great Britain	963	210	21.8
Canada	19,554	2,305	11.8
United States	59,360	9,824	16.5
Norway	11,861	1,356	11.4
Sweden	6,700	1,105	16.5
France	8,000	1,200	15.0
Finland	3,000	150	5.0
Germany	1,425	618	43.4

From this compilation it is seen that the natural water power is most utilized in Germany, while in Finland it is capable of being increased 20 times and in Canada 8 times. The water power resources of Norway and Sweden give these countries a dominating position in the paper industry and are of specially great value in times of coal famines.

## Paper Production of the World in 1907, 1913 and 1920 in Tons

The world's production of paper is given in the next table. This is taken from the magazine "Wirtschaft und Statistik."

Country	1907	1913	1920
Germany	1,292,850	1,611,240	1,055,360
England	893,010	922,140	.....
France	567,980	725,470	.....
Austria-Hungary	371,163	427,914	156,460
Czecho-Slovakia	.....	.....	226,070
Sweden	232,500	319,302	229,227
Russia	235,530	338,340	32,800
Norway	119,000	198,400	.....
Finland	77,000	224,950	162,459
United States	2,975,000	3,389,207	7,334,614
Canada	240,100	340,650	1,089,235
Other lands	756,000	1,192,803	.....
Total production	7,760,133	9,690,416	10,285,925

In the German production statistics for 1920, 409 mills are included, including 28 cellulose mills. The following table shows the monthly production of paper in these mills, and also a comparison of corresponding periods for 1913 and 1920 and for 1919 and 1920. It is seen that the second half of 1920 shows a decided improvement over the corresponding period for 1919.

## The German Paper Industry in 1920 in 1,000 Tons

Month	Paper	Mechani-		Chemical Pulp			Total
		cal	Sulphite	Sulphate	Straw		
January	78.5	17.3	34.0	23.1	1.3	1.9	26.3
February	78.4	20.0	35.3	20.2	1.4	1.9	23.5
March	85.9	18.9	35.7	26.7	1.8	1.4	29.9
April	90.5	21.3	35.7	26.1	1.1	2.0	29.2
May	94.6	18.8	35.9	32.0	1.2	2.3	35.5
June	100.8	19.7	37.7	38.5	1.4	2.6	42.5
July	85.9	16.9	33.3	32.9	1.9	2.5	37.3
August	75.9	14.7	29.1	30.2	1.9	2.1	34.2
September	82.2	15.3	34.8	38.2	1.9	2.5	42.6
October	94.8	17.0	42.6	42.1	1.9	2.7	46.7
November	93.6	17.7	26.0	40.8	1.7	2.9	45.4
December	94.0	18.9	28.0	37.8	1.7	2.7	42.4
Jan.-Dec., 1920	1,055.1	216.5	408.1	388.6	19.2	27.5	435.3
Jan.-Dec., 1913	1,611.2	369.5	673.9	769.6	.....	.....	791.3
July-Dec., 1920	526.3	100.5	193.8	221.9	11.0	15.4	248.3
July-Dec., 1919	465.1	90.5	169.6	127.2	17.0	10.5	154.7

Austria-Hungary, which before the war, occupied fifth place in the production of paper, is no longer an important factor in this connection, due to the loss of the greater part of its paper mills; 65 per cent of the earlier Austria-Hungarian paper industry with the important mills and the Bohemian forests have been transferred to Czecho-Slovakia.

A further result of the war is the complete collapse of the Russian paper industry. In spite of the fact that the 130 to 140 mills of Russia before the war with their 25,000 workmen turned out 24 million pood (1 pood is 16.375 kilos), the 20,000 workmen under the Soviet republic turned out only 2 million pood during 1920.

While the production of all the countries engaged in the war decreased during that period, because of the lack of raw materials (wood, chemicals, coal) transportation difficulties and lack of workmen, the countries which remained neutral, especially Norway and Sweden, were able during the first years of the war to markedly increase their output. This is seen in the following table:

## Production of Paper in the Northern Lands in 1,000 Tons

Year	Sweden			Norway			Finland		
	Paper	cal	Pulp	Paper	cal	Pulp	Paper	cal	Pulp
1913	218	323	686	181	496	211	146	49	77
1914	191	323	686	182	442	197	137	28	69
1915	230	243	748	207	508	226	146	39	61
1916	266	289	720	199	468	222	159	47	54
1917	184	181	515	80	267	137	114	35	29
1918	149	240	474	112	292	170	24	55	38
1919	160	208	695	107	366	134	46	58	72
1920	284	272	737	185	418	212	130	100	93

(Continued on page 38)

**GROUND WOOD  
CHEMICAL PULPS**

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## Recent Incorporations

**SOUTHWEST PULP AND PAPER COMPANY**, Delaware. Capital, \$2,500,000. Corporation Trust Company of America, Wilmington.

**THE LASALLE PAPER COMPANY**, South Bend, Indiana. Capital, \$250,000; to manufacture paper, wood pulp, etc. Directors, Elva O. Nicely, Claude E. Nicely and John G. Yeagley.

## WORLD'S PAPER PRODUCTION

(Continued from page 36)

The decided drop after 1917 was due to the agreement with the Entente, according to which only a fraction of the production was to be sold.

### United States Shows Increase

The paper production of the United States shows an increase during the last years, though this is due only in part to the increasing demand for paper. The greatest need in these last years consisted, first of all, in the increased consumption by the Government, the war organizations and commissions, the spreading broadcast of news and war propaganda, etc. At times there was a noticeable lack of paper and the price rose considerably, as in all other countries. The paper and pulp production of the United States in tons follows:

Year	Paper	Mechanical	Chemical
1914	5,270,000	1,293,661	1,551,896
1917	5,910,647	1,535,953	1,973,986
1918	6,051,523	1,364,504	1,949,357
1919	6,190,361	1,449,799	1,905,066
1920	7,334,614	1,578,300	2,221,535

The increased paper consumption (1909, 422 kg.; 1914, 484 kg.; 1920, 627 kg. per individual) has been met, in part by importation. The imports of finished paper and half-stuff has steadily increased. The production and export of printing paper in the U. S. and Canada are as follows (in 1,000 tons):

Year	United States		Canada	
	Production	Export	Production	Export
1913	1,305	43	350	297
1914	1,283	61	415	370
1915	1,239	55	489	470
1916	1,260	77	608	549
1917	1,359	94	690	615
1918	1,260	97	740	673
1919	1,375	110	808	725
1920	1,512	49	883	767

### Canada's Production

Canada's production of paper and pulp has been as follows (in tons):

Year	Paper	Mechanical	Chemical
1907	240,100	465,400	199,800
1913	340,650	.....	.....
1914	.....	644,924	289,776
1915	.....	743,776	331,029
1916	.....	827,259	468,826
1917	853,689	923,731	540,423
1918	967,724	879,510	677,683
1919	1,089,235	.....	.....

The details for the pulp production for the last two years are:

Year	Mechanical	Sulphite	Sulphate	Total
1918	273,180	318,882	144,547	463,429
1919	300,205	363,998	124,550	448,543

If the world production in 1913 is calculated as 9,690,416 tons, of which 5,573,799 tons were made in Europe and 4,116,617 tons in North America, it may be stated with certainty that Europe, in 1920, has lost its dominant position with 57.5 per cent of the total world production, because of the increased growth of the industry in the United States and Canada.

### News Print Paper Production in January

The 46 companies in the United States and Canada reporting to the News Print Service Bureau produced 174,807 tons and shipped 174,247 tons during January. Production exceeded

shipments by 560 tons. Production figures include 1,314 tons of hanging, of which 346 tons were made in Canada.

The average daily production of news print paper by the mills reporting for January amounted to 84.1 per cent of the average daily output during the three months of greatest production in 1920 or 1921, with allowances for new machines.

Production by the United States mills during January, 1922, was 13,835 tons or 13 per cent less than during same month in 1921. Production by the Canadian mills during January was 9,900 tons or 14 per cent greater than in January, 1921. Total production of the 46 reporting companies during January, 1922, shows a decrease of 3,935 tons or 2 per cent when compared with January, 1921.

Stocks during January increased 2,699 tons at United States mill points and decreased 2,169 tons at Canadian points. Total stocks at all reporting mills amounted to 33,656 tons or 530 tons more on January 31 than on December 31, and were equivalent to 4 days' maximum production.

### J. A. Millar to Manage Scandinavian-American

J. A. Millar has been appointed general manager of the Scandinavian-American Trading Company, the well-known wood pulp importing concern, 50 East 42nd street, New York. Mr. Millar, who was formerly Commercial Attaché of the Swedish Legation at Washington, is very well known in commercial circles in Scandinavia and is well acquainted with the pulp mills. He is at the present time in Sweden in the interest of the company and is expected at New York next month.

B. Lindell continues as treasurer of the company.

There have also been additions to the sales force in the persons of W. E. Ihling and J. Donaldson. Mr. Ihling was formerly connected with the John Richardson Company of Boston and was for some time western representative of several importers of this city. Mr. Donaldson was formerly connected with the Dill & Collins Co. and J. F. Patten Company. Both men are well known in the trade having been actually engaged in the handling of wood pulp for a number of years.

The Scandinavian-American Trading Company continues to handle the output of some of the largest Swedish pulp mills as heretofore.

### New York Waste Paper Merchants Meet

The regular meeting of the Waste Paper Merchants' Association of New York was held at Mouquin's Restaurant, New York, on Wednesday evening, February 8, 1922.

The banquet committee reported that all arrangements had been completed to hold the fourteenth annual banquet in the east ballroom of the Hotel Commodore on the evening of April 12. The dinner will be followed by an elaborate review and cabaret. The committee in charge are F. H. Chase, of Chase & Norton, chairman; E. Salomon of the American Woodpulp Corporation, and W. H. Martens of Geo. W. Miller & Co.

On February 20 there will be a hearing before the Interstate Commerce Commission at Washington on the subject of reducing freight rates on rags and paper stock. F. H. Chase and Ernie Adamson of Almy, Van Gorden & Evans will attend the hearing on behalf of the association.

The following new members were elected: Tortora & Carrizzo Company, Nicholas Guariglia.

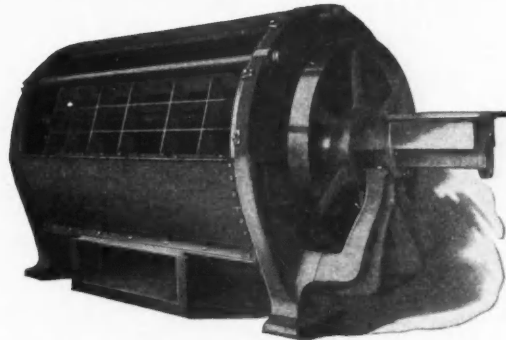
Reservations for the banquet can be had from F. H. Chase, 275 Water street, New York City.

### Beaver Brook Paper Mills to Rebuild

DANBURY, Conn., February 14, 1922.—The Beaver Brook Paper Mills, Inc., have arranged to take care of their customers till they are rebuilt, which they intend doing at once.

# "IMPCO" TAILING SCREENER FOR SCREENING GROUND WOOD TAILINGS

Very Low  
Power  
and  
Upkeep Expense



Delivers  
Rejections Free  
from Good  
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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

**SNOWHITE  
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.

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to ENGINEERS:

## How to cut down "Trouble"

*"It is not hard work that wears men out—it is worry."*

**P**REVENT needless friction in your machinery and you will prevent such worries as—

- (1) worries caused by extra power needed to keep production up to normal.
- (2) worries about the dangers of high temperatures in bearings.
- (3) worries that come with slow-downs.
- (4) worries that follow waste of oil.
- (5) worries about making repairs at short notice.
- (6) worries in connection with replacements of worn parts.
- (7) worries when any of the above items have to be explained to officers of the company or owners of the business.

Friction is the unseen enemy of production in your plant. Correct Lubrication—and Correct Lubrication alone—will prevent it.

When a Vacuum Oil Company representative calls to explain definitely how Correct Lubrication will save money for

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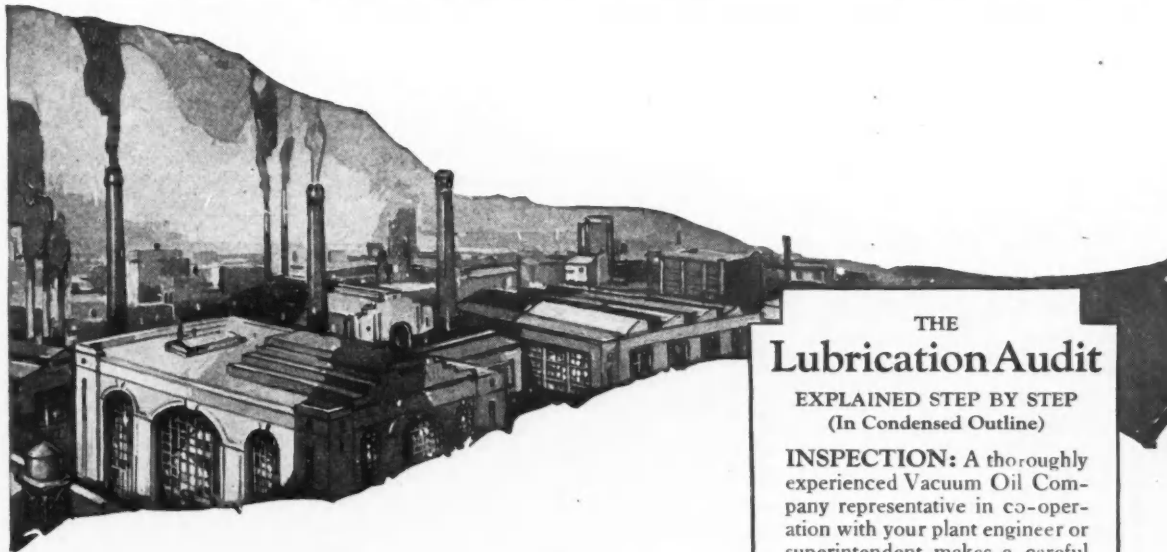
# VACUUM OIL COMPANY

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the owners of your business—and will save you from operating troubles and worries—it will pay you to talk with him. He will work with you. With a little explanation he will understand your problems. He knows engines and machines from years of practical experience. He knows oil.

With your co-operation and help, our representative will be glad to make a careful and dependable survey of your lubricating needs.

We call this service a "Lubrication Audit." See panel at right.

When completed, it will give you in a nutshell the benefits of 56 years of Vacuum Oil Company experience in the Correct Lubrication of all types of mechanical equipment throughout the world—benefits which you can apply at once in your own plant.

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- (1) The inspection of the machines in your plant.
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**CHECKING:** If, following our recommendations in this audit, you install our oils, periodical calls will be made to check up the continuance of the desired results.

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# VACUUM OIL COMPANY

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# Editorial

Vol. LXXIV New York, February 16, 1922 No. 7  
FIFTIETH YEAR

## Need for New Forest Station

The pulp and paper industry is vitally concerned in bills (S. 783 and H. R. 9679) recently introduced in Congress by Senator Keyes and Representative Wason, providing for a forest experiment station in the Northeast. The industry is interested because a forest experiment station will help to increase its supply of timber and to avert a serious timber shortage.

New England and New York manufacture 80 per cent of our news print paper. Together they consumed 51 per cent of the pulpwood used in the United States in 1920. Maine leads in the production of pulp. The Northeastern States, with abundant supplies of excellent pulp timber near the great consuming markets, have become the pulp and paper center of the United States.

The demands of the pulp mills already far exceed the cut of the local forests. Many of the northeastern pulp and paper manufacturers—for example, 60 per cent in New York—are totally dependent on the purchase of pulpwood and only a few are entirely independent. Large investments in plant make prohibitive the cost of moving to new regions as timber supplies fail. Shipping distances for pulpwood have rapidly increased until at the present time shipments of 500 miles are not uncommon. American industry has turned to Canadian supplies, and in 1920 imported more than 25 per cent of its pulpwood. New York, in the same year, imported 59 per cent of the spruce consumed by its mills.

Canadian supplies are not limitless. The Canadian industry has been expanding with extreme rapidity, and in order to insure a continuous supply for its own mills the extension to privately owned lands of the embargo now in effect on Crown Lands is finding constantly increasing public support.

Only one conclusion can be drawn. American mills, in the comparatively near future, will be compelled to grow their supplies of raw material or go out of business. Only the intensive practice of forestry can supply the amount of material needed to meet these demands. The scientific foundation for such intensive practice is largely lacking. It can be supplied only by a forest experiment station, such as that proposed in the Keyes and Wason bills.

A forest experiment station alone can supply the information which the pulp and paper industry needs on methods of artificial reforestation; on methods of cutting which will insure natural reforestation without the expense of artificial planting; on the best methods of brush disposal; on improved methods of fire protection; on growth and yields as a basis for the business policy of timber owners. It will furnish the information needed to bring into full production the 22,000,000 acres of forest land in the Northeast which are now producing nothing or only a small fraction of what they might, and which could be made to yield annually much more than the amount of the present consumption. Such a station should have been established twenty years ago. It should not be delayed another year.

These bills, the PAPER TRADE JOURNAL believes, will not be passed this year without a much stronger and more unmistakable public demand than has yet been in evidence. If the pulp and paper industry is interested in seeing every action taken which will help to insure its own future timber supplies, it must individually and collectively get behind these bills.

## The Net Price List

Agitation for the long price list on the part of the United Typothetae of America, while not a new issue by any means, has been unusually strong and persistent in recent months. As usual this agitation has been resisted by most paper merchants and especially by the National Paper Trade Association which has not unnaturally caused the questions to be brought up as to why paper men of the United States insist and persist that the net price list is the only correct method for selling their merchandise and why they consider that method right and all other methods wrong.

The following reasons and arguments presented in a bulletin just issued to members by Mr. William C. Ridgway, secretary of the National Paper Trade Association, for supporting the net price list and resisting any efforts to establish the long price list put the case briefly but convincingly for the stand taken by the paper trade:

"The net list on paper has done more to establish confidence in paper values than any other single factor. It fixes, at least, one known cost in a printed job, by taking the price of paper out of the doubtful or guess work column. Dummy prices, subject to discount, would open up a wide and dangerous field for price cutting and price juggling by way of discount, and would finally destroy confidence in the industry and in the integrity of paper values and prices. The net list is the best insurance the buyer of paper can have—he is getting value received for price paid.

"The net list has been a very essential factor in the standardization of paper and paper products. Complete standardization in any line of merchandise includes standard prices.

"The net list has opened up the question of reasonable and reciprocal protection between paper merchant and commercial printer, and if they will but grasp the opportunity and conscientiously co-operate, the problem will be solved to every one's satisfaction, and without resorting to any impractical schemes or round-about methods.

"The net list serves as a barrier against the invasion of the consuming field by any piratical merchant and printer who would take advantage of a price listing plan that seeks to elevate price levels.

"Some people seem to forget that if the printers cannot stand shoulder to shoulder for the right under a net list, they cannot under any other list of which the mind of man can conceive.

"The 'nettest' list a paper merchant can issue today carries prices scarcely low enough to receive public approval or harmonize with the general tendency of prices to seek more normal levels.

"The net price list can be counted upon to work satisfactorily in any market where the paper merchant and commercial printer approach the subject with an open mind, and consider the whole question from the standpoint of mutual benefits and responsibilities."

In closing this interesting bulletin, Mr. Ridgway clinches his argument against the long price list by saying:

"The commercial printer as a converter of paper and paper products, whether he realizes it or not, is deeply concerned in this question of the price of paper. This concern or interest reaches much farther than the question of the rightful charges he should make for handling paper as one of the raw materials entering into his manufacture. He should be interested in having the buyer of printing think of paper in terms of the highest value at the lowest cost. The real difficulty lies in the fact that certain printers and printers' organizations persist in declaring that the commercial printer is a retailer, and as such, he should have resale prices established for him, whereas his profits should come from the finished product, of which paper is but one of the elements.

"There is just one right policy for the paper merchant to follow, and that is, to have one standardized price, based on the unit of sale which involves the question of quantity and whether shipment is made from warehouse or from mill. Any other pricing plan will take the props out from under our standardization structure and cast suspicion over the entire field of paper values. Every good manufacturer figures his legitimate profit on the finished product, which, of course, includes all raw materials. Is it possible that the commercial printer follows some other plan, and if not, why should paper bear any different relation to the finished or printed product than any of the other raw materials involved. The printer knows perfectly well where the paper merchant's function ends, and the printer's begins, and it is high time, let us say, for the printer to accept his responsibility and exercise his function, and the securing of an adequate profit for his material and work is his responsibility, and his only."

While the foregoing arguments and others that might be advanced make the possibilities remote of any considerable number of paper men acceding to the efforts being made to establish the long list it does not seem, as far as the facts are known, that the printers have undertaken the work of establishing the long price list as fairly or as intelligently as they might have. The paper trade wants to be fair in this matter and only recently the Secretary of the National Paper Trade Association addressed an invitation to the chairman of the Long Price List Committee of the United Typothetae of America for a conference on this matter. This invitation, however, was not accepted. This is to be regretted because the conference could have done no harm and it undoubtedly would have brought about a better understanding regarding each side of the controversy. In view of all the agitation it is to be hoped that this conference can still be arranged.

Everyone interested in the paper business should have a copy of Lockwood's Directory of the Paper and Allied Trades.

### R. S. Kellogg Speaks at Yale Forest Club

[FROM OUR REGULAR CORRESPONDENT.]

NEW HAVEN, Conn., February 15, 1922.—"Hard times have had little effect upon the consumption of news print paper in the United States," said R. S. Kellogg, secretary of the News Print Service Bureau, in an address before the Yale Forest Club Tuesday evening of this week.

"The daily newspaper is a fixed part of the mental diet of the average family. Observation shows this and statistics prove it. The circulation of the more than 2,000 English language dailies published in this country is nearly 29,000,000 copies or one copy for every family of four persons, with 2,000,000 copies thrown in for good measure. In addition to this the Sunday newspapers have a circulation of 19,000,000 copies. This is a greater circulation of daily newspapers than existed even during 1918, the critical year of the war, when every edition that came out was quickly snatched up. The more than 60 newspapers which have a daily circulation of 100,000 copies or more averaged 23 pages in their daily issues and 80 pages in their Sunday issues during 1921.

"It has been well said that the problems of a democracy could not be solved in a country of continental dimensions like ours without the means for rapid and widespread dissemination of information afforded by the modern newspaper. The man who runs while he reads never realizes what a remarkable co-ordination of service from tree to newsstand is required to give him for two or three cents an up-to-the-minute resumé of world happenings in politics, industry, science and education.

"The total consumption of standard news print paper in the United States last year," continued Mr. Kellogg, "was 1,900,000 tons, or only 41,000 tons less than in 1920, which was the greatest ever known, and 52,000 tons more than in 1919, the year of the next greatest consumption prior to 1921. But this great use of paper did not bring prosperity to the manufacturers in 1921. Prices of the finished product declined much more rapidly than those of the raw material, while European paper was constantly offered and delivered in the American market at prices below that of the domestic product.

"The development of processes for making paper cheaply from wood has been responsible for the large increase in the number of newspapers and other periodicals of wide circulation. Our use of news print paper has grown from 3 pounds per capita in 1880 to 35 pounds at the present time and we are now using nearly as much news print as all the rest of the world put together.

"News print paper is a 100 per cent forest product, for it is made of wood and nothing else. It requires the investment of millions of dollars in a modern plant to make print paper and it requires the investment of other millions to produce a great metropolitan daily. Hence both papermaker and publisher are vitally concerned in the one natural resource which insures the permanence of their undertaking—that is, the forest. Papermakers and publishers have joined hands in the effort to maintain our timber supply through the enactment of legislation that will reduce forest fires, extend the area of publicly owned forests, bring about fair taxation of privately owned forests, and by co-operation of all who have interests at stake set up conditions under which all land chiefly valuable for such purposes can be made continuously productive of timber crops.

