

NOV 18 1924

PAPER TRADE JOURNAL

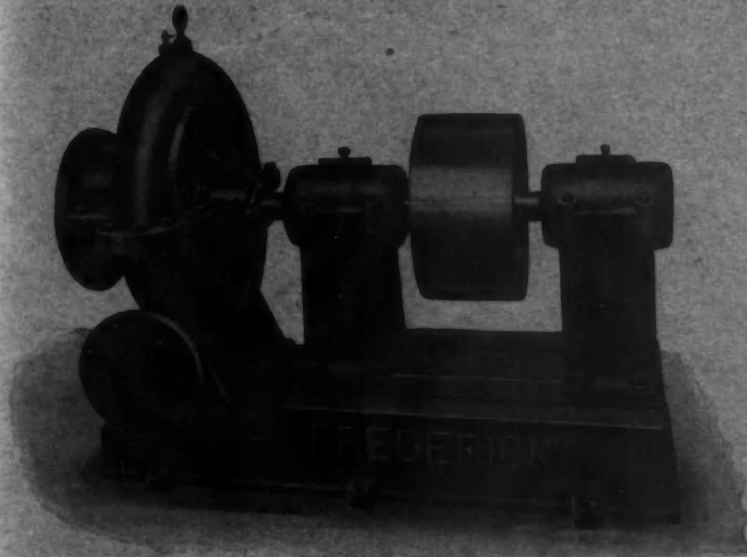


Vol. LXXIX. No. 20

NEW YORK AND CHICAGO, NOVEMBER 13, 1924

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PAPER TRADE JOURNAL

ESTABLISHED 1872

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
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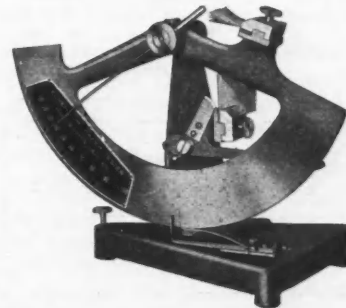
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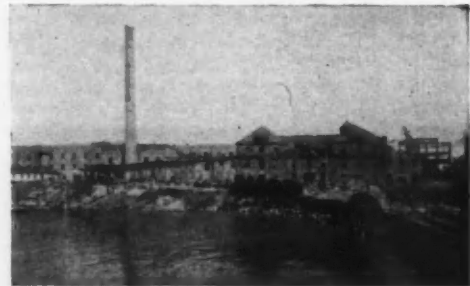
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ENGINEERING—BUILDING—EQUIPMENT

PAPER TRADE JOURNAL

ESTABLISHED IN 1872

Vol. LXXIX. No. 20

NEW YORK AND CHICAGO

Thursday, November 13, 1924

TESTS FOR GOVERNMENT PAPER

To Furnish Reliable Information To Manufacturers Bidding on Government Paper Called for By the Joint Congressional Committee on Printing for Next Year, Testing Section of Government Printing Office Offers To Test Regular Stock Papers for Comparison With Proposed Specifications — Special Attention Called To Specifications for Bonds, Ledgers and Map Papers

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—In order that paper manufacturers interested in bidding on government paper requirements may secure reliable information as to the quality of paper called for by the specifications proposed by the Joint Committee on Printing for next year, the Testing Section of the Government Printing Office offers to test samples of regular stock papers simply for comparison with the proposed specifications. It should be understood, however, that the testing of these samples does not in any way supersede the specifications and standards adopted by the Joint Committee on Printing. All bids submitted must be based on the government specifications, the testing of samples being only for the purpose of furnishing the manufacturer with information as to the grade of paper required by the Joint Committee on Printing. No proposal based on bidder's samples will be considered by the Joint Committee on Printing in awarding annual contracts for paper.

Special attention is called to the specifications for bonds, ledgers and map papers, specifying a minimum average folding endurance of the paper at 70°-75°F. and 50% relative humidity, which test for quality was added to the specifications last year and has proved most satisfactory for indicating the quality of paper desired. Samples of bond, ledger and map papers submitted, as well as samples of other kinds called for by these specifications, will be carefully tested and full report made for the information of the manufacturer. These test reports cannot, however, be used for advertising purposes. In submitting samples not less than six sheets 8 x 10½ inches should be submitted, and only one weight paper need be submitted on a specification calling for several weights of the same quality.

It has been the endeavor of the Paper Specifications Committee to prepare specifications which can be met by any paper manufacturer, and thereby to stimulate the interest of paper manufacturers in bidding on government requirements. It is hoped that this offer to cooperate with the manufacturers by testing their commercial papers for comparison with government specifications will be utilized to mutual advantage. Samples should be addressed to the Public Printer, Washington, D. C., Attention of Testing Section.

For Simplification of Tissue Sizes

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—“Consumers, jobbers and manufacturers of sheet tissue paper are losing a lot of money because of a practice of using odd size tissue sheets,” says a letter to the Division of Simplified Practice, Department of Commerce, from a mid-western manufacturer, asking the co-operation of the Division in checking this loss.

“The Standard size of tissue paper is 20 x 30 inches, and this size

has been in effect for many years. It is largely used in department stores for packing purposes,” continues the letter, “and of course the size is not a real feature with them.

“A few years ago some jobber salesman who could not stand to lose an order conceived the idea of selling his customers a sheet 19 x 28 in competition with a sheet which his customer was using in 20 x 30 inches. Since that time, the practice has grown until today when only about eighty per cent of the tissue made for the eastern market is ordered in standard sizes.

“The result is that if an eastern jobber carries a stock of tissues, he has got to have seven sizes: 19 x 26, 19 x 27, 19 x 28, 18 x 28, 18 x 27, 18 x 26, and 17½ x 23. When the consumer uses the odd sizes, he does so not knowing, in many cases, of the standard sizes, and in many instances is fooled because he buys a ream of tissue paper and does not know the standard size of tissue paper.

“Practically all the tissue machines in this country are made to trim 60, 80, 100 or 120 inches. When these odd sizes are made by the manufacturer, he loses production, which means an extra cost to him. When the jobber carries the odd sizes, it means extra work and extra expense.”

The Division is asked to give its assistance in bringing back the old standard to its former prominence, both as a matter of checking losses in production, reducing inventories and handling cost, and as a need economy in the industry.

Correspondence with various paper trade associations and others has been undertaken, as a preliminary to a closer study of the situation upon which the Division's action can be based.

Bradford Paper Co. Incorporates

KALAMAZOO, Mich., November 10, 1924.—The Bradford Paper Company, authorized capital \$500,000, has filed articles of incorporation with the secretary of state and county clerk. Clarence A. Bradford, formerly vice-president and general sales manager of the Rex Paper Company, is president of the new company. George K. Taylor, president of the Taylor Produce Company, is vice-president; H. Clare Jackson, attorney, is secretary-treasurer. These three and H. A. Young, J. L. Hollander and J. Grant Fox comprise the board of directors.

The articles filed show that Mr. Bradford has 6,200 shares of stock in the new concern. J. Grant Fox holds 1,200 shares. George K. Taylor and H. A. Young, 200 shares each and H. C. Jackson and J. L. Hollander, 100 shares each.

Mr. Bradford reports that the machinery has been ordered. The work of getting the Fulford street plant ready for the equipment is progressing rapidly.

PHILADELPHIA LOOKS FOR IMPROVED PAPER DEMAND

Paper Merchants Expect Business to Show Gradual Betterment From Now On—Keen Competition With Price Cutting Disturbs Local Bag Market—Progressive Paper Co. Moves to Larger and More Desirable Quarters at 266-70 South American St.—New York & Pennsylvania Co. Rapidly Repairing Mill at Lock Haven, Pa., and Will Resume Manufacture of Kraft Early in New Year.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., November 10, 1924.—Although it is too premature for the industrial response to the overwhelming confidence in the present administration as demonstrated at the polls, nevertheless the paper trade has taken on a new inspiration in its attitude towards the future. Paper distributors do not look for any immediate brisking up of demand but are looking forward to a gradual improvement as the new year dawns, with more favorable markets next spring.

Paper Market Spotty

Present business is still dragging along in the same rut which has marked the fall trading with occasional spurts for some of the lines used by the department stores, clothing manufacturing plants, and a few of the larger factories in the coarse paper division and books and special grades of writings used in the manufacture of stationery specialties in the fine paper section.

Bag Market Uncertain

Bag dealers are feeling the keenness of the competition now being waged among the local distributors and among the manufacturers. Most of this competition comes from the small plants. In regard to this competitive price slashing the larger manufacturers have been urging dealers to give their attention to the size of the bags rather than the price. It is claimed by the larger concerns that they are not able to meet some of the lower quotations of the smaller producers for the reason that they are giving full size bags whereas there is a tendency among the competing houses to cut the sizes and misrepresent capacity in the marking of the bags for the distribution trade. For instance, the example is given of one of the manufacturers marking his bag capacity as 11 pounds whereas by actual measurement there were but 10½ lbs. While apparently the cut is but ½ lb. it nevertheless means that a 10 per cent reduction can be quoted from the correct weight in the manufacturing of this article. The larger producers are showing actual figures to back up their statements to the local trade, on these facts.

Progressive Paper Company in New Home

The Progressive Paper Company, formerly located at 137 N. 6th street, has taken larger quarters for the expansion of business on the first floor of the Allied Industries Building, 266-270 South American street, owned by Sylvester S. Garrett, coarse paper distributor. The new location gives the Progressive Company, a central city sales office and warehouse, with wide street facilities for the shipping service and the speedier handling of the growing business. The firm specializing in coarse papers, Senecas, pattern papers, corrugated and like products and twines has been organized six years with its original members still conducting its business and consisting of Samuel and Harry Clair and their sister Miss Miriam Clair, who is actively associated with her brothers in the management of the company.

H. J. Fleming Joins Hunting Camp

Harry J. Fleming of the H. J. Fleming Paper Company, 1017 N. Front street, will in the course of his business trip through New England join the camp of trade sportsmen who make up the hunting party of the Raquette River Paper Company, in the Adirondacks

during this month. Mr. Fleming leaves next week for the mountains and will join the trade guests of R. J. Sifton, Jr., who annually make Raripaco Lodge their headquarters for a two weeks' sojourn in the Adirondacks. The camp provides a diversified recreational program of outdoor life including fishing, hunting, hiking and other Fall pastimes. The campers are formed of two parties with two weeks allotted to each group and totaling several hundred of the paper trade fraternity.

N. Y. and Penn. Co. Repairs Mills

Philadelphia paper dealers who handle the various lines of the New York and Pennsylvania Company, have been assured that the mills will resume the manufacture of krafts by the early part of the New Year. Every effort is being concentrated by the mills on the speeding up the reconstruction of its digester room which was destroyed in the explosion that occurred in the Lock Haven Mills in late September. The only product which has been affected by the explosion was that of the kraft papers which have been off the market ever since the catastrophe. With no mill shipments to the local houses of any consequence since production was suspended, stocks on hand having been cleaned up, the Quaker City trade is eagerly awaiting the resumption of operations, in order to take care of its accumulated orders for the line of krafts made by these mills, one of the best selling in this section. The Philadelphia headquarters of the company are located at 437 Chestnut street.

C. D. Hallock Retires from Paper Business

C. D. Hallock, who for many years has been general sales manager for the Analomink Paper Company, and covering the Philadelphia trade for that company with headquarters in the Delaware Water Gap, has severed his connection with the trade and is now engaged in the coal business at Stroudsburg, Pa. His successor, W. V. Spear, called on the local trade last week, and was enthusiastic over the outlook for the company's future. The Analomink Paper Company produces in its mills a large variety of specialties such as better grades of wrappings, colors, manilas and fibres.

Durham Paper Co. to Resume

The Durham Paper Company, with mills at Durham, Pa., announces during the week through its local representative, W. L. Cochran, that it will again resume the operation of its plant after several months shut-down. With the reopening of the mills a line of high grade krafts and water finished wrappings of exceptional strength will be produced. Since the closing of the mills many improvements have been made in the buildings and mechanical equipment. Mr. Cochran, who visited the trade last week, will continue to represent the mills in the Philadelphia district, the territory assigned to him for some time previous to the closing of the mills.

Paper Sale by Auction

More than 300 tons of assorted varieties of paper and paper products were disposed of by auction last week by William F. Comley & Son, auctioneers, in the warehouse, 416 S. Front street. The stock, consisting of wrappings, toilets, stationery, envelopes, tags, cards, writings, bonds, super calenders and coated papers were disposed of by auction under legal procedure brought about by the failure of a New York concern to follow its agreement with the Goldman Paper Stock Company, 414 S. Front street, to take over their purchase of the fire damaged papers salvaged from the Garrett-Buchanan Company, by the insurance concerns, and sold to the Goldman Company. The New York paper distributor made an initial payment at the time of purchasing the stock but failed to carry out its agreement to take over the stock with full payment at a later date. In order legally to dispose of the papers the Goldman Company was obliged to proceed for its disposition by auction sale last Tuesday, with the remainder of the consignment going at bargain prices to paper dealers and the consuming trade. Much of the stock was water damaged.

Noble Gillett Addresses Paper Dealers

Noble Gillett, of the Chicago Paper Company and Chairman of

Program Committee of the Western Paper Trade Association, was in Philadelphia on November 3 and 4 on business for his company.

At the Fall Meeting in Chicago last month, Mr. Gillett presented a very able paper on the subject "How Can Distribution of Paper Be More Efficient?" The ideas suggested by Mr. Gillett were so interesting that, hearing of his presence in Philadelphia, Mr. Thomas, president of the local Paper Trade Association, decided it would be very advantageous for all of the members of the Philadelphia Paper Trade Association, particularly those who had not been to Chicago, to hear Mr. Gillett speak.

Consequently, a testimonial luncheon was arranged with Mr. Gillett as the guest of honor and attended by over 50 members of the local paper trade. The luncheon was held on Tuesday, November 4, at noon, at the Bourse Restaurant.

Mr. Gillett spoke for about one-half hour, explaining further his ideas on the scientific merchandising of paper. His talk was eagerly listened to and at its completion, he was given a rising vote of thanks by the Philadelphia Paper Trade Association for the work he has done towards solving some of the biggest problems that have confronted paper merchants since before the war.

B. F. Perkins & Sons to Build

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., November 11, 1924.—The contract for the second building in the \$2,000,000 group of B. F. Perkins & Son at Willimansett was awarded the past week to Casper Ranger Construction Company who receive the main contract amounting to about \$200,000. As noted in the PAPER TRADE JOURNAL the awarding of this contract was subject to the election of President Calvin Coolidge.

General Manager Paul W. Bidwell explained to your correspondent that this condition had nothing to do with politics. "We did not believe that Davis had a chance; and the election of La Follette or the throwing of the election into Congress would lead to such an unsettled state of affairs that we would not care to invest money in a new building at this time. Now the election is over and Coolidge is elected we can go ahead with our plans."

The building is of brick concrete and steel 74 x 165 feet, four stories, and is located at right angles to the present building in Willimansett. The Company also owns a large lot of land with 1100 feet abutting the Boston & Maine railroad track and has its own spur track. It is expected that the new building will be completed by April 15 when a third building will be undertaken. The present building will be used in the manufacture of cotton and husk calendar rolls the machinery and equipment of the Winter street plant being moved over.

Two new big buildings will be built soon there being five in the plans for the new plant including an office building. On their completion the entire machinery and equipment will be removed from the Crescent street plant which will either be sold or taken over by the American Tissue Mills Inc. The concern will employ a much larger force in their new location. They are badly overcrowded in the present quarters.

Wm. Whiting to Speak on Paper Making

SPRINGFIELD, Mass., November 10, 1924.—The Connecticut Valley Club of Printing House Craftsmen, Inc., will hold a banquet and illustrated lecture on Writing Papers at 6:45 o'clock, Saturday evening, December 6, at Cooley Hotel.

The Club has been fortunate in securing for the speaker of the evening William Whiting, Treasurer of the Whiting Paper Company, Holyoke, Mass.

Mr. Whiting will take his audience through the paper mill by means of illustrated slides. Each slide will be explained in its relation to the art of paper making.

Tickets for the banquet may be had from any member of the Club or from Stephen F. Bible, chairman of the banquet committee.

New A. P. W. Plant at Sheet Harbour

The A. P. W. Paper Company purchased in 1923 the Rhodes-Curry limits at Sheet Harbour, Nova Scotia, comprising 60,000 acres of timber, mill site, wharf and buildings, and immediately started the building and equipping of a ground wood pulp mill with an annual capacity of 24,000 tons.

The same year a Canadian corporation was formed with the following officers: President, Seth Wheeler, Jr., vice-president, Willis S. Crandell, treasurer, William A. Wheeler, secretary, Frederick A. Gaylord.

The mill is equipped with a Thorne Barker, eight grinders from the Engineering and Machine Works of Canada, two 2500 hp. motors from the Canadian General Electric Company, eight wet machines



NEW GROUND WOOD PLANT AT SHEET HARBOUR

from Port Arthur Shipbuilding Company and three 600-ton Hydraulic presses from the Hydraulic Machinery Company. This is the first pulp mill to be built without belts, basement or stuff chests and is arranged to carry all stock in process by gravity after passing through the screens.

The construction of the plant is concrete with brick curtain walls, steel trusses and wood roof.

The local manager of the mill department is Ralph E. Jones. The woodlands department is in charge of Frederick A. Gaylord. The designer of the plant and general manager of the mill department is Willis S. Crandell.

The plant will go into operation about February 1, 1925. Power is furnished from Government development on East River, Sheet Harbour; the power house being located about three miles from the plant.

Fraser Pulp & Lumber Co. Being Wound Up

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., November 10, 1924.—Recently Fraser Pulp and Lumber Company, which, although it is owned by the same shareholders as Fraser Companies, Limited, has no connection with that company, sold its large timber holdings in the province of Nova Scotia for several millions. Fraser Pulp and Lumber having sold its properties, is now being wound up, and its assets are being distributed among its shareholders, as it has ceased to be an operating company. Fraser Pulp and Lumber, however, should not in any way be confused with Fraser Companies, Limited, which latter company is doing one of the largest pulp and lumber businesses in eastern Canada, and this year is extending its operations considerably, including the construction of a new mill on the Quisibis.

PAPER DEMAND IN TORONTO NOT UP TO EXPECTATIONS

Market Spotty and Aggregate Sales Not As Large As They Should Be at This Season of Year—Demand for Wood Pulp Continues Limited With No Change in Prices—W. H. Sherriff of Hodge-Sherriff Paper Co. Returning From Western Canada Says Paper Business Is in Fair Shape in That Territory—Canadian Mills Show Considerable Interest in Safety Work—General News of the Trade.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., November 10, 1924.—November business with the wholesale paper trade has thus far not come up to expectation, being rather light in volume. The market has been spotty. The turnover is not what it should be at this season of the year and consuming concerns are still buying on a cautious basis. No large orders for tonnage are being placed but hopes are entertained for an improvement before the end of the month. The mills continue fairly busy and manufacturers of book papers are quite active and, in some cases, have orders booked which will keep them going until the end of the year. There is a very good demand from catalogue houses and publishers. Producers of toilets, tissues and specialties report that requisitions are quite sizeable. Coated paper firms are rather quiet, a condition which has lasted for several months now. China clay has been reduced in price and is now selling at twenty dollars a ton delivered while casein is around ten and a half cents a pound, with a light call.

No Change in Pulp Market

So far as pulp is concerned there is no change and mills are buying only for immediate requirements. Only small stocks are in the hands of the manufacturers and prices remain unchanged.

Mr. Sherriff Returns from West

W. H. Sherriff, of the Hodge-Sherriff Paper Company, Toronto, has returned from an extended trip to Western Canada. He says that he found the paper business in fair shape and so far as kraft papers are concerned there is a better demand for the product. In all the western provinces, a growing feeling of optimism exists owing to the higher prices which wheat is commanding and the improved outlook in many lines of trade.

Educational Work Among the Mills

A meeting of the Educational Committee of the Canadian Pulp and Paper Association was held in Toronto last week and plans considered for the promotion of the work in the industry. The Committee is composed of George Carruthers, president of the Canadian Pulp and Paper Association, T. L. Crossley, A. P. Costigane and C. Nelson Gain.

Taking Out Considerable Pulpwood

About a year ago Charles Mellor, of Port Arthur, Ont., was awarded the contract to cut the timber in the township lying east of the C. P. R. main line near James station. He cut about 12,000 cords of spruce during the past year and will take out about the same quantity during 1924, although the call for wood is not as active at the present time as it was but the market is expected to pick up with the anticipated revival in the pulp and paper business.

Mr. Costigane Visits Northern Mills

A. P. Costigane, of Toronto, Engineer of the Ontario Pulp and Paper Makers' Safety Association has returned from an extended trip to the pulp and paper mills at Iroquois Falls, Smooth Rock Falls and Kapuskasing, Ont. He found much interest taken in the work of safety at Smooth Rock Falls, a well equipped hall with a moving picture outfit has been erected and safety meetings will be held by the employees of the Mattagami Pulp and Paper Company Ltd. At

Kapuskasing, there is an interesting accident prevention competition in progress for a trophy offered by Mr. Hoyman, safety engineer of the Kimberly-Clark Company, and considerable interest has developed in the contest. At Iroquois Falls, safety conditions in general were discussed with the special committee and plans for an intensive campaign are under way among the employes of the Abitibi Power and Paper Co.

Nipigon Products Secures Charter

A provincial charter has been granted to Nipigon Products, Limited, with an authorized capital of \$500,000, one half of which will be preference shares. The head office of the company will be at Fort William and the organization is empowered to carry on business as timber merchants, loggers, pulp and paper mill activities and allied lines.

Waterous Company Gets Big Contract

The Waterous Engine Works Company, Brantford, Ont., has been awarded the contract by Price Brothers & Co., of Quebec, for fourteen new and improved pulpwood grinders for which the Waterous Company has secured the manufacturing rights from the owners of the patent. The turning out of these machines will keep the plant busy until spring working night and day shifts.

Notes and Jottings of the Industry

Victor Wainio, a well known pulpwood jobber, who had a contract for taking out wood for the Spanish River Pulp and Paper Mills, at Pilot Harbor, Lake Superior, was drowned recently when his canoe capsized while crossing from one camp to another at night.

Hon. W. H. Price, Provincial Treasurer for Ontario, states that the new airplane service of the province, which did most effective work last season in Northern Ontario, resulted in the cutting down of the number of foresters and affected a direct saving of three hundred and fifty thousand dollars in the protective service.

L. S. Dixon of Liverpool, Eng., manufacturer of Dixotype Dry Flog, who spent some time in Toronto and other cities, has returned home.

The Ontario Department of Lands and Forests will plan some thirty thousand pounds of red and white pine seed during this fall on burnt over and cut timber lands. This will be in the nature of an experiment in reforestation plans.

The Buntin Reid Company, Toronto, has issued a new broadside known as "Seal of Approval" printed on dove white book, which is a Canadian made sheet competing with English esparto printing and imitation art papers.

Fire recently visited the headquarters of James Stewart, of Port Arthur, Ont., pulpwood contractor, at Lake Shebandowan and wiped out all the buildings. It was with great difficulty that a tug and two scows were saved.

