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— FIFTY-THIRD YEAR —
ESTABLISHED 1873

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PAPER TRADE
 ESTABLISHED 1872
JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALME' GEO. S. MACDONALD F. K. HOPPIE
 PRESIDENT VICE-PRESIDENT & TREAS. SECRETARY
 10 EAST 39TH ST. N. Y. U. S. A

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PAPER TRADE JOURNAL

Vol. LXXX. No. 1

NEW YORK AND CHICAGO

Thursday, January 1, 1925

MONTREAL INTERESTED IN RIORDON CO. RUMOR

International Paper Co. Said to Be Working on Plan to Take Over All Assets of Riordon Co. — George Chahoon, Jr., Speaks on the Growing Competition in News Print and What It May Mean — Wayagamack Pulp and Paper Co. Makes Annual Report to Its Shareholders — St. Lawrence Paper Mills Achieve Real Financial Accomplishment — Chicoutimi Co. to Pay Interest

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., December 28th, 1924.—It is reported here that the International Paper Company is working on a plan by which it will take over all the assets of the Riordon Company, including the mills at Kipawa, Hawkesbury and Merriton, together with the timber limits connected with these. This comes as a surprise to people here because it was thought that the company would not desire to operate bleached sulphite mills such as the Kipawa and Hawkesbury plants. It is pointed out, however, that the company manufactures fine paper in the United States as well as news print and the sulphite pulp could be used for the mills that produce the finer papers.

The Bondholders' Committee and the International Paper Company are in negotiation with this plan as a basis and it is reported that recently good progress has been made in the negotiations. The opinion is that the International Paper Company will form a subsidiary company to take over the Riordon concern and will make a bond issue having a first lien on the properties it is taking over. A large news print mill is stated to be projected by the company on the Gatineau limits and the possibilities are that there will be extensive development of water power.

Growing Competition in News Print

The many plans for new news print mills and for extensions to existing mills are causing some apprehension in news print circles here and doubt is expressed as to whether the market will be able to absorb all the new production that is coming along. In this connection an address given to the Laurentide Council by the President of the Laurentide Company, George Chahoon, Jr., is worth noting. He said:

"It would be unfair for me to say that I see peace and plenty in store for us all over the next year, because I do not. All of these new mills that are being built and these new machines that are being put in are, for a time at least, going to make more paper than is used. Therefore there will not be sufficient orders for all of the mills to run full time, and we will have to stand our fair share of any curtailment.

"To my mind this condition is not as serious, however, for the coming year as many people picture it. At the present time our company is under contract for about 80 per cent of its full capacity, and if conditions in other lines of business remain good, we may be able to get some additional contracts. I wish, however, to impress upon you men of the retiring council, and upon the men of the incoming council, and upon all those interested in Laurentide's welfare, that we are in a period of very keen competition where every man whether he be president or an ordinary laborer, will be put to the test of doing his utmost in order to keep himself and his company in the big race for prosperity and success, and I

look to the new council with confidence to give serious thought and unselfish consideration to the problems which will be theirs over the next twelve months."

Wayagamack's Earnings Down

The annual report of the Wayagamack Pulp and Paper Company, which has just been forwarded to shareholders shows a reduction in earnings with net for that period equal to 1.78 per cent, on the stock of the company, as compared with 4.12 per cent in the preceding twelve-month period. In explanation of the reduction in profits, the president, C. R. Whitehead, states that this was due to severe competition in export markets and the low rate of exchange. He adds the encouraging comment, however, that there is now showing a marked improvement and pointing out that the shareholders have in addition the promising prospect of the entrance of the company into the news print field. A favorable arrangement under which the British Government will provide a portion of the capital required at a very favorable rate was recently ratified by shareholders, and in reference to this the report contains the definite announcement that steps are now being taken to put the plan into operation without further delay. It is expected that the new news print machines, with an output of about 200 tons daily, will be ready for operation by the end of 1925. The statement under review shows operating profits at \$677,509, after allowing for income tax, but before interest on bonds, depreciation of buildings and plant and depletion of timber limits. This compares with \$893,495 in the previous year. After providing \$300,000 for bond interest, \$160,000 for depreciation, \$118,000 for depletion and \$10,000 for bonds discount, there remained a surplus on the year's operations of \$89,013. Previous balance brought forward at \$1,108,278 brings total profit and loss account at November 30, to \$1,197,292.

St. Lawrence Paper

Evidence of the earning power of news print companies even with considerable curtailment of output and price declines is furnished in the paying off of all arrears of preferred dividends by St. Lawrence Paper Mills, Limited. These accrued dividends amount to 12 per cent as of December 31, 1924. Payment will be made on January 15 to shareholders of record December 31.

Chicoutimi Co. Will Pay Interest

Arrangements for the formation of the Quebec Pulp and Paper Mills, Limited, that will take over the Saguenay Pulp and Paper Company and its subsidiaries, are making progress, although several problems remain still to be solved. In the meantime provision has been made for meeting not only the interest on the Saguenay bonds but those of Chicoutimi Pulp Company, in spite of the fact that the latter company is in liquidation. This interest is due on the first of January and has not yet been passed by the other company.

BUSINESS FORGOTTEN FOR HOLIDAYS IN PHILADELPHIA

Call of Christmas Had Tendency to Flatten Paper Trade and Little Activity is Expected Until After First of Year—New Trade Custom Pertaining to Broken Lots to be Discussed at Special Meeting—Wilder Brothers and Co. Suffer \$20,000 Fire Loss—People of Pennsylvania to Have Voice in Big Reforestation Program—Federal Container Co. Adds New Equipment.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., December 28, 1924.—Attractions of the Holidays, lured the business world to the happier pursuits distinct from the routine of commercial life; and in consequence, the paper trade was allowed to drift along until the season of good will and friendly social contact had passed.

In the shortened holiday week little activity for any of the standard grades in both the fine and coarse paper divisions was apparent. Inventory time also had a share in the lack of interest displayed by the industrial concerns in the paper markets; and the tendency was apparent to hold off purchase until the coming year, awaiting the more substantial verifications of actual resumption of business in all enterprises.

The fine paper market was particularly quiet. With the large printing and publishing concerns well supplied with stocks purchased earlier in the season, there was no demand for sizable orders. A few of the smaller printing and stationery plants were responsible for the hand-to-mouth buying of a few grades of writings, used in the production of bookkeeping accounts, or for letter heads and announcements of changes that will be made as 1925 arrives.

Coarse Papers in Holiday Market

A few of the grades of wrapping and waxed products used by the mercantile, confectionery and other industries that are particularly active in the holiday season, were the main factors that sustained an otherwise sluggish coarse paper distribution. As in the previous week, the belated orders that are still coming, in only hand-to-mouth kept the paper houses catering to this class of trade working on an overtime schedule.

A better tone was dominant in the paper stock trade as the year approaches the end. There were more frequent mill inquiries and actual orders for the few grades of container stock and soft white shavings. Not much stock is accumulated and prices have a tendency to advance rather than diminish.

Trade Custom Revision

A special meeting of the Fine Paper Division of the Philadelphia Paper Trade Association will be called shortly after the New Year for the purpose of taking up the question of revising the recently introduced Trade Custom dealing with the charges on shipments of broken lots. Chairman Norbert A. Considine, of the Trades Relation Committee, and his co-workers on that body, will take up that question with the fine paper distributors in order to bring about some solution, that will meet the approval of all the dealers concerned in the distribution of light weight fine papers cost of handling is involved in the disputed Trade Custom formerly accepted by the entire members of the Fine Paper Division. It is expected that the Trade Custom will be revised so as to include a Service Charge along with the extra 25 percent increase in the cost of the broken lot.

Wilder Bros. Lose by Fire

In the \$100,000 damages caused by fire last Tuesday to the building used by Wilder Brothers and Company, 12th and Brown streets, that firm suffered a loss of \$20,000. The loss was confined

to water-damaged paper stock as recorded to date, although considerable building destruction resulted from the flames and smoke. The large six-story building known as the Wilder Building is owned by the members of the firm, Charles A. Wilder and his brother I. J. Wilder who occupy the first floor of their coarse paper business. It was thoroughly reconstructed at the time that the firm bought it more than three years ago, and its excellent fire-proof construction was responsible for the confinement of the loss to a minimum. The fire started on the second floor, in the stock room of the Quaker City Paper Box Company, and spread through the windows to the third floor occupied by a knitting concern.

Kieckhefer Container Co. Improvements

Modernizing of the beater equipment in the plant of the Keickhefer Container Company, Delair, N. J., has been completed and there is now installed the very latest improved type of Shartle System which simplifies the handling of the raw materials. The Shartle System was installed at a cost approximating \$90,000. It produces 200 tons of pulp per day for the manufacture of container board used in the production of corrugated and fibre containers. The new system is of the continuous operation type, providing for an automatic drainage of the pulp, and the feeding of it by gravity to the paper machines, eliminating much of the overhead formerly required in the handling of the raw materials. It has been housed in a separate building constructed especially for this purpose. It is 75 feet long and the building construction has been arranged to accommodate its length. The new system will enable the Keickhefer Company to greatly increase its capacity of the finished boards and to speed up its shipments to the trade.

Reforestation Plans for Pennsylvania

Providing that the plans of the Pennsylvania State Forestry Association, as approved by the State Legislature at the last meeting of that body, are sanctioned by the public at the election in November, 1925, the Keystone State will acquire 5,000,000 additional acres of forest lands. This fact was made the subject of an appeal in annual report of the Forestry Association, issued a few days ago, when it was announced that more than 1,000,000 idle acres had been reforested during the past five years, and that should the public express its approval of the plans for further developments, the additional acreage will be given over to the cultivation of trees for lumber and pulp supplies.

The Council of the Forestry Association was responsible for the introduction of the Bill at the last Legislature's meeting, when there was appropriated \$25,000,000 for the reforesting subject to the electoral vote for its adoption.

Federal Container Co. Improves

Equipment installed in the plant of the Federal Container Company, 56th and Paschal avenue, has provided the firm with manufacturing facilities that enable a 50 per cent increase in the production of corrugated and fibre products. The firm is now producing the largest volume in its history. In the home which it purchased, in 1921, with its 60,000 square feet of space, there were installed a new Swift Slotting Machine, two new S. and S. Automatic Taping Machines, and two new Hooper Presses for the Printing Department. The Delivery Service has been augmented by the addition of a Mack and of a G. and M. Truck. The Federal Company, of which Egbert Moxham is President and T. C. Mitchell, Vice President, has been engaged in the manufacture of corrugated and fibre products ever since 1904.

Beck Heirs

Disposing of an estate valued at \$72,000, the will of Charles Beck, founder of the Beck Paper Company, 609 Chestnut street, whose death occurred last month, was filed with the Register of Wills in this city last week. Among the heirs are two sons of Leon Beck, the present head of the firm. Richard Hancock Beck, and

Carl Augustus Beck, each having been allotted \$5,000, until they become 21 years of age. Five nephews get \$1,000 each and the remainder of the estate is divided among the six surviving children with the exception of \$30,000 to be held in trust for Miss Bertha E. Beck during her lifetime.

A. M. Collins Gives Monkeys to Zoo

The trophies recently acquired by the noted Philadelphia hunter and explorer, Major Alfred M. Collins, head of the A. M. Collins Company, 3rd street and Columbia avenue, manufacturers of card paper products and cover papers, who just returned from the African Jungles, were donated to the Quaker City Zoo. Major Collins brought back from his long African hunt, continuing for more than a year, a large Chimpanzee named Josefa, and two small monkeys. Major Collins made the special trip into the African Jungles for the purpose of securing rare specimens of monkeys and other animals for the Marshall Field Museum of Chicago along with several noted scientists.

Involuntary Bankruptcy Petition

An involuntary petition in bankruptcy was filed during the week against Ernest G. Snow, manufacturer of paper towels and toilet papers, 2112 Washington avenue. The petition, filed in the United States District Court in this city, contains the following names as creditors:—Alfred G. Walker, \$600; J. L. N. Smythe Company, \$324; and A. W. Webb, \$23.

The Snow plant is located in the Southern Part of the city. It recently was entirely re-equipped with new machinery and greatly expanded in the production of sanitary paper products, such as towels, napkins, and other paper items of like character.

Miami Paper Co. Making Improvements

WEST CARROLLTON, Ohio, December 28, 1924.—The Miami Paper Company has under way a well rounded power improvement program, including both steam plant and manufacturing departments.

An extensive addition to present boiler plant, including new boilers, stokers and building, is nearing completion, the first new boiler to be in operation shortly after January 1st.

New turbines and condensers have been placed under order, and with other power plant equipment, will be added to a complete remodeling of power house, work on which will be commenced shortly after the first of the year.

New Motive equipment for many of the existing drives and general transmission is to be installed, and drives and transmission improved throughout the different departments.

This power improvement upon completion will provide the Miami Paper Company with a fully equipped power installation of the latest type, and one that will meet the most severe manufacturing demand that can be placed upon it.

W. W. Sunderland is president and Arthur Nevius, vice-president and treasurer of the Miami Paper Company. Design and installation is being carried out by H. S. Taylor, consulting engineer.

Order Regarding News Print Rates

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 31, 1924.—The Interstate Commerce Commission has issued an order in connection with news print paper rates to New Orleans. The application was filed by several railroads and the Commission in its statement has ordered:

"That the petitioners herein be, and they are hereby authorized to establish rates on news print paper, in carloads, from Port Arthur, Fort William, and West Fort, Ontario, to New Orleans, La., on the basis of 6 cents per one hundred pounds higher than the present rate on the same commodity from International Falls Minn., to the said New Orleans, and to maintain higher rates to intermediate points of destinations provided, that the present rates to the said intermediate points shall not be increased except as may hereafter be authorized by the Commission and shall in no case exceed the lowest combination."

John Matthews, Jr., to Be Asst. Director

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 28, 1924.—President Coolidge has sent the name of John Matthews, Jr., chief of the Paper Division of the Department of Commerce, to the Senate for confirmation as Assistant Director of the Bureau of Foreign & Domestic Commerce. Mr. Matthews will also remain in charge of the Paper Division.

Mr. Matthews has been in the paper business since August, 1912 when he became associated with the Parsons Trading Company of



JOHN MATTHEWS, JR.

New York City remaining with that firm until 1921. During this time he was department manager of the Latin American, Far East, India and South African divisions and for three years he was branch office manager of the firm at Buenos Aires, having charge of Argentina, Paraguay, Uruguay, Brazil, Chile and Peru. In 1921 Mr. Matthews became associated with the Miami Paper Company, at West Carrollton, Ohio where he was eastern sales manager. He left the Miami Company to come to Washington at the suggestion of the American Paper & Pulp Association as chief of the Paper Division. That was in August, 1922. Mr. Matthews who succeeds Robert A. Jackson as assistant director is well liked by the departmental officials and has made good. O. M. Butler, who has been in the Paper Division for some time will be in active charge of the work there.

Canada Paper Co. Building Pulp Mill

[FROM OUR REGULAR CORRESPONDENT.]

WINDSOR MILLS, Que., December 29, 1924.—The Canada Paper Company is erecting a new pulp mill, the designs being in the hands of Geo. F. Hardy of New York.

The mill is being laid out to run either by the soda or Keebra process.

Steam will be supplied by Babcock & Wilcox boilers built by Goldie & McCullough of Galt, Ont. They are equipped with type E stokers and Ljungstrom Air Preheater instead of economizers and will operate at 200 lbs. pressure.

The digesters are being built by the American Welding Company to operate under a working pressure of 150 lbs.

The pulp will be washed on filters and the hot water will be supplied by the condensation of blowoff steam.

The mill will be a very compact unit good for 50 tons per day, and is being designed with every provision for economic manufacturing.

TORONTO HAS NO COMPLAINT OVER 1924 PAPER BUSINESS

Turnover Was Not as Great as in 1923 and Yet Year Was a Fairly Satisfactory One—Better Business During Next Twelve Months Seems Certain—News Print Being Successfully Made from Jack Pine at Thorold—More Details Regarding Recent Important Merger—Manitoba Pulp and Paper Enterprise Not to be Abandoned—Ontario Had Record Year in Reforestation.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, December 29, 1924.—The past year in the pulp and paper industry was a fairly good one although, on the whole, not as large in turnover as in 1923 except, possibly, in news print. Book and writing mills were employed to about 80 per cent of capacity and jobbers, in spite of small orders and spasmodic buying, will come within 5 or 10 per cent of doing as much business as in 1923. Collections were not satisfactory during the year and credits had to be watched closely but, the trade emerges with better results than at first anticipated. Prices were fairly steady during the past twelve months and there were but few changes which added to the stability of the whole situation.

Quotations today are a little lower than they were a year ago. Many disturbing factors which appeared on the horizon in 1923 such as the federal sales tax, the proposed abolition of the long price list, industrial quietness and a general hesitancy on the part of the purchasing public, have been removed. A better feeling now prevails and the trade is looking forward to 1925 with more confidence than it has during any period since 1920. There is a better feeling in all ranks of the business and, fundamentally and economically, things are sounder than they were several months ago. On the whole 1924 was a pretty good merchandising year and while purchasing was of a hand-to-mouth character, still the number of orders received were numerous which, in the aggregate, reached a very respectable total.

At Work on Inventories

The wholesale paper merchants are now engaged in taking inventories, holding conferences and making ready for bigger and better business during the coming twelve months. Some large consumers of paper have already entered into contracts for their requirements for 1925 which is an encouraging sign. Very few, if any, price changes are anticipated and with good, sound basis for operation and distribution, it is expected that the coming year will be normal in turnover, production and distribution.

Some branches in 1924 fared better than others but, on the whole, the paper trade came through with less disasters than many allied enterprises due to co-operation and harmony, and the splendid influence of the Canadian Paper Trade Association which worked in close relations with manufacturers and removed many obstacles that might otherwise have resulted in slaughter sales, unlimited credits, serious price-cutting and misunderstandings.

1925 is being welcomed by the paper industry with high expectations and a feeling that much better things are in store for all those connected with this great national undertaking.

Making News Print from Jack Pine

A new process of making news print has been tried successfully at Thorold, in the Niagara Peninsula, and it is believed that this method of wood treating will work out satisfactorily. News print has been produced and used which was made from 78 per cent jack pine, groundwood and 22 per cent sulphite pulp. The product is reported to have given every satisfaction so far and its future will be watched with interest. Considering that jack pine is

pregnant with pitch, resin and gummy substance, it has been successfully employed for paper-making.

If jack pine can be used in the future in turning out news print, it will mean that great impetus has been given to the industry in Canada and the threatened depletion of pulpwood will be postponed many years. There are about 15,000,000 cords of jack pine in Northern Ontario and about the same quantity of poplar.

The treating plant at Thorold was established in September last by Wood and Pulp Processes, Limited, a new Canadian concern which has not talked much but seems to have done a great deal. Extraneous substances in the wood are removed and the product goes to the grinding mills. In the case of the paper used, the wood was ground into pulp by the Davy Pulp and Paper Company, Thorold, and was made into paper by the Interlake Tissue Mills Co., Merritton.

Expert paper men of the Niagara district have given their opinion that the new process will become a predominating factor in production in Canada and that costs will be lowered and vast resources of wood made valuable by the treatment of jack pine. Another economy effected by the process is that in chemicals; spruce and balsam together, 100 per cent wood without any sulphite whatever, were manufactured lately into very fine news print at the Interlake Tissue Mills Company.

The Niagara district is the first paper manufacturing centre to exploit the new process and from the Peninsula will go out the first new paper made from treated raw material, with economies which, it is claimed, may revolutionize the big industry.

Important Merger is Completed

A merger of considerable interest to the pulp, paper and other industrial activities of Canada is announced in the consolidation in Canada between Vickers Limited, the British Engineering and Shipbuilding Company and the Combustion Engineering Corporation, Limited, a Canadian firm in the steam power plant field representing the interests in Toronto of the International Combustion Engineering Company. A. J. T. Taylor, of Toronto, who recently returned from a visit to the pulp and paper plants of Sweden, Great Britain and other countries, is president and chief executive officer of the consolidated concern.

The amalgamation has taken effect by the formation of a new company to be known as Vickers and Combustion Engineering Company, Limited, with offices in Montreal, Toronto, Winnipeg and Vancouver.

The entire business of the Combustion Engineering Company, Limited, and of its parent company, the International Combustion Engineering Corporation, of New York, and the Canadian sales agency of Vickers Limited, and other shipbuilding companies, along with the sales of the industrial department of Canadian Vickers of Montreal, comes under the one executive concern.

The new company will carry on the work done by both Canadian Vickers and Combustion Engineering Corporation in plant design and in contact and collaboration with consulting engineers in Canada, Great Britain and the United States. The company will have associated with it the manufacturing plants of Canadian Vickers in Montreal and the advantages of the established facilities of these works, together with the manufacturing facilities and association of the many large manufacturing works in Britain, France and Germany of the two concerns now uniting in Canada.

Taking Out Less Pulpwood

C. W. Cox, who is a well known pulpwood contractor in the Port Arthur district, states that business during the past season has been only fair. The demand for pulpwood and railway ties is considerably less than last year and prices are somewhat lower. Mr. Cox uses a Caterpillar tractor in connection with his logging activities and he finds the machine very economical in covering a road across the lake, his operations being conducted 65 miles from the railway. He is hopeful that an improvement will take place in the market for pulpwood in the next few months.



How They Let Obsolete Methods and the Old Year Go Together

No better New Year's message can be sent you than this story of the actual experiences of two paper manufacturers, one in New York, the other in Wisconsin.

One was operating a Fourdrinier machine on book paper at an unusually high rate of speed. Following the best methods at hand he was having great difficulty feeding the stock to the wire as fast as was necessary and at the same time keeping a good formation. It was necessary for the Wisconsin man to make the paper of uniform caliper and he was in continual difficulties. By installing one piece of

equipment the New York papermaker not only fed the stock to the wire at exactly the right speed, but was able to increase his production 10%, at the same time obtaining the best formation he ever had. The Wisconsin man cut down his caliper variation 75% and made better paper.

The machine used in both cases was the new Voith High Pressure Stock Inlet. Your copy of an interesting booklet giving full particulars regarding the above and describing the machine in detail, is yours on request. Let it help show you the way to make better paper at a lower cost in 1925.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

BIDS AND AWARDS FOR GOVERNMENT PAPER

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 31, 1924.—The Government Printing Office will receive bids on January 5 for 150,000 pounds of calendered manila tag board in 24-inch and 26 $\frac{3}{4}$ -inch rolls.

Bids will also be opened by the Printing Office on January 7, for 54,000 pounds of white M. F. book printing paper in various sizes and for 40,000 pounds (500 reams) of 25x38, end paper. Bids will also be opened on the same date for 14,800 pounds (100 reams) of 24 x 38—138 pounds, rope manila paper.

Paper Bids Received

The Printing Office has received the following bids for 3,600 lbs. 22 x 34—18, No. 9 blue glazed manifold, bond paper: Barton, Duer & Koch, 24.6 cents per pound; Mathers-Lamm Paper Company, 17.8 cents and 20 cents; R. P. Andrews Paper Company, 24.73 cents; Whitaker Paper Company, 29 cents; Old Dominion Paper Company 25.49 cents; American Writing Paper Company, 30 cents.

Bids were also received for 50,000 pounds of 26 x 38, white S and SC lithograph paper: American Writing Paper Company, 16.5 cents; Lindemeyr & Harker, 11 cents.

The Printing Office also received bids for 32,250 pounds of various sizes, white glazed manifold bond paper as follows: Barton, Duer & Koch Paper Company, 15.84 cents; Whitaker Paper Company, 13.87 cents; Mathers-Lamm Paper Company, 12.5 cents; R. P. Andrews Paper Company 19.75 cents; Esleek Manufacturing Company, 30 cents; American Writing Paper Company, 20.75 cents; Virginia Paper Company, 16.59 cents; Reese & Reese, 19.97 cents; Old Dominion Paper Company, 19.74 cents; Dobler and Mudge, 19 cents; Samuel S. Alcorn, 20.5 cents; and Aetna Paper Company, 15.62 cents.

For 150,000 pounds of manila tag board in 26 $\frac{3}{4}$ -inch rolls, C. L. LaBoiteaux Company, 7.29 cents; American Writing Paper Company, 7 cents; R. P. Andrews Paper Company, 7.54 cents and 7.44 cents; Maurice O'Meara, 8 cents; Reese & Reese, 8.06 cents; Barton Duer & Koch, 7.73 cents; and Coy, Hunt & Co., 7.53 cents.

The following bids were also received for 1,800 pounds of 21x32—9, white tissue paper Whitaker Paper Company \$1.17 per ream; Reese & Reese, \$1.35 and \$1.17; Dobler and Mudge, \$1.80; Lindemeyr and Harker, \$1.41; R. P. Andrews Paper Company, \$1.79; Mathers, Lamm Paper Company, 90 cents and 99 cents; Barton Duer & Koch, \$1.18; Old Dominion Paper Company, \$1.099 and Republic Bag and Paper Company, 99.5 cents.