"As a member of the Forest Conservation Committee of the American Paper and Pulp Association," concluded Mr. Kellogg, "it has been a great pleasure to me to be associated among others in this work with Elbert H. Baker, the chairman of the Committee on Conservation of Natural Resources of the American Newspaper Publishers' Association. Both Mr. Baker personally and the great organization of publishers that he represents are contributing splendidly to the creation of a public sentiment and understanding which demand that the problem of a future timber supply be tackled in a fashion that will bring lasting results."

## THE FITCHBURG PROCESS COMPANY

THE FITCHBURG PROCESS COMPANY offers to the Paper Trade their process for the reclaiming of WASTE PAPER.

The Process will yield a continuous flow of 2000 lbs. per hour of WASTE PAPER PULP requiring only 75 H. P. The PULP without being bleached is absolutely free from ink specks, and is of such color that it is suitable for the highest grade English Finish Book, Music, Lithograph paper, Coating and Fine papers.

Water and Alkali are the only chemicals used.

One man can operate the entire process.

\$15.00 a ton conservative estimate on the saving of power, labor and chemicals over other processes considered efficient.

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Conducted by **W.G. MacNAUGHTON**, Secretary

# THE UTILIZATION OF JACK PINE IN THE MANUFACTURE OF NEWS PRINT\*

BY MAURICE NELSON, OF THE BELGIAN INDUSTRIAL CO., LTD. SHAWINGAN FALLS, QUE.

The subject of this paper is, I think, familiar to, if not popular with most mill men.

In saying that it is not a popular subject, I mean that to the operating man, the word Jack Pine is often something in the nature of a bugbear which ought to be kept very much outside the mill-gates.

When the production drops below the mark, and the manager wants to know the reason why, the operating man is apt to reply, "What can you do, with all this Jack Pine coming into the Mill"! Or he may even in desperation make a dash for the log-pile to find out what devilry the wood-room superintendent now is up to.

However, to the manager the possible use of Jack Pine in the mill presents a point of view, which the operating man is apt to overlook, namely that of economy.

The economical aspect of this question is admittedly of considerable importance to the Canadian News Print Industry.

Much has been said and printed concerning the future of this industry, which in its present form is altogether dependent upon the forest for its raw material.

On one point, most authorities appear to agree, however, and that is that our available spruce forests are being slowly depleted.

This means of course longer log hauls, more expensive driving and a higher priced wood at the mill.

In the mean time we are allowing the pine to rot in our woods.

In the pine we have a tree, which grows in sandy soil, where the spruce will not grow, and which reaches a commercial size in from 30-40 years, while it takes the spruce around 70-80 years to reach the same size, and it is evident that if the pine can be used in the manufacture of news print together with, or in the place of spruce, it would be of considerable economical benefit to the Canadian News Print Industry.

This question has been in the mind of the management of the company, with which I am connected, for some time, and during the early part of last year it was decided to find out whether this particular nigger in the wood-pile really is as black as he is generally painted.

I think it will be of interest to establish here what Jack Pine is. To the casual observer it seems to have as many names as a cat is reputed to have lives. You take a block of wood to the

wood expert—there is at least one around the mill—and ask him what species that is and he perhaps tells you that it is gray pine. Another may say it is pitch pine, a third cypress, etc.

During the 12 years we were using Jack pine sulphite on all the machines, the mill was running exceptionally well. It is of course evident of pine growing in this province, to wit: White pine or *Pinus Strobus* and Jack pine or *Pinus divaricata*. Of these White pine grows principally in the Ottawa and Matawan Valleys, while Jack pine predominates in the St. Maurice and Abitibi Valleys. In addition there are found scattered stands of red or Norway pine (*Pinus Resinosa*).

The later species is, however, found in such small quantities as to be of no consequence, being only about 1/3 of one per cent of the total yearly cut.

As the pine used during our experiments came principally from the St. Maurice Valley, it is thus apparent that it really consisted of Jack pine.

During the experiments, which will be described below, the Jack pine was used in the sulphite process principally, on account of the practical difficulties in the way of collecting enough pine to run the whole groundwood mill over a sufficiently long period.

It was at first of course necessary to proceed very slowly, as we had no previous experience in cooking Jack pine, except for occasional runs of from 10/15 per cent mixed with spruce.

Table No. 1. Digester Data of Jack Pine Cooks

Data	Monthly Cooks		No. 109 Mar. 16
	Feb. 28	Mar. 7	
Date	165	16	
Moisture of chips, per cent.	36.0	39.0	43.9
Steaming time, hours	10.45	9	8
Filling time, minutes	40	30	30
Acid pumping time	15	15	15
Total cooking time, hours	11.55	10	9
Cooking acid:			
Total SO <sub>2</sub> , per cent.	6.00	6.20	6.16
Combined SO <sub>2</sub> , per cent.	1.36	1.20	1.26
Free of total SO <sub>2</sub> , per cent.	77.3	80.7	79.3
Acid temperature 0 degrees	34	32	32
Steam pressure on main line, lb./sq. in.	114	114	116
Steam temperature, degrees F., superheat	158	150	140

	%SO <sub>2</sub>		%SO <sub>2</sub>		%SO <sub>2</sub>	
	Tot.	Comb.	Tot.	Comb.	Tot.	Comb.
Acid test, after 3 hours	4.02	...	4.22	...	4.22	0.83
Acid test, after 4 hours	4.12	0.92	...	...	3.30	0.88
Acid test, after 5 hours	3.18	0.86	...	...	2.06	0.31
Acid test, after 6 hours	3.44	0.70	2.98	...	1.90	0.24
Acid test, after 7 hours	3.26	0.60	2.24	...	1.10	...
Acid test, after 8 hours	2.06	0.46	...	...	...	...
Acid test, at blow	0.60	...	0.60	...	0.14	...

\*Paper read at the annual meeting of the Technical Section of the Canadian Pulp and Paper Association.

Top relief opened after hours. ...	3.15	...	2.00	...	2.00
Draining commenced after hours. ...	7.30	...	5.00	...	4.45
Draining finished after hours. ...	8.15	...	6.45	...	5.30

The digester was up to pressure in 3.15 hrs. and the maximum temperature 144 deg. C was reached after 10 hours.

In the first column of Table No. 1 the cooking data of this cook are given.

This first cook did not look particularly good. The color was very poor and there was a larger percentage of short weak fibers. The following cook was greatly improved in both appearance and quality of fiber. The steaming time of this cook was 10.45 hours, but the maximum temperature was reached one hour earlier than during the first cook.

Having thus been established that Jack Pine could actually be made in to sulphite on a commercial scale, we were ready to continue the experiments, and to determine the following points: The most suitable cooking time, the yield of pulp per cook, and the action of the stock on the paper machines.

In all 587 cords of wood was used, the paper mill was run on Jack Pine sulphite during 12 whole days and 1,975 tons of paper made. During this time the sulphite mill was run entirely on Jack pine.

We soon found that we could materially cut down the steaming time from 11 hours, and through continual experiments, we finally reached a steaming time of 9 hours.

Thirty-four cooks were then made with steaming time varying from 8.45 hours to 9.45 hours, depending on the strength of the acid. Column 2, Table 1, gives the cooking data of a representative 9 hours cook.

Table No. 2. Yield of Air Dry Sulphite from Jack Pine

Date	No. 1 and 2		No. 3	No. of Cooks	Per Cook No. 1 and 2 Tons	No. 3 Tons
	Tons	Tons				
March 3.....	60.29	2.52	7	7	8.63	0.36
March 4.....	72.48	2.97	7	7	10.35	0.42
March 5.....	67.45	4.36	7	7	9.66	0.63
March 6.....	27.71	2.57	3	3	9.24	0.85
March 16.....	59.71	7.23	6	6	9.94	1.22
March 17.....	52.45	6.71	7	7	7.50	0.93
March 18.....	64.99	8.36	7	7	9.30	1.19
March 19.....	27.65	2.56	3	3	9.23	0.85
March 20.....	25.66	3.43	3	3	8.59	1.14
March 21.....	83.87	6.42	8	8	10.48	0.80
				Average:	9.34	0.82

	No. 1 and 2 Tons	No. 3 Tons	Total Tons	Per Cent Screening
Yield from 9 to 10 hours cooks	9.34	1.62	10.96	14.8
Yield from 8 hours cooks.....	8.42	2.54	10.93	23.2

In examining these figures, we find that the acid was of very good strength, having a combined SO<sub>2</sub> of 1.20 per cent with free SO<sub>2</sub> equal to 80.7 per cent. The digester was up to pressure in 2 hours while the maximum temperature 145 deg. C. was reached after 8 hours.

The wood chips during the tests had an average moisture content of 38.7 per cent. The size of the chips was our standard containing around 20 per cent 1-2", 60 per cent 3-4" and 20 per cent 1."

We were not, however, satisfied that we had reached the shortest possible cooking time in the 9 hours cook, so we ran off one cook in 8 hours. The data is shown in Column 3, Table 1.

Part of this cook was digested, the quality fiber being good. A very large part of the wood was, however, not at all or only partly cooked. The percentage of screenings was very high, as will be shown further down. The circulation in the digester was very good during this cook, the temperature following the standard curve set. There was no evidence of too quick turning of the liquor, and at the blow the liquor was of normal color and smell.

It is therefore evident that the low yield of properly digested fiber was due to the relatively slow penetration of the pine chips. The uncooked part consisted mainly of large chips only partly attacked by the acid. This fact suggests the possibility of obtaining a better yield with a relatively short cooking time by using chips considerably smaller than what at present is the standard for spruce chips.

Table 2 shows the yield of sulphite obtained from Jack pine.

It should be noted that during the period, March 3rd. to March 6th., owing to trouble with our refining system we could not recover all of the screenings.

The average yield of No. 3 sulphite per cook from March 16th. —1.62 tons—therefore gives the more nearly correct figures for the amount of screenings obtained.

A total yield per cook of 10.96 tons was thus obtained from Jack pine, with a cooking time of 9-10 hours, and with a cooking acid of about 6 per cent, total SO<sub>2</sub>.

The 8-hour cook gave a total of 43,711 lbs. of No. 1 and 2 sulphite, 38.50 per cent air dry test, or a dry weight of 8.42 tons. The screenings amounted to 2.54 tons, of 23.2 per cent.

From the results obtained during these our experiments, it is apparent that a fair yield of pulp is obtained with Jack pine. The screenings are somewhat higher than with spruce, when steamed the same length of time and under the same conditions, say about 8 per cent for spruce against 14 per cent for Jack pine.

Let us now see how the Jack pine sulphite behaves on the paper machines.

An investigation of the fiber does not show in any way that it is unsuitable for News Print. The fiber is long and rather coarse but of very good strength.

As for pitch, some rather interesting figures are shown in Table 3. From a chemical point of view pitch is not easily defined.

It is an oxidation production of resins and balsams in the wood. It is soluble in alcohol and ether, and thus the amount of alcohol-ether extract is a measure of the amount of "pitch" in the wood or the pulp.

The figures in this table indicate that Jack pine does not contain a great deal more "pitch" than does spruce.

On comparing the figures giving the amounts of alcohol-ether extracts obtained from spruce sulphite made during 1920 with those of Jack pine sulphite, it is also found that there is really not such a large amount of "pitch" in the latter as to make any appreciable difference on the paper machines. This is actually born out by our experience during the time we were running on Jack pine.

Table No. 3. Pitch Contents in Wood and Sulphite Pulp

	Ether Extract Per Cent	Alcohol Extract Per Cent
Fresh spruce .....	0.79-1.80	0.70-1.94
Jack pine chips .....	2.10	1.43
Jack pine sulphite lap cook No. 20.....	2.23	0.42
Jack pine sulphite lap cook No. 24.....	2.02	0.43
Average, June 1st to Oct. 15th, 1920.....	1.56	...
Belgo sulphite, claimed to cause pitch troubles on paper machines .....	1.27	0.38

The first day we really did have a great deal of trouble on the machines. This was, however, due to causes, which will be discussed further down. With this exception, during the 12 days we were using Jack pine sulphite on all the machines, the mill was running exceptionally well. It is of course evident that whatever troubles might be expected would show up during this length of time.

Unfortunately it is not possible to exhibit all the time recorder charts here, but I have one chart which I wish to show. This chart is typical of the run, and shows clearly that the machines were running exceptionally well (charts will be printed later).

In Table 4 is further given the number of breaks, lost time and speed of the machines in 24 hours during the experiments, compared with those of several other periods. An examination of this table shows that the number of breaks and time lost was actually less than during the other periods compared, while speeds compare very favorably. The wire seams were cleaned on an average once a day, while the washing up was done very much as usual.

Table 5 shows finally that the paper production did not suffer during this time and that the bursting strength and moisture were well maintained. In regard to the Mullen test it should be noted that during the run the basis was 0.56 per cent below 32 lbs.

From what has been related above, I think we can draw the conclusion that it is quite feasible to use Jack pine in the manu-

facture of news print. At least that is our experience. We are also convinced that Jack pine is not synonymous to pitch trouble. Of course this applies to seasoned wood.

Green wood is apt to cause a great deal of trouble on the paper machines, probably due to the fact that in green wood the resinous matter is in a more or less fluid form, while in seasoned wood it has been oxidized to a hard brittle substance. This applies, however, also to spruce, and in the speaker's opinion green spruce is as apt to cause pitch trouble on the paper machines as pine is.

Table No. 4. Comparison of Breaks, Time Lost and Speed of Paper Machines per 24 hrs. During Run with Jack Pine Sulphite

	Period of run with Jack Pine Sulphite (Feb. to March).	Period Feb. 1 to 15, 1921.	Average Jan., 1921.	Aver. Jan., 1920.	Aver. Feb., 1920.	Aver. March, 1920.
<b>No. 1 Machine—</b>						
Number of breaks...	9	17	19	18	23	17
Time lost, mins....	48	82	104	85	114	84
Speed, F. P. M.....	635	626	628	623	521	625
<b>No. 2 Machine—</b>						
Number of breaks...	6	13	13	27	17	18
Time lost, mins....	30	68	74	140	86	78
Speed, F. P. M....	625	629	628	603	603	599
<b>No. 3 Machine—</b>						
Number of breaks...	16	18	19	15	16	18
Time lost, mins....	83	76	89	76	63	88
Speed, F. P. M.....	635	646	644	625	625	625
<b>No. 4 Machine—</b>						
Number of breaks...	13	15	19	24	22	20
Time lost, mins....	71	88	89	121	110	100
Speed, F. P. M....	650	662	663	622	648	651
<b>All Machines—</b>						
Number of breaks...	44	64	69	84	78	73
Time lost, mins....	232	314	366	422	373	350
Speed, F. P. M....	637	636	640	656	624	625

I said above that we do not consider Jack pine synonymous to pitch trouble. On the contrary, we have found that Jack pine often is blamed where it is not really the guilty party. To illustrate this, I wish to show a time recorder chart from February the 24th, the first day of our experiments. An examination of the chart shows that during the forenoon of this day, the paper mill was having any amount of trouble, from, what was at first thought, pitch in the Jack pine sulphite. We soon found, however, that this was not really the case, because, through a misunderstanding in the wood-room the Jack pine had been sent to the groundwood mill instead of to the sulphite mill.

The groundwood mill not being prepared for this sudden invasion of Jack pine, did not have the stones properly dressed, with the consequences that for some hours, a totally insuitable grade of pulp was supplied to the paper machines.

An examination of the stock showed that it contained an excessive amount of short and flouy fibers together with a large amount of short coarse fibers, the worst possible combination for our machines. It acted very "sticky" on the wires and couches, did not form properly and caused innumerable breaks as is clearly indicated on the chart reproduced.

This fact gave us the clue to what we believe in a great many instances is the real cause, of so called "pitch" troubles, to wit: short and flouy stock. We have from time to time had similar

Table No. 5. Comparison of Production, Basis, Test, Moisture and Sulphite Used for Paper Machines per 24 hrs. During Run with Jack Pine Sulphite

	Period of Run.	No. 1 Machine January, 1921.	Year, 1920.
No. 1 Machine, tons.....	43.79	41.57	52.10
No. 2 Machine, tons.....	41.75	42.46	41.39
No. 3 Machine, tons.....	52.46	53.44	51.78
No. 4 Machine, tons.....	70.49	72.63	70.80
All machines, tons.....	208.48	210.10	206.12
Basis, lbs. ....	31.82	32.03	32.17
Test, lbs./sq., inch .....	9.42	9.17	9.51
Moisture, per cent.....	8.79	9.08	8.94
Sulphite in paper, per cent.....	28.04	27.47	26.47

troubles on the machines and we have found the same answer—short and flouy stock. For some time we have been testing the freeness of the groundwood stock all through the twenty-four hours, and we have found that a drop in the freeness below a certain point will invariably cause these troubles on the machines.

The wire becomes dirty, and has to be steamed and the paper sticks to the clothing. These troubles disappear as by magic the moment the stock is freed up.

Although we have not so far been able to run the groundwood mill altogether on Jack pine, we have been using considerable amounts of Pine mixed with spruce, and we have found the above to be true also in this case.

### Decay of Wood Pulp Can Be Prevented

Forty-eight pulp mills in this country are reported to have a stock of over 2,200,000 cords of pulpwood in storage. Investigations by the Forest Products Laboratory have revealed the fact that losses from decay amounting to at least 10 per cent of the weight of the wood may be expected in these mills under the prevailing storage conditions. A 10 per cent loss, at a cost conservatively estimated at \$15 per cord, would amount to a total of \$3,300,000 due to shrinkage from decay at these mills. At least half of this loss could be prevented if proper methods of handling the wood were followed. Methods of keeping the wood yards sanitary have been suggested by the Laboratory, but convincing demonstrations are needed to bring the pulp and paper industry to realize its losses, and persistent education of mill operators is required to bring about the adoption of known preventative measures.

By far the greatest amount of pulp deterioration is found in stored groundwood. Groundwood pulp is generally stored, owing to large seasonal fluctuations in the hydraulic power used in its manufacture. Furthermore, it is usually stored in the form of wet or hydraulic pressed laps, which are more subject to decay than the machine-dried chemical pulps.

Several antiseptics have been demonstrated by the Forest Products Laboratory as effective in preventing the spread of infection in pulps, if applied at the time of manufacture. The Laboratory should have men available to assist the pulp mills to install and operate the facilities for applying these antiseptics, and to help the mills develop safe storage conditions for their future stocks of pulp wood. An additional appropriation of \$10,000 would finance these men in the field for a period of one year. It is only by such direct assistance that the value of the Laboratory's investigation can be fully translated into profit for the industry and for the public.

### Favors Modified Process of Cooking Pulp

WINDSOR MILLS, Que., January 26, 1922.

Editor PAPER TRADE JOURNAL:

I read the article by Forest Products' Laboratory in the Technical Section of the PAPER TRADE JOURNAL of January 19 with great interest, as I feel sure that the modified process is one which should be adopted by every sulphate and soda mill on this continent, especially when a reduction in manufacturing cost is of such vital importance.

In 1919 and 1920 I put this modified process of cooking into successful commercial operation at the Canada Paper Company's plant, Windsor Mills, Que.

During 1921 I put the same process into commercial operation at another sulphate plant, and my earlier figures on saving of soda in the final cooking operation and the saving of steam consumption were proved to be correct.

While the changes necessary are small to enable any mill to benefit by the modified process of cooking, each plant requires thorough chemical engineering supervision for at least a time in order that the saving in coal of approximately 1,000 pounds per ton of pulp produced, also of at least 30 per cent of the chemical used in the final cooking would be accomplished with the least disruption of original operation.

Yours truly,

ROBT. WOODHEAD.

## PUMPS AND PUMPING MACHINERY

(Continued from last week)

In order to assist the Joint International Committee on Text Books both financially and in attracting criticism of certain sections, the PAPER TRADE JOURNAL has arranged to co-operate with the committee by publishing some of the material submitted to the editor of the text books. In presenting this series of articles to our readers a cordial invitation is extended to assist the committee by suggestions and criticisms of this material. It is hoped that in this way omissions and errors will be noticed and corrected.

### CHAPTER IX

#### Pulsometer and Ejector and Injector Pumps

Steam is the customary source of power for these pumps although compressed air or water is sometimes used for operating the ejector type of pump.

The Pulsometer is a pump in which the driving steam comes in contact with the water.

A sectional view is shown in Fig. 44. Steam is admitted at A and if the ball is resting over the left hand opening (thus closing chamber B) steam will enter chamber C and drive out the water therein.

A sudden change in the steam pressure when the water surface reaches the level of the discharge valve causes the ball to close the right hand side (Chamber C) and then the condensation of the

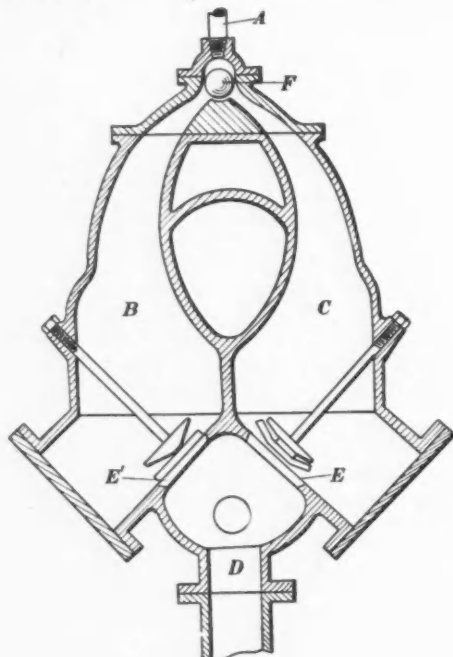


FIG. 44

steam on that side draws water through the suction D and suction valve E, as shown by the illustration.

When the water is driven from chamber B the ball is forced over to the left and the operation is repeated.

Pulsometer pumps are easily applied for contracting work such as pumping out coffer dams and similar excavations where temporary service and where easily handled pumping apparatus is required and where the pump can be suspended above the work. It is commonly used for this class of work although its steam consumption is excessive. For temporary, rough and ready work it

may not cost more in money outlay than other types of pumps which are more economical under permanent service conditions.

Ejector pumps or syphons are used for similar classes of work as the Pulsometer. These pumps are also largely used for priming or displacing the air contained in the casing of centrifugal pumps before starting them up.

They are essentially a suction pump and operate through the displacement of atmospheric pressure in the suction pipe or vessel to which they are connected, thus permitting the atmospheric pressure outside of the suction pipe or vessel to press the water into and fill it up to the level of the ejector.

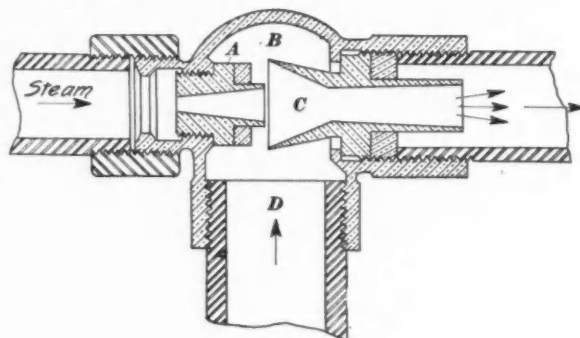


FIG. 45

The ejector consists of a nozzle A within a chamber B, as shown by Fig. 45. The steam, water or compressed air used for operating the ejector flows through the nozzle A at high velocity and as it leaves the nozzle outlet it expands, filling the pipe ahead of the nozzle completely with fluid or vapor under pressure, which drives the air or water, which may be in the pipe, ahead of it and through the discharge opening C; the displaced air or water being replaced by air or water following up through the suction pipe D.

The flow from the ejector pump discharge is steady, the air or water which is forced through the discharge pipe mingling with the steam, water or compressed air which is used for operating the pump.

