

MEMBER OF THE A. B. C.
FORTY-NINTH YEAR

PAPER TRADE JOURNAL

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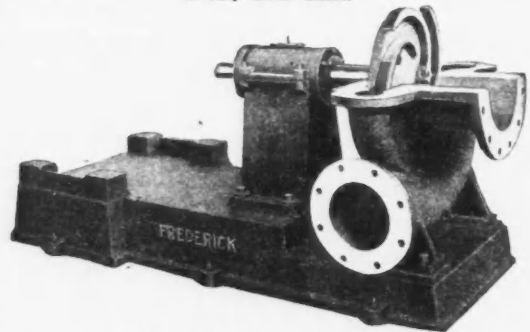
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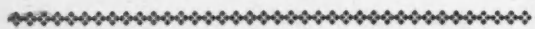
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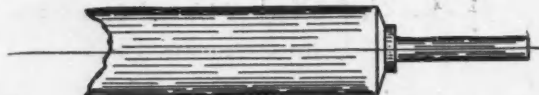
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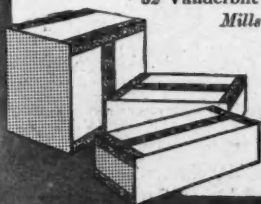
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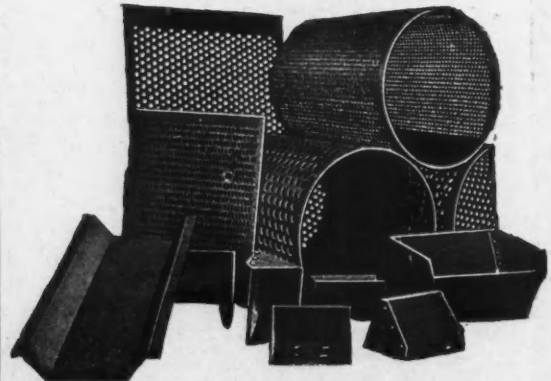
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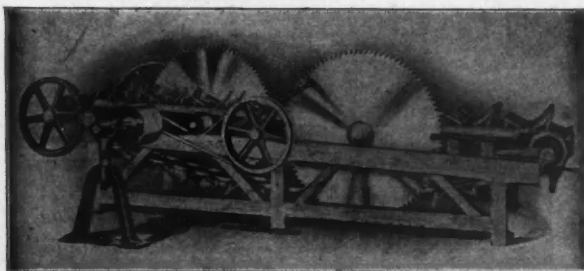
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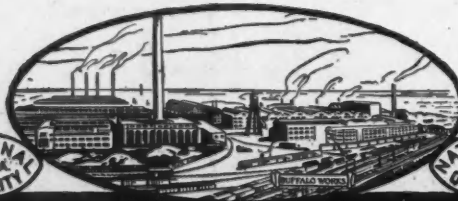
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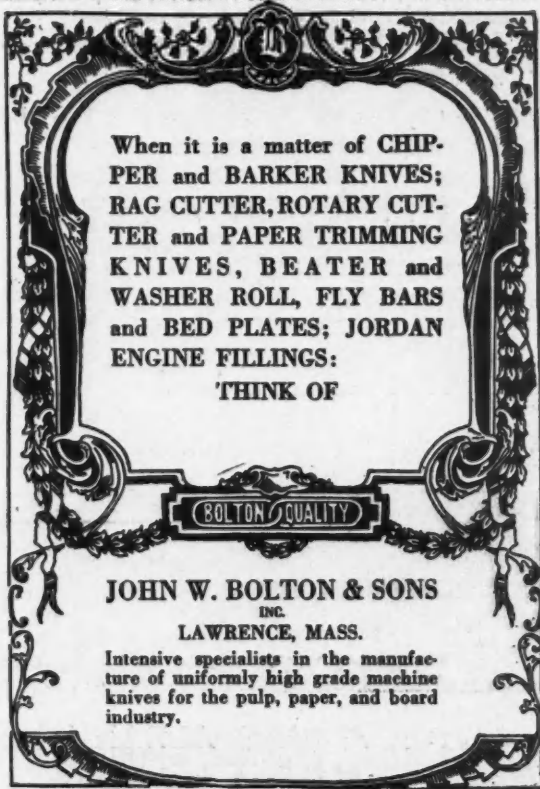
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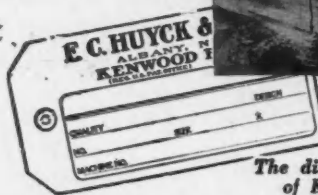
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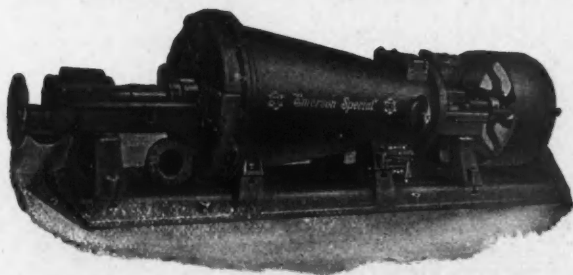
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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FORTY-NINTH YEAR

PUBLISHED EVERY THURSDAY BY THE
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Vol. LXXII. No. 11

NEW YORK AND CHICAGO

Thursday, March 10, 1921

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PRODUCTION OF ALL PAPERS DURING MONTH OF JANUARY

According to Statistics Prepared by Federal Trade Commission, Mill Stocks at End of Month of News Print Equaled Seven Days' Average Output, of Book Paper Equaled Nine Days' Average Output, Paper Board Equaled About Nine Days' Average Output, Wrapping Paper Equaled About Nineteen Days' Average Output, and Bag Paper Equaled About Six Days' Average Output.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 9, 1921.—The attached tabulation is a summary of production, shipments and stocks of paper mills in the United States for the month of January, 1921, compiled by the Federal Trade Commission. This summary is compared with the month of January, 1920, January, 1919, and January, 1918, and the average production and stocks based upon the production and stocks for the years 1918, 1919 and 1920. The mills have been classified for convenience into ten groups according to the grades of paper made. Some mills making several grades appear in more than one group which causes duplication in the body of the tonnage tables in the number of mills.

The variation in the number of mills from one period to another is due in part to the fact that some mills do not run continuously on the same grade.

The stocks of paper carried by different mills depend not only upon the condition of the market but also upon the kind of paper made, trade customs, etc.

Tonnage Summary

Production, Shipments and Stocks of Paper, by Grades, for the month of January, 1921, compared with January, 1920, January, 1919, and January 1918, and with average production and stocks.

Grade	Number of Mills	Stocks on Hand of Month, Net Tons	Production, Net Tons	Shipments, Net Tons	Stocks on Hand End of Month, Net Tons
News Print (Standard and Special Grades of News):					
January, 1921	85	24,763	123,830	116,176	32,417
January, 1920	89	15,369	129,663	128,098	16,934
January, 1919	66	19,408	116,154	114,343	21,219
January, 1918	66	31,713	105,700	108,485	28,928
Average	..	..	112,925	..	23,763
Standard News:					
January, 1921	67	19,573	113,764	106,228	27,109
January, 1920	66	12,338	114,957	112,719	14,576
January, 1919	51	15,656	106,002	105,169	16,489
January, 1918	50	26,482	97,086	96,336	27,232
Average	..	..	101,650	..	19,528
Book (M. F., S. S. C. and Coated):					
January, 1921	93	25,005	64,382	60,507	28,880
January, 1920	98	23,279	96,419	96,152	23,546
January, 1919	90	28,431	70,443	64,836	34,038
January, 1918	90	36,845	74,219	82,082	28,982
Average	..	..	78,125	..	28,328
Paperboard—Total (Straw, Fibre, Leather, Chip, Etc.):					
January, 1921	244	53,104	105,806	100,431	58,479
January, 1920	248	40,329	211,934	209,035	43,228
January, 1919	236	46,196	140,859	133,838	53,217
January, 1918	236	42,411	153,602	161,299	34,714
Average	..	..	168,575	..	45,530
Board:					
January, 1921	144	25,451	74,870	71,625	28,696
Average	..	..	112,600	..	19,303
Wrapping (Kraft, Manila, Fibre, Etc.):					
January, 1921	142	35,800	44,620	35,179	45,241
January, 1920	151	26,791	70,109	71,247	25,653
January, 1919	160	40,499	50,490	39,592	51,397
January, 1918	160	53,551	48,732	58,978	43,305
Average	..	..	61,000	..	39,488
Bag (All Kinds):					
January, 1921	38	3,031	6,296	5,861	3,466
January, 1920	46	2,087	20,963	20,707	2,343
January, 1919	37	3,408	11,691	11,203	3,896
January, 1918	37	6,498	14,875	16,001	5,372
Average	..	..	15,375	..	3,365
Fine (Writing, Bonds, Ledgers, Etc.):					
January, 1921	105	30,312	22,756	18,320	34,748
January, 1920	110	31,516	32,886	35,611	28,791

January, 1919	114	34,576	27,675	26,176	36,075
January, 1918	114	32,500	28,865	28,690	32,675
Average	..	..	29,975	..	31,835
Tissue (Toilet, Crepe, Fruit, Wrappers, Etc.):					
January, 1921	99	8,774	7,704	7,356	9,122
January, 1920	96	5,697	15,695	15,542	5,850
January, 1919	96	5,400	10,611	9,667	6,344
January, 1918	90	6,083	11,589	11,646	6,026
Average	..	..	12,975	..	6,453
Hanging (No. 2 Blank, Oatmeal, Tile, Etc.):					
January, 1921	26	3,027	9,507	7,735	4,799
January, 1920	26	1,452	9,935	10,427	960
January, 1919	21	2,933	9,180	9,447	2,666
January, 1918	21	6,789	4,304	4,629	6,464
Average	..	..	7,325	..	3,296
Felts and Building (Roofing, Sheathing, Etc.):					
January, 1921	52	13,420	17,885	17,752	13,553
January, 1920	54	5,315	37,733	36,463	6,585
January, 1919	48	7,699	15,039	13,272	9,466
January, 1918	48	8,341	25,910	25,964	8,287
Average	..	..	25,425	..	8,571
Other Grades (Specialties Not Otherwise Classified):					
January, 1921	94	17,160	17,682	16,606	18,236
January, 1920	95	12,482	24,956	23,433	14,005
January, 1919	62	11,310	14,094	14,150	11,254
January, 1918	62	13,382	23,214	23,386	13,210
Average	..	..	21,425	..	12,784
Total—of All Grades:					
January, 1921	..	214,396	420,468	385,923	248,941
January, 1920	..	164,317	650,293	646,715	167,895
January, 1919	..	199,860	466,236	436,524	229,572
January, 1918	..	238,113	491,010	521,160	207,963
Average	..	..	533,125	..	203,373

Note—The average production and stocks are based upon the annual reports for 1918, 1919 and 1920.

The following stocks were reported on hand at terminal and delivery points on January 31 in addition to the mill stocks shown in the tabulation: Newsprint, 153 tons; book paper, 3,755 tons; fine, 169 tons; and "other grades," 171 tons.

Stocks of all grades increased during the month. Stocks of all grades reported by manufacturers at the end of January amounted to 253,189 tons, including the stocks at terminal and delivery points. In addition to these stocks, jobbers and publishers reported news print stock and tonnage in transit aggregating 250,339 tons.

Ratio of Stocks to Average Production

Comparing the stocks on hand at the domestic mills on January 31, with their average daily production based upon the combined production for 1918, 1919, and 1920, the figures show that:

News print paper mill stocks equal seven days' average output.

Book paper mill stocks equal nine days' average output.

Paper Board mill stocks equal about nine days' average output.

Wrapping paper mill stocks equal about nineteen days' average output.

Bag paper mill stocks equal about six days' average output.

Fine paper mill stocks equal about twenty-nine days' average output.

Tissue paper mill stocks equal 18 days' average output.

Hanging paper mill stocks equal slightly more than sixteen days' average output.

Felts and building paper mill stocks equal thirteen days' average output.

Miscellaneous paper mill stocks equal slightly more than twenty-one days' average output.

Total paper mill stocks of all grades equal about twelve days' average output.

Imports and Exports

The imports and exports of all grades of paper for December, 1920, compared with December, 1919, as shown by the records of the Department of Commerce were as follows:

	December, 1920		December, 1919	
	Pounds	Value	Pounds	Value
Imports:				
News print	163,578,860	\$8,496,635	104,253,592	\$3,783,700
Book paper	1,254,170	149,052	6,826	3,577
Wrapping	359,850	36,167	675,944	52,404
Hanging	..	46,522	..	30,878
All other grades*	..	312,305	..	150,030

Exports:				
News print	6,647,822	459,879	7,168,844	383,942
Book paper	11,897,950	2,138,239	5,127,872	581,712
Paper board		732,760		211,197
Wrapping	5,168,494	706,753	4,813,953	424,999
Bag		320,630		175,510
Fine		1,317,255		471,528
Tissue		191,308		177,330
Hanging		114,732		81,813
All other grades*		1,266,111		655,450
Total imports		9,040,681		4,020,589
Total exports		7,247,667		3,163,481

*Includes some paper already converted into commercial articles.

News print is the only grade of which the United States is a heavy importer. The bulk of this tonnage, the value of which amounted to \$8,496,635 for December, 1920, is imported from Canada. The value of the exports of news print in December, 1920, amounted to \$459,879, which is about 5 per cent of the news print imported.

Book paper, News print, Wrapping Paper, Fine Paper, and Paperboard were the principal grades exported, the combined value amounting to \$5,354,886 for December, 1920.

The value of the total imports of all grades was about 20 per cent more than for November, 1920, and 125 per cent greater than for December, 1919. The value of the total exports for December, 1920, was \$4,084,186 more than the value of the exports for December, 1919, and \$1,793,014 less than the value of the imports for December 1920.

Loss of Production

The idle machine time reported to the Commission is shown by grades in the tabulation attached. This lost time is compiled from the following operating reports: News print, 51 companies operating 60 mills and 118 machines; Book Paper, 46 companies operating 65 mills and 185 machines; Paperboard, 160 companies operating 199 mills and 359 machines; Wrapping, 90 companies operating 101 mills and 181 machines; Bag, 20 companies operating 23 mills and 29 machines; Fine, 58 companies operating 86 mills and 117 machines; Tissue, 62 companies operating 76 mills and 147 machines; Hanging, 28 companies operating 28 mills and 33 machines; Felts and Building, 29 companies operating 34 mills and 50 machines; Other grades, 61 companies operating 69 mills and 98 machines. This tabulation does not include the machines in 75 mills which were closed down completely. The reasons tabulated for lost time are lack of orders and repairs. "Other reasons" include lack of coal, lack of water power, etc. The time lost in January, 1920, is given by grades and reasons for purposes of comparison.

Loss of Production

Grade	Lack of Orders		Repairs		Other Reasons		Total	
	1921	1920	1921	1920	1921	1920	1921	1920
News Print:								
Number of machines	15	0	19	31	3	13	37	44
Total hours idle	2,568	0	2,582	1,820	627	454	5,777	2,274
Book Paper:								
Number of machines	117	1	29	24	7	37	153	62
Total hours idle	22,698	63	6,421	1,206	1,226	2,295	30,345	3,564
Paperboard:								
Number of machines	215	12	40	85	57	76	312	173
Total hours idle	58,510	3,951	14,048	7,327	15,347	11,010	87,905	22,298
Wrapping:								
Number of machines	70	1	51	35	27	33	148	69
Total hours idle	19,004	456	8,929	6,002	5,704	2,063	33,637	8,521
Bag:								
Number of machines	15	0	4	9	0	10	19	19
Total hours idle	4,914	0	430	557	0	958	5,344	1,515
Fine:								
Number of machines	70	4	29	20	19	26	118	50
Total hours idle	19,487	1,016	8,530	1,550	3,254	2,500	31,271	5,066
Tissue:								
Number of machines	75	1	33	44	12	34	120	79
Total hours idle	24,486	312	4,096	5,706	5,127	4,911	33,709	10,929
Hanging:								
Number of machines	4	0	2	5	1	2	7	7
Total hours idle	1,857	0	85	172	13	251	1,955	423
Felts and Building:								
Number of machines	30	0	6	25	9	17	45	42
Total hours idle	6,299	0	671	837	2,976	1,381	9,946	2,218
Other Grades:								
Number of machines	46	2	17	19	9	17	72	38
Total hours idle	12,482	557	3,405	1,110	2,201	2,149	18,088	3,816
Total number of machines	657	21	230	297	144	265	1,031	583
Total hours idle	172,305	6,355	49,197	26,297	36,475	27,972	257,977	60,624

International News Print Price for Second Quarter

The International Paper Company has sent out the following announcement signed by President P. T. Dodge, regarding rules news print contract price for the second calendar quarter:—

"To the end that all of our news print business be on the same basis from April 1st, we have decided to revise our price for the second calendar quarter to \$5.50 instead of \$5.70 per hundred pounds, f. o. b., mill, carload lots, as announced in our letter of February 15th.

"This concession is made in spite of the fact that of all Riders signed, a very large proportion are on the quarterly or \$5.70 basis.

"It has been our policy to treat all of our customers on precisely the same basis and as many have signed Riders under our alternative proposition ('B') with fixed price for nine months from April 1st, we hereby extend to such customers the option of having the \$5.50 price apply only to the second calendar quarter, leaving price for the last six months of the year to be determined later, according to provisions of contract.

"We trust that these voluntary concessions made in the interest of uniformity for all customers, notwithstanding our continued high costs, will tend to further relieve the present situation, in the belief that before the year is half spent there will be a decided improvement in business conditions.

"Our Sales Agent, in whose territory you are located, will place in your hands, if he has not already done so, contract rider in duplicate for your signature."

Bids for Government Paper

WASHINGTON, D. C., March 9, 1921.—The Purchasing Officer of the Government Printing Office will open bids on March 11 for 40,000 pounds of 21 x 32—30 wood manila paper, and also for 575 pounds (500 reams) of 17 x 28—11½ No. 9 white glazed bond paper.

The Manufacturers' Paper Company has been awarded the contract by the Bureau of Supplies and Accounts, Navy Department, for furnishing 80,000 rolls of paper towels at \$20,400. Bids for these towels were opened February 1.

The Purchasing Officer of the Government Printing Office will open bids on March 14 for 6,000 pounds of 22½ x 28½—200 orange cardboard. Also, bids will be opened on the same date for 875 pounds of 22½ x 28½—175 salmon index Bristol board, and 500 pounds of 26 x 38, No. 120, news board.

GOOD PROGRESS ON NEW MILLS MADE BY KIMBERLY-CLARK CO.

New Mills at Kapuskasing, Will Be Ready for Operations in a Few Weeks—Will Have an Initial Capacity of 200 Tons Daily Which Probably Will Be Increased to About 500 Tons When the Complete Project Is Carried Out—Pulpwood Loggers in Northern Michigan Expect an Increase in Price in the Near Future—Finishing Touches Being Put on the Telulah Mill.

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., March 8, 1921.—Excellent progress is being made on the Kimberly-Clark Company's big pulp and sulphite mills at Kapuskasing, Can., according to information from the construction site. About 130 hands are now employed and the mills will be ready for operation within a few weeks, it was said. The pulp mill will have a capacity of about 200 tons daily, which probably will be increased to about 500 tons when the complete project is carried out.

The Canadian government has made extensive arrangements for providing homes and suitable living conditions for the 500 or more men who eventually will be given employment in the plant. The town of Kapuskasing has been created by special act of the legislature and the sum of \$400,000 has been made available for loans to home builders. In addition, about \$100,000 was appropriated for construction of sewers, waterworks and other public improvements. It is planned to make Kapuskasing the center of the largest and most important logging and paper mill district in Canada.

The Kimberly-Clark Company controls about a million and a half acres of timberland, giving it sufficient wood resources to keep the mill operating for years. It is quite probable that at least part of the pulp will be shipped to the company's mill at Niagara Falls, N. Y., until the paper mill at Kapuskasing is completed.

Pulpwood Loggers Expect Price Increase

Pulpwood loggers in northern Michigan are expecting an increase in price in the near future, despite the immense cut in northern Wisconsin and Minnesota. The mild weather interfered rather seriously with logging operations in northern Michigan, according to advises from St. Ignace, in the center of the wood country. It was said recent quotations are higher than those in the beginning of the season and further increases are looked for. Few loggers were able to complete their contracts because of the lack of snow, it was said. Conditions in lower Michigan are said to be even worse than in the upper peninsula.

Conditions in Wisconsin apparently are the reverse of those in Wisconsin, where last season's cut was one of the largest in history. In fact there was a tendency to reduce prices because a large number of loggers were unable to dispose of their logs. Pulp mills generally had contracted for a sufficient supply and they were not disposed to buy on the spot market unless prices were satisfactory.

Some mills in the Fox River Valley have enough wood to last them nearly two years and all have plenty to operate until the next logging season. There is every reason to believe the demand for wood next year, especially from this section, will be less acute than for several years past.

Putting Finishing Touches on Telulah

Finishing touches are being put on the Telulah mill of the Fox River Paper Company, and it will resume operations about March 20, it was announced. The two paper machines, which have been

given a thorough overhauling, were completed this week and will be started on the manufacture of writing papers.

The plant will practically be new when it starts up. A large proportion of the machinery is new; the interior has been remodeled and repainted, and several large additions were constructed. An addition to the east end will be used as a rag room, equipped with modern machinery and with suction fans for removing the dust and returning washed air to the room. A splendidly equipped rest room has been provided for the women workers.

Two Niagara beaters, with double the capacity of the former beaters, have been installed. Traveling cranes are provided for handling the machinery.

The paper machines will be driven by two steam turbines of 150 horsepower each, and nearly all the other machinery will be operated by electricity. A huge generator has been installed. Work was completed this week on a splendid filtering plant.

Employment will be given to about 200 hands. The new mill will practically double the capacity of the Fox River Paper Company.

Very Little Improvement Noted

Very little improvement in the paper industry was noted this last week. One or two mills in the Fox River Valley have reduced their working time by one day a week, and one mill is partially closed down. In some lines there was a slight improvement, but not enough to give rise to optimistic predictions.

From Ladysmith comes word that it is the belief of some officials of the Great Western Paper Company that the depression will continue until next fall. Part of the Ladysmith plant was closed down temporarily because of lack of orders. The Grandfather Falls Company mill at Merrill was closed down for repairs several days last week. It was the first time the mill had halted operations in several years.

The Appleton Woolen Mills, manufacturers of paper-mill blankets, is operating only part time because of lack of orders. Other industries here, dependent on the paper trade, also have slackened operations.

Open Gates on Dams at Menasha

A special order has been issued by the War Department to open the sluice gates on the big power dams at Menasha in order to lower the level of water in Lake Winnebago to prevent water backing up in its tributary streams and flooding riparian lands. Power users along the river, including many paper mills, may be jeopardized during the summer period of low water, because opening of the sluice gates will reduce the amount of water held in storage in Lake Winnebago for the low water season. Riparian owners have petitioned Congress for legislation which will permanently relieve them from the danger of flood water losses.

Application has been made to the Federal Government by the Wisconsin-Minnesota Light and Power Company for permission to construct a dam and reservoir on the Chippewa River in northern Wisconsin. Part of the project will be located in the Lac Court Oreilles reservation. The company is planning one of the most extensive water-power developments in the Middle West.

Good Outlook for Pulpwood

OLD TOWN, Me., March 7, 1921.—Edward W. Conners, of the James W. Sewall forest engineering office, Old Town, Me., and Washington, D. C., is in New York and Boston making calls on land owners and operators in the interests of the Sewall organization. Mr. Conners reports that general sentiment is optimistic for the future in both pulpwood and lumber, although present conditions are quiet. Another of Mr. Sewall's men, who recently returned from an extended trip through the South, reports much the same quiet confidence in a coming well-sustained business.

N. E. PAPER MEN PROTEST COAL RATES ADJUSTMENT

C. H. Tiffany, Traffic Manager of the New England Paper & Pulp Association, Says the Proposed Rates Are Incomplete, Inopportune, Unscientific and Unsatisfactory—He States That the Paper and Pulp Mills of Maine Will Not Willingly Submit to the Extortionate Advance—Paper Men Who Have Visited Maine Recently Say Logging Conditions in That State Have Been Most Unusual.

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., March 8, 1921.—The most important development of the week in the Boston paper trade was the vigorous protest made to the proposed adjustment of rates on "all rail" coal from the mines to this district, through the New England Paper and Pulp Traffic Association, which represents thirty pulp and paper concerns, operating fifty large mills and other plants, using more than 1,000,000 tons of steam coal annually.

This protest was voiced by C. H. Tiffany, traffic manager of the organization, at a hearing held at the Boston Chamber of Commerce, Thursday. He analyzed clearly the bad effect of the proposed increase, warning the committee the railroads "could not get away with it." This statement and the query, "What the devil do you mean?" brought forth much applause. He stated that since its organization the association had given much study to bituminous coal rates.

He declared the rates to Northern New England, which were wrong in 1913, have since received a larger measure of advance than any other coal rates in official classification territory under the McAdoo act and 40 per cent advances, and today are at the uttermost peak. He characterized the proposal as "incomplete, inopportune, unscientific and unsatisfactory" and will probably lose money, he said, to the Boston & Maine and perhaps to the New Haven and Boston & Albany. It will inevitably hurt the industries located on the Maine Central, he asserted.

Mr. Tiffany further stated the paper and pulp mills of Maine will not willingly submit to the "extortionate advance." He continued: "The mileage from Mechanicsville to Portland and Groveton, also the rates, are identical, \$5.42, and advances of 42 cents and \$1.12 are proposed via Boston & Maine. The advance at Groveton is much the largest measure of advance proposed at any Boston & Maine point. Together with the wholly indefinite but larger advance foreshadowed on Delaware & Hudson bird's-eye anthracite, it would impose an added burden of over \$75,000 on the paper mill at that point on its fuel alone."

Other New England business men, official representatives of the mayors and city governments of several cities, Chambers of Commerce and other organizations joined the paper men in their opposition. The hearings were held by the coal and coke committee of the railroads of the trunk line territory and were adjourned to Boston after sessions at New York a month ago. The transportation committee of the Boston Chamber obtained the sittings of the committee here, and the hearings are held under auspices of the New England Freight Association.

Unusual Winter in Maine

Paper men who have recently visited Maine report that a curious condition has obtained in that state this winter, in regard to the snowfall and weather in general. The log cut has been up to expectations, and pulpwood operations also have progressed favorably, with the average of both not much below normal. There has been no lack of help, although wages have been cut 25 to 40 per cent. Several of the great blizzards have been severely felt in the

extreme southwestern part of the state, in York and Cumberland counties.

There has been considerable snow at times in the vicinity of Portland. To the east and north of Bangor, there has been snow enough at most times for good sledding, the depth increasing toward the extreme north. In Aroostook from two to four feet has been encountered and lumbermen have generally had a good season. In Bangor and immediate vicinity, however, and eastward along the coast, there has been very little snow at any time, while the temperature has fallen below zero on very few occasions.

Amalgamates with Canadian Firm

Word comes from Pittsfield of the announcement that William H. Eaton, treasurer, and C. C. Davis, first vice-president, of the Eaton, Crane & Pike Company, of that city, have entered negotiations with Sinclair & Allen, of Toronto, for amalgamation of the Pittsfield paper company's business in Canada with the Sinclair-Allen & Co. Norman A. Sinclair, who has spent most of his life in the fine stationery business in Canada, will be president of the new company. W. H. Eaton, vice-president, and Thomas Allen, secretary-treasurer. Steps were taken for formation of the Eaton, Crane & Pike Company of Canada, Ltd., at a meeting in New York February 22. Elaborate plans were made for the development of the stationery business in Canada.

General Trade News

The "Whirling Hub" column of the *Boston Traveler* contained the following item recently: "There's a man well known in paper circles named Bernard Miner. To those who know him intimately he's known as 'Bun.' Everyone along the line on Congress street is glad to see him again on his job after having tried to stop an elevator with his body some time ago. Mr. Miner says he'd much rather sell paper than be confined in bed with nurses and doctors in attendance, which latter has been his life the past few months."

Many favorable comments are heard on the descriptive catalog distributed to the trade by A. Storrs & Bement Co., 140 Federal street. It is attractively designed, made to last and conveniently suited to the pocket. Pages are arranged conveniently, with thumb index marks, so that ready reference may be made to any kind of paper, and the catalog contains a picture of the live paper store and miscellaneous information about the service it offers customers.

Paper clothing, equal to the German product exhibited here recently under auspices of the Associated Industries of Massachusetts, is being manufactured to a limited extent by the Bozart Rug Company, in Springfield.

National Pulpwood Corp. Formed

[FROM OUR REGULAR CORRESPONDENT.]

RUTLAND, Vt., March 7, 1921.—Articles of association have been filed with the Secretary of State by the National Pulpwood Corporation of Rutland, organized to purchase, acquire, cut, take and manufacture all manner of trees, timber, wood and underwood and the products thereof and to deal in all manner of fiber suitable to be used in the manufacture of paper, also to construct such buildings, dams, etc., as may be needed in this work. The company is capitalized at \$200,000 divided into 2,000 shares. The incorporators are Perley R. Eaton, Grace J. Eaton and Mary V. Quigley, all of Rutland, and Edward P. Cleary, of Sillery, Province of Quebec.