The Government Printing Office has received the following bids for 38,500 pounds of 24 x 38—77 white laid antique book paper: Bryant Paper Company, 13.25 cents per pound; Dobler and Mudge, 20 cents; Reese & Reese, 16.5 cents; Barton Hobart Paper Company, 21 cents; Lindemeyr and Harker, 13 cents; American Writing Paper Company, 16.5 cents; Whitaker Paper Company, 14.25 cents; Barton Duer & Koch, 12.94 and 13.84 cents; R. P. Andrews Paper Company, 15.35 cents; Mathers Lamm Paper Company, 12.99 and 18.5 cents; Old Dominion Paper Company, 16.749 cents; Virginia Paper Company, 19.45 cents; Perkins Goodwin Company, 18.4 cents.

The following bids were also received for 40,000—4 $\frac{1}{2}$ x 10 $\frac{3}{8}$ -inch wood manila envelopes: U. S. Envelope Company \$1.93 per M; Union Envelope Company \$1.75; Oles Envelope Company \$2.38; U. S. Paper Goods Company \$1.90.

The following bids were received for 6,600 pounds of 28 x 34-inch 33 pounds, No. 13 white writing paper: Aetna Paper Company 16.49 cents; American Writing Paper Company 18.5 cents; R. P. Andrews Paper Company 15.65 cents; Barton Duer and Koch

Paper Company 15.85 cents; Virginia Paper Company 15.75 cents; Barton Hobart Paper Company 23 cents; Reese & Reese 20.11 cents; Lindemeyr and Harker 9.5 cents and 11.7 cents; Dobler and Mudge 18.5 cents; Old Dominion Paper Company 20.49 cents, and Mathers Lamm Paper Company 13.49 cents.

The Government Printing Office has received the following bids for 18,885 lbs. various sizes manila cardboard: American Writing Paper Company 7.75 cents per pound; Barton Duer & Koch Paper Company 5.98 cents; R. P. Andrews Paper Company 6.25 cents; Mathers Lamm Paper Company 5.5 cents; Old Dominion Paper Company 5.69 and 7.59 cents; Reese & Reese 5.295 cents; Maurice O'Meara Company 6.5 cents; Lindemeyr and Harker 5.86 and 6.11 cents; Dobler & Mudge 5.85 cents; Whitaker Paper Company 6.41 cents; Osborne Paper Company 7.85 cents.

The Printing Office has also received the following bids for 20,000 pounds of wood manila paper in 27 $\frac{1}{2}$ -inch rolls: Maurice O'Meara 5.5 cents and 5.3 cents; Mathers, Lamm Paper Company 5.1 cents; Reese & Reese 5.34 cents; Dobler & Mudge 6 cents; Whitaker Paper Company 4.97 cents; Old Dominion Paper Company 5.19 cents; Barton Hobart Paper Company 5.31 cents; Import Paper Company 4.85 cents; Lindemeyr & Harker 5.1 cents and 5.4 cents; American Writing Paper Company 7 cents.

The Printing Offices has also received the following bids for 40,000 lbs. of No. 2 quality No. 60 and 20, 25 x 30-inch binders board: Barton, Duer & Koch \$67.90 per ton and \$62.84; Whitaker Paper Company \$67.73 and \$62.73; T. A. Cantwell \$77.50; Dobler & Mudge \$67.50; Holiston Mills \$67.50; Philip Rudolph & Sons \$75.00; C. L. Laboiteaux Co., \$67.20, and Mathers, Lamm Paper Company \$67.90 and \$62.95.

Paper Contracts Awarded

Reese & Reese have been awarded the contract by the Government Printing Office for furnishing 35,700 pounds (350 reams) of 21 x 31—102, buff wood bristol board and 4,795 cents per pound, bids for which were received on December 8.

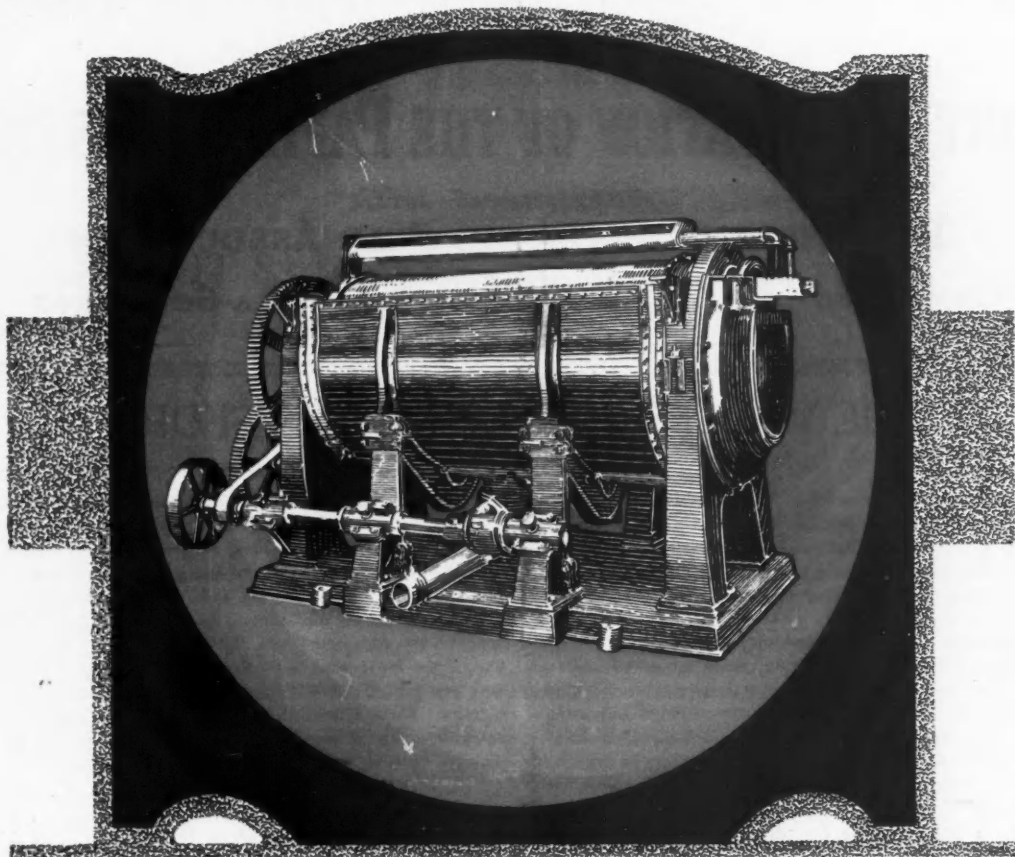
The R. P. Andrews Paper Company will furnish 2,400 pounds (25 reams) of 33 x 34—96, No. 32 parchment deed paper at 39.5 cents per pound, bids for which were received on December 5 and the same firm will also furnish 7,400 pounds (100 reams) of 24 x 38—74, sulphite manila paper at 7.24 cents, bids for which were received on December 3.

The Mathers-Lamm Paper Company has been awarded the contract by the Government Printing Office for furnishing 32,250 pounds (1,000 reams) of various sizes white glazed manifold bond paper at 12.5 cents per pound. Barton, Duer & Koch will furnish 3,600 pounds (200 reams) of 22 x 34—18 lbs., No. 9 blue glazed manifold bond paper at 24.6 cents. Bids for these items were received on December 15.

The Kalamazoo Paper Company will furnish 23,100 pounds (300 reams) of 24 x 38—77, double coated book paper at 8.75 cents per pound and the Mathers-Lamm Paper Company will furnish 5,200 pounds (200 reams) of 22 x 34—26, No. 13 blue sulphite writing paper at 9.3 cents. Reese & Reese will furnish 6,000 pounds of sulphite manila paper in 18-inch rolls and also 19,700 pounds (200 reams) of various sizes flat same at 5.71 cents. Bids for all of these items were received on December 12.

The R. P. Andrews Paper Company will furnish 5,000 pounds (5,000 sheets) of 26 x 38—No. 50, lined straw board at \$55.00 per ton, bids for which were received on December 10.

Reese & Reese will furnish 2,400 pounds (100 reams) of 17 x 22—24 lbs., fine white glazed bond paper at 27.65 cents per pound, bids for which were received on December 5.



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 Conducted by **THOS. J. BURKE, C.A., Sec-Treas**

THE VALUE OF ORGANIZED EFFORT*

HUGH P. BAKER SEC., AMERICAN PAPER AND PULP ASSOCIATION

I bring you greetings from the American Paper and Pulp Association. It is always a pleasure for us to be represented at these meetings of other organizations in the paper industry, and to have the opportunity of extending greetings and through the very fact of these greetings emphasizing the coordination of organized effort within our industry.

You know of course, that the American Paper and Pulp Association is a national federated organization, made up of 15 affiliated associations and sections, and that we are dealing with the larger general problems of the industry leaving our affiliated associations the problems for which they are particularly organized. Your organization means to us a service bureau, that is, a bureau organized to give service to the entire paper and pulp industry along cost lines.

I am particularly glad to bring you greetings and emphasize coordination of effort from one organized effort in the paper industry to another organized effort. Though we will soon hold the 48th Annual Meeting of the American Paper and Pulp Association, it really hasn't been so very long since we have had effective organized effort in this great industry of ours. We are indeed old in years, having come into existence in 1878, but we are in fact young in opportunity for service. It has given me much pleasure in the past few months to look up somewhat the history of associations in the paper industry. For a number of years the American Paper and Pulp Association seems to have been largely a social organization. In fact in the early years the efforts of the Association seemed to be largely an Annual Banquet where the manufacturers of paper and their friends could get together for a good time—and they seem to have had a thoroughly good time. It is only comparatively recently that the Association has attempted to be more than a social organization, and to take hold of the problems vital to the industry, to see if they cannot be solved in ways that will be of direct and lasting benefit to the industry.

The paper industry is an old and a very honorable industry, and to repeat—it is still young in its opportunity for development. We are, in fact, in a paper age and in trying to analyze the present make-up of the industry and its outstanding problems, it has come to me time and again that we are just at the beginning of our development as an industry. There is every reason to expect that we shall go much further in developing both pulps and papers of different kinds for new and different uses.

The Place of the Paper Industry

It may be of interest to you to know the place which our industry

*Delivered at the convention of the Cost Association of the Paper Industry, Commodore Hotel, New York, December 11, 1924.

COST SECTION

holds among the great industries of the country. You have heard figures given, doubtless, as to our rank among the great American industries. It is a little difficult to give you the exact figures as to the rank of the paper industry last year on the basis of capitalization of the industry, or the value of the annual product. The Census Bureau at Washington, in analyzing the industries of the country generally, combines the paper industry with printing. In one of the latest reports of the Bureau of Census they give paper and printing the sixth place among the great industries of the country. Their figures are arrived at, as I understand it, by averaging five year periods beginning with 1904. On this basis the industries rank as follows:

1. Food and kindred products	\$6,277,677,000
2. Textiles and other products	4,976,173,000
3. Iron and Steel and their products	4,718,463,000
4. Chemicals and allied products	2,950,232,000
5. Lumber and its remanufactures	1,981,464,000
6. Paper and Printing	1,931,295,000

We have figured a number of times in the past as to the annual value of the product of our industry, and in working up an estimate from different angles we arrive each time at a figure of approximately a billion dollars as the annual value of the pulp and paper produced in the United States. We are, therefore, one of the great industries of the country.

Efforts Toward Organized Effort

There are few if any more interesting subjects for discussion than the efforts of the human race toward organized effort. The efforts of a people toward organized efforts, and results achieved, are in fact the only sound basis for judging advancement in civilization.

Only as our pre-cave man ancestor joined his physical strength with that of another ancestor, for defective purposes, did civilization begin. For very many thousands of years it is probable that the only organized effort among men was for defense. The necessity for defense brought men together in communities, and finally into cities and nations. Some few of the lower animals in the fight for existence have learned the value of organized defensive action. The multitudinous varieties of pre-historic animals of great size lived their age and disappeared, to be known to us only through fossilized remains, largely because of inability to use what we might call group defense. Some of the smaller forms of animal life, like the bees and the ants, have continued through the ages largely because of a slight advance toward organized effort.

Man, the animal, may be separated from the lower animals some-

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Season's Greetings

For the closer friendship and increasingly pleasanter relationship which the past year has brought us from our many friends in the trade, we are thankful. For the numerous favors so gladly extended by them, we are grateful. And our expressions of good-will carry to all our appreciation of the good they have bestowed on us.

Again we say a Happy and Prosperous New Year to all.

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what on his ability to go beyond organized effort for defense only.

Much, if not all, of our earliest literature is the history of man's efforts toward organized defense. In other words, much of the earliest literature, and much of the literature of today, is the history of individual and group defense and war.

If we analyze the Bible on the basis of its historical value it is easy to see that it is after all the story of man's efforts toward the higher forms of control of human society. The same individual characteristics of selfishness and greed, and destructive ambition made for the defeat of organized effort among the early Jewish people, as outlined in the Old Testament, as today are creating difficulties and hindrances in satisfactory organized effort among men along all lines of human action. Unfortunately we still have individuals and groups of men who find it difficult, if not impossible, to appreciate that their organizations should be carried on for purposes other than protection only.

Possibly the right development of the individual, whether man or woman, can best be judged by his ability to live and work harmoniously with other people. If one observes the development of satisfactory human relationships one is led to believe that satisfactory organized effort in the family is of comparatively recent origin, and still, unfortunately, harmonious family relations are all too rare. Only as the human characteristics of selfishness, greed, and destructive ambition are replaced by unselfishness, friendliness, generosity and love, can we expect to achieve harmony in the relations of men.

The problem of organized effort among men, whether it be in religion, in fraternal organizations, or in business and commercial organizations, is to force the destructive attributes of men into the background and bring out the constructive attributes that make for the successful working together of men for the achievement of the best in life. The association secretary could well be something of a psychologist, to the extent that he may know better the reasons for the actions of men and how men may be influenced to bring out their best development as a group, and for the group.

It has given me keen pleasure to work with the paper industry for now nearly five years. The experience has been a most valuable one, and has taught me a great deal about organized effort among men, and about trade association work. Even with these years of experience I appreciate the fact that I am but a beginner and can see particularly that the more a trade association secretary in an organization can know and appreciate the reasons for action among men, the more effective he will be.

The Trade Association in Organized Effort

It is comparatively easy to bring men together for protective purposes. The family, the clan, the community and the nation, will rush together for organized effort when under attack.

Witness the coming together of the Allies in the Great War. Several of these Allies were ancient enemies under peace conditions. A common danger and a common enemy caused them to forget older hates and older differences to the extent of pooling their force for defensive action.

Because the trade association must go further than the protection of an industry only, its work is always difficult and never finished. How easy it is when an industry is under the necessity of meeting destructive legislation or injurious foreign trade, to get the individuals in the industry to pool their interests for a fight. As soon as the fight is over the old antagonisms and suspicions again come to the fore, and prevent the industry from making progress toward a right solution of peacetime problems. Using again the example of the warring nations, with the Armistice and the signing of the Peace Treaty, how quickly the Allies fell apart and quarreled with each other over the spoils and the opportunities for commercial development.

After several years of close study of organized effort in the paper industry it is easy to see that a trade association is after all the highest form of organized effort among men. It is the highest

form because it is the coming together of a group of men to promote the common welfare, sometimes as against the welfare of the individual. It is never possible to get all of the units in an industry together in such an effort as a trade association. Witness the effective work of the National Automobile Chamber of Commerce, and yet a great manufacturer of automobiles in Detroit won't belong to the Automobile Chamber. Your Secretary and I could tell you of splendidly organized paper companies who, for this reason or that (and how we all use reason as a camouflage) won't join with associations in the industry for the development of the industry as a whole.

In other forms of organized effort in this country today there are factors which are a great help but are not present in a trade association. In religion there are the intangible factors of inherited beliefs and that striving of the individual soul toward betterment which, somehow or another, either force men together or bring them together in a religious effort. In fraternal organizations there is the ever present urge of the desire for friendship and brotherly action, which can be of great help—or at times, unfortunately, taken advantage of—in holding men and women together, but which cannot as a rule be used more than temporarily in the building up of an effective trade association.

Profound changes are taking place in the economic life of the world. In studying these changes and the trends which seem to be evident, one cannot but be an optimist. With all of the destructive factors of selfishness, greed, and actual wrong doing, one cannot but be impressed with the fact that business is on a higher plane today than ever before in the history of men. Of course, religious and fraternal organizations have helped to bring this condition about, and when the history of this particular economic age is written it will be incomplete indeed if the influence of the church, of fraternal organizations, and of such semi-social organizations as the Rotary Club, are not indicated as playing a definite part in raising the plane of business dealings between men.

The Great War brought men so close together in organized effort in this country, and taught them that, after all, men everywhere are both human and alike and likable. Many trade associations came into existence as the result of organized effort put forth during the war. With the pulling away from the ideals developed during the war, many trade associations have had to fight for their very existence, and some have gone by the board. Even where associations have passed because of the inability of men to sink their individual attitudes and needs sufficiently, nevertheless these same groups have often come together again, feeling sometimes without clearly understanding the cause for the feeling, that organized effort, after all, is both necessary and worth while. Leaders in economic and business thought, who are watching and studying economic changes and trends, tell us repeatedly that the trade association has come to stay because it is filling a definite need in industry. There can be no question but that the soundly organized trade association will play an increasingly important part in the future business of this country.

What's Ahead in Association Work

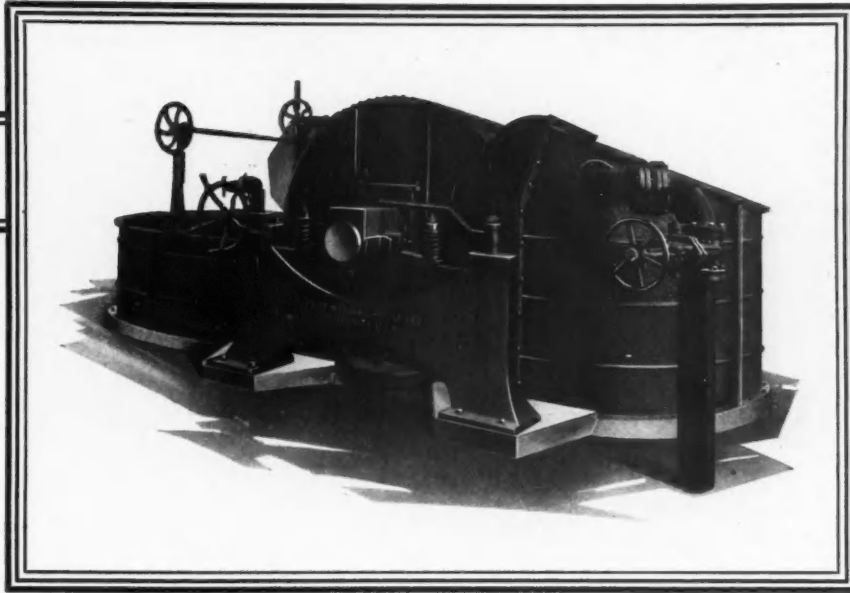
Possibly the greatest incentive in human life comes from interest in, or a belief in, "what's ahead." The hope of the individual is built always on the belief that there is something better and more worth while just ahead. The individual or the group which, for any reason, comes to the false conclusion that there is nothing ahead, are indeed unfortunate and lost as far as really sound development of any kind is concerned.

It is quite in place to ask what is ahead of trade association effort in the paper industry; what can the Cost Association of the Paper Industry do from this time on that will be of greater value to its individual members, and to the industry which it serves. What is ahead of the American Paper and Pulp Association in the way of a more worth while service to the paper industry? There is probably not a thinking trade association secretary today who is not

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going over in his mind constantly this question of what is ahead in trade association work. Those who are really concerned with the furtherance of the work of all of the associations in the paper industry are thinking constantly of this question of what is ahead, and are trying to determine a constructive program that will make the associations more effective servants and more efficient in their work for the industry.

Perhaps this question of "what's ahead" can be outlined and answered in part by stating briefly what appear to be the most fruitful opportunities for service. In mentioning these opportunities the American Paper and Pulp Association is considered, of course, because of my close contact with the work of that association, and these suggestions may possibly be of value to other associations in the industry.

Getting Along with Other Men

The biggest job in life after all is getting along satisfactorily with other men. We all know, doubtless, men of marked ability, men who have proven themselves as scholars, men whose value to their fellow-men and the nation could never be placed in question and yet have failed absolutely in accomplishing what they had planned for their lives, because of their inability to work harmoniously with other people. In these particular people we know that there are certain attributes, such as selfishness, unbalanced ambition, or wrong mental conditions, that always put them at odds with other people. We are advancing as individuals and as a group only as we can submerge these destructive attributes and replace them by constructive characteristics, which will let us work together more smoothly.

It is all too easy for us at times to become so thoroughly absorbed with our own particular piece of work that we let that work overshadow the necessity for our having friendly relations with the men about us. To a large extent, from the standpoint of the secretary, the success of his organization depends upon his ability as a salesman, which means ability to get across to those who are to use association service the value of such service, and in such a way that those whom we serve will want this service and be ready to pay for it.

There are those in our industry who find it difficult to get together for the solution of common problems, or who fail to respond to the strenuous efforts of secretaries or manufacturers, who believe that voluntary effort is after all most worth while, and rush to various governmental agencies at Washington with the hope that somehow or another the pressure that seems to be inherent in governmental action will force them together in some way or another. Personally, I am strongly in favor of our being able, as men and as groups in the paper industry, to solve our own problems voluntarily and without having to go to the government for the pressure which we should be able to exert among ourselves in the solution of our own problems. This reference is made not as an argument against close cooperation with governmental agencies.

It has been a pleasure to see how the industry has responded to the building up of the statistical activities of the American Paper and Pulp Association. As you know, we took over from the Federal Trade Commission the development of a monthly statistical summary for the industry. Gradually, since June of last year, an increasing number of mills are contributing statistics, in part, it would seem, as the result of their beginning to appreciate the fact that in such a matter as the collection and distribution of statistics the industry should be able, voluntarily, to do the things which we need done.

Difficulty of Working in Groups

In our trade association activities it would seem that the goal toward which we are working is the doing for ourselves, voluntarily, what we need to have done. Just as there is inability at times to work together as individuals, so there comes, sometimes, conditions that make it difficult for us to work together as groups. Particularly in federated organizations, conditions may arise which make it

difficult for the affiliated groups to work together as they should for a common purpose. At times, in American Paper and Pulp, we seem to be where the Federal Government was in 1800. A reading of our own Constitutional history would help materially in understanding the development of federated trade organizations. In 1810 our Federal Government could levy taxes but could not collect them. It could make levies on the states for troops but could not insure the raising of the troops. There was a long period when our government was a weak central organization which found it exceedingly difficult to bring the states together for common action, and in such a way as to make the Federal Government representative of all of the states in their common activities and relationships. It has taken more than 100 years of interpretation of our Constitution, of decisions by the Supreme Court, for us to come to a time where we have a clear understanding between the states and the Federal Government, and we still have individuals and states who believe tremendously in state rights and who are loath to concede the Federal Government the powers it should have as a government. There are many people who fail to appreciate the fact that the trend in government today is towards stronger municipal and Federal Government, and weaker county and state government.

One of the things which has brought about a strengthening of our Federal Government, and a better working together of the states making up the government, has been a clear demarcation of boundary between the functions of the states and the Federal Government. We have not gone far enough as yet in the paper industry in this matter of defining clearly the functions of the different associations. We have made some progress, but more must be done if we are to prevent duplication and be really effective in our service to the industry.

Value of Clear Statement of Program

It would be very helpful to the American Paper and Pulp Association if each of the associations affiliated with it could come out with a clear statement of its program, its field of action in the industry. With such clearly outlined programs we could certainly avoid duplication of effort. It would, furthermore, make for harmony because there would be less suspicion on the part of various associations that some one association is carrying on some activity that belongs to another association. The clearer we make our definitions in this line among the associations, the less chance there will be for differences between the individuals within the associations.

The Cost Association, as one of the associations of the paper industry, might possibly strengthen itself materially at this time by making a very clear statement of its field in the industry, so that all who run may read, and so that other associations would be able to cooperate more effectively with you and you with them.

To continue the discussion of what is ahead in the association; a federated organization such as American Paper and Pulp finds it always more difficult to outline a program and carry out the program effectively because it is attempting to bring together groups which can easily be divergent groups at times, and it is always more difficult to finance an association made up of different groups than it is a service bureau made up of different individuals. In American Paper and Pulp there are certain things ahead which we believe of great importance to the industry. Some of these are:

Some Things of Importance

(a) Effective representation of the industry in all of its various activities, with other national associations, before the public, and in contact with national and state legislative bodies.

We have just sent a questionnaire to the industry on certain important national problems. In this questionnaire the opinion of the executives on certain outstanding questions is asked. Such question, for instance, as the 20th Amendment, the Child Labor Law, Income Tax Publicity, Waterways Development, etc.—all matters which, after all, while somewhat remote from the daily activities of the individuals in the industry, yet are matters which



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are exceedingly important to us as a people. The paper manufacturers are just as broad-gauged citizens as any other groups of men. The paper industry has lost, and lost heavily, in times past by being unable to speak as an industry on national questions, which affect them as a group.

(b) Education of the public as to paper and as to the problems of the paper industry. One would think offhand that the public knows all about the paper industry because there isn't a man, woman or child, who isn't using paper day in and day out, yet if we are to judge from the many inquiries coming to the Association, there is really great ignorance as to paper. We certainly need to so educate the public that there will be greater discrimination in the use of paper—a right paper for every use. Unfortunately, paper is not being used in the right way in a great many instances, in business, commercial activities, etc.