The annual meeting of the Canadian Lumbermen's Association, will be held on February 4 and 5 in Quebec City. Hon. Mackenzie King, Premier of Canada, Hon. L. A. Taschereau, Premier of Quebec, and others will be among the speakers on that occasion.

R. I. Finlay, of Toronto, president of the Canadian Paper Trade Association, spent the past week in Montreal on business connected with the association.

John Martin, of the John Martin Paper Company, Winnipeg, spent a few days in Toronto this week on a visit to his friends in the industry.

A provincial charter has been granted to the Newsome Stationery Company, Ltd., with an authorized capital of \$40,000 and head office in Toronto to manufacture, import and deal in stationery.

J. G. Gibson, of Toronto, secretary of the Spanish River Pulp and Paper Mills, spent a few days lately on a visit to the Espanola plant of the company.

Col. C. H. L. Jones, of Saulte Ste. Marie, Ont., manager of manufacturing for the Spanish River Pulp and Paper Mills, was a business visitor to Toronto last week.

MATHIESON System

Accuracy First

ACCURACY is the keynote in the design and operation of the Mathieson Multi-Unit Tank Car. Absolute accuracy in loading is the basic feature that creates all the other advantages of this car—maximum safety, economy and convenience in the transportation and use of Liquid Chlorine.

Upon the return of a Multi-Unit Car to our works, each of the fifteen one-ton containers is removed from the car and thoroughly cleaned, dried and inspected. The valves and fusible safety plugs are removed from each container and reset in our machine shop.

Each ton container is refilled while being individually weighed on a Toledo scale. To make doubly sure of the accuracy of the contents and of the tightness of the valves, all containers are allowed to stand for 24 hours after filling, until the Liquid Chlorine has adjusted itself to atmospheric temperature. A final inspection is then made and the weights rechecked before the containers are returned to the Multi-Unit Car.

Users of the Mathieson Multi-Unit Tank Car are assured of an even fifteen tons in each carload, each container an accurate measure of Liquid Chlorine, with none of the hazard due to possible overloading and with no shortages or uncertainty as to the quantity of material received.

The **MATHIESON ALKALI WORKS Inc.**
25 WEST 43rd STREET NEW YORK CITY

PHILADELPHIA
PROVIDENCE

CHICAGO
CHARLOTTE



Deal Direct with  the Manufacturer

Bicarbonate of Soda
Liquid Chlorine-Caustic Soda

Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

CHICAGO TRADE LOOKS FOR GREATLY IMPROVED DEMAND

Paper Business Expected To Reach Its Normal Pace By Middle of November—Coarse Paper Branch of the Market Considerably Encouraged Over the Outlook—Paper Stock and Boards, However, Fail To Show Improvement—Plain Chip Board Shows a Decline of About \$2.00 Per Ton in Past Few Weeks—W. E. Dwight, President of Dwight Bros. Paper Co., Distributes Bonus.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Nov. 10, 1924.—From now on a marked improvement in Chicago's paper market is anticipated. General consensus of opinion has future business on a sound, prosperous, yet conservative basis. Many believe that orders will increase all along the line with a heavier demand after January 1, 1925. Belief is further expressed that the new twelve-month period will be a normal business one in which salesmanship must figure prominently.

By the middle of November trade should have assumed its regular pace. In bonds, ledgers, writings, coated and books, November and December ordinarily are not big ones in sales volume. It will probably be somewhat different though this year inasmuch as a good many orders have been held up pending political development. A few are prone to think this had no effect on placing of orders, but a representative of a large producer the other day stated that he knew of a number of large orders which would not be booked until after election. He expects these to come through now. Besides, there were unquestionably hundreds of small ones hanging fire.

In the face of such potential business, paper folks contend there will be no boom. In fact, they talk against it, hoping that conditions will maintain an even, normal level. Practically all large advertising campaigns for late fall, holiday and winter programs have been out, but those for next spring will begin to take form soon after the holidays. Opinion has it that these will be heavy indeed. Prices are firm with little indications of advances. Nothing marked is looked for. Lower grade bonds are slightly higher but this is evidently due to the fact that special lots are no longer available at the lower figure.

Coarse Paper Merchants Optimistic

Optimism in the coarse paper branch is warranted, judging by the outlook. Some are displaying their confidence in the future by buying heavily from the mills. They are placing large orders now as insurance against any advanced or runaway market. Such action further indicates that they anticipate increases on all higher grade coarse papers. Although an upward movement has not yet shown itself, it seems to be inevitably that way. Some unsettling of market stability has been caused by heavy shipping of low grade kraft recently, into the Chicago territory.

Moreover it is sold in competition with higher grades at a considerably lower figure and in some instances has cut a chunk of trade for those mills producing it.

Pilcher-Hamilton Salesmen Hold Luncheon

After a lapse of two months, the Pilcher-Hamilton Company sales organization resumed its monthly luncheon and meeting on the first Thursday of November. One was missed due to the fact that the old Union League Club, at which the luncheons were held and of which sales manager E. A. Hull, Jr., is a member, began to come down to make way for a new, modern edifice which the club will occupy. So another place must be used for a year or so until new quarters are completed.

Of particular interest to everybody at this luncheon were the remarks made by E. N. Smith, vice-president of the Tuttle Press Company, whose lines were waterproof paper, both plain and creped, has been taken on by the Pilcher-Hamilton Company, with exclusive

sales rights in Chicago and the surrounding territory. This waterproofed paper is composed of two layers of kraft with a layer of asphaltum between and is used in the wrapping of foodstuffs. Mr. Smith explained the manufacturing processes and stirred up a great deal of enthusiasm among the salesmen over these products.

Chairman A. S. Harmon officiated in his usual enjoyable fashion, introducing the speaker of the day. Prizes were announced and awarded for the last month's sales contest, Capt. Shultz's team winning the team prize for the largest number of new accounts. Mr. Reineke won the individual prize for the largest number of new accounts and Mr. Treadwell won the individual prize for the largest sale to a new account.

Boards and Paper Stocks Recede

While the finer divisions of the paper industry in this section of the country, firm up and even show some advances, the board and paper stock branches are not so affected. Plain chip receded slightly in the past few weeks about two dollars per ton. Containers firmed up in price a shade or so. The board recession has its effect upon the paper stock market. Declines were again noticed on about one-third of the items listed. These concerned principally the upper grades, while most of the lower ones remained the same. While there is growing confidence in the general outlook paper stock dealers are awaiting actual orders that will indicate business is moving along. There seems to be plenty of accumulations to supply the present demand.

W. E. Dwight Again Distributes Bonus

W. E. Dwight, president of the Dwight Brothers Paper Company, Chicago, has just left to spend the next three or four months at his winter home in Naples, Florida, where it has been his habit to enjoy the cold months for the past decade or so. It is usually early in November that Mr. Dwight makes the trip and always just before he goes he distributes a cash bonus to every one of his employees, from the highest man down to the office boy, none excluded. And the gift is always generous enough to cause each recipient to look forward to the next one with eager anticipation. Mr. Dwight's stay in Florida this year will be an especially enjoyable one inasmuch as he has a new motor boat that will accommodate a dozen or more people quite conveniently and which always enlivens the winter months' stay at Naples. Mr. Dwight will probably return early next March.

I. P. May Build Mill at Chelsey, Que.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., November 10, 1924.—It is taken for granted here that the International Paper Company will take over properties formerly belonging to the Riordon Pulp and Paper Company now in the hands of bondholders' committees, and this belief has been strengthened by the news from New York that the company will make a bond issue of between ten and twelve million dollars to finance the project.

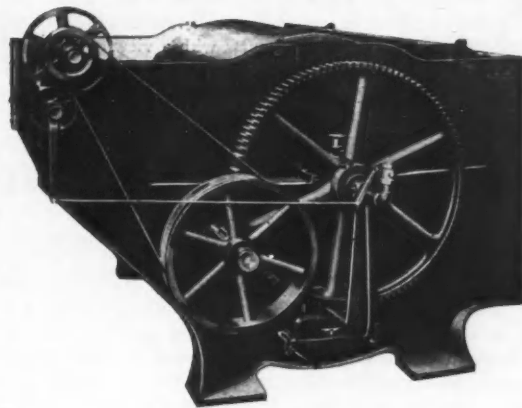
It is stated in Ottawa that the company will erect a large pulp and paper mill at Chesley, Quebec, which is in the Gatineau Valley between Montreal and Ottawa. The cost of the mill it is stated will be around \$3,000,000, while another \$3,000,000 will be involved in taking over all the properties of the Gatineau Company, Limited, which were acquired by the Riordon Company.

The area of timber lands involved is 9,638 square miles, as compared with the company's present holdings of 6,969 square miles of timber lands in Canada and the United States. This will make a total of 16,607 square miles of timber limits. In addition the International Paper Company will acquire valuable water power sites.

Meanwhile The Ottawa Journal received a telegram on November 7 from A. R. Granstein, president of the International Paper Company stating that although the International Paper Company is considering the possibility of acquiring the Riordon properties it has as yet neither decided to do so, nor settled any basis for their purchase.

"This is the whole story up to date," the telegram concludes.

**BIRD
MACHINERY**



*This mill has a
closed system*

ONE of the best managed mills in the country uses three Bird Save-Alls to handle the white water from its giant cylinder machine.

Another Bird Save-All is used as a thickener for the fibres recovered from the tailings of five Bird Screens.

Two other Bird Save-Alls recover the good fibres from the white water of the Fourdrinier machine.

All white water and waste water is passed through Bird Save-Alls before it leaves this mill. The management is convinced that the installation of Bird Save-Alls is a profitable investment.

BIRD MACHINE COMPANY
South Walpole Massachusetts

Western Representative
T. H. Savery, Jr., 1524 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Limited
260 St. James Street
Montreal, Canada

The
**BIRD
SAVE-ALL**

SULPHURIZED PULP AND PAPER PRODUCTS

By WM. H. KOBBE, TEXAS GULF SULPHUR CO., NEW YORK.

During the past two years the Research Department of the Texas Gulf Sulphur Company has been experimenting with various sulphur treatments applicable to pulp and paper products with a view of extending its market for crude sulphur. Some of the results achieved are of interest to the pulp and paper industry.

Since the treatment imparts certain characteristics of sulphur to the finished product, it is well to describe some of the outstanding qualities of sulphur which may not be fully understood.

Physicochemical Properties of Sulphur

Sulphur possesses certain characteristics which are of interest and importance in connection with the sulphurizing of pulp and paper products.

Sulphur melts at approximately 235°F., becomes very viscous at 356°F., ignites in contact with air at 478°F. and boils at 832°F. It is insoluble in water, nonwetttable, extremely acid resistant, of comparatively low heat conductivity and of high dielectric strength. The specific gravity of crystalline sulfur is 2.07 and when melted 1.81, this change of density indicating a certain degree of contraction when passing from the liquid to the solid state.

The color of sulphur varies from the well known yellow when refined through a wide range of neutral shades, especially in the crude state when used for processing pulp and paper products.

Crude sulphur is 99½ per cent pure and brightness of color is generally indicative of the quality. The color of crude sulphur, however, is modified by the substance impregnated and rarely imparts a yellowish cast to pulp and paper materials.

Although sulfur is inflammable, it is not more so than many other materials and in fact is far more difficult to burn than is popularly supposed. Crude sulphur will not burn in an open receptacle unless the surface of the molten mass is agitated. As soon as a portion of it becomes melted a scum forms on the surface and the flame is extinguished for lack of oxygen. Special apparatus has been devised for the burning of crude sulphur and similarly the many types of sulphur candles depend for their effectiveness upon peculiarities of design or wicking and would otherwise fail to burn satisfactorily, although made from refined sulphur.

In burning, sulphur passes from the solid to the liquid state and some of the heat of combustion is required to accomplish this. A very large quantity of air is necessary to support combustion and it will therefore not burn in a confined space. When burning under the most favorable conditions sulphur is readily extinguished by water or carbon tetrachloride.

Notwithstanding these facts, the inflammability of sulphur cannot be denied and, in addition, its combustion produces sulphur dioxide gas, which is an additional hazard. Sulphurize paper and pulp products should never be employed in general construction work, dwellings or wherever there is a large choice of materials which lack the fire hazard injected by the sulphurizing process.

Processing of Pulp and Paper

The sulphurizing of pulp and paper products consists essentially of impregnating the material with sulphur in the liquid state which crystallizes in the pores and fibres. The liquid sulphur is introduced by immersing the material in a bath of molten sulphur with or without pressure. A simple open tank treatment generally suffices. The period of immersion varies from two to three minutes to ten or twelve hours, depending upon the porosity of the material, thickness of stock, moisture content and degree of impregnation. The porosity and moisture content influence time of immersion more than the other factors mentioned.

The best temperature range for the bath is between 280°F. and 300°F. At this temperature the pulp or paper is rapidly heated by the bath and all moisture present is converted into steam. Above 300°F. sulphur begins to thicken, making penetration more difficult

and possibly charring the material. Under certain conditions it is desirable to use a lower temperature. For example, between 250°F. and 270°F. or just above the melting point of sulphur. Thin stock and paper are rapidly sulphurized in a bath maintained at this lower range, but for wall board, box board and the heavier papers, especially when laminated or with a comparatively high moisture content, the higher ranges are much more effective. At 300°F. sulphur is about as limpid as when the temperature is just above the melting point and at the same time is as hot as it is safe to use it. If the material is very dense and resistant to penetration, as is the case with certain semi-vulcanized fibres, impregnation is assisted by maintaining a temperature of about 300°F. until the material has become fully expanded and then lowering the temperature to 250°F. or 270°F. This apparently creates a certain degree of vacuum and the sulphur in its very thin state is forced into the pores and interstices. In general, however, a good working range of temperature is between 280°F. and 300°F., although this may be modified to suit special conditions.

In order to make paper and pulp articles moisture proof or where they are to contain liquids it is very essential not only to bring about complete impregnation but to thoroughly fill the surface pores. This may be done by slowly withdrawing the article from the bath with gradual cooling. For example, if a bottle made from wood pulp is completely immersed in a sulphur bath at 300°F. and then immediately removed some of the sulphur will volatilize and pass off in the form of vapor on account of the contained heat in the pulp.

If, on the other hand, this bottle is allowed to float on the surface of the bath following impregnation, it cools off gradually and absorbs additional sulphur, especially if rolled about. Closure of the surface pores can also be accomplished by double impregnation or a second treatment for a very short period of time after the sulphur has solidified within the pulp mass. If care is exercised in treating, it is seldom necessary to use this second impregnation.

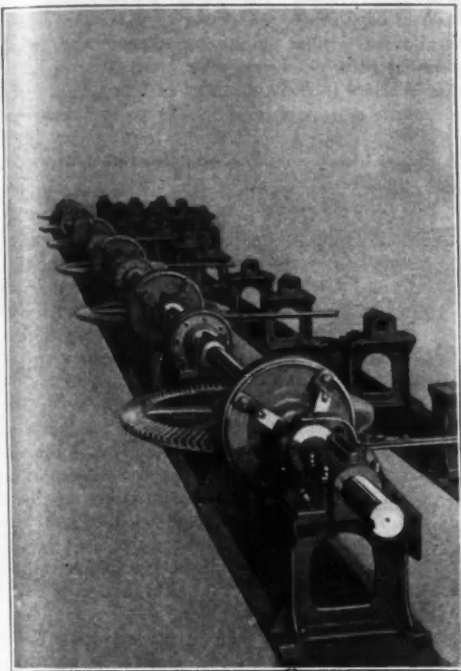
The quantity of sulphur absorbed by pulp and paper products varies within wide limits and may be from one or two per cent based upon the treated weight up to as much as 85 or 90 per cent. In other words, the material may absorb anywhere from a very small percentage of its own weight up to four to five times its weight. For example, although a very dense, hard fibre board may absorb less than one per cent of sulphur, a single ply molded pulp product will take up from four to five times its own weight and becomes in effect a mass of sulphur reinforced with wood fibre. *Qualities Imparted to Pulp and Paper Products.* Sulphurizing of pulp and paper products, as outlined, imparts certain very desirable qualities which are difficult or impossible to obtain in any other way, there being no substance which is easily fusible, crystalline in structure and possessing the peculiar qualities of sulphur.

In general, it is a stiffening and waterproofing process. Articles so treated are waterproof, nonwetttable and several times stronger, although thin papers derived from wood pulp are made very brittle. In addition, they are acid resistant and probably weatherproof, of very high dielectric strength and of low heat conductivity. There is a marked increase in resistance to puncture, as shown by the Mullen test, this in many cases being two or three times as great.

These qualities suggest certain uses for sulphurized pulp and paper products where great strength, rigidity, waterproofness and acid resistance are essential and where fire hazard is of secondary importance. These various uses will be described under separate headings depending upon whether the product is flat, cylindrical or molded.

Paper and Boards

Very few thin papers can be satisfactorily sulphurized and this



Unit drive for battery of agitators at Brown Paper Mill Company. Note the compact and rugged design.

Valley Agitator Equipment

1. Built to suit requirements of purchaser.
2. Substantially made.
3. Handles maximum quantity at minimum cost.
4. Are of simple and rigid construction.
5. Low rate of wear and tear.
6. All parts readily accessible for lubrication and adjustment.
7. Agitators and stuff chests both vertical and horizontal for all classes of paper stock; either spur or bevel drives; arms of wood or iron. Furnished complete in single units or in batteries as desired.
8. Equipment with special features built to suit requirements of purchaser.
9. Built to withstand heavy service.

Write for full particulars. They will be sent upon request.

The Best Is None Too Good

for the

Brown Paper Mill Company

Producing Southern Kraft Papers of exceptional high quality the Brown Pulp & Paper Mill Company is winning just popularity with consumers thruout the country.

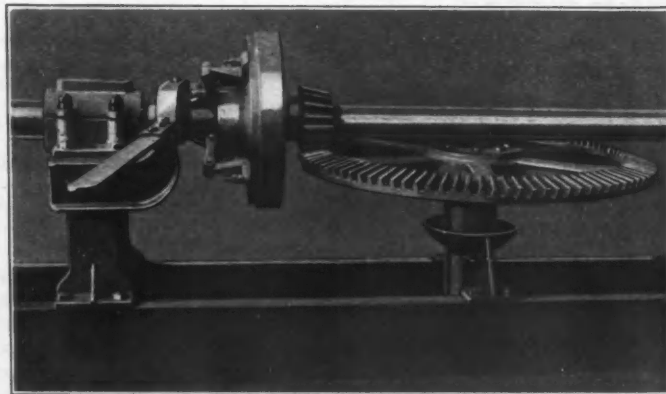
To produce quality papers necessitates improved modern machinery and this is a big factor in the excellence of their products, because this organization specified nothing but the very best.

The Brown Pulp & Paper Company in making these quality papers use Valley Agitator and Stuff Chest Equipment in which the stock is stored and agitated while passing through the various stages in beating and refining into readiness for the paper machines. Valley Agitator and Stuff Chest Equipment is unique both in construction and operation and has the same characteristics of economy, strength and utility possessed by the product they help to manufacture.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue



Detail of drive; note simplicity in design and construction; also vertical oil thrust bearing.

is especially true of all paper derived from wood pulp or containing a large percentage of wood fibre. Even where such paper approaches thin board in thickness, it would become so brittle after sulphurizing that it is practically useless. This applies to all types of paper derived from wood pulp whether sulphite, sulphate, soda or kraft. A 20 pound wood fibre paper after impregnating with sulphur cannot be folded, bent or even safely handled without going to pieces. The one exception of this statement is in the case of crinkled, rippled or crepe papers which, although derived from a wood pulp, may be impregnated or coated with sulphur and at the same time retain some degree of plasticity. This may be due to the fact that the crinkles allow the sulphur to contract without creating tension. This fact is mentioned simply as a matter of interest because any stretching of these crinkled papers destroys the effect of the sulphur and it is questionable whether they will find practical application.

The only thin papers which we have found capable of being satisfactorily sulphurized are those made from fibre other than that derived from wood pulp. This is notably the case with cotton fibre and a paper of this character even as light as 10 or 15 pounds in weight is very readily treated by simply floating on the surface of a sulphur bath. This method appears to give better results than complete immersion. When floated the paper almost immediately absorbs the sulphur until it shows on the upper side with a marked change in color but without any sulphur actually passing through to the upper side. After a minute or two these thin cotton papers when removed from contact with the sulphur retain an unbroken film adhering to the side which was in contact and in addition are apparently fully saturated. If completely immersed, the film of sulphur is carried by both sides of the paper, which under certain special conditions may be advisable, but this has a tendency to stiffen the paper.

Various weights of cotton papers have been experimented with ranging from 10 or 15 pounds to 50 or more. These sulphurized cotton sheets might be used as waterproofing plies in the manufacture of various paper articles, for wrappings where it becomes desirable to introduce a sulphur coating in order to isolate certain substances and for the sulphurizing of special cotton bags to exclude moisture from the tops of telegraph poles or other structures.

A wide range of paper boards, including box and wall board and the many types of single ply stock made from wood pulp offer a large field of usefulness after being sulphurized. In no case, however, is it probable that the boards can be bent or their shape otherwise modified after once being treated, although they can be shaped while hot and before the sulphur has crystallized.

Certain possible uses and applications for sulphurized board in appropriate thicknesses are as follows:

- Paper spool heads.
- Paper cores for buffing wheels.
- Siding for acid plants.
- Meter discs.
- Tops for closed cars, buses and trucks.
- Automobile door panels and running boards.
- Refrigerator car floors.
- Siding and floors in cold storage plants.
- Table tops resistant to acids.
- Special counter tops.
- Table tops in hotel kitchens and steamship galleys.
- Special table tops and benches in industrial works.
- To prevent the warping of various cards and boards.
- Billboard and outdoor advertising signs.
- Laboratory hoods.
- Special shelving.
- Benches in greenhouses and mushroom cellars.
- Boards for finished textile goods.
- Hardening and stiffening advertising signs for window display.
- Chair seats.
- Poultry houses and similar structures.

Generally speaking, single ply board is more readily impregnated than one of a laminated structure. Sulphur reacts chemically with glue, rosin size and certain other materials used in paper giving rise to a very offensive odor. These materials should be omitted from stock to be sulphurized, as nothing is gained by including them. Penetration of sodium silicate by sulphur with which it apparently does not react is extremely slow and it is advisable to use some other adhesive in making laminated board for sulphurizing. Flour or starch paste appear to offer much less resistance to sulphur penetration and where a single ply board cannot be used it is better to employ a flour or starch adhesive rather than sodium silicate.

Cylindrical Products

Under this heading is included such pulp and paper products as mailing tubes, paper cores, paper cans, fibre conduit and pipes.

Spirally wound paper tubes made from chip or straw board are readily impregnated with sulphur and absorb approximately their own weight. Pulp tubes or fibre conduit which are monolithic in structure absorb much more sulphur, frequently taking up from four to five times the untreated weight and containing 85 to 90 per cent sulphur in the finished product. Sulphurized pulp conduit or tubing 4 inches in diameter withstands a longitudinal knife edge crushing force of 1,000 pounds per linear foot. This is equivalent to approximately 10 times this figure if the pipe is imbedded in sand.