Wm. Clements Goes with Fourdrinier Wire Firm

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 7, 1921.—William B. Clements, formerly business agent for the Eagle Lodge of papermakers of this city, has taken a position as traveling agent with the William Cable Wire Works of Brooklyn, N. Y., manufacturers of Fourdrinier wires for paper machines.

FURTHER PRICE RECESSION IN PHILADELPHIA MARKET

Mill Prices for Coarse Papers Especially Show Further Declines—Market Now Said to Be at Its Lowest Level and It Is Believed That Present Prices Have Been Influenced by Desire on Part of Mills to Keep in Operation—Fine Paper Market Continues Exceedingly Quiet but Prices Are Much Steadier—Demand for Old Paper and Rags Is Virtually at Standstill—Paper Stock Plants Burn.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, March 7, 1921.—The week brought forth further recessions in mill prices, especially in the coarse paper market. That has suffered very heavily through the present depression. For some grades of goods the market is almost demoralized. So great has been the flood of tissues for instance that the distributors all are loaded up and apparently a great stimulus was required to induce buying. It came during the week in the offer of one of the largest mills in the tissue class which offered No. 1 crystal tissues 20 by 30 at a reduction of 35 cents from the rates hitherto maintaining, low as they were. The break caused a sensation. The mill price was so low indeed that distributors regarded it as below the cost of production. Heavy orders were placed by many firms, not to meet present requirements but as investments for future needs. Just how much tonnage the mill will take, however, remains to be disclosed for with the offer came the condition that it proposed to serve its old customers before opening new accounts and furthermore that a formal acceptance by it would be necessary before the purchaser could feel assured that he will be supplied. White waxed papers also declined in mill quotations but not to as low a point as crystal. The action of one of the larger Kraft mills in withdrawing its recent quotation of 1½ cents per pound less than that hitherto maintaining, was interpreted in the trade as the result of a warning said to have been served upon it by the largest producer that a price warfare would immediately be started if it did not mend its ways. But immediately after the withdrawal another mill also making a first grade of Kraft, sent widespread its offer of stock at the low price quoted by the other mill. Spot news and particularly side runs is also down in price. A large quantity of it is in stock here. During the week one of the larger houses placed orders for sheet news at 5¼ cents. Silk fibres and screenings also are being offered by the mills at large reductions from even the low price of mid-February.

Believe Low Level Reached in Coarse Papers

The coarse paper trade believes the present level of prices to be about the lowest to which they will fall and to be due to a desire on the part of the mills to get business for the purpose of keeping the wheels moving and organizations intact rather than for profit making. Distributors do not believe that the mills can continue to produce stock at present prices. One of the largest coarse paper distributors who has warehouse capacity for 40 carloads has about determined to place orders for that amount and to store for future requirements, believing that at no future time will he be able to buy goods as cheaply as now. Consumer demands just now are at a low ebb it is true, but he has complete confidence that it is only a matter of a comparatively short time before they again will become active.

Fine Paper Market Quiet

In the fine paper market business continues exceedingly quiet but values are much steadier. One of the mills producing a cheap grade of machine finished book was in the market for orders as low as 8 cents. The general run of prices, however, was from 3 to 4 cents above this figure.

Few orders for book are being placed, however, because the distributors generally are still heavily stocked up and the outward movement is very sluggish. Printers and publishers still insist that there must be more reductions before they are willing to buy save for absolutely immediate requirements. These show very little improvement over the preceding week.

Stock Market at Standstill

The stock market for both old paper and rags is virtually at a standstill. Jobbers say that not enough mill orders have been received to make real quotations possible. Some sales have been effected of course, where the jobbers have been compelled to get rid of stock to make room for grades he regards more profitable to hold, at prices so low as to represent a real loss. The distributors, however, are unwilling to make these exceptional prices the basis for market quotations. The mills are really able to buy stock at their own terms these days. Though the \$30 per ton for box board still maintains the dealers have been able to get from \$7 to \$8 a ton for such mixed and commons as they were called on for by the mills. There is no accumulation at all of this grade in the warehouses and the dealers say that any lower price would mean that there was no inducement at all to gather up stock. Better grades of paper stock are being stored for a market which the trade believes shortly will get active.

Paper Stock Plants Burn

Fires this week visited the plants of A. Race, 607 Pine street and Sobel and Company, 6th and Race streets. The largest loss was at the Race establishment. It is being conducted by Mrs. Bessie Race, widow of the former proprietor whose tragic death a year ago will be recalled. Mr. Race's body was found in a baling press into which apparently he had fallen from an upper story. His neck was broken. The flames, which severely damaged the plant during the week, caused a loss to stock estimated at about \$6,000 and only partly covered by insurance and to building estimated at \$15,000 and insured. Their origin is unknown. The stock burned consisted principally of manilas, white shavings, Kraft and rags. Miss Francis Feldman is in charge of the Race plant.

At the Sobel warehouse, 6th and Race streets, the flames were confined to the basement. Considerable stock was destroyed. The first floor girders were burned to such an extent that a new floor will be required. The total loss will not, however, exceed about \$6,000 and this is covered by insurance.

The Penn Paper and Stock Company is in course of removal this week from Delaware avenue and Race streets, to the southwest corner of Front and New streets.

Creditors of William Burleigh Confer

Creditors of William Burleigh, 2003 E. Arizona street, were in conference during the week for the purpose of deciding on the disposition of the business. Liabilities are placed at about \$20,000. There is a unanimous desire on the part of the creditors that extension shall be granted and a belief that the Burleigh troubles can be solved if time is given. Mr. Burleigh is widely known in the trade. Before entering business for himself he was connected for almost a score of years and from boyhood days, with the paper stock firm of Burr Brothers, Delaware avenue and Market street.

Fine Paper Division to Meet

The Fine Paper division of the Philadelphia Paper Trade Association will meet on Thursday next as guests of Matthias & Freeman. The date of the annual banquet probably will be finally decided upon. President Allen E. Whiting will lay before the division the plans of the proposed Guild of Printers' Supply Salesmen which now is being organized. While enough signatures have been attached to the petitions being circulated in the trade to assure the organization it is believed that the anticipated approval

(Continued on page 68)

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NEW YORK

PAPER PRICES IN TORONTO DECREASE ON SOME LINES

Reduction of 10 Per Cent in the Price of Many Lines of Book and Writing Papers Is Made by the Mills—Several Reductions in the Price of Wrapping Paper Are Announced—First Unit of New Pulp Mill Which Is Being Erected at Kenora Will, It Is Expected, Be Completed by Next October—Mattagami Pulp Paper Co. Resumes Operations—Lincoln Paper Mills Enlarge Plant.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., March 7, 1921.—During the past week there was a decrease of ten per cent. made by the mills on many lines of book and writing papers. A leading manufacturer stated that the reason for the present quietude in market conditions was that the wholesalers and retailers were not cutting costs on their product as rapidly as they should, but were holding off as long as possible. He added that the pulp and paper manufacturers had reduced prices to the lowest possible point consistent with making a fair profit, but that the distributors, instead of taking a loss on some of their high priced lines, were still hanging back and seeking to throw the onus on the manufacturers, who had been the first to endeavor to meet the existing situation. He thought it was high time some members of the wholesale and retail trade wakened to conditions as they are today.

The pulp market is very quiet at present and there are few sales. Sulphite, bleached, is quoted at \$135 to \$140, f. o. b. mill, and easy bleaching at \$95 to \$100. On ground wood there is a variety of figures and some mills will make definite quotations only on a special lot when they find that an inquirer is really in the market to buy and not merely "fishing for information." While there are numerous inquiries, there are not many sales being made, and a number of mills have curtailed production, while those concerns which operate a paper plant are using the major portion of their output at present in the manufacture of their own goods.

The whole paper market continues spotty and has not improved as rapidly during the first week in March as was expected. Salesmen are out hustling for orders, but there is a disposition to place only small business in spite of a slight improvement in some lines. Most wholesalers take an optimistic view of the future, and, while things have not picked up as rapidly as was expected in 1921, they are confident all will come out right before many weeks pass.

Wrapping Paper Comes Down in Price

There have been several reductions in price during the past week. White wrap and gray rag are now down to 7 cents per pound in car lots to jobbers; "B" manila to 7½ cents; No. 1 manila to 9 cents, and fiber to 8½ cents; kraft, both glazed and unglazed, has been reduced to 10 cents per pound in car lots to jobbers, which is a drop of one and one-half cents. The reductions on the other mentioned lines are from one and one-half to two cents. Board mills are also quiet and some of them are running only four days a week, but paper-box manufacturers report that, with the advent of spring, business is picking up gradually and orders are coming in a little more freely. Colored drug papers have been reduced, in rolls, from 13 cents to 11 cents, and in sheets, from 13¼ cents to 11¼ cents, and snow white, in rolls, from 14¼ cents to 12¼ cents, with one-quarter of a cent extra for sheets. Lightweight M. G. kraft, 17 to 20 pounds, is now selling at 12 and 13 cents per pound to jobbers, instead of 13 and 14 cents as formerly. It is expected that the decreased prices will stimulate trade, as stocks with many consumers is running low.

Work to Begin on Kenora Plant

It is the intention of E. W. Backus, of the Fort Frances Pulp and Paper Company, Fort Frances, Ont., to have the first unit of the new pulp mill, which he will erect at Kenora, completed by October next. Work is now going ahead with the power development. There is considerable rock work to do and the present building of the municipal plant will be enlarged to permit the installation of new power units. The present wheel pits will be enlarged and modern turbines installed in order to develop the utmost from the water power. It is planned to make a development of over 8,000 horsepower at the plant. This marks the real commencement of work on the great pulp and paper industry of Mr. Backus at Kenora.

Lincoln Company Enlarges Sulphite Plant

At the annual meeting of the Lincoln Paper Mills, Merritton, held last week, Dr. Thomas A. Woodruff, of Chicago, a brother of the late Welland D. Woodruff, succeeded him as president and manager of the company. Dr. Woodruff will take up his residence in St. Catharines in connection with his new duties. A. S. Woodruff was re-elected vice-president; Peter Mitchell, secretary; and John R. Leslie, treasurer. H. K. Woodruff, H. H. Collier and Mrs. W. D. Woodruff were elected directors. The sulphite plant of the company has recently been doubled in capacity and a bleaching equipment installed. About one-third of the output is bleached now. The company recently started the manufacture of book, envelope and bond papers on one of their machines, with an output of twenty-five tons a day. The number of orders already received is reported to be large.

Pulp Plant Adding to Output

The plant of the Mattagami Pulp and Paper Company at Smooth Rock Falls, Ont., which was closed down for a few weeks, owing to repairs and overhauling, is again running and will soon be turning out 150 tons of sulphite pulp daily. The third digester will soon be put in operation. The company has carried out many improvements in the town by the erection of fifty new dwellings and one of the largest and finest boarding houses in the north. Duncan Chisholm, of Toronto, president of the company, reports that they have an abundance of pulpwood cut for the coming season's operations and that labor at the mill is very efficient at present, with everything running smoothly. The company lately installed apparatus for baling pulp for export shipment, and, while the market has been quiet for some time, it is expected that it will pick up in the near future.

Notes and Jottings of the Trade

F. A. Ritchie, of Ritchie & Ramsay, coated paper manufacturers, Toronto, accompanied by his daughter, left last week for Kingston, Jamaica, where he will spend a few weeks' holidays.

John Hewitt, president of Paper Sales, Limited, Toronto, left this week for North Virginia, where he will spend some time for the benefit of his health.

Speaking of the pulpwood cut in northern Ontario last year, School Inspector Wilson, of Harleybury, said that if it was gathered together and stretched out in a line, four feet high, it would reach from Iroquois Falls to Toronto, a distance of 460 miles. The wood is usually cut in four-foot lengths.

F. H. Johnston has been appointed superintendent of the new sulphite plant which is being erected at Kapuskasing, Ont., by the Spruce Falls Company, of Neenah, Wis. He comes from the Niagara, Wis., mill of the Kimberly-Clarke Company and will shortly enter upon his new duties.

Inland Empire Co. Increases Stock

SPOKANE, Wash., March 1, 1921.—The Inland Empire Paper Company has filed notice with the county auditor of an increase of its capitalization from \$1,000,000 to \$1,650,000.



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EMPIRE

NEWS IN WATERTOWN SECTION OF INTEREST TO PAPER TRADE

Mark S. Wilder, President of Diana Paper Co., Mentioned as Prospective Member of the Oswegatchie Water Power Commission—Formation of Syndicate Offering \$500,000 of the Hanna Paper Corp. First and Refunding Mortgage 7 Per Cent Convertible Gold Bonds Is Announced by Northern New York Trust Co.—M. M. Bagg Paper Supply Co. Sold to Black River Paper & Mfg. Co.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., March 7, 1921.—Mark S. Wilder, president of the Diana Paper Company, the Malone Light & Power Company and one of the owners of important power sites on the Oswegatchie river, is mentioned as a prospective member of the Oswegatchie Water Power Commission under changes in the law governing the commission provided in a bill in the State legislature.

At the present time the law confines membership on the commission to residents of St. Lawrence county, but the bill introduced by Assemblyman E. A. Everett of Potsdam would make possible the selection of men from St. Lawrence, Lewis or Jefferson counties.

Mr. Wilder is a director of the Northern New York Utilities, Inc., which corporation owns considerable power on the Oswegatchie river and it is felt that this concern should be represented upon the important board.

Strange Asset of Knowlton Bros.

Nature has given to the Knowlton Brothers, Inc., a strange asset in connection with the Mill street plant. It has installed a bottomless sewer in the form of a cave which is so located in the boiler-room that its mouth opens directly under the pipes from which hot water is blown off, and so placed as to be conveniently used for disposal of all roof water.

While there is nothing new to Watertown people in the discovery of caves beneath all parts of the city, experiments just made by this paper company are of special interest. The installation of new boilers in the plant is now under way and in excavating for foundations three separate cave openings were made. Tuesday the officials of the company decided to ascertain if it were possible to use the largest cave as a permanent water disposal sewer.

The fire hose was manned and a full stream carried 45,000 gallons of water into the cave in 45 minutes, but it entirely disappeared as fast as poured in. This has convinced the officers that the cave either has an outlet at some distant point into Black river or is of unlimited capacity in its farther extremities.

The test has convinced the company officials and engineers that it is safe to seal the opening with an attachment to the boilers and the surface water pipes. It means a great economic saving and a decided convenience. At present the hot water from the boiler passes to the river through an open sewer and great volumes of steam fill the basement of the mill. This has its evil effects upon machinery and pipes. The cost of installing a special sewer has been obviated by the discovery that the cave sewer is already blasted out of the rocky foundations by the erosions of time upon the limestone deposits beneath the ground.

\$500,000 Hanna Paper Corp. Bonds

The formation of a syndicate of Northern New York banking institutions offering \$500,000 of the Hanna Paper Corporation first and refunding mortgage 7 per cent convertible gold bonds is announced today by the Northern New York Trust Company. The purpose of the present issue of bonds is to combine the entire funded debt into one issue and providing additional working capital needed for the carrying out of present plans.

The participating institutions are the Northern New York Trust Company and Jefferson Securities Corporation of this city; The Peoples Trust Company of Malone, The Citizens Trust Company of Adams, the Carthage National Bank of Carthage and the Citizens National Bank of Potsdam.

The Hanna Paper Corporation was formerly the Remington Paper and Power Company. Its paper, ground wood and sulphite mills are located at Norfolk, East Norfolk, Norwood and Raymondville in St. Lawrence county. The company owns and operates one of the best equipped and largest paper manufacturing plants in this section of the state.

Brownville Board Plant Closes

The Brownville Board Company closed its plant again today following a week of operations. The mill was under full production last week but was down for nine days prior to that. Just when it will again start up is not known.

President J. Munson Gamble said today that the receipt of future orders would determine the date of future operations. Like most other mills in this section the Brownville Board plant is running on short orders. Many are closed down entirely waiting a revival of business that will warrant operations. Many have stored paper to capacity awaiting the day when the demand will equal production.

The Brownville mill is being run when orders necessitate it, thus giving the employees all possible employment.

M. M. Bagg Paper Co. Sold

The business of the M. M. Bagg Paper and Supply Company of this city has just been purchased by the Black River Paper and Manufacturing Company and the two concerns will be combined in the future. The officers of the Bagg company in Mill street will be closed and all business transacted through the offices of the Black River company in West Main street.

This means a broad consolidation of concerns of this sort in this city. The M. M. Bagg company purchased the C. A. Mack Paper Company business over a year ago. This makes the largest wholesale paper mill supply concern in this section. Allen Perkins will be in charge of the company.

National Waste Material Dealers to Meet

The National Association of Waste Material Dealers will hold its annual meeting, Monday, Tuesday and Wednesday, March 14, 15 and 16 at the Hotel Astor, New York.

The Annual Meeting, for the purpose of electing a president, and twelve directors to serve for two years, and to consider any other business which may legally come before the meeting, will be held on Wednesday morning, March 16, at 10 o'clock.

The Paper Stock Division will hold a meeting at the Hotel Astor, on Tuesday, March 15, at 10 A. M.

The Waste Paper Division will hold a meeting at the Hotel Astor, on Tuesday, March 15, at 10.30 A. M.

The Foreign Trade Division will hold a meeting at the Hotel Astor, on Tuesday, March 15, at 11 A. M.

The Eighth Annual Banquet of the Association will be held at the Hotel Astor, New York, on the evening of Tuesday, March 15, and from reservations already received, it is apparent that this year will witness the largest attendance by far at any banquet of the Association.

In view of the fact that the membership has been very substantially increased during the past year, there is every reason to believe that the capacity of the North Ball Room will be taxed to the limit. It is therefore important that members get their reservations in at the earliest possible moment, and it is also urged that members having guests, should give the names of their guests when making reservations. Banquet tickets this year will be \$10 each.

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MORE PULPWOOD FROM QUEBEC IS EXPECTED FROM NEW PLAN

Provincial Legislature Decides to Place Crown Lands Under Control of the Department of Colonization, With the Result, It Is Believed, That Many Areas Now Covered by Pulpwood Will Be Cleared by the Farmers and the Pulpwood Put on the Market—Brompton Pulp & Paper Co. to Float New Issue of \$3,000,000 Bonds—Wayagamack Co. to Resume Operations.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, QUE., March 7, 1921—The Provincial Legislature for Quebec Province has decided to place the Crown lands under the control of the Department of Colonization instead of keeping them in the Department of Lands and Forests. The object is to facilitate the settlement of lands suitable for colonization and it is expected that many areas now covered by pulpwood will be cleared by farmers and the pulpwood put on the market. The sum of \$5,000,000 is being devoted to the promotion of colonization, and there is a plan for a new railway through the Temiscamique region. When this proposal was introduced in the Legislature, the Hon. Mr. Mercier, Minister of Lands and Forests, gave some figures to show the tremendous progress of the lands and forests in the Province of Quebec. The revenue from lands and forests during 1896-1897 was \$853,427, while in 1919-1920 it had reached the sum of \$2,604,150. In 1896-97 the whole revenue of the Crown domains amounted to \$879,893, and in 1919-20 it had reached the total of \$3,033,537.

Mr. Mercier also dwelt upon the development of the pulp and paper industries in the province. He pointed out that in 1881 there were 5 pulp mills with a capital of \$92,000, and in 1919 there were 37 pulp mills and 26 pulp and paper mills capitalized at \$241,244,704. The pulp and paper industries had naturally resulted in a very extensive development in the extension of hydraulic powers in the province. The Minister also dealt with the protection of the forest reserves of the province and showed how the government had taken every possible precaution to save for the future the great forest resources of Quebec.

New Pulp and Paper Financing

The directors of the Brompton Pulp and Paper Company met in Montreal a day or two ago and decided to float a new issue of \$3,000,000 par value of bonds of the company. The total funded debt of the company and its two United States subsidiaries is \$3,843,000 so that the forthcoming issue of \$3,000,000 will bring the total funded indebtedness to \$6,843,000.

Shareholders of the Howard Smith Pulp and Paper Mills, Limited, at a meeting held here Monday, ratified the company's new financing proposals embodying the issue of \$7,000,000 7 per cent 25-year refunding sinking fund gold bonds, \$1,000,000 to be sold at once, \$2,500,000 to be held in escrow and the remainder \$3,500,000 to be retained in the treasury.

These two issues follow close upon issues by Spanish River Riordon and Abitibi. Other financing of an important nature by companies engaged in the same industry is also expected in the near future. The money is required for extensions and betterments which have been in progress for some time past.

Wayagamack Paper Company to Resume Operations

It is unofficially announced that the Wayagamack Pulp and Paper Company, which closed down their mills a month ago for repairs, will resume operations in a few weeks—at the end of March at the latest. It is understood that the output of the company will

be doubled as soon as the mills work full time. Large additions are being made to the present mills.

Turpentine Extraction Industry

Twenty-five thousand dollars has been loaned to the Douglas Fir Turpentine Company by the British Columbia Government as an aid to establishment of a turpentine industry. The company, which will engage in the extraction of turpentine from the Douglas fir, has a plant in operation on False Creek, B. C., and has completed extensive and successful experiments in tapping the trees.

New Sulphite Mill

The Prince Rupert Pulp and Paper Company, recently incorporated in British Columbia, is asking industrial privileges at Seal Cove within the city limits. The company will erect a sulphite mill with a capacity of fifty tons of pulp. It will operate in conjunction with the Emerson sawmill and the intention is to later build a large paper mill.

Bathurst Pulp Mill Re-opens

Angus McLean, general manager of the Bathurst Lumber Company, has announced that the big pulp mill of the corporation which has been shut down since December 24, has resumed operations. The announcement is of importance to Bathurst vicinity as five hundred or six hundred men have been idle for nearly two months.

Coupled with the notice of resumption was one announcing that it would be necessary to reduce wages twenty per cent throughout the entire plant. While regretting the necessity for cutting wages, Mr. McLean said it was a question of cutting the wages or keeping the mill closed. In the present condition of the pulp market, Mr. McLean explained that even with a reduced wage scale the company stood to lose \$27.50 a ton, as it would cost that amount in excess of market price to produce the commodity.

The pulp mill has a capacity of 100,000 pounds of sulphite pulp and 120,000 pounds of sulphate pulp every twenty-four hours.

The Grand Falls Development

The proposition which the Grand Falls Company, Limited, is making to the Provincial Government of New Brunswick for a renewal of its rights in the water power at the Grand Falls on the St. John River is revealed in a notice published in the official Royal Gazette.

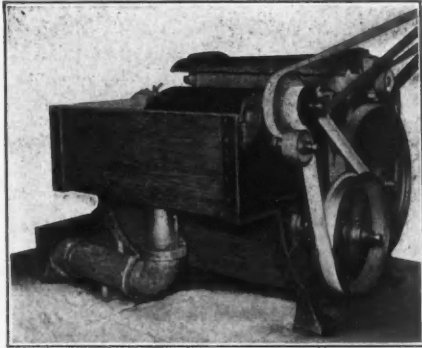
This notice states that application will be made at the coming session of the Legislature for "the passage of an Act in addition to the Act 6 George V., Chap. 59, 1916, entitled an Act in addition to the Act 1 George V., Chap. 128, respecting the Grand Falls Company, Limited, providing that the time limited for the commencement of work by the said Grand Falls Company, Limited, in the development of water power at Grand Falls, in the County of Victoria, province of New Brunswick, shall be extended for a period of two years from the first day of May, A. D., 1921."

Premier Foster recently gave out an opinion that the company's rights would expire in April, 1921, because of its failure to expend \$100,000 in actual bona fide development work at Grand Falls on or before January 10, last, or one year after the official stoppage of hostilities in the Great War. The Grand Falls Company, Limited, is controlled by the International Paper Company, and other pulp and paper interests have been known to be anxious to secure the power rights of Grand Falls. At the last session of the Legislature a special act was passed empowering the Provincial Government to take over the power rights at Grand Falls under certain conditions.

Large Profits for Whalen Pulp

Reports received from the West go to indicate that Whalen Pulp and Paper Mills of Howe Sound, B. C., in which Montreal capitalists are largely interested will show, in its financial report for the

(Continued on page 28)



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THE BIRD SAVE-ALL

MORE PULPWOOD FROM QUEBEC EXPECTED FROM NEW PLAN

(Continued from page 26)

year ending February 28, an enormous increase in profits over the figures of any previous year. This report is in part based on the statement that for the first eight months of the year, after all deductions for interest on the company's securities the net income amounted to \$1,200,000 before taxes. This would be upwards of three times the amount shown for the entire previous year.

Lumber Shows Activity in B. C.

During the past few weeks there has been a marked revival of confidence in the Pacific Coast lumbering industry, and logging camps and mills are beginning to reopen after a shutdown of a few months. One factor is the strong demand from the Orient, for B. C. lumber. Between the first of the year and the first of April the Canadian Robert Dollar Company will ship about 12,000,000 feet of lumber, and further orders are looked for. The sudden activity in Oriental shipments of lumber is due to the decline in freight rates. Last fall the rate was between \$25 and \$30. Now it is down to \$12.50, which is regarded as the rock-bottom rate.

The lumber export trade is being further boosted by the big cargoes that are being taken to Australia, South Africa and Great Britain by the Canadian Government freighters. Millions of feet are on the way, and orders already booked will keep several of the local mills busy for several months to come.

As a result of the contracts that have been received by General J. W. S. Stewart on the Gold Coast of Africa, it is believed that a large number of orders will be placed with local firms for the large amount of construction work that is involved in his contracts. A renewal of orders is also expected from the Prairie Provinces.

Financing by Fraser Companies, Limited

The Royal Securities Corporation of Montreal and the United Financial Corporation, have purchased an issue of \$2,000,000 general mortgage bonds of Fraser Companies, Limited, the well-known New Brunswick pulp manufacturers and lumber operators. In conformity with recent financing of a similar character, the bonds which mature in 1941 will bear interest at the rate of 8 per cent, payable in Canadian funds.

The two investment houses associated in the purchase of the new securities will make a public offering of the bonds early next week at a price of 99 and interest, to yield 8.10 per cent.

The issue will be a direct mortgage on the Fraser Companies' plants and properties, subject only to the outstanding first mortgage serial 6's, underwritten and sold by the Royal Securities Corporation in April, 1919.

The purpose of the issue is to reimburse the treasury of the enterprise for large capital expenditures made during the past two years. Such outlay was for the extension of plant and limits, and was provided for almost entirely out of earnings. It is understood that when effect is given to the new financing the working capital position of the company will be exceptionally strong, net liquid assets totalling practically 100 per cent, of bonds outstanding.

Riordon Company's Reorganization

Directors of the Riordon Pulp and Paper Company were in session here yesterday when, it was stated at the close of the meeting, consideration was given to the long-anticipated adjustment of the status of the holding company's outstanding common and preferred stocks. The matter, it has been known for some time past, has been under the advisement of the board, but legal technicalities, all of which have not yet been definitely disposed of, have interfered with the clearing up of the position to a sufficient degree to warrant an official arrangement of the plans of the executive. This, however, is expected to be a development of the

near future. The new common shares are to be listed in the near future.

If the present plans of the board mature, as it seems likely they will at an early date, holders of old Riordon common will receive 2 shares of the new common for every one of the present securities held, the 7 per cent preferred being retained, as at present, in the treasury of the holding concern to maintain the 10 per cent dividend now being paid. In this way a purchaser of the present Riordon common dealt in on the main portion of the Stock Exchange here would, if he paid 123 for the stock, be in possession of a 10 per cent security at around 87, the new common being quoted at approximately 18 on the unlisted department in recent dealing.

One of the directors of the Riordon Company stated that the business of the enterprise during the month of February was of a much better volume and nature than that experienced in the preceding month.

"The demand for our products," this director stated, "is showing consistent improvement at prices which are quite satisfactory to us as producers. We feel confident that from now on this state of affairs will continue and believe that whatever slackening was experienced by Canadian pulp manufacturers is now definitely behind us."

Shawinigan Financing

The Shawinigan Water and Power Company has disposed of an issue of \$2,500,000 of Series "C" thirty-year 6 per cent first refunding mortgage gold bonds, due July 1, 1950. The securities were sold in New York, the entire issue being taken by a syndicate comprising Lee Higginson and Company, Brown Brothers & Co., Alexander Brown and Sons and Jackson and Curtis.

The offering was made at 90 in New York funds and with the favorable exchange rate provides the new money on a very advantageous basis to the Shawinigan Company. Part of the proceeds will also be used on the extension of the company's plant at Shawinigan Falls, where work on the 40,000 horsepower installation is now being proceeded with. It is anticipated that the latter work will be completed by the end of the current year.

Storage Plant of Judd Paper Co. Burned

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 7, 1921—The four-story storage plant and one-story office building owned by the Judd Paper Company of this city and located at 96 Race street, were totally destroyed by fire last Friday morning. The damage will reach between \$150,000 and \$200,000. The cause of the fire is unknown.