Taking the Industry to the Public

The work which American Paper and Pulp has done to take the industry out to the public has been discontinued because of necessity for economy, yet we are feeling the accumulative effects of that work. Inquiries are coming to us constantly as to paper and its uses. After two or three Chambers of Commerce, east and west, came to us for information as to paper we decided to get out a letter to all of the leading national trade associations and Chambers of Commerce (members of the Chamber of Commerce of the United States) referring to the fact that paper, after all is the most widely used commodity in all industries in this country. It has been emphasized to us constantly, during the past year, that there is a real desire for more knowledge as to the use of paper, and, therefore, in these letters we are suggesting that we are in position to give information as to the manufacture and classification of paper, where various papers can be secured, etc. We have had some very interesting returns from that letter. For instance, we have a letter from a Chamber of Commerce in Arkansas saying that one of their members is interested in a certain form of boxboard for fruit baskets. We were in position, of course, to refer that inquiry to mills which could answer it intelligently. We must keep everlastingly at the idea of educating the public as to our industry.

(c) Sounder basis of acquaintanceship and fellowship of the men making up the industry.

Is there anyone to question the inestimably valuable returns which have come to our industry through men becoming thoroughly well acquainted and friendly in their contacts? This matter of better acquaintanceship is strengthened, of course, by such meetings as this, by the working together of the executives in committees, in conventions, and at Annual Meetings.

(d) Better knowledge of the industry itself on the part of the executives.

Statistics play a large part in the development of a better understanding of what is going on in the industry. Can there be any better way for the development of a picture, of a knowledge, that can be used as the basis for decision as to trends in the industry? There must be constant effort toward making everyone in the industry better acquainted with his product and with all of the various activities that result finally in a satisfactory product for the consumer.

(e) Research.

Though old, it is well to emphasize the fact that the industry is young in its opportunities for increasing the use of paper. Research is fundamental in improving methods of manufacture, in effecting economies and in increasing more general and more effective use of the product. The Technical Association, and other associations, are working closely with us in research.

(f) Arbitration.

Association effort should strengthen the idea of the economy and the satisfaction coming from the settling of difficulties without resort to legal action. We have had to do with two interesting arbitration cases within the last six months. They were both settled out of

court and were satisfactory to the parties concerned. We can all go a long way in association work in promoting this idea of arbitration.

(g) Distribution and New Markets.

In many of the fundamental industries of the country too much stress has been laid, through the years, upon production and too little upon distribution; or, rather, there has not been a right balance between these two activities. There has been much too great a loss to the industry and to the ultimate consumer because of expensive methods of distribution, and industry seeking to give service to the consumers of this product must help in the solution of the distribution problem, and not leave it to the public. In the solution of this distribution problem there will come, automatically, wider and more satisfactory markets.

(h) Foreign Trade.

After all the world is our market. If we are over-producing, why not reach out for wider markets as other nations have done, so advantageously, in the past? We need the products of other lands, and as we can make many products more cheaply and better than similar products can be made in other lands, we should be in a position to sell effectively, in the world market and in competition with other nations. We buy from other nations, why not sell to other nations?

More Interest in Foreign Trade

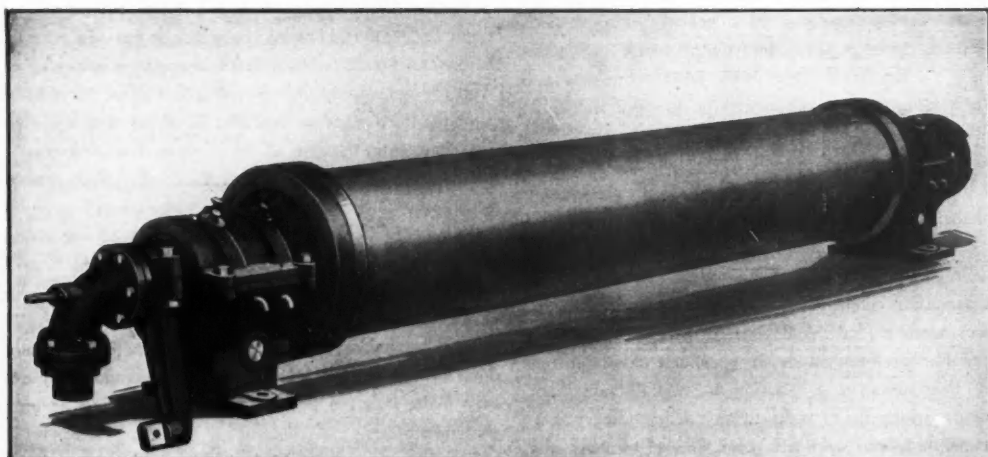
We are making some progress in interesting the industry in foreign trade. Of course there are numerous manufacturers who will say at once, when foreign trade is mentioned, that they have all that they can do to develop domestic business, and that they are not interested in foreign trade, yet, often, in the next breath, these same manufacturers will begin to talk of the number of new machines which will soon come into use and of the fact that in their particular group there is over-capacity. Unfortunately, in trade associations if we refer to over-capacity, even though we are giving the absolute facts, we may be charged with trying to limit production. However, so long as we give the facts and do not seek to interpret the facts or apply them in such a way as to restrict production, there can be no reason for our not making the situation perfectly clear to the industry and to the public. If there is over-capacity to the extent of five or ten per cent, and foreign trade can be made the means of taking up the slack, it seems to us that it is worthy of spending both time and money to develop satisfactory foreign trade. Possibly the best answer, after all, to the manufacturer who says he is not interested in foreign trade, is that each month during the past eleven months we have been selling to foreign countries from two to two and a half million dollars worth of paper and paper goods. Our total foreign trade in paper and paper goods this year will amount to between twenty-two and twenty-six million dollars. That amount of business is certainly of interest and of value to the paper industry.

In conclusion, it is well to emphasize again the fact that the highest form of organized effort is the trade association. It is going to be a long uphill fight to the time when the trade association will really be bringing together all of the units of the industry for the harmonious and effective upbuilding of the industry.

You men who are a vital part of your organization can do a great deal in assisting your organization in accomplishing what it has set itself to do, and your organization, in developing service to the industry, can help all of the other associations in the industry in accomplishing their programs of activity.

There is great opportunity for all of us as men to bring about a better industry, by bringing about a better understanding between the men in the industry. A fair and honest understanding among the men in our industry, bringing them together for the building up of a permanent pulp and paper industry in the United States assisted all the way along by effective trade associations, is indeed worthy of all the fight there is in us.

Kilberry SUCTION ROLL



Patents applied for

Common-sense bearings about one-half diameter of shell. Infallible alignment of suction box to shell, no adjustments required. No wear on packings, therefore no replacements required. Direct jaw clutch connection to driving shaft, no gears. Less power to drive roll.

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East Downingtown, Pa.

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- () Send your complete catalog of Paper Mill Machinery.
(Check item desired, no obligation.)

Company

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Editorial

Vol. LXXX New York, January 1, 1925 No. 1

HENRY J. BERGER, Editor

COMING EVENTS

American Paper and Pulp Association, Convention and Meeting of Affiliated Associations, Waldorf-Astoria, February 2-5.
 Technical Association of the Pulp and Paper Industry, Convention, Waldorf-Astoria, February 3-5.
 Salesmen's Association of the Paper Industry, Convention, Waldorf-Astoria, February 2-5.

IS GOVERNMENT COMPETITION FAIR?

The Envelope Legislative Committee which is composed of representatives from the envelope manufacturers, printers, lithographers, stationers and others, have issued a bulletin in which it opposes unfair competition of the government with private business and especially that pertaining to the manufacture of stamped envelopes. A proposed bill touching upon the subject is to be introduced at the coming session of Congress.

The question of how far the Government can legitimately go in competition with private business interests is not a new one and it is not an easy matter always to draw the fine line between what may properly be regarded as fair competition and what should be openly rebuked as unfair competition.

There are times when an individual concern or a group of concerns may by peculiar environment or by peculiarly favorable circumstances find themselves in a position to manufacture their products at a figure which defies competition under ordinary conditions. That might be looked upon in a cold blooded business way as the good luck of the favored concerns and the hard luck of the ill-favored concerns. And yet American enterprise has to be protected and so our laws have thrown up certain safeguards for American business and have drawn a fine line of distinction between what is fair competition and what is unfair competition.

The legal interpretation of this question is too lengthy and too technical to go into at this time but most business men are acquainted with the general purposes and intent of those laws and have a somewhat superficial knowledge of the great boon proper competitive restriction has been in many lines of business.

The bulletin issued by the envelope men succinctly explains the situation pertaining to the Government's envelope business as follows:—

As an example of the proposition just stated (interference of the Government with private business interest), may be cited the Government stamped envelope business, where the Government is practically attempting to monopolize the manufacture and sale of envelopes of certain grades and sizes and has built up through its stamped envelope contractor a mammoth plant and conducts its operations upon such a scale as to defy competition by private concerns in the manufacture of and printing thereon of certain types of envelopes generally used in the business and professional correspondence of the people of the country.

It is plain to be seen that the Government enjoys facilities in the envelope manufacturing business that no envelope manufacturer or group of envelope manufacturers can enjoy or could hope, under any circumstances, to ever enjoy. Its very magnitude creates a

business Goliath so powerful that even its most formidable opponent could hardly be regarded as more than a pygmy.

In the envelope manufacturing business also the Government is favored by avenues of trade denied any business competitor. Every established Post Office is a sales agency and no selling campaign could compete with this highly favorable process of marketing its wares.

We believe that the manufacture and sale of stamped envelopes by the government is wrong for several reasons. In the first place it places the envelope manufacturers of the country in a position where they cannot compete and where they must be satisfied to accept the crumbs which are left over after the Government has had its feast. In the second place the Government manufacture of envelopes, while it may serve in a haphazard way the rank and file, deals its greatest blow to the envelope manufacturers in supplying banks and big interests which use great quantities of envelopes and who are abundantly able to pay a fair price for what they require.

In the third place we feel that Government competition in business is a dangerous weapon to be used against American business and that if the soft pedal is not called into play there is no telling where such competition might lead.

And lastly but, by no means, the least of our objections is our feeling that Government competition with American business interests is not properly within the function of our Government. There is much to engage the attention of our officials at Washington—much that might be done better and more completely than it is done now. Their work is cut out for them and every excursion they may make into the field of business strikes us as extraneous and picayune.

The Government would do better to give its undivided attention to the purposes of government and to leave American business to the attention of American business men.

FOREIGN PAPER PRICES

The monthly average import price of standard news print continued showing a slightly higher tendency for October according to the monthly summary of foreign commerce which has just been issued by the Department of Commerce at Washington, D. C. The average price per pound of news print for the month was 3.71 cents as compared with 3.68 cents for September and 3.75 cents for October of last year.

The average monthly import price of ground wood also showed an increase for October, the price per ton for the month being \$33.00 as compared with \$30.73 for September and \$38.75 for October of last year.

The monthly average import price per ton of unbleached sulphite pulp for October was \$52.00 as compared with \$52.78 for September and \$59.82 for October.

The monthly average import price per ton of bleached sulphite pulp for October was \$72.35 as compared with \$76.80 for September and \$93.38 for October of 1923.

The monthly average import price per ton of unbleached sulphate pulp for October was \$54.55 as compared with \$55.82 for September and \$67.14 for October of last year.

The monthly average import price of pulpwood showed a considerable decline for October, the price per cord for the month

being \$10.15 as compared with \$11.17 for September and \$10.19 for October of last year.

The monthly average export price of news print declined slightly for October, the price per pound for the month being 5 cents as compared with 5.3 cents for September and 4.9 cents for October of last year.

Taggart Bros. Take Over Herrings Mill

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., December 31, 1924.—The St. Regis Paper Company of this city and New York today turned over its property at Herrings to the Taggart Brothers Company Inc., which was recently reorganized for the purpose of expanding.

The change in the ownership of the mill is expected to result in changes in the village of Herrings. This will be brought about by a change in the paper manufactured and the entirely different systems used by the two companies. The mill will be converted in the near future from a plant manufacturing newsprint to one manufacturing paper bags from jute stock. The change in the policy will mean change in the personnel of the employees as the trades are different.

Engineers will visit the plant soon and they will make the plans for the conversion of the plant into one for the manufacture of bags. It is estimated that about six months will be required to bring about the complete change and that \$500,000 of working capital will be necessary.

The Watertown mill of the Taggart company is one of the largest of its kind in the country. About 25 tons of paper are made daily in the mill and the machines are operated at a slow rate of speed as strength is the objective desired in the paper. The stock is made up into bags at the Watertown mill and it is printed and shipped to the purchaser ready to be filled with the products that the purchasers manufacture.

The company has enjoyed a steady growth in trade for the last several years and there has been more business than the three machines have been able to turn out.

A mill near the city of Watertown has been sought by the company for some time and it was considered fortunate that the company was able to buy the mill at Herrings.

Only specialty work of the St. Regis Paper Company has been carried on at the Herrings mill for the past several months. The company has just closed a contract with the New York Telephone Company for the manufacture of paper used in its directories. This work will be carried on at the Deferiet's plant of the company. It is the plan of the company to get out of the specialty line.

New Industry for Synthetic Co.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 29, 1924.—The manufacture of wood pulp from the plant of the Port Huron Sulphite and Paper Company into a type of carved lumber is a new industry to be undertaken by Synthetic Wood Products Company, Port Huron. By a peculiar process the sulphite mixture is pressed into block form, the moulds used giving the impression of wood carving. It is then treated chemically causing it to assume the form of wood. These carved pieces are to be used in general manufacture of furniture.

Paper Mill A Losing Venture

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 29, 1924.—The Mid Lakes Paper Company, which purchased the Mullen Brothers paper mill at St. Joseph, Mich., has closed that plant after a year's operation, which has proved a losing venture. It is said that the Mid Lakes liabilities are \$60,000 with liquid assets placed at \$30,000, though the permanent assets, investments in mill, land and equipment total \$205,000.

Canadian Exports for November

The regular report of the Canadian Pulp and Paper Association shows that exports of pulp and paper in November were valued at \$11,765,431 which was an increase of \$116,645 over the total for the previous month. Increases were shown under mechanical pulp, sulphite pulp and book paper.

Comparative figures for November and October are given below:

	November, 1924		October, 1924	
	Tons	Value	Tons	Value
Paper—				
News print	96,981	\$7,114,018	99,812	\$7,307,539
Wrapping	1,210	182,644	1,217	186,322
Book (cwts.)	2,728	25,831	2,525	20,751
Writing (cwts.)	2,567	27,017	2,971	27,854
All other .....	.....	354,837	.....	409,914
		\$7,704,347		\$7,952,380
Pulp—				
Mechanical	40,937	\$1,186,866	32,773	\$1,002,362
Sulphite, bleached	14,240	1,050,060	13,818	1,017,399
Sulphite, unbleached	23,260	1,192,814	17,841	911,961
Sulphate	10,452	631,344	11,974	764,684
	88,889	\$4,061,084	76,406	\$3,696,406

For the first eleven months of this year the total exports of pulp and paper were valued at \$89,927,033 which was a decrease of \$2,659,715 over the value for the corresponding months of 1923, the decrease being due to smaller shipments of wood pulp while paper exports increased in this period by \$4,060,238.

For the first eleven months of 1924 and 1923, the details are given in the following table:

	11 Months, 1924		11 Months, 1923	
	Tons	Value	Tons	Value
Paper—				
News print	1,103,540	\$82,424,597	1,043,139	\$78,467,716
Wrapping	19,427	2,894,794	19,145	2,902,127
Book (cwts.)	21,599	177,122	45,992	319,649
Writing (cwts.)	18,377	193,221	22,121	228,358
Paperboard .....	.....	3,125,694	.....	2,924,981
All other .....	.....	1,111,595	.....	1,123,954
		\$89,927,023		\$85,966,785
Pulp—				
Mechanical	229,508	\$7,181,076	316,741	\$10,710,250
Sulphite, bleached	150,986	11,285,526	144,430	12,405,981
Sulphite, unbleached	199,046	10,381,451	208,806	11,344,718
Sulphate	129,603	7,689,374	133,708	8,696,431
	709,143	\$36,537,427	803,685	\$43,157,380

November exports of pulpwood were 64,401 cords valued at \$633,021 compared with the export of 105,951 cords valued at \$1,112,333 in October. For the eleven months the quantity exported was 1,160,777 cords valued at \$12,886,192, a decline from the high figure of 1,330,814 cords valued at \$12,910,079 exported in the corresponding months of 1923.

Bonuses for Watervliet Employees

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 29, 1924.—Employees of the Watervliet Paper Company, 350 all told, were last Wednesday afternoon the recipients of \$4,200 in cash, a Christmas gift from the corporation. The custom of a Christmas bonus distribution is well established at that concern. W. M. Loveland, president of the company, personally supervises the disbursement of the funds. The past year has been a very successful one with that concern, all departments working at full capacity.

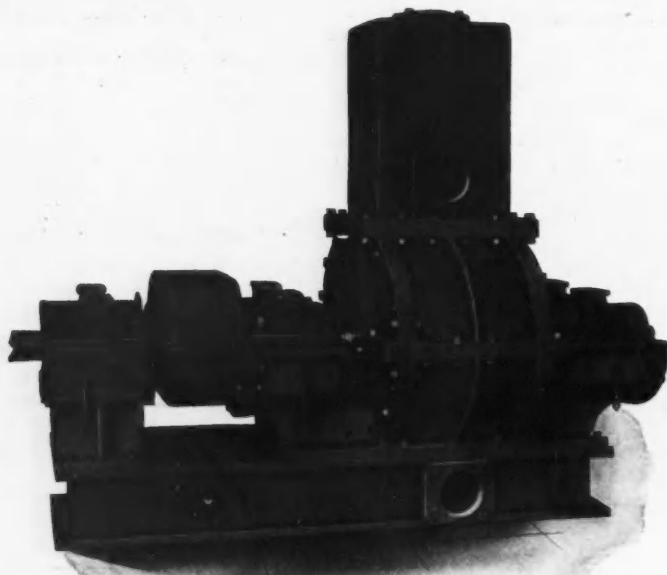
News Print Rate Found Unreasonable

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 31, 1924.—The rate on news print paper in carloads from Thorold, Ontario, Canada, to New York City has been found unreasonable by the Interstate Commerce Commission and reparation has been awarded.

This decision was rendered in Docket 15034 in the case of the Ontario Paper Company Ltd. against the Canadian National Railways.

The Standard for Suction Roll Service



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Among the several hundred mills where Connersville Cycloidal Vacuum Pumps are connected to the suction rolls, will be found mills of all sizes making practically every kind of paper. The names below are representative.

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Section of the Technical Association of the Pulp and Paper Industry



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



Conducted by **W.G. Mac NAUGHTON**, Secretary

CURRENT PAPER TRADE LITERATURE

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

CLARENCE J. WEST, CHAIRMAN

Use of Slime Formers in Beating Pulp. C. G. Schwalbe. *World's Paper Trade Rev.* 81, 628, 630 (Feb. 22, 1924); *Paper* 33, No. 22, 11, (Mar. 20, 1924). See *Pulp & Paper* 22, 578 (May 29, 1924).—A. P.-C.

Beater Room Notes. A. D. Dimanche. *Paper Ind.* 501 (June 1924). Practical hints on the care to be exercised in the beater room to avoid unnecessary contamination of the stock by dirt.—A. P.-C.

Use of High Pressure Steam in the Pulp and Paper Industry. Gleichmann. *Wochbl. Papierfabr.* 55, 649-650 (Mar. 22, 1924); *Papierfabr.* 22, 189-197 (May 4, 1924). The excessive cost of equipment incident to the use of high pressure steam makes the upper limit of pressure around 40 to 50 atmospheres. The different types of high pressure boilers and engines are described. Boiler feed water must be of a high degree of purity for this purpose.—J. L. P.

Composition of Wattle Wood. E. F. English. *S. African J. Ind.* 7, 446-448 (1924). A sample of wattle wood (*Peltophorum africanum*) was analyzed, according to the method of Schorger, with the following results: ash, 0.85%; cold water soluble, 9.55%; hot water soluble, 12.29%; ether soluble, 0.17%; acetic acid, 4.19%; pentosans, 21.2%; methylpentosans, 1.3%; cellulose, 59.3%; ash in cellulose, 0.32%; pentosans in cellulose, 9.42%; methylpentosans in cellulose, 0.37%.—C. J. W.

Fiber Plants of Brazil. F. Tobler. *Faserforschung* 3, 265-270 (1923). Several of a long list of fiber plants native to Brazil could, by improved methods of culture and preparation, yield large quantities of textile and papermaking fibers.—C. J. W.

Suitability of Fir Wood for Wood Pulp and Cellulose. Walter Freund. *Chem.-Ztg.* 48, 279-280 (1924). Fir is used the same as spruce for production of wood pulp for cellulose. Fir grown at higher altitudes is more suitable for the purpose than that grown in the lowlands.—C. J. W.

Decayed Wood for Pulp at a Profit. John D. Rue. *Pulp & Paper* 22, 792-793 (July 31, 1924). A discussion of the problem of proper culling of decayed wood in the forest, at the storage pile and in the wood room to ensure rejection of logs unfit for pulping and inclusion of logs, which, though partly decayed, can be profitably pulped.—A. P.-C.

How the United States Can Meet Its Present and Future Pulpwood Requirements. Earle H. Clapp and Charles W. Boyce. *Paper Trade J.* 79, No. 6, 47-50 (Aug. 7, 1924); *Paper* 34, 706-708 (Aug. 7, 1924); 753-756 (Aug. 14, 1924); 809-812 (Aug. 21, 1924). An analysis of the present status of the U. S. paper industry from the standpoint of supplies of raw materials, showing that the solution of the problem of finding enough raw material at home lies in utilizing sawmill waste, reducing the waste in pulping processes, and especially growing pulpwood.—A. P.-C.

Papermaking Qualities of "Samba" Wood (*Triplochiton Johnsoni*). F. Heim, J. Maheu, M. Cercllet, G. S. Dagand and R. Heim de Balsac. *Bull. Agence Gén. Colonies* 16, 949 (1923); *Bull. Imp. Inst.* 22, 230 (1924). Analysis of the wood showed 9.8% moisture, 1.77% ash (containing 46.5% chlorine, 44.1% soda, 1.0% lime and 8.4% silica), 0.56% fats and waxes, 59% cellulose and 39% lignin. On digestion with caustic soda solution under pressure a reddish-brown pulp was obtained which was readily bleached, the yield of bleached pulp being 33% (calculated for a moisture content of 5%). Paper made from this pulp was slightly rough to the touch, fairly supple, and of moderate strength, but a little brittle. Microscopic examination of the pulp showed a very small proportion of non-fibrous elements. The ultimate fibers have an average length of 1.4 mm., average diameter of 0.020 mm., and a satisfactory felting power of 0.015. On the whole the results of the investigation indicate that the wood can be readily converted into a paper of medium quality.—A. P.-C.

Paper Making Qualities of West African Corkwood. L. Vidal and M. Aribert. *Agronomie Coloniale* Dec. 1923, 159; Jan. 1924, 14; *Bull. Imp. Inst.* 22, 230-231 (1924). *Musanaga smithii* from Ivory Coast cooked under pressure with caustic soda gave a 48% yield of hard bleaching pulp, and 43% yield of bleached pulp, from which satisfactory paper was made. Under present conditions it is considered that it would not be feasible to manufacture paper in the Ivory Coast, but that it might be possible to prepare unbleached pulp for export to Europe.—A. P.-C.

Paper Industry in India. Bamboo As a Papermaking Material. Pearson and Raitt. *Paper* 34, 999 (Sept. 18, 1924); *Pulp and Paper* 22, 962-963 (Sept. 18, 1924). A brief discussion showing that bamboo pulp of good quality can be made in India at a price considerably below that of imported wood pulp.—A. P.-C.

Process of Obtaining Fibers from Bagasse. J. K. Shaw. U. S. pat. 1,501,924, July 22, 1924. Bagasse and like fibers are cooked together with their natural pith in such a way that the encrusting casing is loosened without any appreciable solution of the pith. The treated material is then opened up in a beater, after which a portion of the long fibers is separated from the short fibers and subjected to a further cooking action to produce paper pulp.—A. P.-C.

Bagasse Fiber and Process of Producing Same. J. K. Shaw assignor to F. C. Dahlberg. U. S. pat. 1,501,925, July 22, 1924. Strong flexible bagasse fibers having pithlike protuberances are obtained by cooking bagasse while still associated with its natural pith in a solution containing not more than 20% of alkali on the bone dry weight of fibers until the alkali is practically exhausted.—A. P.-C.

Process for Conservation of Wood in the Manufacture of Paper. William A. Audibert, Pierre M. Henri and Francois Bransaul. Ger. pat. 400,895. *Papierfabr.* 22, 431 (Sept. 14, 1924). Wood, after barking and chipping, is soaked in a solution of ammonia and sodium hydroxide and distilled. The main products of the distillation are methanol, rosin, rosin oils, and acetic acid.—J. L. P.