On account of the principle of operation through which the operating force is reduced to nearly atmospheric pressure when it leaves the nozzle, the ejector pump cannot be used for pumping against heads or pressure of more than a few feet above the pump itself. It is customary to use them for pumping and priming service arranged in such a way that there will be a discharge to the atmosphere, with practically no discharge head. The injector is a pumping device which utilizes the velocity and condensation of steam for pumping water against pressure and is ordinarily used for boiler feeding, either as the regular source of supply or as an auxiliary to other boiler feed pumps.

A section through an injector is shown by Fig. 46.

To start the injector the lever handle A, operating valve V, is pulled back a short distance, permitting steam to enter the space B between the two tubes. The pressure of this steam entering between the two edges produces such high velocity of discharge across the upper end of space C that it entrains the air at that point, driving it out through the openings D and E into the space G and from this into the atmosphere.

This produces a partial vacuum at C and water therefore enters through the suction pipe H and valve V. This water is taken up by the steam discharge and driven through the combining tube J and is discharged through E and F, finally appearing at the overflow F.



When water appears at the overflow, the handle is drawn back completely and the steam then discharges through the main nozzle K. The steam in this acquires a high velocity, due to the drop in pressure in the nozzle. This velocity is many times greater than that acquired by water under the same drop in pressure on account of the low density of the steam.

The steam is then condensed by the water, but when the steam particles draw together to form a drop of water their velocity is maintained and drops of water, moving with very high velocity, result. This condensed steam can then strike the body of water drawn through H and by impact impart to it a velocity greater than that which would be acquired by water discharging from the boiler. If this is the case, this mixture of water and condensed steam could enter the boiler under steam pressure.

The combining tube J is made convergent since the steam is gradually condensed in the passage and the water gradually increases in velocity. When the tube L is reached the steam is condensed and the water is supposed to have its maximum velocity. From this point the delivering tube M diverges, making the velocity less, and with this comes a change of velocity head into pressure head until at the end there is sufficient pressure to force open the valve O, when the mixture will enter the boiler.

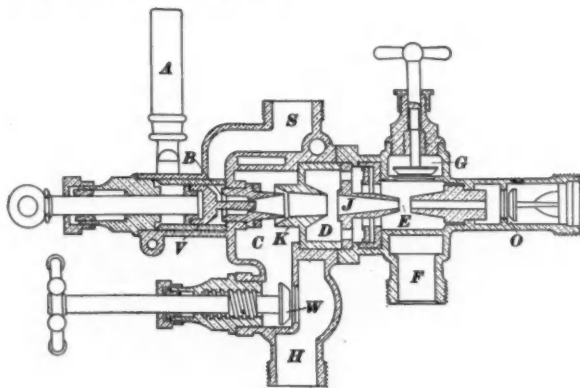


FIG. 46

The pressure in the space within the end of the combining tube reaches a point of low vacuum of about 25 in. while at the end of the steam nozzle it is at atmospheric pressure. At the small part of the nozzle, known as the throat, the pressure is found to be 0.58 of the boiler pressure. The pressure at the throat of the delivery tube is usually about atmospheric pressure.

#### CHAPTER X

##### Application of Types of Pumps for Pulp and Paper Mill Service and Suitable Materials for Their Construction

**Groundwood Pulp.** The selection should be centrifugal pumps of the single stage type either single suction with thrust bearing or double suction, if designed with extra large areas in the suction passages.

Inclosed impellers are suitable for handling pulp up to 3 per cent air dried stock; above this percentage best results are secured with open impellers, which will handle pulp up to about 4½ per cent.

Any requirements for handling pulp above 4½ per cent air dried consistency will require a pump of the plunger type with ball valves and on account of the thick material handled it must flow very slowly. In all cases pulp pumps should be arranged with a gravity feed to the suction whenever possible.

Pumps of standard cast iron construction are suitable for this service. **Sulphite Pulp:** The same remarks as above apply to this material except that it is advisable to use open type impellers in all cases except for short fibre stock up to 3 per cent.

The pumps used for blow pit service come under this heading.

**Acid Pumps.** Centrifugal pumps of single stage. Single or double suction type with either open or enclosed impellers may be used. The materials of which the pumps are constructed in order to resist the corrosive action of the acid handled will depend on the kind of acid to be pumped.

The following list will indicate the most suitable construction for different kinds of acids. The materials referred to in the following list will be understood to apply only to the parts of the pump in actual contact with the liquid pumped; other materials in the pump may be of standard construction.

Liquid.	Material.
Brine	Bronze Fitted
Calcium Acid Sulphate	Bronze
Carbonate of Soda	Cast Iron
Caustic Carbonate of Soda	Cast Iron
Caustic Potash	Cast Iron
Caustic Soda	Cast Iron
Caustic Sulphite	Bronze
Cellulose	Cast Iron
Chloride of lime	Enameled
Chlorine in water	Enameled
Lime Water	Cast Iron
Milk of lime	Cast Iron
Salt Brine	Cast Iron
Soda Ash	Cast Iron
Sulphate of Alumina	Brass
Sulphide of Sodium	Cast Iron
Sulphurous Acid	Bronze
Sulphurous Acid Gaseous	Cast Iron

Pumps for handling heavy ground wood stock are usually of the single suction centrifugal type with open impeller and of standard cast iron construction.

They should be selected of ample capacity so that the passages will be large throughout the pump and permit of very moderate velocities; a flow from the discharge of five to six feet per second will usually result in more satisfactory and reliable operation than when higher velocities are used. As a uniform constant flow through the pumps will be maintained at a fair efficiency.

Pumps for handling light ground wood stock are also of the centrifugal type and may be of either single or double suction and either open or enclosed impeller type.

A general rule which may be followed would be to install single suction open impeller pumps up to 6 in. diameter discharge opening and double suction enclosed impeller pumps for units of 8 in. diameter discharge opening and upwards.

Higher velocities may be used for light than for heavy stock—for the reason that a uniform flow of the mixture may be maintained at higher velocities and these may be fixed at from 8 to 12 feet per second.

Pumps for handling white water should be of the centrifugal type and either single or double suction with enclosed impeller.

For all of the above pumping services the pump should be located so that there is a constant static head on the pump suction, so that the liquid can flow into the pump under a constant head.

General water supply pumps may be of either centrifugal type, and are usually either motor or steam turbine drive, or steam or power driven piston or plunger pumps may be used, but the centrifugal pumps are coming more into use for general water supply, not only for manufacturing plants but also for towns and cities, on account of their adaptability for direct connection to high speed electric motors and steam turbines and also their high efficiency and flexibility over a large range capacities.

For steam driven units a high grade of reciprocating plunger pump with triple expansion steam end will usually show a higher duty trial than the centrifugal pump and steam turbine, but taken

(Continued on page 54)

## ALKALI RECOVERY IN THE SULPHATE PROCESS

BY CLINTON K. TEXTOR

*This article is reprinted through the courtesy of the Alberene Stone Company. In an introductory the author says: The sulphate process of pulp and paper making is the latest to be developed and in consequence it has comparatively little published data of good authority, most of the literature on this subject being of a descriptive or speculative nature. This article then is of necessity based on personal experiences and observations in a few mills which I believe may be taken as typical of American practice.*

In considering the recovery of alkali, this paper does not limit itself to a discussion of the design and operation of the "Recovery Room," by which name we usually refer to the room containing the smelters and incinerators, but to all those features which affect recovery from the time the chemicals enter the digester to the time they are returned there to be used again.

### Digester Room

The principal bearing of the cooking operation upon the recovery process is in regard to the dilution of the liquors, which in turn determines the amount of work that will subsequently have to be done by the evaporation equipment.

As by far the greatest proportion of sulphate pulp made in this country is used in the manufacture of kraft papers, in which a high color is not essential, the usual procedure is to add to the chips in the digester sufficient chemicals in the form of white liquor to perform the cooking and to add black liquor to make the total volume of liquids sufficient to cook all the chips. In this way the mill is spared the evaporation of a volume of water equal to the volume of the black liquor added, with the equivalent saving of heat.

The use of black liquor in the digester has another effect on the recovery, of which we have no explanation. When, for any reason, no black liquor is used in cooking, it soon becomes difficult to keep the incinerators producing the desired quality of black ash, although they are kept supplied with liquor of the same concentration as before.

For the ordinary practice, figures as low as  $1\frac{1}{2}$  and as high as 3 pounds of steam have been given as necessary to cook one pound of pulp; personal experience has indicated that 2 to  $2\frac{1}{4}$  pounds of steam were used, depending upon the atmospheric temperature, the moisture in the wood and other factors. The difference between the maximum and minimum figures applied to a 50-ton mill would mean a difference of 75 tons of water to be evaporated per day, which would require 65 H.P. under average conditions.

The use of indirect steam in cooking would, of course, mean a great saving in the water which would have to be evaporated. This method, however, presents mechanical difficulties and its adoption depends on how well these difficulties are solved. A preliminary drying of the chips has also been recommended as a means of reducing the dilution of the black liquors, but unless some source of heat which is otherwise wasted is available for this drying, it is not probable that chip dryers will be widely used for the purpose of increasing concentration, as this concentration can doubtless be accomplished more efficiently with the apparatus now employed.

### Diffuser Room

The washing of the pulp represents a very important step in the recovery process as it involves not only dilution of the liquors, but considerable losses of alkali. The majority of modern mills wash their pulp in diffusers, but the diffuser capacities vary so much that it is very doubtful if any practice can be considered standard. Some mills operate very successfully with two diffusers per digester while others have as high as four. Perhaps the commonest arrangement is about three diffusers per digester where each digester blows every four hours. In a mill so equipped,

about ten hours can be allowed for the pulp to be washed and the diffuser emptied.

In a typical mill having ten hours for washing, the diffusers are operated in pairs. When a charge is blown into one diffuser, it is first washed with weak black liquor from its mate, the black liquor coming from the fresh charge, testing at first 12 or 13°Be., is sent to the evaporators until the test has dropped to 6°Be. when it is held until its mate has received a blow. This scheme will keep the evaporators supplied with a 10° liquor. In the meantime, the mate has washed down to 0°Be. when it is considered sufficiently free from alkali; it is then disconnected and emptied and if the last blow has not been washed down to 6° the washing is continued with water until the point is reached.

The above mentioned change in the density of the black liquor received from the digester and delivered to the vaporators, from 13°Be. to 10°Be., means that to every gallon of black liquor received with the pulp from the digester, almost a gallon of water is added before it is delivered to the evaporators.

In a plant in which the digesters were heated with indirect steam and which has four diffusers per digester, the black liquor was consistently delivered by the diffusers at a concentration of 16°Be.

The losses of chemicals during the washing is not so easily estimated though it is probable that the losses at this point are considerably greater than is ordinarily supposed.

### Evaporator Room

Evaporator operation is one which is fairly well standardized in its general application, but the conditions of the several sulphate mills are so different that hardly two are operated alike, due to their receiving and delivering liquors of widely varying concentrations.

A quadruple effect evaporator receiving black liquor at 10° and delivering it at 20° indicated a consumption of  $2\frac{1}{2}$  lbs. of steam per pound of pulp produced, but this figure is not entirely reliable as both live and exhaust steam was used and due to peculiar local conditions, some of the meter readings were questionable.

Mills using indirect heat in cooking usually operate without any vacuum evaporators.

### Recovery Room

The function of the recovery room is to receive black liquor from the diffusers or evaporators, make up for losses of alkali in the cycle by the addition of salt cake, and deliver to the causticizing department the so-called green liquor, a solution of sodium carbonate, sodium sulphide and minor proportions of other substances. The equipment for this purpose is usually arranged in units consisting of a disc evaporator, a rotary incinerator, a double smelter and two dissolving tanks, one for each side of the smelter. There is a serious lack of scientific information on almost all features involved in recovery room operation, and practice today is based almost entirely on what experience has shown to give the best results in any particular installation. We can find no data regarding the heat available or required in the operation nor the temperatures which should give the best results.

### Disc Evaporators

The favorite type of disc evaporator consists of a concrete or steel box equipped with horizontal shafts set across the direction of flow of the gases. The shafts carry a number of circular steel discs at right angles to its axis, the diameters being from 6 to 8 feet and the number per shaft being such as to give a total surface of about 2,000 sq. ft. From 2 to 4 of these shafts are used; while it may be that differences in local conditions are responsible for the following, it seems probable that best results are obtained

with three shafts. In an installation of four shafts it was found that liquor of the desired concentration could be delivered more rapidly if the last shaft did not revolve, indicating that after passing the third shaft the gases were saturated with moisture at a temperature higher than that of the entering liquor and that the last shaft was really acting as a condenser.

A three shaft evaporator was able to keep the incinerator supplied with a 30° black liquor concentrated from a 16° liquor whereas under similar conditions, a two shaft evaporator had to be supplied with 20° liquor to obtain the same results.

The speed of the shafts is not uniform in the several operations, varying from 8 to 20 R.P.M.; as long as the speed is sufficient to prevent caking of the liquor upon the discs and not high enough to cause excessive splashing, there is no evidence that the rate at which the discs revolve has any bearing upon efficiency of recovery. The direction of revolution is such as to keep the liquor moving forward towards the hotter part of the evaporators.

#### Incinerator

From the disc evaporators, the liquor, as indicated at a concentration of about 30°Be., flows or is pumped to the rotary incinerator. The sizes of rotaries in use vary over a wide range both in length and diameter and as incinerator operation does not lend itself well to any measurement expressible in numbers, the comparative value of the several sizes is largely a question of the operator's opinion. However, it seems to be agreed that the best sizes are 9 ft. x 30 ft., 10 ft. x 25 ft., and 11 ft. x 20 ft.; good results can be obtained with any of these rotaries.

The incinerators are variously lined, some using fire brick in the forward end and others are operated without any lining whatsoever in the back end. A lining of two courses of ordinary building brick set on edge will stand 18 months' constant operation if well laid and such service is generally considered satisfactory.

#### Smelters

The smelters constitute probably the most troublesome feature in all pulp making and today there is probably no one construction that is decided upon as standard even for one mill; in the rebuilding of almost every furnace, some new features are incorporated which seem to be warranted by experience. There is, however, a certain general type which is quite widely used; this is the so-called "Double-Furnace" which is essentially a single furnace with two feed holes, two outlets and a dividing wall in the center.

The furnaces are about 5 ft. x 6 ft. inside and are placed end to end; the dividing wall is about two feet thick and is built up to about three feet below the base of the furnace arches. The floors of the furnaces are sloped three ways, toward the outlet, with a pitch of about 2 inches per foot. The arches of the furnaces are so located that the top of the arch comes six inches to a foot above the firing floor, giving five to eight feet inside of the furnace under the archkey. The arch used has a radius equal to its span, the key running lengthwise of the furnaces, and is supplied with a feed hole about 12 in. x 16 in., at about the center of the furnaces.

There is a gap between the arches of the furnaces at the center over which is built a common flue which conducts the gases to the incinerators. The gap between the arches and width of the flue vary over a considerable range, which is to be expected as in some installations this superstructure is considered merely as a flue whereas in others it is built as a combustion chamber. With the long rotaries, best results seem to follow the use of a narrow flue, about 3 ft. wide, while with the short rotaries of large diameter, the most noticeable difference is in the life of the flue, which also seems to place the advantage with the narrow flue.

The brick work at the point of delivery from the flue to incinerator is sometimes protected from mechanical injury by surrounding it with a cast-iron collar. This device, by allowing the brick work to be suspended, gives more space for black ash between the rotary and the furnace.

The best material we know of to date for the furnaces is a soft, quartz-free soapstone. Walls and floors made of this material, 12 inches thick, last from 15 months to two years. The arches of soapstone do not last as well, one 8 inches thick giving about 6 months' service which is 50 to 100 per cent more than could be derived from the same thickness of fire brick, though the latter material is widely used for these arches.

In the flue there seems to be comparatively little corrosion due to chemicals and fire brick has been found to be immensely superior to soapstone. This part of the smelter is relatively the shortest lived of all, but this seems to be due not so much to the direct effect of the heat as to having its foundations undermined. The side walls of the flues rest on the furnace arches near the open ends where gases turning from the furnaces upward into the flue wear off the edge of the arch and remove the support from under the wall; by keeping the edges of the furnace arches in good repair and by giving the side walls of the flue an independent support by means of a separate arch, such a wall 18 inches thick can be made to give at least six months' continual service.

#### Air Pressures

The above figures relative to furnace life apply to an operation in which air was supplied to the furnaces under a pressure of 7 to 8 inches of water through three 3-inch water cooled nozzles. The nozzles, all pointing toward a point in the center of the furnace, were located two in front and one in the rear and inclined downward about 3 inches to the foot, their ends being about 2 feet apart inside the furnace and about a foot above the floor.

Just what is the relation between air pressure and reduction efficiency, life of furnace, alkali losses, etc., is a question which has not been answered except for individual mills, which have found the pressures at which they can operate most economically.

It seems more reasonable that the rate of air delivery rather than the pressure of delivery is the important feature for the pressure will be affected by the depth of the fuel bed, obstructions in pipes or nozzles and the condition of the black ash. However, we do not know of any mill in which the air is being metered, except insofar as in a mill where the black ash is kept of uniform consistency and the fuel bed at a constant level the pressure of delivery may be taken as a measure of the volume of air blown in.

We know in a general way that on increasing the air pressure within certain limits the capacity of the furnace is increased; that the temperature is increased; that there is less danger of chemicals running out of the furnace unchanged and more danger of the salt cake, after being reduced to sulphide being reoxidized to sulphite or sulphate; that the sulphide is more apt to be driven off as a vapor and alkali to be carried mechanically along with the gases; that with the higher temperatures so produced wear on the furnace becomes greater; these things we know in a general way but we do not know the specific points at which they begin nor how fast they go, and though some plants have worked out their own salvation very satisfactorily, they have found their best operating conditions by their trials and experiences with their own peculiar equipment.

The function of the furnaces is to receive black ash and salt cake, burn off the organic matter at the same time reducing the salt cake to sulphide and to deliver the molten mixture to the dissolvers. With good operation, 90 to 93 per cent of the salt cake is reduced to sulphide and reduction figures as high as 98 per cent have been noted. As the salt cake has no part in the cooking operation but is subject to the same percentage of loss as the other chemicals it is important to obtain as high a reduction as practicable.

The molten chemicals leave the furnaces through an opening at the bottom of the front wall and run in a spout to the dissolving tanks. These spouts are sometimes built of fire brick or soapstone, but for both economy and ease of operation water cooled iron spouts are preferable.

There is not much of importance to note in regard to the design

of dissolving tanks. They are supplied with agitators, a sludge clean out opening in the bottom and a liquor outlet in front, a foot or so above the bottom. Except that it is sometimes interesting to compare the capacities of several furnaces, which is easiest if each dissolving tank holds enough for one caustic tank, or that the two dissolving tanks of one unit have such capacity, the size of these tanks is not very important.

The liquid supplied the dissolving tanks is usually the wash from the caustic room; if for any reason appreciable quantities of lime sludge are returned with the wash, the resultant strong liquor after causticizing is found to settle very slowly; the explanation of this is not evident.

A recovery unit such as has been described consisting of a two shaft disc evaporator, an incinerator with 600 to 700 sq. ft. surface inside the lining and a smelter consisting of two 5 ft. x 6 ft. furnaces with suitable dissolving tanks would be able to receive black liquor at 19 or 20°Be. and deliver green liquor enough for the production of 30 to 33 tons of kraft pulp per 24 hours. The black liquor should supply all the fuel necessary except in starting the fires in the furnaces; where resinous woods are being pulped the black liquors have a higher heating value which permits the recovery units to operate on liquors of lower initial concentration.

There is considerable difference of opinion as to the amounts of alkali lost in the furnace room, but it seems reasonable that a considerable proportion of the total losses occur in this department, especially when we remember that the losses in the soda process are very much smaller though the same equipment and procedure is there employed except in the furnace room; it is true that the majority of soda mills wash the pulp in open pans but it is very improbable that the losses in such an operation are less than in the use of diffusers.

Except for leaks and spills due to accidents or carelessness, there seems to be only one way to lose alkali in the recovery room and that is up the stack. Certain data of experiments with a Cottrell precipitator applied to stack gases have indicated that losses through this channel are considerably less than is expected from the above comparison with the soda process, but these data were neither authentic nor complete.

#### Causticizing Room

The causticizing room is equipped with 5 or 6 tanks of the same size and construction, the number depending upon the number of times it is desired to wash the sludge. Each tank is supplied with an agitator, a sludge clean out, a basket for the lime and a swing pipe for drawing off the clear liquor.

The best method of removing the alkali from the sludge is by a progressive washing. In an installation fitted with six tanks, the first wash was sent to the dissolving tanks, a second wash for making a first, a third for a second, and a fourth for a third, the fourth being made with water. This system gives ample time to wash the sludge out of a tank after the fourth wash has been drawn off.

There is no special reason for sending a strong wash to the dissolving tanks and so it is the practice in some mills to use a very strong solution for causticizing and then mixing the first wash with the clear liquor before sending it to the digester room.

The concentration at which the green liquor is sent to the causticizing room varies in different operations from 16°Be. to 24°Be., the proper strength depending upon local conditions; the same applies to the amounts of lime used per unit of alkali. A dilute solution and an excess of lime mean a higher percentage causticity but they also mean more water to evaporate, larger storage tanks and a higher lime bill; on the other hand, incomplete causticization involves the carrying around of quantities of sodium carbonate which is inactive in cooking but which suffers the same shrinkage as the other chemicals.

It is considered good practice to causticize a 20°Be. liquor using 50 to 60 lbs. of lime per 100 lbs. of sodium carbonate. This will

give a white liquor of about 83 to 85 per cent activity (activity being caustic plus sulphide divided by caustic plus sulphide plus carbonate) which is generally acceptable; this represents a lime consumption of about 600 lbs. per ton of pulp.

The causticizing is done at a temperature of from 90 to 95°C.; this has been found to give as good results as at a higher temperature and minimizes the danger of boiling over and scalding the operators.

The time that the agitator should be kept going and the time which should be allowed for settling depends upon the quality of lime available and must be determined by trial as chemical tests are of little aid in foretelling these factors, except in such general terms as that a high purity calcium lime with little iron or magnesia should be used and that as far as possible air-slaking should be avoided, as air-slaked lime contains a considerable proportion of finely divided calcium carbonate which not only is valueless in the chemical reaction of causticizing but its presence retards the rate of settling.

Theoretical considerations indicate that tall tanks of small diameter should be used for settling as they would speed up the settling and permit a sharper separation of liquor and sludge but since tanks 14 feet in diameter by 10 feet high can be operated with a loss of less than one per cent of the alkali it is quite probable that questions of space, floor levels, metal, etc., should be given first consideration.

#### General

The proportion of chemicals used in one digester charge which passes through the recovery cycle and is returned to the digesters for reuse, expressed in per cent is the percentage of recovery. As the total quantity of chemicals in circulation should be kept constant, the quantity of salt cake (and soda ash, where it is used) required for this purpose is then the equivalent of the losses; the losses per digester charge expressed as a per cent of the total chemical charge and subtracted from 100 is the usual way of estimating recovery.

Eighty per cent is considered good operation and while recovery over 80 per cent is being obtained, lower figures than 80 per cent are more common.

In cost accounting the salt cake consumption is usually reported in pounds per ton of pulp made, but this figure is not the equivalent of per cent recovery because the chemical charge per ton of pulp varies as much as 50 per cent in various mills depending on the time allowance per cook, steam pressure, grade of pulp, etc., which makes it entirely possible that a mill recovering 80 per cent may use more salt cake per ton of pulp than one in which only 75 per cent recovery is being realized.

In considering recovery as a whole, there are, besides a mass of details and special features, two main principles involved; first, prevention of dilution, and second, prevention of losses. Of the two, the latter is the more important and except for the minor and more obvious ones, the causes are harder to detect and remedy. This is especially true in regard to the furnaces where there is today probably the greatest room for improvement.

#### Blotting Paper in Canada in 1859

ROCHESTER, N. Y., February 9, 1922.

Editor PAPER TRADE JOURNAL.