"Business as usual" is the slogan of the Judd company. "We are open for business and will fill our orders as usual, subject to slight delay," states John K. Judd, president of the company. Mr. Judd also states that the second floor and basement of the American Braiding Company building of this city has been leased giving the Judd company approximately 15,000 square feet. The officials of the Judd company are high in their praise of the firemen, patrolmen and others who helped to bring order out of the chaos which existed.

Cale B. Forsythe to Represent Wilkinitite

The Owyhee Chemical Products Company of Chicago, producers of Wilkinitite, the new loading material, through their sales representatives, Williams Commission Company, announce that they have appointed Cale B. Forsythe, Kalamazoo, Mich., as their exclusive representative to the paper industry.

Established 1886

Experience

THE world of science and invention has progressed to the point where it is both possible and practicable to find a substitute for almost anything.

NO one, however, has yet been able to offer a substitute for that which we have learned to call "Experience." Ability, integrity and responsibility are expected of every business organization—and they are sterling attributes, indeed. But it is experience which is the mother of wisdom and discretion, pointing out the paths to be chosen and the methods to be adopted.

MAY we remind you that this is our 35th year?

WOOD PULP

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PRODUCTION OF NEWS PRINT FOR THE MONTH OF JANUARY

According to Figures Obtained by the Federal Trade Commission from Domestic Manufacturers the Production of News Print for January, 1921, Over January, 1920, Shows a Decrease Amounting to 5 Per Cent for Total News Print and About 1 Per Cent for Standard News—Idle Machine Time for January Was 1,080 Hours More Than That Shown in December.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 2, 1921—The following is a review of the reports received from domestic manufacturers of news print paper, from jobbers buying and selling news print paper and from leading publishers using news print paper furnished by the Federal Trade Commission. Import and export statistics of the Department of Commerce are also included in the review. Whenever possible the figures for 1921 are compared with those for the corresponding period of 1920, 1919 and 1918.

The figures which follow show the results of the Commission's tabulations for January, 1918, to January, 1921, inclusive. In addition the tonnage for the corresponding period of each year is shown.

	Number of Mills	Stock on Hand First of Month, Net Tons	Production, Net Tons	Shipments, Net Tons	Stock on Hand End of Month, Net Tons
Total news print:					
January, 1921	85	24,763	123,830	116,176	32,417
January, 1920	89	15,369	129,663	128,098	16,934
January, 1919	66	19,408	116,154	114,343	21,219
January, 1918	66	31,713	105,700	108,485	28,928
Standard news:					
January, 1921	67	19,573	113,764	106,228	27,109
January, 1920	66	12,338	114,957	112,719	14,576
January, 1919	51	15,656	106,002	105,169	16,489
January, 1918	50	26,482	97,086	96,336	27,232

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

The average or normal production of total news print and standard news based upon the total combined production for the years 1918, 1919 and 1920, amounted to 102,925 tons of total news print and 101,650 tons of standard news, for a period corresponding to January. The actual production amounted to 123,830 tons of total news print and 113,764 tons of standard news, an increase in the cost of total news print of 10 per cent over the average for the three-year period and an increase in the case of standard news of 12 per cent over the average.

The production of news print for January, 1921, over January, 1920, shows a decrease, amounting to 5 per cent for total news print and about 1 per cent for standard news.

The increase for January, 1921, over January, 1919, amounted to 7 per cent for total news print and 7 per cent for standard news.

The increase for January, 1921, over January, 1918, amounted to 17 per cent for total news print and 17 per cent for standard news.

Mill stocks of both total news print and standard news increased during January, 1921.

In addition to the stocks given above 153 tons were reported on hand at terminal and delivery points on January 31, 1921.

Loss of Production

The following tabulation shows idle machine time reported to the Commission for the month of January, 1921, by 51 companies operating 60 mills and 118 machines.

Reasons	Number of Mills	Number of Machines	Hours Idle
Lack of orders	10	15	2,568
Repairs	10	19	2,582
Other reasons	3	3	627

The idle machine time reported to the Commission was 1,080 hours more than that shown in December, 1920. No lost time due to labor conditions was reported by news print mills.

Imports and Exports

The imports and exports of printing paper not dutiable (practically all news print) and of wood pulp for the month of December, 1920, compared with the month of December, 1919, were as follows:

	December, 1920, Net Tons	December, 1919, Net Tons
Imports of news print (total)	81,789	52,127
From Canada	58,275	50,417
From Germany	14,206	.....
From Sweden	5,268	.....
From Finland	2,797	.....
From Norway	840	.....
Exports of news print (total)	3,324	3,584
To Argentina	1,377	30
To Cuba	1,104	1,005
To Uruguay	152	20
To Philippine Islands	130	80
To other countries	561	2,449
Imports of ground wood pulp (total)	22,299	23,696
Imports of chemical wood pulp (total)	53,008	51,189
Unbleached sulphite	23,218	29,589
Bleached sulphite	13,240	5,980
Unbleached sulphate	15,952	14,967
Bleached sulphate	598	653
Exports of domestic wood pulp	2,379	3,567

The imports of news print for December, 1920, were 29,662 tons more than for December, 1918. The exports for December, 1920, were 260 tons less than for December, 1919.

The tonnage to "other countries" under "exports of news print" for November, 1920, includes 46 tons to Canada, 95 tons to Colombia and 55 tons to Brazil.

The imports of mechanically ground wood pulp for December, 1920, were 1,397 tons less than for December, 1919. The exports of domestic wood pulp were 1,188 tons less than for December, 1919.

Jobbers' Tonnage

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

	On Hand First of Month, Net Tons	Received During Month, Net Tons	Shipped During Month, Net Tons	On Hand End of Month, Net Tons	Commitments to Buy, Net Tons	Commitments to Sell, Net Tons
Rolls, January, 1921	3,046	6,869	7,002	2,913	27,125	35,027
Rolls, January, 1920	1,920	6,721	6,742	1,899	65,526	74,097
Rolls, January, 1919	3,262	2,895	2,727	3,430	98,269	111,157
Rolls, January, 1918	2,604	2,074	2,330	2,348	(a)	(a)
Sheets, January, 1921	6,432	2,640	2,751	6,321	2,930	2,324
Sheets, January, 1920	3,554	3,244	3,108	3,690	5,996	3,929
Sheets, January, 1919	7,795	2,870	2,664	8,001	3,336	2,635
Sheets, January, 1918	6,823	2,397	2,848	6,372	(a)	(a)
Total news print:						
January, 1921	9,478	9,509	9,753	9,234	30,055	37,351
January, 1920	5,474	9,965	9,850	5,589	71,552	78,026
January, 1919	11,057	5,765	5,391	11,431	101,605	113,792
January, 1918	9,427	4,471	5,178	8,720	(a)	(a)

(a) Figures not available.

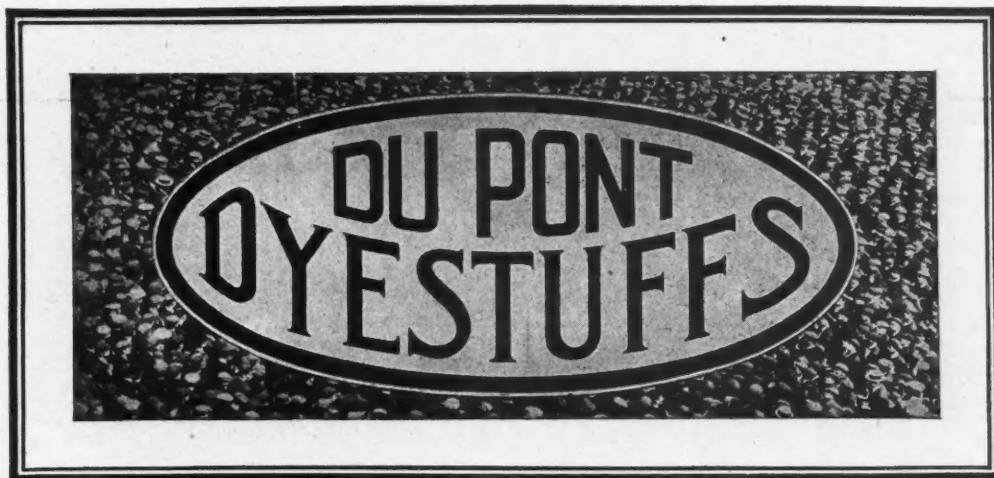
Stocks of rolls in the hands of jobbers at the end of January were 133 tons less than the stocks in the hands of the same jobbers at the beginning of the month. Stocks of sheets were 111 tons less at the end of January than at the beginning of the month. The net decrease in the total stocks of news print in the hands of jobbers at the end of January amounted to 244 tons.

Commitments to sell roll news were 7,902 tons greater than commitments to buy. Commitments to sell sheet news were 606 tons less than commitments to buy. Total commitments to sell both rolls and sheets were 7,296 tons less than commitments to buy.

Publishers' Tonnage

Monthly tonnage reports from 662 (a) of the most important newspaper publishing concerns and associations grouped according to the principal business sections of the United States together with a separate tabulation for the agricultural publications show the following results for January, 1921:

(Continued on page 32)



The Result of Continuous Care

"One hundred ninety-one firms reported a total of 24,736 employees engaged in the manufacture of coal-tar products, 2,605, or 10.5 percent, were chemists or engineers. This is probably a larger proportion of technically trained men than will be found in any other important manufacturing industry in the U. S."—*United States Tariff Commission Report.*

The reason for this preponderance of technicians is that each step in the intricate synthesis from the lump of coal to the brilliant dyestuffs must be under the constant observation of chemical engineers.

Coal-tar dyestuffs are the final effect of months of tedious laboratory research coupled with more months of semi-commercial experimenting and the last stage of actual plant production. Each step has its ever-watchful chemist, for the greater the care the better the dyestuff.

Du Pont Dyestuffs are what they are, because some 4000 earnest workers labor for their excellence, and of this number 470 are chemists or technically trained men.



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Obituary

Col. H. A. Frambach

Col. H. A. Frambach died in Los Angeles on March 5, at the age of 82 years. He was one of the oldest paper manufacturers in the West. He formerly owned and operated the Kaukauna Paper Company of Kaukauna, Wis., now owned by the Union Bag and Paper Corporation, Badger Paper Company of Kaukauna, Wis., Quinnesec Falls Company of Quinnesec, Mich., now owned by the Kimberley Clark Company, and the Cheboygan Paper Company of Cheboygan, Mich., now owned by the Union Bag and Paper Corporation.

William Clarke

TORONTO, Ont., March 8, 1921.—News has been received in Toronto of the death of William Clarke, a life-long resident of Toronto, who passed away last week at the home of his brother in New York City. The late Mr. Clarke, who was vice-president of the Gulf Pulp and Paper Company, Clarke City, Que., was in his seventy-first year and, in his early days, was in business as a builder and contractor, but in later years was a partner with his three brothers, James, George and Frank W. Clarke, in the Gulf Pulp and Paper Company, which was recently disposed of to the Northcliffe interests of London, Eng. The capacity of the plant is about one hundred and fifty tons of ground wood daily and the location is on the north shore of the Gulf of St. Lawrence, near Seven Islands. The brothers acquired extensive timber limits in the province and built up a large business in ground woodpulp, particularly in the export line, and Clarke City now has a population of about ten thousand. Mr. Clarke had been in poor health for about a year, and six months ago went to New York City for special treatment for pernicious anaemia. His wife, four sons and one daughter survive. Two brothers, James and George, reside in New York. The remains were brought to Toronto for interment and the funeral was attended by a large number of pulp and paper men.

PRODUCTION OF NEWS PRINT

(Continued from page 30)

Location of Publishers (b)	Number of Concerns	On Hand First of Month	Received During Month	Used and Sold During Month	On Hand End of Month	In Transit End of Month
New England.....	80	21,839	13,596	13,813	21,622	2,261
Eastern States.....	169	54,974	52,652	50,484	57,142	12,138
Northern States.....	128	46,967	37,003	32,716	51,254	9,942
Southern States.....	76	13,585	8,071	8,397	13,259	3,592
Middle West.....	151	35,627	24,797	21,580	38,844	4,931
Pacific Coast.....	31	9,503	13,723	12,551	10,675	1,918
Farm Papers (c).....	27	9,247	1,927	2,018	9,156	123
Total	662	191,742	151,769	141,559	201,952	34,905

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

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

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

Publishers' stocks increased 10,210 tons during the month. The average daily tonnage used during January was 535 tons less than the average used in December.

Publishers' stocks and transit tonnage on January 31 represented slightly less than 53 days' supply at the existing rate of consumption.

Eighty-two publishing concerns held about 72 per cent of the tonnage on hand at the end of the month.

The domestic consumption of standard news, by metropolitan dailies using between one-half and three-fourths of a million tons annually, for January, 1921, when compared with January, 1920, shows that the consumption for the month of January for both years was approximately the same, and increased slightly more than 23 per cent for January, 1921, over January, 1919.

Average Prices Paid by Publishers

The weighted average price of contract deliveries from domestic mills to publishers during January, 1921, f. o. b. mill in carload lots for standard news in rolls, was \$6.076 per 100 pounds. This weighted average is based upon January deliveries of about 52,000 tons on contract involving a total tonnage of approximately 683,000 tons of undelivered paper manufactured in the United States.

The weighted average contract prices based on deliveries from Canadian mills of about 23,000 tons of standard roll news in carload lots f. o. b. mill in January, 1921, was \$6.385 per 100 pounds. This weighted average is based upon the January deliveries on contracts involving about 247,000 tons of undelivered Canadian paper.

The weighted average market price for January of standard roll news in carload lots f. o. b. mill based upon domestic purchases totaling about 5,000 tons was \$6.945 per 100 pounds.

Blake & Decker, Inc., Increase Selling Organization

With the idea in mind of building up an efficient selling organization Blake & Decker, Inc., 501 Fifth Avenue, New York City, have, with the addition of three new members, now rounded out what is sure to prove a well equipped, up-to-the-minute sales force. These new members are A. W. Taube—W. H. Kinnear and F. A. Stocker, Mr. Taube, for many years in charge of the manufacturing and purchasing department of Frederick A. Stokes Company, is thoroughly conversant with the paper requirements of both the publisher and printer.

Mr. Kinnear has been for some time in the export field, having been in charge of the paper department of Bech, Van Siclen & Co., Inc., where he acquired a broad knowledge of the business.

Mr. Stocker, for eight years with the Robert Gair Company and for some time in charge of the purchasing department, has been closely identified with the paper trade and has a large and intimate acquaintance among the manufacturers, which materially adds to the service already rendered by this company.

With this thoroughly equipped organization Blake & Decker, Inc., will be well represented in the local market and able to offer a service to the printing, publishing and advertising trades, second to none.

Appears for Three Shift Bill

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 7, 1921.—Edward S. Alden, of the Central Labor Union of this city, appeared before the legislative committee on labor and industries in Boston, Wednesday of last week at the hearing held on the bill to provide that paper mills shall be operated on the three-shift basis. Alden, who favored the bill, said that 90 per cent of the paper mills in Massachusetts and every one of the paper mills in this city are operated on the three-shift basis. He said that for some reason or other the manufacturers here have opposed legislation requiring the three-shift basis. The only reason he could give for this attitude on the part of the manufacturers was that the latter may entertain the hope that the two-shift basis may be possible.

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DETERMINATION OF LIGNIN IN LIGNEOUS FIBRES*

P. WAENTIG AND E. KERÉNZI. TRANSLATED BY CLARENCE JAY WEST

In a previous communication one of the authors with Gierisch [Z. angew. Chem. 32, 173 (1919)] reported that the lignin determination in wood could be carried out by the chlorine number method (originally developed for another purpose) and showed that, calculating from the chlorine number of wood and the chlorine number of lignin, isolated according to Willstätter, the same values for the lignin content were obtained as when it was directly determined. Meanwhile, Gierisch [Textile Forschung 1, 105 (1920)] has described a simple apparatus, which permits the determination of the chlorine number with sufficient accuracy.

Very recently, a number of other methods for determining lignin directly and indirectly have been discussed by Schwalbe and Heuser. In further developing the chlorine number to a useful analytical method, these various methods have been considered. The results of the further work on the chlorine number and the comparison with other methods are given below.

The Most Suitable Method

The most suitable method for the determination of the lignin content of ligneous fibers is that of Willstätter and Zechmeister, which consists in the determination of the portion of the fiber not hydrolyzed by acid, after removing the rosins and fats and the ash constituents. The method has been used by several investigators as an analytical method [Schwalbe and Becker, Z. angew. Chem. 33, 229 (1919); 33, 14 (1920)]. Willstätter and Zechmeister did not give details for an analytical procedure. With the introduction into the analytical field the method has been modified by various workers, both as to the acid to be used for hydrolysis and the general method of procedure.

It is not without value to point out that it is desirable to have a definite method for the isolation of the lignin, since the results will vary, depending upon the method used. It has been established that lignin is not entirely resistant to the action of acids and also that, on the other hand, if the hydrolysis is not properly carried out, it is easy to obtain a lignin containing sugar-like body. Heuser [Papierfabr. 17, 566 (1919)] therefore recommends the hydrochloric acid method and suggests that the acid treatment be repeated and the solution tested for reduction with Fehling's solution. (Heuser has also found that lignin itself reduces Fehling's solution.) If one again treats the lignin obtained in this way with fresh acid, it is observed that a small amount of material always goes into solution, which has marked reduction properties when tested with Fehling's solution, even if the lignin no longer shows the presence of furfural-yielding substances. Thus a pine wood (Fichtenholz) lignin after one treatment with acid was obtained in a yield of 27.9 per cent, calculated upon the dry wood freed from rosin by benzene-alcohol. This lignin, upon a second treatment, lost 3.2 per cent dry substance, 2.1 per cent after the third and 2.2 per cent after a fourth treatment. A Scotch pine (Kiefernholz) gave 27.35 per cent of lignin upon the initial treatment and lost 5.6 per cent of its dry weight upon being treated with acid a second time. With deciduous woods the loss was even greater. Alder wood lignin lost, on the second treatment, 7.34 per cent, and on the third, 6.05 per cent. The second treatment of beech lignin showed a loss of 8.8 per cent, that of alder lignin, 9.8 per cent, birch lignin, 11.25 per cent, and poplar lignin, 10.1 per cent.

There is, therefore, little doubt that one must determine, in order to secure comparable results, how far the hydrolysis will be carried on.

Methyl Numbers Practically Unchanged

That the loss in these cases is not due to a simple removal of

the impurities from the lignin follows from the fact that the methyl numbers of the lignin remain practically unchanged by the repeated treatment with acid, as is shown in Table I:

METHYL NUMBER OF LIGNIN

Wood	First treatment	Second treatment
Pine	6.96	7.1
Scotch pine	7.22	7.1
Alder	9.38	10.2
Beech	10.13	10.18
Oak	8.57	8.48
Birch	10.60	10.55
Poplar	9.40	9.47

After four treatments with acid, pine lignin had a methyl number of 7.1. Alder, after three treatments, contained 9.27 per cent methyl. The small variations in the above table may well be due to the experimental error.

In addition to hydrochloric acid, alcohol treatment is capable of dissolving a part of the lignin. Pine wood lignin lost, upon extraction with alcohol in a Soxhlet, 3.8 per cent; after the second treatment with acid, it lost 4.3 per cent to alcohol and after a fourth acid treatment, 5.5 per cent. Similarly, alder lignin upon first treatment with acid, lost 9.13 per cent, and after the third treatment, 9.7 per cent. In the case of poplar lignin the loss upon extraction with alcohol was as high as 16.1 per cent. Upon investigation the material extracted by alcohol is found to have practically the same methyl number as the extracted material. The alcohol in extract of beech wood lignin, for example, had a methyl number of 11.08, that from poplar lignin 10.01. These facts are of considerable importance in determining a method for purifying and drying lignins.

It has also been shown that the complete removal of the easily hydrolyzed portion is attained if the hydrolysis with a strong acid is followed by a digestion of the reaction mixture at a somewhat higher temperature. As Willstätter and Zechmeister have stated, the characteristic hydrolysis process consists of a solution of the cellulose, so that in the first phases of the reaction the cellulose is precipitated upon dilution. This process of solution must, in case hydrochloric acid is used, and in order to maintain the high concentration necessary for a quantitative determination, be carried out at a low temperature, while, naturally, the further hydrolysis of the dissolved cellulose proceeds more quickly and completely at a higher temperature.

Procedure Used

We have, therefore, used the following procedure: Ten grams dry wood meal, from which the fat has been removed by benzene-alcohol, are digested with 120 cc. concentrated hydrochloric acid (density 1.19), while for 1.5 hours a stream of hydrochloric acid gas is passed through the well-cooled mixture. Then the reaction flask is closed, allowed to stand for eighteen hours, then opened and warmed to 30 degrees C. for about three hours.

When this reaction product is diluted with water there is no separation of dextrin-like products and the lignin, after washing with boiling water by decantation until nearly free of hydrochloric acid (it cannot be completely freed of acid), proves to be free of pentosans. Further, the ash and chlorine contents of lignin prepared in this way are practically negligible; with various woods the ash content varied from 0.18 to 0.33 per cent, and the chlorine content varied in about the same way. Straw behaves differently

(Continued on page 36)

*Cellstoffchemische Abhandlungen 1, No. 3, 65-71 (1920).

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390 West Broadway

New York

DETERMINATION OF LIGNIN IN LIGNEOUS FIBRES

(Continued from page 34)

from wood, because its ash constituents are insoluble in hydrochloric acid and, therefore, remain in the lignin. Straw lignin was found to contain 11.4 to 13.1 per cent ash. Thus in the calculation of the lignin of straw, the ash content must always be considered.

Choice of the Acid

When considering the choice of the acid, one should, when there is no special reason for using sulphuric acid, avoid it [Cf. Becker, Papierfabr. 17, 1325 (1919)] in spite of the ease of handling this acid, since it undoubtedly produces a rather deep-seated change in the lignin and does not yield a particularly pure product. Using the same raw material, the yield of lignin is not the same when sulphuric acid and hydrochloric acid are used. Pine wood meal, which gives 27.9 per cent of lignin by the hydrochloric acid process, yields 33.6 per cent by the use of sulphuric acid. It possesses a different color and consistency, contains after repeated washings 4.03 per cent sulphur and gives a methyl number of 4.85, which is raised to only 4.97 per cent after a second acid treatment, which is accompanied by a loss of 6.9 per cent. In addition, the determination of the methyl number is rendered difficult by the presence of the sulphur and it is necessary, to avoid the formation of hydrogen sulphide, to use a solution of cadmium sulphate as a washing agent for the purification of the methyl iodide which is formed. Because of these facts, we have used the hydrochloric acid method in all of our later work.

We Decided Differences

If one now compares the yields of lignin obtained by the above described hydrochloric acid method from different woods (Table II) it is seen that they show no decided differences. Naturally, there can be no standard number, since the age, morphology, habitat, etc., of the wood cannot be considered. There is no real object, therefore, in comparing these values with those of other investigations. Still it may be said that there is complete agreement of our results with those obtained by Schwalbe and Becker [Z. angew. Chem. 32, 229 (1919)]. That no two values are exactly the same is explained by the differences to be expected in the lignin content because of the morphology and age of the wood [Z. angew. Chem. 33, 15 (1920)]. Of the indirect methods for cellulose estimation, there are, besides attempts based upon very similar procedures, such as Seidel's oxidation method, those in which the lignin content is calculated from the methyl number or phloroglucinol absorption capacity of the lignin on the one hand, and the corresponding values of the raw material on the other.

Phloroglucinol Method Not Suitable

The phloroglucinol method is not suitable for this purpose, because the isolated lignin absorbs practically no phloroglucinol. This proves either that the phloroglucinol absorption by the raw material bears no relation to the lignin content, as is probably true of a number of qualitative tests for lignin [Waentig and Gierisch, Z. physiol. Chem. 103, 87 (1918)] or that it is so changed by the hydrochloric acid treatment that it loses the property of absorbing phloroglucinol.

Methyl Number Estimation

More suitable is the method which makes use of the methyl number estimation. Heuser has made several calculations, based upon these values and these check fairly well with the lignin values found by direct determination. From our results (Table II) it would appear that the calculated values are too high. The simplest explanation for this fact is that in the acid treatment of lignin methyl groups are split off, so that the methyl values of the lignin are too low, or that, in the original material methyl groups are present bound to other substances not lignin, which naturally would

Table II

Wood	Direct Lignin Yield	Methyl No. of Wood	Methyl No. of Lignin	Lignin Content Calculated from Methyl No.	Chlorine No. of Wood	Chlorine No. of Lignin	Lignin Content Calculated from Chlorine No.	Lignin Content Calculated from Chlorine No. = 140
Pine	27.9	2.53	6.96	36.35	39.2	142.5	27.6	28.0
Scotch pine...	27.4	2.43	7.22	32.89	42.7	153.6	27.8	30.5
Alder	26.5	3.05	9.38	32.52	40.5	144.6	28.0	28.9
Beech	24.5	3.38	10.13	33.37	34.7	143.5	24.2	24.8
Oak	29.3	3.05	8.57	35.59	46.2	139.2	33.2	33.0
Birch	22.2	2.88	10.60	27.17	30.5	134.8	23.1	21.8
Poplar	20.3	2.65	9.40	27.32	33.4	140.7	23.74	23.9

be determined with those of the lignin complex in the analysis of the raw material. The established presence of methylpentosans on the one side and the fact that through treatment with sulphuric acid the methyl number of the resulting lignins is much lower than that in the corresponding product from the hydrochloric acid method, on the other, would indicate that both things are possible.

From this standpoint it is evident that the methyl number can scarcely be considered as a practical method for determining the lignin content.

Indirect Method of Determination

A third possibility for an indirect method of the indirect determination of lignin consists in the use of the chlorine number as we have developed it, in place of the method recommended by Cross and Bevan [Z. angew. Chem. 32, 173 (1919)]; Textbook of Paper Making, page 328]. The determination of the chlorine number of the wood and of the lignin obtained from it are carried out in the manner previously described and likewise the calculation of the lignin content from these two chlorine values.

The condition given for the determination of the chlorine number of the wood, as given (use of rosin-free wood, finely divided and moistened) offers no difficulties. The determination of the chlorine number of lignin should be made on finely pulverized material, well mixed with moistened and chlorinated asbestos, in order to possess a complete chlorination of the lignin and also to retain all the hydrochloric acid which is formed. It should be noted, however, that the action of chlorine upon the lignin does not reach a final equilibrium. The traces of hypochlorous acid which results by the action of moisture upon the chlorine, have an oxidizing action, which causes a further consumption of chlorine after the end of the characteristic chlorination process. This oxidation process, which is supposed to reach a noticeable velocity only towards the close of the chlorination, introduces a certain error in the determination of the chlorine number, which, however, is only a few percent, as prolonged chlorination experiments have demonstrated. It has been proven that a chlorination time of five to six hours is sufficient to reach that stage in the chlorination process of lignin at which the absorption of chlorine is small and practically stationary and that the rapidly proceeding chlorination process is as good as completed. With ligneous fibers this stationary condition is reached much more quickly. In the chlorination of lignin itself, however, this time (five to six hours) is necessary, and it is recommended that, in all cases, the chlorination be carried out for the given time. It has been found that there is no noticeable effect of the chlorine upon the cellulose of the fibers for this length of time under the conditions given.

Parallel Determinations

Since there is always a little uncertainty in the estimation of lignin by the chlorine number, a number of parallel determinations have been carried out, and variations greater than 5 in the chlorine

(Continued on page 40)



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FORT HOWARD PAPER CO.
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PRODUCTION OF WOOD PULP DURING MONTH OF JANUARY

Total Stocks of All Grades of Pulp in the Mills at End of Month Amounted to 200,817 Tons—Mill Grades of All Grades Showed an Increase During the Month—Ground Wood Stocks Equalled Slightly More Than Eight Days' Average Output—News Grade Sulphite Mill Stocks Equalled Slightly More Than Eight Days' Average Output—Bleached Sulphite Mill Stock.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 9, 1921.—In connection with the Federal Trade Commission's current statistics of the paper industry, a summary of the monthly reports from manufacturers of wood pulp and other kinds of pulp used in paper making is submitted herewith for the month of January, 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 January, 1921, compared with January, 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. of Mills	On Hand First of Month	Production for Month	Used During Month	Shipped During Month	On Hand End of Month
Ground Wood Pulp:						
January, 1921.....	165	129,626	140,999	115,880	7,781	146,964
January, 1920.....	172	139,304	110,835	126,086	7,020	117,033
January, 1919.....	157	131,170	122,469	80,720	39,473	133,446
Average.....		118,025				137,165
Sulphite, News Grade:						
January, 1921.....	65	17,984	60,934	50,876	7,112	20,930
January, 1920.....	65	20,046	73,192	64,274	10,022	18,942
January, 1919.....	58	17,905	61,430	41,452	18,310	19,573
Average.....		62,425				19,800
Sulphite, Bleached:						
January, 1921.....	32	5,661	31,335	20,480	6,414	11,102
January, 1920.....	32	6,810	51,160	27,026	24,725	6,219
January, 1919.....	28	4,240	42,708	22,935	16,324	7,689
Average.....		42,400				8,710

Sulphite, Easy Bleaching:						
January, 1921.....	6	1,134	4,549	2,922	1,279	1,482
January, 1920.....	8	1,314	5,541	3,895	1,836	1,124
January, 1919.....	6	2,212	4,968	3,452	1,497	2,231
Average.....		6,225				1,555
Sulphite, Mitscherlich:						
January, 1921.....	7	2,768	3,897	3,165	466	3,034
January, 1920.....	7	1,809	7,182	4,479	2,773	1,739
January, 1919.....	7	1,489	6,392	3,959	2,195	1,727
Average.....		6,450				1,655
Sulphate Pulp:						
January, 1921.....	21	7,850	7,474	4,959	1,746	8,619
January, 1920.....	22	5,753	16,941	11,442	5,737	5,515
January, 1919.....	20	4,490	12,172	7,264	2,838	6,560
Average.....		13,300				5,908
Soda Pulp:						
January, 1921.....	25	6,507	25,446	16,102	7,300	8,551
January, 1920.....	27	5,672	36,895	20,573	18,260	3,734
January, 1919.....	28	3,395	32,503	21,031	10,571	4,296
Average.....		31,700				5,938
Other Than Wood Pulp:						
January, 1921.....	5	119	719	703		135
January, 1920.....	5	240	795	752	72	211
January, 1919.....	6	252	628	744	23	113
Average.....		875				159
Total.—for All Grades:						
January, 1921.....		172,649	275,353	215,087	32,098	200,817
January, 1920.....		180,948	302,541	258,527	70,445	154,517
January, 1919.....		165,153	283,270	181,557	91,231	175,635
Average.....		181,400				180,880

Total stocks of all grades of pulp in the mills on January 31, amounted to 200,817 tons. Mill stocks of all grades increased during the month.