Study of Flax Straw for Paper Making. John D. Rue, Sidney D. Wells and E. R. Schaefer. *Paper* 34, 1037-1042 (Sept. 25, 1924); *Paper Trade J.* 79, No. 13, 45-50 (Sept. 25, 1924); *Paper Mill* 48, No. 39, 26-33 (Sept. 27, 1924). The experiments described show that it seems impossible to prepare pulp of sufficient strength for the manufacture of bank note paper by digestion of the whole straw with chemical solutions. It is necessary to start from fine tow, obtained by removal by mechanical means of as much shive as possible; and the pulps obtained by chemical digestion must be thoroughly washed to remove spent liquor and ultimate cells of the shive. Very careful control of the beating is necessary, even with the best pulps, to produce satisfactory paper. Mixtures of sodium hydroxide with sulphur or sodium sulphide, with or without sodium sulphite, gave best results. Pulping tests on the whole straw gave yields of 40 to 50% of pulp suitable for the manufacture of greaseproof paper, tissue, etc., in which the properties peculiar to flax serve to advantage. Towing waste can give satisfactory yields of pulp suitable for the manufacture of test board in combination with coarse, long fibered stock, such as sulphite or sulphate screenings.—A. P.-C.

Paper Making in the Balearic Islands. *Papeterie* 46, 797-803 (Sept. 10, 1924). Description of the mill and process used for the manufacture of reed pulp on the Island of Majorca.—A. P.-C.

Production of Pulp from Reeds. Ludwig Bela von Ordody. Ger. pat. 396,070. *Papierfabr.* 22, 274 (June 15, 1924). The dry, chopped reeds are treated in a bath which consists of 100 parts of water, 0.6 to 0.7 parts of sulphuric acid (spec. grav. 1.04) or 0.8 to 0.9 parts acetic acid (80 to 85%). This is followed by the customary bleaching, washing, and beating processes.—J. L. P.

Manufacture of Pulp from Reeds, Straw, Corn Cobs and Similar Material. Ludwig Bela von Ordody. Ger. pat. 396,137. *Papierfabr.* 22, 285 (June 22, 1924). Pulp, for conversion into paper, is manufactured from reeds, straw, corn cobs and like material by the following process: the chopped, dusted and screened material is treated, with or without pressure, in a liquid which consists of a mixture of a caustic alkaline solution (2° to 4° Be.) and a bleaching powder solution (2° to 4° Be.) to which is added a small amount of an ammoniacal copper sulphate solution (1 part concentrated ammonia, 1 part copper sulphate, and 200 parts of water).—J. L. P.

Apparatus for Salvaging Usable Materials from Street Sweepings and Dump Stock. Chas. W. Shartle. U. S. pat. 1,488,219, Mar. 25, 1924. The stock is delivered by means of a con-

veyor into a duster where the fine dirt is separated. It then passes into a disintegrator or digester, either rotary or stationary, in which it is cooked or steamed. The disintegrated material is put through a settling trough to remove the heavier impurities, through a whirlpool to remove the lighter impurities, which are skimmed off, through a beater with Buehler perforated backfall, and finally through a thickener to remove the greater portion of the water.—A. P.-C.

Manufacture of Pulp from Peat, Especially for the Manufacture of Fine and Printing Papers. Albert Koch. Ger. pat. 400,570. *Papierfabr.* 22, 431 (Sept. 14, 1924). As a basic material a non-colloidal peat, of any kind, must be used as outlined in Ger. pat. 388,344.—J. L. P.

Regeneration of Old Paper. Ernst Altmann and Abele. *Wochbl. Papierfabr.* 55, 1550-1551 (June 21, 1924). A discussion concerning the use of soluble printing inks for printing paper, thus facilitating the recovery of old paper.—J. L. P.

Pulp from Straw or Similar Raw Material. Peter Backer. Ger. pat. 396,607. *Papierfabr.* 22, 297 (June 29, 1924). Chopped straw is digested in a spherical digester with carbide mud for about 3 hr. at 4 to 5 atmospheres' pressure. A very good yield of straw pulp is claimed when 10 to 12% of carbide mud is used.—J. L. P.

Waterproof Papers and Boards. J. Frere. *Rev. Prod. Chim.* 27, 397-402 (June 30, 1924). Review of patents (chiefly American and English) granted during the past few years.—A. P.-C.

Absorbent Roofing Felt Material. A. L. Clapp, assignor to The Flintkote Co. U. S. pat. 1,463,611, July 31, 1923. An absorbent sheet is formed of fibers of "news" and chemical wood pulp mixed with an initially porous, absorbent, fireproof filler such as kieselsgur.—A. P.-C.

Roofing Paper. F. Hoyer. *Wochbl. Papierfabr.* 55, 1425-1428 (June 7, 1924). This last article of a series completes the description of the manufacture of roofing paper. The following tests for the product are explained: tearing strength, ash, moisture, absorption of anthracene oil, and composition.—J. L. P.

Device for Impregnating Roofing Paper. Gose and Werner. Ger. pat. 394,527. *Papierfabr.* 22, 214 (May 11, 1924). An apparatus, consisting of a vat and rolls suitably arranged, is described for impregnating roofing paper.—J. L. P.

Apparatus for Covering Impregnated Roofing Paper. Ewald Richter and Paul Knorr. Ger. pat. 394,098. *Papierfabr.* 22, 214 (May 11, 1924). Rotating brushes are arranged as to cover either one or both sides of impregnating roofing paper with sand or talcum.—J. L. P.

Machine for Making Imitation Hand Made Paper. J. H. A. Armstrong assignor to American Writing Paper Co. U. S. pat. 1,470,675, Oct. 16, 1923. In a cylinder machine heavy wire strips are provided on the face of the cylinder to make the sheet thinner along these wires. The sheet passes through a series of pairs of press rolls with top and bottom felts, and through a pair of breaker rolls which act frictionally to pull the web apart into separate sheets along the thin lines made by the heavy wires on the cylinder. The sheets are then carried by means of top and bottom felts around one or more drying cylinders and through a sizing bath.—A. P.-C.

Bentonite

The Department of Mines, Dominion of Canada, Ottawa, has just published a very complete booklet on bentonite by Hugh S. Spence. The distribution of bentonite in Canada and United States is covered as well as a discussion of the character of this material and its origin. A large part of the treatise is given to its possible uses, among which are the de-inking of printed paper and as a paper filler. At the end are given four pages of bibliography listing the publications in which articles on bentonite have appeared.

The bulletin is No. 626, Mines Branch, Ottawa, Ont.

THE DRYING OF WOOD REFUSE AND ITS IMPORTANCE TO INDUSTRY

BY ALFRED J. T. TAYLOR AND OTTO NORDSTROM, MEMBERS OF THE TECHNICAL ASSOCIATION.

The importance of drying wood refuse to improve its value as a fuel needs no special argument, and the necessity for some commercial form of drier has long been recognized but the economies involved, the savings to be effected, and the theoretical requirements to be met have not up to the present been fully treated in this country nor has any commercially successful form of drying equipment suitable for use in the pulp and paper industry been developed or described.

Purpose of This Article

It is the purpose of this article to first discuss the desirable effects of drying moist fuels before burning them; and to carry forward this discussion by the help of special curves some of which have not appeared before, and after having dealt with some of the economic considerations to describe in detail the construction, operation and tests of an actual waste wood drying plant, one of three that are successfully operating on a system devised by Otto Nordstrom of Sundsvall, Sweden.

Nature of the Wet Wood Refuse

The moist fuels usually referred to are wood and peat but as the peat drying problem is complicated and not of immediate interest to the pulp or paper industry, this paper will be confined to wood refuse with particular reference to saw mill waste.

Saw mill waste consists mainly of the sapwood and bark of the logs. These absorb during transportation large amounts of water, so that the waste as available for fuel often contains upwards of 65 per cent water, that is nearly two-thirds of its weight is water.

Sixty per cent moisture is the average value one has to figure with for even if during the summer it should decrease to 50 per cent or

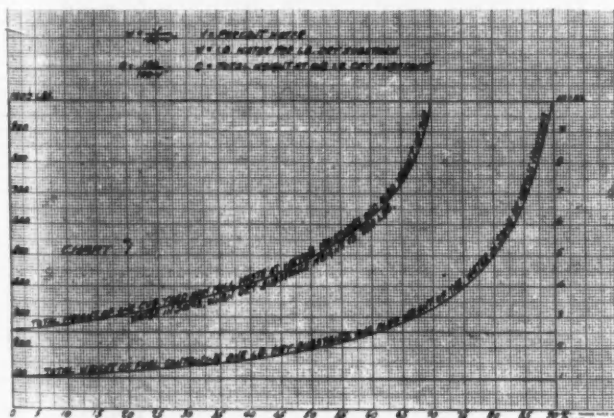


CHART 1

occasionally lower, nevertheless during the wintertime we have to deal with a lot of snow and ice, which also must be melted and evaporated.

The water content in a substance given as a percentage of moisture is often wrongly conceived. If one says that saw mill waste should be dried from 65 per cent moisture to 50 per cent moisture, it is commonly understood as though only 15 per cent water should be dried away. It is, however, not 15 per cent but 30 per cent of the total weight of the substance and 46 per cent of the water that must be dried away in order that the waste should contain 50 per cent water. If one calculates from 1 lb. dry substance the weight of

65 per cent waste will be $Q = \frac{100}{100-65} = 2.86$ lb., when the weight of

50 per cent waste is only 2 lb., which means that 0.86 lb. of water per lb. dry substance in the 65 per cent moist waste must be dried away. This equals 30 per cent of 2.86 or 46 per cent of 1.86, the

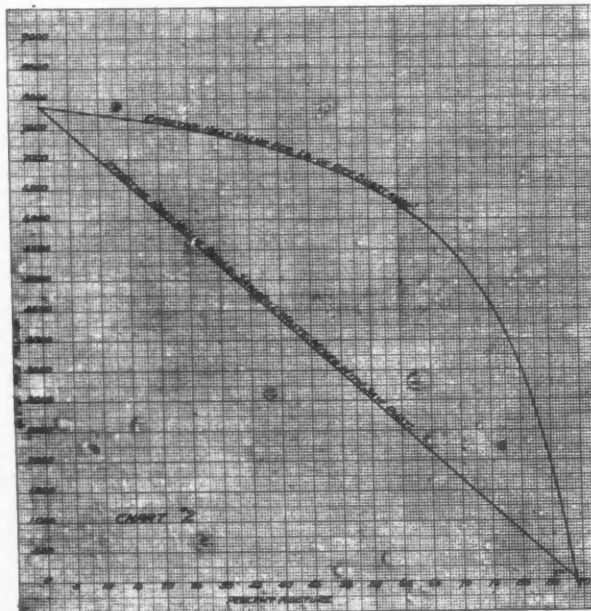


CHART 2

latter being the weight of the water contained in 65 per cent moist waste.

Chart 1 containing curve 1 shows the variations in weight of a substance, for instance peat, at different percentages of moisture containing 1 lb. dry substance. Curve 2 shows the variations in weight of 1 cu. yard sawmill waste, mixed with sawdust at different percentages of moisture. One cu. yard of such waste contains about 250 lb. dry substance. The constant parts of these two curves, which are marked by dark shading, represents the dry substance, the lighter shaded fields the amount of water and, therefore, both surfaces together equal the total weight.

The Influence of the Moisture on the Value of the Fuel

Calculating from a calorific heating value of the dry substance of 8,460 B.t.u. per lb., the effective heating value per lb. fuel is as shown by curve 3 on Chart 2 or, transformed to the basis of lb. dry substance, as shown by curve 4. According to this latter curve the saving in fuel by drying it from 60 per cent moisture to 30 per cent

$$\text{is: } \frac{7412-6255}{7412} = \frac{1157}{7412} = 15.6 \text{ per cent.}$$

There are, however, other circumstances that influence the fuel consumption besides the effective heating value. In the case mentioned the effective heating value is calculated from the gross calorific value by subtracting the heat content of steam in the smoke slightly above freezing temperature, but in practice the smoke leaves the boiler at a much higher temperature usually about 575 degrees

F. or more, and as the specific heat of steam is very high compared with that of other gases composing the smoke, the escaping smoke from moist fuel at a certain temperature carried a much larger amount heat than the smoke from dry fuel at the same temperature, event if the amount of carbonic acid should be the same in both cases.

The curves on Charts 3 and 4 show the heat losses in the smoke at different temperatures and percentages of CO₂ for fuel containing 30 and 60 per cent moisture. A special curve is drawn on each chart above specified percentages of moisture and at varying CO₂ percentages for 392 degrees F. temperature of the exit gases which is about their temperature in the chimney if an economizer is used and does not have any air leakage. If we examine the curves for 392 degrees F. we find that the chimney losses for example for 60 per cent moist fuel are about 6 per cent larger than for 30 per cent moist fuel even if the percentage CO₂ in both cases should be same, namely 10 per cent. Now the fact is that the CO₂ percentage cannot be kept as high when burning moist fuel as when the fuel is dry provided the furnaces are designed to permit sufficient air supply for secondary combustion when dry fuel is fired.

For calculating the boiler efficiency the writers have proceeded

this have then calculated the same for the other cases with consideration to the varying capacity of evaporation of the boiler, which with fuel containing 30 per cent moisture is assumed to be 4.6 lb. and at 60 per cent moisture 3.1 lb. of steam per sq. ft. of heating surface per hour. The general losses for instance for 60 per cent moisture will then be about 9.2 per cent. Above assumptions are

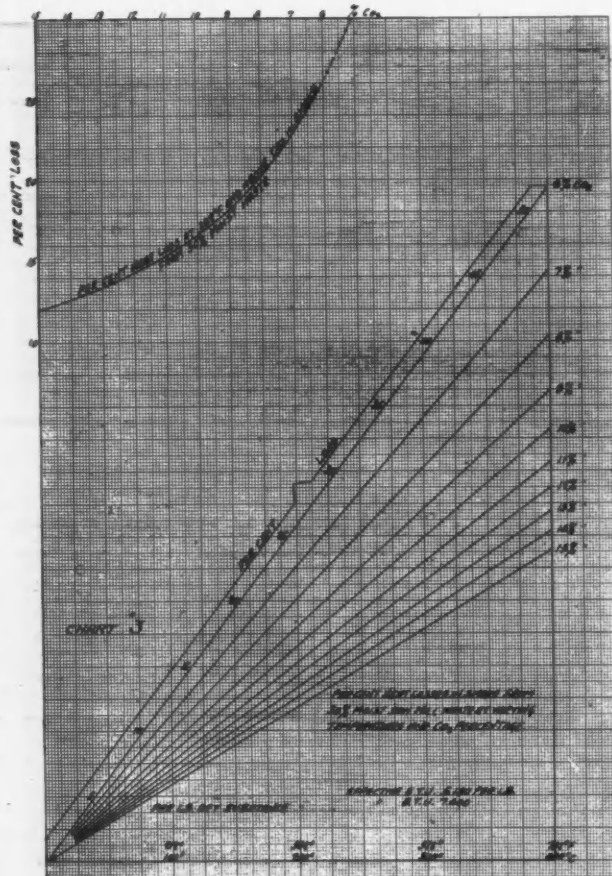


CHART 3

from the assumption that the percentage of CO₂ with fuel of 30 per cent moisture can be kept at 14 per cent and with fuel of 60 per cent moisture at 10 per cent. The temperature of the products of combustion, when leaving the boiler, is assumed to be 572 degrees F. in either case. Further that the general losses (by radiation, etc.) at 30 per cent moisture will be 7.7 per cent (a high figure) and from

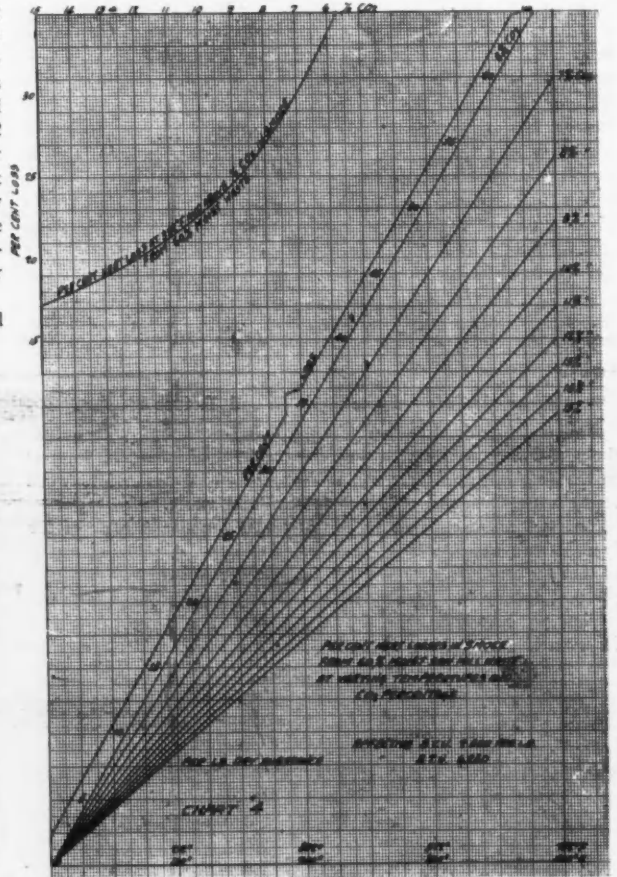


CHART 4

founded on a great number of boiler tests and actual experience in the firing of all types of wood fuels.

If we desire to analyze the profit gained by drying from 60 per cent moisture to 30 per cent moisture, we use the curves for 60 per cent and 30 per cent on Chart 3. The heat lost by the exit gases from the boiler at 60 per cent moisture, 10 per cent CO₂ and 572 degrees F. is 34 per cent; at 30 per cent moisture, 14 per cent CO₂ and 572 degrees F., the loss is 19 per cent. The general losses for 60 per cent moisture are assumed to be 9.2 per cent and for 30 per cent moisture to be 7.7 per cent. Total losses for 60 per cent moisture will, therefore, be 34+9.2=43.2 per cent and for 30 per cent moisture 19+7.7=26.7 per cent.

The boiler efficiency at 60 per cent will then be 100-43.2=56.8 per cent and for 30 per cent, 100-26.7=73.3 per cent. The increase in efficiency by the economizer is with 60 per cent moist fuel assumed to be 7 per cent with no variations for other moistures. The total efficiency is then for 60 per cent fuel 63.8 per cent and for 30 per cents 80.3 per cent as shown by curve 6 on Chart 5.

The effective heating value per lb. dry substance was for 60 per cent moist fuel 6,255 B.t.u.; 63.8 per cent of 6,255 is 3,990. The effective heating value of 30 per cent moist fuel was 7,412 B.t.u.;

80.3 per cent of 7,412 is 5,952 B.t.u. The saving in fuel by drying
5952 — 3990

from 60 per cent to 30 per cent moisture is then $\frac{5952}{3990} = 33.0$

per cent. The profit by drying to other moisture contents is shown by the curve on Chart 6.

If so desired the saturated vapors escaping from the drying tower at a temperature of about 140 degrees F. may be used for heating water to 85 or 105 degrees temperature. This warm water can be utilized for example for washing the digesters in the pulp mill, for melting the ice from the timber during the winter, for hot water on the fourdrinier wire, etc. Hereby in certain cases 12 to 15 per cent more fuel be saved. The apparatus for reclaiming this heat will be comparatively small and cheap as it here is a question of heating water with saturated steam (mixed with the products of combustion) and the coefficient of transmission in such a case is large.

Besides the saving in fuel only two-thirds of the boiler heating surface is needed, when using 30 per cent moist fuel, as compared with the surface needed for generating an equal amount steam from 60 per cent moist fuel, and conclusively the boiler house can be operated in a better manner. That the evaporation per unit heating sur-

The curves on Chart 7 show the temperatures. In calculating these we have also considered the increase in specific heat value at higher temperatures. On Chart 8 are the curves for the specific heat of the gases here dealt with.

If we look at the curves for temperature of combustion and examine the values on per cent moisture and CO₂, that have been used

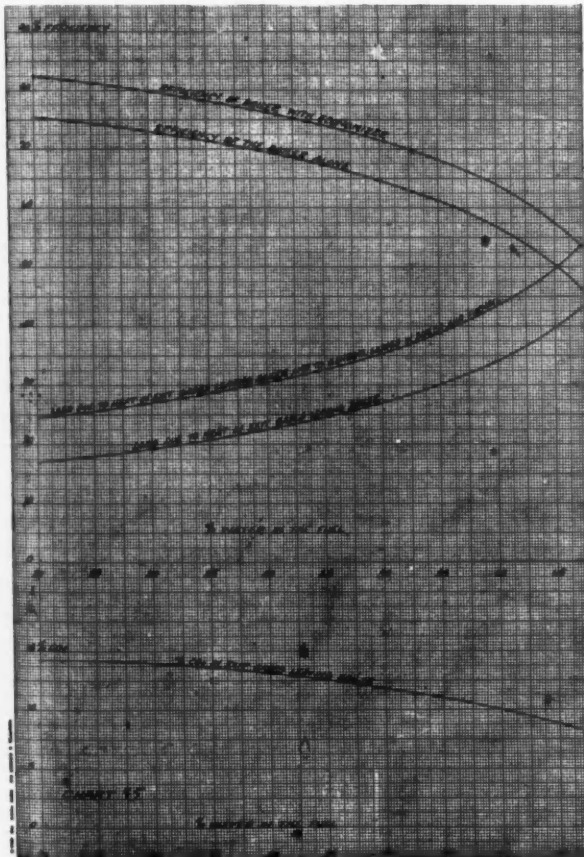


CHART 5

face of the boiler will be much larger, when it is fired with dry waste, than when the waste is wet, is plainly seen by observing the theoretical temperatures of combustion for different degrees of moisture. That is, the temperatures arrived at for different percentages and CO₂, if all the generated heat should be used for heating up the products of combustion.

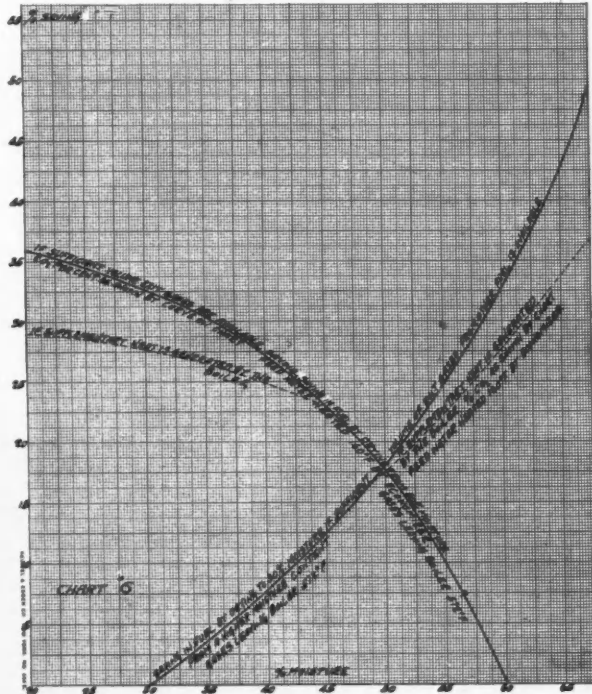


CHART 6

before for showing the profit in drying 60 per cent moist fuel to 30 per cent moisture you will see how very different the temperatures are in both cases. For 60 per cent moisture at 10 per cent CO₂ the temperature is 1508 degrees F. only, when it for 30 per cent moisture and 14 per cent CO₂ is 2534 degrees F. The difference in temperature of combustion and temperature of exit gases leaving the boiler is in the first case 1508 — 572 = 936 degrees F., when it in the latter case is 1962 degrees F. or more than double.

In furnaces with high temperatures on the exit gases, for instance in steel works the open-hearth furnaces, glass melting ovens, etc., is the importance of drying the moist fuel still greater.

Chart 9 shows two curves made by the furnace expert, A. Hermansen, Engineer, Ingelstad, Sweden. On these charts he has shown fuel containing not more than 50 per cent moisture. He compares the consumption of wood (dry substance) in kilogram, at different working temperatures and per cent moisture with a consumption of 100 kilogram coal. One of the charts is made for single recuperative ovens, that is, the air only for the secondary combustion is heated. The other chart is for double recuperative ovens where the generator gas also is preheated. If we look at the curve for singly recuperative oven and the temperature 2912 degrees F., representing about the temperature in open-hearth steel furnaces, we find, that of wood containing 10 per cent water about 420 lb. dry substance are consumed against 880 lb. with 35 per cent moisture, both compared with 220 lb. coal; that is, the consumption is more than double in the latter case. At 40 per cent moisture the consumption (not shown on chart) may be three times as big and fuel with still greater moisture may be impossible to use. With double recuperative ovens the conditions are better. The fuel consumption with 35 per cent

moisture is in this one 30 per cent higher than with 10 per cent moisture and with 50 per cent moisture the consumption is about 50 per cent higher. For fuel with still higher percentage moisture the consumption here also increases enormously.

Sources of Heat for Drying

The foregoing should plainly show the importance of using dried fuel. Drying by storing, for example, wet hogged waste is useless. A method of first air drying the slabs and edgings coming from the saw mill and then chipping them requires too much space and too much labor, making this method of drying impossible to use for larger plants. The drying must be done either solely by supply of heat, or partially by squeezing out some of the moisture in presses and partly by heat.