Regarding a news item in the PAPER TRADE JOURNAL concerning the making of blotting-paper in Canada, I beg to inform you that blotting paper was made in the Buntin Company's paper mill at Valleyfield, Que., by John Crichton, who was then in charge of that mill as early as May 2, 1859.

I have in my possession samples and furnish made on that date.

Blotting paper was made there at regular intervals until the plant was dismantled and sold in 1900.

JOHN CRICHTON WISHART.

## 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

**Flue Gas Analysis.**—Blau.—*Zentr. Papierind.*, No. 16, 1921. Description of a new apparatus for analyzing flue gas as an indicator of the quality of fuel and the efficiency of firing.—P. B.

**Packing of Wood Pulp.**—*Pappen u. Holzstoff Ztg.*, No. 41, 1921. Owing to the high cost of freights and sacks, mechanical wood pulp is preferably packed in the form of boards for shipments, although in this state it is not so well adapted for immediate use in the beater. On the other hand packages are the simplest form. Methods of avoiding waste and adventitious moisture are also described.—P. B.

**Electric Safety Devices in Paper Mills.**—*Papier Markt*, No. 14, 1921. The dangers of defective insulation, short circuits, etc., in rooms containing moist and inflammable materials are obviated by means of a new installation or "transformer."—P. B.

**Defective Printing on Porous Paper and Cardboard.**—*Papier Markt*, No. 20, 1920. In the use of carbon black as well as pure colors it sometimes happens that in spite of all known methods of preventing it the ink or tones do not print satisfactorily, that is, become blurred or smudged. The defect is usually attributed to the color, but a careful examination of the paper or cardboard will show that the surface is either too porous or too rough. Two methods are suggested for overcoming the trouble; careful preliminary calendering of the rough surface, or, in case the paper is too porous, the spaces may be caused to coalesce and close the interstices by a slight moistening of the sheet.—P. B.

**New Constituent of Rosin.**—*Pappers Travaru Industri*, No. 7, April 15, 1921. Pine resin contains a hitherto unknown acid of undetermined composition called by the author *colophenic acid*. Various samples of rosin contained 2-4% of it. It is stronger than resinic acid and its sodium salts are readily soluble in water, while those of resinic acid are almost insoluble. Pure colophenic acid is pale yellow or colorless, but impure samples are yellow to red, or brown. Technically the acid and its salts are important, since they impart a brown color to paper during sizing. Colophenic acid is an amorphous powder with a melting-point of 100°C. It is monobasic. The brown color of commercial rosin is due to this substance, the darker the color the greater the amount of colophenic acid present. It dissolves in sulphuric acid to an orange color, which in a few minutes changes to yellowish or blood red. In concentrated hydrochloric acid it dissolves to a dirty yellow color.—P. B.

**Cellulose Yarn Spinning Machine.**—Ger. patent No. 338,993. The patent covers a device for converting narrow strips of paper into yarn for spinning.—H. E. W.

**Device for Preparing Endless Paper Tubes.**—Astbest und Gummiwerke Alfred Calmon Akt. Ges., Hamburg. German patent No. 329,446.—H. E. W.

**Removal of Steam Mist in Mills.**—Kummer.—*Papier Ztg.*, xlvi, 3429, (Sept. 17, 1921). The article takes up the question of ventilation of mills and gives a sketch of the system in use in various mills.—H. E. W.

**Methanol in Sulphite Alcohol.**—Bergstrom.—*Papier Ztg.*, xlvi, 3465 (Sept. 20, 1921).—H. E. W.

**Preparation of Fiber from Typha.**—Paul Grabner.—Ger. patent No. 339,978. The leaves are submerged in water and are allowed to disintegrate as much as possible in the absence of air.—H. E. W.

**Use of Vapor Accumulator Systems in the Paper Industry.**—Hakanson, *Papierfabr.*, xix, 929,957, (Sept. 2, 1921).—H. E. W.

**Use of Lime Wastes for Fertilizer.**—Lecher.—*Papierfabr.*, xix, 965, (1921).—H. E. W.

**Device for Cutting Fiber from the Formation Roll.**—Ger. patent No. 340,057, Strobelt. An automatic device for cutting the layer of fiber on the cylinder of a wet machine (formation roll) is described. As soon as the layer attains the requisite thickness a knife is released and drawn through the sheet.—H. E. W.

**Fiber from Peat.**—Ger. patent No. 339,559, Torfoleum Werke Eduard Dyckerhoff.—H. E. W.

**Beater with Several Bed Plates.**—Ger. patent No. 340,339, Reisten.—H. E. W.

**Batik Effect on Paper.**—Ger. patent No. 339,606, Meister, Lucius and Bruning. Addition to Ger. patent No. 338,105. Covers the use of caustic liquors as solvents.—H. E. W.

**Production of Technical Alcohol.**—*Papier Ztg.*, xvli, 2927, (Aug. 16, 1921). A description of the industrial processes used in hydrolyzing cellulose and fermenting the sugars formed, and of the production of alcohol from sulphite waste liquors. Ammonium sulphate and superphosphate and yeast extract are added to aid in the fermentation.—H. E. W.

**Sulphite Cooking.**—Klein.—*Papier Ztg.*, xlvi, 2959, (Aug. 18, 1921). A general survey of the subject.—H. E. W.

**Flange Tubes of Paper.**—Ger. patent No. 329,154, Continentale Isola Werke Akt. Ges.—H. E. W.

**Straw Lignin Prepared by Treatment with Alkali Carbonate.**—F. Paschke.—*Z. angew. Chem.*, xxxiv, 465 (1921); *J. Soc. Chem. Ind.*, xl, 732A, (Oct. 31, 1921). The lignin was prepared by treatment of the straw with alkali carbonate, precipitation from the extract with acid, and purification by repeated solution in alkali and re-precipitation with acid. The equivalent weight, determined by solution in excess of standard caustic soda solution and titration with phenolphthalein and methyl orange as indicators, with which lignin behaves similarly to carbon dioxide, has a value of 357. This is lower than that found by Beckmann for lignin from winter rye straw, viz., 462, but the high figure is due in part to colloidal lignin passing through the filter in the method he adopted. Elementary analyses of the straw lignin gave figures corresponding to an empirical formula or either  $C_{22}H_{28}O_6$  or  $C_{26}H_{32}O_8$ , from which it is apparent that this lignin differs from Beckmann's essentially in its oxygen content, the formula assigned to Beckmann's product being  $C_{26}H_{32}O_8$ . The  $C_{26}H_{32}O_8$  formula demands an equivalent weight of 366 which is in close agreement with that actually found.—A. P.-C.

**Production of Artificially Dense Charcoal from Hydrolyzed Sawdust Residues.**—L. F. Hawley, Section of Derived Products, Forest Products Lab., Madison, Wis. *J. Ind. Eng. Chem.*, xiii, 301-302, (April 1921). The insoluble residue obtained by hydrolyzing sawdust with dilute acid and leaching out the sugars was briquetted under a pressure of 35,000 lbs. per sq. in., giving a product having a specific gravity when first made of about 1.21, which in a few hrs. swelled out to about 1.18, after which there was little more swelling. When distilled under a pressure of 300 lbs. per sq. in. (estimated) at a final maximum temperature of 450°C, the briquets gave a yield of 40 per cent of charcoal with an apparent density of 0.52 and an absorption value for chlorpicrin. (See *J. Ind. Eng. Chem.*, xi, 519, 1919) of 700. On a larger scale (commercial-sized unit) an apparent density of 0.63 and a chlorpicrin value of 600 were the best that could be obtained after incomplete experimental work.—A. P.-C.

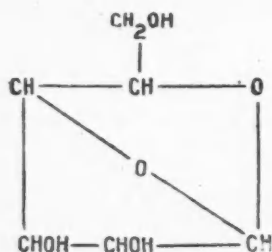
**Drum Barker.**—Can. patent No. 194,245, The American Barking Drum Company, assignee of Herbert Guettler, both of Chicago, Ill., U. S. A., Nov. 25, 1919. The drum is built up of U-bars having the rounded portions directed inwardly toward the center of

the drum and spaced apart an appreciable distance from one another, so as to form pockets adapted to catch the corners of the wood blocks and positively force them to travel around with the drum. Claims allowed 10.—A. P.-C.

**Log Barking Drum.**—Can. patent No. 195,010, Peder Peterson Westbye, Peterborough, Ont., Canada, Dec. 16, 1919. The drum is built up of pairs of inverted channel bars alternative with M-bars, riveted to circumferential bands. Claims allowed 4.—A. P.-C.

**Wood Fiber.**—Can. patent No. 195,212, Geo. J. Manson, Toronto, Ont., Canada, Dec. 23, 1919. As a new article of manufacture, a fiber product comprising long and short well-barbed fibers of raw wood and bark, having 22-28 per cent of short fibers. Claims allowed 4.—A. P.-C.

**Studies on the Chemistry of Cellulose. I. The Constitution of Cellulose.**—Harold Hibbert, Dept. of Chemistry, Yale Univ., New Haven, Conn. *J. Ind. Eng. Chem.*, xiii, 256-260, (March 1921), 334-342, (April 1921). The author reviews the formulas proposed for cellulose by Tollens, Cross and Bevan, Vignon, Green, and Barthélémy, showing wherein they fail to account for various experimentally acquired facts. He then proposes the following as the formula of the cellulose nucleus:



and shows how it accounts for the following facts: (1) The highest stage of nitration of cellulose (calculated on the  $C_6$  formula) is the trinitrate. (2) The highest acetylation product (contrary to the views of Cross and Bevan) is the triacetate. (3) Cellulose forms with concentrated sodium hydroxide a sodium compound, which is decomposed by water, leaving the cellulose as a hydrated product. In this latter form it is much more readily soluble in a solution of zinc chloride or ammoniacal copper sulphate. (4) On treatment of the sodium derivative of cellulose with carbon disulphide a cellulose xanthate is obtained which is readily soluble in water. This product is very unstable and is decomposed by acids, acid salts, ammonium chloride, or heat, with regeneration of a hydrated cellulose. (5) Cellulose does not react with phenylhydrazine or with hydroxylamine; therefore, apparently does not contain free carbonyl (aldehyde or ketone) groups. On the other hand, by subjecting it to simple hydrolysis, derivatives containing free carbonyl groups are obtained. (6) Cellulose yields dextrose as the end product of hydrolysis (for example, with sulphuric acid). (7) Cellulose yields omega-bromomethyl furfuraldehyde on treatment with hydrobromic acid in ether or chloroform solution. (8) The oxidation of cellulose gives oxy-cellulose, a body of marked acid character, which yields furfuraldehyde on distillation with hydrochloric acid. (9) On heating oxy-cellulose with calcium hydroxide, isosaccharic and dioxybutyric acids are formed. (10) The nitrocelluloses when treated with dilute caustic soda yield hydroxypyruvic acid. (11) Relation of cellulose to the cellulose nucleus. (12) The formation of 1, 2, 5-trimethyl glucose and the absence of a tetramethyl derivative by the action of dimethylsulphate and subsequent hydrolysis of the methylated product (Denham and Woodhouse). (13) The formation of dextrose and cellobiose by the hydrolysis of cellulose acetate. (14) The production of levoglucosan by the action of heat on cellulose, starch, and beta-glucose under diminished pressure. (15) Formation of omega-hydroxymethyl furfuraldehyde on distillation. (16) Action of

metallic salts such as zinc chloride. (17) Formation and properties of hydrocellulose and cellulose hydrates. (18) Action of acids. (19) Relation of cellulose to starch and dextrose and the problem of plant metabolism.—A. P.-C.

**Barking Drum.**—Can. patent No. 195,299, A/S Myrens Verktsted, Christiania, Norway, assignee of Adolf August Alfsen, Hen Aadalen, Norway, Dec. 23, 1919. In barking drums, an open-ended substantially cylindrical barking drum having a periphery formed of longitudinal separated slats to form intervening slots for the discharge of the bark, and helically arranged angle iron ribs secured to said slat and projecting inwards from the periphery of the drum and making an angle of about 45° with the longitudinal drum slats to engage and longitudinally feed the logs during the rotation of the drum, these helical ribs being oppositely directed in the opposite ends of the drum. Claims allowed 4.—A. P.-C.

## PUMPS AND PUMPING MACHINERY

(Continued from page 49)

on a yearly running basis and taking into consideration the lower first cost, smaller foundations and housing accommodations and lower cost for oil and attendance, the centrifugal pump steam turbine unit will show a lower yearly cost for operation, interest and depreciation.

For boiler feeding service it may safely be said that there are at the present time two standard types of pumps in general use, and that the capacity of the boiler plant fixes the dividing line between these two types.

This dividing line is determined by the point where the better efficiency of the one type will show that it is an economical investment to spend more money for the original purchase of the pump and get it back again in the shape of interest on the investment by reason of more economical operation.

The two types of pumps referred to are the direct acting type of steam pump in the first place and steam turbine driven centrifugal pumps in the second place.

The point where it is usually considered that the two types of pumps meet on an equal basis is in the case of a 2,000 Boiler Horse Power boiler plant.

The Boiler Horse Power unit represented, in round figures by the evaporation of 35 pounds of water per hour, this means a plant evaporating into steam 70,000 pounds of water per hour which, reduced to the normal pump capacity terms, means:

$$\begin{array}{l}
 70,000 \\
 \text{---} = 140 \text{ gallons per minute.} \\
 60 \times 8.33
 \end{array}$$

For plants up to 2,000 Boiler Horse Power the direct acting steam pump is supreme, while for plants above 2,000 Boiler Horse Power the centrifugal-turbo unit will show the best results.

For boiler feeding service the steam driven pump is at the same time the most reliable and flexible unit that can be installed.

Being operated by means of the steam pressure from the boilers, to which the feed water is being supplied, these pumps may be controlled by means of a pressure regulator, acting on the steam supply pipe to the feed pump; so as to operate at just the proper speed to maintain the water level in the boilers constant under all conditions of load and to follow along automatically and supply the proper amount of feed water and pressure to suit the load conditions.

In the case of the centrifugal-turbo unit there is also another decided advantage in that a sudden shut down of the boilers or the closing of a valve in the supply line will not build up pressure beyond approximately 10 per cent above normal working pressure,—and the pump may continue to run under such conditions without serious results.

It may be said that practically all of the larger power plants have adopted the centrifugal turbo unit for boiler feeding service.

(To be continued)

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 56)

PAPER AND MANUFACTURES OF.	December				Twelve Months Ended December 31					
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
PULP WOOD—										
Rough .....	26,345	\$317,833	6,523	\$39,554	241,420	\$2,315,059	260,914	\$3,241,523	548,696	\$5,027,508
Peeled .....	127,451	1,979,941	40,535	447,701	698,785	6,778,550	824,326	10,820,550	753,600	10,827,002
Rossed .....	16,788	295,868	2,976	47,774	107,094	1,365,144	156,204	2,840,866	85,448	1,522,400
Total.....	170,614	\$2,593,642	50,034	\$535,029	1,047,299	\$10,458,753	1,241,444	\$16,902,939	1,061,684	\$15,377,910

EXPORTS—PAPER.										
PAPER AND MANUFACTURES OF.	December				Twelve Months Ended December 31					
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Bags .....		\$320,630		\$70,800		\$1,566,373		\$2,593,459		\$846,909
Books, Music, Maps, Engravings, Etchings, Photographs, and Other Printed Matter.....	2,878,607		1,597,313		18,239,016		24,803,932		21,112,824	
Boxes and Cartons.....	198,189		107,930		1,351,930		2,237,596		1,300,853	
Carbon Paper.....	84,164		45,897		964,288		1,029,868		496,400	
Cash register and adding-machine paper.....	30,485		21,346		132,515		121,167		168,622	
Paper Board and Strawboard.....	732,790		163,444		4,604,048		5,553,094		2,223,949	
Paper Hangings.....	114,732		23,609		899,457		1,251,743		590,549	
Playing Cards.....	119,864		24,387		1,522,516		1,173,559		592,920	
PRINTING PAPER—										
News Print.....	6,580,358	\$449,906	3,197,970	\$144,393	220,535,014	\$10,091,951	91,777,916	\$5,970,127	33,641,462	\$2,162,975
Exported to—										
Canada.....	54,447	\$4,511	18,670	\$2,736	703,243	\$34,940	1,682,855	\$135,027	491,792	\$45,397
Cuba.....	2,208,773	163,126	1,907,381	79,293	19,923,883	925,479	16,370,866	1,075,100	17,544,086	1,027,044
Argentina.....	2,753,879	148,226	206,595	8,046	52,469,896	2,185,846	41,358,842	2,141,815	4,468,693	318,346
Brazil.....	109,669	14,342			30,991,533	1,393,940	3,856,361	279,423	233,236	21,325
Uruguay.....	304,108	15,274			6,204,195	273,251	2,568,045	137,161	756,097	55,210
Other South America.....	429,490	38,253	313,068	14,191	10,613,644	506,332	5,345,024	459,043	1,533,123	113,464
China.....	72,728	5,906	116,685	6,101	8,437,175	550,949	5,317,770	491,915	490,061	80,820
Australia.....	260,787	15,534	296,523	13,964	3,312,499	195,070	3,503,200	215,116	3,724,906	239,713
Philippine Islands.....	389,462	44,734	389,068	20,015	87,378,906	4,021,144	11,779,953	1,035,527	4,069,300	283,194
Other countries.....										
All other.....	11,965,414	\$2,148,212	1,487,837	\$161,193	153,382,000	\$16,169,055	95,116,113	\$13,776,464	40,167,065	\$5,392,908
Exported to—										
Greece.....	54,647	\$16,001					1,373,970	\$164,956	103,302	\$14,361
United Kingdom.....	218,879	52,837	30,337	\$4,967	2,540,811	\$333,560	2,238,696	433,564	378,394	85,141
Canada.....	400,595	71,121	229,769	26,964	6,389,647	744,272	5,787,172	868,513	3,214,884	391,007
Mexico.....	313,410	61,172	115,167	13,544	4,313,771	409,740	1,820,996	285,254	3,743,892	532,322
Cuba.....	1,654,844	291,220	142,156	19,725	10,378,445	1,190,407	14,998,966	2,268,732	4,417,232	674,428
Argentina.....	2,124,757	319,030	1,739	400	30,027,287	3,094,071	15,762,513	2,048,672	5,667,229	803,980
Brazil.....	602,885	114,415	55,809	13,315	18,763,525	1,473,297	7,571,614	1,198,101	1,320,578	244,225
Chile.....	278,635	55,452			4,784,661	596,061	1,551,003	236,302	228,535	40,743
Colombia.....			18,612	1,808			797,709	117,130	655,445	108,550
Peru.....	145,622	26,996	78,263	5,413	1,288,406	154,319	797,709	117,130	1,114,682	169,224
Uruguay.....	202,739	38,636			3,167,006	341,373	2,204,747	325,107	630,545	67,323
Venezuela.....			39,231	5,873					616,244	96,467
China.....	1,147,837	215,115	253,986	20,639	8,991,051	865,444	6,674,425	940,676	3,284,893	541,390
British India.....	148,171	28,008	2,065	2,065	4,340,436	402,632	4,361,027	602,540	1,072,900	150,616
Dutch East Indies.....									339,338	60,238
Japan.....	135,918	21,529	248,443	18,366	20,882,547	2,302,762	6,715,253	814,410	2,126,643	315,968
Australia.....	1,431,968	228,726	118,804	12,676	22,689,863	2,166,587	5,935,256	816,103	4,701,785	617,099
Philippine Islands.....	427,739	84,729	78,606	6,483	5,291,118	592,237	3,698,450	517,950	3,060,316	514,922
Other countries.....	2,647,708	523,163	72,331	8,905	14,578,427	1,501,793	13,024,981	2,138,474	3,491,238	506,415
Tissue and Toilet Paper.....		\$191,306		\$73,633		\$2,056,607		\$2,654,529		\$906,411
Towels and Napkins.....		\$3,015		\$7,675		\$80,963		\$18,348		\$178,000
Wax Paper.....		\$5,302		\$5,592		\$68,810		\$68,810		\$133,134
Wrapping Paper.....	5,168,494	706,753	2,246,479	162,893	74,916,830	6,664,462	61,264,501	6,994,331	26,044,152	2,238,802
Writing Paper and Envelopes.....		1,317,255		172,184		13,188,165		8,908,230		4,355,642
All other paper.....		1,266,111		392,068		8,799,550		11,091,952		6,143,155
Total Paper and Manufactures of.....		\$10,687,293		\$3,166,153		\$86,983,063		\$99,072,289		\$40,494,822

WOOD PULP AND PAPER STOCK.										
Paper stock.....	3,722,432	\$102,800	4,896,225	\$75,078	54,541,361	\$1,533,013	84,666,468	\$2,718,929	40,411,442	\$729,595
Wood Pulp.....	1,975	275,579	2,337	137,223	35,795	3,048,491	23,541	2,947,267	25,431	1,764,080

MISCELLANEOUS ITEMS.										
Rosin .....	43,622	\$508,982	142,911	\$672,732	1,209,627	\$20,433,970	1,164,328	\$19,468,705	1,001,542	\$5,202,368
Exported to—										
Belgium.....			1,845	\$7,431					26,531	\$122,516
Germany.....			8,927	37,436					137,868	669,594
Italy.....	89	\$1,159	3,909	16,717	18,470	\$269,177	32,797	\$565,684	15,668	90,608
Netherlands.....	176	1,805	2,633	11,990	24,554	307,977	11,463	160,136	14,353	66,490
Norway.....			42	160	6,731	104,604	12,370	211,929	1,740	7,644
Sweden.....	60	900	5,961	25,393	23,645	408,280	42,482	717,313	19,752	89,373
United Kingdom.....	16,108	189,426	45,294	199,349	504,489	8,538,218	299,891	4,254,199	212,692	1,062,828
Canada.....	3,321	39,464	6,048	34,556	71,316	1,255,724	102,633	1,747,964	70,418	482,471
Cuba.....	735	6,706	1,508	6,777	27,099	443,782	25,106	445,884	19,198	104,386
Argentina.....			15,367	67,203	116,708	1,896,519	136,345	2,272,741	158,330	755,107
Brazil.....	401	4,574	14,474	73,828	154,513	2,573,164	146,965	2,642,430	98,843	571,005
Uruguay.....	889	9,207	2,491	11,300	23,905	382,527	22,449	410,869	18,819	97,279
Dutch East Indies.....	706	10,738	9,768	56,986	26,739	459,995	41,869	829,891	45,319	256,128
Sweden.....	982	11,000	15,730	74,917	106,110	1,024,951	99,189	1,772,332	77,940	399,175
Japan.....	1,502	21,311	3,927	23,181	16,657	278,748	54,687	1,056,722	24,601	139,014
Australia.....	18,653	212,580	4,892	26,178	88,691	1,506,551	141,883	2,350,295	56,396	323,677
Other countries.....										
Sulphur or Brimstone.....	19,144	\$34,299	18,533	292,027	224,712	6,325,552	447,450	8,994,350	285,792	4,524,758
Paper and Pulp Machinery.....		\$94,854		\$12,503		\$,958,873		\$,048,697		\$,297,657

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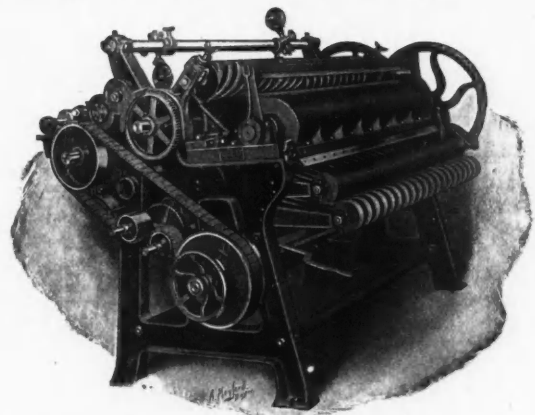
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## IMPROVEMENT LOOKED FOR BY PULP TRADE IN SWEDEN

**While 1921 Has Probably Been the Most Trying Year Ever Experienced by the Pulp Industry There Is a General Feeling That the Tide Has Turned and That Business Will Soon Show a Recovery—Total Output of Sulphite in Sweden for 1921 Will Not Exceed 450,000 Tons and of Sulphate About 112,000. Productions of Mechanical Wood Pulp Only 50 Per Cent of Last Year.**

[FROM OUR REGULAR CORRESPONDENT.]