Ratio of Stocks to Average Production

Comparing the stocks on hand at the domestic pulp mills at the end of the month with their average daily production based on the reports covering the years 1917, 1918, 1919 and 1920, the figures show that:

Ground wood pulp stocks equal slightly more than 31 days' average output. News grade sulphite mill stocks equal slightly more than eight days' average output.

Bleached sulphite mill stocks equal slightly less than seven days' average output.

Easy bleaching sulphite mill stocks equal less than six days' average output.

Mitscherlich sulphite mill stocks equal less than 12 days' average output.

Sulphate mill stocks equal slightly more than sixteen days' average output.

Soda pulp mill stocks equal slightly less than seven days' average output.

Mill stocks of "other than wood pulp" equal about four days' average output.

Total mill stocks of all grades equal slightly less than eighteen days' average output.

Loss of Production

Grade	Lack of Orders, 1921*	Lack of Power		Repairs		Other Reasons		Total	
		1921	1920	1921	1920	1921	1920	1921	1920
Ground Wood Pulp:									
Number of grinders.....	33	35	619	94	208	336	211	498	1,038
Total hours idle.....	5,390	10,885	101,746	12,677	46,770	22,932†	59,263	101,884	207,779
Sulphite, News Grade									
Number of digesters.....	28	2	21	40	22	21	19	91	62
Total hours idle.....	8,375	132	3,186	5,167	2,718	902	1,318	14,578	7,222
Sulphite, Bleached:									
Number of digesters.....	49	0	4	3	6	12	3	64	13
Total hours idle.....	10,500	0	747	464	763	505	746	11,469	2,256
Sulphite, Easy Bleaching:									
Number of digesters.....	10	0	5	1	0	2	3	13	11
Total hours idle.....	2,209	0	541	184	0	255	880	2,648	1,421
Sulphite, Mitscherlich:									
Number of digesters.....	17	0	0	12	12	5	0	34	12
Total hours idle.....	7,227	0	0	2,295	1,445	1,536	0	11,058	1,445
Sulphate Pulp:									
Number of digesters.....	22	0	5	9	11	6	4	37	20
Total hours idle.....	8,344	0	1,320	2,897	1,223	2,496	1,566	13,737	4,109
Soda Pulp:									
Number of digesters.....	76	0	0	5	8	18	20	99	28
Total hours idle.....	15,376	0	0	1,313	731	4,182‡	3,811	20,871	4,542
Other Grades:									
Number of digesters.....	0	0	2	1	0	0	0	1	2
Total hours idle.....	0	0	295	24	0	0	0	24	295
Total number of grinders and digesters.....	235	37	659	165	267	400	260	837	1,186
Total hours idle.....	57,421	11,017	107,835	25,021	53,650	82,808	67,584	174,267	229,069

*Lack of orders for 1920 included in "Other Reasons."

†Includes 55,263 hours due to water conditions.

‡Includes 1,722 hours due to labor conditions.

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Recent Incorporations

U. S. PULP PRODUCTS CORPORATION, Delaware. Capital, \$1,750,000. Incorporators: Lindsey Hooper, Boston; Ernest F. Fox, L. G. Rowe, Newark, N. J.

GEORGE J. GILLIES CORPORATION, Rochester, New York; paper boxes. Capital, \$250,000. Incorporators: G. Y. Webster, A. M. and G. J. Gillies, Rochester.

WESTCHESTER PAPER COMPANY, White Plains, New York. Capital \$50,000. Incorporators: A. S. Diven, W. M. Gilbert, J. C. Brophy, White Plains.

BOYSTON PAPER COMPANY, Boston, Massachusetts. Paper. Capital \$100,000.

DETERMINATION OF LIGNIN

(Continued from page 36)

number have not been found. Usually the single determinations vary only by 2 or 3. Thus:

Scotch pine	151.8, 155.3, 153.6
Poplar	138.0, 143.5, 140.5
Oak	137.5, 140.9
Pine	140.0, 145.0

In the table (II) the average values have been given.

As this table shows, the agreement between the lignin values found by direct determination and those calculated from the chlorine numbers is better than the comparison with the values calculated from the methyl numbers. This depends upon the fact that, in spite of the inadequacy of the chlorine method, it really acts upon those incrustations, which must be considered as the unhydrolyzable or very difficultly hydrolyzable constituents of the wood fibre and are, therefore, the characteristic lignin substance. To be sure, the high chlorine number of oak wood gives a somewhat too high value for the calculated lignin yield from that wood. It may be supposed that the presence of tannin influences the reaction and that, for exact values, this must first be removed by extraction.

A marked advantage of the chlorination method over the methyl number method consists first of all, in the greater ease and simplicity of its operation: By the help of the simple chlorination apparatus, it may be carried out on the intermediate and finished products, which lend themselves with difficulty, to the direct lignin determination.

Only an Approximate Method

It is recognized that we have here only an approximate method. This is true for all methods of determining lignin as long as we are unable to define lignin as an exact chemical substance. This is especially true of the direct method of estimating lignin by hydrolysis with hydrochloric acid, since, as has been pointed out, directly comparable results cannot be obtained unless the method is followed in every detail. Because of this, it is sufficient, if one uses for the calculation of the lignin content of a particular wood and the product obtained therefrom, the average chlorine number of lignin as 140 (the exact average value is 142.7); by the use of this number, as is seen from Table II values are obtained which are very close to the values obtained from the actual chlorine numbers found. This value (140) is to be used with the chlorine number found for the dry raw material.

An Indirect Method That May Be Used

For the approximate determination of the lignin content of lignin fibers, the following indirect method may be used, in addition to the direct method by the use of hydrochloric acid. A suitable amount of well moistened material is placed in the chlorination apparatus, tared and treated for five to six hours with a slow stream of chlorine gas. The chlorine gas is then displaced by a stream of dry air, and the apparatus again weighed. The increase in weight thus obtained, in percent of the dry materials, represents

the chlorine number, which, divided by 140, and multiplied by 100, gives the approximate content of lignin (in percent) in the raw material.

Dr. Merchant Addresses Container Club

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, March 7, 1921.—Dr. E. O. Merchant, statistician, speaking before members of the Container Club here recently in a review of general business conditions said in part:

"Most of the industries of the country having completed the liquidation and made the turn are at present in the convalescent stage, but the recovery is proceeding very gradually. A few industries are still on the downward grade and will not strike bottom for some months yet. Among these are steel, coal, oil and some grades of paper, especially those used for printing."

He further stated that it was reasonable to expect a quickening of business with the coming of spring, and especially so in the container industry.

He said that the money market was not easing fast enough to make a rapid revival possible and that the banks were carrying a large number of loans "based on agricultural and other commodities which have taken such a severe slump in price that they can't be liquidated without causing wholesale bankruptcy." Commenting further upon the result of a gradual revival he said that when good business did return it would probably stay longer after a slow recovery than following a more speedy revival. "Business," he said, "will be better generally, if we can escape the sharp swings that have characterized the last few years."

He says that it is evident now that business would not revive as rapidly during the first half of the year as we had hoped and gives as one reason the "uncertainty connected with the tax revision and tariff revision."

News of the Chicago Trade

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, March 7, 1921.—The optimistic outlook still continues to hold with the jobbers here. Business has been reported continually growing better by some houses which found this condition to exist. Meanwhile other jobbing houses have not evidenced much of an increase in buying.

F. D. Wilson, sales manager for the Alton Box Board and Paper Company, has been out of the city for several days on a business trip.

C. H. Phipp, identified with the Watab Pulp and Paper Company, of Sartell, Minn., spent a few days in the city last week calling on members of the trade here.

Ed. French, of the French Paper Company, Niles, Mich., visited with members of the trade while in Chicago during the past week.

D. R. Seaman, of the Seaman Paper Company, left Chicago last week on a trip east. He will spend most of his time in New York.

Geo. W. Gould, identified with the Chicago sales force of the Seaman Paper Company, is now on the Pacific Coast plying his trade there. He will make all the usual stops while covering this territory.

Chas. A. Esty Paper Co. Issue New Price List

WORCESTER, Mass., March 7, 1921.—The Charles A. Esty Paper Company has just issued a new price list covering all items in its Fine Paper Department, copies of which have been mailed to its entire fine paper mailing list. Extra copies of this list may be had on application at 185 Commercial Street, Worcester, Mass.

The Esty Paper Company is also circularizing a new sample book on gummed papers just issued by the Ideal Coated Paper Company, for whom it is the Massachusetts Agent.

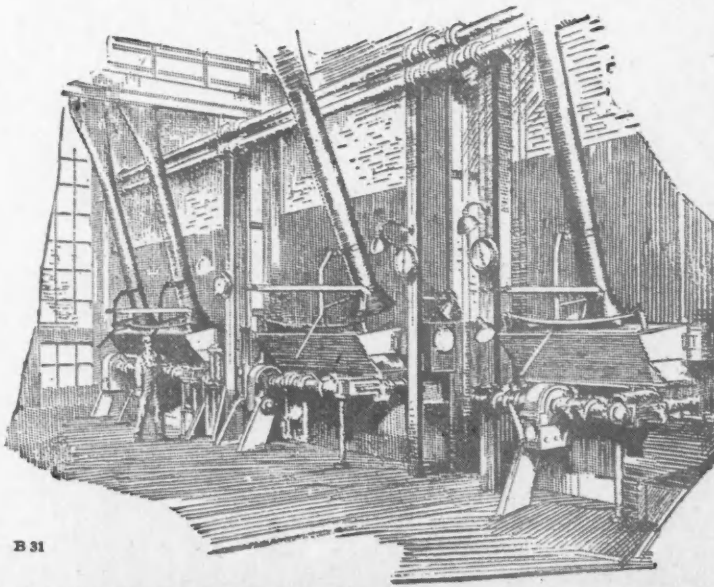
Worthington builds every type of boiler feed pump

POWER plant engineers and managers benefit by the Worthington policy of building every type in each of its lines of equipment.

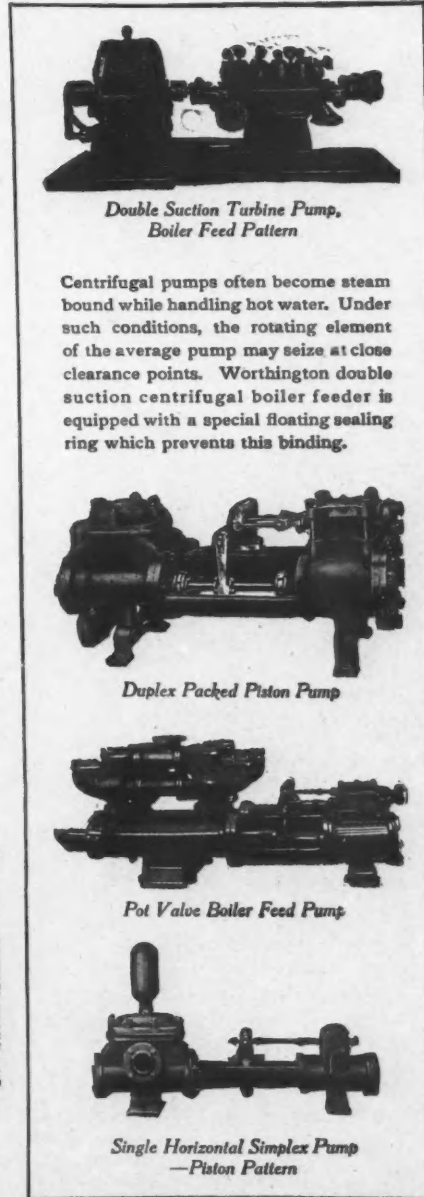
Take for instance the Worthington boiler feed line. Steam pumps include single and duplex, horizontal and vertical types in pot valve plunger and standard piston models for all ranges of pressure. Similarly, Worthington centrifugal pumps are built in patterns to meet the varying conditions of temperature and pressure found in boiler feed work.

This policy of manufacturing every type of a given equipment assures to the buyer impartial advice on his selection.

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Gas Engine Works, Cadahy, Wis.
 Power & Mining Works
 Cadahy, Wis.
 Saw-Hully Works
 Buffalo, N. Y.
 Epping-Carpenter, Pittsburgh, Pa.



New York Trade Jottings

Frank L. Moore, president of the Newton Falls Paper Company, was in this city last Tuesday.

* * *

President Sisson, of the American Paper and Pulp Association, spent several days in town last week at the offices of the association.

* * *

E. W. Kiefer and Captain W. J. Crosby, of the Port Huron Sulphite and Paper Company, were in New York last week relative to developments in the Woodlands Section.

* * *

Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, last week discussed the Snell bill, providing a national policy of forestation before the New York Rotary Club.

* * *

One of the large department stores of the city has an interesting line of rugs for summer use which are woven out of woodpulp fibers. Another store has the new German paper suits on sale.

* * *

The Kennedy Paper Mills, Inc., with paper mill at Broadalbin, N. Y., and New York offices at 501 Fifth avenue, has filed schedules in bankruptcy, with liabilities of \$32,817 and assets of \$36,780, consisting of real estate in Broadalbin, N. Y., \$35,000; insurance of paper mill, machinery, etc., \$10,500, and stock, \$1,280.

* * *

The Waterman Press, which for some time past has been conducting commercial stationery stores at 59 West 36th street and 51 East 31st street, has leased the building at 225 West 31st street, in which it will carry on a paper jobbing and twine business. The new business will be started on or about April 1. S. Wasserman will do the buying.

* * *

T. J. Burke, secretary of the Cost Association of the Paper Industry, is spending the week visiting among the trade of the Berkshire division of the association, which will meet on Friday at Holyoke. The first part of the week he spent in the vicinity of North Adams, Mass., with the board manufacturers, and the latter part he will be in Watertown, N. Y., and then in Holyoke.

* * *

The Union Sulphur Company has purchased, through Joseph P. Day, a tract of seven acres in the Bergen Point section of Bayonne from the Story Realty Company. The property is on First street and extends along the waterfront at the foot of Avenues C and D, with a frontage on the Kill von Kull of about 410 feet. The Union Sulphur Company will improve the land with a large warehouse. The property is located along the same shore line of the Kill von Kull as the large plant of the Standard Oil Company at Constable Hook and the plants of the Texas Oil Refinery and Tidewater Oil Refinery.

* * *

Dr. Arthur S. Klein, chief of the technical department of Billeruds Aktiebolag, Seflé, Sweden, and a paper technologist of distinction, has been visiting in New York and other sections of the country. He was graduated from the Stuttgart Technical University in 1898 and from Budapest University in 1900. The Billeruds concern operates four sulphite cellulose mills, one sulphate or kraft pulp mill, six ground wood mills, three paper mills and two sulphite alcohol recovery plants. It is one of the largest producers of cellulose in Europe. Dr. Klein was at one time editor of the *Papierfabrikant*, and is one of the founders of the Association of Cellulose and Paper Chemists, having been its first manager. He is an active member of the United States Technical Association of the Pulp and Paper Industry. There are about thirty of his publications on pulp and paper technology available, in German, English and French chemical journals and paper trade periodicals.

G. H. Carter May Be Public Printer

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 9, 1921.—George H. Carter, clerk of the Joint Committee on Printing and very well known to the paper trade, will probably be appointed Public Printer by President Harding, according to reliable information.

Mr. Carter has been clerk of the Joint Congressional Committee on Printing for the last twelve years. He came to Washington from Iowa and was engaged in newspaper work for several years before his appointment as clerk of the printing committee.

Mr. Carter has the backing of the entire Iowa delegation in Congress and of Chairman Smoot of the Joint Committee on Printing; Senator Moses, chairman of the Senate Printing Committee, and Representative Kiess, chairman of the House Printing Committee.

As clerk of the Joint Committee on Printing, Mr. Carter has rendered efficient service and is highly regarded by the members of Congress. He is entirely familiar with the business of the printing office.

B. T. McBain Leaves Crown Willamette

PORTLAND, Ore., March 1, 1921.—B. T. McBain, who has been connected with the news print and wrapping paper manufacture of the Pacific Coast ever since 1893 when there were only three or four small machines and a maximum product of about 25 to 30 tons per day, severed his connection with the Crown Willamette Paper Company by resignation on January 1 of this year effective March 1.

Mr. McBain was mill manager of the Oregon City mills of the Willamette Paper Company under Norman R. Lang, now managing director of the Powell River Company, Ltd., of Vancouver, B. C., and later succeeded Mr. Lang as resident manager of the Oregon City and Lebanon mills of the Willamette Company. He is known throughout the Pacific Coast among the trade and in financial circles. Regret is expressed by all including the workmen in the mills that he is leaving the paper manufacturing business. He intends organizing a new banking house, among the stockholders of which will be many of his old associates in the mills, and expects not only to handle part of the business of his old employers, but to be the banker for the majority of his employees.

Take Over Toronto Paper Mfg. Co.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., March 8, 1921.—The Howard Smith Paper Mills, Ltd., has sent out the following notice:

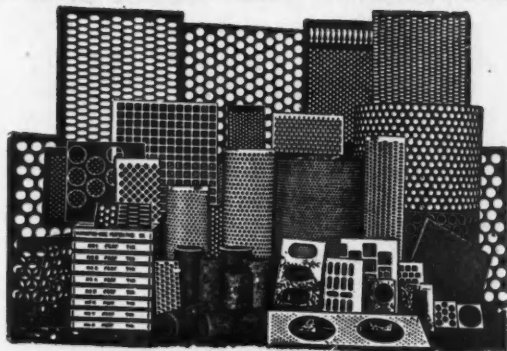
"We beg to advise you that the Toronto Paper Manufacturing Company, Limited, which for some time past has been controlled by the Howard Smith Paper Mills, Limited, has now been taken over by this company, and its accounts incorporated in our books.

"On and after March 1, 1921, therefore, you are requested to please bill all shipments of merchandise to Howard Smith Paper Mills, Limited, Cornwall, Ont., and address all invoices, statements and communications to the head office, 138 McGill street, Montreal, Que."

Ontario Gets Some Timber Dues

There has been paid into the Ontario treasury \$12,600 in respect to timber dues owing to the provincial government from past transactions and arising out of the recent timber probe, which has lately been halted in its hearings owing to the question having been raised as to the jurisdiction of the members, Justices Riddell and Latchford, in an application made to the courts. It has been deemed advisable not to go on with any inquiry until the courts have decided regarding the jurisdiction of the committee.

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CORDAGE

Editorial

Vol. LXXII New York, March 10, 1921 No. 11
FORTY-NINTH YEAR

General Commodity Sales Tax

The increasing opposition to the excess profit tax makes of decided interest any reasonable plan to displace it. A number of leading trades and industries have gone on record as strongly favoring a general sales tax in place of the excess profit tax, but it is believed none of the paper trade associations have as yet taken such action. It is known, however, that numerous representative paper men favor a general commodity sales tax. This tax preferably at the rate of three-tenths per cent, but in any case not to exceed one-half of one per cent, offers the best means of supplementing the country's present fiscal system, according to Dr. Henry A. E. Chandler, economist of the National Bank of Commerce in New York. It is estimated that such a tax would yield a substantial annual revenue and would enable inequities in the existing fiscal system to be corrected, he points out in the March number of *Commerce Monthly*, the bank's magazine.

"The urgent need for the reform of the Federal tax system is beyond dispute," Dr. Chandler declares. "Serious defects inevitably appeared in a hurriedly constructed system of war finance. These defects were enduring in the period of feverish activity and high profits that soon followed the close of the war, but with the fall of prices, the resulting liquidation and the prospect of a recovery conditioned upon lower margins of profit, the time is at hand when the system must be adjusted more nearly in conformity with the facts of our national industrial life.

"In reforming our system the urgent needs of industry, however important, are not the sole considerations—the Government must be financed, and while the budgetary needs for the next three years cannot be forecasted with any degree of accuracy, it is evident that with a large floating debt and other heavy obligations maturing in the near future, nothing short of the sum total of revenues yielded by our present sources will suffice. And while it will doubtless be possible to raise additional revenues by adjusting the rates of some of the present taxes and also to remedy certain inequities in the present system, it is clear that to accomplish the full reforms which sound industrial conditions demand and which necessitate serious curtailment of some of our most productive bases, it is necessary to find new sources of revenue."

Pointing out that sharp distinction must be made between the various types of sales tax that are being proposed, Dr. Chandler says:

"The weight of the economic arguments for or against the general commodity sales tax, depends largely upon the proportion of the revenues to be derived from this source, and upon the rate. Theoretically, the general character of the tax is such as to throw the larger part of the immediate burden upon the masses of people receiving the lower incomes. If the tax were to be levied at the rate of one per cent or higher, a not inconsiderable burden would be immediately thrown upon the masses who are not now reached by any of the Federal direct taxes.

"If we consider this form of tax, not as a separate measure, but merely as a measure supplementary to a system already largely composed of direct taxes, and if we reduce the rate to a very low percentage, namely, to three-tenths per cent, we are faced with quite a different situation.

"Such a tax would not be free of objections, but the cumulative effect of the tax would be small and inequalities arising where business units with frequent turnovers might be unable to shift the tax would be minimized. Moreover, the rate would be so low that the arguments for numerous exemptions would lose much if not all of their force. It would be possible, therefore, to frame a much simpler act, and the problem of administration, although by no means insignificant, would be less difficult.

"It would appear that this tax, notwithstanding difficulties in administration and some inequalities, offers one of the least objectionable means of furnishing new revenue from indirect sources, providing always that the rate does not exceed five-tenths per cent. Preferably it would not exceed three-tenths per cent. Even at this low rate the yield would be substantial because of the broad base to which the rate would be applied.

"Adequate data upon which to base a satisfactory estimate of the yield do not exist and until we can know more about the future trend of the price level all estimates must be considered as only relative. However, from the best data available it is believed that this tax, upon the basis of the estimated income for 1919, would yield about \$516,000,000 at the rate of three-tenths per cent, or \$860,000,000 at the rate of five-tenths per cent, providing no exemptions were allowed.

"If the sales of farmers were to be exempted the yield would be reduced to about \$486,000,000 at the rate of three-tenths per cent, and to about \$810,000,000 at the rate of five-tenths per cent. Were this tax once introduced into the fiscal system, say at the rate of three-tenths per cent, and we had been able, by experience, to ascertain the effects, it might then be possible to raise the rate by an additional one-tenth per cent, or two-tenths per cent, and thus substantially to increase the revenue from this source."

Referring to the comprehensiveness of the general commodity sales plan as compared with other proposals, Dr. Chandler concludes:

"The broader base permits a much lower rate without reducing the yield. This lower rate in turn destroys the force of the arguments for numerous exemptions which appear valid when advanced against the higher rate. In reducing the number of exemptions the administration is, of course, simplified. Finally, as this tax also promises to yield very substantial revenues, it would appear that of all the available plans the general commodity sales tax at a rate of three-tenths per cent offers the best means of supplementing our present fiscal system."

The Store-Door Delivery Plan

Railway traffic executives in eastern territory now have before their committee a proposition from the transportation committee of the Federal Highway Council to make a larger use of the highway and motor truck in the store door collection and delivery of freight.

Numerous meetings of the council's committee have been held to determine the proper policy in approaching this important subject. The proposition now before railway executives is the concrete result of these meetings.

In determining the class of traffic which would economically come under the new plan of delivery, Mr. J. C. Lincoln, traffic manager of the Merchants' Association of New York, has had embodied in the plan of procedure the principle that store-door delivery should apply to all station or platform delivery. This would exclude carload lots delivered to sidings, but would include carload lots handled over freight platforms at terminals. In most smaller cities carload lots are seldom handled over platforms, while at New York City a large portion of the freight is so handled whether it is carload or less than carload lot.

A motion has also been adopted to the effect that "the committee deems it most advantageous to have store-door delivery a carrier service, but at additional rates not included in the through rates." It was brought out in the discussion that store-door delivery tariffs should be published separately, similar to the lighterage tariffs of New York. Discussion at the last conference thoroughly established the fact that this proposed service should not be an additional burden upon the railroads.

Upon the suggestion of Mr. William J. Pitt, of Philadelphia, the committee has adopted a recommendation that "the carriers, to avoid congestion and delay, be urged to establish and operate, in all large cities, a store-door collection and delivery system to be performed by, or under the control of the carrier, the carrier to assume liability for the safe transfer by their representatives, a reasonable charge to be assessed for such service."

Features of Technical Convention

Thomas J. Keenan, secretary of the Technical Association of the Pulp and Paper Industry, has sent out a notice regarding the convention of the association in New York April 14, which in part is as follows:

"Engineering problems in the pulp and paper industry will be broadly considered in the reports of standing committees and in special papers. One topic to be considered is the operation of water power plants at maximum efficiency.

"A session in charge of the Heat, Light and Power Committee will be held on Wednesday, April 13, for the discussion of Pulverized Fuel and Steam Economy.

"A searching investigation has been made of a new groundwood process and this will be the subject of a report by the Committee on Groundwood.

"Preliminary impregnation of the wood as a means of shortening the cooking time in sulphite pulp manufacture is the topic of a paper to be presented by a member of the staff of the Forest Products Laboratory which will be of special interest and value to manufacturers.

"Facts and figures on power required for paper machines will be given in a paper by the chief engineer of a large Canadian mill, while a number of other papers will be presented on different subjects, including the measuring of moisture in chips for cooking; the testing of crude rosin; methods of drying paper on paper machines, and the electrification of paper machinery.

"It is planned to show at one of the sittings on Thursday afternoon a moving picture study of the mining of sulphur for use in the sulphite pulp industry. The picture will show in detail every

operation and object of interest connected with the production of sulphur. The pictures will be staged by a member of the Committee on Sulphite Pulp who will describe the uses and properties of sulphur in a manner to interest users of the element.

"The Annual Banquet of the Association will be held at the Hotel Astor, Forty-fourth Street and Broadway, New York, on Tuesday evening, April 12, beginning at 7 o'clock sharp. Seats at table will be assigned to suit the wishes of members, who may indicate their preference for table companions in ordering tickets. The banquet proceedings will be in charge of Judge Charles F. Moore, who will act as Toastmaster and introduce the speakers. It is requested that applications for banquet tickets be made promptly, accompanied by check or money order at \$5 per ticket. Members of T. A. P. P. I., are eligible to attend the annual banquet of the American Paper and Pulp Association on Thursday evening, April 14, and reservations at \$10 each may be made through Dr. H. P. Baker, Secretary, on the forms previously sent.

While no special provisions have been made for the entertainment of ladies, they may come to the meeting and join us at the banquet with the assurance that everything will be done for their comfort and pleasure.

"It is requested that members make early applications for seats at the banquet. Seats will be assigned according to preferences for table companions, as may be indicated at the time of ordering tickets."

Paper Supply Co. to Build at Once

[FROM OUR REGULAR CORRESPONDENT.]

MINNEAPOLIS, Minn., March 7, 1921.—Plans have been made for the immediate construction of a modern, fireproof building, at a tentative cost of \$150,000, to house the Paper Supply Company, whose building at 414 Third avenue north, was destroyed by a \$280,000 fire recently. This announcement was made by M. F. Hewitt, secretary-treasurer of the company.

Officials of the company, H. W. Mathewson, president; H. N. Thwing, vice-president, and Mr. Hewitt held a meeting and discussed plans. Offices were opened at 324 North First street.


The company owns property on Seventh avenue north and had planned to build there before the war, said Mr. Hewitt. This lot may be used. A new home was planned when the lease on the building which burned expired in two years.