Where the price differential is such, these products may be impregnated by batch treatment for the production of acid proof pipes and similar products. For waterproofing paper cans, however, it will probably be necessary to devise a method of impregnating the paper as it passes on to the mandrel in the form of a strip, possibly using sulphur as the adhesive.

Suggested uses for sulphurized pulp and paper products in tubular form are as follows:

- Paper bobbins.
- Dry cell containers.
- Salt boxes.
- Waterproof paper cans.
- Railroad fuses.
- Rocket cases.
- Containers for thermometers and other delicate instruments.
- Hardening and strengthening paper cores.
- Acid proof pipe and conduit.
- Paper tubes.

Molded Pulp Products

Under this heading is included articles made from blown pulp by either the pressure or vacuum system, and all molded or cast products made directly from pulp without an intermediate paper making stage. In general, articles made directly from pulp are of peculiar design or shape, such as bottles, cones and similar products. Flat sheets and tubes may also be made of pulp, but the process is especially applicable to the manufacture of products which it is impracticable to form from paper or board. In addition, these pulp articles are monolithic in structure and rectangular boxes or other products are without seams or joints.

Papier maché products should be included in this classification, although the method of manufacture is different and they are more expensive. Papier maché is well adapted to processing with sulphur however, and very satisfactory articles result from treating boxes, animal heads and other commodities made from papier maché.

These various pulp products are especially adapted to the sulphurizing process, absorption being very rapid and complete. The time of immersion varies, of course, with the thickness of the stock and the density of the pulp, the maximum being approximately 3 or 4 hours in the case of pulp articles made under great pressure and ½ inch thick. The usual blown pulp article requires only a few minutes for treatment. In all cases the pulp absorbs 3 or 4 times its own weight of sulphur.

After sulphurizing, the pulp becomes impervious, highly acid re-

"MOORE & WHITE" ROTARY SCREEN

(Patents pending on the application of flat plates to Rotary Screens, also construction)



The March of Progress—More and Better Paper—Efficiently

SCREENING EFFICIENCY MEANS

CLEAN PAPER

NO LUMPS

LARGE CAPACITY

LOW UPKEEP

GET IT WITH AN "M&W"

The Screen That PRODUCES

THE MOORE & WHITE CO.

Since 1885

Makers of Dependable Machinery for the Paper Mills

No. Philadelphia Station, Penn. R. R.

Philadelphia, U. S. A.

sistant and very strong. In appearance it is neither sulphur nor wood and when sanded and polished looks like old ivory. It possesses all the chemical qualities of sulphur but is very unlike this substance physically, being rather flexible and withstanding shock. It may be painted before or after surfacing and not only takes the ordinary oil paints but special acid proof paints. Asphaltum paints, such as are used on structural iron and China wood oil paints are very satisfactory.

A wide range of products may be developed by sulphurizing various products made from wood pulp and the following is a suggested list:

- Textile cones.
- Toilet seats.
- Flush tanks.
- Floats for acid tanks.
- Hydrofluoric acid bottles.
- Hydrochloric acid carboys.
- Storage battery boxes.
- Battery jars.
- Paper spools.
- Window boxes.
- Toys.
- Papier maché deer head and other animal parts.
- Molded pulp or papier maché dress forms, collarettes and display figures.
- Cylindrical caps to exclude moisture from the tops of telegraph poles.
- Radio and phonograph horns.
- Megaphones.
- Flower pots, tubes and other containers used by nurserymen and florists.
- Caskets.
- Forming tanks.
- Acid dips.
- Electrolytic cells.
- Bee hives.

Although much experimental work has been done and the process has been tested on a wide range of products, it is the desire of the Texas Gulf Sulphur Company to encourage the cooperation of the paper industry in the commercialization of such articles as appear most promising. The pulp and paper industry is so diversified and highly specialized that it is impossible to adequately determine the usefulness of the many products possible to treat with sulphur without the assistance and advice of paper technicians. It should also be stated that patent has been applied for in all cases where it appeared desirable to do so.

Box Board Statistics

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—The Department of Commerce announces monthly figures on the operations of boxboard manufacturers, based on reports of from 75 to 84 companies each month, beginning with November, 1923, as follows:

Year and Month	Operation Inch Hours	Production	Orders Received	Unfilled Orders (End of Month)	Consumption Waste Paper Tons	Stocks of Waste Paper (End of Month)		
						On Hand	In Transit	Unshipped Purchases
November 1923	*6,703,115	*140,228	140,686	66,362	129,661	128,399	9,428	20,333
December 1923	*6,680,217	140,553	144,419	77,268	128,976	149,670	11,690	19,982
January 1924	*7,663,687	160,817	186,379	92,658	151,145	114,137	13,224	36,541
February	*7,306,766	156,002	158,775	88,214	148,329	107,720	12,953	23,890
March	*8,253,274	176,293	152,861	85,989	165,986	124,774	13,997	21,827
April	*7,904,214	167,580	146,018	66,504	155,790	127,392	11,533	25,709
May	*7,794,499	161,820	147,961	65,811	*154,584	129,950	11,632	26,354
June	*6,336,149	141,641	151,161	81,399	139,883	145,542	13,674	33,522
July	*6,339,107	141,364	155,871	100,837	137,688	*150,442	16,939	34,370
August	*8,156,758	186,340	202,542	118,492	184,513	147,072	17,002	34,297
September	7,715,528	179,982	158,671	99,101	174,941	157,915	15,319	40,382

*Revised.

New York Trade Dattings

The White Paper Company has moved from 653 Williams avenue, Brooklyn, to 35 Crosby street, New York. The telephone numbers at the new address are Canal 8248 and 8249.

* * *

R. T. Lang, formerly with J. M. Voith of Heidenheim, Wurttemberg, Germany and now connected with the American Voith Contact Company of 280 Madison Ave., New York, has just returned from a visit among the Continental Mills and machinery plants.

* * *

The American Paper and Pulp Association will give a luncheon during the Wood Utilization Conference in Washington, November 19 and 20 for the pulp and paper men attending the meeting. The luncheon will be given at 1 o'clock Thursday, November 20 at the Cosmos Club. Dr. Julius Klein, Director of the Bureau of Foreign Commerce will be present and will speak briefly on foreign trade with special reference to paper.

* * *

A simplification and standardization conference will be held in New York City on December 4 between officials of the Simplified Practice Division of the Department of Commerce and members of the Grocery Bag Manufacturers Service Bureau in connection with the program for the simplification of paper bags. A thorough survey has been made and it is understood that the Committee in charge will submit its report to the industry on the Simplification and standardization of grocery paper bags.

* * *

The Aldine Paper Mills Inc. have been formed with H. E. Goldberg as president. The executive offices of the new concern are at 1270 Broadway and warehouse at 541 West 34th street. Mr. Goldberg, the president of the company announces that he has sold his interest in the Baldwin Paper Mills and that he will hereafter have no connection with that concern. W. J. Clements has been appointed sales manager of the Aldine Paper Mills. Mr. Clements has had wide mill and selling experience in various sections of the country.

Paper Supply Co. Opens in Los Angeles

[FROM OUR REGULAR CORRESPONDENT.]

LOS ANGELES, Cal., November 5, 1924.—The Paper Supply Company, a new organization founded by three former employees of the Pioneer Paper Company, Inc., has established a warehouse and office at 440 Seaton street. The new company carries a complete stock of coarse paper items and will feature, particularly, Los Angeles-made products.

Wrapping papers manufactured by the California Oregon Paper Mills will be featured in line with the policy of the concern.

Charles R. Pritchard, who was sales manager of the Pioneer Paper Company for six years, is president of the Paper Supply Company, and the two other members of the firm are C. Cleve Bolyard and D. A. Reid, who were formerly salesmen with the Pioneer Paper Company.

Is the New Dilts Siphon Cylinder Washer a success?

The following letter from a well known paper mill (name on request) answers this question fully.

"We wish to congratulate you on the performance of your Siphon Type Washer, which has proved most satisfactory to us.

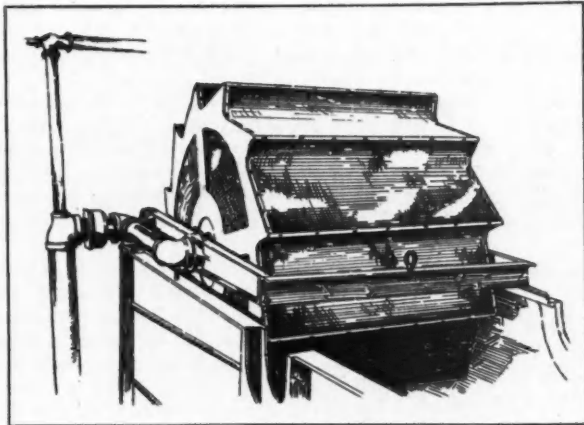
"Our special qualities are such that only a part of our stock requires washing; necessitating washing and beating in the same beater, and we have always used the standard hexagonal bucket type of washer. However, when we were figuring with you on a Beater (which is now our No. 6) your blue prints of the washer looked so good that we ordered one to be installed with the beater.

We have now given it a thorough practical trial with the following results.

"Your washer is simplicity itself in operation, doing away with driving belt, gears and raising racks; washes 1000 lbs. of stock better in 40 mins. than the old type did in 2 hrs and we believe that in maintenance it will show us a big saving over the old type. Our original fear that as the stock was used to turn washer it would retard circulation, was unfounded as we can see no appreciable difference in the circulation when the washer is operating; in fact we believe

it an advantage to rotate the washer at the exact speed of the stock. It is rather difficult to check up the actual gals. per min. removed, but the washer will take out approximately all the water put in from a 5" pipe at 15 lbs. pressure.

"The above speaks for itself, and we would be glad to heartily recommend this washer to anyone you might wish to refer to us."



Dilts

The Siphon Cylinder Washer is an entirely new idea in washer design. The cylinder is propelled by circulating stock and not by power.

You will want to know more about this new type of washer, so write.

Dilts

MACHINE WORKS, Inc. FULTON, N. Y.

EXPORT OFFICE - 15 PARK ROW - NEW YORK CITY

Trade-Marks Department

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

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

CORRECT CONTAINER Co. CCC—No. 174,561. Correct Container Company, Cincinnati, Ohio. For containers of paper and similar materials which have been chemically treated for shipping and storing food products and similar articles.

FOREVERFOLD—No. 200,893. Moser Paper Company, Chicago, Ill. For enameled papers.

"SPIDER'S WEB," with the representation of a spider's web—No. 202,458. Paper Service Company, Inc., Hinsdale, N. H. For toilet papers.

"MIONE"—No. 201,979. Central Paper Box Company, McGraw, N. Y. For candy and bonbon boxes.

"WESTWARD-HO"—No. 200,148. Montag's Incorporated, Los Angeles, Cal. For tablets, boxed writing papers, pound papers, envelopes, etc.

"CORRU"-RAPPER—No. 198,930. Watson Pomeroy-Aull, St. Louis, Mo. For protective paper wrappers for containers.

"BURLABOX"—No. 180,048. Columbia Corrugated Company, New York City. For boxes, tubes, and cartons.

"COLORTONE"—No. 167,778. Alfred B. Lemon, Providence, R. I. For stationery.

SUFECHECK—No. 191,651. Walther & Co., New York City. For paper for blank checks, money orders, bonds, coupons, vouchers, etc.

ROPAX—No. 188,933. Rope Paper Sack Manufacturers Association, Providence, R. I. For sacks, bags, merchandise envelopes, cartons and tubes made from manila rope and paper.

ROPAX—No. 188,612. Rope Paper Sack Manufacturers Association, Providence, R. I. For same as above.

No. 1 PEARL FIBRE—No. 186,882. The Diem and Wing Paper Company, Cincinnati, Ohio. For wrapping papers.

SILVER FLAX—No. 199,236. The Edward Malley Co., New Haven, Conn. For writing paper and envelopes.

The representation of a bear with a fanciful picture of a falls, around which picture are the words "NEWTON FALLS PAPER CO."—No. 198,245. Newton Falls Paper Company, Newton Falls, N. Y. For bond and ledger paper.

CENT A POST—No. 198,831. H. P. Andrews Paper Company, New York City. For mailing envelopes.

B. & J. DUPLEX Co.—No. 199,519. Berlin & Jones Company, Inc., New York City. For envelopes.

ESOPUS—No. 199,708. The Martin Cantine Company, Saugerties, N. Y. For enameled book paper.

FLEXITYPE—No. 200,846. Brooks Paper Company, St. Louis, Mo. For prepared stereotype dry matrices.

WHITE SWAN—No. 201,422. Adams Paper & Specialties Company, Waterloo, Iowa. For butchers' waterproof wrapping papers.

WHITE BEAR—No. 199,419. Fisher Bros. Paper Co., Fort Wayne, Ind. For wrapping papers.

O. Bache-Wiig Killed in Accident

A. J. Stewartson, secretary of the Wrapping Paper Service Bureau received a telegram Wednesday from the Wausau Sulphate Fibre Company, Mosinee, Wis., telling of Olaf Bache-Wiig's death at Louisville, Kentucky, following a fall from a horse. Mr. Bache-Wiig was first Vice President and General Manager of Wausau Sulphate Fibre Company.

Continental Optimist Club Formed

The Continental Optimist Club sponsored by George W. Reed, general district manager of the Continental Paper and Bag Mills Corporation, 810 Clark avenue, St. Louis was formed recently and is growing rapidly in membership. In forming the club the first piece of literature sent out by Mr. Reed was as follows:—

"Believing that business conditions are really determined by an attitude of mind, and that conditions are either good or bad just in the proportion the public thinks they are, I think it is high time for us to organize an Optimist Club, known as the Continental, for the following reasons:

"Business conditions depend to a very large extent on the mental attitude of the public. Just as soon as the public believes business conditions are bad they retrench and this in turn makes conditions so. Nearly every depression we have had has been brought about by a state of mind.

"You will note today that since the beginning of the year most of the large industries, such as motor car industry, if not up to last year's production—a phenomenal one in that industry—are really ahead of the average year since 1913, and what is true about that line of business is largely true about a great many others."

The only initiation fee or dues required to join this club will be to subscribe to the following resolution:

"Resolved that I will never talk about "hard times," nor listen to such talk by any other people, but on the other hand will speak "prosperity" and "good times" to a number of people every day, and will go after business with a feeling that, taking everything into consideration the country is in good shape."

Those who signed the pledge were written as follows:—

"We were happy to receive your signed pledge which makes you a member of the Continental Optimist Club. Enclosed you will find your membership card which you may use as a desk slogan, if you wish. The daily reminder will be an incentive to live up to the one obligation which you have assumed, namely, optimism in your business contacts.

"If you feel your salesmen would be interested in becoming members, let us have the names and we will immediately forward pledge cards. Or, if you prefer, let us know how many salesmen you have and we will send the cards direct to you and you may pass them on to the proper parties. In all cases pledge cards should be returned to the headquarters of the Club.

"Will you write to us at your convenience and give us your views of the beneficial effects optimism may have on business conditions. Also any suggestions that may occur to you in connection with the Continental Optimist Club. We want this to be a helpful organization, and we believe that you will agree with us that the greatest good can come from enlisting the co-operation of the greatest number.

Interest in the club has already grown so greatly that it cannot fail to have a considerable influence for better business.

More Interest in Government Paper Bids

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—As a result of communications sent to paper manufacturers of the country by the Paper Specifications Committee of the Joint Congressional Committee on Printing a great many answers have been received relative to the forthcoming specifications which indicates it is felt by members of the committee, that the American paper manufacturers are becoming more interested in selling paper to the government printing office. The answers received by the Committee, it is said, show a desire on the part of the paper manufacturers to cooperate with the government.

It is understood that the work of the Specifications Committee will be completed within a few days and will be ready for submission to the Joint Congressional Committee as soon as Congress convenes.



Nearly Six Months' Wire Life!

A Michigan mill removed a Fourdrinier Wire from a **BELOIT** machine that had run *continuously* (except Sundays and holidays)

From November 18th, 1923
Until May 3rd, 1924

An exceptional performance for even a **Beloit**, but numerous instances may be cited of three months' life at 650 feet per minute and over.

Beloit Iron Works

Established



Beloit, Wis., U.S.A.

Since 1858

Editorial

Vol. LXXIX New York, November 13, 1924 No. 20

HENRY J. BERGER, Editor

TO INCREASE EXPORTS OF PAPER

The American paper industry has greatly missed its export market for some years past. Shortly after the war sales of paper to be sent abroad aggregated more than \$10,000,000 monthly, but this total has gradually declined until now sales aggregate less than two million monthly. As specifically showing this decline it may be mentioned that exports of paper and manufacturers of paper for February, 1919, were valued at \$11,163,737 as compared with \$1,952,044 for September of this year which are the latest figures available.

Disorganized conditions throughout the world, have, of course, caused this great decline in the exports of American paper but with the improvement that has already so noticeably set in the time seems opportune for the American manufacturer to take steps to regain this business. To stimulate such action the American Paper and Pulp Association has just sent out the following notice:

"You are interested in increasing the sale and consumption of paper. Perhaps the biggest problem before the industry today is that of finding a good market for the 5 or 10 per cent of paper production which represents the difference between unsatisfactory or satisfactory operation, a loss or reasonable profit for the year.

"Is there any more important problem before the industry?"

"The difficult import paper situation has loomed so large in our industry that we may have overlooked the opportunities which confront us in foreign trade. Certainly it means something to us when in August, 1924, we exported over \$200,000 worth of book paper; over \$150,000 worth of wrapping paper; over \$86,000 worth of tissue and crepe; and approximately \$180,000 worth of photographic paper, etc.—a total export value for August of \$2,182,882.

"The outstanding fact in what would appear to be a gradual settlement of the European situation is the very great increase in worldwide purchasing power. The need for goods of all kinds has been steadily accumulating in anticipation of settled conditions. As one financial expert puts it, 'The prompt floating of the German loan has had a dynamic effect in restoring confidence in Europe. . . . It is difficult to see how America can fail to benefit from the approaching world revival in trade. . . . Foreign trade will become a decisive factor in America's prosperity during the next few years, and probably permanently. . . . If Germany, for instance, can become prosperous through her foreign trade, her resulting capacity to purchase American products would compensate for any direct loss America might encounter by reason of German competition in other parts of the world.'

"The situation would seem to be such as to warrant greater effort on the part of American paper manufacturers toward the increasing of foreign business.

"The Association is watching the foreign situation carefully but is there not something more definite in the way of organized effort to increase foreign trade, which might be undertaken at this time?"

"You have the machinery in the Association. How can that machinery be best put to work along this line?"

This suggestion of the American Paper and Pulp Association deserves serious consideration just now as the export paper business can undoubtedly under the improving conditions be very considerably increased.

NEWS PRINT PRODUCTION IN CANADA

Frequent references have been made in the *PAPER TRADE JOURNAL* recently to the remarkable increase in the production of news print in Canada.

Figures now compiled show that during the year 1923 the capacity for news print manufacture in Canada was increased by 413 tons per day. In 1924 this was further increased by 485 tons per day.

According to present plans, the St. Maurice Paper Company will add 150 tons per day to its capacity in January next. The new mill of the E. B. Eddy Company at Hull, Que. will start manufacturing 100 tons of news print per day early in the spring and the Wayagamack company's news print mill will be producing 200 tons per day by December next. Further plans now under way are for the increase of Price Bros. & Co.'s production by 200 tons per day in 1926, while the Kenora mills and the J. D. MacArthur's mill at Winnipeg will be producing 100 tons and 200 tons per day, respectively, in 1926.

Thus in the period of 4 years the production in Canada will have increased from 1600 to 1800 tons daily or in the neighborhood of half a million tons per annum.

This does not take into account the addition of 400 tons which is planned by the Abitibi Power and Paper Company, in regard to which nothing definite has yet been announced.

By the end of 1924, the capacity of Canadian mills will exceed 5000 tons per day or 1,500,000 tons per annum, and by the end of 1926 if present plans are carried out, the production will be well over 1,700,000 tons per annum.

AN IMPORTANT CONFERENCE

It is expected that more than 400 representatives of the lumber and paper industry and other wood using industries will attend the timber utilization conference to be held in Washington, D. C. on November 19 and 20 under the auspices of the Department of Commerce. Elaborate plans have been made for the meeting and Col. Wm. B. Greeley, chief forester, states that great interest is being evidenced in the various trades.

Acting Secretary of Agriculture H. M. Gore or any other person who may be acting Secretary at the time of the Conference will preside. President Coolidge who has always shown great interest in forestry matters has prepared a statement which will be read at the conference and it is expected that Secretary of Commerce Hoover will address the delegates on the problem of waste saving as a background for the proceedings of the conference. Col. Greeley will also address the meeting and paint a general picture of the situation as seen by the Forest Service. Representative lumbermen, paper manufacturers and representatives of other wood using industries will also address the meeting on specific questions dealing with the better utilization of timber.

Col. Greeley has expressed the hope that out of the conference may grow some kind of a permanent organization for the better utilization of waste. An effort will be made at the meeting to deal with specific jobs for the reduction of timber waste and to outline a practical program for the future. High hopes are held out by Col. Greeley that this will be an epoch making conference.

PAPER WAGES AND EMPLOYMENT

The slight betterment in the pulp and paper industry is reflected in the employment figures just issued by the Bureau of Labor Statistics of the Department of Labor at Washington, D. C., for September.

One hundred and eighty-one paper and pulp plants reported their employment in August at 49,585 increasing in September to 50,055 an increase of .9 per cent. The payrolls in these plants also increased from \$1,275,861 in August to \$1,311,530 in September an increase of 2.8 per cent. Replies were also received from 153 paper box plants who gave their employment in August at 15,242 increasing in September to 15,946 an increase of 4.6 per cent. The payrolls in these plants also increased from \$315,610 in August to \$340,980 in September an increase of 8 per cent.

The Bureau received replies from 137 paper and pulp plants who gave their employment in September of last year at 41,633 decreasing slightly in the same month of this year to 41,313 a decrease of 0.8 per cent. The payrolls in these plants on the other hand increased from \$1,073,340 in September of last year to \$1,084,745 in the same month of this year an increase of 1.1 per cent. Replies were also received from 138 paper and box factories who gave their employment in September of last year at 13,884 decreasing in the same month of this year to 13,279 a decrease of 4.4 per cent. The payrolls in these plants also decreased from \$281,089 in Sept. of last year to \$280,591 in September of this year a decrease of 0.2 per cent.

Permanency of Kraft Paper

NEW ORLEANS, La., Nov. 8, 1924.

Editor PAPER TRADE JOURNAL:

There came recently to my attention a report that had been made to an important committee of the United States Government to the effect that Kraft paper deteriorates very rapidly in storage. Since this is contrary to the experience of our mills and of men old in the Kraft industry, I set about ascertaining the facts. I find that they do not in any way support this statement.

I have just submitted to the Committee samples of Southern Kraft paper seven and ten years old, respectively, which shows no signs of any weakness either in strength or in toughness. I have submitted, also, two letters, one from the Forest Products Laboratory of the Department of Agriculture, the other from the Bureau of Standards of the Department of Commerce.

As the misstatement under discussion has no doubt been given wide circulation, I will be glad if you can find space in your paper for this answer to it.