GOTHENBURG, January 7, 1922.—Now when there is a possibility of looking back upon the situation in the woodpulp trade during 1921, it is a general feeling that we have behind us one of the most trying years for the woodpulp industry since it started in Sweden. The question is whether the new year will bring an improvement in the situation, which is so highly needed by the manufacturers. There is a general feeling in pulp circles that the tide has turned and that business will soon recover and we can only express the hope that 1922 may realize the expectations in this respect.

### Sulphite Cellulose

The total outturn of sulphite cellulose in Sweden during 1921 will certainly not exceed 450,000 tons whereof ca. 105,000 tons for domestic paper mills, out of any effective capacity of 850,000 tons, corresponding to 53 per cent of the normal output. We must go back to 1909, the great strike year, to find an output that falls below last year's production.

At the beginning of 1921 the great crisis, as far as the pulp industry is concerned, had just commenced but the sulphite makers had then already sold about 10,000 tons bleached and about 265,000 tons unbleached sulphite for successive delivery over that year to European papermakers. The quotations were in January:

About Kr. 900	to 950	per ton	for	bleached	sulphite
" "	735 " 755	" "	" "	easy bleaching	sulphite
" "	675 " 700	" "	" "	strong	sulphite

But there were practically no sales made. In order to prevent a total and sudden collapse of the market the cellulose makers formed a selling union and although the prices were successively reduced during the spring, the European buyers did not come into the market during the first half of the year, the reason being that the paper mills were then running only 25 to 50 per cent of normal capacity and the running contracts as stated above, were more than sufficient to cover their need. In July and August, when the selling union was dissolved and the prices were greatly reduced the American papermakers who had no forward contracts, started to buy bleached and strong sulphite at \$3.50 per 100 pounds, ex dock for the bleached make and \$2.50 per 100 pounds for strong sulphite.

The demand from the U. S. A. continued over the rest of the year and the prices advanced slightly and were at the end of the year \$4 to \$4.25 per 100 pounds ex dock for bleached sulphite, and \$2.75 to \$3 for strong sulphite. It is estimated that about 8,500 tons bleached sulphite and ca. 58,000 strong sulphite have been sold to U. S. A. in 1921.

During the autumn the situation for the European paper industry improved and as a consequence thereof the French and other continental papermakers came into the market, but only for parcels for prompt delivery. On account of the low rate of exchange the Finnish and German cellulosemakers could secure these orders at prices that the Swedish makers refused to follow, and in November and December, when no

more sulphite could be had from Finland or Germany, the buyers came to Sweden. It is principally bleached and strong sulphite that is in demand. The situation for easy bleaching sulphite being rather weak. The prices f. o. b. Swedish export harbors for all kinds of sulphite have been ruling at about the same level since July and August when the selling union was dissolved viz. at:

Ca. Kr. 350	to 370	per ton	net	f.o.b.	for	bleached	sulphite
" "	240 " 260	" "	" "	" "	" "	easy bleach	sulphite
" "	230 " 250	" "	" "	" "	" "	strong	sulphite

These are the prices actually quoted by the sulphite makers.

### Sulphate Cellulose

The total output of sulphate cellulose in Sweden during 1921 is estimated to ca. 112,000 tons, whereof ca. 27,000 tons was for domestic papermills. The effective capacity of the sulphate mills is ca. 260,000 tons and the outturn represents consequently only about 43 per cent of their real capacity.

The development of the sulphate market during 1921 has followed the same lines as the sulphite market. In the beginning of the year the quotation for Swedish export harbors were:

Kr. 625	to 650	per ton	net	f.o.b.	for	easy bleaching	sulphate
" "	550 " 575	" "	" "	" "	" "	strong	sulphate

A selling union was formed but during the first half of the year rather no sales were concluded. The European buyers had running contracts for about 16,000 tons easy bleaching and 15,000 tons strong sulphate and these quantities exceeded the consumption at the time. In July and August, when the selling union was dissolved, the prices jumped down to about Kr. 190 per ton for the Kraft pulp. In spite of this low price the sales to England and to the continental countries have been very limited also during the second half of the year, but the quotations, have owing to great demand from the U. S. A., slowly advanced and are actually Kr. 215 to 225 per ton quite net f.o.b. for the Kraft pulp.

With regard to the market in the U. S. A. the quotations for Kraft pulp were in July and August down at \$2 per 100 pounds ex dock and at that time the American papermakers commenced buying large quantities of this make, and during the whole autumn and up to present time the sale ex consignments in American ports have been quite brisk, about 62,000 tons Kraft pulp being sold to the U. S. A. in 1921.

The quotations advanced as a consequence of the increased demand and are actually \$2.65 to \$2.85 per 100 pounds ex dock.

### Mechanical Wood Pulp

The production for sale of mechanical wood pulp during 1921 amounts to about 50 per cent of previous years' output. In Norway too the reduction in the output has been about the same.

In the beginning of 1921 the quotations were:

About Kr. 150	to 165	per ton	net	f.o.b.	for	the	wet	pulp
" "	300 " 325	" "	" "	" "	" "	dry	pulp	

But as no buyers came in the market the prices were successively reduced and reached bottom in July and August when the quotations were:

Kr. 45	to 60	per ton	net	f.o.b.	for	wet	pulp
" "	110 " 125	" "	" "	" "	" "	dry	pulp

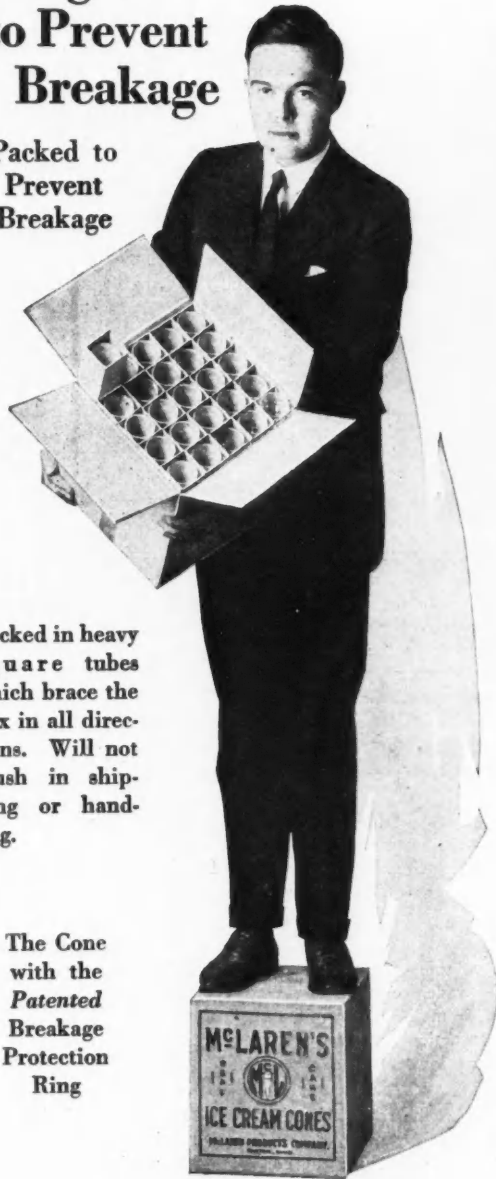
In September the mechanical market became firmer, owing to increased demand and even the U. S. A. were buying wet pulp from Scandinavia at that time as the output in the U. S. A. and Canada was greatly reduced on account of the drought. The prices got an upward tendency and the tone of the market improved greatly during the last months of the year.

The quotations are now ruling at:

Kr. 80	to 85	per ton	net	f.o.b.	for	wet	ground	pulp
" "	165 " 175	" "	" "	" "	" "	dry	ground	pulp

**Designed  
to Prevent  
Breakage**

**Packed to  
Prevent  
Breakage**



Packed in heavy square tubes which brace the box in all directions. Will not crush in shipping or handling.

The Cone with the Patented Breakage Protection Ring

**It's a pleasure to sell**

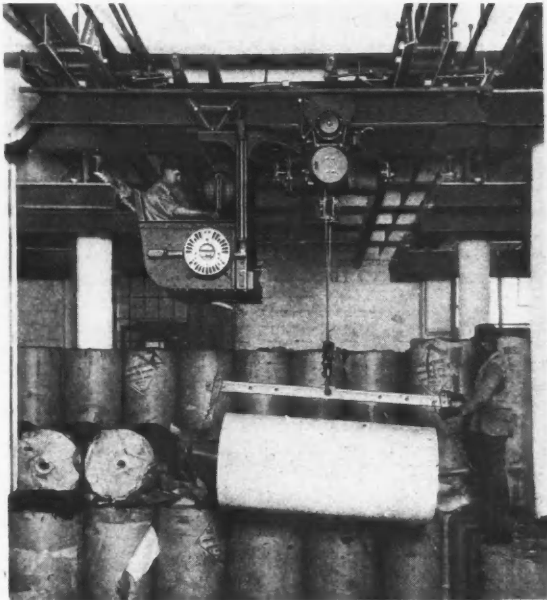
**McLAREN'S**

**"Real Cake" (Double Ring) Cones**

**McLAREN PRODUCTS COMPANY**

Dayton  
Ohio

Kansas City  
Missouri



**To all points  
without change**

A "Shepard" picks a load at one extreme of the plant, conveys it to the other, transports it from building to building, and to all points indoors and out, "stopping over" wherever desired.

The necessary equipment for every operation of handling is concentrated in one complete unit—a Shepard Cage Controlled Hoist operated on a Shepard Transfer Crane and suitable monorail track.

The savings in time and labor that "Shepard" makes are a vital factor in lowering production costs.

Shepard Engineers are widely experienced in planning successful handling systems for paper mills. These men can devise the easy, rapid, and economical lifting and conveying method for your mill. Their services are freely extended. There is no obligation in inquiring.

**SHEPARD ELECTRIC CRANE & HOIST CO.**

378 Schuyler Ave., Montour Falls, N. Y.

Branches in Principal Cities.

Member Electric Hoist Manufacturers' Assn.

## New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,  
WEDNESDAY, February 15, 1922

The full week just ended in the New York paper market merely lends additional proof that the course of reconstruction following depression is not always an easy path to pursue but one beset with many difficulties that sorely try the patience and sap the energy of those forced to traverse it. Lost confidence is being regained very slowly and movement toward a market of healthy activity is taking place hand in hand with the betterment in national and worldwide economic conditions, which develops very gradually of necessity. Wherein the greatest improvement may be seen is in the actual turning of the wheels of industry thus far in 1922 that were stationary throughout the greater part of 1921. The feeling that certain forces are at work on the task of bringing business back to normalcy maintains a tone of optimism in the trade that would otherwise be lacking. The East is now in a superior position to the West and evidence is plentiful that it will mount from its present status to one that will embrace the conservative and prosperous business long awaited. President Harding is authority that the agricultural crisis has passed, while Thomas W. Lamont is sponsor for the words, "There are now distinct signs that business is on the mend and that the worst is over." In fact no pessimist, however bold, would dare to say less when the far-reaching effect of the successful conclusion of the Washington Conference on the Limitation of Armaments and the notable progress of the English pound toward par are considered with true regard for the great weight they bear upon existing economic conditions. The irregular buying of the week reflects the influence of uncertain prices and expectations among some buyers that a lowering of freight rates will possibly bring quotations down. Opinions differ as to the course paper quotations will take in the next few months. In some quarters it is felt that the bottom has been reached without fail, while in others it is believed that foreign competition has power to force domestic prices to lower levels. The price situation is worthy of attention. No matter what the attitude taken appears to be the conclusion is general that it is no time for wild ventures in the paper line but rather a period when hard work and effort expended will count most. It is no time for labor to be refractory and as the past is replete with sad examples so will the future be unless workers realize that it is good business sense to hold down a job nowadays as long as the job will hold them. It is a reckless gamble to do otherwise. With labor and transportation problems once ironed out there is no reason why the future of the paper trade should not be bright.

The news print market is firm with the demand constant and production slowly increasing. Domestic manufacturers are doing all in their power to compete with competition from abroad and their efforts are being repaid in a gradual improvement.

Orders for small lots of book paper are received with considerable regularity and are sufficient to cause some betterment in the volume of mill production, which is still below normal. Domestic consumption continues steady although marked by those economical tendencies so prevalent at the present time. Buyers take what book paper is required for immediate use only so that stocks on hand are low in all quarters, which condition will admit of considerable activity as soon as confidence is wholly restored in the trade. Prices are firm and should fluctuate but a few cents with the seasons throughout the year.

The fine paper market shows little change except that even a smaller volume of business has been done in the past week shortened by a holiday. Those mills specializing in cheaper grades of sulphite bonds are busy whereas those producing the finer grades are not yet operating at or near capacity. Salesmen find the demand to be somewhat stronger than in January, although it still requires a good deal of effort to effect sales. Prices are unchanged.

The tissue market is listless. The demand for the week has been light and production correspondingly limited. Spot business is the rule now in the tissue market, while contracts for any length of time are unheard of. The market is very spotty and it is expected that it will be subject to ups and downs for some time to come.

The kraft market is a bright spot in the list with its production proceeding at normal and the demand supplied on contract for a month or six weeks in advance. The demand for immediate shipment of kraft is still considerable from some quarters where a hand-to-mouth existence is maintained. It is reported that collections are hard to make, and manufacturers find it necessary to extend the time allowed for payment in many instances. On the whole the kraft department stands out very well as an example of what reconstruction will do in time for the other branches of the paper market.

The board market is inactive and the demand exceedingly light. Board mills have not been able to assist the unemployment situation and are just about holding their own in production. However, better business is anticipated, and should soon make its appearance as the trade is not well supplied with board at present.

### Mechanical Pulp

The mechanical pulp market is quiet with very little additional interest shown by the demand. Greenwood production is on the increase and should be normal before long. Prices show no change and are considered by many to be at rock bottom.

### Chemical Pulp

Only a moderate improvement has been registered this week in the chemical pulp market, where the demand is still for small lots for immediate delivery. The late embargo on German pulp has largely reduced the supply from that source and has tended to create a better tone in the domestic market. Chemical pulp from Scandinavian markets is an important factor in the present market. This pulp undersells the domestic and tends to keep prices here at a low level. Domestic producers look for a decided betterment in the spring, when it is hoped freight rates will have been corrected and other influences on the market put into adjustment.

### Old Rope and Bagging

The old rope and bagging market continues quiet and promises little improvement until the demand from the paper mills is again heard from. Slight improvements in the operating capacity of the mills gives cause for encouragement, although no marked advance has yet been observed in old rope and bagging.

### Waste Paper

The volume of inquiries for waste paper has increased slightly and the trade feels that it is on the road to better business. The demand from the paper mills more nearly approaches normal and spot transactions are fairly satisfactory. It is thought that prices will go no lower.

### Rags

Dealing in the rag market is light. There is very little pressure upon the market from those quarters that should be interested, for paper containing a high rag content is not yet in good demand.

### Twine

The twine market is operating on a better basis than formerly with the long awaited increase in demand now fairly well under way. Business is slowly picking up and the trade is generally optimistic.

### New Industry Secures Charter

Ideal Box and Paper Specialties, Limited, Toronto, were recently granted a charter, with a capital stock of \$150,000. The plant of the company is located at 165 St. Patricks street. Among the lines turned out are boxes for the confectionery and baking trade and several specialties. It is understood that the company will add other lines later. Business is improving and they expect the coming year to be a very good one.

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations February 14, 1922:

Table with columns: STOCKS, BID., ASKED. Includes American Writing Paper Company, International Paper Company, etc.

Because of the unusual conditions prevailing in the various markets quotations are more or less nominal.

Table of Paper prices (F. o. b. Mill) including Ledgers, Writings, News, Tissues, Kraft, Manila, Fiber Papers, Wax Paper, Mechanical Pulp, Chemical Pulp, Sulphite, and Soda bleached.

Table of Domestic Rags prices (New Prices to Mill, f. o. b. N. Y.) including White, Blue, Black, and various types of cuttings and stockings.

Table of Paper prices (F. o. b. Mill) including India, B. C., A. B. Italian, Finished, Jute, Tube, Fine, Unfinished, Paper Makers Twine, Sulphite, News, Water Marked, Coated, News-Rolls, No. 1 Manila, No. 1 Fiber, No. 2 Manila, Butchers' Manila, No. 1 Kraft, No. 2 Kraft, Wood Tag Boards, Screensings, Boards, Plain Chip, Solid News, Manila Lined, Container Line, Bonds, Ledgers, Writings, Superfine, Extra fine, Fine, Fine No. 2, Fine No. 3, Book, M. F., Book, S. S. & C., Coated Lithograph, Label, News, No. 1 Jute Manila, Manila Sul., No. 1, No. 2, No. 1 Kraft, No. 2 Kraft, No. 1 Kraft, Common Bogus, Straw Board, News Board, Chip Board, Wood Pulp Board, Binder Boards, Tarred Felts, Regular, Slaters.

Table of Old Waste Papers (F. o. b. New York) including Shavings, Flat Stock, Manila, and News.

CHICAGO

Table of Paper prices (F. o. b. Mill) for Chicago including Binders' Board, Solid Wood Pulp, Straw Board, Filled Pulp Board, Old Papers, Shavings, Ledgers and Writings, Solid Books, No. 1 Books, Blanks, Ex. No. 1 Manila, Manila Envelope Cuttings, Folders News, Old Newspaper, Mixed Papers, Straw Clippings, Binders Clippings, Kraft, New Kraft Cuts, Roofing Stock, Chicago, Net Cash.

PHILADELPHIA

Table of Paper prices (F. o. b. Phila.) including Best Tarred, Best Tarred 2-ply, Best Tarred 3-ply, Bagging, Gunny No. 1, Foreign, Domestic, Manila Rope, Sisal Rope, Mixed Rope, Scrap Burlaps, Wool Tares, Mixed Strings, Burlap, New Burlap Cuttings, Old Papers, Shavings.

(Continued on page 66)

# Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

## NEW YORK IMPORTS

WEEK ENDING FEBRUARY 11, 1922

### SUMMARY

News Print.....	10,117	rolls
Printing Paper.....	11	bis., 173 cs., 209 rolls
Cigarette Paper.....	20	cs.
Wall Paper.....	1,620	rolls, 6 bis., 25 cs.
Hangings.....	81	bis., 27 cs.
Tissue.....	18	cs.
Drawing.....	14	cs.
Tracing.....	17	cs.
Copy Paper.....	59	cs.
Litho Paper.....	5	cs.
Writing.....	11	cs.
Colored Paper.....	6	cs.
Packing Paper.....	23	cs.
Miscellaneous Paper.....	184	cs., 602 bis., 3,770 rolls

### CIGARETTE PAPER

British American Tobacco Co., Baltic, Liverpool, 20 cs.

### WALL PAPER

The Prager Co., Finland, Antwerp, 1,620 rolls.  
A. C. Dodman, Jr., Montana, London, 6 bis.  
R. F. Downing & Co., Inc., Shunko, Kobe, 25 cs.

### PAPER HANGINGS

A. Murphy & Co., Mesaba, London, 4 bis.  
W. H. S. Lloyd & Co., by same, 46 bis.  
W. H. S. Lloyd & Co., by same, 5 cs.  
W. H. S. Lloyd & Co., Montana, London, 22 cs.  
W. H. S. Lloyd & Co., by same, 31 bis.

### TISSUE PAPER

R. Hoe & Co., Montana, London, 5 cs.  
Wilkinson Bros. & Co., Baltic, Liverpool, 10 cs.  
American Express Co., by same, 3 cs.

### DRAWING PAPER

Favor Ruhl & Co., Montana, London, 6 cs.  
Gruner & Reinhardt, Inc., Mt. Clinton, Hamburg, 8 cs.

### TRACING PAPER

Gruner & Reinhardt, Inc., Orbita, Hamburg, 13 cs.  
E. Dietzgen Co., by same, 4 cs.

### COPY PAPER

Japan Paper Co., Shunko, Kobe, 59 cs.

### LITHO PAPER

R. F. Downing & Co., Inc., Rangoon Maru, Hong Kong, 5 cs.

### WRITING PAPER

Whiting & Patterson Co., La Savoie, Havre, 11 cs.

### COLORED PAPER

F. B. Vandegrift & Co., Carson, Hamburg, 6 cs.

### PACKING PAPER

Japan Paper Co., Carson, Hamburg, 23 cs.

### NEWS PRINT

American Woodpulp Corp., Natirar, Hallvik, 376 rolls.  
New York American, Nyland, Hallstavik, 3,122 rolls.  
New York American, Nyland, Norrkoping, 929 rolls.  
New York American, Carlsholm, Norrkoping, 1,849 rolls.  
Chemical National Bank, Potomac, Bremen, 83 rolls.  
M. O'Meara, Topdalsfjord, Brenik, 484 rolls.  
Haring Paper Corp., by same, 1,413 rolls.  
National Bank of Commerce, Panola, Kotka, 333 rolls.  
Street & Smith Corp., by same, 50 rolls.  
The "Globe," by same, 117 rolls.  
Young Publishing Co., by same, 148 rolls.  
Irving National Bank, by same, 1,162 rolls.  
Hudson Trading Co., Potomac, by same, 91 rolls.

### PRINTING PAPER

E. C. Melby, Topdalsfjord, Brenik, 11 bis.  
Globe Shipping Co., Potomac, Bremen, 139 cs.  
Agar Berussion Corp., Mt. Clinton, Hamburg, 19 rolls.  
Perkins, Goodwin & Co., G. Verdi, Genoa, 25 cs.  
F. B. Vandegrift & Co., Carson, Hamburg, 2 cs.  
Agar Berussion Corp., by same, 190 rolls.  
C. Dietzgen & Co., Orbita, Hamburg, 7 cs.

### PAPER

P. C. Zuhlke, Finland, Antwerp, 104 cs.  
M. O'Meara Co., Natera, Hallnik, 207 bis.  
W. J. Byrnes, LaSavoie, Havre, 7 cs.  
D. S. Walton & Co., Carlsholm, Norrkoping, 320 bis.  
D. S. Walton & Co., by same, 154 bis.  
D. S. Walton & Co., by same, 957 rolls.  
Sinclair, Valentine & Co., Mt. Clinton, Hamburg, 7 cs.  
Republic Bag & Paper Co., Carson, Hamburg, 1,217 rolls.  
D. S. Walton & Co., by same, 1,596 rolls.  
D. S. Walton & Co., by same, 21 bis.  
A. Lamb, Orbita, Hamburg, 69 cs.

### RAGS, BAGGINGS, ETC.

Castle, Gottheil & Overton, Independence Hall, Rotterdam, 979 bis. rags.  
E. J. Keller Co., by same, 94 bis. rags.  
R. F. Downing & Co., Inc., Potomac, Bremen, 227 bis. rags.  
N. S. Lines, Inc., by same, 1,121 bis. rags.  
Albion Trading Co., Mesaba, London, 38 bis. rags.  
G. W. Millar & Co., Vechtdyk, Rotterdam, 321 bis. rags.  
State Bank, West Nilus, Hamburg, 92 bis. rags.  
E. J. Keller Co., by same, 322 bis. paper stock.  
American Woodpulp Corp., Mt. Clinton, Hamburg, 104 bis. rags.  
Albion Trading Co., Bonic, Manchester, 20 bis. rags.  
B. D. Kaplan & Co., by same, 25 bis. rags.  
Castle, Gottheil & Overton, Galileo, Antwerp, 218 bis. rags.  
Equitable Trust Co., by same, 70 bis. cotton waste.  
A. Katzenstein, by same, 139 bis. rags.  
B. D. Kaplan & Co., Baltic, Liverpool, 162 bis. rags.  
Albion Trading Co., by same, 59 bis. rags.  
Salomon Bros. & Co., Carson, Hamburg, 51 bis. paper stock.  
E. J. Keller Co., by same, 158 bis. bagging.  
Parsons & Whittemore, by same, 776 bis. rags.  
Guaranty Trust Co., by same, 1,456 bis. rags.