"Therefore, the fire set our plans ahead a year," Mr. Hewitt declared. "Business will be conducted as usual from our temporary offices, and we will be able to supply customers to a limited extent from our surplus stocks which were stored in outside warehouses."

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PRACTICAL QUESTIONS AND ANSWERS FOR MILL MEN

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

Sorting Board to Caliper Thickness

Question No. 2532. Some of the board mills in Finland request exacting technical information as to how the American board manufacturers procure a constant caliper thickness. They also will be pleased to know the manner of sorting the board according to caliper thickness.

Answer No. 2532. It is distinctly up to the beater engineer and the machine tender to keep the board to a uniform gauge. Right at the beginning, the beater engineer must see that every beater is loaded uniformly and when the beaters are dumped into the chests that about the same amount of water is used in each beater. If the beaters are not uniform it is impossible to keep the stock going to the machine uniform. Then again the stock could be sent to the machine uniform and still not have a constant gauge when it is turned out a finished product.

We will suppose that the board is running at a certain gauge and the machine tender has to change the board a point or so one way or the other. He will go up and put a little more stock on if he wants the board heavier. He will then send a marker over the machine so that he can caliper the board at that point when it gets to the reels. We will now suppose that he was a little anxious and got the marker in too soon. The result is that he has not given the stock a chance to get on the machine so that when he calipers the board it will still be too light. He will immediately go up and put some more stock on and the process is repeated. This time no doubt he will wait for the stock to get on the machine before putting the marker in. Well, when he calipers the board this time it will be too heavy. So he has to fool around, first at the dry end and then at the wet end until he has gotten the board to the right gauge. In the meantime the board is being wound up on the reels while he is trying to get the gauge right.

Generally the sorting is done right on the reels. The backtender will cut pieces out of the board as it is being wound up and test them for the correct gauge. When the gauge shows that the board is running at the right caliper, most backtenders will immediately commence to wind the board on another reel. The board which is of varying gauge is then either wound up in wrapper rolls, cut into head stock, or sent back to the beater room to be made over again.

Reagents for Detecting Ground Wood

Question No. 2533. I would like to ask if some reader of the PAPER TRADE JOURNAL can give me the names of several reagents which can be used to detect the presence of mechanical ground wood pulp in paper and also give the approximate percentage of same?

Answer No. 2533. There are several reagents by the use of which the presence of mechanical wood pulp in paper can be detected and these produce a definite color when applied to the sheet of paper. The only way to get the percentage of mechanical ground wood in the paper is to judge by the color. That is an approximate method and it takes an expert to judge by the different shades of the color. The only reliable method is to make an examination by the use of the microscope. Following are the reagents which can be used and the effect of each.

By the use of nitric acid the mechanical wood pulp turns to a brown stain.

By the use of aniline sulphate a yellow coloration is produced when applied to the surface of news print. It is more or less intense according to the amount of mechanical wood pulp present. This solution is prepared by dissolving five parts of aniline sulphate in one hundred parts of distilled water.

Phloroglucine gives a rose pink color when brushed on to the surface of the paper. This solution is prepared by dissolving four grammes of phloroglucine in one hundred c. c. of rectified spirits and adding to the mixture fifty c. c. of pure concentrated hydrochloric acid. The phloroglucine reagent fails as a test for mechanical wood in papers which have been dyed with certain aniline colors. For example * * * paper which has been colored with metanil yellow will, when moistened with the phloroglucine reagent, give an intense pink color even if no mechanical wood is present. The reason for this is that the dye itself is acted upon by the hydrochloric acid in the test reagent. There is little difficulty in distinguishing between the color arising from the presence of such a dye, because the effect is instantaneous * * * whereas the coloration due to mechanical wood develops gradually. Also when metanil yellow is present the surface is colored perfectly even while in that which has mechanical wood the fibres appear to be more deeply stained than the body of the paper.

Eddy Paper Co. to Make Fruit Packages

[FROM OUR REGULAR CORRESPONDENT.]

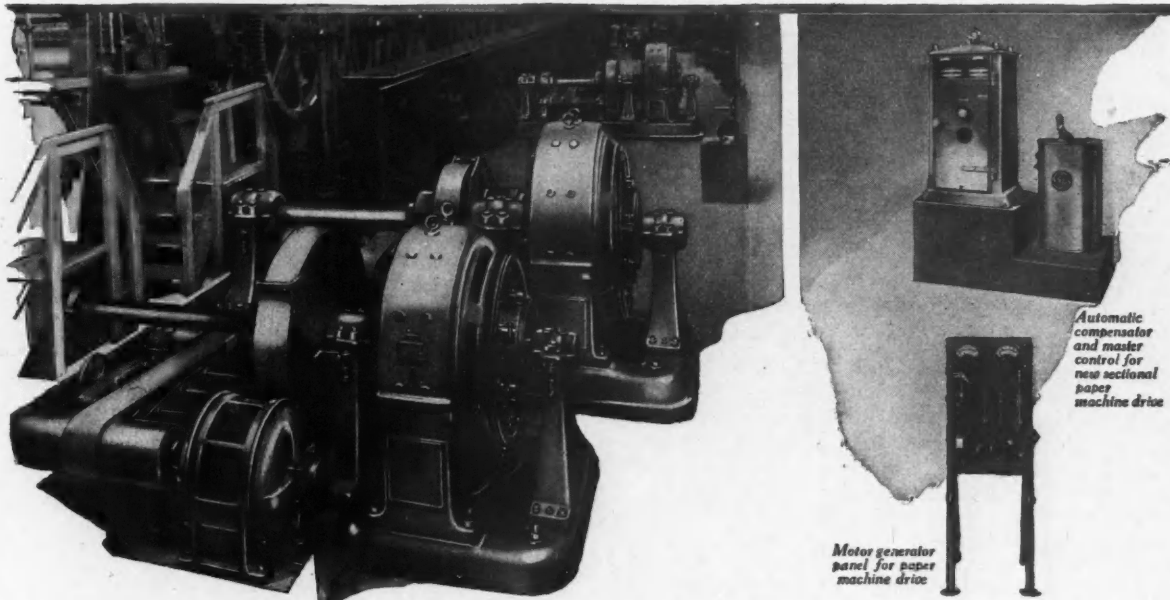
KALAMAZOO, Mich., March 7, 1921.—Invasion of the fruit box field through the manufacture of a complete line of board fruit boxes and fruit packages is contemplated by the Eddy Paper Company, according to a statement just made by Charles E. Nelson, general manager and secretary.

For years and years the problem of securing adequate supplies of berry boxes and peach, pear and plum baskets by the growers of Michigan and other horticultural states has grown more complex. For some time officials of the Eddy Paper Company have been studying these conditions and have been working out plans whereby paper board can be used in the place of wood fiber in the manufacture of these boxes and baskets. Its efforts have been successful and it will soon begin making all types of fruit containers, ranging from the ordinary quart berry box to a half-bushel measure, suitable for peaches, pears, plums, etc. The larger board measures will be equipped with handles, quite as easy and convenient to handle as the ordinary market basket.

"It will not be until well into April, possibly May, before we are able to begin the manufacture of fruit packages on an extensive scale," said Mr. Nelson. "We are now running three shifts a day to fill the orders for our shipping containers and we must keep up with our orders in that line. The prospects are that our new fruit package department will require at the outset the entire product of a board machine and will increase the number of employees on our payroll from 400 to 600."

The establishment of the new department will make it necessary to install a considerable amount of specially built and designed machinery and equipment.

Shortage of paper is such a vital problem that no large producer or user of this commodity can afford to ignore its solution



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A GROWING demand for paper necessitates the absolute maximum production from every mill. To increase production, the speed of machines must be increased. At the same time this speed must be regulated and controlled if the paper is to be of uniform quality.

Paper machinery is big and expensive, and the process is delicate, from pulp to coating. Speed fluctuation is costly in "breaks," for each section of the entire machine performs a definite function and operates at a different speed. However, it is imperative that each one of these sectional speeds be uniform.

To meet such a complicated problem it became necessary for G-E engineers to devise a method of drive which would allow for a comparatively wide speed range for the entire paper making machine, as well as a speed range to operate each section of that machine as a unit, independently of the other sections. This was the only solution for "draw and stretch" difficulties.

The result is found in the G-E Sectionalized Drive, now in successful use in the West Linn, Oregon, mill of the Crown Willamette Paper Company. By applying a power unit to each section, consisting of a direct

current motor and a synchronous motor driven by it, it is possible to perfectly control the speed of any single section or the whole machine. One generator supplies power for everything, while proper voltage regulation permits a wide range of speed.

As the load on any particular section is increased, the synchronous motor acts as a power plant and helps maintain an even speed. All the other synchronous motors then act simultaneously as generators, supplying current to the dead bus to which they are connected. As the load decreases, one synchronous motor acts as a generator, while each of the others absorbs its share of the current produced. Thus, load fluctuation does not affect the direct current motor, which goes on working at uniform speed.

In addition to the fact that G-E Sectionalized Drive allows a higher machine speed and a corresponding increase in paper production, it eliminates line shafting, belts, clutches and gears—saves valuable space, saves power, cuts down maintenance cost, and enables the operator to stop or reverse any section without disturbing the others.

Full particulars about this new method of drive are available at the nearest G-E District Office.

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CURRENT PAPER TRADE LITERATURE

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

Electrolytic Chlorine Cell.—U. S. patent No. 1,349,597, Herbert I. Allen and Kent R. Fox, Portland, Me., assignors to Electron Chemical Company, Aug. 17, 1920. *Chem. Met. Eng.*, xxiii, 847 (Oct. 27, 1920).—An improved form of electrolytic cell for the decomposition of brine consists of a suitable tank, a rectangular, box-shaped cathode having perforated active end, side and bottom walls, and a rectangular tubular anode. Certain advantages result from this construction. For example, practically the entire inner surface of the cathode, including the bottom, sides and end walls, is electrically active, and the exterior faces of the cathode are wholly un submerged in any body of electrolyte. By providing a watertight and gastight pressure joint between the cathode and the freeboard section, it is possible to build up the column of electrolyte in the freeboard section so as to secure the desired hydrostatic head as the diaphragm becomes more or less clogged with the impurities in the brine, thus insuring a longer diaphragm life than would otherwise be possible.—A. P.-C.

Cuprammonium Cellulose Solutions.—Br. patent No. 145,035—1919, Glanzfarben Akt. Ges., Petersdorf, Germany, Aug. 18, 1920. *Chem. Met. Eng.*, xxiii, 941 (Nov. 10, 1920).—Solutions of cuprammonium cellulose, which are permanent and capable of being satisfactorily spun, are obtained by the addition of sugars both of the grape sugar group and of the cane sugar group; the former are added to prevent oxidation of the cupric salt and of the cellulose, and an amount of 0.25 per cent of the cellulose taken is sufficient; the sugar of the cane sugar group, of which refined beet sugar is the most suitable, are added to effect or maintain the hydration of the cellulose, and of these sugars it is sufficient to add 2 per cent of the weight of the cellulose taken, or a little more if the cellulose has not been decomposed. By the addition of a reducing sugar, it is stated that the solubility of cupric oxide in ammonium is increased, and the solution of the cellulose in such solution is rendered more rapid and complete.—A. P.-C.

Greaseproof Paper from Reeds.—Ger. patent No. 303,266, P. Hoering, Sept. 1, 1916. *J. Soc. Chem. Ind.*, xxxix, 652A (Oct. 15, 1920).—The leaves, or stalks, or both, of the reed mace are subjected to the action of caustic alkalis under pressure and the product after washing is employed as paper pulp without any special beating and without sizing. The material, consisting of bast fibers and parenchyma, furnishes a transparent, greaseproof paper of a brownish-yellow color.—A. P.-C.

Waterproofing Process for Board and Paper.—Ger. patent No. 316,527, L. Buchbinder, March 19, 1919; addition to 306,028. *J. Soc. Chem. Ind.*, xxxix, 653A (Oct. 15, 1920).—Carboard which has been coated with a glue precipitate containing a filling material, in accordance with the chief patent (see *J. Soc. Chem. Ind.* xxxvii, 575A, 1918), and dried, is further coated with a mixture consisting of a saturated solution of tannin and rosin in alcohol and a varnish containing a drier, to which mixture zinc white and formaldehyde have been added.—A. P.-C.

Sizing and Waterproofing Paper.—Ger. patent No. 318,923, E. Fues and E. Braunnmuller, Jan. 3, 1917. *J. Soc. Chem. Ind.*, xxxix, 653A (Oct. 15, 1920).—The paper material is treated with colloids such as dialyzed solutions of hydroxides of trivalent metals, preferably iron or chromium with or without the addition of solutions of other, preferably organic colloids.—A. P.-C.

Sizing and Waterproofing of Paper, etc.—Ger. patent No. 321,232, W. Schmidt and E. Heuser, March 15, 1918; addition to 296,124. *J. Soc. Chem. Ind.*, xxxix, 653A (Oct. 15, 1920).—The paper pulp or fabric is treated with a solution of tar soap prepared by saponification of wood tar, lignite tar or coal tar, previously

extracted with water. Injurious acid substances may be removed from the tar by distillation and a soap prepared by incomplete saponification of the tar may be used.—A. P.-C.

Use for Straw Pulp Waste Liquor.—Ger. patent No. 319,068, S. Herzberg, Nov. 13, 1917. *J. Soc. Chem. Ind.*, xxxix, 654A (Oct. 15, 1920).—Alkaline liquors from the treatment of straw are electrolyzed to obtain the caustic soda in a concentration suitable for further use. The degree of evolution of O or of oxidation of organic substances at the anode varies with the strength of the current.—Ger. patent No. 321,453, S. Herzberg, March 28, 1919; addition to 319,068 (preceding abstract).—The liquor, or at least the portion to be used as anodic bath, is treated in the cold with mineral acid or bisulphate and heated to 70° Cent.; it is then filtered with precipitated organic substances and electrolyzed. The precipitated lignin acid can be utilized, and if salt solution is used as anodic electrolyte the chlorine produced may be employed in the dissolution of chopped straw previously treated with milk or lime.—A. P.-C.

Deinking Process.—U. S. patent No. 1,351,092, C. Baskerville and C. M. Joyce, Aug. 31, 1920. *J. Soc. Chem. Ind.*, xxxix, 686A (Oct. 30, 1920).—Waste inked paper is saturated with a mixture of kerosene, borax, soap and water.—A. P.-C.

Deacidification of Raw Woodpulp Liquor.—Br. patent No. 150,571, B. Gratz, Nov. 26, 1919. *J. Soc. Chem. Ind.*, xxxix, 686A (Oct. 30, 1920).—The liquor is allowed to flow along a trough through which the ashes of lignite or other brown coals are transported in an opposite direction by means of a mechanical conveyor. The cost of neutralization is small, and the liquor obtained may be used for preparing artificial stone.—A. P.-C.

Method of Concentrating Black Liquor.—Ger. patent No. 322,771, H. Achenbach, Feb. 16, 1919. *J. Soc. Chem. Ind.*, xxxix, 686A (Oct. 30, 1920).—The black liquor passes down a tower, in which it is concentrated from about 5° Bé (sp. gr. 1.037) to about 10° Bé. (sp. gr. 1.075) by means of furnace gases. It can then be evaporated in the usual apparatus without frothing.—A. P.-C.

Cellulose Acetate Solution.—Br. patent No. 145,511—1919, Badische Anilin und Soda-Fabrik, Ludwigshafen-on-Rhine, Sept. 1, 1920. *Chem. Met. Eng.*, xxii, 989 (Nov. 17, 1920).—Cellulose acetate solution in acetone is dissolved in a fully hydrogenized monocyclic ketone, such as cyclohexanone, to form solutions suitable for lacquering and for the production of artificial silk and films. A solvent or diluent, e.g., alcohol, acetone, ethyl acetate, or benzene, may be added to the ketone.—A. P.-C.

Waterproofing Cellulose.—Br. patent No. 145,610—1919, F. Moeller, Cassel, Germany, Sept. 1, 1920. *Chem. Met. Eng.*, xxii, 990 (Nov. 17, 1920).—Pure cellulose, such as cotton, cellular tissue and papers and cardboards made therefrom, are hardened and rendered water-resisting by treatment with thionyl chloride. Indifferent solvents for the thionyl chloride, such as chloroform, carbon tetrachloride, benzene, etc., may be used. A better parchmentizing effect on paper is produced by exposing the paper, after treatment, if necessary, in vacuum, to the vapors of thionyl chloride. Continued treatment renders paper absolutely impermeable. It is desirable, after treatment, to wash with water or dilute alkali, or to treat with dry ammonia gas.

The foregoing process, described in Br. patent No. 145,610—1919, may be applied to the treatment of vegetable matter containing cellulose, such as wood, cork, straw, jute, hemp, linen, flax, artificial silk, yarns and fabrics obtained therefrom, cellulose derivatives, such as cellulose hydrate, hydrocellulose, oxycellulose,

(Continued on page 50)

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CURRENT PAPER TRADE LITERATURE

(Continued from page 48)

kindred substances, such as starch, dextrin, or fabrics and substances treated or impregnated therewith. These materials may also be hardened and rendered less sensitive to water by treatment with a suitable solvent. The products of this treatment may be parchmented and the fat-resisting material so obtained rendered water-repellent by further treatment with thionyl chloride.—A. P.-C.

Machine for Producing Narrow Strips of Paper.—Fr. patent No. 505,686, Türk Gessellschaft m. b. H., Germany. *Papeterie*, xlii, 925-6 (Oct. 25, 1920).—Narrow disks are placed side by side, but a small distance apart, and are made to act on the wire of the machine between two of the guide rolls so as to produce trough-like depressions in the wire. As the wire travels the fibers are deposited in the spaces between the disks, so that when the wire emerges from under the disks it carries strips of fibers having clean-cut edges and uniform width and thickness.—A. P.-C.

Artificial Fuel.—Br. patent No. 124,310, L. Grimani, England. *Chimie & Industrie*, iv, 480 (Oct., 1920).—An easily handled fuel is obtained by coating strips of paper with paraffin. They are then made into bundles, subjected to a very high pressure, and cut into blocks which can then be coated with resins, paraffin or gums.—A. P.-C.

Acidproof Cement.—U. S. patent No. 1,287,995, A. E. Holley and H. W. Webb, assignors to Chance & Hunt, England. *Chimie & Industrie*, iv, 506 (Oct., 1920).—A cement consisting of about 17 parts by weight of siliceous acid-resisting material, 0.12 part calcium sulphate, 3 parts of 34 Bé. waterglass.—A. P.-C.

Paper Pulp from Furze.—Fr. patent No. 495,367, J. C. Daurers, F. F. Robert, O. Fabre, France, June 27, 1919. *Chimie & Industrie*, iv, 516 (Oct., 1920).—Two grades of pulp are prepared by two successive treatments of furze (a plant which grows abundantly on barren soils. (1) By the action of diluted caustic soda (2 to 3 per cent.) under pressure (2 to 3 kg.) for five hours, a first grade of pulp is obtained; it is long-fibered and can be used as a rag substitute in the manufacture of paper pulps. (2) The residue from the first treatment is crushed and may or may not be cooked with caustic soda under pressure; this yields a second grade pulp which can be used for the manufacture of cellulose acetates or plastics.—A. P.-C.

Digester.—Br. patent No. 124,676, E. Schaufelberger, England. *Chimie & Industrie*, iv, 516 (Oct., 1920).—A digester for the preparation of pulp from bamboo, esparto, or similar material, in which the liquor is made to circulate from bottom to top and in which the liquor is sprayed at the top of the digester. The liquor may also be heated in an exterior heater.—A. P.-C.

Recovery of Acetates from Black Liquor.—U. S. patent No. 1,298,478, V. Drewsen, assignor to the West Virginia Pulp & Paper Company, U. S. A. *Chimie & Industrie*, iv, 517 (Oct., 1920).—The liquor is concentrated to a sp. gr. of about 1.30 and 10 per cent. caustic soda and 50 per cent. powdered quicklime are added to obtain a strongly caustic and porous mixture. After heating to about 250° Cent., it is cooled out of contact with air and extracted with cold water so as to obtain an acetate solution of about 30° Bé. Carbonic acid is passed through the solution, the precipitate of sodium carbonate is separated, acetic acid is added to purify the liquor and neutralize the carbonates, and an excess of 5 per cent. (of the solids) of powdered quicklime is added. The liquor is filtered, concentrated, and the sodium acetate crystallized out. The motor liquor is acidified with sulphuric acid and the acetic acid distilled off.—A. P.-C.

Recovery of Chemicals from Black Liquor.—U. S. patent No. 1,298,479, V. Drewsen, assignor to West Virginia Pulp & Paper Company, U. S. A. *Chimie & Industrie*, iv, 517 (Oct., 1920).—The black liquor is concentrated by adding powdered quicklime

so as to obtain a dry caustic mixture. This is distilled to obtain acetates and other volatile products.—A. P.-C.

Acetates from Black Liquor.—U. S. patent No. 1,298,481, V. Drewsen, assignor to West Virginia Pulp & Paper Company, U. S. A. *Chimie & Industrie*, iv, 517 (Oct., 1920).—The liquor is concentrated until it contains about 50 per cent. solids, and the lignin compounds and sodium carbonate are precipitated by passing carbonic acid through the solution, this being done under pressure to agglomerate the precipitant. The precipitant is filtered off and the liquor is concentrated by adding about half its weight of powdered quicklime, thus giving a drying caustic mixture. This is pulverized, moistened, treated with carbonic acid, heated to 160 to 200° Cent., and treated with a small quantity of cold water to extract only the sodium acetate, which is then crystallized out.—A. P.-C.

Marbled Paper.—Fr. patent No. 506,862, G. L. M. Labatie, (Seine), France. *Papeterie*, xlii, 877-8 (Oct. 10, 1920).—The invention covers a process and a machine for making marbled paper continuously so as to give it the same aspect as paper marbled by hand. Adhesive is poured on the upper length of an endless belt having slightly raised edges and passing over rolls. Drops of color are produced mechanically on the surface of the adhesive and the paper is unwound from a roll and passed over the layer of adhesive so as to receive the required impression.—A. P.-C.

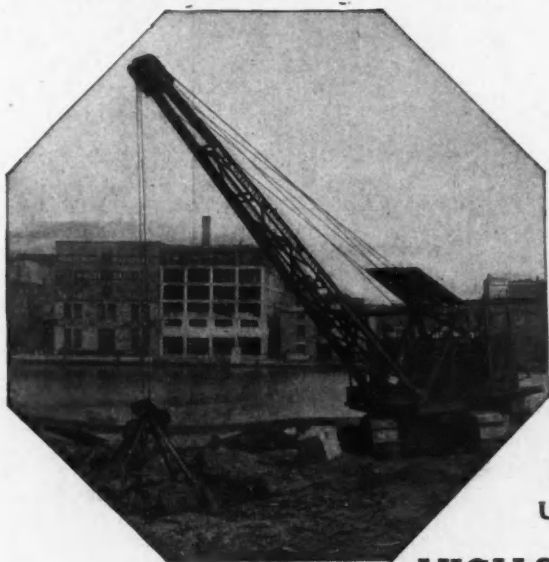
Process for the Manufacture of Paper Pulp from Rags, Cordage, Twine and the Like.—Fr. patent No. 506,569, Armand Boileau (Dordogne), France, June 1, 1920. *Papier*, xxiii, 229-31 (Oct., 1920).—The material in a proper state of subdivision is first of all subjected to the action of a very slightly alkaline and rather weak sodium hypochloride solution. This may be carried out cold for a few hours and followed by washing with cold water for half an hour. The material can then be cooked under pressure with a relatively weak (as low as 1 to 2 per cent.) solution of soda ash, caustic soda, sodium sulphite, etc., for a relatively short time (2 to 4 hours). Or it may be treated with cold caustic ammonia or ammoniacal sodium sulphite. It is then washed again and submitted to mechanical treatment. The essential characteristic of the process lies in the preliminary sodium hypochloride treatment, which facilitates and hastens the saponification of the fatty material with which the fibers are more or less covered, thereby reducing the consumption of alkali, and also the pressure and time required for the operation.—A. P.-C.

Separation of Vegetable Fibers.—Fr. patent No. 506,292, Albert Nodon, May 25, 1920. *Papier*, xxiii, 228-9 (Oct., 1920).—The raw material is impregnated with a conducting solution containing either a salt or sulphuric acid, the latter helping to remove the mineral matter combined with the incrustants and ensuring a proper conductivity of the whole mass. The impregnated material is placed between vertical lead electrodes and subjected to the action of an electric current. Through the combined action of the current, of the ozone formed through electrolysis and of the acid solution, the incrusting matters are rapidly oxidized and resinified, thus being rendered soluble in alkalies. The fibers are completely freed by boiling the mass for a few hours in a weak alkaline solution, without pressure. The alkaline soaps thus formed can be easily washed out with cold water. The isolated fibers are slightly colored and are very strong, as they have not been appreciably weakened by the alkaline treatment.—A. P.-C.

Artificial Fibers from Cellulose Solutions.—Ger. patent No. 322,538, K. Schreiner, Dec. 25, 1917. *J. Soc. Chem. Ind.*, xxxix, 719A (Nov. 15, 1920).—The method of producing fine threads by drawing out thick threads spun from wide orifices, is applied

(Continued on page 52)

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CURRENT PAPER TRADE LITERATURE

(Continued from page 50)

to cuprammonium cellulose solutions with the aid of slowly-acting, gaseous precipitants. After use the gases are passed into a well-cooled tubular vessel in which the moisture is deposited and the greater part of the ammonia is absorbed; after being moistened and reheated, the gases are used again to extract ammonia from the threads.—A. P.-C.

Stationary Digesters.—Br. patent No. 150,782, S. Milne, June 4, 1919. *J. Soc. Chem. Ind.*, xxxix, 719A (Nov. 15, 1920).—A vertical cylindrical digester has a conical lower portion within which are perforated plates for supporting the grass or like material under treatment. A valve at the lowest part of the digester has a hollow spindle connected at the upper end with a perforated pipe passing into the lower part of the digester. During digestion the liquor drains through the perforated plates, passes out from the space between the plates and the outer walls, and is returned to the top of the apparatus by a steam injector or pump; when the process is complete the valve at the bottom is opened and the contents are washed out by water, spent liquor, steam, or air, and forced under pressure into the digester through the valve spindle and perforated pipe.—A. P.-C.

Treatment of Waste Liquor.—Ger. Patent No. 322,688, M. Claass, Feb. 15, 1918. *J. Soc. Chem. Ind.*, xxxix, 719A (Nov. 15, 1920).—Cellulose waste liquor is improved both in adhesive properties and in color by treatment below 100° Cent., with acids, sulphates, and a sulphoxalate.—A. P.-C.

Cellulose Esters.—Br. patent No. 145,534-1919, Akt. Ges. für Anilin Fabrikation, Treptown, Berlin, Sept. 1, 1920. *Chem. Met. Eng.*, xxiii, 1,036 (Nov. 24, 1920).—Cellulose esters are prepared by subjecting to the usual processes of esterification on a cellulose derivative obtained on treating cellulose with nitric acid in the presence of benzene.—A. P.-C.

Sulphite Waste Liquor as a Precipitant for Viscose Solutions.—Br. patent No. 145,627, M. Mueller, Finkenwalde, near Stettin, Sept. 1, 1920. *Chem. Met. Eng.*, xxiii, 1,036 (Nov. 24, 1920).—In the manufacture of artificial threads and of ribbons, films, or sheets from viscose, the solution is introduced through suitably shaped apertures into a precipitating bath, consisting of sulphite waste liquor to which has been added a mineral acid or an acid salt, e.g., sulphuric acid, sulphurous acid, or hydrochloric acid. The waste liquor obtained in the manufacture of "sulphite ethers" may also be used. It is preferred to use a waste liquor which is free from lime, e.g., a sodium sulphite liquor obtained when the wood is boiled with sodium bisulphite, or "by conversion of sodium salts from the waste lye of lime"; and the liquor should be concentrated before use. Hardening agents, such as formaldehyde or alum, and glue, seaweed mucilages, etc., may be added to the precipitating bath; by such additions the sensitiveness of the threads, etc., to water and their capacity for dyeing can be favorably affected.—A. P.-C.

Cellulose Acetate Compositions.—Br. patent No. 146,212, British Cellulose and Chemical Manufacturing Company, London, Sept. 8, 1920. *Chem. Met. Eng.*, xxiii, 1,036 (Nov. 24, 1920).—A composition for use as a coating material, or in the manufacture of artificial silk or films, or as a varnish, and which can be cast or molded, consists of cellulose acetate and the aggregate of fatty acids extracted from coconut oil. A volatile solvent, such as chloroform, acetone, carbon tetrachloride or chloroform and alcohol, is used in the manufacture of the composition; and the proportions of solvent and of fatty acid are varied according to the purpose for which the composition is to be employed.—A. P.-C.