In order that the drying should be economical this heat must be cheap. From the chimneys of our boiler houses escape enormous quantities of heat to no purpose, and this heat should be used for the drying of fuel.

The question is, is this waste heat sufficient? Concerning open-hearth furnaces, etc., one may say that it is under nearly all conditions, if a reasonably economical drying apparatus is installed. In efficient boiler plants it is not always certain that it is sufficient.

If all the fuel is to be dried from 60 per cent moisture or more, the waste heat ordinarily will not be sufficient to dry away more than part of the water. However, what is possible is dried away and supplementary heat may be taken from the boiler for increased drying, which, as shown by the curves on Chart 6, proves itself to be economical. By Chart 6 we find how large the saving will be in different cases, provided the drying plant shows a good efficiency. We have calculated that only 990 B. t. u. are necessary for evaporat-

there may be enough heat in the exit gases after the economizer to dry the other fuel from 60 per cent down to 30 or 40 per cent without supplying supplementary heat.

In such cases, where also the refuse from the barking plant must be dried, the heat remaining in the waste gases after these have



DRYING PLANT AT J. W. ENQUIST, AB., TAMMERFORS, CAPACITY 10,000 CUBIC FEET PER 24 HOURS



DRYING TOWER AT VÄSFERVIK, CAPACITY 5,000 CUBIC FEET PER 24 HOURS

ing 1 lb. of water and will later show how we arrive at such a low heat consumption.

In the pulp-mills in Scandinavia the fact must be kept in mind that these also fire the refuse (from seasoned pulp wood) delivered by their knife-barking plants. If this refuse or bark is not dried,

passed the economizer may not be sufficient if all the other waste fuel contains as much as 60 per cent moisture. The curve on Chart 8 shows that it pays well to take the additional needed heat from the economizer. If the steam plant has back pressure turbines installed, the feed water may be economically heated with back pressure steam, and in such cases the loss by taking heat from the economizer be reduced and the profit made by drying the fuel will be practically as great as if sufficient waste heat had been available.

But as most mills in this country are fired partially with coal, there is usually an abundance of waste heat available for drying of all the wet wood refuse.

The Nordstrom Method of Drying

Many experiments in the drying of wood waste, bark refuse and peat have been made, but no practical or economical method of solving the problem had been attained. After some years of work and investigation, this problem has now been solved, and already two drying towers are working satisfactorily and a third will be started within a short time.

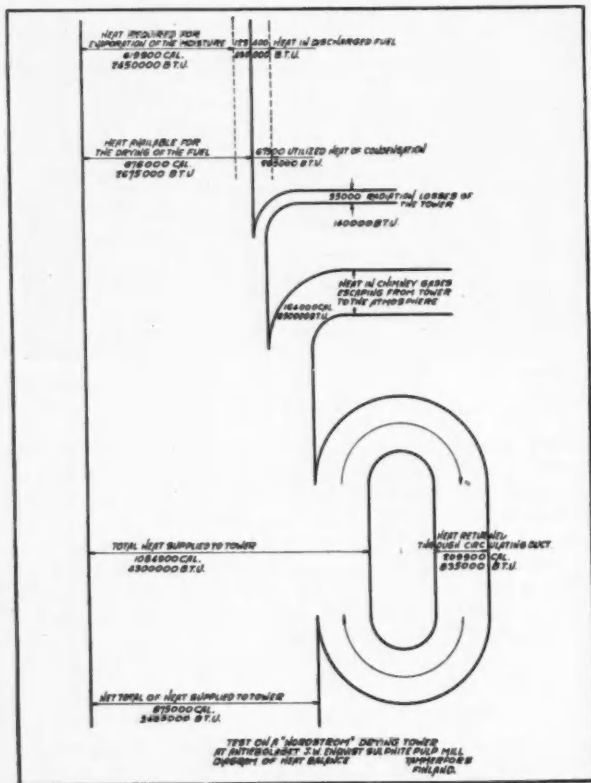
Below is given a detailed description of the first complete plant in operation at the sulphite pulp mill of J. W. Enquist, AB., Tammerfors, Finland, since May, 1923. The attached drawing shows the essential parts of the arrangement, the photograph shows the plant in actual operation, and the diagram shows the heat balance.

The Drying Plant

This is built near the boiler house of the mill, in which the dried waste fuel is to be used. This boiler house at present contains three 300 hp. B. & W. water-tube boilers with economizers for heating the feed water. The flue gases, used for the drying are sucked out of the flue after passing through the economizer by an electrically driven fan erected in a separate building outside the boiler house. The waste fuel arrives at the mill in railway trucks, and is discharged from these to a conveyor, which transports it to the tower's elevator. After being dried, the fuel is conveyed into the boiler room, where it is distributed to the furnaces of the boilers. The fuel may, in case of interruption in the operation of the drying plant, be conveyed direct to the boiler room. The speed of the discharge from the drying tower can be regulated to suit convenience, and in this way the quantity of fuel, delivered to boiler house, is controlled as required.

The Nordstrom Drying tower

This tower, having a capacity of about 86 cubic yards of fuel, consists primarily of an inner and an outer round tower of sheet iron, between which towers, the fuel, during the drying process, sinks down; both the inner and outer towers are made sloping to prevent the chips bridging. In order to allow the drying gases to pass, both the inner and outer tower are perforated in such a way that the waste cannot attach to or pass through the perforations.



HEAT BALANCE

Around the outer tower is a brick construction with a roof of reinforced concrete, the latter having a steel plate chimney. The outer tower and the brick cover rest on a reinforced concrete construction. The inner tower, which is closed at the upper end, and is the continuation of the duct from the flue, is carried by a cast steel collar, resting on the concrete foundation itself. At the upper

end of the tower arrangement is made for the feeding in of the chips, and at the lower end for their discharge.

The Feeding

This is done by a bucket elevator, which delivers the fuel into a special feeder. This feeder distributes the fuel into the ring-

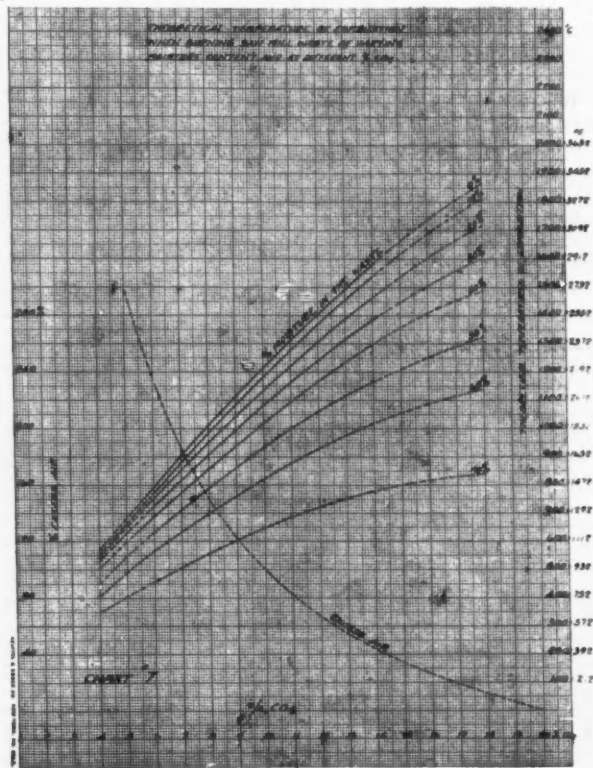


CHART 7

shaped drying space in such a way that the larger pieces are placed nearest to the inner tower, and the smaller ones, such as sawdust, etc., nearest the outer tower. This arrangement is made in order to decrease the resistance of the gases through the layer of fuel, which consequently gives the smallest resistance per surface unit near the inner tower, where the speed of the gases is highest, and the largest resistance near the outer tower, where the speed is lowest; this saves power. Also, the largest pieces come in contact with the hottest gases, which is, of course, preferable.

The drying space is always kept filled while the plant is in operation thus preventing the gases from going direct from the inner tower out to the chimney. In order to provide for observation of the fuel level in the tower from outside, a float gage is mounted on the roof.

Discharging

This is effected by a partially conical rotary bottom, filling the whole cross-section between the inner and outer tower, its flat part also extending to constitute the bottom of a ring-shaped space of a certain height, and lying outside the external tower. As both the conical part of the bottom and its plane part inside the outer tower have suitably arranged scrapers fastened to them, and as the bulk of the fuel rests on this bottom, the pressure on its conical part and the movement of the scrapers during rotation force out the fuel through the ring-shaped opening, which is situated between the lower edge of the outer tower and the rotary bottom. The fuel in the ring-shaped space then follows the flat bottom, which is also

equipped with scrapers, round to an opening in the side from which the fuel falls onto the conveyor and is transported to the boiler house.

The Gas

This is delivered through a fan, forcing it from below into the inner tower, and from this through perforations more or less radially through the layer of fuel, and subsequently through the perforated outer tower out to the gas collecting chamber, and from there through the chimney of the tower.

In order to keep the temperature of the ingoing gases constant, or regulated according to the variations of the moisture in the fuel, a thermostat is inserted in the fan's discharge channel and connected with an Arca type regulator. This regulates a damper, placed in a circulating duct between the gas collecting space in the tower and the fan inlet. When the temperature rises above the one for which the thermostat is adjusted, the Arca regulator opens this damper, the hot gases are diluted with part of those which have already been used for drying until the temperature is stabilized. This gas is used for dilution, in order to avoid the necessity of heating fresh air for the purpose, and also, in order that the percentage of carbon dioxide in the drying gases may remain as high as possible.

The Drying

This is done simultaneously through the whole pile, as the hot gases from the inner tower are continuously pressed through the layer of chips in a nearly radial direction, and on their way out

the circumference come in contact with almost every piece. The fuel adjacent to the inner tower soon becomes absolutely dry and the thickness of the dry layer increases as the fuel sinks downward, owing to the discharge and the feeding in of new fuel. The position of the various chips to each other being nearly always constant in the horizontal plane, there invariably exists a moist and cooler layer next to the outer tower, cooling down and saturating the gas, even over-saturating it, so that the outermost layer, especially higher up, is sprinkled with condensed water, which, owing to the speed of the gases, follows them in form of water.

On Chart 10 an attempt is made to establish a theory for the drying process which takes place in the tower. From the inner tower the gas enters the waste wood with a temperature of about 320 degrees F. As long as water is evaporated from the chips, the temperature among them will be kept at 220 degrees F. or below. At the temperature of saturation which is about 167 degrees F., the vaporization ceases, and instead the water is beginning to condense on the chips, in the outermost layers first. By the then liberated heat content of the steam, the wet chips are heated up to 167 degrees F., having this temperature when the unsaturated gases come in contact with them. Because of the comparably high velocity of the saturated gas, this carried with it the water condensed on the surface of the chips in a mechanical way, no second evaporation of this then being necessary.

(Judging from the tests, the temperature of saturation lies higher in the drying tower than the tables for saturation show, which

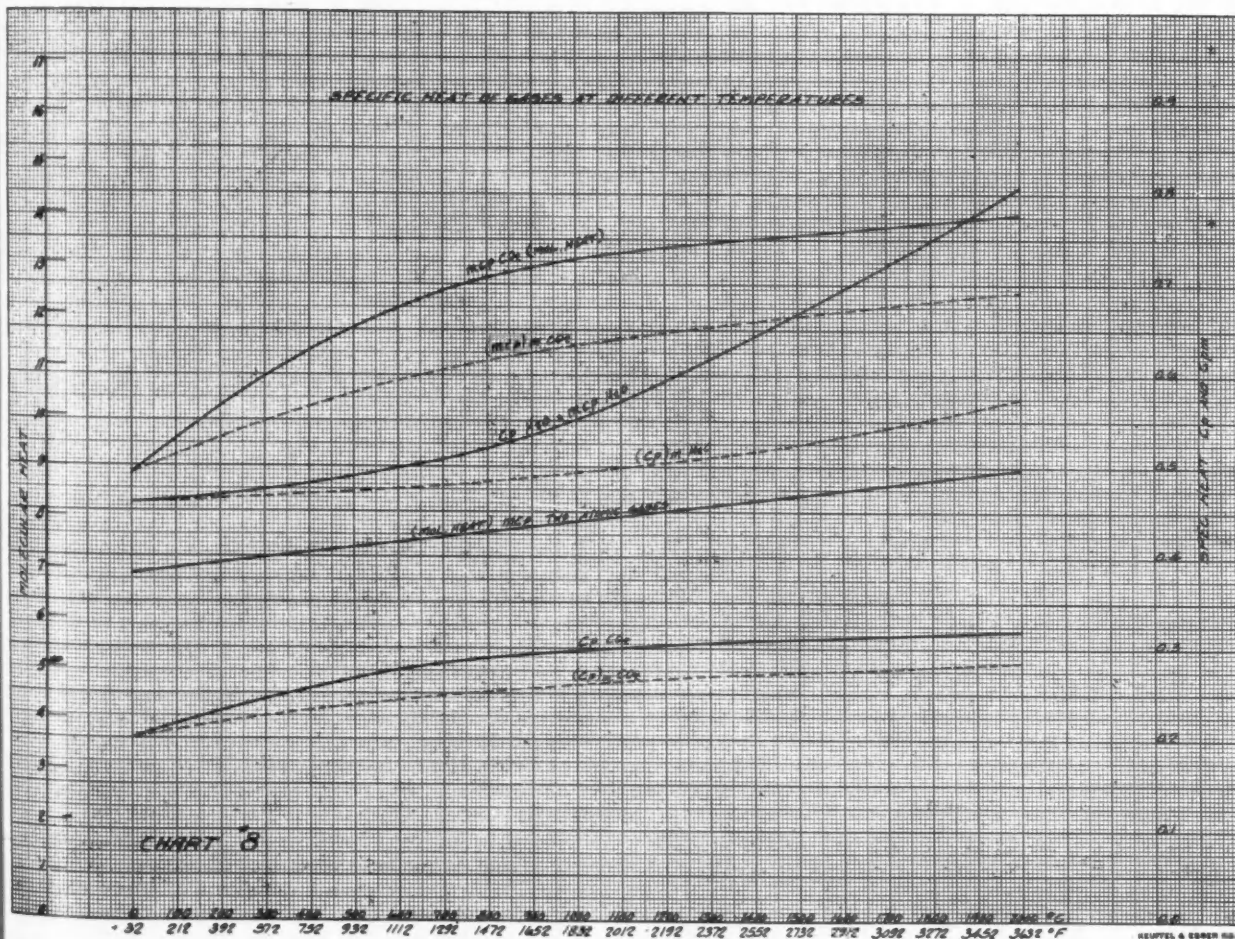


CHART 8

should indicate that this temperature varies with the material which the gas passes by. As known the tables of saturation temperatures are made up for air over water, but in this case the gas passes over wood.)

Thus the heat transmitted above 167 degrees F. by the gases to the contents of the tower is all given back and used over again. Consequently one does not need to figure the heat for warming up the chips to 167 degrees F., but only the heat of evaporation for water of 167 degrees F., this being 997 B. t. u. per lb.

As, however, the chips leave the tower at a considerable temperature, the evaporation continues also during transportation to the furnaces under the lowering of the temperature, and we have, therefore, considered it safe to calculate with 990 B. t. u. per lb. The results obtained during tests made by the Swedish Academy of Engineering Science on the experimental drying plant at Matfors Paper Mill also agree fairly well with our calculations according to the theory above.

As the gas is led into the center of the pile of chips there is no reason for losing heat by radiation, etc., provided the tower always is kept filled.

Tests on Nordstrom Tower

For the purpose of ascertaining the efficiency of the drying tower here described, tests were made on June 16 and 17 last year by representatives from the two Swedish Boiler Associations and the Association for Power and Fuel Economy in Finland.

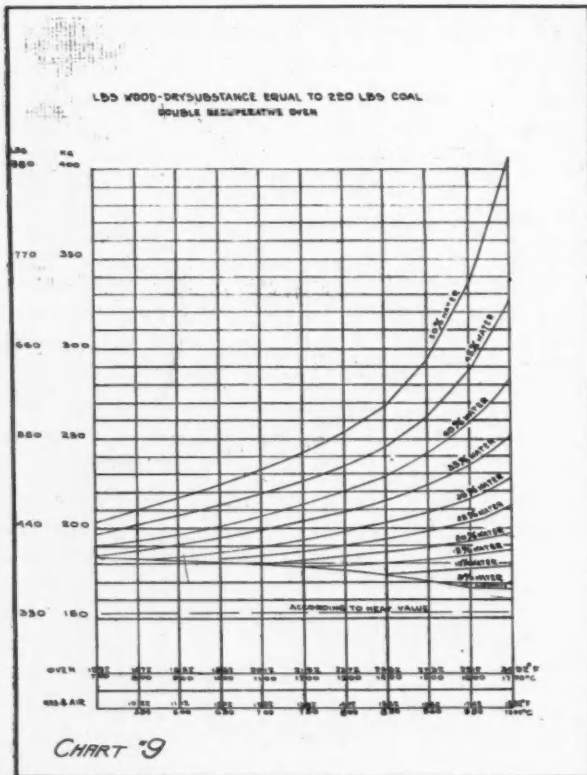


CHART 9

As a result of a defect in the fan motor, the capacity of the drying plant could not unfortunately, at the time of testing, be raised to the intended amount, since the drying plant was designed to dry each day 300 cu. m. (10,500 cu. ft.) of saw mill waste from a moisture of about 60 per cent to one of about 30 per cent and with a calculated dry density of 150 kg. per cu. m. According to this

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$$\text{calculation } \frac{300 \times 150}{24} = 1,875 \text{ kilograms should be dried in one}$$

hour, but owing to the motor defect only 1,605 kilogram were dried from 58.1 to 43.6 per cent. Later on, when another motor was

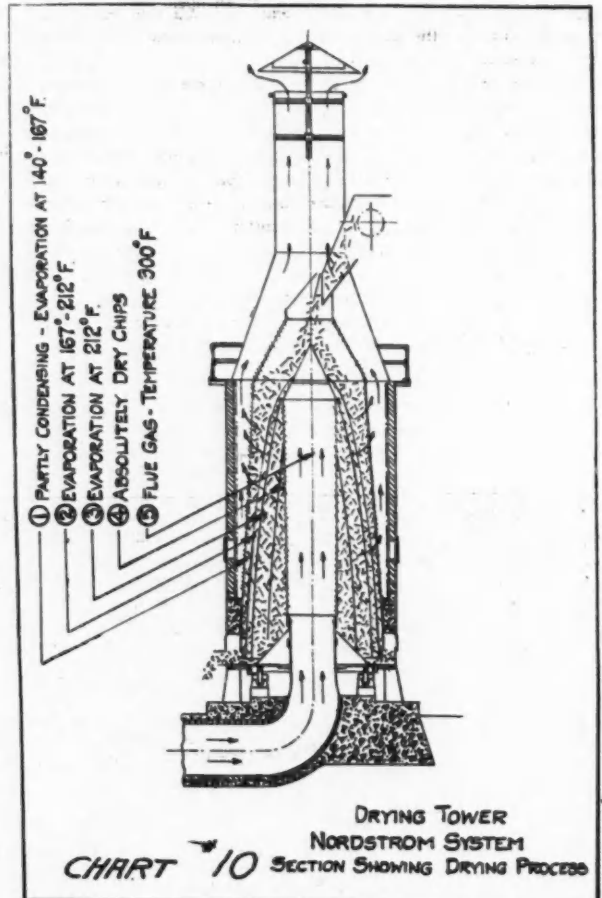


CHART 10

procured, the calculated drying capacity of the plant was nearly attained.

What the Fuel Consisted Of

The fuel consisted of about 60 per cent chips from slabs and edgings and about 40 per cent sawdust. The chimney gases were taken out after passing through the economizer, at a temperature of 271 degrees Centigrade. By circulating the gases, their temperature before being led into the fuel was reduced to 164 degrees C. The waste gases from the tower had a temperature of 63 degrees C. The air temperature was 9 degrees C. By careful measurement of the gases, by analyzing them and the fuel, and by weighing the fuel passing through the tower for drying purposes as well as other fuel burned simultaneously, the following resultant heat balances were obtained:

HEAT BALANCE ACCORDING TO THE OFFICIAL TESTS (See the graphical chart of heat distribution)	
Supplied heat	Calories per hour
Total heat supplied to tower	1,084,900
Heat returned through circulating duct.....	209,900
Net total of heat supplied to tower	875,000

Distribution of the supplied heat.

Heat in the gases escaping from tower to the atmosphere	164,000
Heat consumed inside the tower	711,000
Total	875,000

Distribution of heat consumed in the tower.

Radiation losses of the tower assumed to be about 5 per cent of heat consumed in tower	35,000
Heat available for the drying of the fuel	676,000
Total	711,000

Heat required for drying.

For evaporation of moisture from the fuel	619,900
Heat in discharged fuel 63° c.	123,400
Total	743,300

The difference between the heat required for drying	743,300
And the heat available for this drying, without calculating with condensation heat	676,000
Makes, Calories per hour	67,300

This as previously assumed, must have been gained by condensation of steam in the tower, and is equal to 116 kilograms condensate per hour, or 32 grammes per second.

It was also observed at the test that the condensate streamed from the tower in a quantity that probably reached 32 grammes, or 32 cubic centimeters per second.

Efficiency of Drying Tower

(Extract from the record of test)

"If the efficiency of the drying tower is calculated as the ratio between the heat used for evaporation of moisture and the heat supplied to the tower above the temperature of the atmosphere, plus 9 degrees C., exclusive of the heat in the condensate, the efficiency will then be $\frac{619,900}{875,000} = 70$ per cent.

"However, it must be borne in mind that if the dried fuel, after being discharged from the tower, is immediately brought into the boiler furnaces, the heat contained in this fuel will be utilized. If none of this heat were lost, the efficiency would then rise to $\frac{743,300}{875,000} = 85$ per cent.

"The ability of the tower to conserve the supplied heat, in an effective way, is obvious. Firstly, the fuel comes into close contact with the supplied gases, secondly the gases are cooled down to and below the point of saturation without those troubles which, through condensation of the moisture, invariably arise with an air preheater, and finally the radiation losses are negligible, the gases being supplied through the central inner tower and the surface temperature being low."

On the occasion recently, when a test* was made on a similar drying plant at Västerviks Pappersbruk in Sweden, the fuel coming into the tower contained about 65 per cent moisture, about one-third of which was calculated to be ice; the temperature at time of testing being 10 degrees C. below zero. The dried fuel contained about 30 per cent moisture and had a temperature of 60 degrees C., and the waste gases from the tower had a temperature of 59 degrees C. In this case the chimney of the steam central station was closed by dampers, and all the waste gases from the steam central went through the drying tower at that temperature; at the same time a great deal of condensed water ran off from the tower. No examination of the efficiency of this plant was made but in view of the prevailing atmospheric conditions everything pointed to its efficiency being even greater than that of the above-mentioned plant in Finland.

As, however, the tests at Västervik only aimed at determining the drying capacity with the gases at disposal, this test was not made so extensive as that in Finland. The tests in Västervik have, however, shown that with exit gases from only the fuel itself, this, of which one-third was frozen, was dried down from 60 per cent

*See appendix for full copy of this test.

moisture to 33 per cent moisture, which means a saving in comparison to earlier boiler tests on wet waste of about 33 per cent fuel. The total efficiency of the whole boiler plant with the tower, calculated on the moist fuel fed in amounts to more than 90 per cent.

Calculation for a Tower Drying 650 Cu. Yds. Saw Mill Waste Per 24 Hours

If we look at the curve on Chart 6, the consumption of fuel containing 30 per cent moisture is 33 per cent less than when the fuel contains 60 per cent moisture. A sufficient amount of heat in the exit gases for the drying is assumed to be at our disposal. If, therefore, we can dry the fuel from 60 per cent moisture down to 30 per cent we will only require 650 cu. yards of the 30 per cent moist fuel to be equal to 930 cu. yards 60 per cent moist fuel. Thus the saving in fuel is 280 cu. yards per 24 hours or 91,000 cu. yards per year of 325 days' full operation in the boiler house. Assuming a coal price of \$5 per ton delivered in the boiler room, equal to 25.6 cents per cu. yard of hogged raw waste also delivered in the boiler room, the total profit for one year is:

91,000 cu. yards minus, say, 4300 cu. yards of the waste used in generating the 70 hp. needed for the operation of the drying tower with fan elevator, etc., or equal to 86,700 cu. yards at 25.6 cents.....	\$22,200
The drying plant is run by the firemen or the men loading the conveyor, making no extra personnel necessary.	
Expenses for oil, belting, repairs, etc.....	2,200

Net profit\$20,200
not deducting for interest or amortization. In most places, however, it is possible to buy the waste at a price considerably below the price of coal, and if in above calculation, for instance, the waste is bought at 15 cents a cu. yard a further saving of \$22,400 a year is made. In such a case the drying plant will pay for itself in less than a year.

If the raw fuel contains less than 60 per cent moisture, the plant naturally will be smaller and less expensive for the same capacity in cu. yards per day and consequently amortize itself on about the same basis.

Apart from the great advantages of steadier operation in the boiler house and the need for smaller heating surface, etc., by drying and warming up the fuel the gain which is partly due to the increased effective heat value, and partly to increased efficiency of about 25 to 30 per cent, equivalent to an increased fuel value of between 33 and 40 per cent, is assured.