### OLD ROPE

N. E. Bergen, Galileo, Hull, 47 coils.  
Brown Bros. & Co., by same, 45 coils.  
R. F. Downing & Co., allia, Palermo, 122 bales.  
Equitable Trust Co., Vechtdyk, Rotterdam, 96 coils.

### WOOD PULP

Castle, Gottheil & Overton, Potomac, Bremen, 625 bales.  
H. Hallesen, by same, 3,750 bales.  
National Bank of Commerce, Panola, Kotka, 250 bales, 50 tons.  
Lagerloef Trading Co., by same, 1,555 bales, 177 tons.  
Lagerloef Trading Co., by same, 1,080 reels, 191 tons.  
National Bank of Commerce, West Nilus, Hamburg, 2,994 bales.  
Scandinavian-American Trading Co., Nyland, Norrkoping, 1,500 bales.  
Scandinavian-American Trading Co., Carlsholm, Gothenburg, 508 bales.  
Atterbury Bros., by same, 500 bales.  
Tidewater Papermills Co., G. C. Hogg, Liverpool, N. S., 6,995 bales, 639 tons.  
A. J. Pagel & Co., Inc., Natirar, Hallnik, 3,000 bales, 500 tons.  
F. Enders & Co., by same, 3,675 bales, 735 tons.  
American Woodpulp Corp., by same, 1,000 bales, 200 tons.  
National Bank of Commerce, by same, 2,500 bales, 500 tons.  
Brown Bros. & Co., Carson, Hamburg, 102 bales, 14 tons.  
M. Gottesman & Co., West Nilus, Hamburg, 2,994 bales.  
M. Gottesman & Co., Natirar, Sundsvall, 2,599 bales.

### CASEIN

F. M. Duche & Sons, V. Skogland, Buenos Aires, 417 bags, 25,020 kilos.  
F. M. Duche & Sons, Seattle Spirit, Buenos Aires, 1,667 bags, 100,020 kilos.  
Kalbfleisch Corp., by same, 2,501 bags, 150,010 kilos.

West Virginia Pulp & Paper Co., Huron, Buenos Aires, 834 bags, 50,040 kilos.  
First National Bank of Boston, by same, 432 bags, 25,920 kilos.  
Mechanics & Metals National Bank, by same, 834 bags, 50,040 kilos.  
British American Tobacco Co., Mesaba, London, 5 bags.

## BOSTON IMPORTS

WEEK ENDING FEBRUARY 14, 1922

M. Gottesman & Co., Carlsholm, Norrkoping, 2,500 bales wood pulp.  
American Woodpulp Corp., by same, 1,200 bales wood pulp.  
J. A. & W. Bird & Co., Seattle Spirit, Buenos Aires, 546 bags casein, 32,760 kilos.  
T. M. Duche & Sons, by same, 834 bags casein, 50,040 kilos.  
Atterbury Bros., by same, 1,000 bags casein, 60,000 kilos.

## PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 14, 1922

E. J. Keller Co., Carson, Hamburg, 94 bis. paper stock.  
Agar Berussion Corp., by same, 38 rolls printing paper.  
Chemical National Bank, by same, 125 rolls paper.  
Ladenburg, Thalman & Co., by same, 220 bis. rags.  
Irving National Bank, by same, 6 bis. rags.  
Castle, Gottheil & Overton, by same, 211 bis. rags.  
Castle, Gottheil & Overton, by same, 393 bis. wood pulp, 58 tons.  
F. Enders & Co., by same, 525 bis. woodpulp, 107 tons.  
Johnstone Paper Co., Panola, Kotka, 156 bis. news print.  
National Bank of Commerce, by same, 1,434 bis. printing paper.  
National Bank of Commerce, by same, 66 bis. news print.  
National Bank of Commerce, by same, 4 bis. writing paper.  
Paper House of Pennsylvania, by same, 620 bis. printing paper.  
Paper House of Pennsylvania, by same, 1,401 bis. news print.  
Paper House of Pennsylvania, by same, 905 reels news print.  
Paper House of Pennsylvania, Panola, Helsingfors, 468 reels news print.  
Virginia Paper Co., by same, 368 bis. news print.  
Agras Corp., by same, 580 reels news print.

## BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 14, 1922

F. Enders & Co., Natirar, Hallvik, 325 bis. wood pulp, 65 tons.  
National Bank of Commerce, Natirar, Sundsvall, 9,426 bis. wood pulp, 1,625 tons.  
American Woodpulp Corp., by same, 3,000 bis. wood pulp, 609 tons.  
American Woodpulp Corp., by same, 1,440 rolls news print.  
American Woodpulp Corp., Carlsholm, Norrkoping, 3,240 bis. wood pulp.  
The Borregaard, Carlsholm, Gothenburg, 1,000 bis. wood pulp.  
Equitable Trust Co., by same, 1,007 reels news print.  
Hubbs & Corning Co., Carlsholm, Norrkoping, 17 bis. paper.  
Hudson Trading Co., City of Flint, 260 bis. wood pulp.

## NORFOLK IMPORTS

WEEK ENDING FEBRUARY 14, 1922

Hudson Trading Co., Vulcan City, 46 bis. wood pulp.



**THE CLAFLIN ENGINEERING COMPANY**

manufacturers of  
**CLAFLIN  
CONTINUOUS  
BEATERS**

They are used successfully on ALL KINDS OF STOCK  
Watch this space next month

**THE CLAFLIN ENGINEERING CO.**  
Lancaster, Ohio

Type "B"  
**Iron Extractor**

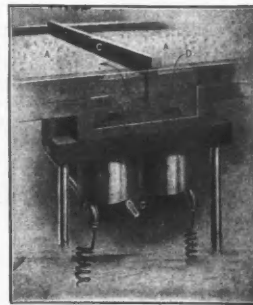
Simple  
Effective  
Durable  
Inexpensive

Better paper is the aim of the majority of manufacturers. Our Type "B" IRON EXTRACTOR will be of remarkable aid to the manufacturer who installs it. It is positive in its results, it extracts all iron and

also objectionable material from the paper stock during the process of manufacture, it is compact and economical in operation.

Let us co-operate with you in obtaining **BETTER PAPER.**

**The Roland T. Oakes Co.**  
Holyoke, Mass.



**Hudson Bag Co., Inc.**

Our Brands:  
**Prominent  
My Choice  
Popular  
Favorite**

MANUFACTURERS OF  
**Self-Opening  
Square and Flat Bags**

**SACKS AND SPECIALTIES**

New York Office, 516 Fifth Ave.  
(Cor. 43rd St.)

Factory: Brooklyn, N. Y.

**ROGERS WET MACHINE**

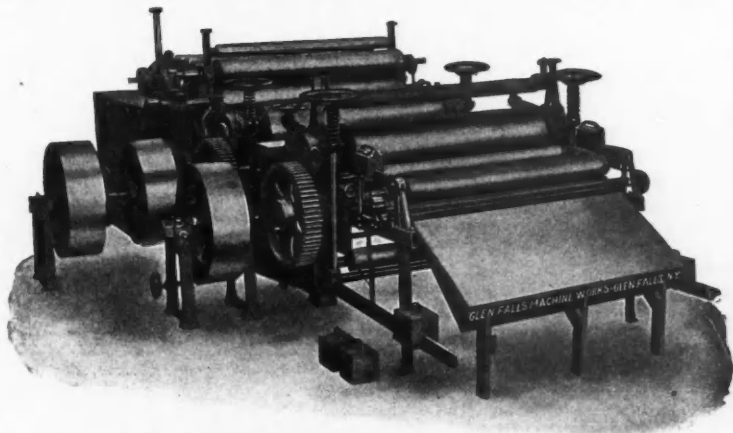


Illustration Shows Rogers Double Press Wet Machine

FOR CHEMICAL PULP—including Sulphite, Sulphate, Soda, also Cotton and Waste Paper fiber.

TYPES—Single and Double Press 72" wide.

CAPACITY—either type 25-30 tons air dry stock per 24 hours.

SHEETS produced by the Double Press Machine uniformly 48% dry. By the Single Press Machine uniformly 40% dry. There is no fold to contain excessive moisture. Sheets are handy size, 33"x36", and are folded once into most convenient bundles for storage, for the beater or for shipping. By this great capacity, high dry test, small amount of floor space per ton pulp produced, exceedingly low cost for labor and maintenance, users are assured that the machine will completely pay for itself within one year, and are promised a handsome return on their investment.

**WORKMANSHIP AND MATERIAL GUARANTEED**  
**GLENS FALLS MACHINE WORKS**      **Glens Falls, N. Y.**

*Try Our Split Cams for Your Flat Screens*

See our exhibit at the Seventh National Exposition of Chemical Industries, 8th Coast Artillery Armory, New York, Week of September 12th.

## Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,  
WEDNESDAY, FEBRUARY 15, 1922.

**ALUM.**—Activity in the alum market is moderate, with the demand holding constant and the supply plentiful. Prices are firm, with ammonia alum quoted at from 3.65 to 3.75 cents a pound for the lump, 3.75 to 4.00 cents for the ground, and 4.15 to 5.25 cents for the powdered.

**BLEACHING POWDER.**—The demand for bleach continues of the hand-to-mouth variety. Low stocks of the commodity now on hand in the paper mills give promise of renewed business activity before long. Imported bleach sells at 1.90 cents a pound and domestic at from 2.00 to 2.25 cents a pound.

**BLANC FIXE.**—Business is slack in the blanc fixe market, although increased business is expected before long, as the paper mills are becoming more active. Blanc fixe pulp is quoted at from \$40 to \$50 a ton, depending on the grade required, and powdered blanc fixe is quoted at from 3.50 to 3.75 cents a pound.

**BRIMSTONE.**—Little change is apparent in the sulphur market, which has been subjected to the influence of dull times the same as the other markets. The demand is fairly steady and most buyers desire immediate delivery. Domestic brimstone is quoted at from \$18 to \$20 a ton, f. o. b. New York, and \$16 to \$18 a long ton at the mines.

**CASEIN.**—A firming up process is going on in the casein market, due to the low supply of the commodity now on the market and the fairly good demand. Importations from Argentina have not been of normal volume in a good many months and supplies from California are also smaller than usual. The price is 9.00 cents a pound and promises to become higher.

**CAUSTIC SODA.**—The movement of caustic soda is sluggish. There are plenty of inquiries for small spot lots, but a noticeable absence of contracts. Shipment must be immediate in most cases. The freight rates are destroying a good volume of business, for the item of transportation cost is one that buyers are inspecting more carefully than ever, since they are compelled to accept smaller profits than are normally received. The contract price is 3.65 cents a pound on the basis of 76 to 78 per cent, while spot caustic sells at a slightly lower figure.

**ROSIN.**—The rosin market holds firm and more or less inactive as far as those grades of rosin used in the paper industry are concerned. Grades E, F and G, most used in paper manufacturing, are quoted at 5.45 cents a pound, per barrel of 280 pounds net.

**CHINA CLAY.**—The demand for china clay is increasing slowly and the trade is generally optimistic in the belief that 1922 will see a greater amount of the product employed in the paper industry than for some time. Orders for a few weeks in advance are on hand in goodly number, although the uncertain feeling regarding prices and the comparatively tight financial situation still prevent the renewal of contracts for any considerable period. Domestic unwashed sells at \$6 to \$8 a ton net, washed at \$8 to \$10, and imported at \$13 to \$20.

**SALTCAKE.**—Considerable volumes of saltcake are moving, in spite of the fact that the demand is still subnormal and freight rates too high. The production of the material is slow and the market fairly firm as a result. Chrome saltcake sells at \$18 a ton and acid white at \$20.

**SATIN WHITE.**—Trading is light in the satin white market, which is spotty at best. Satin white is quoted at 2.10 cents a pound.

**SULPHATE OF ALUMINA.**—The market is quiet at present, but promises to become stronger as soon as the demand from the paper industry again strikes its stride. The commercial grade sells at 1.50 to 1.60 cents a pound, and the iron-free grade at 2.60 to 2.75 cents, depending on the location of the supply.

**SODA ASH.**—Foreign soda ash sells at 1.75 cents per pound and domestic at 1.75 to 1.90 cents per pound.

## 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 3/4 @ .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 1/2 @ .08
Container Manila. 1.00 @ 1.10	New Black Mixed 3.00 @ 3.25
Old Kraft. . . . . 1.90 @ 2.00	Old
Overissue News. . . . . .75 @ .80	White, No. 1—
Old Newspaper. . . . . .50 @ .60	Repacked. . . . . .06 @ .06 1/4
No. 1 Mixed Paper. . . . . .45 @ .50	Miscellaneous. . . . . .04 1/4 @ .04 3/4
Common Paper. . . . . .40 @ .50	White, No. 2—
Straw Board, Chip. . . . . .40 @ .45	Repacked. . . . . .03 @ .03 1/4
Binders' Bd. Chip. . . . . .40 @ .45	Miscellaneous. . . . . .02 3/4 @ .03 1/4
Domestic Rags—New.	Thirds and Blues—
Price to Mill, f. o. b. Phila.	Repacked. . . . . 1.85 @ 2.00
Shirt Cuttings—	Miscellaneous. . . . . 1.55 @ 1.75
New White, No. 1. .09 1/4 @ .09 3/4	Black stockings. . . . . 1.75 @ 2.25
New White, No. 2. .05 @ .06	Roofing Stock—
Silesias, No. 1. .05 @ .06	No. 1. . . . . .90 @ 1.00
New unbleached. .08 1/2 @ .09	No. 2. . . . . .80 @ .90
Washables. . . . . .03 1/4 @ .03 3/4	No. 3. . . . . .70 @ .80
Fancy. . . . . .05 @ .05 1/4	No. 4. . . . . .75 @ .85
Cottons—according to grades—	No. 5A. . . . . nominal
Blue Overall. . . . . .05 @ .05 1/4	B. . . . . nominal
New Blue. . . . . .02 1/4 @ .02 3/4	C. . . . . nominal

### BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

<b>Paper</b>	Wood, Vat Lined. .47.50 @ 50.00
Bonds. . . . . .07 1/2 @	Filled News Board. 40.00 @ 45.00
Ledgers. . . . . .09 @	Solid News Board. 42.50 @ 45.00
Writings. . . . . .07 @	S. Manila Chip. . . . . 42.50 @ 45.00
Fine. . . . . .12 @	Pat. Coated. . . . . 70.00 @ 75.00
Books, S. & S. C. .06 1/2 @ .07	
Books, M. F. . . . . .05 1/2 @ .06 1/4	<b>Old Papers</b>
Books, coated. . . . . .09 @	Shavings—
Label. . . . . .09 1/4 @	No. 1 Hard White. .04 @ .04 1/2
News sheets. . . . . 4.00 @	No. 1 Soft White. .03 @ .03 1/2
News, rolls. . . . . .05 1/4 @	No. 1 Mixed. . . . . .07 1/2 @ \$8.00
Manila—	Ledgers & Writings. .02 @ .02 1/4
No. 1 Manila. . . . . \$6.75 @	Solid Books. . . . . .01 1/4 @ \$1.35
No. 1 Fibre. . . . . 8.00 @	Blanks. . . . . \$1.30 @ \$1.40
No. 1 Jute. . . . . 8.50 @ 9.00	No. 2 Books Light. .60 @ .70
Kraft Wrapping. . . . . 7.00 @	Folded News, over
Common Bogus. . . . . 3.00 @	Issues. . . . . \$11.50 @ 12.00
	Mixed paper. . . . . .05 @
<b>Boards</b>	Gunny Bagging. . . . . .80 @
(Per Ton Destination)	Manila Rope. . . . . .04 @ .04 1/4
Chip. . . . . \$37.50 @	Common Paper. . . . . 8.00 @
News, Vat Lined. . . . . 39.00 @ 40.00	Old News. . . . . .80 @
	Old Kraft. . . . . 1.70 @

### TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

<b>Paper</b>	Sulphite bleached. . . . . 95.00 @ 105.00
(Mill Prices to Jobbers f. o. b. Mill)	Sulphate. . . . . .75.00 @
<b>Bond—</b>	<b>Old Waste Papers</b>
Sulphite. . . . . 12 1/2 @ 14	(In carload lots, f. o. b. Toronto)
Light tinted. . . . . 13 1/2 @ 15	Shavings—
Dark tinted. . . . . 15 @ 16 1/2	White Env. Cut. 3.75 @ —
Ledgers (sulphite). . . . . @ 14 1/2	Soft White Book
Writing. . . . . 11 1/2 @ 15	Shavings. . . . . 3.15 @ —
<b>News, f. o. b. Mills—</b>	White Bl'k News 2.00 @ —
Rolls (carloads). 3.50 @ —	<b>Book and Ledger—</b>
Sheets (carloads). . . . . @ 4.25	Fiat Magazine and
Sheets (2 tons or	Book. . . . . 1.45 @ —
over). . . . . @ 4.50	Stock
<b>Book—</b>	(old). . . . .
No. 1 M. F. (car-	Light and Crum-
loads). . . . . 10.00 @ —	pled Book Stock 1.30 @ —
No. 2 M. F. (car-	Ledgers and
loads). . . . . 9.00 @ —	Writings. . . . . 1.80 @ —
No. 3 M. F. (car-	Solid Ledgers. . . . . 1.80 @ —
loads). . . . . 8.50 @ —	<b>Manilas—</b>
No. 1 S. C. (car-	New Manila Cut. 1.95 @ —
loads). . . . . 10.50 @ —	Printed Manilas. 1.00 @ —
No. 2 S. C. (car-	Kraft. . . . . 2.25 @ —
loads). . . . . 9.50 @ —	<b>News and Scrap—</b>
No. 1 Coated and	Strictly Overissue. .90 @ —
litho. . . . . 15.00 @ —	Folded News. . . . . .80 @ —
No. 2 Coated and	No. 1 Mixed Pa-
litho. . . . . 14.00 @ —	pers. . . . . .70 @ —
No. 3 Coated and	<b>Domestic Rags—</b>
litho. . . . . 13.25 @ —	Price to mills, f.o.b. Toronto.
Coated and litho.	Per lb.
colored. . . . . 15.25 @ —	No. 1 White shirt
Wrapping—	cuttings. . . . . .09 1/4 @ .10
Grey. . . . . 4.75 @ —	No. 2 White shirt
White Wrap. . . . . 5.25 @ —	cuttings. . . . . .05 1/4 @ .05 3/4
"B" Manila. . . . . 5.75 @ —	Fancy shirt cut-
No. 1 Manila. . . . . 7.50 @ —	tings. . . . . .05 1/4 @ .05 3/4
Fibre. . . . . 7.25 @ —	No. 1 Old whites. .04 @ —
Kraft, M. F. or	Thirds and blues. .02 @ .02 1/4
M. G. . . . . 8.75 @ —	Per cwt.
	Black stockings. 2.00 @ —
<b>Pulp</b>	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. . . . . 70.00 @ 75.00	Manila rope. . . . . .04 1/4 @ .04 1/2
Sulphite, news grade. 60.00 @ 65.00	No. 2. . . . . .01 1/2 @ —
	Gunny bagging. . . . . .02 1/4 @ —

*The Home of Quality*



FACTORY  
132<sup>ND</sup> TO 133<sup>RD</sup> ST & BROOK AVE

# PAPER BAGS

Sacks and Specialties

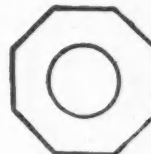
ESTABLISHED 1901

## SCHORSCH & CO.

Manufacturers

500 East 133d Street : New York

This Registered Trade Mark Octagon



on a Paper Bag Vouches for Its Good Quality

# Buchanan & Bolt Wire Company

ESTABLISHED 1878 AT HOLYOKE, MASS.

Makers of Highest Grade Fourdrinier Wires, Dandy Rolls, Cylinder Covers, Brass Wire Cloth of all Meshes for Paper, Pulp and Coating Mills—Quality Guaranteed

We make a specialty of Fine Wires for Magazine and Book Papers

## Felt Test—Lowest Cost per Ton

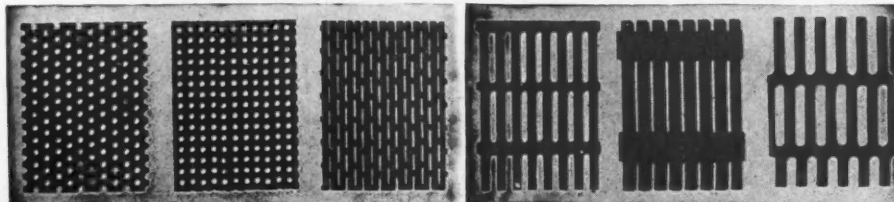
If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts, for ORR felts will produce the lowest cost per ton. They “stand up” under severe usage. Orr durability is acknowledged everywhere. Their strength and long life are as dependable as their reliability and quality.

In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

**THE ORR FELT & BLANKET COMPANY, Piqua, Ohio**

## PERFORATED METALS

All sizes and shapes of Holes



All kinds and thicknesses of Metal

For Centrifugal and Rotary Screens, Drainer Bottoms, Filter Plates, Pulp Washers, etc.

### The Harrington & King Perforating Company

618 No. Union Ave., Chicago, Ill., U. S. A.

New York Office, 114 Liberty St.

# WANT AND FOR SALE ADVERTISEMENTS

## HELP WANTED

### CLASSIFIED RATES

Minimum rate for advertisements of 25 words or less, first insertion, \$1.00.

**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.

**WANTED—Paper Bag and Envelope Salesmen.** A Specialty House having recently enlarged its Manufacturing Equipment desires the services of young aggressive salesmen. A broad field and excellent future. Experience and knowledge essential. Write in detail. Address, Box 4638, care Paper Trade Journal. tt

**WANTED: COMBINER MAN—**To make lay-outs and take charge of operating one 80" and 120" machine for pasting solid fibre container board. Pressman: Must be experienced in High-class solid fibre container work to assume direct charge of Printing Department, consisting of various makes of fibre-Board Presses, both flat beds and cylinder types. General Foreman: Man who is experienced in all the finishing processes of solid Fibre Container Work. Must be able to take full charge of Slitting, Cutting, Creasing and Stitching Departments. Full particulars as to experience, references, and salary expected to be covered in first letter of application. All correspondence treated confidentially. Address, Box 4708, care Paper Trade Journal. tt

**WANTED—**An assistant Chemist for laboratory of a large Pulp and Paper Company located in the Middle West. A young college graduate with a year or two Paper Mill experience preferred. Must be wide awake. Address, Box 4796, care Paper Trade Journal. F-23

**WANTED—**First class Machine tender for Box Board Mill making 35 to 40 tons of high grade folding boards. Good opportunity for the right man. Address, Box 4805, care Paper Trade Journal. F-16

**WANTED—**Trimmer Man on Bond, also all around finisher on Bond. Address, Box 4809, care Paper Trade Journal. F-16

**WANTED—**Machine Help and Beaterman, Mill in good location. Address, Box 4831, care Paper Trade Journal. M-9

## A CAREER NOT A JOB

Wanted: A high class man as General Manager of modern Waxed Paper Plant. Must be fully experienced in this line and not be afraid to shoulder responsibility as to quality and production. Only those who have earned \$5,000 or more can be considered. All answers, which should contain details as to experience and references will be kept in strictest confidence. Address, Box 4794, care Paper Trade Journal. F-23.