Treatment of Straw for Pulp.—U. S. patent No. 1,347,979, E. E. Worner, July 27, 1920. *J. Soc. Chem. Ind.*, xxxix, 624A (Sept. 30, 1920).—Straw or the like is treated with an excess of an alkaline solution and, before further treatment, a portion of

the solution is expressed to reduce the alkalinity of the material to a given degree.—A. P.-C.

Process of Dissolving Cellulose.—U. S. patent No. 1,348,731, Z. Ostenberg, assignor to International Cellulose Company, Aug. 3, 1920. *J. Soc. Chem. Ind.*, xxxix 624A (Sept. 20, 1920).—Cellulose is dissolved in a highly concentrated hydrochloric acid in which a portion of the hydrochloric acid has been replaced by one and a half times its quantity of concentrated sulphuric acid below 50° Cent.—A. P.-C.

Machine for Imitation Hand-made Paper.—*Paper*, Sept. 15, 1920.—An invention to produce sheets of paper in imitation of hand-made paper of any required size or shape and automatically to deliver the sheets without the aid of hand labor. A wire-cloth-covered drum or cylinder is employed, on the surface of which are formed the moulds, and the drum is caused to rotate beside a pulp-containing trough in the manner of the fountain roller of a printing press. The sheets are withdrawn on to an endless felt from which they are taken on to a conveyor and delivered.—A. P.-C.

Bevelling Millboard Edges.—Br. patent No. 144,090, Wilmar Engineering Company, Ltd., Glasgow. *Paper*, Sept. 22, 1920.—An improved contrivance of the type in which a rotary knife is mounted on a spindled journal in a frame ready to cut edges of cardboard blanks held by a guide plate. The improvement consists in the provision of a grinder for sharpening the knives, and which is driven by the knife-grinding gear.—A. P.-C.

Varnishing and Gumming Paper.—*Paper* (Sept. 22, 1920).—The sheets of paper, etc., are carried on endless tapes through a longitudinal drying chamber having a continuous circulation of hot-air maintained by a fan; the outlet of the fan casing is connected to the external heater through which the air is forced to the chamber through a series of pipes to hoods or canopies forming the roof of the chamber, the top of which is wholly covered by a perforated plate. The pipes may be controlled by dampers; and the plate divided into sections corresponding with the canopies.—A. P.-C.

Conditioning Paper for Spinning.—Br. patent No. 144,057, H. Wood, Bolton, England. *Paper* (Sept. 22, 1920).—Patent issued covering a machine which simultaneously cuts and conditions paper ready for spinning. The conditioning liquid is applied during the cutting, and varies in quantity as the diameter of the paper strips on the roll increases.—A. P.-C.

Improvements in Corrugated Cardboard.—Br. patent No. 145,854, Wm. Grant Fiske, Director of Thames Paper Company, Ltd., Purfleet, Essex, England, June 29, 1920. *Paper*, Sept. 29, 1920.—Corrugated cardboard, strawboard, and the like is composed of a plurality of layers of boards which are corrugated prior to their becoming mutually immobile owing to the action of an adhesive when dried or set. The corrugating of the several layers whereof the completed board is built up may be effected before or after the adhesive is applied thereto, and the corrugations of the layers may be effected individually or collectively, or some may be corrugated individually and some collectively, or the totality may be built up of layers which are corrugated as they are superimposed.—A. P.-C.

Improved Sulphur Dyes from Sulphite Waste Liquors.—U. S. patent No. 1,316,742, Jacob S. Robeson, Pennington, N. J., U. S. A., Sept. 23, 1919. *Chem. Met. Eng.*, xxii, 138 (Jan. 21, 1920).—Sulphur dyes obtained from sulphite waste liquor are improved by converting the calcium ligosulphonate into the corresponding salt of a heavy metal base, e.g., Fe (brownish black), Al (red brown), Cu (seal brown), Zn (gray brown), etc.—A. P.-C.

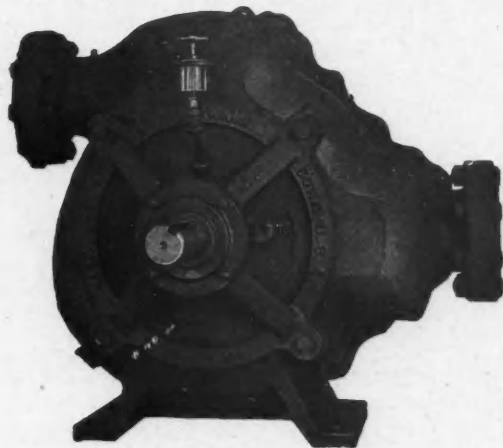
(Continued on page 54)

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CURRENT PAPER TRADE LITERATURE

(Continued from page 52)

Strawboard Lining for Cyanamide Furnaces.—U. S. patent No. 1,315,678, Wm. H. Middleton, Niagara Falls, Ont., assignor to American Cyanamide Company, Sept. 9, 1919. *Chem. Met. Eng.*, xxii, 89 (Jan. 14, 1920).—By merely lining a cyanamide furnace with corrugated strawboard a given oven will hold 35 per cent. more carbide than when a paper sleeve is used, and 50 per cent. more than when a metal container is used. The usual cylinder around the resistor is provided and, in addition, tubes of corrugated strawboard extend from the N inlet to the resistor space so that effective distribution of the N is obtained.—A. P.-C.

Purification of Partly Oxidized Resins.—U. S. patent No. 1,316,842, J. R. Kohler, Stockholm, Sweden, Sept. 23, 1919. *Chem. Met. Eng.*, xxii, 89 (Jan. 14, 1920).—Old resins which flow spontaneously from conifers or from wounds of tapped trees consist of a mixture of oxidized resin acids and crystallized resin acids, both constituents being soluble in ethyl alcohol. Solvents, such as benzol and oil of turpentine, dissolve only the valuable crystallizable resin acids, which may be recovered as light-colored copolymer of high quality.—A. P.-C.

Treating Black Liquor from Sulphate Pulp.—U. S. patent No. 1,322,043, Elis Olsson, East Angus, P. Q., Nov. 10, 1919. *Chem. Met. Eng.*, xxii, 378 (Feb. 25, 1920).—Same as Can. patent No. 202,467, Aug. 3, 1920.—A. P.-C.

Calcium Carbide and Wood Distillation Products.—U. S. patents Nos. 1,327,736, 1,327,737, 1,327,738, J. H. Reid, Newark, N. J., U. S. A., assignor to International Nitrogen Company, Jan. 13, 1920. *Chem. Met. Eng.*, xxii, 661-2 (April 7, 1920).—Wood distillation products and calcium carbide are produced in one operation by heating a mixture of sawdust and lime in an electric furnace. At first, products of the destructive distillation of the sawdust are obtained. Later, the temperature is raised until calcium carbide is obtained. In a modification, coking coal is used instead of sawdust. A third patent describes an automatic controlling device for the furnace electrodes.—A. P.-C.

Reduced Sulphite Waste Liquor.—U. S. patent No. 1,327,862, Frank E. Coombs, San Francisco, Cal., Jan. 13, 1920. *Chem. Met. Eng.*, xxii, 662 (April 7, 1920).—Commercial neutral sulphite waste liquor of 30° Bé. is acidified with 0.5 per cent. sulphuric acid and iron filings or iron wire is added. The reduction may be hastened by adding a little copper to form a couple. The reduced liquor, after removing undissolved iron and iron salts, is evaporated to 20° to 30° Bé. It may be used as a dye, producing shades of greenish-brown or unmordanted wool. The liquor also has considerable insecticidal value. It may be used with the usual spraying apparatus. Retaining some of the original sulphite waste liquor, it adheres well to leaves, vines, etc.—A. P.-C.

Destructive Distillation of Wood.—U. S. patent No. 1,330,632, David L. Hanson, Wilmington, Del., assignor to Pine Nene Products Company, Feb. 10, 1920. *Chem. Met. Eng.*, xxii, 857 (May 5, 1920).—In order to prevent "cracking" of the oils and gums formed, during the destructive distillation of wood, a current of superheated steam and air is introduced into the retort and hastens the removal of the vapor by the use of a suction fan.—A. P.-C.

Treating Fibrous Materials.—Eng. patent No. 135,240, Amber Size & Chemical Company, London, and C. Weygan, Maidenhead, Berkshire, Jan. 21, 1920. *Chem. Met. Eng.*, xxii, 948 (May 19, 1920); also, *J. Soc. Chem. Ind.*, xxxix, 59A (Jan. 31, 1920).—Straw, wood, flax, jute and other vegetable fibrous materials are boiled in water with a mixture of 1 to 4 parts of calcium carbonate and 1 part of alkali compound of low causticity, such as sodium sesquicarbonate, to produce fibers suitable for spinning, for yarns, or for rope-making, or to obtain a papermaking material. The residual liquor or the paste settling from it may be used as a

detergent, with or without the addition of soda ash or soap.—A. P.-C.

Cellulose Ester Solutions.—Eng. patent No. 136,141, O. Carlsson and E. Thall, Stockholm, Feb. 4, 1920. *Chem. Met. Eng.*, xxii, 992 (May 26, 1920).—The viscosity of solutions of nitrocellulose, acetylcellulose, celluloid and other cellulose esters is permanently reduced by heating the solutions, meanwhile preventing the escape of solvent, to a temperature between 60° Cent. and the temperature at which the ester in question is decomposed. The temperature and duration of the heat are correlated; the longer the heating and the higher the temperature, the more is the viscosity reduced.—A. P.-C.

Cellulose Compound.—Eng. patent No. 138,116, Deutsche Celluloid Fabrik, Eilenburg, March 31, 1920. *Chem. Met. Eng.*, xxii, 1,129 (June 16, 1920).—A cellulose compound suitable for use in the manufacture of non-inflammable films and in the preparation of a substitute for gelatin is prepared by treating ordinary or mercerized cellulose with a halogenized fatty acid, such as chloroacetic or chloropropionic acid, in the presence of caustic alkali.—A. P. C.

Separating Wood Tars and Pyrolygenous Acid.—U. S. patent No. 1,339,022, Wm. E. Clifford, Memphis, Tenn., U. S. A., May 4, 1920. *Chem. Met. Eng.*, xxii, 1,128 (June 16, 1920).—The pyrolygenous acid content of the tar from the settling tanks can be reduced to 2.5 to 4 per cent. by agitating with air at a temperature not above 85° Cent. Treatment for 2 to 3 hours results in almost complete separation of the mixture into two layers. The tar can be successfully distilled in direct fired stills.—A. P.-C.

Pulp for Papermaking.—Eng. patent No. 138,911, Société Anonyme, A. Olier, Clermont-Ferrand, France, April 21, 1920. *Chem. Met. Eng.*, xxii, 1,175 (June 23, 1920).—Same as Fr. patent No. 496,613, Feb. 11, 1919. See *Papeterie*, xli, 623 (Dec. 25, 1919); *Pulp & Paper*, xviii, 836 (Aug. 5, 1920).—A. P.-C.

Paper Box Industry Better in Chicago

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, March 7, 1921.—In the paper box industry of Chicago, the representatives of manufacturing plants here state, there are signs of gradual recovery and return to a more normal condition. As the box board industry depends largely upon this industry for its outlet, the business in box board can be best explained by telling of what the manufacturers and users of the board are doing and what they expect.

Paper box manufacturers state that they have noted a better condition, which is growing stronger continually.

"We depend almost entirely upon what the rest of industry does, and what business in general is enjoying in the way of orders and work, we find that we enjoy," said one member of this trade. "We constantly watch the clothing business and the candy business and almost every business because a great majority of them use paper boxes in one form or another."

Here, too, the situation is rather spotty. Some of the box plants in Chicago are running full time and some of them even overtime, while others are only running part time. Some houses are busy filling standing orders. Others are doing up small special jobs which are placed for the purpose of taking care of the present demand for containers.

One thing is very noticeable in the box manufacturing industry here just now, and that is that the orders that do come in, even the smaller ones, are all marked "rush."

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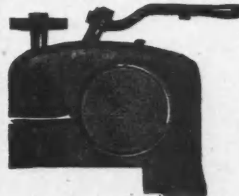
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BIBLIOGRAPHIE DE LA PAPETERIE*

[A Bibliography of Papermaking*]

Compiled by CHARLES DUMERCY, Lawyer, Doctor of Political and Administrative Science, Deputy-Examining Magistrate of the County Court at Antwerp.

Translated by DARD HUNTER, Member Committee on Bibliography, T. A. P. P. I.

(Committee on Bibliography, Technical Association of the Pulp and Paper Industry; Contribution No. 24)

(Compiler's Preface)

It may seem presumptuous for a jurist to undertake to publish a bibliography on papermaking.

We were induced to do so under the following circumstances:

Having been called upon to plead in a case concerning the manufacture of paper, we were forced to study the subject. The time is past when one could plead on technical matters merely by drawing on one's imagination. Judicial proceedings are assuming more and more a scientific character. Soon we shall understand that everything in Nature has its place in Law.

The first thing to do when beginning the study of a subject is to search the literature. This is what we have done in the case of papermaking. The work, begun through necessity, was continued from choice. The collector's mania is easily acquired, and after some time we were astonished at the amount of material we had gathered together. The specialists to whom we showed it advised us to publish it, and as advice of this nature is usually followed we were induced to do so.

Our sole object is to spare others the laborious investigations we have had to make. The purpose of the work must be its excuse. Despite all our endeavors to be accurate, there will inevitably be many errors and omissions. The number of the latter, however, is not as large as might appear at first sight, when it is recalled that we have attempted to prepare a bibliography of papermaking, not of paper.

(Translator's Note)

When reproducing the individual bibliographic entries from Dumercy's original edition, they have been rearranged to modern bibliographic style, unquestionably with loss of quaintness. Translations of the foreign language titles are given in the concluding italicized paragraphs under each such entry herein. The word *Passim* so frequently used by Dumercy is retained in the translations because there is no succinct Anglo-Saxon word to express its "here and there" and "everywhere" significances which, in certain cases, must mean that the article or work referred to is published elsewhere than in the reference given.

The list below, then, is a bibliography of the same titles included in Dumercy's work, rather than a literal reproduction of it.

(The translator desires to express special thanks to Mr. A. Papineau-Couture, Ottawa, Canada, who has subjected the following bibliography to a careful

*The letter of transmittal, under date of Feb. 15, 1921, from Clarence Jay West, Chairman, Committee on Bibliography, Technical Association of the Pulp and Paper Industry, reads as follows:

"The Committee on Bibliography transmits herewith as its 24th contribution a manuscript entitled, 'Bibliographie de la Papeterie,' which has been furnished through Mr. Dard Hunter, member of this committee. The translation was made from the French edition of the same title, published by Ferdinand Larcier, Bruxelles (Brussels), 1888, and designated on the fly leaf, 'Extrait de L'Industrie Moderne.' Originals of this work are rarely to be found, which is to be expected, in view of the inscription to the effect that only 103 copies were printed. Numbers 1 to 3, inclusive, were on Dutch hand-made paper.

"Contribution No. 23 was: 'Papermaking Materials,' compiled by Clarence Jay West, published in the PAPER TRADE JOURNAL, vol. 71, No. 24, to vol. 72, No. 10 (1920-1921). It might be stated that contributions 16 to 23, inclusive, have appeared in this journal."

scrutiny. He is indebted to him for a number of valuable suggestions and corrections.)

Amberg, Abbé.

Poème latin sur le papier. 1613. ? p. 4to.

Passim.

Latin poem on paper.

American stationer.

1873—

New York, 1873—

.. v. ..cm. weekly.

Anleitung z. mikroskop-chem. Untersuchung d. Papiers u. d. z.

Papierfabrikation verwendeten Rohstoff. Berlin: Klönne und m., 1884.

8 p. 12mo. Mk. 0.50.

Introduction to the micro-chemical examination of papers and of the raw materials applicable to papermaking.

Appeltauer, F.

Adressbuch der Papier . . . Fabriken. Wien: Gerold and Co., 1883.

160 p. 8vo. Mk. 4.00.

Directory of paper . . . mills. Vienna: . . .

Armonville, J. R.

Le clef de l'industrie.

See its Papier (paper) and Papyrographie (art of printing, etc., directly on fiber board or artificial lithographi cstone).

The key to the industry. (Literal; probably one of the so-called "guides.")

Barse, Jules.

Études comparées sur l'industrie française.

No. 2 de la série: La fabrication et le commerce du papier en 1860 et en 1864. (Paris?) 1864. 8vo. Fr. 1.00.

Comparative studies of French industries.

No. 2 of the series: *Papermaking and trade in 1860 and in 1864.*

Becherelle (Ainé, i. e., senior).

Dictionnaire national.

2 v. 4to.

See its Papeterie (papermaking) and Papier (paper).

National dictionary.

Bévenot, P. F.

Le parchemin végétal et ses usages dans l'industrie. Par P. F. Bévenot, ingénieur civil, ancien élève de l'école centrale des arts et manufactures de Paris, directeur-gérant la société anonyme l'Union des papeteries. Bruxelles: Lhoest, 1885. 36 p. 8vo.

Vegetable parchment and its industrial uses. By P. F. Bévenot, civil engineer, graduate of the . . . (central school of arts and manufactures of Paris), managing director of the Union des Papeteries). Brussels . . .

Bibliographie de la Belgique.

Bruxelles.

Editor: A. Manceaux.

Passim: Articles on papermaking.

Bibliography of Belgium. Brussels.

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Leipzig, 1834-1839.

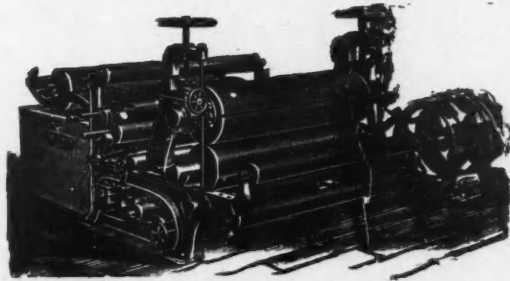
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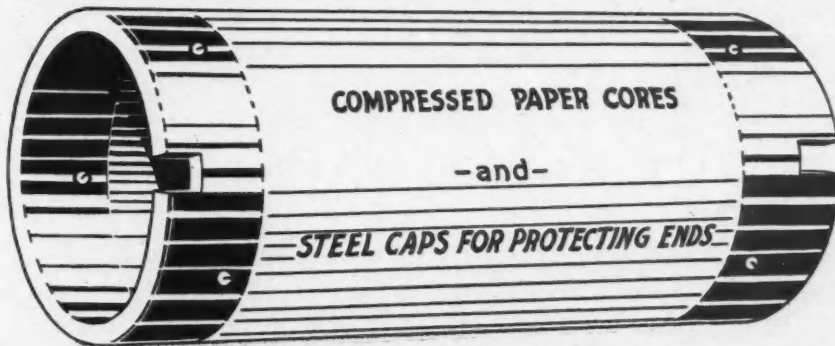
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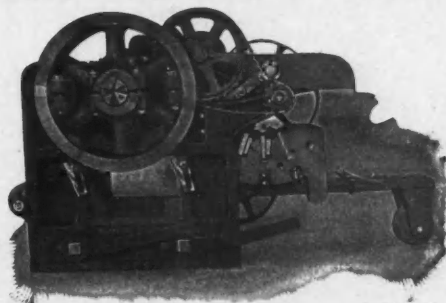
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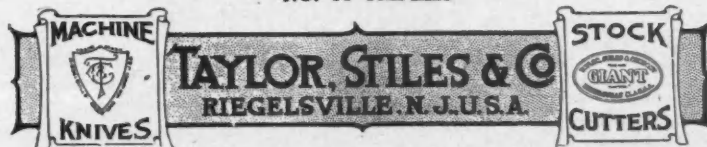
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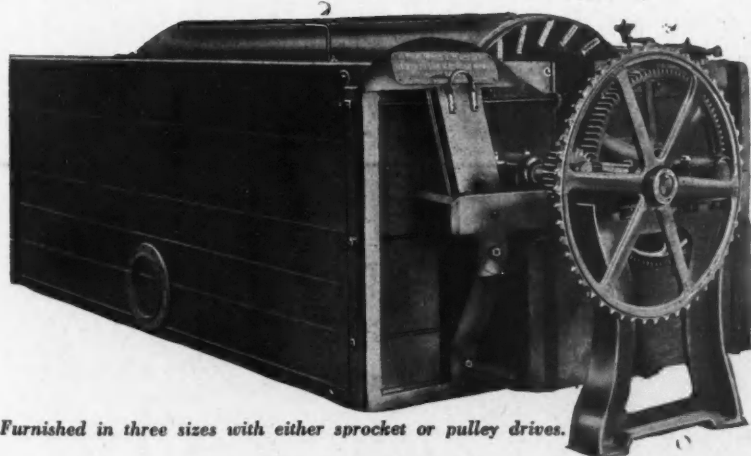
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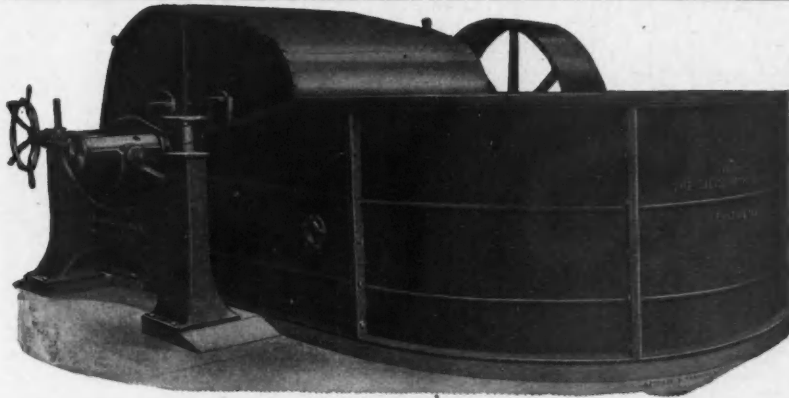
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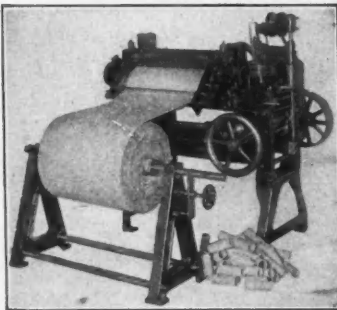
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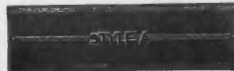
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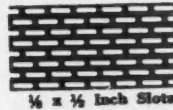
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The universal dyer; the use of coloring matters in the arts and industry, etc.
- Jamar, A.**
See London.
- Journal de l'imprimerie et de la librairie.**
Passim: Articles on papermaking.
Journal of printing and book publishing.
- Journal des chiffons, de l'effilochage, de la papeterie et des ventes publiques en gros.**
1864—
Paris, 1864— . . .
. . . v. . . cm. Fr. 20.00 per annum.
Journal of rags, of half stuff, of papermaking, and of wholesale merchandising.
- Journal des fabricants de papier.**
1854 —
Paris, 1854 —
. . . v. 8vo. weekly. Fr. 30.00 per annum.
Papermakers' Journal.
- Journal de pharmacie et de chimie.**
1809—
Paris, 1809—
. . . v. 8vo. monthly.
- Table de la 1re série (1809-1830). Paris: L. Colas, 1831. 8vo. See its *Papier* (paper).
- Table de la 3e série (1842-1864). Paris: G. Masson. 1872. 8vo. See its *Papier*, *Altération particulière du. (Peculiar deterioration of paper.)*
- Table de la 4e série (1865-1880). Paris: G. Masson. 1880. 8vo. See its *Papier*, *Procédé pour reconnaître de bois dans sa pâte, (Test for the detection of groundwood in paper pulp)*, and *Papiers colorés (colored papers)*.
Journal of pharmacy and chemistry.
Index . . .
- Journal du Palais.** Répertoire général. Paris, 1857.
15 v. 8vo.
See its *Papeteries* (paper mills), *Papetiers* (papermakers), *Papiers* (papers).
Journal of Palais. General index . . .
- Julien, Stanislas.**
See *Description . . .*
- Kaepfelen, D.**
Fabrication des papiers peints.
. . . p. illus. 8vo. Fr. 1.00.
Manufacture of wall paper.
- Koops, Mathias.**
Historical account of the substances which have been used to describe events and to convey ideas, from the earliest date to the invention of paper. London, 1801.
. . . p. 8vo.
- Lachat, Maurice.**
Nouveau dictionnaire universel. Bruxelles: Peeters (n. d.)
See its *Papier* (paper).
New universal dictionary. Brussels: . . .
- Lacroix, Auguste.**
De la fabrication du papier, de ses progrès et de ses abus. 1848.
97 p. 8vo. (Bibliographie Lacroix, 1re série, no. 1019).
The manufacture of paper, its progress and its abuses.
- Lacroix, Auguste.**
Histoire de la papeterie d'Angoulême, suivi d'observations sur le commerce des chiffons en France. 1863.
. . . p. 8vo. Fr. 10.00.
History of papermaking in Angoulême, followed by notes on the rag trade in France. . . .
- Lacroix, E.**
Étude sur l'exposition universelle de 1878.
For papermaking, see its tome vi, p. 468; tome ix, p. 222.
Study on the universal exposition in 1878.
- Larousse, Pierre.**
Grand dictionnaire universel du XIXe siècle, . . . et supplément. Paris, 1866-1877.
16 v. 4to.
See its *Chiffon* (rags), *Papeterie* (papermaking), *Papetier* (paper trade) and *Papier* (paper).
Unabridged universal dictionary of the 19th century. . . with supplement.
- Laurens.**
De l'organisation de l'industrie, application à un projet de société générale des papeteries françaises. Par . . . Laurens et Ch. Callon.
. . . p. 8vo. Fr. 4.00.
Industrial organization, as applied to a project for a federation of French paper mills. By Laurens and Ch. Callon.

(Continued on page 66)

The Home of Quality



PAPER BAGS

Sacks and Specialties

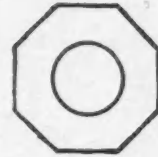
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Manufacturers

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This Registered Trade Mark Octagon



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Blotting Paper of the Best Quality

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THE EATON-DIKEMAN COMPANY

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Manufacturers of Blotting, Matrix, Filter and all other grades of absorbent papers.

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SEND FOR SAMPLES AND PRICES

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SHELDON SPRINGS VERMONT

White and Tinted Bristols—White Blanks—Index Bristol and Specialties in Card Boards.



We announce the completion at Cincinnati, Ohio, of the most modern plant, built and operated by practical experts of the highest standing in the manufacture of Silicate of Soda.

It is our purpose to merit your business on the basis of standard quality and dependable service.

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THE STANDARD SILICATE COMPANY

MANUFACTURERS OF

SILICATE OF SODA

CINCINNATI, OHIO.

New York Market Review

Office of the PAPER TRADE JOURNAL,
WEDNESDAY, March 9, 1921.

Now that the new administration has actually taken up the reins of government the increase in confidence on the part of business men all over the country is expected to have a stimulating and beneficial effect. Paper is still dull and the demand is very spotty, but some of the other commodities are showing definite signs of picking up and particularly the things on which paper is more or less dependent. Leather, for example, is better and this means more of a demand for shoes and a consequently increased demand for board to make the boxes. Silk and wool are also improved and this should help wrappings to buck up a little.

A great many men throughout the paper trade are rather pessimistic and say that they do not look for any improvement until fall if it comes that soon. This estimate, it seems, is a little too dark. These fellows are coloring future conditions with the same shades of black and grey which are prevalent now. Paper more than almost anything else is dependent upon general market conditions. As the various other lines continue to improve throughout the spring and summer there is bound to be a gradual betterment in paper. The demand for wrapping will increase as soon as the retailers begin to do a bigger business. Then, too, as business increases correspondence increases and with it comes a greater demand for fine papers. Of course advertising will get more abundant and this will cause all the publications, both newspapers and monthlies, to buy more of the various kinds of stock that they use. Thus it would seem that paper men may expect things to pick up a good deal sooner than next fall, although conditions may remain so extraordinary as to keep the demand dull, but this seems hardly probable.

News print still remains about the most active of any quarter of the paper market at the present time. The cheap foreign stock does not appear to be popular enough to force any of the domestic mills to shut down, in fact most of them are running on full time. Trading on the open market is still slow which tends to show that the small publishers, most of whom depend on spot goods for their entire supply, have not been buying with their usual regularity and in the same quantities. Contracts, however, are being made right along and the manufacturers say they are not going to have any trouble in disposing of their entire production.

Book paper is still in the doldrums with prices ostensibly the same, although it is said that dealers will shave them down when they have a large order in view. Most of the large buyers are pretty well stocked up and are getting along as best they can in the hopes of a further drop in the price of all grades. At present shipments are confined to small lots for immediate use and this condition is likely to continue for some weeks to come.

Tissue has not fulfilled its promise of a few weeks ago when the little flurry of buying seemed to point toward much brisker business in the near future, but it is still in better demand than much of the other kind of paper in the market. Wrapping paper is still dull with almost no movement of goods on the open market. Dealers say that this product is not going to improve until the whole commodity market improves and until the retailers are selling more goods. Board is a little better and the demand for all grades has improved with the picking up in the box grades.