Since the results obtained on this plant in Finland have become generally known, great interest has been shown both in Sweden and Finland for this drying system, and it is probable that several similar plants will be constructed in the near future, and negotiations are in progress looking to the building of plants in this country.

Drying of Sulphate Pulp Chips

The Nordstrom method of drying is, of course, practicable not only for fuel. A very interesting question of drying is that of drying the chips for sulphate pulp manufacture. As is known, waste from saw mills is often used to make sulphate pulp. This waste, which is free from sawdust and bark, is hogged to similar size as the chips from timber. There is not only a question of unnecessary heating the surplus water in the chips to a high temperature in the digester, but there is also the question of the steam for boiling as the surplus water in the wood must be evaporated in the recovery house. From these two questions one easily understands why the steam consumption is much higher, when using the raw chips instead of dried chips. From the recovery house there escapes as from a regular boiler house a whole lot of heat, and we have found that this heat is sufficient for evaporating the largest part of the water in the wood. In case the waste heat should not suffice entirely, part of the heat may be taken from the rotaries and the drying will still be profitable.

The gases from the recovery plants do not contain any large particles of carbon, but may well be used for drying purposes, especially when kraft pulp is manufactured. The dust of chemicals, which follows the gases stays in the chips which form a filter for the gas. Simultaneously the chips absorb the obnoxious ingredients in the gases which are oxidized and destroyed. The waste gases from the drying tower are thus deodorized.

It would appear that there are many advantages to be gained by the drying of the sulphate pulp chips:

1. Decreased steam consumption (see Example).
2. Decreased consumption of sulphate on account of less losses in the exit gases and less losses by washing the pulp on account of stronger black liquor.
3. Better run of the mill; that is, increased production.
4. Less repairs of the evaporators, and, which, as time goes on, may be increasingly important.
5. The deodorizing of the recovery gases.

Mr. Brahmer, chief engineer, has in *Svensk Papperstidning*, July 31, 1920, shown the importance of using dry wood in pulp manufacture instead of wet. According to him the steam consumption in the sulphate pulp process, with other factors constant, is a factor of the dilution of the white liquor and the moisture in the wood. He shows with many graphic charts the rules for these facts, and points out the importance of water economy for the steam consumption and also the bad influence of ice in the frozen chips in the winter time.

For instance, direct boiling at 320 degrees F. with white liquor of 12 degrees Bé. To heat 2,000 lb. (figured bone dry) chips of 30 per cent moisture from freezing point to 320 degrees F. takes 5,000 lb. steam, but 60 per cent moist chips require 9,600 lb., or 92 per cent more. If the temperature of 30 per cent moist chips in winter time is minus 4 degrees F. there is in addition required 1,520 lb. of steam to heat the chips to freezing point and to melt the ice. For 60 per cent moist chips 4,340 lb. of steam are required for 2,000 lb. (bone dry figured) wood.

With dry wood and strong white liquor it is also possible to keep the black liquor at a higher strength and thus eliminate the evaporation of large volumes of unnecessary water. To evaporate black liquor from 8 degrees Bé. to 30 degrees Bé. takes 250 per

cent more steam than evaporation from 18 degrees to 30 degrees Bé., according to Mr. Brahmer.

Example

Steam consumption, when using direct steam for cooking, for heating the excess water in 55 per cent moist chips as compared with 20 per cent moist chips:

Heat content of steam, 1,180 B. t. u.

Temperature in digester, 320 degrees F.

Assumed that no radiation losses occur.

4,620 lb. wood dry substance are required for 2,200 lb. pulp.

1 lb. dry substance, when 55 per cent moist, contains 1.22 lb. water.

1 lb. dry substance, when 20 per cent moist, contains 0.25 lb. water.

Steam needed for heating $1.22 - 0.25$ lb. water 320 degrees F.

$$4,620 \times (320 - 32) \times 0.97$$

figured on 2,200 lb. pulp: $\frac{\quad}{1,180 - 288} = 1,452$ lb.

Excess water to evaporate in soda house: $4,620 \times 0.97 + 1,452 = 5,934$ lb. To this should be added excess water by greater dilution in the washing process, which may be estimated to 1,100 lb. per 2,200 lb. pulp. For evaporation at 100 per cent efficiency without vacuum should be required fuel to make $5,934 + 1,100 = 7,034$ lb. excess steam per 2,200 lb. pulp, or together with the excess steam used in the cooking $7,034 + 1,452 = 8,486$ lb.

At several mills in Sweden and Finland we have made experiments, drying the chips in this way. At two of the mills large experiments were made, so that the chips for one cook in a digester holding 1,050 cu. feet were dried, and no dirt could be found in the pulp on examination.

As mentioned before, the characteristic smell of the exit gases is completely removed. During one of the larger experiments, when 2.10 cu. ft. were dried in each batch, the experiment being made in the recovery house, the laborers for several hours each time were attending to their ordinary work in a fog of moisture and gas from the drying chips, without any other inconvenience than would arise from a usual fog. When, however, the same amount of exit gases as used in the experiment was directly blown into the room, work had to be immediately stopped.

APPENDIX

On account of agreement between the Västervik Paper Mill, Västervik, and AB. Sundsvalls Förenade Verkstäder, Sundsvall, we have through our engineer, Mr. Josefson, made inspection of the drying tower, designed by Otto Nordström, engineer, in Sundsvall, and intended for drying of hogged wood, and after investigations and calculations we are able herewith to give the following report on the inspection. At this the contractor was represented by the designer of the tower.

By the inspection it was intended to prove if the tower had the drying capacity guaranteed by the contractor, and if the delivery was fulfilled according to the stipulations in the contract for the delivery of the tower.

The Extent of the Delivery

The delivery is based on a contract with accessory specifications of February 16 and comprises mainly:

- 1 drying tower, system Nordström, with a content of 39.24 cu. yards and a capacity of 196.2 cu. yards in 24 hours.
- 1 fan for supply stack gases to the tower.
- 1 elevator for transporting the moist wood waste to the top of the tower.
- 1 elevator for transporting the dried waste to the boiler house.
- Electric motors for running the tower, fan and elevators.
- All transmission, according to the drawing, for driving the drying arrangements.

In the delivery is not included:

- The reinforced concrete cover around the tower.
- The foundation for the tower.
- The flues of masonry to the tower.
- The wood work for the elevators.

Guarantees Given

In the contract the contractor has given the technical guarantee "that the tower should be able to work off 196.2 cu. yards waste of normal consistency in 24 hours, and then be able to remove a quantity of water equal to at least 107 per cent of the weight of the dry substance, when the waste has a moisture content of 60 per cent and more; however, the moisture content of the waste may not be over 70 per cent. The specified evaporation equals, for instance, a reduction of the moisture content from 60 to 30 per cent. When firing with waste only the capacity of the tower is guaranteed; only provided that the amount of heat in the stack gases by regulating the first are sufficient for the guaranteed evaporation."

Method of Testing

For investigating the drying capacity of the tower one head test lasting 8 hours was made. This was begun only when a preliminary test of the same duration as the period of drying had been run. During the preliminary test, which lasted 5:45 hours, several preliminary tests were made in order to ascertain that the drying and the conditions having influence on it at the beginning of the head test had been stabilized. Samples were taken of the fuel

going to the tower, and measurements of the fuel, the temperatures and pressures were taken in the same manner as during the head test.

The fuel to be dried was wood waste from Stegeholm's saw mill.

The amount of fuel delivered to the tower was found by measuring its volume in a measure of one cubic meter. The weight per cubic meter was found by measuring and weighing the railroad cars in which the wood waste was transported to the paper mill.

Samples were taken in the usual manner from the undried, unfrozen waste and also from the undried frozen waste and from the dried waste, and the moisture content was analyzed by the Government Testing Institution in Stockholm as well as by the Chemical Station of Sundsvall. One of the two jars containing a sample of the undried, unfrozen waste was crushed when arriving at the Testing Institution in Stockholm. The institution therefore was unable to analyze the moisture in this sample, but since the tests in Sundsvall agree well with those in Stockholm, and since the moisture in the unfrozen waste was only a trifle higher than in the frozen, the crushing is of no consequence for judging the moisture content.

All the fuel to the boiler was waste material dried by the tower. The boiler was fired by the firemen of the mill after instructions given by our engineer. The mill was running normally.

Part of the exit gases were from the boiler led through the existing economizer, raising the feedwater temperature from 180 degrees F. to 225 degrees F., and then to the drying tower. The rest was by passing the economizer, going directly to the tower. In such a way no exit gases escaped by the chimney of the mill to the open air. Their temperature, composition and draft conditions at the boiler were noted during the test.

As the mixture of gas from the boiler and economizer had too high a temperature to be introduced directly into the tower, part of the gas from the tower was circulated to the fan and then again passed to the tower. In such a way the temperature of the gas was kept down to suitable degrees.

Results of the Test

The notations made during the head test and the results drawn therefrom are put together with the results from the analyses of the moisture in the fuel.

From the test it is evident that the tower has been able to dry 201 cu. yards of waste, with a dry substance weight of 265 lb. per cu. yard, in 24 hours from 60.39 per cent moisture to 33.65 per cent moisture. The dry substance of the amount of fuel passing through the tower in 24 hours was thus $201 \times 265 = 53,265$ lb. The amount of water evaporated, adjusted with regard to the temperature conditions, was 2,422 lb. per hour, or $2,422 \times 24 = 58,130$ lb. per 24 hours, equal to 110.3 per cent of the dry substance weight.

According to the contract, when operating at 196.2 cu. yards in 24 hours, there should be removed in the drying tower an amount of water equal to at least 107 per cent of the weight of the dry substance.

The guarantees with regard to the capacity as well as to the drying are thus amply effected.

The volume of the tower is liberally provided for, and is 45.24 cu. yards instead of 39.24 cu. yards.

Ocular Inspection

While arranging for the test it was found that the drying tower with its accessory parts, as far as one could make out by ocular inspection, was delivered according to the clauses of the contract and made in a very satisfactory manner.

On the interior inspection of the tower it was found that the inner tower was completely without fault. On the outer tower both the upper plate sections were without fault on the inside. Plates 3 and 4 from the top were in some places a little rusty near the perforations made for allowing the gas to pass through. The lowest section was a little rusty on the upper half. In all places where

rust had occurred before the tower was closed down the plates had been polished by the wood waste, and the rust thus accrued after the tower had been closed down. In those places where the steel plates were without fault they were covered by a thin layer of tar and soot. Any corrosion in the plates could not be discovered.

The outer tower was covered on the outside with a thick layer of soot and tar. Under this layer the plates, especially on the lower parts, were a little corroded in certain places. The lowermost plate in the edge where the fuel is fed out was a little worn and sharp. Corrosion could not be discovered.

On the conveyors the corrosion which had originated on the surface of certain plates may doubtless have happened through the plates being oxidized when touching the warm, somewhat moist waste, and through the constant rubbing away of the oxidized layer as the waste slides down from the chutes. The chutes down to the firehole of the boiler may have been worn in this way by oxidizing and rubbing. The smaller holes on the lower part of the elevator and on the lower part of the chute from the tower have come about by wear, oxidizing and rubbing, and are thus to be referred to natural wear.

The concrete bottom between the cover and the outer tower had not a sufficient slope to allow the condensate to run off well. This bottom should therefore be shaped so that the water may run off through the open hole. However, it does not lie with the contractor to make this change.

Final Judgment

By the above report it is made clear that the drying tower delivered was made in a very satisfactory way and according to the clauses in the contract, and that the guarantees given, concerning both the capacity and the ability of drying, were amply filled. We therefore recommend that the delivery be accepted in full.

**THE BOILER ASSOCIATION FOR SOUTHERN SWEDEN
Inspection of Delivery of Drying Tower to Västervik Paper Mill, Västervik**

Date of the test	March 21st 1924.
<i>Data concerning the Drying Tower:</i>	
Total space for fuel according to contract	39,24 cu. yards
Total space for fuel according to calculation	45,51 cu. yards
Space in tower filled with fuel	28,78 cu. yards
Capacity of drying	196,20 cu. yards/24 hours.
<i>Time for the head test:</i>	
Test begun	March 21, 1924, at 4.00 p. m.
Test ended	March 21, 1924, at 12.00 midnight,
Test lasted	8.00 hours.
<i>Observations during the test:</i>	
Boiler pressure	240, 4 lbs./sq. inch
Damper at boiler opened	2.2 feet
Damper before economiser opened	1/1 feet
Damper after economiser opened	1/3
Damper by passing economiser opened	1/1
Damper in circulating duct from tower opened	1/3
Ash pit chimney opened	6, °
Ash pit door opened (measured at lower edge of door)	5/8 inch
Rossett valves on doors to combustion chamber opened	0, °
Doors for secondary air opened	1/1
The feeding in of the fuel into the oven was done: against door of combustion chamber.	
Draft before damper of boiler	5/8 inch water pressure
<i>Percentage CO₂ in exit gases:</i>	
before damper of boiler	13.1%
after economiser	10.1%
in flues from boiler and economiser	6.0%
Percentage Oxygen in smoke before damper of boiler	6.2%
Percentage Carbon monoxide in do.	0, °%
Temperature of feedwater before economiser	108°F.
Temperature of feedwater after economiser	225°F.
Temperature of exitgases before damper of boiler	690°F.
Temperature of exitgases before economiser	662°F.
Temperature of exitgases after economiser	410°F.
Temperature of exitgases at entrance to the tower	293°F.
Temperature of exitgases in circulating duct	131°F.
Temperature of exitgases discharged from the tower	131°F.
Temperature of the air	27°F.
Draft before the fan	1 13/16 inches water pressure
Static pressure in supply canal to tower	23/32 inches water pressure
Electric current required by motor driving fan	14A.
<i>Fuel to the tower:</i>	
The fuel consisted of hogged waste from Stegeholm's saw mill.	
The amount used up during the test was 66,7 cu. yard at 665 lbs. per yard =	44,320 lbs.
or 8,345 cu. yards respectively	5,540 lbs./hour
The moisture content of the fuel, when fed into tower:	
"frozen", according to analysis by "Government Testing Institution"	59%
"frozen", according to analysis by Sundsvall Chemical Stat.	60.1%
"unfrozen" according to analysis by Sundsvall Chem. Stat.	61.5%
average of "frozen" and "unfrozen"	60.39%

The moisture content of the fuel, when discharged from tower:	
according to analysis by the "Gov't. Testing Institution"	34.3%
according to analysis by the Sunsvall Chemical Station	33.5%
average	33.65%
Dry substance in one cu. yard waste, 0.3961x3540=	265 lbs.
Dry substance in fuel fed into tower 0.3961x3540=	2,195 lbs./hour
Water in fuel, when fed into tower 0.6039x5540=	3,345 lbs./hour
Amount fuel taken out from tower, 2195: (1-0.3365)=	3,308 lbs./hour
Water in fuel taken out from tower, 0.3365x3,308=	1,114 lbs./hour
Amount water evaporated 3345-1114=	2,233 lbs./hour
Temperature of fuel, when fed into tower, 26.7 cu. yd.=	17,728 lbs. 27°F.
Temperature of fuel, when fed into tower, 40.° cu. yd.=	26,592 lbs. 32°F.
Temperature of fuel, when taken out of tower	131°F.
Specific heat of dry substance in the fuel	0.65
Specific heat of ice	0.5
Heat, needed for evaporation of 1 lb. water from 32°F.	1.50 B. t. u.
Temperature	144 B. t. u.
Heated needed for melting 1 lb. ice	144 B. t. u.
Heat consumed in heating the dry substance, 17.728x2.195 (131-27)x0.65=	59,170 B. t. u./hour.
44.320 26.592x2.195 (131-32-x0.65=	84,900 B. t. u./hour.
44.320 heating the ice, 17.728x3.345x5x0.5=	3,020 B. t. u./hour.
44.320 melting the ice, 17.728x2.345x144=	193,230 B. t. u./hour.
44.320 heating up the water in the discharged fuel, 1.114 (131-32)=	116,280 B. t. u./hour
evaporation of the water, 2.233x150=	2,574,880 B. t. u./hour.
Total	3,025,480 B. t. u./hour.
Water evaporated according to results:	
Fuel of 60.39% moisture fed into tower per hour	8,345 cu. yard
Fuel of 60.39% moisture fed into tower per hour	5,540 lbs.
Fuel of 60.39% moisture fed into tower per 24 hours	8,345x24= 201 c. yd.
Weight of dry substance per hour	2,195 lbs.
Fuel of 33.65% moisture taken out of tower per hour	3,308 lbs.
Amount water evaporated per hour	2,233 lbs.
Amount heat per hour for heating up the dry substance to 32°F. 17.728x2.195x5x0.65=	2,570 B. t. u.
44.320 heating up the ice to 32°F.	3,020 B. t. u.
melting the ice	193,230 B. t. u.
Total amount heat per hour	198,820 B. t. u.
Equivalent amount of water, which could have been evaporated per hour, when figured, that 10% of the condensing water is useful, 198,820 x 1.1	189 lbs.
1,150	
Total amount water evaporated, provided the fuel was not frozen, but had a temperature of 32°F.	2,422 lbs.
2,233+189	
Amount water evaporated in % of fed in dry substance by weight, 2,422x100=	110.3%.
2,195	

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Under the consolidation which takes effect by the formation of a new company, known as Vickers and Combustion Engineering Limited, with large established offices in Montreal, Toronto, Winnipeg and Vancouver, the entire business of the Combustion Engineering Corporation Limited and of its parent company, the International Combustion Engineering Corporation of New York, and the Canadian Sales Agency of Vickers Limited and their subsidiary companies, along with the sales of the Industrial Department of Canadian Vickers of Montreal comes under one executive control.

Vickers and Combustion Engineering Limited will cover the whole range of engineering work in the Dominion, embracing steam power plants, by which is meant complete units, including both construction and equipment hydraulic power plants, large Diesel oil engine installations, mining and general machinery, pulverized coal equipment, all types of automatic stokers, all types of boilers, turbines, both water and steam, oil engines and all types of prime movers.

Two entirely new lines of equipment in Canada are introduced by this amalgamation, namely the Ruths Steam Accumulator, a Swedish invention, which Vickers and International have had their engineers investigating since early in the spring, and which is said to be of far reaching importance to all heat-using industries, and the Nordstrom Waste Wood Refuse Dryer, which has also been under observation and investigation since early in the summer. This dryer is of special importance to the paper and saw mill industry, and for that reason is of particular interest in Canada.

The new company will carry on, on a more extensive scale than heretofore, the work done by both Canadian Vickers and Combustion Engineering Corporation in plant design and in contact and collaboration with consulting engineers in Canada, Great Britain and the States, with the underlying thought that Canadian power developments shall embrace the best thought and practice, both in Great Britain and the States.

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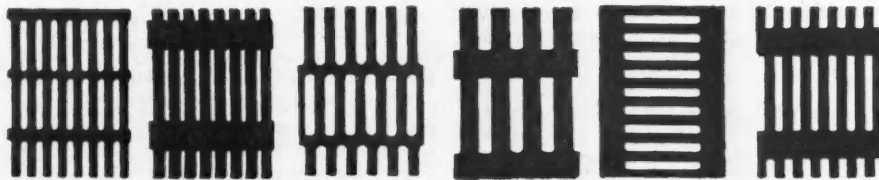
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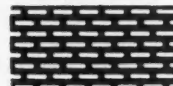
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New York Trade Jottings

E. P. Archibald and M. P. Galvin of Boston who are connected with the Paper House of New England, were New York visitors recently.

* * *

Jack Deutsch of the Deutsch Brothers Manufacturing Company has been spending the holidays at Atlantic City with his family. He has had a most enjoyable vacation of two weeks.

* * *

The Eastern Manufacturing Company has moved its New York offices from 501 Fifth avenue to the Johns-Manville Building, 292 Madison avenue.

* * *

The Eastern States Paper Sales Corporation has taken over the sales representation of the Oswegatchie Paper Company, Inc., of Natural Dam, N. Y. The offices of the Eastern States Paper Sales Corporation are located in the Grand Central Terminal Building.

* * *

A. A. MacDiarmid, chief engineer of Price Brothers & Co., who narrowly escaped death early in October in the landslide at Kenogami which cost the life of Sir William Price, president of the company, was in New York this week accompanied by Mrs. MacDiarmid. They sailed Wednesday for Jamaica where they will spend a month.

* * *

Charles G. Keferstein announces that Gregory F. Demonet is now a full partner with him in the firm of Keferstein & Demonet, 154 Nassau street. The firm will continue the business along the same lines as Mr. Keferstein had conducted it, distributing exclusive lines of imported paper and specializing in groundwood papers, news, hanging, etc.

Pacific Box Men Insure Employees

Following an indorsement of group insurance by the Pacific Coast Paper Manufacturers' Association, seven companies included in its membership have provided group life insurance protection for their employees. In each case the insurance was written by Metropolitan Life Insurance Company under the community or cooperative plan wherein employer and employee share the cost. The total coverage amounts to \$122,500 on 156 employees.

The Los Angeles Paper Box Company, of Los Angeles has insured 53 employees under a group policy for a total coverage of \$26,500 each individual receiving \$500 protection with provision for an annual increase of \$100 until the maximum of \$1,000 is reached.

In addition six companies, all located in Seattle, have insured their employees for individual amounts ranging from \$500 to \$1,000. The full coverage under the wholesale plan amounts to \$96,000 on 103 lives. These companies are the Keystone Paper Box Company; Union Paper Box Company; Standard Paper Box Company; Northwestern Paper Box Company; Hincer Paper Box Company and the Coast Carton Company.

One feature of this life insurance plan is its disability clause. Under this provision the insurance company guarantees the full payment of the insurance to any employee, becoming totally and permanently disabled before age 60, premium collections being waived.

Besides the actual provisions of the policies, the Metropolitan offers certain service advantages such as the distribution of health pamphlets, and a free visiting nurse service.

Paid Bonus to Its Employees

CHICAGO, Ill., December 30, 1924.—The Waterway Paper Products Company declared and paid a bonus to all its employees for the year, 1924.

Obituary

Thomas Green

JAMAICA, N. Y., December 29, 1924.—Thomas Green, well known in the paper trade and particularly in the board business died at his home at 404 Shelton avenue, Friday evening, December 26.

Mr. Green was connected with the J. E. Linde Paper Company for many years and was later with the Seaman Paper Company. At the time of his death he was representative in New York of the Pratt Paper Company of Boston.

James Wright

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., December 30, 1924.—James Wright, 57, died Saturday night at his home, 44 Laurel street. He had been superintendent of the Newton Paper Company for the past 16 years. He was born in Scotland, coming to this city when 22 years old and entering the employ of the Newton Company as a papermaker. He was promoted from time to time and finally was given the position of superintendent. He was a trustee of the First Presbyterian Church, and a member of the Caledonian Society and William Whiting Lodge of Masons. He leaves besides his wife, a brother William, a son J. Howard of Gardner, and four daughters, Vera and Mrs. Henry Escott of this city, Mrs. Frank Smead, Jr., of Keene, N. H., and Mrs. Robert Hahs of Springfield.

Swedish Wood Pulp Sales

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 31, 1924.—Advance sales of Swedish wood pulp are reported to have already reached 250,000 metric tons and increased production is predicted for 1925 says Trade Commissioner Klath at Stockholm reporting to the Paper Divisions of the Department of Commerce on the outlook in the Swedish pulp and paper market. The report continues in part:

"Negotiations between representatives of the Wood Pulp Association and the Workers Union have resulted in a new wage agreement for 1925 and it seems likely that the wood pulp industry will not be hampered by labor strikes during 1925. Slightly higher wage rates have been granted to about half of the workmen.

"Exports for November consisted of 88,419 tons of sulphite pulp, 29,050 of soda pulp, 26,984 mechanical ground wood and 30,607 tons of paper including 14,278 tons of news print."

Record Year in Reforestation

During the past twelve months Ontario established a record-breaking achievement in its program of reforestation. Nearly two million trees were put out by the Provincial Department of Lands and Forests in 1923 but in 1924 the figure exceeded three million, procured from the nurseries of the province. Last year Scotch pine and jack pine were much much favored in tree-planting but willows and poplars were also popular. Tree-planting is done to reclaim deteriorated lands as much as to reforest. A large number of trees have been planted among the Northumberland hills and in parts of York County under Government auspices.

Norway Conditions Satisfactory

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 31, 1924.—Conditions in the paper and pulp industries of Norway are satisfactory according to a cablegram received by the Bureau of Foreign and Domestic Commerce from Acting Commercial Attache Sorensen at Copenhagen. The market is reported as rather quiet with orders on hand to insure full operation. October exports consisted of 43,500 tons of mechanical pulp, 20,000 tons of chemical pulp and 22,000 tons of paper including 15,000 tons of news print.