Your courtesy will be appreciated, I am sure, by the entire Kraft industry.

C. E. DOBSON,

Secretary Southern Kraft Manufacturers Association.

The letter in part from the Forest Products Laboratory follows: "This letter refers to our recent letter on the question of deterioration of Kraft paper in storage.

"We are enclosing a table showing tests on seven samples of Kraft pulp taken at random from storage. All of these samples were made more than seven years ago and tested at that time.

"The table shows the date when the tests were made, bases weight of the sheet tested and the various strength data described at the head of each column.

"It will be observed that as a general rule the Mullen test and strength factors (which is the Mullen test divided by the basis weight) has increased during storage. The tensile strength of all the samples shows an improvement. This test, by the way, is

independent of basis weight. The per cent stretch shown by the paper during the testing for tensile strength is practically the same or in one or two instances shows a slight improvement. The last column in the table shows the relative humidity of the air in the testing room and the slight variations shown do not make a great difference in the value of the tests.

"The results shown in the table confirm the observation in our previous letter that apparently little deterioration had taken place; in many cases the paper may be said to have improved during storage."

The letter in part from the Bureau of Standards at Washington follows:

"This is in reference to your inquiry of October 18, on the 'Permanency of Kraft' which we advised we would answer after obtaining results of tests in progress. These tests have been completed and they confirm our opinion that kraft paper of good quality is quite durable, being at least as durable as any wood pulp papers.

"Tests were made on 36 samples of representing 23 different lots of papers which had been purchased as kraft wrappings from various sources during the World War period and held in storage since that time. Definite data concerning the ages of the papers, the kind of papers and original strength are not available. Concerning the ages of the papers, however, it is known that they are all at least five years old and that some lots had been stored possibly three or four years longer than this time. Tests were made of bursting strength with the Mullen tester, and folding strength with the Schopper folding machine.

"Of the 23 lots tested, 15 were as strong as newly made No. 1 Kraft having a bursting strength of nearly a point per pound on a 24 x 36 inches, 500 sheet ream basis and a folding endurance across the machined direction of over 1,000 double folds, four lots showing approximately 90 per cent of this strength. The remaining four lots were the only ones that were very deficient in strength. From microscopical examination of the fibers of the last lots, we found that one paper was composed entirely of sulphite fiber. The other three were composed, apparently, of sulphate fibers but did not appear to have been produced by the regular kraft sulphate process.

"Tests of kraft wrapping papers from our files ranging in age from one to three years which were tested when received show that these papers had lost practically no strength in that period of time.

"The statement which you bring to our attention that 'Kraft paper contains practically all the lignous and oxidizing substances which cause the paper to deteriorate,' we believe is open to question. In our opinion, kraft fiber is quite well purified and we see no reason why it should deteriorate more rapidly than fibers which had been more thoroughly cooked and possibly bleached. While additional cooking and bleaching may take out additional impurities, it is possible this treatment may also weaken the fiber, thus tending to make it less resistant."

Japanese Pulp Industry Grows

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—The Japanese Pulp Industry has made considerable progress during the past ten years and is now in the position to take care of domestic requirements almost unaided except in sulphite and soda pulps according to a report received by the Paper Division of the Department of Commerce from Acting Commercial Attache Butts.

The report states that production during last year reached 179,327 tons or 84.4 per cent of the total consumption and imports 33,167 tons or 15.6 per cent thus practically reversing last year's proportions when production equaled 20 and imports 80 per cent. Production this year is estimated at 180,000 tons and imports at not exceeding 25,000 tons. Present stocks are reported at approximately 20,000 tons.



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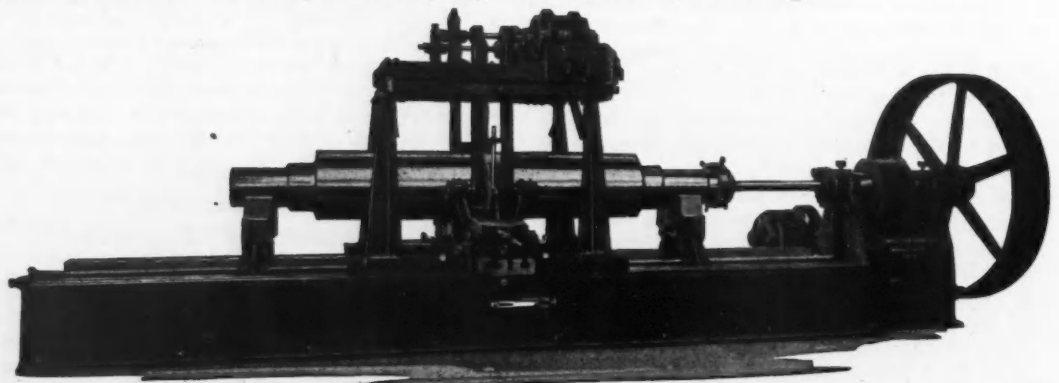
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Section of the

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**

IMPORTANT STREAM POLLUTION DECISION IN PENNSYLVANIA

Indian Creek in Fayette County, Pa., is a stream about 22 miles in length with approximately 130 square miles of drainage area in which there are a score or more of coal mines.

Years ago long before the mines began operations the water of the stream had been used for domestic and industrial purposes, one of which was for the use of railroad locomotives.

After the mines were operated the drainage from them was discharged into Indian Creek rendering the water unfit for use.

The water companies had taken action to enjoin the flow of the mine water into the stream and later, on petition, the Attorney General of Pennsylvania had received permission to intervene in the name of the Commonwealth.

In the present decision on the appeal from the decrees of the Court of Common Pleas of Fayette County, which was in favor of the continuance of the discharge of mine drainage by the coal mine companies even though it affects the public interests, the Supreme Court, after discussing the arguments in the case, says: "We therefore reiterated long ago used language of our predecessors that the domestic uses of water are its natural and primary ones."

"No language used can be tortured into an implication that the waters of the Commonwealth can be polluted by the mines where the public has been affected as it has. It has always been under our law a nuisance to pollute a stream from which the public gets its supply of water."

"Dwight Printing Company vs. City of Boston, 122 Mass. 583, completely answers the claim set up by appellees of a right to pollute the stream in view of the interest of the public in it. In that case, the City of Boston had appropriated the waters of a river as part of its water supply. A petition was filed by an upper riparian owner praying for an assessment of his damages upon the ground, among others, that the appropriation interfered with the petitioners' use of the water in bleaching and dyeing cloths. The Supreme Judicial Court of Massachusetts, in disposing of the plaintiff's contentions, said (p. 587-589): 'The riparian proprietors higher up still retain all their common law rights in the river, so far as they are not inconsistent with the use defined in the statute. They certainly are not prohibited from drawing water from the river for domestic purposes, or from watering cattle in it or from cutting ice. * * * Another claim, put forward by the petitioner, is that the use which it proposes to make of the water of the river in bleaching and dyeing woolen and cotton cloths must befoul the water and render it unfit for drinking purposes, and that the statute

in question deprives it of that right. But it is agreed that the petitioner has acquired no such right by any grant or prescription, and it is well settled that, as a riparian proprietor merely it has no such right. An injury to the purity or quality of the water to the detriment of other riparian owners, constitutes in legal effect a wrong, and invasion of private right, in like manner as a permanent obstruction or diversion of the water.' The title acquired by defendants, whether by grant or demise, gave them no property rights in the waters of the stream save those which pertained to riparian ownership; obviously this did not include the right to pollute the stream: (Howell v. McCoy, 3 Rawle 256; Comth. v. Emmers, 221 Pa. 298, 304). It could not be said that a land owner on a water course whose rights in the stream are only those of a riparian proprietor (and none other are shown in defendants), would have them enlarged to one of property in the use of the waters by the discovery or development of coal on his lands.

"Our conclusion is that defendants have no right of any kind to drain their mine waters into the stream considering the public use which is made of its waters and that their so doing constitutes a nuisance which must be restrained.

"We recognize, however, as evidently the court below also did, that the public has an indirect interest in the business of defendants, and hence, applying the principle that he who seeks equity must do equity, the decrees to be entered should require plaintiffs (other than the Commonwealth), so far as this can reasonably and legally be done, to afford defendants an opportunity to transport and dispose of the mine water of their respective mines in such a way as shall minimize the expense of so doing; and the decrees, after their entry, should be enforced in the same equitable spirit. In fairness to plaintiffs it should be stated that their counsel, in oral argument at the bar of the court, expressed the willingness of their clients to thus cooperate with defendants.

"The decrees of the court below dismissing plaintiffs' several bills of complaint are reversed, the bills are reinstated, and, it is directed that the court below shall enter decrees, enjoining and restraining defendants, and each of them, from discharging, pumping or causing or permitting to flow or to be discharged, any drainage of mine water from their mines, and from the mines of each of them, into the waters of Indian Creek, or its tributaries, above the dam of Mountain Water Supply Company, after the expiration of six months from the date of the entry of the decrees. It is further directed that defendants shall pay the costs."

The Sanitary Water Board of Pennsylvania is having an investigation made of the streams of the state towards their classifica-

tion as to present degree of purity and where polluted the extent to which it should take measures against the pollution agencies.

Classification Adopted

The classification which has been adopted is as follows:

Class A—Relatively Clean and Pure Streams

Streams in their natural state probably subject to chance contamination by human beings but unpolluted or uncontaminated from any artificial source, hence generally fit for domestic water supply after chlorination, will support fish life and may be safely used for recreational purposes.

Class B—Streams in Which Pollution Shall Be Controlled

Streams more or less polluted, where the extent of regulation, control, or elimination of pollution will be determined by a consideration of (a) The present and probable future use and condition of the stream; (b) The practicability of remedial measures for abatement of pollution, and (c) The general interests of the public through the protection of the public health, the health of animals, fish and aquatic life, and the use of the stream for recreational purposes.

Class C—Streams Now Highly Polluted.

Streams now so polluted that they cannot be used as sources of public water supplies, will not support fish life and are not used for recreational purposes and also from the standpoint of the public interests and practicability it is not now necessary, economical or advisable to attempt to restore them to a clean condition;

RESOLVED, That all artificial pollution of Class A streams shall be prohibited and any sewage or industrial wastes on the watershed shall be treated to such a degree that the effluent shall be practically free from suspended matter, non-putrescent and disinfected and that recreational use shall not be sanctioned within prejudicial influence of waterworks' intakes,

That the degree of treatment of sewage and industrial wastes discharged into Class B streams shall be determined for each particular stream or portion thereof after consideration of the general interests of the public and the economies of the particular case,

That sewage and industrial wastes may be discharged into Class C streams; provided, however, that such discharge shall not create any public nuisance or menace to health.

STREAM POLLUTION IN OHIO

The following is from Administrative Bulletin No. 136 recently issued by the Department of Health of the State of Ohio:

"The pollution of streams in Ohio has given rise to frequent complaint and there exists a general demand that some action be taken by the State for the purpose of securing a remedy. As no thorough investigation of the pollution of the streams of Ohio has ever been conducted, the actual facts are not available and, therefore, it is impossible at the present time to place in effect a logical and equitable policy of remedy which would deal fairly with the many interests at stake. It is obvious that the first step must be the determination of the facts. For the purpose of ascertaining the extent and sources of pollution of the streams in Ohio and the effects thereof, a general survey of the streams of the State has been undertaken. This work is being conducted by the State Department of Health with the co-operation of the State Department of Agriculture. After the facts secured from this survey have been established, consideration will be given to the action which may be necessary to secure remedies. It is expected that the general survey will progress with sufficient promptness to permit the compilation of a report by the end of the present year.

Uses of Streams

"The principal uses of our streams are for water supply, drainage and recreation. Under the heading of water supply, we must include water supplies of municipalities, institutions, industrial plants and farms, and must recognize not only use for human consumption but also other use. The use of a stream for drainage is its natural use for removal of water running from the surface and includes also its use for removal of sewage and industrial wastes. The recreational use of a stream includes fishing, boating and swimming. Under certain circumstances the use of a stream for the disposal of sewage and industrial wastes may be legitimate and may result in no damage to other legitimate uses of the stream. However, if definite control to prevent abuse or misuse of a stream is not provided, conflicts will result and the legitimate uses of the stream may be rendered entirely impossible.

Causes of Stream Pollution

"The principal causes of pollution of streams are sewage from municipalities and wastes from industrial plants and other industrial operations. Sewage and industrial wastes may reach a stream independently or may be discharged jointly as in the case of an industrial city having sewers which carry both sewage and industrial waste.

Effects of Stream Pollution

"The effects of pollution vary widely, being dependent upon the volume and character of the sewage or waste and the size, character

and use of the receiving stream. The principal evil effects of stream pollution are:

1. Pollution of Public Water Supplies.
2. Creation of Nuisance affecting Public Health and Comfort.
3. Pollution of Bathing Places.
4. Killing of Fish and other natural stream life.
5. Damage to Live Stock.
6. Damage to Property and depreciation of values.
7. Damage to Recreation.

The first three items are definitely associated with public health

Remedies for Stream Pollution

"When a stream is polluted by sewage the remedy must include the construction and operation of a sewage treatment plant or the abandonment of the sewer outlet and the establishment of a new point of outlet where the sewage may be disposed of properly. If an industrial waste is causing the pollution of a stream the discharge of the waste must be entirely discontinued or a plant must be constructed and operated to provide proper treatment or modification of the waste prior to its discharge.

Conditions in Ohio

"As no thorough investigation has as yet been made, accurate information regarding the pollution of the streams of Ohio is not available. Many of the streams of the State, both large and small, are being polluted by sewage and industrial wastes. This State is growing rapidly in population and industrial development and an increase in the pollution of the streams will naturally result if steps are not taken to prevent it.

Investigation by State of Ohio

"The time has come when it is necessary that the State of Ohio attack this problem. As an initial step, the State Department of Health with the co-operation of the State Department of Agriculture, is making a survey of streams to determine the location, nature and effects of the major sources of pollution. The facts secured will permit a comprehensive presentation of the situation to be followed by application of necessary remedies.

Thorough Investigation Necessary

"The adoption of a sound policy by the State in a program to correct and prevent stream pollution depends upon the availability of facts—not theories, guesses or opinions—as to the extent to which streams are polluted and the necessity of correction. A thorough investigation is, therefore, required.

Limitations of Investigation

"It is not the intention that this survey by the State will include a determination of most suitable processes or methods of treatment

and disposal of sewage and industrial wastes. This is a problem to be solved by the municipalities and industries. It is the function of the State to determine the necessity for remedies and the result to be attained but not to prescribe the method of securing such results.

Co-operation Is Necessary

"Stream pollution cannot be effectively corrected and prevented without full co-operation between municipalities and industries causing the pollution of streams, the interests affected by such pollution and the departments of government of the State charged with the duty of controlling such pollution.

Who Is Interested in This Problem?

"Owing to the importance of this problem from the standpoint of public health and welfare, every citizen of the State has an interest at stake. More particularly, interest should be manifested by public officials, officers and managers of industrial plants and operations, sportsmen, farmers, and many organizations representing these groups.

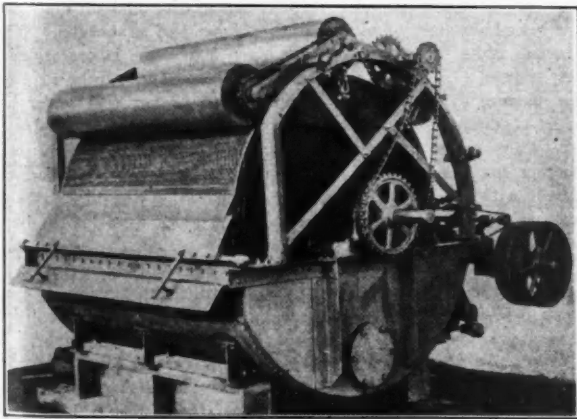
Fundamental Principles

"Stream pollution will not be effectively corrected and prevented unless there is a general acceptance of the responsibility which the municipality and the industrial enterprise owes to the public. The proper disposal of sewage must be accepted as a necessary feature in the operation of a municipality and likewise the proper disposal of industrial wastes must be accepted as a necessary feature in the operation of an industrial enterprise."

Thickening Pulp

One of the latest uses for the Oliver filter, made by the Oliver Continuous Filter Co., Oakland, Calif., is in thickening paper pulp. When the filter is equipped with press rolls as shown in the accompanying photograph, the cake can be discharged up to 30 per cent air dry. When pulp is being discharged at less than 15 per cent air dry, these press rolls are not employed.

Pulp is fed to the filter at approximately 1 per cent concentration in water, in some cases being 0.75 per cent and in others 1.5 per cent. This stock flows in a continuous stream into the filter tank. The filter operates by the well known Oliver method, picking



FILTER FOR THICKENING PAPER PULP

up a sheet or cake of pulp and removing water from it by vacuum. After the drum has completed almost one revolution from the point where it entered the tank, the pulp is removed by the scraper—the vacuum being cut off on the section from which the pulp is being removed until that section again enters the tank.

When the press rolls are used and pulp is removed from the filter 30 per cent air dry, it comes off continuously in solid, uniform sheet which may be easily shredded for bleaching at "high density." When bleaching is to be done in Bellmers, only part of the pulp

is thickened on the Oliver to from 10 to 15 per cent air dry. This is then mixed with the remaining thin stock, the resulting mixture going to the Bellmers at from 6 to 8 per cent air dry.

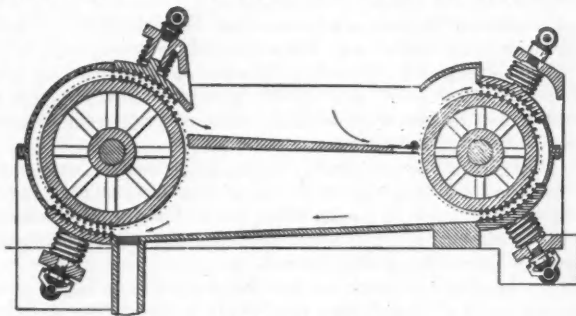
The capacity on chemical pulp is 500 pounds dry weight per square foot of filter surface per 24 hours from 1 per cent density. A machine 5 ft. 3 in. diameter 6 ft. long will deliver 25 tons per 24 hours.

Several advantages are claimed for this method of thickening pulp, among which are uniform results, the discharge of pulp at unvarying density, the elimination of fiber losses and more economical operation through elimination of shut-downs.

The Serpas Beater

The objective when designing this beater was to provide a machine that would prepare stock in a relatively short time at a low cost for power.

The chief features are the horizontal midfeather inclined in the direction opposite to the sloping bottom of the tub, and the four



SERPAS BEATER

bedplates giving four beating or brushing surfaces in each cycle instead of one as ordinarily provided. The beater rolls are mounted on fixed journals equipped with ball bearings. The bedplates, which may be of various design to suit the stock being treated or the particular treatment desired, are capable of accurate adjustment either individually or in pairs.

The machine is the invention of Ralph J. Serpas, of Cloquet, Minn., and is patented.

Testing Chip for Water Resistance

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—Some additional tests have recently been made by the Paper Section of the Bureau of Standards in the application of the ground glass method of determining water resistance, to testing chip board for this quality. This method gives good results, says the paper experts, with highly water-proofed papers, but in the case of less water resistant paper such as chip board, where water penetration is very rapid, it is difficult to apply the method.

It is said that this is due to the fact that continuous observation of the surface of the specimen opposite that to which the water is applied, is necessary. Efforts will be made to find a means for continuous observation, as this would make possible the application of the method to a much wider range of papers.

New Development by Shawinigan

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., November 10, 1924.—The Shawinigan Water and Power Company, which is the main source of power supply for the paper mills in the St. Maurice district, has started work on a new power development at St. Narcisse on the Batiscan River. The new development will have an installed capacity of 20,000 with the possibility of being increased later on to 30,000 and will cost about \$1,500,000. The work is expected to be completed by May, 1926.

THE USE OF GLUE FOR COATED PAPER*

By V. H. GOTTSCHALK, RESEARCH ASSOCIATE AT THE BUREAU OF STANDARDS FOR THE NATIONAL ASSOCIATION OF GLUE MANUFACTURERS

I. INTRODUCTION

The following observations on the use of glue for the coating of paper are the results of an experimental investigation being conducted by the National Association of Glue Manufacturers in cooperation with the Paper Section of the U. S. Bureau of Standards. The work was undertaken at a time when market conditions threatened to force the use of glue as a substitute for casein in the manufacture of ordinary coated paper, and hence the primary object was to gather data and information that would be of immediate use in aiding the coating mills to make the change that seemed imminent.

The need for this emergency work disappeared, however, with the turn in the market price of casein, but the investigation has been continued for the following reasons:—

(1) Because casein is subject to wide fluctuations in price, preparation for a future emergency seemed rational and wise.

That the expected emergency will arise sooner or later is predicted by a number of persons who believe that the cost of any product that has the food value of casein must eventually become prohibitive for industrial uses.

Whenever such a condition arises again, the present experience of the Bureau of Standards in the use of glue for coating of paper will be available to the coating industry and should be of assistance in the production of a glue-bound paper that will meet the requirements of present day printing practice.

(2) Because there is an unmistakable demand in the paper coating industry for a satisfactory substitute for casein. The dissatisfaction with casein is not limited to its uncertain price, but is prompted by variations in quality and in properties of the commercial casein, which lead to disturbances in the routine of the coating process.

This difficulty is not experienced by many coaters who are in the favorable position of commanding a uniform supply of casein from one source, but it often becomes a serious matter for those coaters who, in depending on the open market, must work with a variety of brands of casein.

Glue has not been considered seriously as a substitute for casein chiefly on account of price considerations, but also because of its lack of waterproofness and of its reputed variations in acidity, grease content, odor, and color. Furthermore, opinions as to the printing quality of glue-bound coated paper are conflicting. This investigation, therefore, has included some consideration of the water resistance of coated paper, of its printing qualities, and of the specifications for coaters' glue.

(3) Because, finally, the preliminary work indicated that glue as a binder for coated paper may have more possibilities than are generally recognized.

Although this investigation is not yet complete, enough has been done to show that much of the objection to glue rests on a misapprehension of its nature; that some of the statements concerning glue for coating need modification; and that the range of properties realizable in coated papers can be extended by the use of glue.

II. APPARATUS AND METHODS

The coating equipment of the Bureau consists of a 14-inch Waldron Flat Bed Brush Coater with festoon drier and rewinder. The festoon rack is but 15 feet in length and holds a maximum of 380 feet of paper in 27 loops, each 7 feet in length. It is not enclosed, and has no provision for heating; therefore, in every one of the 83 runs made during this investigation, the festoon was filled and

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allowed to dry over night. Three pounds of clay were mixed for each day's run.

The Bureau does not possess the special type of calender that is used for coated paper. A small amount of the glue-bound paper produced in these experiments was calendered on the Bureau's 9-roll Holyoke supercalender stack. The paper so calendered was used chiefly for the preliminary printing tests.

Five lots of glue-bound clay-coated paper were made and supercalendered at a commercial coating mill. These lots, of one ream each, 19 inches by 26 inches, will provide enough material of the proper finish for the more definitive printing tests that have been planned as a part of the investigation.