Mechanical Pulp

The demand for mechanical pulp has been sluggish during the week and prices are so ragged that it is almost impossible to set any good average. The supply is said not to be as large as it should be at this time of year but since there is such a small demand this will not make a serious condition, in fact it makes little difference what the supply is.

Chemical Pulp

The downward trend in prices of chemical pulp appears to be bringing a little more business in, but not enough to make things very brisk in this line. Buyers are determined to wait until prices are right down on the ground floor before they come in to the market again.

Rags

Foreign and domestic rags are still slow this week. Importations are not nearly so great as they ordinarily are at this time and collection of the domestic stock has fallen off to a marked degree. Here, too, business is so slow that it is hard to set average prices, in fact most of the prices are nominal anyway.

Waste Paper

With the improvement in the board market and the reopening of some of the board mills, which were shut down for a long time, the demand for waste paper is better, but still spotty. Sometimes interest will develop in some grade for a few days and then it will fly to some other widely different grade for a little while and in all the trading the buying is marked by extreme caution.

Old Rope and Bagging

Bagging is still dull with little demand. Rope has improved a little and there is more call for all grades, but even at that most of the buying is for immediate use.

Twine

Twine is improving very slowly and gradually, but it seems to be on the road to better times. While the sales are not heavy, dealers say that they look for a return of business soon.

BIBLIOGRAPHY OF PAPER MAKING

(Continued from page 64)

Leblanc.

- Recueil de machines.
3e partie:
1re livr.: Machine à fabriquer le papier continu, par Chapelle. 1 pl. et texte. Fr. 2.00.
4e livr.: Aspirateur pour machine à papier, par Chapelle. 1 pl. et texte. Fr. 2.00.
5e livr.: Machine à grouper le papier, par Debergue et Spreafico. 1 pl. et texte. Fr. 2.00.
7e livr.: Cylindre à papiers, par Chapelle. 1 pl. et texte. Fr. 2.00.
4e partie:
5e livr.: Fabrication du carton-paille. 1 pl. et texte. Fr. 2.00.
10e livr.: Machine à satiner, glacer, et éplucher le papier. 1 pl. et texte. Fr. 2.00.
Descriptive list of machines.
Third part:
1st instalment: *Machines for the continuous manufacture of paper.* By Chapelle. 1 pl. . . .
4th instalment: *Suction box for paper machines.* By Chapelle. 1 pl. . . .
5th instalment: *Machine for grouping paper.* By . . .
1 pl.
7th instalment: *Paper machine cylinders.* By . . .
Fourth part:
5th instalment: *Manufacture of straw-board.* 1 pl. . . .
10th instalment: *Machine for pressing, glazing and surfacing paper.* 1 pl. . . .

Lebrun.

- Nouveau manuel complet du cartonnier et du fabricant de cartonnages. 1844.
. . . p. 18mo. Fr. 3.00.
Revised complete manual for the manufacturer of pasteboard.
(To be concluded)

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations March 8, 1921:

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.

Paper

F. o. b. Mill. Bonds, Ledgers, Writing, Extra Superfine, Superfine, Tub Sired, Engine Sired.

News-f. o. b. Mill. Rolls, contract, Rolls, transit, Sheets, Side Run, Book, Cased-f. o. b. N. Y., S. & S. C., M. F., Coated and Enamel, Lithograph, Tissues-f. o. b. N. Y., White, No. 1, White, No. 2, Manila No. 1, Kraft, Colored, Anti-Tarnish, Kraft-f. o. b. Mill., No. 1 Domestic, No. 2 Domestic, Imported, Screenings, Manila, No. 1 Jute, No. 2 Jute, No. 1 Wood, No. 2 Wood, Butchers, Fibre Paper, No. 1 Fibre, No. 2 Fibre, Common Bogus, Card Middies, Boards-per ton, News, Straw, Chip, Binders' Board, Sgl. M.La. Ld. Chip, Wood Pulp, Container.

Foreign Rags. New Light Silesias, Light Flannelettes, Unbleached Cottons, New White Cuttings, New Light Oxfords, New Light Prints, New Mixed Cuttings, New Dark Cuttings, No. 1 White Linens, No. 2 White Linens, No. 3 White Linens, No. 4 White Linens, Old Extra Light Prints, Ord. Light Prints, Med. Light Prints, Dutch Blue Cottons, Ger. Blue Cottons, Ger. Blue Linens, Checks and Blues, Dark Cottons, Shoppery, French Blues.

Mechanical Pulp (F. o. b. Pulp Mills). No. 1 f. o. b. Mill. 50.00 @ 55.00

Chemical Pulp (Ex-Dock, New York)

Sulphite (Foreign), Bleached, Easy Bleaching, No. 1 unbleached, No. 2 unbleached, Kraft (Foreign), Sulphate, Bleached, (F. o. b. Pulp Mill), Sulphite (Domestic), Bleached, Strong Unbleached, Easy Bleaching, Sulphite, News Sulphite, Mitscherlich, Kraft (Domestic), Soda bleached.

Domestic Rags

Prices to Mill, F. o. b. N. Y. Shirt Cuttings, New White, No. 1, New White, No. 2, Silesias, No. 1, New Unbleached, Washables, Fancy, Cottons-according to grades, Blue Overall, New Blue.

New Black Soft, New Light Sec, Bonds, Khaki Cuttings, Corduroy, New Canvas, New Black Mixed.

White, No. 1 Old, Repacked, Miscellaneous, White, No. 2, Repacked, Miscellaneous, St. Soiled White, Thirds and Blues, Repacked, Miscellaneous, Black Stockings, Cloth Strippings, No. 1, No. 2, No. 3, No. 4, No. 5A, B, C.

Foreign Rags. New Light Silesias, Light Flannelettes, Unbleached Cottons, New White Cuttings, New Light Oxfords, New Light Prints, New Mixed Cuttings, New Dark Cuttings, No. 1 White Linens, No. 2 White Linens, No. 3 White Linens, No. 4 White Linens, Old Extra Light Prints, Ord. Light Prints, Med. Light Prints, Dutch Blue Cottons, Ger. Blue Cottons, Ger. Blue Linens, Checks and Blues, Dark Cottons, Shoppery, French Blues.

Bagging

Prices to Mill F. o. b. N. Y. Gunny No. 1, Foreign, Domestic, Wool, Tares, light, Wool, Tares, heavy, Bright Bagging, No. 1 Scrap, Sound Bagging, Manila Rope, Foreign, Domestic, New Bu. Cut, Hessian Jute Threads, Foreign, Domestic, Mixed Strings.

Twines (F. o. b. Mill)

Cotton, No. 1, No. 2, No. 3, India, No. 6 basis, Light, Dark, B. C. 18 Basis, A. B. Italian, 18 Basis, Finished Jute, Light, 18 basis, Dark, 18 basis, Jute Wrapping, 2-6 Ply, Extra No. 1.

No. 1, No. 2, Tube Rope, 5-ply and larger, Fine Tube Yarn, 5-ply and larger, 4-ply, 3-ply, Unfinished India, No. 2 (3-ply and larger), Paper Makers Twine, Balls, Box Twine, 2-4 ply, Jute Rope, Amer. Hemp, 6, Sisal Hay Rope, No. 1 Basis, No. 2 Basis, Sisal Lath Yarn, No. 1, No. 2, Manila Rope.

Old Waste Papers (F. o. b. New York). Shavings, Hard White, No. 1.

Old Waste Papers (F. o. b. New York). Shavings, Hard White, No. 1.

Hard White, No. 2, Soft White, No. 1, Colored, No. 1, Flat Stock, Stitchless, Over Issue Mag., Solid Flat Book, Crumpled, No. 1, Solid Book Ledger, Ledger Stock, No. 1 White New, New B. B. Chips.

Manilas, New Env. Cut, New Cut, No. 1, Extra No. 1 Old, Print, Container Board, Bogus Wrappers, Old Krafts, machine compressed, Bales, News, Strictly Overissue, Strictly Folded, No. 1 Mixed Paper, Common Paper.

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill. All Rag Bond, No. 1 Rag Bond, No. 2 Rag Bond, Water Marked Sulphite, Sulphite Bond, Sulphite Ledger, Superfine Writing, No. 1 Fine Writing, No. 2 Fine Writing, No. 3 Fine Writing, No. 1 M. F. Book, No. 1 S. & S. C. Book, Coated Book, Coated Label, News-Rolls mill, News-Sheets mill, No. 1 Manila, No. 2 Manila, Butchers' Manila, No. 1 Kraft, No. 2 Kraft, Wood Tag Boards, Screenings.

Boards, per ton, Plain Chip, Solid News, Manila Lined Chip, Container liner, 85 Test, 100 Test.

Solid Wood Pulp, Straw Board, Filled Pulp Board.

Old Papers

Shavings, No. 1 Hard White, No. 1 Soft Shav, No. 1 Mixed, No. 2 Mixed, White Envel. Cutting, Ledgers and Writings, Solid Books, No. 1 Books, light, Blanks, Ex. No. 1 Manila, Manila Envelope Cuttings, No. 1 Manilas, Folded News (over issue), Old Newspapers, Mixed Papers, Straw Clippings, Binders' Clippings, Kraft, New Craft Cuts, Roofing Stock, f. o. b. Chicago, Net Cash, No. 1, No. 2, No. 3, No. 4.

PHILADELPHIA

[BY OUR REGULAR CORRESPONDENT.]

Paper

Bonds, Ledgers, Writings, Superfine, Extra fine, Fine, No. 2, Fine, No. 3, Book, M. F., Book, S. S. & C., Book, Coated, Coated Lithograph, Label, News, No. 1 Jute Manila, Manila Sul, No. 1, Manila No. 2, No. 2 Kraft, No. 1 Kraft, Common Bogus, Straw Board, News Board, Chip Board, Wood Pulp Board.

(Carload Lots.) Binders Boards, Per ton, Carload lots, Tarred Felts, Regular, Slaters'.

Best Tarred, 1-ply (per roll), Best Tarred, 2-ply (per roll), Best Tarred, 3-ply 2.15 @ 2.20.

Bagging

F. o. b. Phila. Gunny No. 1, Foreign, Domestic, Manila Rope, Sisal Rope, Mixed Rope, Scrap Burlaps, Wool Tares, heavy, Mixed Strings, No. 1, New Lt. Burlap, New Burlap Cuttings.

Old Papers

F. o. b. Phila. Shavings, No. 1, Hard White, No. 2, Hard White, No. 1 Soft White, No. 2 Soft White, No. 1 Mixed, No. 2 Mixed.

(Continued on page 70)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MARCH 5, 1921.

News Print.....8,924 rolls, 4,318 reels
 Printing Paper.....436 rolls, 167 cs.
 Cigarette Paper.....436 cs.
 Colored Paper.....10 cs., 3 bls.
 Tracing Paper.....22 cs.
 Drawing Paper.....55 cs.
 Filter Paper.....7 cs.
 Hangings.....11 cs., 5bls., 569 pkgs.
 Parchment Paper.....27 cs.
 Photo Paper.....1 cs.
 Crepe Paper.....30 cs.
 Wood Pulp Paper.....109 cs.
 Wrapping Paper.....63 cs.
 Miscellaneous Paper.....76 cs., 18 reels, 22 bls.

NEWS PRINT.

Roncomni & Millar, H. Luckenbach, Hamburg, 1,883 rolls.
 National City Bank, Delco, Gothenburg, 1,627

reels
 C. L. Robinson, Stockholm, Gothenburg, 14 rolls.
 Cleveland Trust Co., Stavangerfjord, Kristiania, 336 rolls.

Equitair Trust Co., by same, 12 reels.
 American Foreign Banking Corp., Pontia, Helsingfors, 533 reels.

First Federal Foreign Banking Corp., by same, 1,043 reels.
 National City Bank, Pontia, Gothenburg, 766

reels.
 New York American, Baltic, Hallstavik, 7,527 rolls.

PRINTING PAPER.

Roncomni & Millar, by same, 32 rolls.
 Keuffel & Esser, by same, 93 rolls.
 M. O'Meara Co., Western Glenn, Rotterdam, 45

cs.
 Globe Shipping Co, Hawaiian, Hamburg, 122 cs.
 Roncomni & Millar, by same, 211 rolls.

CIGARETTE PAPER.

R. J. Reynolds Tobacco Co., Bellingham, Havre, 180 cs.

P. J. Schweitzer, by same, 56 cs.
 American Tobacco Co, by same, 200 cs.

COLORED PAPER.

Palm Fechteler & Co., H. Luckenbach, Hamburg, 4

cs.
 A. C. Dodman, Jr., Inc., Kamesit, Antwerp, 6 cs.
 A. C. Dodman, Jr., Inc., by same, 3 bls.

TRACING PAPER.

Keuffel & Esser, Ipswich, Hamburg, 22 cs.

DRAWING PAPER.

Keuffel & Esser, by same, 54 cs.
 H. Reeve Angel & Co., Mesaba, London, 1 cs.

FILTER PAPER.

H. Reeve Angel & Co., by same, 7 cs.

PAPER HANGINGS.

W. H. S. Lloyd & Co., by same, 11 cs.
 W. H. S. Lloyd & Co., by same, 5 bls.
 The Prager Co., Krootland, Antwerp, 569 pgs.

PARCHMENT PAPER.

F. C. Stryfe & Co., by same, 27 cs.

PHOTO PAPER.

Pitt & Scott, Mesaba, London, 1 cs.

CREPE PAPER.

Phil. Foreign Trading Corp., Hawaiian, Hamburg, 30 cs.

WOODPULP PAPER.

National City Bank, Ipswich, Hamburg, 109 cs.

WRAPPING PAPER.

Japan Paper Co., H. Luckenbach, Hamburg, 63

cs.

PAPER.

American Shipping Co., by same, 3 cs.

J. W. Hampton, Jr., & Co., Bellingham, Havre, 47

cs.
 Hart Trading Co., Stockholm, Gothenburg, 26 cs.
 Wilkinson Bros. & Co., by same, 18 reels.
 Bendix Paper Co., Hawaiian, Hamburg, 13 bls.

H. Reeve Angel & Co., Pontia, Helsingfors, 1 bl.
 Wilkinson Bros. & Co., Pontia, Gothenburg, 8 bls.

TO NORWOOD, OHIO.

Palm Bros., Cedric, Liverpool, 15 cs. printing paper.
 Palm Bros., Carmania, Liverpool, 15 cs. printing paper.

TO CHICAGO, ILL.

E. H. Sargent & Co., Stockholm, Gothenburg, 4 cs. filter paper.

WOOD PULP.

National City Bank, Delco, Gothenburg, 498 bls., 74 tons.

RAGS, BAGGINGS, ETC.

Irving National Bank, Sidlaw Range, Leith, 64 bls. bagging.

Irving National Bank, Sidlaw Range, Dundee, 139 bls. paper stock.

Ladenburg, Thalman & Co., by same, 166 bls. paper stock.

American Woodpulp Corp., H. Luckenbach, Hamburg, 708 bls. rags.

E. Butterworth & Co., Honolulu, Belfast, 226 bls. paper stock.

S. D. Warren & Co., by same, 91 bls. waste.

Brown Bros. & Co., Cedric, Liverpool, 15 bls. waste.

Old Colony Trust Co., Kamesit, Antwerp, 22 bls. rags.

A. Katzenstein, by same, 200 bls. rags.

Brown Bros. & Co., by same, 972 bls. rags.

Ladenburg, Thalman & Co., by same, 295 bls. rags.

E. Butterworth & Co., by same, 384 bls. bagging.

White Star Line, Bonic, Manchester, 240 bags hide cutting.

Baeder, Adamson & Co., by same, 162 bags hide cuttings.

OLD ROPE.

M. O'Meara Co., Stavangerfjord, Kristiania, 89

coils.
 Old Colony Trust Co., Sidlaw Range, Leith, 96 coils.

PRICE DECLINE IN PHILADELPHIA

(Continued from page 20)

of the Fine Paper division will give a decided impetus to membership. L. Harry Rees, of the Charles Beck Company, who signed the petition during the week was the first member of that organization to join but other fine paper salesmen have indicated their intention to become members. The guild already has in its application list, members of the Whiting-Patterson, Riegel & Co., Garrett-Buchanan and D. L. Ward companies. All salesmen dealing with the printers' trade are welcomed. Petitions are in the hands of John Farnsworth, Miller Saw Trimmer Company, 12th and Race streets; R. L. Stevenson, Cline Electric Company, The Bourse; Milo E. Hayes, the Babcock Printing Press Manufacturing Company, and E. R. Gudehus, 717 Walnut street.

President O. A. Shryock of Shryock Brothers, 10th and Cherry streets, and Mrs. Shryock have left for a trip to Bermuda.

C. L. Stanbridge, of the Franklin Paper Company, has returned to his duties after a short illness.

Nathaniel Saxe, of the Saxe Paper Company, during the week took title to the five-story store building, 320 Race street, corner of Orianna street, lot 16 by 85 feet, subject to a mortgage of \$14,500. The property is assessed at \$16,000. The Saxe Company now at 7th and Cherry streets, will remove to Race street upon the expiration of a lease.

The five-story building at the southwest corner of 21st street and Washington avenue has been leased by the Hercules Bag Company.

President George W. Ward and Secretary William A. Hentz, of the D. L. Ward Company, returned today after a brief vacation visit to Florida.

The 1921 campaign plans of the Strathmore Paper Company, under the slogan "Paper is part of the picture," were described last week at a meeting of the sales force of the Charles Beck Company by Sales Manager F. A. Juckett and Advertising Manager C. W. Dearden. Leon Beck and Sales Manager Meinicke, of the Beck Company, took part in the discussion. The Beck Company and the Paper House of Pennsylvania are the Strathmore distributors in this territory.

Takes Over Northwest Waste and Cotton Co.

[FROM OUR REGULAR CORRESPONDENT.]

SAN FRANCISCO, Cal., March 1, 1921.—The Western Paper Stock Company has taken over the business and good-will of the Northwest Waste and Cotton Company in Portland, Ore., and has organized this business as one of its branches. E. H. Downard, one of the former owners of the old concern, has been appointed resident manager for the State of Oregon with headquarters at 32 Front Street, Portland. In addition to a well equipped paper stock warehouse at this address the company is operating a place at Lake and Nicolai streets, where its rag department is located.

Madison L. Goff, former senior partner of the Northwest Waste and Cotton Company, and now one of the directors of the Western Paper Stock Company, is going to act for them as resident manager for the State of Washington, and is now moving his family to Seattle where he will have his headquarters at the company's office, 914 First avenue south, replacing I. A. French, who is returning to San Francisco.

Mr. Goff will have general charge of the companies' affairs in the Northwest, and one of the first steps he intends to take will be the establishment of one or two additional branches in that territory.

RIORDON SALES COMPANY

LIMITED

367 BEAVERHALL SQ. MONTREAL, CANADA



The operation at "KIPAWA" mill of
TWO ADDITIONAL DIGESTERS
now provides an
EXCEPTIONALLY STRONG FIBRE
HIGH GRADE ELECTROLYTIC BLEACHED
SULPHITE WOOD PULP
for
IMMEDIATE AND FUTURE DELIVERY
AT PREVAILING MARKET PRICES

INQUIRIES WILL RECEIVE PROMPT ATTENTION

T. J. STEVENSON

Sales Managers

GEO. E. CHALLES

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL.
WEDNESDAY, March 9, 1921.

There seems to be no break as yet in the general condition of the chemical market. Like other fields the buyers are determined to hold off until they are sure prices have fallen to the minimum and until this irreducible minimum is reached business is not expected to pick up much. The manufacturers of chemicals have made frequent statements to the effect that they really cannot reduce their prices much until their production costs come down and that they never have boosted them—even during the war when they might have—way up. It is their claim that they have never attempted to make more than a legitimate profit and that their customers can trust them to drop prices as soon as they are able.

ALUM—Alum is moving slowly on the open market, but most of the works are running at least on part time, which would tend to show that this product is selling, though perhaps not in as great quantities as it should. The price remains firm at 4 cents for the lump, 4.50 cents for the ground and 5 cents for the powdered.

BLANC FIXE—Blanc Fixe is also quiet now and most of the sales that are made are for small quantities which are needed for immediate use. Some contracts have been made and most of the manufacturers seem optimistic and say that they expect to be able to get rid of their production this year without any trouble. The price on the paste is 2.25 cents per pound and on the powdered is 3.75 cents.

BLEACHING POWDER—All through this dull period in the general market the demand for Bleach, for some reason or other, appears to have been slightly better than for many of the other chemicals. Business is still fair and trading much more regular in this commodity. The price is quoted as about 2.50 or 3 cents per pound on the spot goods and about 3 cents for the contract.

BRIMSTONE—Brimstone does not seem to be in much better demand this week than it has been for the past weeks, but manufacturers seem to think that things cannot continue this way much longer. The price remains about the same at \$15 or \$16 per ton.

CASEIN—Casein seems to be somewhat improved although no large deals have come to the surface yet. The general tone of this market has improved with the decline in price. It is now quoted around 12 to 13 cents per pound.

CAUSTIC SODA—Caustic Soda continues to be slightly better on contract than some of the other chemicals, but it is still slow. Spot goods are moving very slowly and only a few sales are being made in the open market. The price is about 3.40 to 3.65 cents per pound.

CHINA CLAY—The demand for China Clay does not improve much from week to week although this week it is reported that the buyers have been showing a little more interest than before. Importations have not amounted to a great deal for some time now owing to the general slowness. Domestic unwashed is still selling for \$7 to \$8 per ton, washed is about \$9 to \$10 per ton and the imported runs all the way from \$13 to \$22 depending upon the grade required.

SATIN WHITE—Satin White is still quiet and the price remains firm at 2.25 cents per pound in barrels at the mill.

SALTCAKE—Saltcake is unchanged from last week with the manufactured grade selling at from \$23 to \$25 per ton and the natural at \$20.

SULPHATE OF ALUMINA—Alumina Sulphate is still slow with the commercial grade at 2.25 cents per pound and the iron free at 3.25 to 3.40 cents.

TALC—Talc is still quiet but the price stays up around \$17 or \$18 per ton.

Market Quotations

(Continued from page 67)

Solid Ledger Stock	3.00 @ 3.25	New Black Soft	.04 1/2 @ .04 1/2
Writing Paper	2.50 @ 2.75	New Light Sec-	onds .03 @ .03 1/2
No. 1 Books, heavy	1.75 @ 2.00	Khaki Cuttings	.04 @ .04 1/2
No. 2 Books, light	1.25 @ 1.50	Corduroy	.03 @ .03 1/2
No. 1 New Manila	3.50 @ 4.00	New Canvas	.09 @ .09 1/2
No. 1 Old Manila	1.25 @ 1.50	New Black Mixed	4.15 @ 4.25
Container Manila	1.00 @ 1.25	Old	
Old Kraft	3.25 @ 3.50	White, No. 1—	
Overissue News	1.00 @ 1.10	Repacked	.08 @ .08 1/2
Old Newspaper	.60 @ .70	Miscellaneous	.06 1/2 @ .07 1/2
No. 1 Mixed Paper	.65 @ .75	White, No. 2—	
Common Paper	.35 @ .40	Repacked	.04 1/2 @ .04 1/2
Straw Board, Chip	.60 @ .75	Miscellaneous	.03 1/2 @ .04
Binders' Bd. Chip	.60 @ .75	Thirds and Blues—	
Domestic Rags—New		Repacked	.02 1/2 @ .02 1/2
Price to Mill, f. o. b. Phila.		Miscellaneous	.02 @ .02 1/2
Shirt Cuttings—		Black stockings	2.50 @ 2.75
New White, No. 1	.11 1/2 @ .12 1/2	Roofing Stock—	
New White, No. 2	.08 @ .08 1/2	No. 1	.90 @ 1.00
Silesias, No. 1	.07 1/2 @ .07 3/4	No. 2	.80 @ .90
New unbleached	.09 1/2 @ .10 1/2	No. 3	.70 @ .80
Washables	.04 1/2 @ .05	No. 4	.75 @ .85
Fancy	.07 1/2 @ .07 3/4	No. S.A.	Nominal
Cottons—according to grades—		B.	Nominal
Blue Overall	.06 1/2 @ .07 1/2	C.	Nominal
New Blue	.03 1/2 @ .03 1/2		

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Wood, Vat Lined	45.00 @
Bonds	.15 @	Filled News Board	40.00 @
Ledgers	.15 @	Solid News Board	45.00 @
Writings—		S. Manila Chip	65.00 @
Superfine	.16 @	Pat. Coated	80.00 @
Fine	.17 @		
Books, S. & S. C.	.09 1/2 @	Old Papers	
Books, M. F.	.08 1/2 @	Shavings—	
Books, coated	.14 @	No. 1 Hard White	.04 1/2 @ .04 1/2
Label	.12 @	No. 1 Soft White	.04 @
News, Sheets	.07 @	No. 1 Mixed	.01 1/2 @ .02
News, rolls	.07 @ .07 1/2	Ledger & Writings	.01 1/2 @
Manilas—		Solid Books	.01 1/2 @ .01 1/2
No. 1 Manila	.08 @	Blanks	.01 1/2 @
No. 1 Fibre	.08 @	No. 2, Books, light	.01 @
No. 1 Jute	.09 @	No. 1 Manila	.01 1/2 @ .02
Kraft Wrapping	.08 @	Folded News (over-	issues) .01 @
Common Bogus	.04 1/2 @ .05	Mixed Paper	6.00 @ 8.00
		Gunny Bagging	.90 @ 1.00
Boards		Manila Rope	.03 1/2 @ .04
(Per ten f. o. b. mill.)		Common Paper	— @ —
Chip	35.00 @	Writing Paper, ton	10.00 @
News, Vat Lined	37.50 @	Container Manila	— @ —
		Old News	11.00 @ 12.00

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper		Sulphite, bleached	135.00 @ 140.00
(Mill Prices to Jobbers f. o. b. Mill)		Sulphate	110.00 @ 115.00
Bond—		Old Waste Papers	
Sulphite	18 1/2 @	(In carload lots, f. o. b. Toronto)	
Light tinted	19 1/2 @	Shavings—	
Dark tinted	21 @	White Env. Cut	5.00 @
Ledgers	20 @	Soft White Book	— @ —
Writing	17 @	Shavings	4.00 @
News, f. o. b. Mills—		White Blk News	2.00 @
Rolls (carloads)	6.00 @ 6.50	Book and Ledger—	
Sheets (2 tons or over)	6.50 @ 7.00	Flat Magazine and	
Sheets (less than 2 tons)	7.00 @ 7.25	Book Stock	
Book—		(old)	1.75 @
No. 1 M. F. (car-	16.75 @	Light and Crum-	
loads)		pled Book Stock	1.40 @
No. 2 M. F. (car-	15.00 @	Ledgers and Writ-	
loads)		ings	3.00 @
No. 3 M. F. (car-	13.75 @	Solid Ledgers	3.50 @
loads)		Manilas—	
No. 1 S. C. (car-	17.25 @	New Manila Cut	2.75 @
loads)		Printed Manilas	1.00 @
No. 2 S. C. (car-	15.50 @	Kraft	2.75 @
loads)		News and Scrap—	
No. 1 Coated and	18.50 @	Strictly Overissue	1.25 @
litho.		Folded News	.90 @
No. 2 Coated and	17.50 @	No. 1 Mixed Pa-	
litho.		pers	.45 @
No. 3 Coated and	16.75 @	Domestic Rags—	
colored	18.75 @	Price to mills, f. o. b. Toronto.	
Wrapping—		Per lb.	
Grey	7.00 @	No. 1 White shirt	
"R" Manila	7.50 @	cuttings	.17 @ .17 1/2
No. 1 Manila	9.00 @	No. 2 White shirt	
Fibre	8.50 @	cuttings	.10 1/2 @ .11
Kraft, M. F. or	10.00 @	Fancy shirt	
M. G.	10.00 @	tings	.10 @ .10 1/2
Pulp		No. 1 Old whites	.06 @
(F. o. b. Mill)		Thirds and blues	.02 1/2 @
Ground Wood	\$65.00 @ \$80.00	Per cwt.	
Sulphite, easy bleach-	95.00 @ 100.00	Black stockings	3.00 @
ing	80.00 @ 85.00	Roofing stock	
Sulphite, new grade	80.00 @ 85.00	No. 1	1.50 @
		No. 2	1.30 @
		Roofing stock	
		Manila rope	.04 @
		Gunny bagging	1.00 @
		No. 2	2.75 @

HEAVY CHEMICALS



THE DAILY NEEDS OF ONE HUNDRED AND TEN MILLION AMERICANS

A prolonged cessation of purchasing for their routine needs by the majority of Americans can not persist.

A gradual and healthy demand for basic products is the program for the year.

THE MATHIESON ALKALI WORKS (Inc.)

General Offices

25 West 43rd St.

Chicago, Ill.
Charlotte, N. C.

New York, N. Y.

Philadelphia, Pa.
Providence, R. I.

MATHIESON

DEAL DIRECT WITH THE MANUFACTURER

WANT AND FOR SALE ADVERTISEMENTS

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.