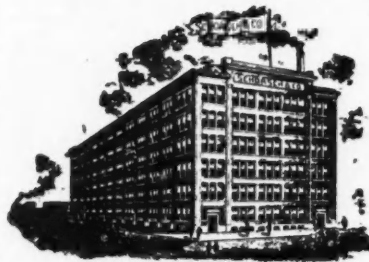
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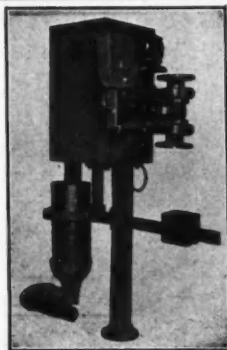
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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING DECEMBER 27, 1924

SUMMARY

News print	2,246 rolls
Printing paper	308 cs., 795 rolls, 51 bls.
Cigarette paper	17 cs.
Wall paper	1,118 bls., 3 cs.
Hangings	35 bls., 1 cs.
Metal paper	10 cs.
Packing paper	79 bls., 16 cs.
Wrapping paper	1,509 bls., 29 cs., 88 rolls
Colored paper	8 cs.
Writing paper	27 cs., 4 bls.
Filter paper	14 bls., 1 cs.
Drawing paper	68 cs.
Parchment paper	1 cs.
Fancy paper	5 cs.
Tissue paper	29 cs.
Hanging stock	144 bls.
Surface coated paper	39 cs.
Onion skin paper	184 cs.
Cardboard paper	27 cs.
Decalomania paper	12 cs.
Kraft paper	152 rolls, 61 bls.
Brown paper	10 cs.
Tracing paper	2 cs.
Miscellaneous paper	167 cs., 5,184 rolls, 670 bls.

CIGARETTE PAPER

Max Spiegel Son, Geifuku Maru, Hamburg, 17 cs.

WALL PAPER

F. J. Emmerich, Cedric, Liverpool, 30 bls.
 F. J. Emmerich, Minnetonka, London, 4 bls.
 R. F. Downing & Co., Minnetonka, London, 32 bls.
 R. F. Downing & Co., Minnetonka, London, 3 cs.
 F. J. Emmerich, Thuringia, Hamburg, 14 bls.
 J. W. Hampton, Jr., & Co., Bilderdijk, Rotterdam, 667 bls.
 Drinhausen Hollkott Paper Co., Bilderdijk, Rotterdam, 364 bls.
 F. J. Emmerich, Deutschland, Hamburg, 7 bls.

HANGING STOCK

Drinhausen Hollkott Paper Co., America, Bremen, 72 bls.
 Drinhausen Hollkott Paper Co., Republic, Bremen, 72 bls.

PAPER HANGINGS

C. A. Haynes & Co., Minnetonka, London, 35 bls.
 C. A. Haynes & Co., Minnetonka, London, 1 cs.

DRAWING PAPER

Keuffel & Esser Co., Thuringia, Hamburg, 20 cs.
 Favor, Ruhl & Co., Minnetonka, London, 1 cs.
 H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.
 Keuffel & Esser Co., Deutschland, Hamburg, 42 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.
 Geo. Lueders & Co., La Bourdonnais, Bordeaux, 14 bls.

WRITING PAPER

Guibout freres, Leviathan, Havre, 26 cs.
 C. H. Powell Co., Leviathan, Havre, 4 bls.
 J. J. Gavin Co., Deutschland, Hamburg, 1 cs.

SURFACE COATED PAPER

J. G. Prager Co., Republic, Bremen, 27 cs.
 Gevaert Co. of America, Zealand, Antwerp, 9 cs.
 Gevaert Co. of America, Minnekahda, Antwerp, 3 cs.

ONION SKIN PAPER

Steiner Paper Corp., Bilderdijk, Rotterdam, 184 cs.

CARDBOARD PAPER

F. C. Strype, Bilderdijk, Rotterdam, 27 cs.

DECALCOMANIA PAPER

C. W. Sellers, Republic, Bremen, 12 cs.

NEWS, PRINT

Parsons & Whittemore, Hankefjell, Kotka, 1,276 rolls.

Parsons & Whittemore, Columbus, Bremen, 210 rolls.

National City Bank, Bergensfjord, Kristiania, 161 rolls.

H. Reeve Angel & Co., Republic, Bremen, 599 rolls.

PRINTING PAPER

H. Reeve Angel & Co., Inc., Republic, Bremen, 205 cs.

H. Reeve Angel & Co., Inc., Hankefjell, Kotka, 39 rolls.

H. Hollesen, Inc., Columbus, Bremen, 252 rolls.

M. O'Meara Co., Columbus, Bremen, 54 cs.

B. T. Drakenfeld & Co., Cedric, Liverpool, 15 cs.

Oxford University Press, Cedric, Liverpool, 10 cs.

H. Reeve Angel & Co., Inc., Minnetonka, London, 2 cs.

J. H. Scott Paper Co., Minnekahda, Hamburg, 430 rolls.

M. O'Meara Co., Thuringia, Hamburg, 37 bls.

Keuffel & Esser Co., Thuringia, Hamburg, 28 rolls.

J. H. Scott Paper Co., Thuringia, Hamburg, 46 rolls.

Republic Bag & Paper Co., Thuringia, Hamburg, 14 bls.

C. Steiner, Bilderdijk, Rotterdam, 19 cs.

Japan Paper Co., Bilderdijk, Rotterdam, 3 cs.

WRAPPING PAPER

Blaunet Wiley Paper Mfg. Co., Cameronia, Glasgow, 179 bls.

C. Steiner, Ohio, Hamburg, 11 cs.

Scheuckers, Inc., Leviathan, London, 5 cs.

F. C. Strype, Deutschland, Hamburg, 5 cs.

I. Barrett & Son, Deutschland, Hamburg, 56 rolls

F. Kraemer & Co., Zealand, Antwerp, 5 cs.

Wilkinson Bros. & Co., Inc., Bergensfjord, Kristiania, 58 bls.

T. Barrett & Son, Oscar II, Copenhagen, 69 bls.

T. Barrett & Son, Oscar II, Copenhagen, 32 rolls.

Republic Bag & Paper Co., Geifuku Maru, Hamburg, 1,186 bls.

Wilkinson Bros. & Co., Inc., Geifuku, Maru, Hamburg, 17 bls.

Steffens, Jones & Co., Thuringia, Hamburg, 3 cs.

KRAFT PAPER

Chemical National Bank, Geifuku Maru, Hamburg, 61 bls.

Chatham & Phoenix Nat'l Bank, Deutschland, Hamburg, 152 rolls.

PACKING PAPER

Martin Walsh, Inc., Geifuku Maru, Hamburg, 79 bls.

Hensel, Bruckman & Lorbacher, Bilderdijk, Rotterdam, 9 cs.

Independent Forwarding Co., Thuringia, Hamburg, 7 cs.

FANCY PAPER

Whiting & Patterson Co., Inc., Leviathan, London, 5 cs.

BROWN PAPER

Houbigant, Inc., Leviathan, Havre, 10 cs.

PARCHMENT PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.

TISSUE PAPER

M. Snedeker Corp., Thuringia, Hamburg, 29 cs.

TRACING PAPER

E. Dietzgen & Co., Deutschland, Hamburg, 2 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, Deutschland, Hamburg, 10 cs.

COLORED PAPER

C. W. Williams, Zealand, Antwerp, 8 cs.

PAPER

P. H. Petry, Deutschland, Hamburg, 3 cs.

Fernstrom Paper Co., Inc., Geifuku Maru, Hamburg, 5,184 rolls.

Rohner & Gehrig Co., Geifuku Maru, Hamburg, 22 cs.

Republic Bag & Paper Co., Thuringia, Hamburg, 9 bls.

J. P. Heffernan Paper Co., Thuringia, Hamburg, 15 bls.

Independent Forwarding Co., Thuringia, Hamburg, 4 cs.

M. O'Meara Co., Minnekahda, Hamburg, 6 cs.

Perry, Ryer & Co., Cameronia, Glasgow, 61 cs.

Freedman & Slater, Eglantine, Rotterdam, 1 cs.

J. I. Bernitz, Eglantine, Rotterdam, 16 cs.

Wilkinson Bros. & Co., Inc., Eglantine, Rotterdam, 54 cs.

M. O'Meara Co., Eglantine, Rotterdam, 646 bls.

RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., Waukegan, Havre, 85 bls. rags.

E. J. Keller Co., Inc., Mahanada, Algiers, 222 bls. rags.

E. J. Keller Co., Inc., Minnekahda, Hamburg, 262 bls. rags.

C. R. Spence, Dromore, Belfast, 43 bls. rags.

Brown Bros. & Co., Dromore, Belfast, 106 bls. rags.

Katzenstein & Keene, Inc., Matoppo, Manchester, 79 bls. rags.

Katzenstein & Keene, Inc., by same, 55 new cuttings.

Kidder, Peabody Accep. Corp., by same, 25 bls. cotton waste.

Brown & Roese, by same, 10 bls. cotton waste.

Ayres, W. C. Jones, Inc., by same, 23 bls. cotton waste.

Guaranty Trust Co., by same, 29 bls. bagging.

Equitable Trust Co., by same, 23 bls. bagging.

W. Schall & Co., by same, 25 bls. new cuttings.

Bank British South Africa, by same, 67 bls. paper stock.

Bank British South Africa, by same, 10 bls. bagging.

Bank British South Africa, by same, 94 bls. rags.

Brown Bros. Co., Cameronia, Glasgow, 66 bls. paper stock.

American Exchange National Bank, by same, 48 bls. paper stock.

American Trading Co., by same, 141 bls. rags.

Castle & Overton, Inc., by same, 5 bls. rags.

Baring Bros. Co., by same, 25 bls. rags.

Brown Bros. & Co., by same, 81 bls. rags.

Reis & Co., Eglantine, Rotterdam, 15 bls. cotton waste.

E. J. Keller Co., Inc., by same, 320 bls. rags.

Castle & Overton, Inc., by same, 42 bls. bagging.

W. Barnet & Son, Cedric, Liverpool, 176 bls. rags.

Amsinck, Sonne & Co., Inc., by same, 34 bls. rags.

Royal Manufacturing Co., by same, 164 bls. cotton waste.

E. Butterworth Co., Inc., by same, 74 bls. bagging.

L. H. Abenheimer, America, Bremen, 103 bls. rags.

Castle & Overton, by same, 5 bls. rags.

H. Feldman & Co., by same, 221 bls. rags.

S. Birkenstein & Son, by same, 197 bls. rags.

Goldman Sachs Co., by same, 160 bls. rags.

M. Wolfer, Siboney, Havana, 111 bls. rags.

E. J. Keller Co., Inc., Republic, Bremen, 105 bls. rags.

Chase National Bank, by same, 110 bls. rags.

Brown Bros. Co., by same, 128 bls. rags.

E. J. Keller Co., Inc., Careneo, Genoa, 62 bls. cotton waste.

E. J. Keller Co., Inc., Oscar II, Copenhagen, 736 bls. rags.

E. J. Keller Co., Inc., Masaniello, Marseille, 169 bls. rags.

L. H. Abenheimer, by same, 129 bls. rags.

Darmstadt, Scott Co., by same, 47 bls. new cuttings.

Equitable Trust Co., by same, 222 bls. rags.

Katzenstein & Keene, Inc., Masaniello, Barcelona, 345 bls. rags.

Anglo South American Trust Co., by same, 410 bls. rags.

S. Birkenstein & Sons, London Exchange, London, 74 bls. rags.

J. M. Jaffe, by same, 56 bls. bagging.

National City Bank, by same, 125 bls. rags.

National City Bank, American Farmer, London, 145 bls. rags.

(Continued on page 66)

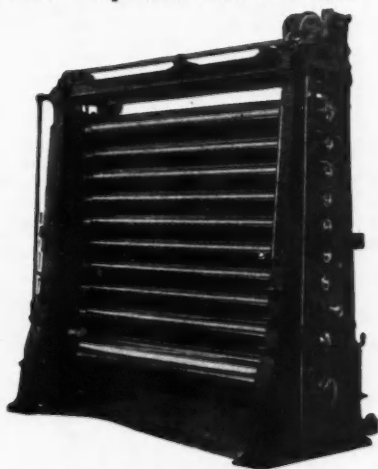
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BONDS
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Main Office:

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Holyoke, Mass.

Imports of Paper and Paper Stock

(Continued from page 64)

Brown Bros. & Co., Geifuku Maru, Hamburg, 52 bls. rags.

E. J. Keller Co., Inc., by same, 226 bls. rags.

E. J. Keller Co., Inc., by same, 49 bls. flax waste.

Equitable Trust Co., by same, 80 bls. rags.

L. H. Abenheimer, by same, 152 bls. rags.

Bankers Trust Co., by same, 57 bls. rags.

National City Bank, by same, 212 bls. rags.

Katzenstein & Keene, Inc., Armando, Venice, 502 bls. rags.

H. S. Prince, Conehatta, Dublin, 33 bls. paper stock.

T. D. Downing & Co., by same, 10 bls. flax waste.

M. O'Meara Co., T. Fagelund, Buenos Aires, 343 bls. rags.

Anglo South American Trust Co., by same, 128 bls. rags.

Anglo South American Trust Co., by same, 119 bls. cuttings.

Amsinck, Sonne Co., Inc., La Bourdonnais, Bordeaux, 36 bls. rags.

Castle & Overton, Inc., by same, 38 bls. rags.

Katzenstein & Keene, Inc., V. Emmanuele, Dublin, 42 bls. rags.

Katzenstein & Keene, Inc., Gasconier, Antwerp, 35 bls. rags.

National City Bank, Thuringia, Hamburg, 107 bls. rags.

National City Bank, by same, 58 bls. jute waste.

E. J. Keller Co., Inc., by same, 11 bls. new cuttings.

E. J. Keller Co., Inc., by same, 157 bls. rags.

E. J. Keller Co., Inc., by same, 5 bls. thread waste.

E. J. Keller Co., Inc., by same, 312 bls. bagging.

Stone Bros. Co., by same, 12 bls. rags.

Belgian Bank, by same, 155 bls. rags.

W. Schall & Co., by same, 97 bls. bagging.

Guaranty Trust Co., by same, 39 bls. new cuttings.

E. J. Keller Co., Inc., Belderdyk, Rotterdam, 248 bls. rags.

R. Blank, by same, 25 bls. rags.

Northern Metals Selling Co., by same, 5 bls. rags.

Stone Bros. Co., by same, 33 bls. rags.

Chemical National Bank, by same, 17 bls. rags.

Katzenstein & Keene, Inc., Galileo, Hull, 274 bls. rags.

G. W. Millar Co., Ltd., by same, 66 bls. rags.

W. Steck & Co., by same, 247 bls. rags.

U. S. Mortgage & Trust Co., by same, 135 bls. rags.

Brown Bros. & Co., by same, 108 bls. rags.

True & McClelland, by same, 457 bls. rags.

Exchange National Bank, Archimedes, Manchester, 135 bls. rags.

National Bank of Commerce, by same, 208 bls. rags.

E. Butterworth & Co., Inc., by same, 63 bls. rags.

E. Butterworth & Co., Inc., by same, 16 bls. bagging.

Royal Manufacturing Co., by same, 202 bls. cotton waste.

Ayres, W. C. Jones, Inc., by same, 80 bls. cotton waste.

Anglo South American Trust Co., by same, 46 bls. rags.

Katzenstein & Keene, Inc., by same, 85 bls. new cuttings.

OLD ROPE

International Purchasing Co., Belderdyk, Rotterdam, 54 coils.

American Exchange National Bank, Galileo, Hull, 226 coils.

S. Birkenstein & Sons, London Exchange, London, 74 coils.

E. J. Keller Co., Inc., Oscar II, Copenhagen, 243 coils.

WOOD PULP

E. J. Keller Co., Inc., Eglantine, Rotterdam, 497 bls. wood pulp, 102 tons.

International Acceptance Bank, by same, 435 bls. wood pulp, 88 tons.

J. Andersen & Co., Bergensfjord, Kristiania, 300 bls. sulphite pulp.

E. M. Sergeant Co., Inc., by same, 350 bls. chemical pulp.

Hartig Pulp Co., Ohio, Hamburg, 500 bls. wood pulp.

Buck, Kaier & Co., by same, 1,425 bls. wood pulp.

Equitable Trust Co., by same, 663 bls. wood pulp.

Ira L. Beebe, by same, 132 bls. wood pulp.

Ira L. Beebe, Minnekahda, Konigsberg, 2,098 bls. wood pulp.

Castle & Overton, by same, 250 bls. wood pulp.

W. Hartman & Co., Minnekahda, Hamburg, 1,103 bls. wood pulp.

J. Andersen & Co., by same, 660 bls. sulphite pulp.

Bulkley, Dunton & Co., Oscar II, Copenhagen, 600 bls. sulphite pulp.

Nilsen, Lyon & Co., Inc., by same, 150 bls. sulphite pulp.

Scandinavian Pulp Agency, Inc., by same, 127 bls. sulphite pulp.

Johanesson, Wales & Sparre, Inc., by same, 750 bls. sulphite pulp.

E. M. Sergeant Co., by same, 747 bls. soda pulp.

Buck, Kaier & Co., by same, 3,700 bls. wood pulp.

Irving Bank-Columbia Trust Co., by same, 611 bls. kraft pulp.

Irving Bank-Columbia Trust Co., Geifuku Maru, Hamburg, 200 bls. wood pulp, 30 tons.

Castle & Overton, Inc., by same, 825 bls. wood pulp, 155 tons.

Tidewater Papermills Co., Bornholm, Liverpool, N. S., 12,360 bls. wood pulp.

A. F. Kelly & Co., Deutschland, Hamburg, 500 bls. chemical pulp, 101 tons.

Pagel, Horton & Co., Inc., Modica, Gefle, 875 bls. sulphite pulp, 177 tons.

Pagel, Horton & Co., Inc., by same, 1,750 bls. sulphite pulp, 355 tons.

Bulkley, Dunton & Co., by same, 625 bls. sulphite pulp, 127 tons.

Hartig Pulp Co., by same, 1,125 bls. sulphite pulp, 228 tons.

E. M. Sergeant Co., Modica, Harnosand, 6,150 bls. sulphite pulp, 1,025 tons.

WOOD PULP BOARDS

Lagerlof Trading Co., Hankefjell, Kotka, 774 pg. wood pulp boards, 26 tons.

Lagerlof Trading Co., by same, 161 rolls wood pulp boards, 34 tons.

Lagerlof Trading Co., by same, 600 bls. wood pulp boards, 86 tons.

WOOD FLOUR

Castle & Overton, Inc., Eglantine, Rotterdam, 891 bls., 57,810 kilos.

B. L. Soberski, Bergensfjord, Fredrikstad, 765 bags.

CASEIN

T. M. Duche & Sons, T. Fagelund, Buenos Aires, 417 bags, 25,020 kilos.

A. Klipstein & Co., by same, 250 bags, 15,000 kilos.

Atterbury Bros., Inc., La Bourdonnais, Bordeaux, 300 bags.

PHILADELPHIA IMPORTS

Week ending December 27, 1924.

J. A. Steer & Co., Dromore, Belfast, 50 bls. rags.

D. I. Murphy, Eglantine, Rotterdam, 204 bls. rags.

Castle & Overton, Inc., by same, 143 bls. rags.

G. M. Graves Co., by same, 46 bls. rags.

E. J. Keller Co., Inc., by same, 59 bls. bagging.

Stone Bros. Co., Careno, Leghorn, 88 bls. rags.

S. Birkenstein & Sons, by same, 32 bls. rags.

Castle & Overton, Inc., Boschdyk, Rotterdam, 74 bls. rags.

Castle & Overton, Inc., Manchester Importer, Manchester, 273 bls. rags.

Castle & Overton, Inc., Lorain, Hamburg, 144 bls. rags.

Castle & Overton, Inc., Hornefels, Hamburg, 191 bls. rags.

Castle & Overton, Inc., Bankdale, Marseilles, 163 bls. rags.

E. J. Keller Co., Inc., Kyphissia, Hamburg, 363 rags.

E. J. Keller Co., Inc., Kyphissia, Gefle, 55 bls. rags.

E. J. Keller Co., Inc., West Arrow, Antwerp, 43 bls. rags.

E. J. Keller Co., Inc., Ossa, Leghorn, 113 bls. rags.

Katzenstein & Keene, Inc., Waukegan, Havre, 298 bls. rags.

Katzenstein & Keene, Inc., Collamer, Bordeaux, 101 bls. rags.

Katzenstein & Keene, Inc., Collamer, St. Nazaire, 98 bls. rags.

Katzenstein & Keene, Inc., Callamer, St. Nazaire

Johanesson, Wales & Sparre, Inc., Hornfels, Suderham, 1,500 bls. kraft pulp.

BALTIMORE IMPORTS

Week ending December 27, 1924.

M. Gottesman & Co., Inc., Hankefjell, Kotka, 1,235 bls. ground wood, 203 tons.

Nilsen, Lyon & Co., Inc., by same, 1,110 bls. sulphite pulp, 185 tons.

Castle & Overton, Inc., by same, 7 bls. woodpulp.

E. J. Keller Co., Inc., Westerner, Rotterdam, 970 bls. woodpulp.

E. J. Keller Co., Inc., by same, 6 bls. rags.

Lagerloef Trading Co., Hankefjell, 2,308 bls., 405 tons chemical pulp.

Johanesson, Wales & Sparre, Inc., Arkansas, 750 bls. sulphite pulp, 750 bls. kraft pulp.

BOSTON IMPORTS

Week ending December 27, 1924.

Kalbfleisch Corp., T. Fagelund, Buenos Aires, 417 bags casein, 25,020 kilos.

Castle & Overton, Inc., ———, Germany, 7 bls. woodpulp.

Katzenstein & Keene, Inc., Daytonian, Manchester, 54 bls. new cuttings.

Johanesson, Wales & Sparre, Inc., Arkansas, Gothenburg, 1,375 bls. sulphite pulp.

NEW ORLEANS IMPORTS

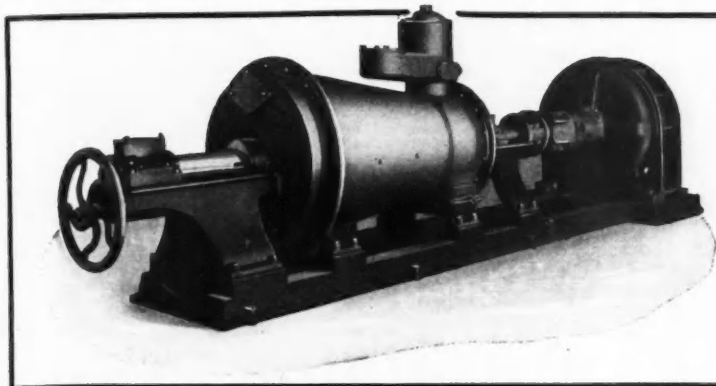
Week ending December 27, 1924.

Katzenstein & Keene, Inc., Colbrook, Antwerp, 37 bls. rags.

Castle & Overton, Inc., Senator, England, 372 bls. rags.

Castle & Overton, Inc., Dido, Rotterdam, 275 bls. woodpulp.

Johanesson, Wales & Sparre, Inc., Louisiana, Gothenburg, 2,386 bls. kraft pulp.