III. PREPARATION AND PROPERTIES OF THE COATING MIXTURES

The almost universal statement that 5 parts of glue are required to replace 4 parts of casein in a coating formula is certainly incorrect. At best, the statement is so incomplete as to be misleading. It ignores the fact that glue, unlike casein, is sold in twenty or more well-recognized and sharply differentiated grades.

The proportion of glue to clay to be used in a clay-coating mixture has been found to vary almost directly with the grade of glue. For example, as much as 20 per cent of a low grade bone glue (Jelly-strength¹, 120 grams; viscosity¹, 39 millipoises) was required to give a good pick test², and as little as 8 per cent of a high grade hide glue (Jelly-strength¹, 257 grams; viscosity¹, 79.3 millipoises) was sufficient for a clay coating that stood the sealing wax picking test as well as do commercial papers. Similar experiments with a number of glues give the figures, 150 grams jelly-strength and 50 millipoises viscosity, for a glue that is about equivalent to casein in binding power; that is, a glue of this grade could be substituted pound for pound in place of casein in a coating formula.

The laboratory pick test gives results that can be duplicated only by working with great care under standard conditions, and then gives results that are merely comparative and do not show the actual amounts of glue that should be used practically. With the two glues for which data are given above, the laboratory pick test showed 11 per cent and 8 per cent, respectively, to be required for binding the clay, while casein showed 12 per cent under the same conditions. From these figures no conclusion can be drawn as to the proper amount of either glue that should be used in coating practice, even if this information were at hand for the casein with which the glues were compared in the pick test, or even if the proper amount for one of the glues were known from practice.

The laboratory pick test has been of little value in this work on glue because it does not give, unequivocally, the amount of glue to be used for making a coating that will be as proof against lifting during printing as are the present day casein-bound coatings. In its place, the following modified pick test was used: Machine coated papers were used, containing progressively increasing amounts of different glues, and these series of papers were then subjected to the sealing wax procedure as prescribed for the laboratory pick test. Any coated paper that did not tear completely through the paper on pulling off the sealing wax was considered as containing too little adhesive. This arbitrary method gives at least a lower limit for the amount of glue to be used in practice. The figure

¹As measured by the official instruments of the National Association of Glue Manufacturers. See Journal of Industrial and Engineering Chemistry, Volume 16, pages 310 to 315, March, 1924.

²Described for casein mixtures, on pages 341-342 of Sutermeister's "Chemistry of Pulp and Paper Making," John Wiley & Sons, 1920. A slightly different method of procedure, used in the Bureau tests, is given on pages 316-317 of Griffin's "Technical Methods of Analysis," McGraw-Hill Book Company, 1921.

obtained in this way is the one that has been quoted above for the two glues whose jelly-strengths and viscosities are given. Such tentative figures are being confirmed or modified by the results of further experiences. Thus, the glue-coated paper that qualifies with good margin as the result of a practical test for lifting in the photo-engraving department of the Government Printing Office was made with 17 per cent of a glue whose lower limit of amount required has been determined as 13 per cent. That is, it is known from a practical test that 17 per cent of this glue is enough, and the arbitrary laboratory test shows that less than 13 per cent is insufficient, whence it follows that the lowest practical amount of glue lies somewhere between these limits. Whether 14 per cent is sufficient will be determined by a series of practical printing tests on a larger lot of coated paper made with 14 per cent of the same glue. On the other hand, a chemist of a commercial coating mill, who made extensive tests, including printing experiments, detected some danger of lifting in the paper with 8, 9, 10 and 11 per cent of the glue for which the lower limit of 8 per cent had been obtained by the arbitrary method outlined above, and gave as his opinion that 12 per cent would be a safer practical limit than the 8 per cent quoted above.

This point is so important that it will be studied further by printing tests on a larger amount of glue-bound clay-coated paper made on a commercial scale, with respectively 9 and 12 per cent of the particular glue in question. If the printing tests on these papers show that 9 per cent of glue is enough to prevent lifting in commercial practice, it would mean that the actual cost for glue binder is little affected by the grade of glue chosen because the smaller amounts needed in the case of the higher grade glues would just about balance the greater cost per pound.

The highest grades of glue, however, can not be used economically in coating, for the reason that, while the adhesive power of glues increases with the grade, the clay-suspending power does not, and hence the small amount of a very high grade glue that will give sufficient binding effect in a coating is not enough to keep the clay of the coating mixture in suspension. Comparatively few glues that are on the market today will hold clay in suspension when as little as 8 per cent of the glue is present at the concentration prevailing for coating mixtures. On the other hand, many glues make a more permanent, non-settling clay suspension for coating than casein does, and it is probable that the glue manufacturer could improve his products still more in this regard if there were a demand for glues of high clay-suspending power. The question as to how to increase the clay-suspending power of a given glue has received but little attention in this work, but a few incidental experiments with calcium salts did show a slight increase in the ability of a high grade hide glue to keep the clay from settling out of a coating mixture. Furthermore, the manufacturer of the glue that has the highest clay-suspending power of the seven so far examined gives it as his opinion that this property is due to the slightly different process that is followed in his factory.

In any case, a coater desirous of using glue as a binder should determine once for all what grades of glue are most suited for his brands of paper, and should buy those grades on specifications, thus insuring a uniformity that is not always possible with casein.

IV. COATING TECHNIC

The technic for the coating of paper when using glue and clay differs from the technic when using casein, only in the necessity of regulating the temperature of the coating mixture. Each combination of a given clay with a given glue demands a fixed temperature range if the weight of coating is to remain constant. This temperature is higher and the range is narrower, the less water is used in the coating mixture. In one large-scale run, 100° Fahr. was found to be about correct for a clay-glue mixture which contained 160 parts of water for 100 parts of clay—a ratio of water to clay that is common in coating mixtures.

The Bureau's small scale equipment is not suitable for determin-

ing whether or not commercial coating with glue would be facilitated by the use of continuous heating with automatic control of temperature. Such an arrangement might make feasible the use of higher temperatures and thus of more concentrated mixtures, with a corresponding shortening of the drying period.

A number of coating runs were made at room temperature, in which the weight of the coating was regulated by diluting the clay-glue mixtures. Under these conditions clay begins to settle out at dilutions varying with the clay and with the particular glue or casein used in the mixture. There seems to be a critical dilution, with casein mixtures as well as with glue mixtures, at which the settling of clay begins. A rough determination of the relative clay-suspending power of different glues and of casein might be obtained by this method of diluting. At and even before this critical dilution is reached, the clay in the coating mixture agglomerates to form coarser particles, which may be seen in the dried, uncalendered paper by holding it up to a strong light. In the supercalendered paper these coarser particles lead to mottling, which may be seen by reflected light.

At the suggestion of one of the Bureau's clay technologists, small quantities of calcium hydroxide were added to the clay slip, and were found to increase slightly the clay-suspending power of a high grade hide glue, and thus to be a preventive of mottling. In other words, the behavior on dilution described above is intimately related to the colloidal nature of the clay and is not peculiar to glue mixtures, but occurs also with casein mixtures. In fact, examination shows that a large proportion of the cheaper casein-bound paper on the market today has this blemish of mottling, which, in the light of the dilution experiments just described, would indicate insufficient dispersion of the clay in the mixtures that were used in coating. This suggests that a systematic study of coating clay might lead to simple methods for preventing the common mottled appearance of coated paper.

V. WATER RESISTANCE

The one objection to glue that has been urged most frequently is its lack of waterproofness. The insistence on a high degree of waterproofness in the coating of a paper is puzzling, inasmuch as, except for high grade lithography and possibly in the offset process, moisture has but little influence in printing; certainly, ordinary half-tone printing, which consumes by far the greater bulk of coated paper, does not require waterproof paper. Furthermore, casein-bound paper as ordinarily made is not waterproof. It is true that the addition of the proper amount of formaldehyde does make a casein coating waterproof, just as it is true that casein cement, containing lime and other constituents, makes wood-joints that have a higher degree of water resistance than can be obtained with animal glue. But casein cement is quite a different thing from the casein adhesive used in ordinary coated paper, and the amount of formaldehyde necessary to make casein adhesive insoluble is rarely added to coating mixtures. One gets the impression from these and other facts that more stress is laid on the waterproofing possibilities of casein than is warranted by the actual working conditions pertaining to coated paper. As this question of the water resistance of coated paper is of interest only in connection with printing processes, plans are now under way to get more information on this subject from printing tests, which are to be tried on several lots of glue-bound paper that have been made in a commercial coating mill during the course of this investigation.

The claim has been made that glue-bound paper sticks together when used for illustrations in books kept in warm, humid climates. Many experiments have been tried to find conditions under which glue-bound paper would become sticky enough to adhere when two sheets are pressed together. It was found that these conditions are so abnormal that they could not be realized under any possible atmospheric conditions, and that, if they were to be encountered, not only glue-bound, but ordinary casein-bound paper also would be unable to withstand them.

It is true, however, that a moistened finger pressed firmly on a glue-bound paper often sticks more readily than when pressed on casein paper. If this stickiness is objectionable, it can be overcome by adding chrome alum to the coating mixture. The action of chrome alum on glue has been known for about twenty years, but has not been used extensively in coated paper. Although it does not make glue completely waterproof, nor even wholly water-resistant, it does improve glues very much in these two respects. Bone glues respond to this treatment less readily than do hide glues. Suitable proportions for coated paper are: $3\frac{1}{2}$ per cent of chrome alum on the weight of low grade bone glues to as little as $1\frac{1}{2}$ per cent on the weight of high grade hide glues. This removes practically all stickiness to the moist finger and has the additional advantage of raising the setting and melting points of the glue. The higher melting point may be of significance in coating practice by facilitating the drying process. It should be mentioned that chrome alum tends to make clay settle out of suspension, but this has not interfered noticeably with its successful use in the coating mixtures.

It should not be overlooked that glue is most water-resistant when it is very slightly acid. Thus, in an experiment quoted by Bogue³, gelatin, when soaked in water at an acidity given as 5 pH, swells 15 millimeters; in water slightly more acid (3 pH), swelling was a maximum of 45 millimeters; and in alkaline water (10 pH), the swelling was also 45 millimeters. Intermediate amounts of swelling were obtained between 5 pH and 3 pH and between 5 pH and 10 pH. If water resistance were indeed of prime importance in paper coating, then an adjustment of each coating mixture to 5 pH might be advisable; this could be accomplished with very little trouble now that simple and convenient colorimetric methods have been developed for determining the acidity of factory solutions. If, on the other hand, it is more important to have the coating exactly neutral, the coating mixtures may be adjusted to the neutral point (7 pH) by use of the same convenient colorimetric method. Or, as was done in all the coating experiments made in the course of this investigation, approximate neutrality may be maintained by the addition of the calculated amount of sodium hydroxide or calcium hydroxide to neutralize the acidity of the glue.

VI. PRINTING QUALITY

Three lots of glue-bound clay-coated paper have been subjected to a practical printing test in comparison with commercial casein-coated paper and with casein-bound paper made on the Bureau machine under the same conditions that obtained in the glue coating.

This practical test was made at the Government Printing Office through the courtesy of E. O. Reed, Chief of Tests. It consisted of two parts.

(a)—In the Photo-Engraving Department—Two half-tones, of about 150 lines to the inch, were pulled off on the papers in the usual way. Critical examination by the practical experts at the Government Printing Office showed that the glue-bound paper does not pick nor lift and is the equal in this regard of the best casein paper.

There were two respects in which the glue-bound paper was not as satisfactory from the photo-engraver's standpoint, as is special high-grade photo-engraving paper. First, as to smoothness of surface, and secondly, as to color and brilliancy. The first defect can be remedied by improving the supercalendering, which was not of the best in the glue-bound papers, due to the lack of coater's calenders at the Bureau. The second difficulty was caused to some extent by the supercalendering as well as by the choice of stock and clay, but is more apparent than real, because the glue-bound papers were coated with clay only while the comparison paper undoubtedly was made with satin white and blanc fixe; in other words, the glue-bound paper could not have been expected to develop the same sharp contrast in the half-tone that was obtained with the

whiter photo-engraving paper. This is confirmed by the fact that these two criticisms of the glue-bound paper were made also of the casein paper prepared at the Bureau with the same clay and the same stock.

(b)—In the Press Room—The glue-bound paper was fed into a cylinder press running on a regular printing job in which appeared a 120-line cut with text. The appearance of the printed sheet was in every way as good with the glue-bound paper as with the commercial casein-bound paper, and this result was obtained without any readjustment whatsoever in the ink or in the make-up.

This printing test indicated that an ink that works well with casein-bound paper will give equally good results with glue-bound paper. The converse of this is probably not true, as may be judged from the statement in the literature concerning the ink difficulties experienced when glue paper was being replaced by casein paper twenty years ago. An explanation for this apparent contradiction may be found in the statement that thinner, more fluid inks can be used with glue-bound paper than with casein-bound paper, but that the heavier, more viscous inks that must be used with casein-bound paper, work with glue as well as they do with casein.

Another series of three lots of glue-bound clay-coated paper has been subjected to an examination for printing quality in the photo-engraving department of one of the coating mills. The report from this test again confirms the satisfactory printing quality of glue-bound coated paper, especially as regards its freedom from picking or lifting.

These preliminary printing tests are to be supplemented by more extensive tests on five larger lots of glue-bound paper made in a commercial coating mill.

VII. SPECIFICATIONS FOR COATER'S GLUE

For satisfactory results with glue in the coating of paper it is essential that the glue used be of known quality and properties. In the first place as to grade, according to the official jelly-strength and viscosity test; then as to the clay-suspending power; and finally, as to acidity, grease content, odor and color.

As to grade, it must be obvious from what has gone before that this is to be determined by the individual coater according to the nature of the paper that he wishes to produce. Having once fixed on this, there will be no difficulty in duplicating this grade because the glue industry is already organized on a grade basis.

As to clay-suspending power, it is unfortunate that no standard test for this has as yet been developed. It would appear to be sufficient for the purpose to mix a small lot of coating mixture according to the formula that is to be used in the mill and to examine this mixture for rate of settling at suitable time-intervals.

As to quality and incidental properties, there are no standards at present for coater's glue, but it is simply a matter for the coater to decide what limits of acidity, grease and odor are allowable, and to specify these limits when buying glue. The glue manufacturer can probably furnish what is specified and will be glad to do so if given an opportunity.

The situation is less clear as regards color of the glue. There is no simple method for predetermining what to expect from a given glue when used for coating. A few experiments have been made with various glues, several samples of casein, and a colorless adhesive (gum tragacanth); these adhesives were used in hand-coating one lot of paper stock with one of the best coating clays in common use. These hand-coated papers were then examined by means of a Pfund⁴ Colorimeter as used at the Bureau of Standards for measuring coefficients of diffuse reflection of light, with the following results:

- (1) Light colored bone glues decrease the whiteness of a coating to about the same extent that casein does.
- (2) Ordinary bone glues make the coating distinctly more yellow.

³R. H. Bogue, "The Chemistry and Technology of Gelatin and Glue," page 153, McGraw Hill Book Company, 1922.

⁴A Measure of Color Characteristics of White Papers, B. S. Technologic Paper, No. 244, R. E. Lofton, 1923.

low than casein does, but the difference is not easy to detect by the naked eye.

(3) Hide glues, being darker than bone glues, make the coating noticeably less white than casein does, although this effect may be offset to some degree by the smaller amount of hide glue as compared with casein for a given degree of adhesiveness of coating.

(4) Chrome alum, added to the glue clay mixture, neutralizes much of the brownish-yellow tinge of the glue, but, like all corrective colors, it decreases the brilliancy of the coating. That is, chrome alum makes the paper more nearly a perfect white, but the total amount of light reflected is decreased, some being absorbed.

(5) Chrome alum decreases the brilliancy less than does ultramarine.

(6) For ordinary bone glues, 2 per cent chrome alum is the correct amount to give water resistance combined with the best attainable neutralization of color. For low grade bone glues, more chrome alum is desirable for water resistance but less for color correction; for hide glues, the color correction is insufficient with the maximum amount of chrome alum that can be added safely.

VIII. PROPERTIES OF GLUE-BOUND COATED PAPERS

Attention is here called to the fact that by the use of glues of a higher grade it is possible to make coated papers containing less adhesive than is used in the regular, commercial casein-bound coated papers. These glue-bound papers are progressively more ink-absorbent as the amount of adhesive decreases; they are also progressively more flexible. No tests have been made as yet, but it has been suggested that the presence of less of the brittle binder ought to make the coating more resistant to cracking on folding;

if this proves to be the case, coated paper made with low percentages of high grade hide glue should be peculiarly adapted to the uses for which folding enamels are specified.

IX. SUMMARY

As a result of the investigation of glue-bound clay-coated papers it has been shown:

(1) That the amount of glue needed in a coating mixture varies almost directly with the grade of the glue chosen, and that this amount is not greater than five-fourths, and may actually be less than, the amount of best casein that is used in present day coating formulas.

(2) That the coating technic with glue is the same as with casein except for the necessity of regulating the temperature of the clay-glue mixture.

(3) That the water-resistance of glue-bound coated paper can be improved, if desired, by the use of small amounts of chrome alum. It is suggested that regulating the acidity of the coating mixture may also be a factor in water resistance. The need for an extraordinary degree of waterproofness and of water resistance in any but high grade lithograph paper is questioned.

(4) That the printing quality of glue-bound, clay-coated paper, as far as can be judged from a small number of preliminary printing tests, is satisfactory with present day printing inks.

(5) That a study of the colloidal properties of coating clays is a desirable preliminary to further work on the clay-suspending power of glues and on the elimination of the mottling in coated papers.

(6) That uniform results in the coating of paper may be attained by the use of glue bought on specification. A brief discussion of the specifications for coater's glue is given.

THE FRENCH SCHOOL OF PAPER MAKING AT THE END OF 1922*

L. BARBILLION, PRESIDENT OF THE ELECTROTECHNICAL INSTITUTE AND OF THE FRENCH SCHOOL OF PAPER MAKING AT GRENOBLE.

It is by no means an easy task for the head of an institution to give a fair and impartial description of the organization placed under his control. On the one hand he must avoid going into tedious details, while on the other hand there is a possibility of being too modest and underestimating the value of the school thereby hurting it in the eyes of the public. I shall endeavor to steer my course clear of both these dangers, and crave the readers' indulgence if I should fail.

The question of vocational education, or to be more precise, of technical education (for we are carrying on mostly technical education, and all too little vocational education, as we shall show further on) is a very big one, and one that is but little understood. This state of affairs is due to no inconsiderable degree to the presence, in certain government departments, of woefully incompetent personalities, who owe their positions to no merit on their part, but merely to the death or retirement of their predecessors, and who talk so much of what has been done by their departments that they finally believe and make others believe that they are responsible for it.

Technical education worthy of the name is based on the supposition that the student possesses certain qualifications, which should comprise: A certain minimum of scientific notions, and preferably some knowledge of literature, a liking for work, a good health, an inborn sense of discipline, and, evidently, some technical knowledge of the vocation which he intends taking up.

In 1907, at the fifty-second convention of the Paper Manufacturers' Association, at Tours, together with the late regretted Henri Chauvin, who was then president, we suggested establishing at

Grenoble a special school for the purpose of training competent technologists for the paper industry and also of ensuring the development of the industry along sound scientific lines by keeping in contact with its graduates in the various paper mills. Provision should also be made for training competent paper mill foremen. Another important function of such a school would be to organize a research laboratory to study the various problems which are encountered in the paper industry, and more particularly to investigate raw materials. Such a project had been mentioned in paper making circles for twenty years previous; but nothing had been decided, for it was a big undertaking to create an autonomous school, which would have an annual budget of at least 50,000 to 60,000 francs, not to mention the large outlay which would be required for establishing the school.

We found a happy solution to the difficulty by proposing that the scientific part of the curriculum should be entrusted to the University of Grenoble, and more particularly to the Polytechnic Institute, which would reduce the outlay to that required for the purely technical part of the course. The proposition was unanimously and enthusiastically adopted.

A few days later, to our great astonishment, and, we may add, to our no small credit, we had succeeded in forming a board on which sat representatives of the Department of Education, the Department of Commerce, and the Paper Manufacturers' Association, which were to take control of the new school and share the cost. Those who are aware of the jealousy and rivalry which exists between our various Government Departments can appreciate that this was no mean accomplishment.

The School gives a two-year course. The first year is devoted to general science subjects, being practically the same as the prepara-

*Translated from the Special Paper Making Number of *Science et Industrie* by A. Papineau-Couture.

tory year of the Polytechnic Institute except for a few relatively unimportant details. The second year is given up entirely to subjects directly related to the manufacture of pulp and paper (paper manufacture and testing, micrography of paper, paper making chemistry, use of electricity in the paper industry, technology, draughting, and other engineering subjects from the standpoint of their application to the industry. The Department of Education pays for the first year courses; and the Department of Commerce and the Association share the cost of the second year courses.

No Contribution from Government

As to the cost of the School itself, the organizers made it a point of honor not to ask for the least contribution from the Government or from the School. Voluntary subscriptions were called for from the paper and allied industries, and the appeal met with a splendid response: 200,000 francs were contributed, and many pieces of apparatus were either given or sold at a low price.

Organization was carried out with remarkable speed: The School opened its doors on the 5th of November, 1907, only six weeks after the Convention at which its establishment had been proposed, and the installation of the equipment was completed during the year 1908.

The Equipment

The equipment comprises a paper machine trimming 1,200 meters (about 48 inches) complete with driers, screens, etc., a battery of three defibering, bleaching and beating engines, screens, dust collectors, a rag boiler, a digester for cooking wood, sheet driers, etc. The various liquors are prepared in autoclaves specially designed to meet the requirements of the School. A battery of boilers, an emergency steam engine, and electric motors of suitable power complete the list. But this is not sufficient, and the School is proceeding with an expansion program which will double its floor area and provide for additional equipment. A chemical laboratory, located near the paper machine room, gives all facility for controlling the product, both during and after manufacture. There is also a micrographic laboratory, a general chemical laboratory for the students, a laboratory for carrying out physical tests on the paper, and also an Official Pulp Testing Bureau, in which the students are allowed to put in some time so as to give them an opportunity to become familiar with current practice in pulp control.

The Staff

Our staff has unfortunately been reduced through the death of three of our professors, Messrs. Beaudoux-Chesnon, Favier and Montessus de Ballore, due in part at least to overwork during and after the War. As it stands at present, our staff comprises a certain number of paper technologists on the one hand, and members of the Faculty of Science of the University of Grenoble on the other. Professor Vidal has charge of the micrographic department, and is an eminent authority on the subject; Professor Brot handles the course in paper making chemistry, and at the same time acts as consulting chemical engineer for several paper mills in the Grenoble district; Mr. Aribert, a graduate of the School, handles in a very able manner all parts of the course dealing with practical paper making. Mr. Duboin of the Faculty of Science, and Messrs. Drouhot, Castex, Ferroux, Jolland and Routin of the Polytechnic Institute give special courses on electricity, mechanics and technology. Finally, there are a number of assistants chosen among the best students in the graduating class, who remain with us for another year or two to carry on post-graduate work; and though universities have the reputation, generally undeserved, of paying very poorly, we can say that our demonstrators receive at least as much as they would get at the start if they were to take up positions in paper mills.