## HELP WANTED

**WANTED—**Superintendent for 2-machine Mill, making Book and Bond Paper. Practical experienced man wanted. In reply, enclose references, state experience. Must have ability and character. Address, Box 4808, care Paper Trade Journal. F-23

**WANTED—**Machine Tender for back tender 86" Machine. Kraft, two Tours, 57 cents and 43 cents. References required. Address, Box 4811, care Paper Trade Journal. F-16

**WANTED—**Two machine tenders, two beater engineers, boss finisher and millwright, for book mill on Pacific Coast. Only first class men experienced in Machine Finished Book and Writings. References required. Address, Box 4847, care Paper Trade Journal. M-2

**EXPERIENCED MEN IN PAPER INDUSTRY—**Our Confidential Personal Service limited to the Pulp and Allied Trades. Can be of the utmost value to you in locating desirable positions. Write to the Industrial Service Bureau, 1502 Monadnock Block, Chicago, Ill. F-23

**WANTED—**First class Cylinder Machine Tender and Beaterman for 80" machine, three tours. Test Board and Bogue Papers. Address, Box 4833, care Paper Trade Journal. F-23

**WANTED—**Two Cylinder Machine tenders and two Beatermen experienced on high grade Manila Rope Specialties. Mill located in good Eastern City. Address, Box 4834, care Paper Trade Journal. M-2

**WANTED—**First class Machinist in new Modern Board Mill. Also experienced all-around Paper Mill millwright, each to have necessary tools and be capable of going ahead with work laid out. Must be industrious and careful workmen; work is steady; state wages expected and give references. Address, Box 4835, care Paper Trade Journal. F-16

**MAN WANTED—**Experienced man on Wax Machine. State reference. Address, Box 4836, care Paper Trade Journal. F-16

### Export Paper Manager

Large, well known firm has exceptional opportunity for high class Executive to take charge of well established Export Business to Latin America and Far East. Must have previous experience along these lines. Remuneration limited only by results. State age, experience and remuneration expected. Confidential. Address Box 4848, care Paper Trade Journal. F-16

## SITUATIONS WANTED

**SUPERINTENDENT—**Open for position; 20 years experience. Practical paper maker on Bonds, Writings, Ledgers, Waxing and book. Will go to Canada or any Foreign Country. Address, Box 4737, care Paper Trade Journal. M-2

**SULPHITE SUPERINTENDENT, 20 years' practical and some technical training,** wishes to get in touch with managers of mills who want the best and are not getting it. Address, Box 4744, care Paper Trade Journal. F-24

**A-1 ALL AROUND MECHANIC—**Wishes to make change. Twenty years' experience in Pulp and Paper Mills. Satisfactory work guaranteed. Employers interest is mine. References. Address, Box 4760, care Paper Trade Journal. M-2

## SITUATIONS WANTED

**MARRIED MAN** desires position as Sulphite Cook. Has had several years' experience in acid making and cooking sulphite. Can give best of references. Address, Box 4822, care Paper Trade Journal. F-23

**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. tt

**SUPERINTENDENT—**Thirty years of age and married, desires position in either Blotting or Specialty Mill. Can get results, and knows quality and production. Good references. Address, Box 4788, care Paper Trade Journal. F-16

**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 Fourdrinier and Cylinder Machines. Address, Box 4786, care Paper Trade Journal. tt

**TECHNICAL GRADUATE—**Desires position of responsibility with professional concern. Fifteen years' varied experience in Pulp and Paper industry, including Technical Control research, operating and engineering duties. Thoroughly practical and reliable man. Excellent references. Address, Box 4787, care Paper Trade Journal. F-16

**POSITION WANTED—**By first class Boss Beaterman. An up-to-date Color man, accustomed to nearly all grades. Best of references. E. L. Davis, care Martin House, Whippany, N. J. F-16

**SUPERINTENDENT** open for position. Familiar with Tag, Card, Colored specialties and Wrapping. Best of references. Address, Box 4802, care Paper Trade Journal. F-16

**YOUNG MAN—**College educated, with practical experience in manufacture of sulphate, soda and sulphite pulp, wishes to connect with progressive concern. Best references. Address, Box 4803, care Paper Trade Journal. F-23

**MASTER MECHANIC** with 20 years experience desires position. Good record in construction and maintenance in pulp and paper mills in United States and Canada. Best of references. Address, Box 4806, care Paper Trade Journal. F-16

**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 4815, care Paper Trade Journal. TF

**COTTON LINTERS—**Experienced Pulp Mill man who has process of cooking Cotton Linters, whereby two-thirds of chemicals can be economically recovered, wishes to connect with reliable Concern. Address, Box 4816, care Paper Trade Journal. F-16

**KRAFT PULP—**Experienced sulphate mill superintendent, 10 years' successful experience on all bleached and unbleached kraft wishes to connect with mill desiring maximum production. Is willing to guarantee a full output per unit. Address, Box 4817, care Paper Trade Journal. F-23

**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-2

**WANTED POSITION** as superintendent used to making all Wrapping, Chip and Box Boards and Building Papers, also Filter Paper. Used to cylinder, fourdrinier and Harper machines. Knows how to handle help. 22 years' experience. Can furnish good references. Address, Box 4821, care Paper Trade Journal. M-9

**SITUATIONS WANTED**

**YOUNG MAN**—College education with Mill and Jobbing experience in Fine Paper Trade wants selling connection with Jobbing House, Mill Agency or Sales Representative in Middle West. Address, Box 4711, care Paper Trade Journal. F-16

**MASTER MECHANIC**—Desires position. Twenty years' experience in Mills of all grades of Paper and Pulp; also on Steam, Water and Electric Power. Best references. Address, Box 4765, care Paper Trade Journal. M-9

**POSITION WANTED**—First class machine tender, 20 years' experience on all kinds of board machine. Married man, steady and sober. Can give references. Can start at once. Address, Box 4823, care Paper Trade Journal. F-16

**PULP AND PAPER MILL ENGINEER** wishes permanent position. Capable all around man, civil, mechanical, structural. Good draftsman. Eleven years' experience. University graduate. American, 33 years old. Married. Address, Box 4824, care Paper Trade Journal. F-23

**WANTED POSITION** as Secretary to President or Manager of Mill, young man thoroughly experienced in Wrapping Paper and Board Mill, possessing initiative and executive ability. Address, Box 4825, care Paper Trade Journal. F-23

**COLLEGE GRADUATE**, thirty-seven years of age, who has been connected with one of the largest wholesale paper houses in Philadelphia for over twelve years desires to become associated with a concern who may be looking for a man with unassailable character, credentials and wide experience. He has thorough knowledge of fine and fancy papers, card board, and printing papers for the box making, publishing and printing industries. His experience in the marketing of these commodities has been both as salesman and managerial executive. Address, Box 4826, care Paper Trade Journal. F-16

**SUPERINTENDENT** wants to make change. Twenty-seven years' experience on News, Book, Writing, Bond, Fibre and Board, also Sulphite and Ground Wood. Always increased the production wherever I have been and put the mill in A-No. 1 shape. 44 years old and can give the best of references. Address, Box 4827, care Paper Trade Journal. M-9

**SUPERINTENDENT** desires position running Friction or binders board mill. Have had many years of experience. Understands repairs and can superintend building of mill. Can furnish best of references. Address, Box 4828, care Paper Trade Journal. M-16

**CHEMICAL & PRODUCTION ENGINEER**—Quality on quantity basis, wants Western Mill or Industrial Commercial Position. Age 38. Address, Box 4849, care Paper Trade Journal. M-2

**BOSS FINISHER**—Practical Executive, wide experience, all grades and weights of Fourdrinier and cylinder paper, desires connection with good mill. Address, Box 4850, care Paper Trade Journal. M-2

**SULPHITE 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. M-9

**WANTED**

Young man with fifteen years' experience in the selling end of the paper business, for reasons entirely foreign to his present connection, desires to make change. Now managing executive in a Division of one of the best known Fine Paper Merchants in the country; 34 years of age, married. My record will stand the closest scrutiny. Correspondence must be strictly confidential. If interested, address Box 4829, care Paper Trade Journal. M-2

**SITUATIONS WANTED**

**BOSS FINISHER**—Open for position. Thoroughly experienced. All grades of book, writing, envelope and board papers. Highest references. Address, Box 4852, care Paper Trade Journal. M-2

**WANTED POSITION**—As assistant to Coating Mill Superintendent. Can furnish references as to ability. Married. 16 years' experience. Address Box 4853, care Paper Trade Journal. F-16

**SALESMAN**—Experienced Coarse Papers, Tissues, Bags, Toilet, Wax Specialties, seeks connection, metropolitan district selling jobs, large consumers. Commission or salary. Address, Box 4854, care Paper Trade Journal. F-16

**YOUNG MAN, 25**—Thorough knowledge of Coarse Paper, Bags, Tissue Specialties, desires position as inside man. Good correspondent. Consider position selling part time. Address, Box 4855, care Paper Trade Journal. F-16

**CORRUGATED AND CONTAINER BOARD MILLS**—Mill agent with well established trade wants to represent mill exclusively, New York and East. Commission or salary. Address, Box 4856, care Paper Trade Journal. F-16

**YOUNG MAN**—Fifteen years' experience, printing papers, desires connection with Mill or Jobber as Executive or Salesman. Now employed. Excellent record. Address, Box 4837, care Paper Trade Journal. F-16

**BEATERMAN** wishes position, experienced on all grades of board, bond hanging and news. Married, sober and steady. Address, Box 4838, care Paper Trade Journal. F-16

**A-1 BEATERMAN**—Experienced on all grades, desires position. Best of references. Address, Box 4839, care Paper Trade Journal. M-2

**SALESMAN**—At present employed selling to jobbers in Minneapolis and St. Paul wants mill agency. Experienced on all lines of paper and specialties. Satisfactory references furnished. Address, Box 4840, care Paper Trade Journal. M-2

**POSITION WANTED** as Machine Tender. Good on fourdrinier and cylinder machine with Edwards attachments or without. Experienced on all grades of Tissue and Crepes. Married, have family. Can furnish best of references. Address, Box 4841, care Paper Trade Journal. M-2

**A-1 MACHINE TENDER** desires position as Boss Machine Tender with good company where his ability and experience may be of value. Experienced on large and fast machines. All grades manila, Tissues and specialties. Married. Best references. Address, Box 4842, care Paper Trade Journal. F-23

**WANTED**—Position as Ground Wood Superintendent. Over 20 years' experience with some of the largest News Mills in the Country. Address, Box 4843, care Paper Trade Journal. F-23

**SITUATION WANTED**—By Superintendent of Ability. Twenty years' practical experience on all grades of felt and floor coverings and building papers of all kinds. Wide experience on mill construction and repairs, also in managing help to get greatest efficiency. Middle-aged, married. Can furnish No. 1 references. Address, Box 4774, care Paper Trade Journal. F-16

**MARRIED MAN** desires position as Sulphite Cook. Has had several years' experience in acid making and cooking sulphite. Can give best of references. Address, Box 4822, care Paper Trade Journal. F-23

**FOR SALE**

**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**—Roofing and Saturating Machines. 72"x36" wide. Chilled steel rolls. Also Painter Mixing Machine, Grinders, etc. Address Box 4310, care Paper Trade Journal. tf

**FOR SALE**

**BOX BOARD MILL FOR SALE**—This mill is new, 50 Tons production per day. Located in central part of New York State. Can be bought right. Address, Box 4714, care Paper Trade Journal. tf

**FOR SALE**—14 Calender Rolls, 58" face, 8" to 14" diameter, 2 No. 1 Claffin 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: DRYERS**—8-60"x120" Dryers with bearings. A bargain. W. V. Sullivan, Call Bldg., San Francisco. tf

**SHERIFF'S SALE**—Under and by virtue of a Writ of Execution issued out of the District Court of the District of Thunder Bay under THE WOODMEN'S LIEN FOR WAGES ACT against the Kaministiquia Pulp and Paper Company, Limited, Defendant, at the suit of E. J. Bawlf and Bawlf Cartage, Limited, Plaintiffs, I have seized and will offer for sale by public auction at my office in the Court House, in the City of Port Arthur, in the Province of Ontario, on Wednesday, the 22nd day of February, A. D. 1922, at 11 o'clock in the forenoon, four thousand nine hundred and eighty-two and 12/128 (4,982 and 12/128) cords of pulpwood now on and about the Defendant's Premises in the said City of Port Arthur. The Wood will be offered en bloc for a lump sum in cash; the Purchaser to take the wood as it is, and the shortage (if any) to be borne by him. Alexander W. Thompson, Sheriff, District of Thunder Bay. F-16

**FOR SALE**—Paper machine reel 110" Face. Heavy pattern revolving reel for 4 drums. Marinette & Menominee Paper Co., Marinette, Wisconsin. tf

**FOR SALE**—Controlling interest in a three Machine Mill. This mill is located in the Central West and is in wonderful physical condition. Owner wishes to retire. Size of machines, 78", 88" and 105". Address, Box 4857, care Paper Trade Journal. F-23

**FOR SALE**—Corporation incorporated in 1919 under name capable of national extension, will sell for nominal figure, its charter, office furniture, and transfer lease on office space, rental \$60 per month. Call Room 41, 27 East 22nd St., New York. F-16

**REBUILT PAPER MILL MACHINERY IN STOCK AND GUARANTEED NOT WHERE IS AND AS IS**

**Fourdrinier Tissue Machine**—One 96", one 72".  
**Fourdrinier Parts**—Pusey & Jones 118", 100".  
**Kutter** Trowbridge 96".  
**Press Parts for Paper Machines**—Pusey & Jones Bell Crank housing, two sets 18" x 96"; Black & Clawson swing arm housings with rolls.  
**Dryers**—Four 48" x 111", four 48" x 68", one 84" x 67", eleven 42" x 66".  
**Marshall Drives**—Three 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.  
**Chilled Calenders**—One 66" face, five roll; one 54" face, five roll.  
**Dillon Doctors**—For Machine Calenders 60" to 120" face.  
**Slitters and Winders**—One 120" Warren, one 106", 36" Kidders.  
**Reels**—Pusey & Jones two drum upright 48" to 114".  
**Beaters**—Six 72" x 42" Noble & Wood, two 66" x 42" Noble & Wood, equipped with three cylinder washers; one Dilts 62" x 50" iron tub, one Jones 62" x 52", seven Horne 36" x 36".  
**Jordans**—One Wagg Majestic, three No. 3 Dillon Improved, one Large Horne, five Monarch; two Pope Brushing engines.  
**Screens**—Three 12 plate open side Packer. Six 10 plate. Two six plate.  
**Stuff Pumps**—Deane Triplex 8" x 12", Gould triplex 8" x 10", Sandusky triplex 4" x 6".  
**Revolving Sheet Cutters**—One 104" Horne, one 50" Hamblet diagonal, one 42" Finlay, four 61" Hamblet, four 61" Finlay.  
**Wet Machines**—Four 72" Bagley & Sewall Hydraulic.  
*We have a large number of pumps and over five hundred calender, press and couch rolls in stock.*

**FRANK H. DAVIS COMPANY**  
 175 Richdale Avenue, Cambridge, 48, Mass.

**FOR SALE**

**FOR SALE**—Moore & White Sorting Table, absolutely new, equipped with motor. Size 57" x 60". Price reasonable. Address, Box 4830, care Paper Trade Journal. M-3

**FOR SALE**—Langston Rewinder, 60" with Extra Slitters and Shafts; 114" Columbia Slitter and rewinder; 38" Brown Carver and 44" Cutting Press; Pusey & Jones 6" Suction Pump, 3 plungers, belt driven; S. & W. Jordan with 26" Split Pulley; 3 Paper Mill Trucks, 54"x60" Platform, 4 wheels. Mortise Gears, Pulleys, Shafting, etc. Address, Box 4844, care Paper Trade Journal. F-16

**FOR SALE**—One New York Safety 5"x8" vertical steam engine, 32"x4 1/2" fly wheel, Pickering governor. One bank of 13 Dryers 28" diameter, 80" face, set in two tiers, complete with top and bottom felt stretcher guides, and carrying rolls in first-class condition, with steam headers. Now in use. One two drum reel for 84" machine complete, now in use. One 10 plate, Packer screen, complete with plates, driving pulley and three extra sets of plates. One Pope mullen screen, 10 plates, 12"x42". One 36" Holyoke Machine plater. Valley Paper Company, Holyoke, Mass. M-2

**MISCELLANEOUS**

**MILLER PAPER CO.**, FRANK P., high grade specialties. Boards. East Downingtown, Pa. Mar-15

**SIMMONS, JOHN, SONS**, Paper and Paper Stock, 28 and 30 South Marshall street, Philadelphia, Pa. Mar.-1

**SWIFT, GEORGE W., JR.**, Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods. Bordentown, N. J. 1-1-24

**MISCELLANEOUS**

**PULP WANTED**—Will pay cash for any quantity Foreign Pulps on spot and to arrive. Send particulars with price. Address, Box 4832, care Paper Trade Journal. M-2

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**MILL AGENCY WANTED**—Established Jobber with outlet for tonnage in Bond and Book Papers desires Mill Agency for Metropolitan District. Address, Box 4780, care Paper Trade Journal. F-16

**WANTED**—Variable speed, second hand double engine, 12x12 to 16x16. State make, size, condition, price, and when can be inspected. Address, Box 4858, care Paper Trade Journal. M-3

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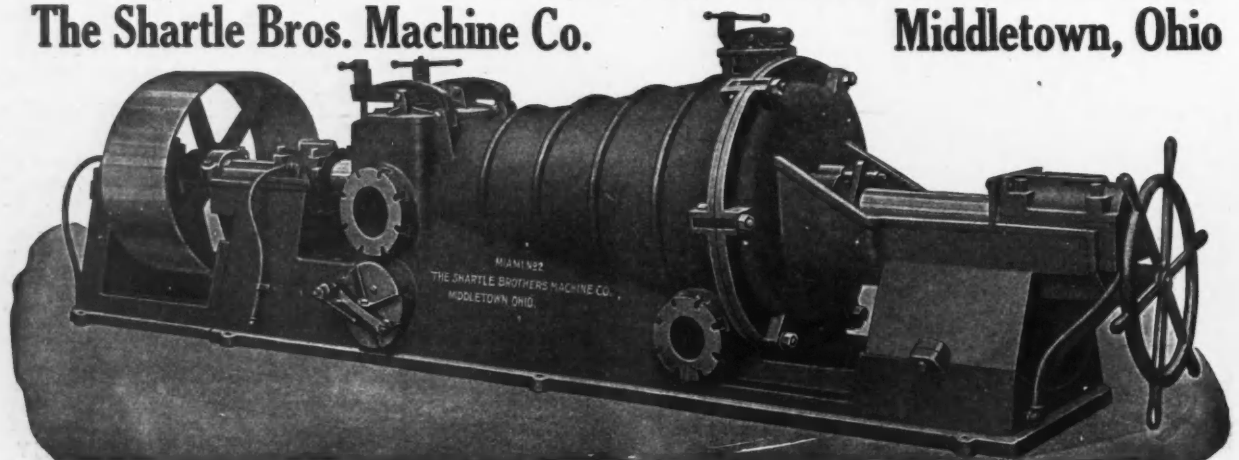
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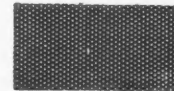
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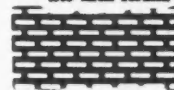
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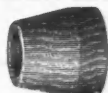
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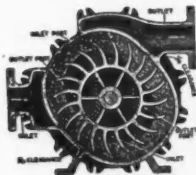
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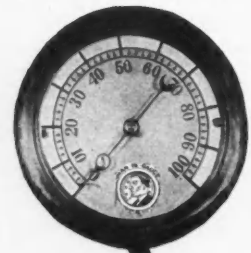


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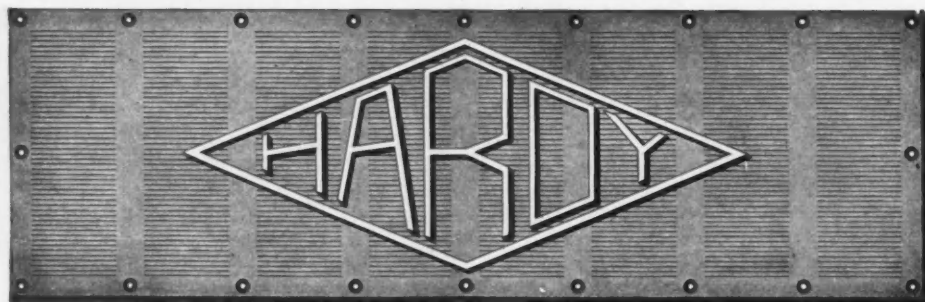
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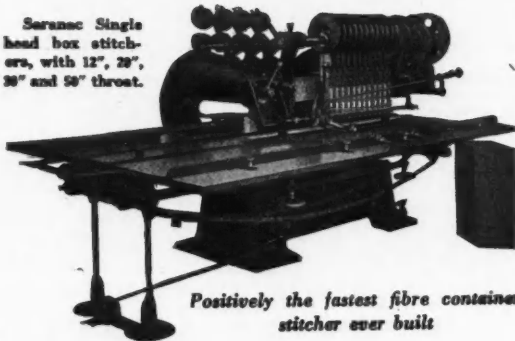
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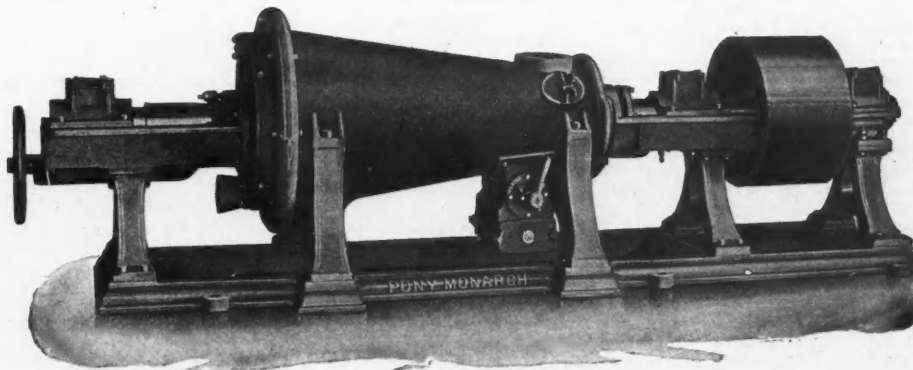
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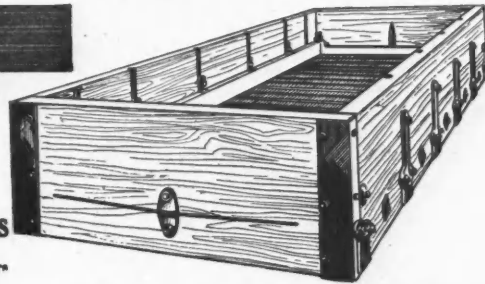
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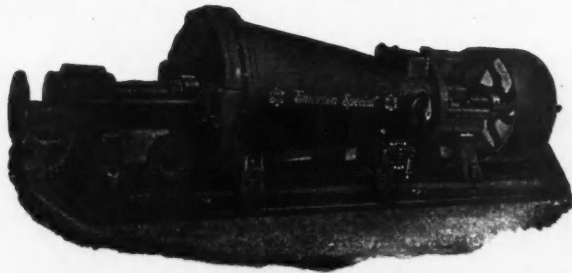
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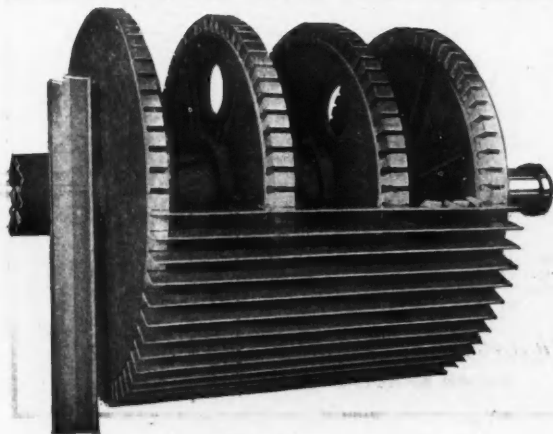


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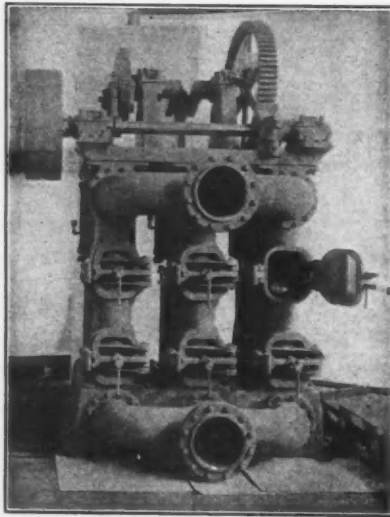
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May we not tell you about its many advantages?