HELP WANTED

WANTED—Superintendent for two-machine mill, running tissues and light weight papers on cylinder machines. Wanted high grade man, and to such would be paid satisfactory salary. Address, Box 2580, care Paper Trade Journal. **M-17**

WANTED—Experienced paper salesman for wrapping paper and twines, who can invest \$2,500, and take active part in established concern doing \$200,000 business annually. Must be willing to locate in Chicago. Address, Box 3070, care Paper Trade Journal. **M-24**

WANTED—Salesman, traveling. Young man between 25 and 35, for selling waxed bread papers. Must be fully acquainted with business and trade. Excellent, permanent position with splendid opportunity for right party. Address, Box 3057, care Paper Trade Journal. **M-10**

WANTED—Mechanical Engineer, experienced in designing and building Paper Bag and Printing machinery. State experience and salary. All information in confidence. Address, Box 3056, care Paper Trade Journal. **M-17**

WANTED—Assistant Plant Manager. One having office experience in a News Mill preferred. State age, previous experience, references and salary expected. Address, Box 3051, care Paper Trade Journal. **M-10**

WANTED—Superintendent for a waxing and printing plant specializing on bread wrappers. Must know waxing and printing processes thoroughly from actual experience. An exceptional ground floor proposition for an A-1 man. Plant will be located in the Middle West. Address, Box 3063, care Paper Trade Journal. **M-17**

WANTED—Color and dyestuff salesman for Middle West, by manufacturing and importing concern, to call on manufacturing trade. Liberal compensation to a business getter. State previous experience, references, age and salary expected. Address, Box 4004, care Paper Trade Journal. **M-24**

MANUFACTURER, of Pulp and Paper Machinery has opening for designer and superintendent. Preference will be given to man 30 to 35 years of age, preferably technically educated, not less than ten years' experience on such machinery, and otherwise qualified to develop into directorship of entire plant. Applicants will please give full particulars and references. Address, Box 3082, care Paper Trade Journal. **M-10**

WANTED—High grade Gentle with experience and knowledge necessary to assume charge of the purchase of paper stock for chip board mill located on Northern Ohio. Applicant must have good record and be well recommended. Address, Box 3083, care Paper Trade Journal. **M-10**

HELP WANTED

STENOGRAPHER WANTED in New York office of paper manufacturers' agent. Must be accurate, rapid stenographer, typewriter and office assistant (Christian, female). Must be familiar with paper business, general office work and telephone. Address, Box 3069, care Paper Trade Journal. **M-10**

WANTED—First class Super-Calendar man for seventy-two inch stack, eight hour shift, seventy-two (72) cents per hour. None but first class men need apply. Address, Box 3084, care Paper Trade Journal. **M-17**

WANTED—A Non-Union machine tender, strictly temperate, who has had experience in making the highest grades of Ledger papers. Bond and light weight Typewriter Papers, on Fourdrinier machines. Address, Box 3085, care Paper Trade Journal. **M-10**

CONTAINER BOARD SALESMAN—Large manufacturer of Container Board requires the services of an A-1 traveling sales representative, one who can produce. Must possess a thorough knowledge of this product, fully familiar with the requirements of the consuming trade and well and favorably known to the Container Board buyers. Compensation commensurate with ability. State age, experience, references and salary desired. Address, Box 3086, care Paper Trade Journal. **M-31**

WANTED—Paper Mill machinery salesman, one who has engineering as well as sales experience. Good opportunity for right man. State age, experience and salary. Also give reference. Address, Box 3087, care Paper Trade Journal. **M-31**

WANTED—Experienced Master Mechanic to take charge of repair and construction work, engineer and boiler room maintenance in board mill. Letter must give full particulars and salary expected. Address, Box 3088, care Paper Trade Journal. **M-10**

SPECIALIST AGENTS wanted to represent us in U. S. A. Bronze Powders and Imitation Gold Leaves. Caplain Saint Andre Filis & Cie., 8-10-12, Rue Portefoin, Paris, France.

Salesman Wanted

Must be known to buyers of paper and twine in New York City. Liberal Salary and Bonus.

L. Hyman & Sons

121 Spring Street,
New York, N. Y.

F-24

SITUATIONS WANTED

BEATER ENGINEER would like to make change. Experience on Book, Bond, Ledger, Water-Leaf, Tissue, and Insulating. Married, steady and efficient. Address, Box 3066, care Paper Trade Journal. **M-10**

FOURDRINIER MACHINE TENDER in West wants position. Ten years' experience. Address, T. Lindsay, 821 West 36th Place, Los Angeles, California. **M-17**

SUPERINTENDENT desires position. 18 years' experience on Tissues, Crepe, Semi-Crepe, Toilet, Towels, Napkins and Colored Crepe Tissues, Pattern and Fruit Wraps. High grade man on Kraft and Waxing Tissue, Twine and Carpet Fibres. All on colors; first class references. Samples showing my work can be submitted if desired. Address, Box 2987, care Paper Trade Journal. **F-10**

SITUATIONS WANTED

WANTED—Position as Beater Engineer. Experienced on Fine Papers, Book, Bonds and Ledgers and high grade Box Boards, Container, etc. Married, steady and sober. Address, Box 3003, care Paper Trade Journal. **M-10**

PAPER SALESMAN, NEW YORK CITY, who can produce large volume of business, in Book Papers and News Print, wishes connection with mill agency company, or mill. Drawing account on commission basis. Address, Box 3058, care Paper Trade Journal. **M-17**

WANTED—Position where expert modern knowledge of continuous vacuum filtration, causticizing, utilization of lime sludge and recovery, backed by successful work as development engineer with large alkali plant, grounded on technical training and wide experience, are desirable. Address, Box 3059, care Paper Trade Journal. **M-10**

POSITION WANTED as Boss Machine Tender by married man with fourteen years' experience on News, Fibres, Tissues and lightweights. At present employed as tour boss. Address, Box 3060, care Paper Trade Journal. **M-17**

SUPERINTENDENT desires to make change from present position. Well up on all grades of Board and Specialties. Can furnish best of references. Address, Box 3075, care Paper Trade Journal. **M-24**

BECAUSE HE HAS ENTHUSIASM, and a sustaining interest in paper—he has had an unusually vigorous training—he knows coarse papers intimately; specialties, fancy papers and printing rarely well—has had 8 years' office management and personal sales experience—is expert in bookkeeping, system and organization—has a record of real, red-blooded ability—he will meet the requirements of a difficult exacting job. Details gladly given to a progressive house that places a proper value on men who do things. Address, Box 3026, care Paper Trade Journal. **M-17**

POSITION WANTED as Superintendent of mill making binders, leather or other boards; middle-aged man; good at erection and repairs. Address 3021; care Paper Trade Journal. **M-10**

BEATERMAN wants position as Boss Beaterman or Beaterman; accustomed to all grades. A-1 on colors. Good reference. Address, C. L. Davis, 22 Leroy St., East, River Rouge, Mich. **M-10**

SUPERINTENDENT with 25 years' practical experience, now engaged, desires to connect with some live concern. Up-to-date on all grades of Combination, Containers and Wallboards. Thoroughly familiar with all repairs and upkeep of mill. Can handle help and get results. Very best references. Address, Box 3071, care Paper Trade Journal. **M-24**

SALES EXECUTIVE DESIRES CHANGE. Would manage jobbing house or represent reliable mill in New York and Eastern district. Familiar with all grades but have special knowledge of Writings, Book, Coated Papers, Boards and Specialties. Address, Box 3079, care Paper Trade Journal. **M-17**

PREPARED ROOFING Factory Superintendent, with wide experience, wants position; thoroughly familiar with latest equipment and methods, fully qualified to build or run a plant. Address, Box 3038, care Paper Trade Journal. **M-10**

CYLINDER MACHINE TENDER wishes position. Good on all grades of Stock. Willing to go anywhere. Steady and reliable. Never been in any labor trouble. Address, Box 3089, care Paper Trade Journal. **M-24**

WANTED—Position by practical man, as Manager or General Superintendent, having had wide experience in manufacturing Tissue, Boards, and Roofing Felt. Both Cylinder and Fourdrinier. Address, Box 3090, care Paper Trade Journal. **M-10**

SITUATIONS WANTED

POSITION WANTED—Young man, familiar with Board Paper Mill, operation and office routine, has qualifications for character, appearance, intelligence, enthusiasm and ability. Wishes to make change preferably in sales department of a Board Mill. Address, Box 3091, care Paper Trade Journal. M-24

SUPERINTENDENT wants position. Well up-to-date on making Bond, Book, Waterleaf and light weights. Also making paper from old papers. Can install machinery for same. Address, Box 3092, care Paper Trade Journal. M-24

MAN WITH YEAR'S EXPERIENCE as sales agent, sales manager and general manager. Well known in the trade. Familiar with all grades of Paper and Boards. Open for engagement. Best of references. Address, Box 3093, care Paper Trade Journal. M-17

PAPER MILL ACCOUNTANT, experience under Public Accountants would like position. Satisfactory references and reason for changing. What have you to offer. Address, Box 3094, care Paper Trade Journal. M-17

STENOGRAPHER and Typist with five years' experience in Paper Jobbing lines desires position. References. Address, Box 3095, care Paper Trade Journal. M-10

TWO HINDU YOUNG MEN, educated at Oxford University, desire work at a paper mill to thoroughly learn the process of paper manufacture. Address, Box 3096, care Paper Trade Journal. M-10

PRACTICAL PAPER MAKER with good Mechanical ability, good habits, best references and seventeen years' experience making Boards, Wrapping and Specialties, wants position as Superintendent or Foreman. Address, Box 3098, care Paper Trade Journal. M-24

SUPERINTENDENT desires position. 18 years' experience on Tissues, Crepe, Semi-Crepe, Toilet, Towels, Napkins and Colored Crepe Tissues, Pattern and Fruit Wraps, High grade man on Kraft and Waxing Tissue, Twine and Carpet Fillers. All on colors; first class references. Samples showing my work can be submitted if desired. Address, Box 3081, care Paper Trade Journal. tf

YOUNG MAN, 29 years old, married, with six years' experience as a salesman and later as chief executive in a paper jobbing house in New England, handling fine papers for the printing trade, desires a position with either a paper mill or paper jobbing house. Services are available immediately. Applicant is a college graduate and has a knowledge of French, German and Spanish. Address, Box 3097, care Paper Trade Journal. M-10

FOR SALE

SECOND HAND MOORE & WHITE 84" four drub Slitter and Rewinder. Practically as good as new. Immediate possession. Address, Box 3099, care Paper Trade Journal. M-17

FOR SALE—Cylinder Mold, 65" x 30" diameter. Machine Frames if desired. Address, Box 4000, care Paper Trade Journal. M-17

FOR SALE—One Allen Mixer made by Sandy Hill Iron & Brass Works, American Paperboard Company, Albany, N. Y.

FOR SALE—Paper Bottle Cap Plant for Medicine Bottles, etc., \$5,000, machinery, stock and good will. Address, Box 3052, care Paper Trade Journal. M-17

MACHINERY FOR SALE in good condition. One large size Thresher Duster, two Whipper Dusters, two Holyoke Wing Dusters, four Daniels Rag Cutters, iron frames, double blades. Address Box 2960, care Paper Trade Journal. tf

MISCELLANEOUS

CASH PAID for old United States, Confederate and foreign postage stamps, used on letters prior to 1870. Send samples. James Hardy, 4522 Forrestville Ave., Chicago, Ill. oam-1-yr

WANTED—A second hand 72" or 82" Cameron Winder for slitting box board, maximum thickness, 40 points; one second hand two bowl upright reel, 84" to 96" in width; also 9 roll calender stack 84" to 90" in width. Also second hand Hamblet Rotary Sheet Cutter, approximately 70" wide. Address, Box 4001, care Paper Trade Journal. M-17

WANTED—A second hand Dry Pulp Machine, capacity 40 tons of sulphite with approximately 20 dryers, 90" to 110" wide. Address, Box 4002, care Paper Trade Journal. M-17

WANTED—Stack Calender and Finishing Room Sheet Cutter. Prefer size from 48" to 55". Give full details concerning specifications, condition and price. Address, Box 4003, care Paper Trade Journal. M-17

WANTED—Second hand 34" or larger Power Paper Cutter. L. Hyman & Sons, 121 Spring Street, New York. M-10

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., March 1, 1921. Sealed proposals are invited to furnish Dextrine, Oils, Textiles, Engravers' Supplies, Dry Colors, Paper Boxes, Paper and Check Paper, during the fiscal year beginning July 1, 1921. The right is reserved to reject any or all bids or parts of bids. Samples of Dextrine, Oils, Textiles, Engravers' Supplies and Dry Colors must be received at the Bureau of Engraving and Printing not later than 2 p. m., Monday, April 18, 1921. Samples of Paper Box Blanks, Paper and Check Paper, not later than 2 p. m., Monday, April 11, 1921. Blank forms with specifications for proposals, giving dates on which the bids for the several schedules will be opened, and further information will be furnished on application to Jas. L. Wilmeth, director. M-3-10

WANTED—Machine dryers; diameter 36 inches, face 44 to 54 inches. Address, O. S. Kirkeby, Room 704, 61 Broadway, New York. tf

SPECIALTIES

Do you manufacture Paper Specialties or Novelties for decorative, sanitary or other purposes?

We shall be glad to co-operate with you in introducing them or increasing their sale.

Send samples and full information to Hilltop Company, 25 West 42d Street, New York City. 1 yr.

FOR SALE

One (1) Eight roll 130" Norwood Engineering Company Stack Super Calenders complete with two-motor drive and control panel. New equipment now ready to ship from shop. Address, Box 3067, care Paper Trade Journal. M-17

The Want Columns
of the
Paper Trade Journal

are

Result Getters

—
TRY THEM

PAPER MILL MACHINERY

In Good Operating Condition and Ready for Immediate Delivery.

- 2—Variable Speed Engines, Brownell, 250 H.P., each size 16x16 twin, speed 50-250 R.P.M.
- 2—Fulmer Savealls, 108".
- 2—Atlas Slide Valve Engines, 14x20.
- 4—Jordans, Pony Monarch.
- 6—Beaters, Noble & Wood, 72"x44".
- 1—Beater, Dilts 62x50, iron tub.
- 1—No. 2 Claffin, motor driven.
- 1—Stack Machine Calenders, 112", 10 rolls.
- 1—Super Calender 40" Holyoke, 7 rolls.
- 1—Duplex Cutter with layboy, Moore & White, 122".
- 1—Layboy, Erie, 91".
- 1—Ream Cutter, Seybold 20th Century, 55".
- 1—Ream Cutter, Acme, 50".
- 1—Ream Cutter, Holyoke, 45".
- 1—Marshall Drive complete, containing 5 sets of B & C self-contained type 6" mortise gear.

FRANK H. DAVIS COMPANY
175 Richdale Ave., Cambridge 40, Mass.

GIBBS-BROWER BULLETIN MILLS FOR SALE

Book, Writings and Ledger Mill—10 Tons Capacity.
Tissue Mills, Toilet, Crepe, Twisting, Copying, Pattern, and Carbon—5 to 15 tons capacity.
Large Water Finished Fibre, Kraft, Mill Wrappers and Board Mill—4 machines, 2 Fourdriniers and 2 Cylinders, 110 tons capacity. Also Sulphite Pulp Mill—35 tons capacity.
Bag Mill, 2 Fourdrinier Machines. Unsurpassed water power, 20 tons production. Also Ground Wood Pulp Mill—7 tons production.
Straw Kraft, Butcher's Fibre, Sulphite Wrapper Mill—10 tons capacity.
Carpet and Car Lining, Bogus and Colored Wrappings Mill—18 tons capacity.
Water Finish Fibre Mill—27 tons capacity. Pulp Mill—Dry Ground—12 tons. Sulphite Fibre—15 tons capacity.
Binder's Board Mill—15 tons capacity.
Chipboard and Sheathing Specialties Mill—5 tons capacity.
Container, set up Box Board and Folding Box Board Mill—50 tons capacity.
Boxboard and Newsboard Mill—50 tons capacity.
Container Jute, Test Kraft and Special Kraft Board Mill—20 tons capacity. Pulp Mill, Ground Wood—10 tons capacity. Excellent water power.
Felt roofing mill—10 tons capacity.
Small ground wood mill.

GIBBS-BROWER COMPANY

Paper and Pulp Mill Brokers

261 Broadway, Telephone—Barclay 5623 New York City
OUR MOTTO—"Service First"

J-20

THE majority of the publishers of this Country believe that their advertising space is a real commodity and well worth the price demanded.

They believe that the right price of space should be determined by circulation.

They invite the closest scrutiny of their product and provide positive proof of its value by their membership in the Audit Bureau of Circulations.

Through membership in the A. B. C., they also endeavor to discountenance the unfair competition of publishers who misrepresent circulation facts to advertisers.

The advertiser who buys space in an A. B. C. paper invests his money wisely and encourages a high ethical standard in the publishing business.

The advertiser who buys space in a non-A. B. C. paper is, to say the least, taking a chance, and may be placing a premium on questionable methods.

The PAPER TRADE JOURNAL is a member of the Audit Bureau of Circulations.

This is your guarantee.

United States District Court

SOUTHERN DISTRICT OF NEW YORK.

2 IN THE MATTER
OF
MAIN PAPER STOCK CO., INC.,
Alleged Bankrupt.

3 Upon reading and filing the petition of FRANCIS L. KOHLMAN, verified the 3rd day of March, 1921, and upon all the papers and proceedings had herein,

4 Let the creditors of the Main Paper Stock Co., Inc., the Main Paper Stock Co., Inc., and its officers, stockholders and directors show cause before me or one of the Judges of this Court at a Stated Term thereof, to be held in the Federal Post Office Building, in Room 235, New York City, on the 14th day of March, 1921, at 10.30 o'clock in the forenoon or as soon thereafter as counsel can be heard, why an order should not be made authorizing and directing Francis L. Kohlman, the Receiver, to accept the offer of George Carrizzo & Company, Inc., to purchase all of the assets of the above named alleged bankrupt now in the possession of the Receiver, including merchandise on hand, office fixtures and furniture, horses, wagons, automobiles, motor trucks, accounts receivable and choses in action of every kind, nature and description, Receiver's right, title and interest in leases of warehouses, securities and certificates of stock, the right to use the name Main Paper Stock Co., Inc., in accordance with the terms of said offer of said George Carrizzo & Company, Inc., contained in its letters dated February 18th, 1921, and February 24th, 1921, attached to the petition upon which this order to show cause is based, or why any other offers which may be submitted upon the return day of this order to show cause should not be accepted, and for such other and further relief as to the Court may seem just and proper.

5 The Receiver is hereby directed to cause a copy of this order to show cause to be mailed to each and every creditor of the Main Paper Stock Co., Inc., at his last known address and upon the officers, stockholders and directors of the said corporation on or before the 9th day of March, 1921.

6 It is further ordered that the Receiver cause a copy of this order to show cause to be published in the New York Times and in the Daily News Record on or before the 9th day of March, 1921.
Dated, New York, March 4th, 1921.

MANTON,
Judge.

7 Inspection of the property to be sold may be had on March 9th, 10th, 11th and 12th, 1921, between the hours of 10 A. M. and 5 P. M., at the warehouses of the Main Paper Stock Co., Inc., located at 25-27-29-31 Peck Slip, 321 Pearl Street, and at their offices, 25 Spruce Street, New York City. Price offered for assets is \$50,000, free and clear of all liens.

8 FRANCIS L. KOHLMAN,
Receiver,
45 Cedar Street,
Borough of Manhattan,
New York City.

HAYS, HERSHFIELD & WOLF,
Attorneys for Receiver,
115 Broadway,
Borough of Manhattan,
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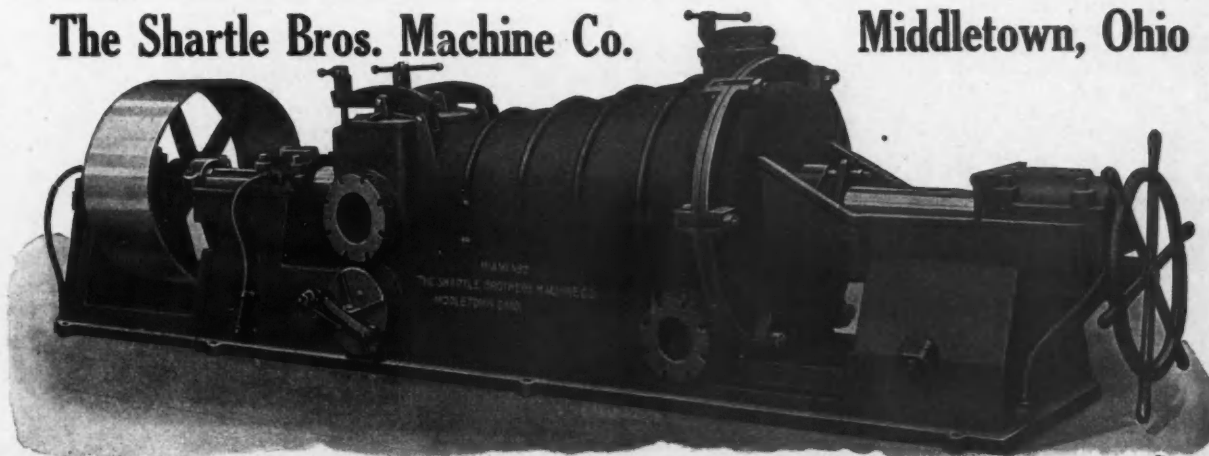
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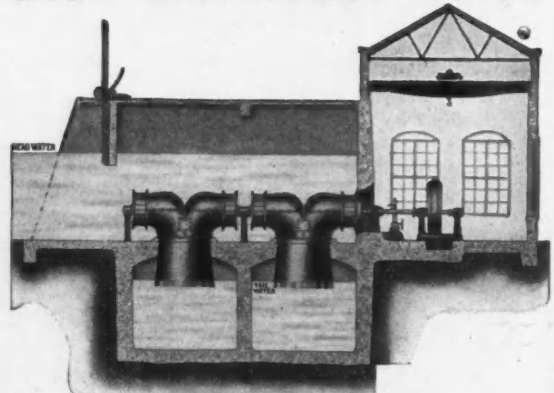
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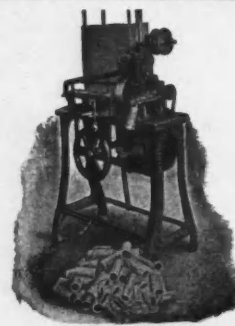
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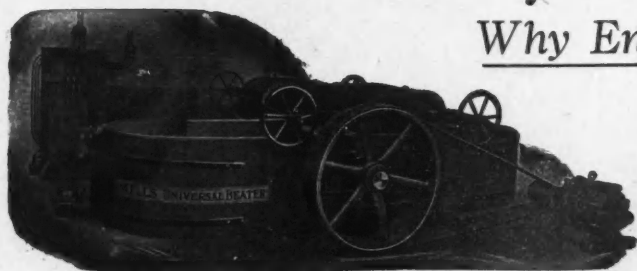
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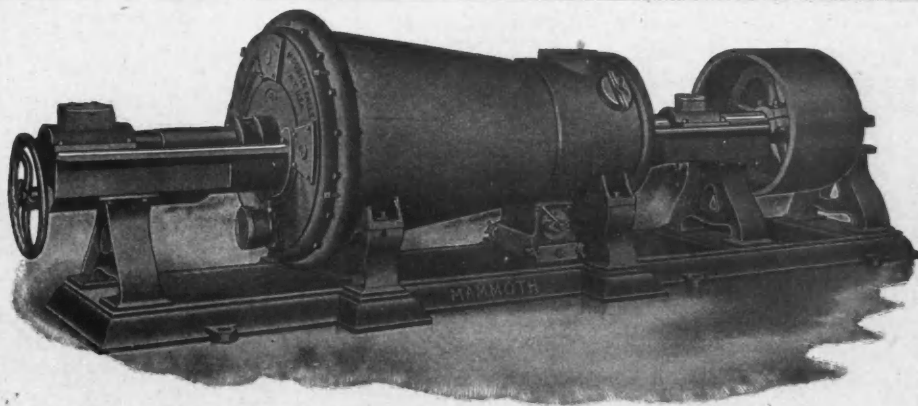
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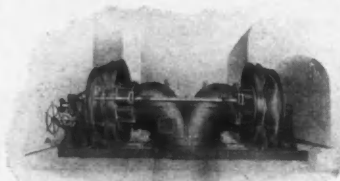
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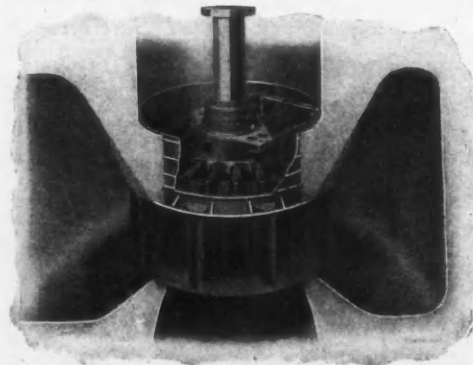
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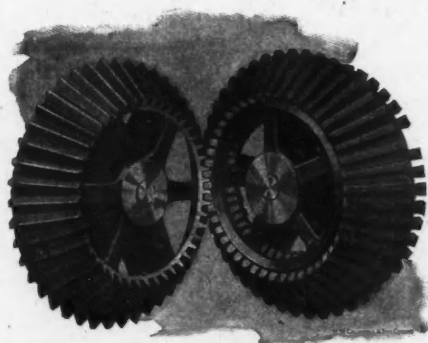
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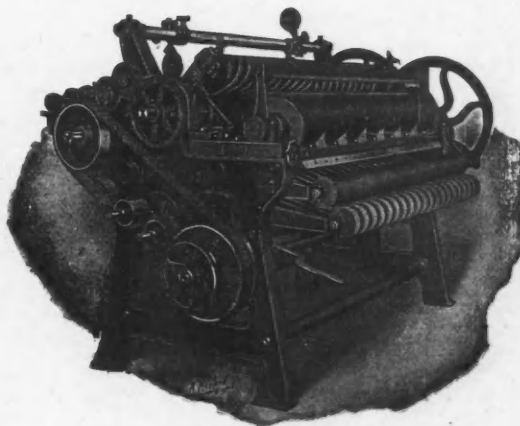
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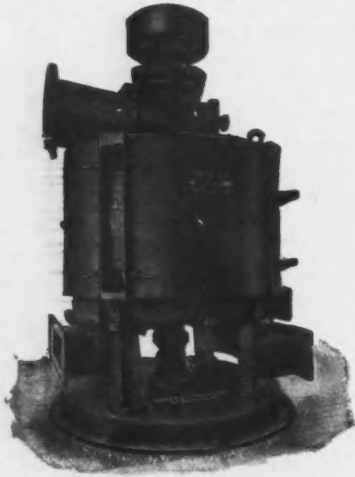
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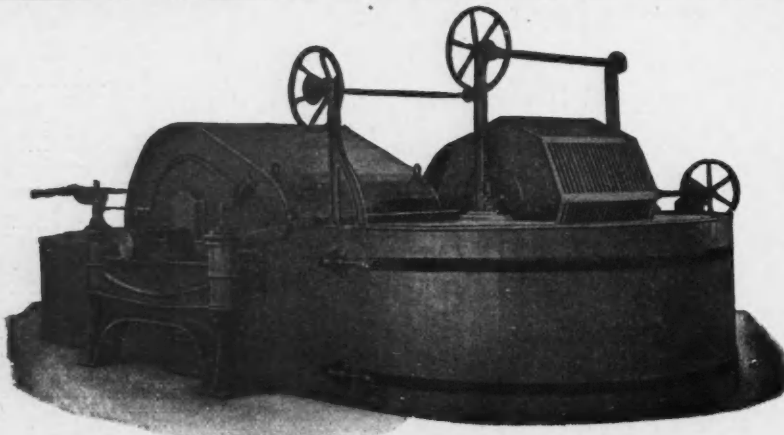


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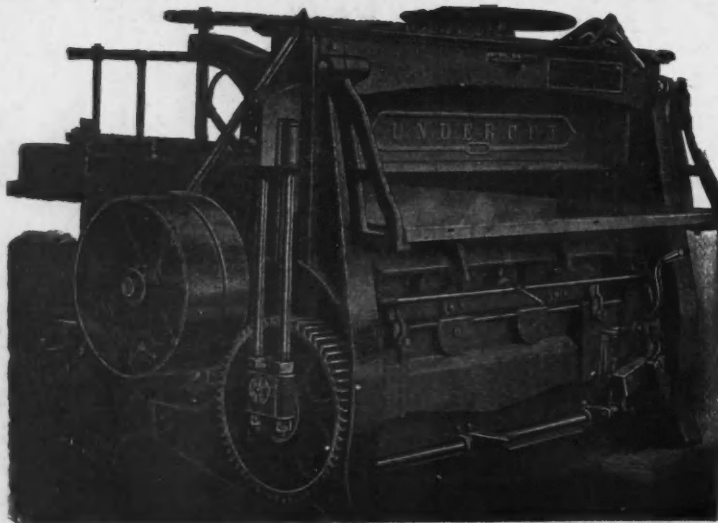
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