Graduates Broadly Scattered

It is not up to us to enumerate the success achieved by our graduates in the paper industry. This can easily be found by consulting the membership list of "La Cellulose", which is the Gradu-

ates' Society of our School. But alas, many names are missing, for the paper industry, unlike certain other industries, did not confer the privilege of industrial mobilization in munitions and allied plants; and many of our students and graduates made the supreme sacrifice in defending their country.

Our graduates can be found, scattered in paper mills throughout the length and breadth of France, and also in foreign countries, where they are general managers, assistant managers, superintendents, chief chemists. Others have entered fields closely related to the paper industry, such as the manufacture of dyestuffs, paper making chemicals, paper machine felts and wires, etc. But whatever line they have chosen, they are making good, and all, we think, are a credit to our Institution and to their professors.

To Increase Competency of Foremen

At the very outset we had considered the advisability of organizing classes for paper mill workers, with a view to training foremen whose competency would thus be greatly enhanced. And as a matter of fact we actually did organize such classes. The choice of a suitable curriculum did not present any great difficulty; it had already been worked out before the war by the late Professor Favier, and we are giving it below. The real trouble lay in an entirely different direction. What few students we have for this course are relatively poor. They come from every part of France, and they cannot afford to make a prolonged stay at Grenoble at their own expense. It would therefore be up to the employers to pay the cost of these courses, preferably by means of bursaries, to which the donor could attach such conditions as he would see fit to compensate him for the outlay and to ensure that he will derive benefit from the increased competency of the workman on his return to the mill.

Time Required for Satisfactory Course

A most important point in this connection is to estimate the time required for a satisfactory course. A few months after the war we made a conclusive experiment with a dozen or more Anamites who had been working in the air service, and who were kept at Grenoble for some time before repatriating them. We proved to our own satisfaction that a few weeks' training was sufficient: After one month of study at the School followed by a fortnight's stay in a paper mill, they could be considered as pretty fair paper makers. If therefore, we allow three months for the training of a young and wide-awake foreman, we feel, certain that we can turn out a man who would certainly be valuable to his employer. This means that the outlay for each student would be about 1,000 to 1,200 francs, including the cost of the course and living expenses.

Course in Practical Paper Making for Machine Tenders

I.—*Trituration*.—Study of the different trituration processes and their effects on the quality of the paper and on the operation of the paper machine; assembling, taking down, and adjusting trituration machines.

II.—*Paper Machines*.—Study of the different parts of the paper machine; assembling and taking down; changing and adjusting the wire; adjusting the table; manipulation of the wire while machine is running; handling of dandy rolls (wove, laid, watermarking); cleaning and repairing dandies; changing and adjusting felts and jackets;

Handling the stock on the machine; pitch of the wire, and its effect on the strength of the paper (in both directions); shake, its effect on the ratio of the strength in the machine and cross directions, on the thickness of the sheet and on the draining of the water through the wire; effect of the draw between the various parts of the machine; handling of the driers, and its effect on the quality of the paper;

Moistening or dampening during reeling or calendering.

III.—*Calenders*.—Complete study of the machine, its operation, assembly, taking down; changing rolls; washing the rolls.

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ORGANIZATION FOR SUCCESSFUL OPERATION

BY B. A. FRANKLIN, VICE-PRESIDENT, STRATHMORE PAPER CO.

Undoubtedly the most important element in industry is organization, and it is natural that it should be so. As long as men accomplished things, and produced singly, individual skill and ability were the supreme industrial qualities, and, while they made for independence in a small way, they never advanced production nor amassed great fortunes. They supplied no wide consuming public, and built up no great demand. For it must be remembered that in the beginning demand is almost always built by supply, and only after supply has thoroughly created demand does it follow demand.

Industry in its present form took a long time to grow. It was offered no incentive under feudal, or completely autocratic, governments. Organizing knowledge and ability, of course, have existed for centuries, but exercised their talents in government and military forms. Outside of shipbuilding and possibly one or two other lines, where groups were essential to production, organization ability took little notice of industry because it had no sufficient incentive.

Invention was one of the first fruits of a wider freedom and gradually organizing ability was incited to take hold of industry through the opportunities which it presented, since, in fact, in the earlier days of growing democracy in the world it had little other opportunity. It is organization, and the right to the results of effort, which have made industry the great proposition it is today. It has fostered invention, and while it has not been directly responsible for specialization, which was the natural outcome of the invention of single purpose machinery, it has naturally expanded and utilized it to the limit.

The Place of Organization

In the industrial unit, organization is the supreme need because it is the most important factor making for progress, production, and success. In the small unit one man of ability and energy may in himself in effect be the whole organization, performing all the essential functions of organization; of buying and selling, of planning and devising, of directing and disposing. This was indeed the early history of industry, as it was the origin of early industry.

As the industrial unit became larger it was necessary for the one man of ability to delegate organization functions to others, to depend upon others to accomplish parts of organization work. As it became greater and greater this necessity was expanded until we arrived today at a point where the chief executive may not even have the ability to perform many of the organization functions or even most of them, despite which lack he may operate a very large unit with great success provided he possesses organization ability—the ability to decide, direct, and inspire.

All of this is very simple, and might be of no particular signi-

ficance if the industrial unit be considered a piece of purely private property whose fortunes may vary, as do those of private ownership. If, however, the industrial unit be considered as a service center, and consequently of definite moment in the community and in the lives of many people; and if, for the value to the general public, its most effective operation be important, then in view of the fact that very many units do fail in this respect of organization, it seems a matter of the greatest importance, for continued success depends to a very great extent on good organization.

Elements of Industrial Success

The first element of success in an industrial unit is the ownership, although in the minds of many this seems to be taken for granted. If the successful units are analyzed it will be found that there is first a definite comprehension and a sensitiveness to public demand. The Ford Company is of course an outstanding example, where the idea that the public would buy in great quantities a cheap and serviceable machine was adhered to intelligently till it brought tremendous results.

The second element, of course, is the development of a plan to put the idea into effect. The third element following in natural sequence, is the development of an organization to carry out the plan.

It is somewhat astonishing occasionally, when consideration is given to the progress of certain industrial units, to observe that the executive is entirely unconscious of two facts, the knowledge of which is fundamental to industrial growth and success, and the use of which has made many fine executives and many fortunes. The first of these is that the industrial unit is very essentially and fundamentally a group center of co-operation of all of the abilities possessed by the co-operators. The second is a tenet of scientific management, viz., that their knowledge and ability should be gathered and utilized.

The Matter of Understudies

It is of course more or less natural for men of energy and force, and especially of proved ability, to operate on the one-man plan because of their very nature. But when as time goes on, and other interests intervene, their expressed desire—"I wish I had someone with my ability to take my place," can only be answered, and truly, with the reply—"Why didn't you train someone in your organization to do it"? This is the cry for organization.

Such concerns, of which there are a great many, are one-man concerns, which, with ability on the part of the one man, may succeed until that ability disappears, and they then become failures. The remedy, of course, is organization which abets the ability of the one man or may make up for the lack. No industrial executive has either

the right, when the industrial unit is considered from the broad point of view, or should have the folly to smother by rebuff or indifference, the ideas and growth of subordinates. The wise executive makes his people grow by the encouragement and careful consideration of their idea.

A good organization must of necessity include men of brains, energy, concentration, and ability for hard work, and while of course the first two are important, the possession by a group of reasonable intelligence, of the two latter qualities will carry farther than the first two without the latter. A necessary element which must display itself in the building of an organization is therefore selection, and herein lies the first quality of an industrial executive. It will be remembered that Andrew Carnegie ascribed his own large success very greatly to his ability in this direction.

As to the method of selection there unquestionably is a considerable need of education among industrial executives. There are those who deliberately seek good men, applying to colleges and other sources of man-supply. Some units endeavor to obtain the experienced men of their competitors. Very largely, however, executives depend upon the chance discovery and application of new material.

Psychology is developing certain tests which are good as general guides in the selection of subordinates—good at least to indicate the possession of certain valuable traits. Perhaps, though, these tests, in a complicated and unmeasurable quantitative but "developable" relation of essential qualities, can as yet only serve as guides. Many executives depend on impressions of personality made by interviews. The wise executive will make no mistake in interviewing every applicant for an organization position, since thus he may now and then make a real find.

Organization Policies as to Promotion

If analysis is made of many successful organizations it will be found that the key men are men who have generally been with the unit from almost the beginning of their careers, and that there exists a definite policy of taking on likely young men and placing them in any position which may offer itself at the time with the idea of observing them and developing them to meet the organization needs. If older men are brought from the outside to fill the more important positions it is because of the possession of some particular knowledge not possessed by those already in the organization. Speaking generally, there must be a policy of adhering as strictly to promotion as possible, if the younger men are to have faith and loyalty in the value of their development and opportunity. Nothing discourages or destroys the loyalty of young men of ability so much as to find their advancement suddenly shut off by outside entries. The industrial executive will, generally, make no mistake if he adheres pretty firmly to: first, the policy of internal promotion; and second, inside the organization, to the promotion of the most able men.

The Selection of Men

There often arises the question as to the comparative value of college men and men who employ this same period in getting practical experience. Opinions vary on this point, but it seems generally true that of two men of given ability, the training of the college man will eventually put him farther ahead—at least it will if he does not become impressed with the idea that his college training alone puts him above the drudgery involved in getting the practical experience he must have.

Of course, the selection of the elements of an organization is directly affected by the requirements of the work to be done—the various departmental functions of planning, of process knowledge, of research, of cost and accountancy, of production, of engineering, of clerical labors, of advertising and selling, and of general executive ability. The choice of men to perform these functions must be made with three considerations in mind—temperament, tendency, and knowledge, for it very often happens that even with knowledge a man without the temperament and tendency accomplished poorly. The

good accountant may make a poor executive, and good clerk is often spoiled by promotion, the good executive may make a poor engineer.

Industrial unit success must always depend on directed co-operation, for under any condition the industrial unit is nothing but a center of co-operation. The quality of the direction must be the important element in its success and the executive organization provides that direction. Selection must therefore be a great element in its upbuilding. With men of brains, of energy, of vision, of courage, of concentration and application, great units have been built even with small initial capital. America is studded with them.

Training the Organization

It follows automatically that the next important element in organization after selection is training. The new member, if experienced, must either learn the ideals, aims, and methods of the organization and fit himself to them, or undertake to bring the other members of the organization to understand and cooperate on his own. The new member, if inexperienced, stands on the threshold of a career of which he knows nothing. His abilities must be given something definite to develop upon, and they must be trained along definite lines if he is to fit into the scheme of maximum unit cooperation. It frequently happens that men of ability become discouraged in one concern by what they term lack of opportunity—not because of failure of promotion which must, generally, in a single unit, come slowly, but because no sense of direction is given to their abilities and no assistance in their general development. The same men may succeed in another concern where they find this direction and interest.

The usual man wants hope and improvement more than he wants immediate promotion. He will wait and work for the latter if supplied with the former. Since the best organization is always the growing one, where the younger men are pushing along behind the older ones with ideas, suggestions, and the urge for improvement, the importance of the proper development of the members of his organization by the industrial executive cannot be overrated. Training, education, discipline, and inspiration will accomplish this development.

In considering the application of these, two things may well be taken in mind. The first of these is that if the body is the industrial unit, the spirit is the executive organization, and upon its maximum animation depends the success of the body. The second important thing is that the industrial executive, in the members of his organization, will find men eager to learn, anxious to know how, willing to discipline, eager for inspiration, desirous of results. If they are not there he needs a new organization. His task, therefore, is mainly to find practical methods of training and developing these on-coming men.

Improving the System and Service

There are certain things which are needed in every industrial unit beyond the carrying on of routine.

One of these necessities is the constant improving of the system and service of the department. Presumably the department head should be capable of looking after this, but in the working out of the two ideas of bringing along all members of the organization for better work and promotion, and the working out of the co-operative idea whereby the best ideas of all are obtained, there should be developed some systematic plan of discussing better ways and deciding what changes are to be made and how to make them.

One concern has handled this proposition with success for a number of years by establishing regular departmental meetings at which all of the department organization are present, and often representatives of interlocking departments. All discussion is open; everyone is asked his opinion, and in turn requested to bring up any matters or suggestions in his mind. There is a chairman and secretary, and all discussion and decisions are recorded, and a copy sent to everyone concerned, including the executives.

It will be seen that this plan brings out the ideas of everyone and reaches some decisions on them after discussion. Each one, besides

learning the aims, the needs, the methods, the difficulties of the department, has an opportunity to help solve them, and since the minutes come before the executives, knows that his ideas are brought to the front. In technical and engineering matters, in statistical and service matters, thorough discussion not only bring out the best but gets immediately, from the very nature of the decision, maximum co-operation. Each man feels himself part of the game, which makes for loyalty. But of course the ideas of the executive, because presumably they ought to be more valuable, must also be thrown into the "pot," and this is of very definite value in both education and encouragement to all down the line.

The Matter of Education

It must be understood, however, that even in the most effective organizations there is no monopoly, even with the ideas of all considered, of all the best possible methods. Constantly, new and effective schemes, technically, from the engineering or the industrial engineering point of view, arise in other units in the same trade and indeed in all other trades. As a matter of fact most of the schemes and methods that operate in any one unit are the result and the experience of other units. Means must be developed to discover and bring these to the front for consideration. This necessitates a plan of education.

There are many sources of education. Makers of machinery, trade associations, engineering associations, technical societies, technical books, trade and technical magazines and papers and educational courses, local or correspondence, all offer varied and considerable possibilities, and the industrial executive has in these all the needed opportunity.

In the paper trade there is a technical association which has pooled its knowledge in a set of books, and one company has a class of fifty students studying these books. This company also subscribes to a dozen or so magazines covering not only the paper trade but also industrial engineering and selling literature and routes them monthly to the departments which should be interested, with the request that they be carefully read and all applicable ideas be brought, with adaptive suggestions, to the attention of the executives.

This concern also has a number of its employees as members of technical organizations, and encourages them to attend conventions. It encourages the members of its executive organization to take any worth-while course, local and correspondence, paying the expense thereof. Its salesmen take public speaking and advertising courses.

It is evident that such a course of action offers an opportunity and inspiration to properly selected men to keep up-to-date methods under consideration and to put the adaptable ones into practice.

Keeping the Organization Up to the Mark

An executive organization, being composed of human beings, needs certain methods of discipline as well as training and education. The best discipline for a wideawake man, of course, is to show him the facts.

One concern makes a point of providing the members of its organization with comparisons of the current situation and previous good ones. Men need goals to aim for. This company also keeps an error book in which are recorded and reported monthly to all departments, all complaints, errors, and losses through bad work, with detailed investigation and placement of blame and period analysis. Nothing is so disciplinary as a definite discussion with a department of its lapses, and of methods of avoiding them. Very much better than the discussion of occasional lapses, however, is the discussion of a comparison of recorded lapses over a period with actual statement of losses.

Of course the most effective method of discipline lies in the salary list. It is wise and valuable for the industrial executive to have a regular period, preferably the beginning of the year, when he goes over the list of salaries of all of the members of his organization, decides definitely as to their merits in this respect, and discusses their value, their good points and their weaknesses in relation to the unit with them. This gives a great opportunity to inspire, to strengthen the courage and energy, and to put fight into the organization. To

let such an opportunity pass, leaves a doubt in, and puts a damper on, the minds of his organization. The results are apt to be discouraging.

Of course the methods of training, education, and discipline will vary with different trades and with different sizes of units. Each concern will want to develop its own methods but the principles are the same, and the necessity is imperative in every concern.

There are, for instance, cases where the selling plan involves large numbers of men who are widely scattered. Probably the most effective method of training and educating salesmen lies in the selling school, with annual gatherings at the manufacturing center. There are many well known concerns which carry out this plan, as, for example, the National Cash Register Company. One concern in Pennsylvania varies this plan by insisting that its novice salesmen take a two months course through all the operations of the unit. After this, each salesman on his return to the center has full interviews with all important executives with an exchange of views on the outside and inside problems of the unit.

Inspiration Needed

What every executive organization needs in addition to training, education, and discipline, is inspiration. Men need, to do their best, to feel that the thing they are doing is fine, even if it is necessary and routine. They need ideals and a vision of accomplishment. Men think of themselves preferably as playing some big part, as heroic, as important, as romantic.

Now there is in industry all of these things if industry be understood. There need be nothing prosy in business affairs, if they are operated with the service idea. It is only when the purely selfish is uppermost, when the doing of a thing for pure gain is undertaken, when the interest of others or the value to others is unconsidered, that business becomes prosy. It detracts nothing from its profitability to see industry in the larger way, as a service to be spread, to be sensitive to public wants to be a happy co-operative effort. It adds definitely to results that each one should see his part as an important one, the most competent doing of which makes the whole more complete and effective.

There are indeed many executives who are in a real sense heroic for their accomplishments in the eyes of their subordinates, and particularly so because of their fairness, their willingness to teach what they know, their open minds to all suggestions, and their frankness in giving the authors due credit. If these are good qualities they may be just as heroic in their practice all down the executive organization.

Men want to do big things, but after all big things are merely comparative and are big only because they are larger in accomplishment than something previously considered fine. So in industry it is a big thing to increase a service, to reduce a cost, to simplify a system, to present a new and result-producing view, to make a laid-down plan most effective, to create a new thing, to improve a quality, to make co-operation more effective, even to do routine work well and promptly, because there are so many men in industry who are doing none of these things.

Every man in an executive organization has or ought to have hopes and ambitions. It is the part of the industrial executive to supply the inspiration for these things in his executive organization, because thereby he can definitely increase his results.

An industrial unit has a soul and spirit as well as a body. That unit is successful whose industrial executive rouses its spirit, creates for it a soul by inspiring his executive organization to understand that each member may be doing fine things in carrying on his work and finding ways to improve it. When that is accomplished a serviceable unit has been built.

Nothing offers, to the industrial executive himself, the inspiration and foundation for the proper discharge of his duties as the understanding of industry as a broad co-operative service. And nothing offers such sure and permanent profit as the intelligent building of an organization to support this ideal.

Obituary

James B. Ramsey

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., November 10, 1924.—With the passing of James B. Ramsey, the Philadelphia trade loses one of its pioneer paper manufacturers whose personality and genial disposition endeared him to all with whom he came in contact both in a business way and in his social life. Mr. Ramsey whose death came suddenly last Monday following a heart attack, had passed the four score and five milestone of life. He was for more than forty years identified with the paper industry as manufacturer and distributor. His association with the trade began more than 60 years ago when he founded the business of Davis & Co. with his uncle, whose name the firm bore. Later he formed a partnership with Charles Wells and the firm became Charles Wells & Co., dealers in coarse papers and specialties, South Marshall street below Market. With the passing of the Wells interests through the death of the head of the firm, about 45 years ago Mr. Ramsey organized the James B. Ramsey & Son company having taken into active association with him his son, J. Bradford Ramsey, the present head of the company.

In 1870 he entered the paper manufacturing field having built and operated the Cecil Mills, at Rising Sun, Md., manufacturers of jute manilas, and added another sulphite manila plant at Oxford, Pa., known as the Valley Mills, built in the Civil War days. The Rising Sun Mills were disposed of by sale in 1900 while the Valley Mills were destroyed by fire in 1892.

He retired from the paper distribution field back in 1900 when the business of Ramsey Paper Company, of which he was head, with offices in the Drexel Building, passed into the sole control of his son, who now is conducting a wholesale coarse paper business.

Though he had retired from active participation in the trade he did not entirely sever his connection with it for he was an occasional visitor to the old time friends, making the rounds of the firms for a friendly call, and keenly interested in the modern business affairs and spreading cheer among the fraternity with his continuous optimism and genial personal philosophy.

With his passing there remains in the local industry but a single survivor of the old days type of individual mill owners with whom he shared the honors of pioneer manufacturers in the Pennsylvania manufacturing field. He is the veteran head of the Shryock Brothers, S. S. Shryock, Sr. who like Mr. Ramsey had passed the four score milestone of life.

Mr. Ramsey was a member of the Odd Fellows and was prominently identified with the Methodist Episcopal Church affairs in this city, having for many years been a Trustee of the M. E. Church at 12th and Ogden streets. Surviving are his son J. Bradford Ramsey, head of the Ramsey Paper Company, and two daughters Emma V. Ramsey and Blanche V. Ramsey. Funeral services were conducted from the home of his son, 328 S. 42nd St. last Wednesday.

Fred M. Coons

[FROM OUR REGULAR CORRESPONDENT.]

BELOIT, Wis., November 10, 1924.—Fred M. Coons, associated during all his active life with the papermaking industry in Rockton and Beloit and one of the best known men in this industry in the middle west, died at his home, 817 Bushnell street, November 4.

Death ended an illness of more than two years during which Mr. Coons had been a great, but a patient, sufferer. He had been in failing health since an attack of heart trouble at his Orlando, Florida, home in 1922.

Mr. Coons was born in Rockton on April 16, 1855. During his youth and early manhood he lived in Rockton and early became associated with the Rockton paper mill. In 1897 he assumed management of the industry, which remained under his management and ownership until July of 1908.

At that time Mr. Coons sold his interests in the Rockton factory and moved to Beloit where he acquired ownership and management of the Beloit Box Board Company. He made this mill one of the most successful in the country and he remained in active control of the industry until he sold it in 1922 and retired from active business life.

Before the advent of the automobile Mr. Coons owned and drove splendid horses and even the decline of the horse in recent years failed to stifle his interest in blooded stock. He drove some of the finest horses in the middle west.

Thomas J. O'Neil

[FROM OUR REGULAR CORRESPONDENT.]

NUTLEY, N. J., November 8, 1924.—Thomas J. O'Neil, president of the Bank of Nutley, and treasurer of George La Monte & Son, manufacturers of safety paper, 61 Broadway, died November 4 at his home here of heart disease after a two years' illness. He was born in Easton, N. Y., in 1865 and settled in Nutley thirty-five years ago, thereafter taking a prominent place in the life of the community. He was a director of the Washington Trust and Eagle Fire Insurance Companies of Newark and a trustee of St. Mary's Church in Nutley. His wife, two daughters and a son survive.

Business Improving in Holyoke

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., November 11, 1924.—The election of Coolidge is deemed by Holyoke paper manufacturers or the majority of them as the forerunner to better times. Already some little improvement in manufacturing conditions has been noted. William D. Judd of the Hampshire Paper Company and Carew Manufacturing Company of South Hadley Falls told your correspondent that he was surprised no later than Friday morning to receive a material increase in orders including several telegraph orders.

Herbert B. Newton of the Newton Paper Company said that he had noted that a better tone prevailed in orders than before election and that he believed a considerable increase in orders was imminent. Frank E. Taylor of the Taylor Logan Company, papermakers, said that he had already indications of increased orders at his mill.

Several other paper manufacturers interviewed had not as yet received any material increases in business but were confidently expecting them though nothing in the nature of a boom. It seemed to be the almost unanimous opinion that business was coming back strong but coming back gradually.

Business with paper converters and papeterie manufacturers has not as yet shown any marked change. Prices for raw materials are already advancing indicating that the raw material-men are discounting expected prosperity in advance.