The
DILLON JORDAN

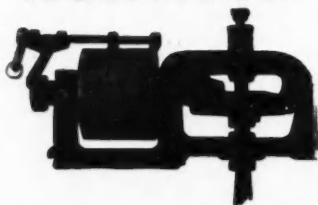
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Market Quotations

PAPER AND PULP TRADE SECURITIES CLOSING PRICES TUESDAY, DEC. 23, 1924.
Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS		BID	ASKED
Abitibi Power and Paper, Gen 6s 1940.....	98	100*	100*
Advance Bag and Paper, 7s 1943.....	97	100*	100*
Aroostook Pulp and Paper, 6s 1925.....	99		
Bastrop Pulp and Paper, 7½s 1932.....	98	100*	100*
Brompton Pulp and Paper, 6s 1927.....	93	95	
Beaver Board, 8s 1933.....	87	89	
Bedford Pulp and Paper, 6½s 1942.....	96		
Berkshire Hills Paper Co., 8s 1941.....	87	89	
Beaver Board, N. Y. Curb, 8s 1933.....	87	89	
Beaver Products Corp., 7½s 1942.....	102	104	
Brown Paper Co., 8s 1931.....	102	105*	
Berlin Mills, 5s 1931.....	99		
Bryant Paper Co., 6s 1942.....	97	100	
Brown Company Serial, 6s 1925-43.....	97	100	
Central Paper, 6½s 1925-42.....	90	95	
Cape Breton Pulp and Paper, 6s 1932.....	100	102	
Carthage Sulphite Pulp and Paper, 8s 1941.....	40	50	
Champion Coated Paper Co., 6s 1924-34.....	102	102	
Champion Fibre Co. Notes, 8s 1930.....	102		
Cherry River Paper, 5s 1929.....	97	100*	
Chicotini Pulp Co., 6s 1942.....	63		
Donnacanna Paper Co., Ltd., 6s 1940.....	98	100	
Eddy Paper, 7s 1931.....	96		
Eagle Paper, 6½s 1932.....	96	100	
Escanaba Paper, 6s 1933.....	84	88	
Fox River Paper, 7s 1931.....	100		
Fort Orange Paper Co., 7s 1942.....	90		
Eddy Paper Co., 7½s 1931.....	95	98	
Gair (Robert) Co., 7s 1937.....	98	100	
Gilbert Paper Co., 7s 1927.....	97		
Gilbert Paper Co., 6½s 1923-29.....	100	102*	
Hammermill Paper Co., 6s 1930-39.....	98	101	
Hummell, Ross Film Corp., 7s 1925.....	90		
Jessup & Moore Paper Co., 6s 1939.....	91		
Kenmore Pulp and Paper Co., 6s 1937.....	91		
Lake Superior Pulp and Paper, 6s 1941.....	102		
Matagami Pulp and Paper Ltd., 6s 1937.....	30	40	
Marinette & Menominee, 7½s 1936.....	104	107	
Mead Pulp and Paper, 7s 1925-29.....	96	99	
Mengel Company, 7s 1934.....	100	103	
National Paper and Type, 6s 1947.....	96	99*	
Oswego Falls Corp., 6s 1942.....	101		
Orono Pulp and Paper, 5s 1941.....	93	96*	
Orono Pulp and Paper, 6s 1943.....	97	100*	
Oxford Paper Co., 6s 1947.....	98		
Paterson Parchment Paper, 5½s 1927-28.....	102	100	
Paterson Parchment, 6s 1938.....	96	99	
Parker, Young Co., 6½s 1944.....	92	96	
Price Bro. & Co., Ltd., 6s 1943.....	98	100	
Provincial Paper Mills, Ltd., 6s 1940.....	97		
Riordan Co., Series A, 8s 1940.....	90	93	
Riordan Pulp and Paper, Ltd., 6s 1929.....	24	28	
River Raisin Paper, 8s 1936.....	102	105	
St. Regis Paper, 6½s 1929-35.....	97	102	
Smith (Howard) Paper Mills, 7s 1941.....	90	93	
Smith (Howard) Paper Mills, 6s 1934.....	93		
St. Croix Paper, 5s 1923-37.....	95		
Stevens & Thomson Paper, 6s 1942.....	86	90	
Spanish River Pulp and Paper, 6s 1931.....	105		
Spanish River Pulp and Paper, Gen 8s 1941.....	107	109	
Ticonderoga Pulp and Paper Co., 6s, 1940.....	91	95	
Whittaker Paper, 1942.....	96	99	
Watab Paper Co., 6½s 1942.....	98	101	
Waterway Paper Products, 7s 1924-27.....	95	100	
Wayagamack Pulp and Paper, Ltd., 6s 1931.....	84	88*	
STOCKS		BID	ASKED
Abitibi Power and Paper, Com.....	62	63	
Abitibi Power and Paper, Pfd.....	98½	103	
Advance Bag and Paper, Com.....	8	12*	
Advance Bag and Paper, Pfd.....	70	75*	
Beaver Board, Com.....	5	8	
Beaver Board, Pfd.....	35	38	
Bryant Paper, Cap.....	9		
Brompton Pulp and Paper, Cap.....	32	33	
Chicago Mill & Lumber Co., Com.....	63		
Chicago Mill & Lumber Co., Pfd.....	97	100	
Crown Willamette, Com.....	93	98*	
Crown Willamette, 7% A, Pfd.....	98	SW	
Donnacanna Paper, Pfd.....	95	100	
Great Northern Paper, Cap.....	220	250	
Jessup & Moore Paper, Pfd.....	79		
International Paper Co., Com.....	50	53	
International Paper Co., Pfd.....	71	73	
Laurentide Co., Ltd., Cap.....	82	84	
Mengel Company, Com.....	30	31½	
Mengel Company, Pfd.....	72*	75	
National Paper and Type, Com.....	70*	75	
National Paper and Type, Pfd.....	85	90	
Oxford Paper Co., Pfd.....	93	95	
Provincial Paper Co., Com.....	90	100	
Provincial Paper Co., Pfd.....	95	98	
Price Brothers, Cap.....	36	38	
St. Maurice Paper Co., Cap.....	83	88	
St. Regis Paper Co., Cap.....	24	27	
Smith (Howard) Paper Co., Ltd, Com.....	29	31	
Smith (Howard) Paper Co., Ltd, Pfd.....	80*	84	
Spanish River Pulp and Paper, Com.....	101	103	
Spanish River Pulp and Paper, Pfd.....	111	113	
Ticonderoga Pulp and Paper, Cap.....	145		
Union Bag and Paper, Cap.....	48	50	
United Paper Board, Cap.....	52	55*	
West Virginia Pulp and Paper, Cap.....	54	57*	
Whittaker Paper, Com.....	12	20	
Whittaker Paper, Pfd.....	42	46	
Zellerbach Paper, Pfd.....	98	100*	

*Nominal.

Paper		F. o. b. Mill	
Ledgers.....	11.00	@	38.00
Bonds.....	9.00	@	45.00
Writings—			
Extra Superfine.....	14.00	@	30.00
Superfine.....	14.00	@	30.00
Tub Sized.....	10.00	@	15.00
Engine Sized.....	8.00	@	11.00
News—			
Rolls, contract.....	3.65	@	3.90
Rolls, transit.....	3.75	@	4.25
Sheets.....	4.00	@	4.25
Side Runs.....	3.25	@	4.00
Book, Cased—			
S. & S. C.....	7.00	@	9.75
Coated and Enamel.....	6.50	@	8.75
Lithograph.....	9.00	@	15.00
Lithograph.....	9.00	@	14.00
Tissues—			
White No. 1.....	.75	@	.90
White No. 2.....	.70	@	.80
Colored.....	.95	@	1.90
Anti-Tarnish.....	1.40	@	2.30
Kraft.....	1.00	@	1.25
Manila.....	.75	@	.80
Kraft—			
No. 1 Domestic.....	5.50	@	6.25
No. 2 Domestic.....	5.00	@	5.75
Imported.....	5.50	@	5.75
Manila—			
No. 1 Jute.....	9.00	@	
No. 2 Jute.....	7.75	@	8.50
No. 1 Wood.....	4.75	@	5.25
No. 2 Wood.....	4.00	@	4.50
Butchers.....	3.75	@	4.00
Fibre Papers—			
No. 1 Fibre.....	5.50	@	6.00
No. 2 Fibre.....	4.75	@	5.25
Common Bogus.....	2.50	@	2.75
S. Screening.....	3.25	@	3.75
Card Moulder.....	4.00	@	5.00
Boards—per ton—			
News.....	42.50	@	45.00
Straw.....	50.00	@	55.00
Chip.....	42.50	@	45.00
Binders' Beards.....	75.00	@	80.00
Sgl. Mln. Ll. Chip.....	55.00	@	62.50
Wood Pulp.....	70.00	@	75.00
Container.....	62.50	@	67.50
Sulphate Screenings—			
Coarse.....	.80	@	.90
Refined.....	1.75	@	2.00
Ground Wood—			
Screenings.....	20.00	@	25.00
Glassine—			
Bleached, basis 25 lbs.....	12.00	@	15.00
Bleached, basis 20 lbs.....	14.00	@	17.00
Mechanical Pulp		(Ex-Dock)	
No. 1 Imported.....	32.00	@	38.00
(F. o. b. Mill)			
No. 1 Domestic.....	30.00	@	35.00
Chemical Pulp		(Ex-Dock, Atlantic Ports)	
Sulphite (Imported)—			
Bleached.....	3.75	@	4.50
Easy Bleaching.....	2.90	@	3.20
No. 1 strong unbleached.....	2.75	@	3.25
No. 2 strong unbleached.....	2.50	@	2.75
No. 1 Kraft.....	2.75	@	3.00
Sulphate—			
Bleached.....	3.50	@	3.65
(F. o. b. Pulp Mill)			
Sulphite (Domestic)—			
Bleached.....	3.45	@	4.50
Easy Bleaching Sulphite.....	2.70	@	3.25
News Sulphite.....	2.45	@	2.75
Mitscherlich.....	3.00	@	3.75
Kraft (Domestic).....	2.70	@	3.50
Sola Bleached.....	3.90	@	4.10
Domestic Rags		New Rags	
Prices to Mill, f. o. b. N. Y.			
Shirt Cuttings—			
New White, No. 1.....	1.15	@	16.00
New White, No. 2.....	9.50	@	11.00
Silesias No. 1.....	10.50	@	11.50
New Unbleached.....	13.50	@	14.50
Washables.....	6.50	@	9.25
Fancy.....	10.00	@	10.50
Blue Overall.....	10.50	@	11.50
New Blue Prints.....	7.50	@	8.50
New Soft Blacks.....	5.75	@	6.20
Mixed Khaki Cuttings.....	5.50	@	6.00
Pink Corset Cuttings.....	10.50	@	11.00
Pink Muslin.....	10.25	@	10.75
New Light Sec-onds.....	3.25	@	3.50
O. D. Khaki Cuttings.....	6.00	@	7.00
Men's Corduroy.....	6.00	@	6.75
New Mixed Blacks.....	4.00	@	5.00
Old Rags			
White, No. 1—			
Repacked.....	8.00	@	9.00
Miscellaneous.....	6.50	@	7.00
White, No. 2—			
Repacked.....	4.75	@	5.25
Miscellaneous.....	4.00	@	4.50
St. Soiled, White.....	3.25	@	3.75
Thirds and Blues—			
Repacked.....	4.25	@	4.50
Miscellaneous.....	3.25	@	3.50
Black Stockings.....	4.00	@	4.50
Roofing Rags—			
Cloth Strippings.....	3.15	@	3.25
No. 1.....	3.15	@	3.25
No. 2.....	3.05	@	3.15
No. 3.....	2.00	@	2.25
No. 4.....	2.75	@	2.85
No. 5A.....	1.80	@	1.50
Foreign Rags			
New Light Silesias.....	9.50	@	10.50
Light Flannelettes.....	11.00	@	12.00
Unbleached Cottons.....	13.00	@	14.00
New White Cuttings.....	14.00	@	15.00
New Light Oxfords.....	9.50	@	10.25
New Light Prints.....	9.00	@	10.00
New Mixed Cuttings.....	4.00	@	4.50
New Dark Cuttings.....	3.75	@	4.25
No. 1 White Linens.....	10.00	@	11.00
No. 2 White Linens.....	7.00	@	8.00
No. 3 White Linens.....	6.00	@	6.50
No. 4 White Linens.....	4.50	@	5.50
Old Extra Light Prints.....	4.75	@	5.25
Ord. Light Prints.....	4.25	@	4.75
Med. Light Prints.....	3.75	@	4.25
Dutch Blue Cottons.....	4.50	@	5.00
Ger. Blue Cottons.....	4.00	@	4.25
Ger. Blue Linens.....	4.50	@	5.00
Checks and Blues.....	3.50	@	3.75
Linsay Garments.....	3.25	@	3.50
Dark Cottons.....	3.20	@	3.35
Shoppery.....	3.05	@	3.15
French Blues.....	4.25	@	4.78
Bagging		Prices to Mill f. o. b. N. Y.	
Gunny No. 1—			
Foreign.....	3.15	@	3.30
Domestic.....	3.25	@	3.40
Wool, Tares, light.....	3.00	@	3.10
Wool, Tares, heavy.....	3.10	@	3.20
Bright Bagging.....	2.90	@	3.05
Mixed Bagging.....	2.40	@	2.50
Sound Bagging.....	2.50	@	2.65
Roofing Bagging.....	2.25	@	2.35
Manila Rope—			
Foreign.....	6.50	@	7.00
Domestic.....	6.50	@	7.00
New Bu. Cut.....	3.50	@	4.00
Hessian Jute Threads—			
Foreign.....	4.00	@	4.25
Domestic.....	3.25	@	3.50
Old Waste Papers		(F. o. b. New York)	
Shavings—			
Hard, White, No. 1.....	3.60	@	3.90
Hard, White, No. 2.....	3.25	@	3.50
Soft, White, No. 1.....	3.10	@	3.25
Flat Stock—			
Stitchless.....	1.45	@	1.55
Overissue Mag.....	1.45	@	1.55
Solid Flat Book.....	1.40	@	1.50
Crumpled No. 1.....	1.25	@	1.35
Solid Book Ledger.....	1.80	@	1.90
Ledger Stock.....	1.60	@	1.70

Table listing various paper products such as 'Finished Jute', 'Jute Wrapping', 'Tubing', and 'Fine Tube Yarn' with their respective prices and quantities.

Table listing 'Unfinished India' products including 'Basis', 'Paper Makers' Twine', 'Balls', and 'Box Twine' with prices.

PHILADELPHIA

Table listing 'Paper' products in Philadelphia, including 'Bonds', 'Ledgers', 'Writings', and 'Superfine' with prices.

Table listing 'Paper' products in Philadelphia, including 'No. 2 Hard White', 'No. 1 Soft White', and 'No. 2 Soft White' with prices.

CHICAGO

Table listing 'Paper' products in Chicago, including 'All Rag Bond', 'No. 1 Rag Bond', and 'Water Marked Sulphite' with prices.

Table listing 'Paper' products in Chicago, including 'Container Lined', 'Old Papers', 'Shavings', and 'Ledges' with prices.

Table listing 'Domestic Rags' and 'Shirt Cuttings' in Philadelphia with prices.

Table listing 'Bagging' products in Philadelphia, including 'Gunny, No. 1', 'Foreign', and 'Domestic' with prices.

BOSTON

Table listing 'Paper' products in Boston, including 'Ledges', 'Sulphite', 'Rag Content', and 'All Rag' with prices.

Table listing 'Paper' products in Boston, including 'No. 1 Books, Heavy', 'No. 1 Books, Light', and 'No. 1 New Manila' with prices.

TORONTO

Table listing 'Paper' products in Toronto, including 'Sulphite easy bleach', 'Sulphite news grade', and 'Sulphite, bleached' with prices.

Table listing 'Old Waste Paper' products in Toronto, including 'Shavings', 'White Env. Cut.', and 'Soft White Book' with prices.

Table listing 'Old Papers' products in Boston, including 'No. 1 Hard White', 'White Blank News', and 'Manila Env. Cuttings' with prices.

Table listing 'Domestic Rags (Old)' products in Boston, including 'White No. 1', 'Repacked', and 'Miscellaneous' with prices.

Table listing 'Pulp' products in Toronto, including 'Ground Wood' with prices.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, December 31, 1924.

Prevailing conditions in the paper market as the year draws to a close indicate that the market is on the threshold of a prosperous year and that buying on a generous scale will be in full swing by February 1 at the latest. The jobbers have for a long period guarded against carrying surplus stock. Ever since November 1 they have been buying in an even, consistent way and their orders come along with dependable regularity. Sometimes the first of the year finds them with a large surplus to fall back on and a cessation of buying follows as a matter of course. That cannot be the result at this time. Their buying is sure to continue—perhaps a little cautious for a time yet, but bound to gain in momentum early in the year. This improvement will probably be noted by the middle of January but it will very likely be February 1 before it gets into its real swing.

Even the holidays were unable to slow up the excellent demand for news. News commands a very conspicuous position in the market and, after the inventory period is over, it is expected to enter upon a period of almost unprecedented prosperity.

Book papers continue in good demand but fine papers have slowed up a little after the splendid holiday business which they did. Tissues did an exceptionally heavy holiday business and there was also a heavy and abnormal demand for board. The board men enter upon the new year with their expectancy keyed up to concert pitch.

Mechanical Pulp

Mechanical pulp slowed up a little the past week but it has been doing well and the ground wood men are anticipating good business in 1925.

Chemical Pulp

Chemical pulp is in good demand and improvement from now on is looked for. Prices remain firm and it is reported that frequent sales are being made at a figure somewhat better than the ruling prices. The price tendency at this time seems to be upward.

Old Rope and Bagging

Old rope is doing exceedingly well and future prospects are good. The prices hold firm and the tendency is upward and the movement will undoubtedly be in that direction when it comes. Buying is being done for a considerable period of the new year which is an agreeable innovation as the buying of old rope has for a long time been practically confined to orders for the demand of the present. Most of the bagging items moved upward in price during the week and there is a strong demand for practically every grade. Supplies are limited and are in the case of some grades lagging behind the demand.

Rags

Prices on domestic rags are holding firm while a slight advance was recorded during the week on most of the foreign rags. The demand has kept up very consistently and good business is being booked daily. The market is in a very satisfactory condition. Collections are coming along better and yet there is not any great over abundance of stock while there is, in fact, a considerable shortage in certain grades. All the better grades are in good demand while there is a fair market in the others. Foreign rags are finding a good market and rags should enter the new year prepared to make a fine start on a period of prosperous business.

Waste Paper

The waste paper market has not undergone any great change. Business was off a little during the holidays but not materially so and there are evidences of revival this week. The prices are holding firm. As in the case of rags the collections are coming along

better but the market is not clogged by any great accumulation of stock.

Twine

The holidays put twine on the top shelf. The demand this year was excellent and it not only kept right up through Christmas but is also keeping right up for New Year's. Twine has had a signally poor year of it with many weeks when the market was practically flat. The revival of interest, however, cannot entirely be attributed to the holiday demand for there is now much buying aside from holiday buying. Orders were placed so cautiously for so long a time that there is every reason to believe that twine will now go ahead enjoying a reasonably good demand and that 1925 will prove a much better year for it than was 1924.

Southern Paper Trade Association Meets

[FROM OUR REGULAR CORRESPONDENT.]

BALTIMORE, Md., December 29, 1924.—The quarterly meeting of the Baltimore and Southern Paper Trade Association was held Friday night, December 19, at the Hotel Rennert, Baltimore. A dinner followed the business session. The principal speaker was Mr. Norbert Considine, president of the Paper House of Pennsylvania, Philadelphia.

Among the members from out of Baltimore who attended were Mr. Robert Johnston, president of the Old Dominion Paper Company, of Norfolk, Va.; B. W. Wilson, of the B. W. Wilson Paper Company of Richmond, Va.; B. W. Lipscomb of the Richmond Paper Company, Richmond, Va.; George E. Caskie, of the Caskie-Dillard Paper Company, Lynchburg, Va.; R. P. Andrews, Alfred Tennyson and William Schaeffer, all of the R. P. Andrews Paper Company of Washington, D. C., and Frank T. Parsons of the F. T. Parsons Paper Company, Washington, D. C.

The officers of the Baltimore and Southern Paper Trade Association are: President, Robert Johnston, of the Old Dominion Paper Company, Norfolk, Va.; Vice-president, H. A. Lengnick, of H. A. Lengnick, Paper, 226 W. Pratt Street, Baltimore; Secretary, John C. Burke, of the Baltimore Paper Company, Inc., 215 Pratt Street, Baltimore; Treasurer, John E. Lorenz, of J. Francis Hock & Co., Paper, 30 South Charles Street, Baltimore, Md.

Big News Print Project Assured

*The pulp and paper enterprise in Manitoba which recently involved the closing of a contract for the cutting of 3,000,000 cords of pulpwood in the north part of the province, will not be abandoned, according to a statement issued recently by J. D. McArthur, of Winnipeg representing interests behind the scheme.

"It may be that we will have to find new bankers and new associates and that the cost of the wood may make banking through the usual channels difficult, but the project will be carried through," Mr. McArthur declared. "With the people of Manitoba behind us, we will have this mill in spite of the Spanish River Pulp and Paper Company, Mr. Backus or any group of bankers in the United States or here, and we will show Canada that Manitoba is more than Mr. Backus' backyard," he added.

Whitaker Paper Co. Changes

[FROM OUR REGULAR CORRESPONDENT.]

BALTIMORE, Md., December 31, 1924.—Warren Hair, a member of the sales force of the Smith-Dixon Company Division (Baltimore) of the Whitaker Company, covering Baltimore city trade, will, after January 1, have charge of the Harrisburg, Pa., office of the Whitaker Company, and will represent his firm in that territory.

H. C. Jamerson, who has been traveling in the South for the Smith-Dixon Company Division (Baltimore) of the Whitaker Paper Company, will, after January 1, have charge of the Richmond, Va., office of the Whitaker Company, representing his firm in Richmond and vicinity, and covering his other territory from that point.

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, December 31, 1924.

The handicap of the holidays as usual proved too much to enable the chemical market to do anything really worth while during the past week. Christmas day coming on Thursday split the week in half and brought partial paralysis to business. Not only was the holiday celebrated but the first half of the week was spent in preparation for it and the last half in recovering from it. With New Year's day coming this week it cannot be said that the market has yet recovered its equilibrium. But this is nothing to be written disparagingly of the chemical market for its experience is nothing new and can probably be duplicated in any business channel. The market, however, has been by no means flat. Some sizeable orders were booked during the week and there was a continuation of contract renewals and frequent inquiries. Taken all in all it was not so bad a week and but for the holiday depression which came as a natural course it would probably have written a very creditable record for itself. This week will probably be a repetition of last but then, the chemical men figure, they will have clear sailing into better business and into a year of more than average prosperity.

BLANC FIXE.—Business in blanc fixe continues to hold off but the constantly increasing number of inquiries seem to indicate that buying on a much more liberal scale will result in a week or two. There are many orders which have been hanging fire for some time and, as has been previously stated, it has been expected that this business would continue to hold off until after the first of the year. If this business should come through at this time it will make an excellent beginning for the new year. The powder is selling at from \$75 to \$80 a ton and the pulp at from \$55 to \$60.

BLEACHING POWDER.—Bleaching powder continues to be in good demand but there are many contracts which still remain unrenewed. The possibility of lower prices in the near future is holding these back and therefore there is bound to be more spot buying than usual during the early part of the year at any rate. The buyers are evidently of the opinion that the present price cannot be maintained and the manufacturers are apparently of the opinion that it can be and that it is as low as conditions justify. It is quoted at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—The demand for caustic soda is very good and more contracts are being placed daily on the same basis as this year's contracts. Consumers are doing more future buying each week and the prospects for the coming year look exceedingly bright. The price is still from 3.10 to 3.15 cents a pound.

CASEIN.—Casein continues to show improvement and in spite of the holiday impediment it passed through an excellent week. A considerable increase in activity of this commodity is looked for at any time. It is selling at from 10 to 11 cents a pound.

CHINA CLAY.—China clay keeps on answering an even demand. Some sizeable orders are being placed and the market is at this time one of constant inquiry regarding this commodity. The imported grades are selling at from \$16 to \$20 a ton and the domestic grades at from \$12 to \$15 a ton.

CHLORINE.—The demand for chlorine continues to be slow. The contract renewals are not coming in as they should do and actual business seems to be holding off for some reason or other. The price is from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—Rosin is in fairly satisfactory demand but does not show the improvement that has been confidently looked for. It should pick up after the first of the year. It is quoted at from \$6.00 to \$6.25.

SALT CAKE.—Sale cake is having a hard time of it to stir up any real activity. Demand is slow and the most encouraging sign is the number of inquiries which are being received. It is quoted at from \$17 to \$20 a ton.

SODA ASH.—Soda ash is just now enjoying an excellent demand. Last week saw many more contracts renewed at the new schedule for 1925 and there is every promise of more energetic buying immediately. The price is 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina which has been picking up creditably experienced another week of real improvement in spite of the holiday depression. Contracts are being placed in increasing numbers and sizeable orders are being filled. The scheduled price is being strictly held to, no concessions are being granted, and the consumers have apparently made up their minds that they will have no better buying opportunity than the present. Sulphate of alumina gives promise of having a banner year in 1925. The price is from 1.40 to 1.45 cents a pound for the commercial grade at the Eastern works and from 2.20 to 2.35 cents a pound for the iron free.

SULPHATE.—The usual contract consignments in sulphur are being taken out and the price continues at from \$18 to \$19 a ton.

TALC.—Talc did finely last week considering it was a holiday week. There are many inquiries and some excellent orders are being booked. Talc has picked up most encouragingly and will start off 1925 with more vitality than it has shown for a long time. It is still quoted at from \$16 to \$17 a ton.

K. V. P. Christmas Service

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 29, 1924.—The addition of four immortals to the honor roll of the Kalamazoo Vegetable Parchment Company was an interesting incident of the fourteenth annual Christmas service of that concern, held last Wednesday in the community house. To attain that distinction one must have been for at least ten years in the employ of the company. Those who have reached that mark this year are Don H. Ross, John F. Schlick, Edwin L. Kelly and Steven Martin.

To each one mentioned, President Jacob Kindelberger presented a diploma of service and a K. V. P. service button. This increases the company's honor roll to 24 in all.

A point brought out by President Kindelberger was that the success of the K. V. P. Company is dependent on the loyalty of everyone. He also declared that the Parchment ideal for 1925 is embodied in the Fifteenth century saying, "It's not in mortals to command success, we'll do more—deserve it."

The annual Christmas exercises brought out a crowd that taxed the capacity of the community house. They were treated to an unusually fine program. Dr. Allan Hoben, president of Kalamazoo College, spoke on "Good Will Toward Men." Rev. O. R. Grattan offered prayer and Rev. W. M. Puffer D. D. pronounced the benediction. Don E. McDowell officiated as leader of the band and conducted a musical program of unusual merit.

A touching incident of the program came just before the singing of the last hymn. President Kindelberger said, pointing to the great throng of employees making up the audience: "You more than any other people I ever met know the meaning and true import of the second verse of this hymn 'Blest Be the Tie that Binds.' Experience has taught me that when trouble comes to anyone in our midst, you, practically one and all, are anxious to aid in bringing relief to the afflicted individual or family."

Following the program there was a distribution of 800 Christmas presents, souvenirs and calendars.

Southern Kraft Prices

[FROM OUR REGULAR CORRESPONDENT.]

NEW ORLEANS, La., December 27, 1924.—Prices on Southern Kraft paper during the past week ranged from \$4.55 to \$5.18 according to reports of the Southern Kraft Manufacturers Association.