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Builders of All Types of Paper Making  
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Successful machines in operation are proof  
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### Automatic Tube Machines

For Making Tubes for Toilet  
Paper Rolls, Paper Towel Rolls

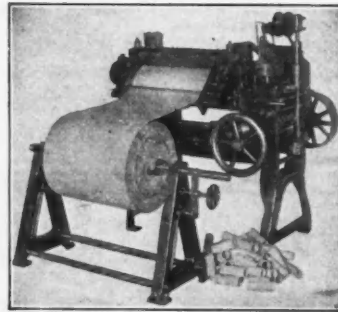
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**Toilet  
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per hour direct  
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are made at rate  
of 1,800 per hour.  
Substantially built  
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Patented Feb. 22, 1916, May 18, 1920.

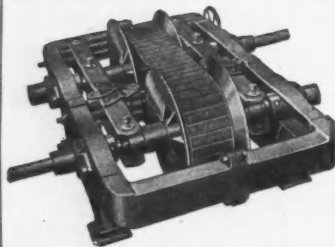
Toilet Paper Machines for making Toilet Rolls with or without perforations and machines for making Sanitary Crêpe Paper Towels, Punch Presses for Sheet Toilet Paper, Drop Roll Slitters, Slitting and Rewinding Machines, Side and Center Seam Merchandise Envelope Machines, Photo Mount Beveling Machines, Candy Bag Machines, Punch Presses for Playing Cards, Rotary Card Cutting and Collating Machines, Etc.

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**VARIABLE  
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THE RIGHT SPEED AT THE RIGHT TIME—that is the only solution for getting superior quality and maximum production of your paper goods at the least expense.

"THE REEVES" Variable Speed Transmission does this very thing to absolute perfection; you can get any variation at any time without stopping your machine. Some decided improvements have been made in the construction of "The Reeves" Transmission, such as:

**TWO KEYS, FULL LENGTH OF SHAFT between boxes,  
LARGER ROLLER THRUST BEARINGS, LARGER  
DISCS, PATENT EQUALIZING COLLARS**

all of which tends to give larger wearing surface, greater carrying capacity and longer life. Special High Duty Ball Bearings are furnished for main boxes if desired.

*It is the only Variable Speed device with 25 years' service record.*

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Furnished Complete with Electric Motor Lift,  
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All Operated from Floor.

Grinding Machines for  
Rolls of all sizes.



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**Job Lots, Rejections, Side Rolls Wanted**

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Special Shaped Carbon, Black Diamond POINTS FOR TURNING Paper, Cotton Chilled Iron and Hardened Steel Calendar Rolls, Hard Rubber, Fibre, etc. Successor to John Dickinson, Established 1796.  
 Agents for Great Britain, C. W. BURTON, GRIFFITHS & CO., Ludgate Square, London.  
 Manufactured by **THOS. L. DICKINSON, 26 Gold St., NEW YORK**

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**"WATERBURY"**

**Felts-Jackets**

ORISKANY, N. Y.

OUR TIGHT FITTING, DIAMOND "W" JACKETS WILL NOT LICK UP AT ANY SPEED  
 1869 {MADE ONLY BY} 1921  
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Various degrees of fineness and either fibrous or granular. Made from first growth Spruce and Pine, by approved processes.

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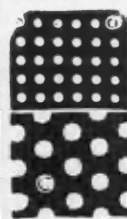
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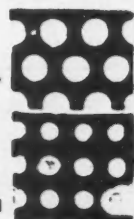
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## CLASSIFIED INDEX TO ADVERTISEMENTS

<b>ADDING MACHINE ROLLS.</b>	<b>CLAY</b>	<b>FOURDRINIER WIRES.</b>
Paper Manufacturing Co. .... 79	Atterbury Bros. .... Front Cover	Appleton Wire Works. .... 84
<b>AGALITE.</b>	John W. Higman Co. .... —	Buchanan Bolt & Wire Co. .... 67
Union Talc Co. .... 79	Paper Makers Chemical Co. .... 4	Cable Excelsior Wire Mfg. Co. .... 84
U. S. Talc Co. .... 79	Western Paper Makers Chemical Co. .... 4	Cheney, Bigelow Wire Works. .... 82
<b>ALUM.</b>	Star Clay Company. .... 84	Eastwood Wire Mfg. Co. .... 84
The Kalbfleisch Corp. .... —	<b>CLUTCHES (Friction, Etc.).</b>	Green Bay Wire Works. .... —
Pennsylvania Salt Mfg. Co. .... 84	Hill Clutch Co. .... —	Lindsey Wire Works. .... 71
Superior Chemical Co. .... 76	<b>COAL MINING.</b>	Joseph O. O'Neill Wire Works. .... 71
Winkler Bros., Inc. .... 76	Empire Coal Mining Co. .... 33	The W. S. Tyler Company. .... 83
<b>ARCHITECTS AND ENGINEERS.</b>	<b>COATED PAPERS.</b>	<b>FURNACES (Automatic).</b>
George F. Drew. .... 72	McLaurin-Jones Co. .... —	Murphy Iron Works. .... 72
Hardy S. Ferguson. .... 72	<b>COGS.</b>	<b>GAUGES (Calliper).</b>
William T. Field. .... 72	N. P. Bowsher Co. .... 84	Farrel Foundry & Machine Co. .... 25
George E. Hardy. .... 72	Menasha Wood Split Pulley Co. .... 73	<b>GAUGES (Pressure, Indicating and Recording).</b>
Herbert S. Kimball. .... 72	<b>COMPRESSORS (Air).</b>	Bristol Co., The. .... 7
Management Engineering and Development Co. .... 73	The Nash Engineering Co. .... 73	Manning Gauge Co. .... 74
H. B. Prather. .... 72	<b>CONVEYORS, PULPWOOD.</b>	<b>GUMMED PAPERS.</b>
F. L. Smith. .... 72	Jeffrey Mfg. Co. .... 71	McLaurin-Jones Co. .... —
Stebbins Engineering Co. .... 73	<b>CORDAGE.</b>	<b>GUMMING AND GLUING MACHINERY.</b>
Thomas L. Tomlins & Son. .... 72	Columbian Rope Co. .... —	Pride in Machine Co. .... 9
Vitale & Rothery. .... 72	<b>CUTTERS.</b>	<b>HEATERS.</b>
Joseph H. Wallace & Co. .... 72	Smith & Winchester Mfg. Co. .... 7	Ordon Co., Inc., Robert. .... —
<b>ASBESTINE PULP.</b>	<b>DIE CUTTERS.</b>	<b>ICE CREAM CONES.</b>
International Pulp Co. .... Front Cover	Hoggson & Pettis Mfg. Co. .... —	McLaren Products Co. .... 61
<b>ASHES HANDLING MACHINERY.</b>	Independent Die Co., Inc. .... 6	<b>IRON EXTRACTORS.</b>
Jeffrey Mfg. Co. .... 71	<b>DIGESTERS.</b>	Oakes Co., Roland T. .... 65
<b>BALL BEARINGS.</b>	American Welding Co. .... —	<b>KNIVES, ETC.</b>
S. K. F. Industries, Inc. .... —	<b>DRIVES (Gear).</b>	Bolton & Son, J. W. .... —
<b>BARKERS.</b>	Farrel Foundry & Machine Co. .... 25	Machinery Co. of America. .... —
Valley Iron Works. .... —	<b>DRIVES, SILENT CHAIN.</b>	<b>LUBRICANTS.</b>
<b>BEARINGS (Collar Oiling).</b>	Morse Chain Co. .... 72	Vacuum Oil Co. .... 40 and 41
Hill Clutch Co. .... —	<b>DRYER EXHAUSTS.</b>	<b>MICROMETERS.</b>
<b>BEATER PADDLES.</b>	The Nash Engineering Co. .... 73	E. J. Cady & Co. .... —
Menasha Wood Split Pulley Co. .... 73	<b>DRYING SYSTEMS.</b>	Foreign Paper Mills, Inc. .... 3
<b>BEATING ENGINES.</b>	Open Coil Heater & Purifier Co. .... 11	<b>MILL COGS.</b>
Beloit Iron Works. .... 14	W. F. Pickles. .... 12	N. P. Bowsher & Co., Inc. .... 84
Claffin Engineering Co. .... 65	<b>DYES, ANALINE.</b>	<b>MOTORS.</b>
Dayton Beater & Hoist Co. .... 82	Calco Chemical Co. .... —	H. F. Perkins & Son, Inc. .... 11
Dillon Machine Works, Inc. .... 82	Heller & Merz. .... 13	<b>OILS AND GREASE.</b>
Diltz Machine Works, Inc. .... 77	National Aniline & Chemical Co. .... —	Vacuum Oil Co. .... 40 and 41
Downingtown Mfg. Co. .... 82	The White Tar Aniline Corporation. .... —	Jenkins Bros. .... 74
Emerson Mfg. Co. .... 77	<b>DYE STUFFS.</b>	<b>PAINTS AND VARNISHES.</b>
Noble & Wood Machine Co. .... 75	E. I. Du Pont de Nemours & Co. .... —	Du Pont de Nemours Co., E. I. .... —
Valley Iron Works. .... —	<b>ELECTRIC HOISTS.</b>	<b>PAPER BAG MACHINERY.</b>
<b>BELTING.</b>	Shepard Electric Crane & Hoist Co. .... 61	Potdevin Machine Co. .... 9
Goodyear Tire & Rubber Co. .... 27	<b>ENVELOPE MACHINES.</b>	Smith & Winchester Mfg. Co. .... 7
R. D. Skinner & Co., Inc. .... —	Potdevin Machine Co. .... 9	<b>PAPER BAG MANUFACTURERS.</b>
<b>BOILERS.</b>	F. L. Smith Machine Co. .... 71	Hudson Bag Company. .... 65
Heine Boiler Co. .... 76	<b>EVAPORATORS.</b>	Lawrence Bag Co. .... 35
<b>BRONZE CASTINGS.</b>	Zarembo Company. .... —	Schorach & Co. .... 67
Hyde Windlass Co. .... —	<b>FAN PUMPS.</b>	<b>PAPER BOX BOARDS.</b>
<b>BUCKETS (Elevator).</b>	Valley Iron Works. .... —	C. L. Boiteaux Co. .... 5
Hendricks Mfg. Co. .... 9	<b>FELTS AND JACKETS.</b>	<b>PAPER CUTTERS.</b>
<b>CALENDER ROLLS.</b>	Albany Felt Co. .... 10	Hamblet Machine Co. .... 59
Farrel Foundry & Machine Co. .... 25	Appieton Woclen Mills. .... 6	McLaurin & Co., G. T. .... —
Lobdell Car Wheel Co. .... 78	Draper Bros. Co. .... 76	<b>PAPER DEALERS.</b>
Norwood Engineering Co. .... 5	Fitchburg Duck Mills. .... 2	M. M. Elish & Co. .... —
Perkins & Son, Inc., B. F. .... 11	F. C. Huyck & Son. .... 13	R. F. Hammond. .... Front Cover
<b>CARBON TOOLS.</b>	Knox Woclen Co. .... 3	Midwest Paper Co. .... 79
Thomas L. Dickinson. .... 79	Lockport Felt Co. .... —	<b>PAPER EXPORTERS.</b>
<b>CASEIN.</b>	Orr Felt & Blanket Co. .... 67	Hudson Trading Co. .... 2
Casein Mfg. Co. .... —	Shuler, Benninghofen Co. .... 84	Parsons Trading Co. .... Front Cover
<b>CENTRIFUGAL PUMPS.</b>	Waterbury Felt Co. .... 4	<b>PAPER MANUFACTURERS.</b>
Valley Iron Works. .... —	Waterbury & Sons Co., H. .... 79	Bayless Mfg. Co. .... 4
<b>CHAINS.</b>	<b>FELT ROLLS.</b>	Becker Paper Corporation. .... 37
Jeffrey Mfg. Co. .... 71	Rodney Hunt Machine Co. .... —	Brown Company. .... 5
<b>CHEMICALS, COLORS, ETC.</b>	<b>FILTERING SYSTEMS.</b>	C. H. Hines Mfg. Co. .... 13
Arnold, Hoffman & Co., Inc. .... 73	Norwood Engineering Co. .... 5	Diamond State Fibre Co. .... Front Cover
Du Pont de Nemours & Co. .... —	<b>FLOOR COVERINGS.</b>	Eastern Mfg. Co. .... 81
Heller & Merz Co. .... 12	L. Sonneborn & Sons. .... —	Eaton-Dikeman Co. .... —
Kuttroff, Pichhardt & Co. .... 83	<b>FLOOR HARDENER (Concrete).</b>	Fort Howard Paper Co. .... 11
Sandoz Chemical Works, Inc. .... 8	L. Sonneborn & Sons. .... —	Franklin Paper Co. .... 79
The White Tar Aniline Corporation. .... —		Hammermill Paper Co. .... 55
C. K. Williams & Co. .... 84		Hanna Paper Corporation. .... 5
		Howard Paper Co. .... 74
		McLaurin-Jones Co. .... —

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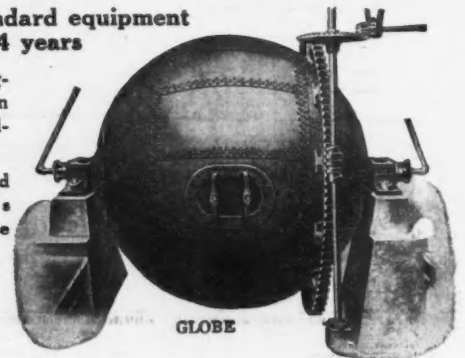
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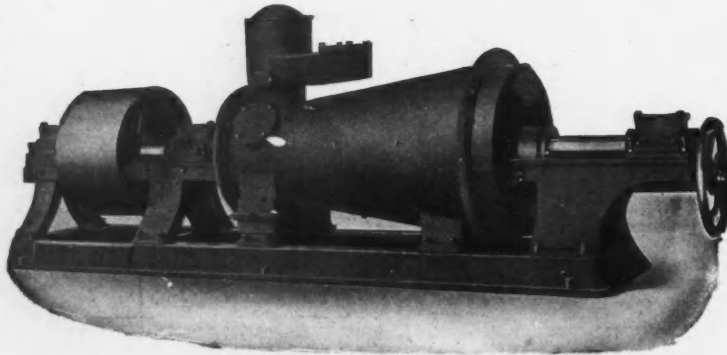
# CLASSIFIED INDEX TO ADVERTISEMENTS

<b>PAPER MANUFACTURERS.—Continued.</b>	Page	<b>PULP STONES.</b>	Page	<b>SULPHITE, BLEACHED AND UNBLEACHED.</b>	Page
Missisquoi Pulp & Paper Co.....	3	International Pulp Stone Co.....	Front Cover	J. Anderson & Co.....	4 and 29
Mountain Mill Paper Co.....	4	Lombard & Co.....	83	The Booregaard Co., Inc.....	5
Poland Paper Co.....	44	<b>PUMPS.</b>	—	Brown Company.....	73
Royal Card & Paper Co.....	5	Frederick Iron & Steel Co.....	—	Butterworth & Co., Inc., E.....	39
Saint Regis Paper Company.....	5	Hayton Pump & Blower Co.....	—	Canadian Robert Dollar Co.....	3
Sherman Paper Co.....	79	<b>PUMPS (Vacuum).</b>	73	Craig-Becker Co., Inc.....	81
Stratford Paper Co.....	73	The Nash Engineering Company.....	73	Eastern Manufacturing Co.....	57
Wausau Sulphate Fibre Co.....	8	<b>PRESSURE BULKERS.</b>	11	Mead Sales Co., The.....	76
West Virginia Pulp & Paper Co.....	8	B. F. Perkins & Sons, Inc.....	11	Parson Pulp & Lumber Co.....	Front Cover
<b>PAPER AND PULP MACHINERY.</b>	—	<b>RAG CUTTERS.</b>	—	Price & Pierce, Ltd.....	4
Bagley & Sewell Co.....	75	B. F. Perkins & Sons, Inc.....	11	Pulp & Paper Trading Co.....	—
Baker Mfg. Co.....	14	Taylor-Stiles & Co.....	—	<b>SULPHUR.</b>	—
Beloit Iron Works.....	23	<b>REAM CUTTERS.</b>	—	Texas Gulf Sulphur Co.....	13
Bird Machine Co.....	28	Geo. T. McLaughlin Co.....	—	Union Sulphur Co.....	70
Black-Clawson Co.....	78	<b>RECORDING INSTRUMENTS.</b>	—	<b>TANKS.</b>	—
Clark-Aiken Co.....	8	Bristol Company.....	7	W. E. Caldwell Co.....	59
Frank H. Davis.....	69	<b>REGISTERS.</b>	—	New England Tank & Tower Co.....	83
Downingtown Mfg. Co.....	82	Standard Register Co.....	—	Stearns Lumber Co.....	—
Farrel Foundry & Machine Co.....	25	<b>ROLL GRINDERS.</b>	25	G. Woolford Wood Tank Co.....	10
Ciems Falls Machine Works.....	65	Farrel Foundry & Machine Co.....	25	<b>TIMBER ESTIMATES.</b>	—
Improved Machine Co.....	39	<b>ROBIN.</b>	—	R. R. Bradley.....	72
Sandy Hill Iron and Brass Co.....	70	Hercules Powder Co.....	—	P. T. Coolidge.....	72
Shartle Bros. Machine Co.....	70	<b>ROBIN SIZE.</b>	—	James W. Sewall.....	72
Smith & Winchester Mfg. Co.....	7	Arabol Mfg. Co.....	83	<b>TRANSMISSION MACHINERY.</b>	—
Valley Iron Works.....	2	Paper Makers Chemical Co.....	4	H. W. Caldwell & Sons Co.....	59
Waterville Iron Works.....	2	Western Paper Makers Chemical Co.....	4	Hill Clutch Co.....	—
<b>PAPER MILL AGENTS.</b>	—	<b>ROTARY BLEACHING BOILERS.</b>	80	Reeves Pulley Co.....	78
Dillon & Barnes.....	79	Biggs Boiler Works Co.....	80	<b>TURBINES.</b>	—
McIver, Dana T.....	2	<b>SAVE ALL.</b>	—	S. Morgan Smith Co.....	—
Melby, E. C.....	—	Bird Machine Co.....	23	<b>TURPENTINE.</b>	—
<b>PAPER AND PULP MILL BROKERS.</b>	—	<b>SATIN WHITE.</b>	—	Hercules Powder Co.....	—
Gibbs-Brower Co.....	—	Kalbfleisch Corporation.....	—	<b>TWINES.</b>	—
<b>PAPER SPECIALIST.</b>	—	Paper Makers Chemical Co.....	4	American Manufacturing Co.....	55
Charles W. Bell.....	73	Western Paper Makers Chemical Co.....	4	<b>VALVES.</b>	—
<b>PAPER STOCK.</b>	—	<b>SCALES (Paper).</b>	—	Crane Co.....	31
Atterbury Bros.....	Front Cover	Fred Baker.....	—	Fenkins Bros.....	74
Butterworth & Co., Inc., E.....	76	E. J. Cady & Co.....	—	<b>VAPOR ABSORPTION SYSTEMS.</b>	—
Castle, Gotthel & Overton.....	76	Foreign Paper Mills, Inc.....	3	I. O. Ross Engineering Co.....	—
Gumbinsky Bros.....	84	<b>SCREENS.</b>	—	<b>VENTILATING FANS.</b>	—
Hicks, Daniel M.....	73	Bird Machine Co.....	23	B. F. Perkins & Sons, Inc.....	11
Mendelson Bros. Paper Stock Co.....	73	Central Mfg. Co.....	—	Ross Engineering Co.....	—
Penn Paper & Stock Co.....	79	Wm. A. Hardy & Sons Co.....	74	<b>VEGETABLE PARCHMENT PAPERS.</b>	—
Salomon Bros. & Co.....	79	Union Screen Plate Co.....	77	Kalamazoo Vegetable Parchment Co.....	8
Train-Smith Co.....	Front Cover	<b>SHREDDERS (Pulp and Paper).</b>	9	<b>WAXED PAPERS.</b>	—
<b>PAPER TESTERS.</b>	—	Grundler Patent Crusher & Pulverizer Co.....	9	Dracorn Paper Mfg. Co.....	—
Foreign Paper Mills, Inc.....	3	Valley Iron Works.....	—	<b>WOOD FLOUR.</b>	—
B. F. Perkins & Son, Inc.....	11	<b>SKYLIGHTS.</b>	—	Union Wood Flour Co.....	79
Valley Iron Works.....	—	E. Van Noorden & Co.....	83	<b>WOOD PULP IMPORTERS.</b>	—
<b>PAPER TUBE MACHINERY.</b>	—	<b>SLASHERS.</b>	—	American Wood Pulp Corp.....	3
Dietz Machine Works.....	78	Ryther & Pringle Co.....	—	J. Anderson & Co.....	4 and 29
Grissinger Machine Works.....	76	<b>SLITTERS AND REWINDERS.</b>	—	Ira L. Beebe & Co.....	83
<b>PAPER WAXING MACHINERY.</b>	—	C. Benninghofen & Sons.....	79	The Booregaard Co., Inc.....	44
Farrel Foundry & Machine Co.....	25	Cameron Machine Works.....	79	M. Gottesman & Co.....	—
Potdevin Machine Co.....	9	Dietz Machine Works.....	78	Hammond, R. F.....	Front Cover
<b>PERFORATING MACHINES.</b>	—	Samuel M. Langston Co.....	79	E. J. Keller.....	83
Dietz Machine Works.....	78	<b>SPlicing TISSUE.</b>	—	Lagerloef Trading Co.....	12
<b>PERFORATING METAL.</b>	—	Sergeant Co., E. M.....	—	Mead Sales Co., The.....	57
Harrington & King Perforating Co.....	67	<b>STARCH.</b>	—	Nilsen, Rantoul & Co., Inc.....	57
Hendrick Mfg. Co.....	9	Corn Products Refining Company.....	59	A. J. Pagel & Co., Inc.....	21
Charles Mundt & Sons.....	71	<b>STEAM SPECIALTIES.</b>	—	I. F. Patton & Co., Inc.....	10
Manhattan Perforated Metal Co.....	79	Crane Co.....	31	Perkins-Goodwin Co.....	37
<b>PRESS ROLLS.</b>	—	Open Coil Heater & Purifier Co.....	11	Scandinavian-American Trading Co.....	Front Cover
Rodney Hunt Machine Co.....	—	<b>STITCHING MACHINERY.</b>	—	<b>WOOD ROLLS.</b>	—
<b>PLUGS (Wood).</b>	—	Saranac Machine Co.....	75	Rodney Hunt Machine Co.....	—
O. L. Bartlett.....	11	<b>STUFF BOX COVERS.</b>	—		
<b>PULP PROCESS.</b>	—	Menasha Wood Split Pulley Co.....	73		
Castle, Gotthel & Overton.....	6				
Fitchburg Process.....	44				



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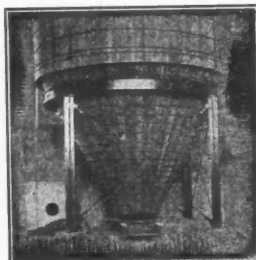
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