Pennsylvania Salt Co. Buys Plant

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., November 10, 1924.—The Pennsylvania Salt Manufacturing Company announces the purchase of the Capital Stock of the Michigan Electrochemical Company at Menominee, Mich. The purchase was made from funds on hand, and no additional stock will be issued. The plant, while not one of the largest in the country, occupies a strategic position and the products are identical with those made by the plants of the Pennsylvania Salt Manufacturing Company.

At a special meeting of the Board of the Michigan Electrochemical Company held Friday, October 31, the former directors resigned and were replaced by the officers and directors of the Pennsylvania Salt Manufacturing Company.

As the sales of the Michigan Electrochemical Company were made in largely different territories, it is felt that the business thus secured will be in addition to the present volume of sales.

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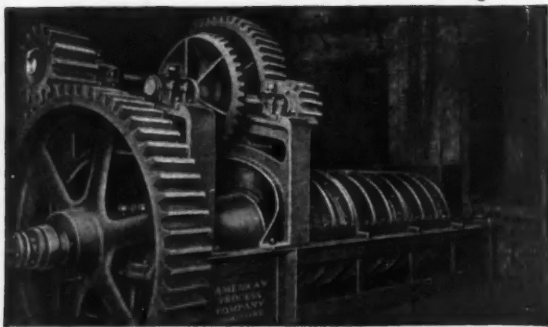
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SEND FOR SAMPLES AND PRICES

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 8, 1924

SUMMARY

News Print	1,846	rolls
Printing Paper	254 cs., 519 bls., 220	rolls
Wrapping Paper	14 cs., 1,478 bls., 1,331	rolls
Packing Paper	255 bls., 458	rolls
Kraft Paper	460	rolls
Cigarette Paper	1,951	cs.
Wallpaper	87 rolls, 39 cs., 56	bls.
Hanging	11 cs., 13	bls.
Velour Paper	8	cs.
Copy Paper	1	cs.
Decalcomania Paper	5	cs.
Drawing Paper	47	cs.
Baryta Coated Paper	67	cs.
Surface Coated Paper	271	cs.
Filter Paper	58	cs.
Writing Paper	38	cs.
Tracing Paper	13	cs.
Photo Paper	3	cs.
Tissue Paper	10	cs.
Metal Paper	5	cs.
Colored Paper	15	cs.
Miscellaneous Paper	96 cs., 537 bls., 837	rolls

CIGARETTE PAPER

Standard Products Corp., Schodack, Havre, 70 cs.
 P. J. Schweitzer, DeGrasse, Havre, 50 cs.
 R. J. Reynolds Tobacco Co., Olen, St. Nazaire, 1,000 cs.
 DeMauduit Paper Corp., by same, 231 cs.
 American Express Co., by same, Bordeaux, 600 cs.

WALLPAPER

H. Reeve Angel & Co., Inc., Republic, Bremen, 87 rolls.
 Whiting & Patterson, Inc., Mauretania, Havre, 14 cs.
 A. C. Dodman Jr., Inc., Berengaria, Southampton, 1 cs.
 A. C. Dodman, Jr., Inc., by same, 31 bls.
 F. J. Emmerich, by same, 1 bls.
 Whiting & Patterson, Inc., by same, Bordeaux, 14 cs.
 F. J. Emmerich, A. Ballin, Hamburg, 16 bls.
 F. J. Emmerich, Majestic, Southampton, 8 bls.

PAPERHANGINGS

A. C. Dodman, Jr., Inc., Baltic, Liverpool, 3 bls.
 W. H. S. Lloyd & Co., Baltic, Liverpool, 9 cs.
 W. H. S. Lloyd & Co., Menominee, London, 2 cs.
 W. H. S. Lloyd & Co., Menominee, London, 10 bls.

NEWSPRINT

M. Gottesman & Co., Inc., A. Ballin, Hamburg, 194 rolls.
 Parsons & Whittemore, by same, 123 rolls.
 Parsons & Whittemore, Bremen, Bremen, 76 rolls.
 National City Bank, by same, 831 rolls.
 Chemical National Bank, Saxonia, Hamburg, 52 rolls.
 Chemical National Bank, Republic, Bremen, 304 rolls.
 Parsons & Whittemore, by same, 306 rolls.

PRINTING PAPER

M. O'Meara Co., Republic, Bremen, 50 cs.
 B. F. Drakenfeld & Co., Baltic, Liverpool, 21 cs.
 Hensel, Bruckman & Lorbacher, N. Amsterdam, Rotterdam, 8 cs.
 Miller, Wright Paper Co., by same, 3 cs.
 H. Hollesen, Inc., Columbus, Bremen, 202 bls.
 C. Steiner, Veendam, Rotterdam, 10 cs.
 J. B. Harris Co., Pittsburgh, Hamburg, 42 bls.
 Pulp & Paper Trading Co., by same, 61 bls.
 Merchants Prod. Corp., by same, 8 bls.
 Steffens, Jones Co., by same, 17 bls.
 P. C. Zuhlke, by same, 20 bls.
 Keuffel & Esser, A. Ballin, Hamburg, 3 bls.
 Falsing Paper Co., by same, 166 cs.
 H. Hollesen, Inc., by same, 200 rolls.
 H. Lindenmeyer & Son, Pastores, Havana, 66 cs.
 Perry, Ryer & Co., Tuscania, Glasgow, 96 cs.

WRAPPING PAPER

E. Dietzgen & Co., A. Ballin, Hamburg, 14 cs.
 Chemical National Bank, by same, 167 bls.
 Wilkinson Bros. & Co., Inc., by same, 76 bls.
 Wilkinson Bros. & Co., Inc., by same, 9 rolls.
 National City Bank, by same, 150 bls.
 C. K. MacAlpine & Co., by same, 136 rolls.
 American Express Co., Bremen, Bremen, 175 bls.
 Chemical National Bank, Drottningholm, Gothenburg, 1,043 rolls.
 C. K. MacAlpine & Co., by same, 143 rolls.
 Wilkinson Bros. & Co., Inc., Idefjord, Kammeheim, 414 bls.
 Republic Bag & Paper Co., Pittsburgh, Hamburg, 496 bls.

PACKING PAPER

J. P. Heffernan Paper Co., A. Ballin, 164 bls.
 J. P. Heffernan Paper Co., Drottningholm, Gothenburg, 83 bls.
 M. O'Meara Co., Anaconda, Rotterdam, 8 bls.
 M. O'Meara Co., by same, 458 rolls.

KRAFT PAPER

Chatham & Phoenix National Bank, Drottningholm, Gothenburg, 460 rolls.

VELOUR PAPER

Bendix Paper Co., New Amsterdam, Rotterdam, 8 cs.

COPY PAPER

Keuffel & Esser, New Amsterdam, Rotterdam, 1 cs.

DECALCOMANIA PAPER

Phoenix Shipping Co., Republic, Bremen, 5 cs.

DRAWING PAPER

Keuffel & Esser, A. Ballin, Hamburg, 28 cs.
 E. Dietzgen & Co., McKeesport, Rotterdam, 19 cs.

BARYTA COATED PAPER

Eastman Kodak Co., Bremen, Bremen, 50 cs.
 G. Gennert, Saxonia, Hamburg, 17 cs.

SURFACE COATED PAPER

Corn Exchange National Bank, Saxonia, Hamburg, 72 cs.
 Genaert Co. of America, Maine, Antwerp, 2 cs.
 Globe Shipping Co., Columbus, Bremen, 75 cs.
 Globe Shipping Co., Republic, Bremen, 76 cs.
 Hensel, Bruckman & Lorbacher, Veendam, Rotterdam, 11 cs.
 P. C. Zuhlke, Pittsburgh, Hamburg, 35 cs.

FILTER PAPER

E. Fougere & Co., Berengaria, Bordeaux, 49 cs.
 Garfield National Bank, A. Ballin, Hamburg, 9 cs.

WRITING PAPER

Guibout Freres, Berengaria, Bordeaux, 10 cs.
 F. C. Strype, Veendam, Rotterdam, 5 cs.
 Dietrich & Co., DeGrasse, Havre, 1 cs.
 Guibout Freres, Mauretania, London, 22 cs.

TRACING PAPER

E. Dietzgen & Co., Anaconda, Rotterdam, 13 cs.

PHOTO-PAPER

T. F. Wilmot, Mauretania, London, 1 cs.
 J. J. Gavin, Baltic, Liverpool, 2 cs.

TISSUE PAPER

Meadows, Wye & Co., Baltic, Liverpool, 2 cs.
 Iwai & Co., M. Maru, Kobe, 8 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, Bremen, Bremen, 5 cs.

COLORED PAPER

C. W. Williams, Maine, Antwerp, 15 cs.

PAPER

Freedman & Slater, Veendam, Rotterdam, 2 cs.
 Guibout Freres, DeGrasse, Havre, 6 cs.
 Japan Paper Co., DeGrasse, Havre, 11 cs.
 The Borregaard Co., Drottningholm, Gothenburg, 170 bls.
 The Borregaard Co., by same, 600 rolls.
 Gilbert Paper Co., by same, 30 rolls.
 Gilbert Paper Co., by same, 102 bls.
 C. F. Hubles & Co., by same, 169 rolls.
 Universal Paper Co., by same, 170 rolls.

Universal Paper Co., by same, 59 bls.
 M. O'Meara Co., by same, 117 rolls.
 M. O'Meara Co., by same, 16 rolls.
 Mugler & Umlauf, by same, 52 rolls.
 Mugler & Umlauf, by same, 83 bls.
 Wilkinson Bros. & Co., Inc., Drottningholm, Gothenburg, 6 bls.

Whiting & Patterson, Inc., Berengaria, Southampton, 8 cs.

W. Schall & Co., A. Ballin, Hamburg, 10 cs.
 National City Bank, Bremen, Bremen, 30 cs.
 J. I. Bernitz, Anaconda, Rotterdam, 12 cs.
 Commercial Fibre Co., Anaconda, Rotterdam, 9 cs.

Wilkinson Bros. & Co., Inc., New Amsterdam, Rotterdam, 4 cs.

F. L. Kramer & Co., Menominee, London, 4 bls.

RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., A. Ballin, Hamburg, 246 bls. bagging.

E. J. Keller Co., Inc., by same, 51 bls. rags.
 E. J. Keller Co., Inc., by same, 56 bls. new cuttings.

E. J. Keller Co., Inc., by same, 150 bls. rag pulp.
 National City Bank, by same, 143 bls. rags.

Union National Bank, by same, 80 bls. rags.
 Guaranty Trust Co., by same, 25 bls. rags.

Brown Bros. & Co., Tuscania, Glasgow, 89 bls. rags.

National Bank of Commerce, Lithuania, Danzig, 165 bls. rags.

A. W. Fenton, Inc., V. Emmanuelle III., Cardiff, 447 bls. rags.

E. Butterworth & Co., Inc., Bremen, Bremen, 33 bls. bagging.

Brown Bros. & Co., by same, 306 bls. rags.
 National City Bank, by same, 37 bls. rags.

National City Bank, by same, 16 bls., new cuttings.
 Bankers Trust Co., by same, 52 bls., rags.

Chase National Bank, by same, 64 bls. rags.
 A. Ragonne & Co., by same, 7 bls. waste paper.

Garfield National Bank, by same, 105 bls. rags.
 L. Schere & Son, Schodack, Dunkirk, 90 bls. rags.

R. Bishop Manufacturing Co., by same, 138 bls. rags.

Royal Manufacturing Co., by same, 26 bls. thread waste.

L. Schere & Son, Schodack, Havre, 379 bls. rags.

Philadelphia National Bank, by same, 267 bls. rags.

MacKenzie & Co., by same, 13 bls. rags.
 Marquardt Hewitt Corp., by same, 212 bls. rags.

International Acceptance Bank, Am. Merchant, London, 61 bls. rags.

S. Birkenstein & Son, Anaconda, Rotterdam, 209 bls. rags.

E. J. Keller Co., Inc., by same, 224 bls. rags.
 Textile Waste Merchandising Co., by same, 423 bls. rags.

J. J. Patricoff, by same, 35 bls. rags.
 American Woolstock Corp., by same, 105 bls. rags.

Castle & Overton, Inc., by same, 33 bls. rags.
 Reis & Co., by same, 16 bls. thread waste.

Atterbury & McKelney, Veendam, Rotterdam, 146 bls. rags.

Stone Bros. Co., by same, 44 bls. rags.
 S. Birkenstein & Son, by same, 208 bls. bagging.

Castle & Overton, Inc., by same, 34 bls. rags.
 P. Berlowitz, by same, 504 bls. rags.

P. Berlowitz, by same, 70 bls. bagging.
 E. Butterworth & Co., Inc., by same, 45 bls. bagging.

Castle & Overton, Inc., Carrier, Antwerp, 170 bls. rags.

E. J. Keller Co., Inc., by same, 66 bls. rags.
 E. J. Keller Co., Inc., by same, 479 bls. bagging.

Katzenstein & Keene, Inc., by same, 45 bls. rags.
 Mechanics & Metals National Bank, by same, 302 bls. rags.

S. Birkenstein Son, Rhode Island, Leith, 36 bls. rags.

S. Birkenstein Son, Rhode Island, Leith, 113 bls. bagging.
 Bankers Trust Co., by same, 31 bls. rags.
 Anglo South American Trust Co., by same, 106 bls. rags.

(Continued on page 58)

A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

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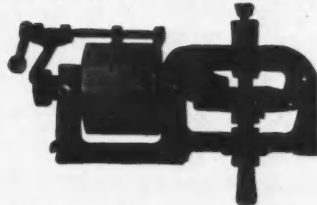
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Wires
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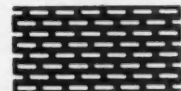
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HOLYOKE, MASS.
Since 1878.

Fourdrinier Wires

Dandy Rolls

Cylinder Covers Best Quality Always

Imports of Paper and Paper Stock

(Continued from page 56)

American Express Co., by same, 42 bls. rags.
 Castle & Overton, Inc., Rhode Island, Dundee, 120 bls. paperstock.
 Baring Bros. & Co., Ltd., by same, 32 bls. paperstock.
 Belgian Bank, Pittsburgh, Hamburg, 94 bls. rags.
 L. H. Abenheimer, by same, 52 bls. rags.
 Garfield National Bank, by same, 76 bls. rags.
 Anglo South American Trust Co., Baltic, Liverpool, 38 bls. rags.
 Katzenstein & Keene, Inc., Archimedeo, Manchester, 143 bls. new cuttings.
 National Bank of Commerce, by same, 103 bls. rags.
 British Bank of South America, by same, 46 bls. bagging.
 Equitable Trust Co., by same, 70 bls. bagging.
 Castle & Overton, Inc., New Amsterdam, Rotterdam, 114 bls. rags.
 E. J. Keller Co., Inc., by same, 642 bls. rags.
 E. J. Keller Co., Inc., by same, 277 bls. bagging.
 State Bank, by same, 24 bls. rags.
 Whaling Waste Products Co., Inc., by same, 148 bls. rags.
 D. M. Hicks, by same, 38 bls. rags.
 Castle & Overton, Inc., Aden Maru, Hamburg, 31 bls. rags.
 E. J. Keller Co., Inc., by same, 19 bls. rags.
 E. J. Keller Co., Inc., by same, 87 bls. new cuttings.
 E. J. Keller Co., Inc., Blue Triangle, Alexandria, 135 bls. rags.
 E. J. Keller Co., Inc., Alaskan, Kobe, 400 bls. rags.
 E. J. Keller Co., Inc., S. Barbara, Kobe, 300 bls. rags.
 E. J. Keller Co., Inc., Nazareno, Leghorn, 433 bls. rags.
 E. J. Keller Co., Inc., Hellig Olav, Copenhagen, 204 bls. rags.
 E. J. Keller Co., Inc., Samland, Antwerp, 67 bls. thread waste.
 Katzenstein & Keene, Inc., Kochambeau, Rouen, 28 bls. bagging.
 Castle & Overton, Inc., Rochambeau, Havre, 99 bls. bagging.
 Castle & Overton, Inc., Volendam, Rotterdam, 54 bls. rags.
 Stone Bros. Co., Idaho, Hull, 517 bls. rags.
 S. Birkenstein & Son, by same, 6 bls. rags.
 Textile Waste Merchandising Co., President Harrison, Kobe, 50 bls. cottonwaste.
 Atlas Waste Manufacturing Co., by same, 50 bls. cotton waste.
 Ainswick, Sonne & Co., Pres. Harrison, Alexandria, 99 bls. rags.
 Brown Bros. & Co., Republic, Bremen, 270 bls. rags.
 National City Bank, by same, 91 bls. rags.
 Chase National Bank, by same, 72 bls. rags.
 Bankers Trust Co., by same, 84 bls. rags.
 Albion Trading Co., Olen, Bordeaux, 312 bls. rags.
 Atlantic Exchange Bank & Trust Co., by same, 193 bls. rags.
 S. Birkenstein & Sons, by same, 52 bls. rags.
 Goldman, Sacks & Co., Olen, St. Nazaire, 284 bls. rags.

OLD ROPE
 International Purchasing Co., McKeesport, Rotterdam, 71 coils.
 Brown Bros. & Co., Maine, Antwerp, 93 coils.
 Brown Bros. & Co., N. Amsterdam, Rotterdam, 123 coils.
 Brown Bros. & Co., Veendam, Rotterdam, 82 coils.
 Brown Bros. & Co., Rhode Island, Leith, 106 coils.
 U. S. Mortgage & Trust Co., Republic, Bremen, 8 coils and 364 bales.
 Graves & Co., Inc., Menominee, London, 96 coils.
 S. Birkenstein & Son, Idaho, Hull, 93 coils.
 Stone Bros. Co., by same, 112 coils.
 E. J. Keller Co., Inc., N. Amsterdam, Rotterdam, 152 coils.
 E. J. Keller Co., Inc., Hellig Olav, Copenhagen, 191 coils.
 Brown Bros. & Co., A. Ballin, Hamburg, 66 coils.
 L. H. Abenheimer, Tuscania, Glasgow, 70 coils.
 Brown Bros. & Co., Exeter City, Bristol, 247 coils.

WOODPULP

Lagerloef Trading Co., Bremen, Bremen, 374 bls.
 Hartig Pulp Co., by same, 1,725 bls.
 Bulkley, Dunton & Co., by same, 1,750 bls.
 Hartig Pulp Co., Anaconda, Rotterdam, 1,268 bls.
 Castle & Overton, Inc., by same, 771 bls., 170 tons.
 Perkins, Goodwin & Co., Eldred, Drontheim, 2,916 bls., 486 tons.
 Buck, Kaier & Co., by same, 384 bls., 64 tons.
 M. Gottesman & Co., Inc., Veendam, Rotterdam, 1,000 bls.
 M. Gottesman & Co., Inc., Mongolia, Hamburg, 845 bls.
 M. Gottesman & Co., Inc., Stavangerfjord, Christiania, 1,600 bls.
 M. Gottesman & Co., Inc., N. Amsterdam, Rotterdam, 750 bls.
 M. Gottesman & Co., Inc., Bratsberg, Stockholm, 600 bls., 100 tons.
 Johaneson, Wales & Sparre, Inc., Bratsberg, Sundsvall, 2,250 bls., 378 tons.
 E. M. Sergeant & Co., by same, 500 bls., 100 tons.
 Johaneson, Wales & Sparre, Inc., by same, Harnosand, 3,780 bls., 630 tons.
 Guaranty Trust Co., by same, Ohrviken, 3,000 bls., 508 tons.
 Bulkley, Dunton & Co., by same, Iggesund, 1,000 bls., 200 tons.
 Lagerloef Trading Co., Republic, Bremen, 381 bls.
 Independent Fibre Co., Drottningholm, Gothenburg, 1,000 bls.
 National City Bank, Pittsburgh, Hamburg, 366 bls.
 J. Anderson & Co., by same, 312 bls.
 Castle & Overton, Inc., by same, 1,820 bls.
 Ira L. Beebe & Co., Inc., by same, 5,035 bls.
 Tidewater Papermills Co., Bornholm, Murray Bay, 6,435 bls.
 Equitable Trust Co., Aden Maru, Hamburg, 572 bls., 100 tons.
 Bulkley, Dunton & Co., Columbus, Bremen, 475 bls.
 Hartig Pulp Co., by same, 2,000 bls.

WOODPULP BOARDS

Bayerdorf Trading Co., Republic, Bremen, 688 rolls woodpulp boards.

WOODFLOUR

B. L. Soberski, Drottningholm, Gothenburg, 847 bags.

CASEIN

T. M. Duche & Sons, Linnell, Buenos Aires, 417 bags.
 Bank of the Manhattan Co., Vestris, Buenos Aires, 833 bags.
 Bank of London & South America, by same, 833 bags.

CHINA CLAY

Morey & Co., Inc., Onega, Fowey, 165 tons, 2 cwt.
 J. W. Higman Co., Inc., by same, 432 tons, 13 cwt.
 Atlantic National Bank of Boston, by same, 1,602 tons, 1 cwt.
 L. A. Salomon & Bro., by same, 40 casks, 20 tons.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 8, 1924

E. H. Bailey, Rhode Island, Leith, 45 cs., writing paper.
 H. Reeve Angel & Co., Inc., Sagopcrack, London, 20 bls., printing paper.
 Castle & Overton, Inc., Olen, Bordeaux, 254 bls. rags.
 E. J. Keller Co., Inc., Olen, St. Nazaire, 135 bls. rags.
 Goldman, Sachs & Co., by same, 42 bls. rags.
 Castle & Overton, Inc., Anaconda, Rotterdam, 403 bls. rags.
 Textile Trading Co., by same, 50 bls. cottonwaste.
 S. Birkenstein & Son, by same, 66 bls. rags.
 E. Butterworth & Co., Inc., by same, 86 bls. rags.

D. J. Murphy, by same, 38 bls. rags.
 E. J. Keller Co., Inc., by same, 80 bls. rags.
 Textile Waste Merchandising Co., by same, 197 bls. rags.
 J. A. Steer, Rhode Island, Leith, 191 bls. rags.
 E. J. Keller Co., Inc., Sweden Maru, Hamburg, 140 bls. rags.
 E. J. Keller Co., Inc., Nevisian, Hamburg, 163 bls. rags.
 E. J. Keller Co., Inc., M. Mariner, Manchester, 83 bls. bagging.
 E. J. Keller Co., Inc., Sarcoxie, St. Nazaire, 236 bls. rags.
 E. J. Keller Co., Inc., Bankdale, Barcelona, 103 bls. rags.
 E. J. Keller Co., Inc., Blommersdyk, Rotterdam, 337 bls. rags.
 E. J. Keller Co., Inc., Blommersdyk, Amsterdam, 66 bls. new cuttings.
 E. J. Keller Co., Inc., Cabo Hatteras, Leghorn, 194 bls. rags.
 E. J. Keller Co., Inc., Cabo Hatteras, Genoa, 256 bls. cottonwaste.
 E. J. Keller Co., Inc., Antiochia, Hamburg, 2,365 bls. rags.
 Castle & Overton, Inc., Cabo Hatteras, Genoa, 80 bls. rags.
 Castle & Overton, Inc., Nevisan, Antwerp, 39 bls. rags.
 Castle & Overton, Inc., by same, 108 bls. bagging.
 Castle & Overton, Inc., Blommersdyk, Rotterdam, 243 bls. rags.
 Castle & Overton, Nienburg, Hamburg, 192 bls. rags.
 Castle & Overton, Eastern Dawn, Antwerp, 287 bls. rags.
 Castle & Overton, Inc., Dromore, Belfast, 108 bls. waste paper.
 Castle & Overton, Inc., Naperian, Hamburg, 125 bls. rags.
 Castle & Overton, Inc., Naperian, Denmark, 281 bls. rags.
 Castle & Overton, Inc., Westpool, Germany, 94 bls. rags.
 Castle & Overton, Inc., Dania, Copenhagen, 120 bls. rags.
 Castle & Overton, Inc., Eastern Victor, Rotterdam, 75 bls. rags.
 S. Birkenstein & Son, Rhode Island, Leith, 91 coils old rope.
 Brown Bros. & Co., by same, 50 coils old rope.
 Castle & Overton, Inc., Anaconda, Rotterdam, 876 bls. woodpulp, 178 tons.
 Castle & Overton, Inc., ———, Germany, 1,390 bls. woodpulp.
 M. Gottesman & Co., Inc., C. Bors, Sundsvall, 2,500 bls. woodpulp.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 8, 1924

Hudson Trading Co., Eldred, Hommelvik, 1,200 bls. woodpulp, 200 tons.
 Wilson, Lyon & Co., Inc., by same, 150 bls. woodpulp, 20 tons.
 Perkins, Goodwin & Co., by same, 7,579 bls. woodpulp, 1,197 tons.
 M. Gottesman & Co., Inc., Modesta, Stockholm, 7,250 bls. woodpulp.
 M. Gottesman & Co., Inc., Sweden Maru, Trieste, 566 bls. woodpulp.
 Castle & Overton, Inc., West Haven, Rotterdam, 1,250 bls. woodpulp.
 Castle & Overton, ———, Germany, 4,675 bls. woodpulp.
 E. J. Keller Co., Inc., C. Boers, Gefte, 660 bls. woodpulp.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 8, 1924

E. J. Keller Co., Inc., Harold, Rotterdam, 186 bls. bagging.
 Castle & Overton, Inc., Leerdam, Rotterdam, 295 bls. rags.

(Continued on page 60)

TEXAS GULF SULPHUR

99½ Per Cent Pure

Huge reserves, ample stocks of remarkably pure material and unexcelled service.

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Tissue

Fourdrinier or Cylinder

We welcome your enquiries for special lightweight papers. Try us when you need

**A SPECIAL PAPER FOR
A SPECIAL PURPOSE**

The St. Regis Paper Company

and the

Hanna Paper Corporation

Daily Capacity, 425 Tons

**Newsprint
Butchers' Manila
Packers' Oiled Manila**

General Sales Offices:

30 East 42nd St. New York
CHICAGO PITTSBURGH
620 McCormick Bldg. 1117 Farmers Bank Bldg.

Imports of Paper and Paper Stock

(Continued from page 58)

Castle & Overton, Inc., West Kasson, Antwerp, 445 bls. rags.
 Castle & Overton, Inc., West Kasson, Havre, 180 bls. rags.
 Castle & Overton, Inc., Sapinero, Rotterdam, 183 bls. rags.
 Castle & Overton, Inc., West Tacook, Hamburg, 118 bls. rags.
 Castle & Overton, Carocoli, Havre, 265 bls. rags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 8, 1924

C. H. Powell & Co., West Cohas, Liverpool, 450 bls. old rags.
 American Express Company by same, 132 bls. old rags.
 National Shawmut Bank, by same, 65 bls. old rags.
 Fred Leyland & Co., West Haven, Rotterdam, 15 bls. paperstock.
 Maurice O'Meara, by same, 16 bls. packing paper.
 E. J. Keller Company, Inc., by same, 238 bls. cellulose.

C. P. M., by same, 16 reels strawboard.
 Castle & Overton, by same, 1402 bls. woodpulp.
 T. D. Downing, by same, 19 bls. old rags.
 On order, by same, 434 bls. old rags.
 W. H. Hasson, by same, 122 bls. old rags.
 National City Bank, by same, 692 bls. old rags.
 Goldman, Sachs & Co., by same, 730 bls. cellulose.
 Castle & Overton, by same, 2,640 bls. woodpulp.
 Hudson Trading Company, by same, 110 reels paper.
 Atlas Waste Material Company, by same, 4 bls. old rags.
 Maurice O'Meara & Co., by same, 41 bls. old rags.
 Ira L. Beebe, by same, 260 bls. old rags.
 Brown Brothers Company, Bolivian, Liverpool, 204 bls. old rope.
 Oxford University Press, by s. s. Samaria, Liverpool, 2 cs. printed paper.
 Brown Brothers Company, Lehigh, Liverpool, 107 coils old rope.
 E. Butterworth & Co., by same, 146 bls. old rags.
 Crocker, Burbank, by same, 225 bls. waste paper.
 Anglo South American Trading Company, by same, 177 bls. old rags.

Katzenstein & Keene, Lehigh, Leith, 257 bls. old rags.
 Mechanics & Metals National Bank, by same, 188 bls. old rags.
 On order, by same, 191 bls. old rags.
 M. O'Meara Co., Aden Maru, Hamburg, 10 cs., parchment paper.
 Brown Brothers Company, Menominee, London, 71 bls. waste paper.
 E. Butterworth Co., Inc., by same, 61 bls. paperstock.
 E. Butterworth & Co., Inc., by same, 45 bls. old rope.
 E. J. Keller Co., Inc., West Haven, Rotterdam, 238 bls. woodpulp.
 Castle & Overton, Inc., by same, 1,530 bls. woodpulp.
 Castle & Overton, Inc., ———, Germany, 1,745 bls. woodpulp.

SAN FRANCISCO IMPORTS

WEEK ENDING NOVEMBER 8, 1924

Rosenberg Iron & Metal Co., M. Maru, Osaka, 140 bls. rags.

BIDS AND AWARDS FOR GOVERNMENT PAPER

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 12, 1924.—The Government Printing Office has received the following bids for 5,275 pounds of 44 x 64 211 No. 28 white map paper: Dobler & Mudge, at 15 cents per pound; Reese & Reese, 15.47 cents; Barton, Duer & Koch Paper Company, 14.95 cents; American Writing Paper Company, 17 cents; and R. P. Andrews Paper Company, at 21 and 16.1 cents.

The following bids have also been received for 70,000 various sizes fine white writing envelopes: R. Carter Ballantyne, \$5.45, \$5.50 and \$6.40 per M; Charles W. Beers & Co., \$6.10, and \$5.75; R. P. Andrews Paper Company, at \$6.90, \$5.67, \$8.97 and \$9.70; Dobler & Mudge, at \$6.20, \$6.30, and \$4.65; and Eaton, Crane & Pike Company, at \$12.88, \$8.68, and \$14.13.

The Printing Office will receive bids on November 17 for 10,000 pounds (278 reams) of 21 x 32—36 No. 20 pink sulphite writing paper.

The Government Printing Office will receive bids on November 14 for 2,500 pounds of kraft wrapping paper in 36 inch rolls. Bids will be received on the same date for 18,000 pounds (150 reams) of 22½ x 28½—120 white bristol board and for 4,950 lbs. (150 reams) of 28 x 34—33 white writing paper.

The following bids have been received for 34,450 lbs. of 31½ x 45½—53 white MF book paper: R. P. Andrews Paper Company, 6.91 cents and 6.66 cents per pound; Dobler and Mudge, 7.1 cents; Reese and Reese, 6.8 cents; Old Dominion Paper Company, 7.09 cents; Allied Paper Mills, 6.905 cents; P. H. Clatfelter Company, 7 cents; Maurice O'Meara Company, 7.25 cents; Perkins Goodwin Company, 6.97 cents and 6.72 cents; Lindemeyr & Harker, 6.8 cents and 7.05 cents; Bryant Paper Company, 6.07 cents; Kalamazoo Paper Company, 7 cents; Barton, Duer & Koch Paper Company, 7 cents; Mathers-Lamm Paper Company, 7.3 cents.

The following bids were also received for 50 reams, 9,000 lbs. of 24 x 36—180 red rope paper: R. P. Andrews Paper Company, 9.94 cents per pound; Dobler & Mudge, 10 cents; Broderick Paper Company, 9.95 cents; Reese & Reese, 9.845 cents; Mathers-Lamm Paper Company, 9.9 cents; R. A. Cauthorne Paper Company, 9.94 cents; Maurice O'Meara Company, 10.25 cents; Barton, Duer & Koch Paper Company, 9.95 cents; Samuel S. Alcorn, 7.25 cents; T. A. Cantwell & Co., 10.65 cents; D. S. Walton & Co., 10.49 cents; and Charles C. Scott & Co., 14.75 cents and 13 cents and 11.75 cents.

Bids were also received for 3,000 lbs. of backlining paper in 24-inch rolls: R. P. Andrews Paper Company, 4.53 cents; Barton, Duer

& Koch, 4.39 cents; Dobler & Mudge, 4.5 cents; Broderick Paper Company, 4.55 cents; R. J. Terry Company, 3.25 cents; Mathers-Lamm Paper Company, 4.5 cents and 3.25 cents; C. A. Cantwell & Co., 4.75 cents and 3.41 cents and Lindemeyr & Harker, 4.38 cents.

The Printing Office also received the following bids for 2,400 lbs. of 19 x 24—80 salmon blotting paper; Dobler & Mudge, 8.75 cents; Mathers-Lamm Paper Company, 8.75 cents and 11.95 cents; R. P. Andrews Paper Company, 8.75 cents and 12 cents; Reese & Reese, 8.66 cents and 10.85 cents; District of Columbia Paper Manufacturing Company, 8.25 cents; Joseph Parker & Sons Company, 13 cents and Old Dominion Paper Company, 8.79 cents and 12.24 cents.

The Government Printing Office will receive bids on November 17 for 5,400 pounds (150 reams) of 21 x 32, No. 20 yellow sulphite writing paper.

The Government Printing Office will receive bids on November 14 for 36,000 pounds (12,960 sheets) of No. 2, 25 x 30, No. 18 binders board.

Bids will also be received by the Printing Office on November 17 for 8,000 pounds (500 reams) of 21 x 32—16 No. 9 canary sulphite manifold paper. The Printing Office will also receive bids on the same date for 3,150 lbs. (100 reams) of 24 x 38, No. 13 light pink manifold bond paper.

Illinois Shipping Container Co. to Build

CHICAGO, November 3, 1924.—To obtain the facilities of the Chicago Junction Railway, a central city location, and a good labor market, the Illinois Shipping Container Company has selected and purchased a site in the Central Manufacturing District of Chicago. On this site—near Ashland avenue, the District trustees are building a one-story plant for the company, which the latter has purchased and expects to occupy around January 1, 1925.

The land measures in area approximately 21,000 square feet. The building will cover about 13,000 square feet of that. It measures 110 x 165, is of brick and terra cotta front. A. Epstein, structural engineer, is designer.

A Junction switchtrack serves the building and the trustees will provide a private driveway for trucks, leading from the garage, an integral part of the factory building.

The company was organized in 1920 to manufacture fiber boxes for parcel post and express shipments.

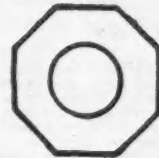
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GLASSINE BAGS—SPECIALTIES

Operating a Modern Printing Plant



SCHORSCH & CO.

Manufacturers


Established 1901

on a Paper Bag vouches for Its Good Quality



FACTORY
132ND TO 133RD ST. & BROOK AVE

500 East 133d Street . New York



Papers:

Genuine Vegetable Parchment

For wrapping all moist and greasy foodstuffs.

Bread Wraps—Waxed Papers

For tight-sealing cartons and wrapping dry foods.

Bond and Ledger Papers

All standard sizes, weights and colors.

Handy Household Papers in Rolls

Ask and ye shall receive full information.

KALAMAZOO VEGETABLE PARCHMENT CO.

Manufacturers of PARCHMENT, WAXED and BOND PAPERS



KALAMAZOO, MICHIGAN
Where Quality is the watchword.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is pulverized. That part of it which is pulverized is, as far as we know, the only pulverized clay which is washed and refined before being pulverized.

This insures greater freedom from impurities and an exceedingly uniform product.

Prices on M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit samples and quote you



FOURDRINIER WIRES

Dandy Rolls, Cylinder Molds,
Steel, Brass and Bronze
Wire Cloth
Bank and Office Railings.

CHENEY BIGELOW WIRE WORKS

Established 1842

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J. ANDERSEN & CO.

21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulp

BLEACHED and UNBLEACHED

Agents for Kollner Partington Paper Pulp Co., Ltd.
Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden.
Kronstädter Papierstoff-Fabriks Actien-Gesellschaft
Mills at Tuciansky, Sv. Martin

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

STOCKS	BID	ASKED
Abitibi Power and Paper Company, Ltd.	55½	56¼
Abitibi Power and Paper Company, Ltd., Pfd.	99	101
American Writing Paper Company, Pfd.	2½	2½
Brompton Pulp and Paper Company, Ltd.	28¼	28¾
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	46¾	46¾
International Paper Company, Pfd.	69½	71½
Laurentide Company, Ltd.	69½	81¾
Price Brothers	34	34¾
St. Maurice Paper Co., Ltd.	80	81
Smith (Howard) Paper Mills, Ltd.	27	28
Spanish River Pulp and Paper Mills, Ltd.	100¾	101
Spanish River Pulp and Paper Mills, Ltd., Pfd.	111	112
Union Bag and Paper Corp.	36	37
Wayagamack Pulp and Paper Company, Ltd.	35½	36
West Virginia Pulp and Paper Company	53	55

BONDS	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	100	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	96	98
Abitibi Power and Paper Company, Ltd., Cn. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	96¾	97¼
Brown Paper Serial 6s	99½	100
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A", 1944	94	95
Donnacona Paper Company, Ltd., 1st 6s 1940	98	100
Eddy Paper Company, 1st 7½s 1931	94	95
Gair (Robert) Company, 1st 7s 1937	98½	99½
International Paper Company, 1st and Ref. 5s (Series "B") 1947	86	86½
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	101¾	102
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	98	100
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	97½	99½
Peabody Paper Company, 1st 7s (Series "B") 1942	92	94
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	98¼	99¼
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	25½	30
Riordon Pulp and Paper Company, Ltd., 6s 1942	91	93
Riordon Company, Ltd., 1st and Ref. 8s 1940	96¾	97
River Raisin Paper Company, 1st 8s 1936	103	104
Smith (Howard) Paper Mills, Ltd., 6s 1934	90	95
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	90	95
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	102½	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	106	106½
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

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	4.15	@	4.40
Side Runs	3.25	@	4.00
Book, Casd			
S. & S. C.	7.00	@	9.75
M. F.	6.50	@	8.75
Coated and Enamel	9.00	@	15.00
Lithograph	9.00	@	14.00

Tissues		@	
White No. 1	75	@	90
White No. 2	70	@	80
Colored	1.05	@	1.90
Anti-Tarnish	1.40	@	2.30
Kraft	90	@	1.00
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	@	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	@	5.75
No. 2 Fibre	4.75	@	5.25
Common Bogus	3.50	@	2.75
S. Screening	2.25	@	3.75
Card Middler	4.00	@	5.00

Boards—per ton		@	
News	50.00	@	52.50
Straw	50.00	@	55.00
Chip	42.50	@	45.00
Binders	75.00	@	80.00
Sgl. Mia. Ll. Chip	55.00	@	62.50
Wood Pulp	70.00	@	75.00
Container	62.50	@	67.50
Sulphate Screenings	80	@	90
Refined	1.75	@	2.00
Ground Wood			
Screenings	20.00	@	25.00
Glassine			
Bleached, basis 25	12.00	@	15.00
Bleached, basis 20	14.00	@	17.00

Mechanical Pulp

(Ex-Dock)			
No. 1 Imported	35.00	@	40.00
(F. o. b. Mill)			
No. 1 Domestic	27.50	@	34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)			
Sulphite (Imported)			
Bleached	3.75	@	4.50
Easy Bleaching	2.90	@	3.15
No. 1 strong unbleached	2.75	@	3.25
No. 2 strong unbleached	2.50	@	2.75
No. 1 Kraft	2.75	@	2.85
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	3.20	@	3.75
Kraft (Domestic)	2.70	@	3.00
Sola Bleached	3.90	@	4.10

Domestic Rags

New Rags			
Prices to Mill, f. o. b. N. Y.			
Shirt Cuttings			
New White, No. 1	14.00	@	15.00
New White, No. 2	7.00	@	7.75
Sileasias, No. 1	8.75	@	9.25
New Unbleached	11.00	@	11.50
Washables	7.00	@	7.50
Fancy	7.75	@	8.50
Blue Overall	8.25	@	9.50
New Blue	5.00	@	5.50
New Black Soft	4.75	@	5.25
New Light Sec			
onds	3.00	@	3.25
O. D. Khaki Cuttings			
tings	5.25	@	6.00
Men's Corduray	5.00	@	5.75
New Canvas	7.00	@	7.50
New Black Mixed	2.75	@	3.00

Old Rags			
White, No. 1			
Repacked	6.30	@	6.55
Miscellaneous	5.55	@	5.80
White, No. 2			
Repacked	4.25	@	4.50
Miscellaneous	3.75	@	4.00
St. Soiled, White	3.00	@	3.50
Thirds and Blues			
Repacked	4.00	@	4.25
Miscellaneous	3.00	@	3.25
Black Stockings	3.50	@	3.75
Roofing Rags			
Cloth Strippings	1.90	@	2.00
No. 1	2.40	@	2.50
No. 2	2.30	@	2.40
No. 3	1.20	@	1.30
No. 4	1.20	@	1.30
No. 5A	1.80	@	1.50

Foreign Rags

New Light Sileasias	7.50	@	8.75
Light Flannelettes	8.00	@	8.25
Unbleached Cottons	9.50	@	10.00
New White Cuttings			
tings	11.50	@	12.50
New Light Oxford	7.25	@	8.25
New Light Prints	7.75	@	7.75
New Mixed Cuttings			
tings	3.25	@	3.75
New Dark Cuttings	3.00	@	3.50
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	4.50	@	5.00
Ord. Light Prints	3.00	@	3.50
Med. Light Prints	2.40	@	2.50
Dutch Blue Cottons	3.50	@	4.00
Ger. Blue Cottons	3.50	@	4.00
Checks and Blues	2.25	@	2.50
Dark Cottons	1.50	@	1.75
Shoopery	1.40	@	1.60
French Blues	3.25	@	3.75

Bagging

Prices to Mill F. o. b. N. Y.			
Gunny No. 1	1.80	@	2.00
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00

Wool, Tares, light	1.55	@	1.5
Wool, Tares, heavy	1.60	@	1.70
Bright Bagging	1.50	@	1.60
Sound Bagging	.90	@	1.00
Manila Rope			
Foreign	6.25	@	6.50
Domestic	6.50	@	6.75
New Bu. Cut.	2.25	@	2.50
Hessian Jute Threads			
Foreign	2.25	@	2.50
Domestic	2.10	@	2.30

Old Waste Papers

(F. o. b. New York)			
Shavings			
Hard, White, No. 1	3.40	@	3.85
Hard, White, No. 2	3.15	@	3.60
Soft, White, No. 1	2.80	@	3.15
Flat Stock			
Stitchless	1.50	@	1.60
Overissue Mag.	1.60	@	1.70
Solid Flat Book	1.45	@	1.55
Crumpled No. 1	1.25	@	1.35
Solid Book Ledger	1.80	@	1.90
Ledger	1.60	@	1.70
New B. B. Chips	.50	@	.55
Manilas			
New Env. Cut.	2.45	@	2.55
New Cut, No. 1	1.75	@	2.00
Extra No. 1 old	1.40	@	1.50
Print	1.20	@	1.30
Container Board	1.00	@	1.10
Bogus Wrapper	1.00	@	1.10
Old Krafts Machine compressed bales	2.05	@	2.15
News			
No. 1 White News	1.65	@	1.75
Strictly Overissue	1.05	@	1.15
Strictly Folded	.95	@	1.05
No. 1 Mixed Paper	.75	@	.85
Common Paper	.50	@	.68

Twines

Cotton—(F. o. b. Mill)			
No. 1	.43	@	.48
No. 2	.41	@	.43
No. 3	.40	@	.42
India, No. 6 basis			
Light	.19	@	.20
Dark	.17	@	.19
B. C., 18 basis	.39	@	.41
A. B., Italian, 18			
Basis	.51	@	.61
Finished Jute			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply			
No. 1	.20	@	.23
No. 2	.18	@	.20
Tube Rope			
4-ply and larger	.15	@	.17
5-ply and larger	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India			
Basis	.14	@	.15
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Amer. Hemp, 6	.30	@	.32
Sisal Hay Rope			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn			
No. 1	.14	@	.15
No. 2	.11	@	.11
Manila Rope	.18	@	.19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite			
9	@	12	
Sulphite Bond	7¼	@	10¾
Sulphite Ledger	9½	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6¼	@	7¾
Coated Book	8	@	10
Coated Label	8	@	10
News—Rolls, mill	3¾	@	4¼
News—Sheets, mill	4	@	4¾
No. 1 Manila	4¼	@	5¼
No. 1 Fibre	5	@	5¾
No. 2 Manila	3¾	@	4¼
Butchers' Manila	4	@	4¾

No. 1 Kraft	6	@	6¼
No. 2 Kraft	5	@	5¼
Wood Tag Boards	4¼	@	6
Sulphite Screenings	2½	@	2¾
Manila Tissue, 24x36 sheet	6¾	@	7
White Tissue, 20x30 sheet	6¾	@	7
Boards, per ton			
Plain Chip	45.00	@	47.50
Solid news	47.50	@	50.00
Manila Line Chip	55.00	@	57.50
Container Lined			
85 Test	67.50	@	70.00
100 Test	72.50	@	75.00

Old Papers

(F. o. b. Chicago)			
Shavings			
No. 1 Hard White	3.10	@	3.20
White Envel. Cuttings			
No. 1 Soft Shav.	2.90	@	3.00
No. 1 Mixed	1.55	@	1.65
No. 2 Mixed	1.35	@	1.45

Ledgers and Writings

Ledgers	1.65	@	1.70
Solid Books	1.60	@	1.65
No. 1 Light Books	1.15	@	1.20
Blanks	2.10	@	2.15
Ex. No. 1 Manila	2.50	@	2.60
Manila Envelope	2.60	@	2.70
Cuttings	2.60	@	2.70
Folded News (over-issue)	.90	@	1.00
Old Newspapers—			
No. 1	.85	@	.90
No. 2	.75	@	.80

Mixed Papers—

No. 1	.80	@	.85
No. 2	.70	@	.75
Straw Clippings	.85	@	—
Binders' Clippings	.85	@	—
Kraft	2.20	@	2.25
New Kraft Cuts	2.60	@	2.65
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	\$.42.00	@	—
No. 2	40.00	@	—
No. 3	38.00	@	—
No. 4	38.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—

White Env. Cut.	3.60	@	—
Soft White Book shavings	3.00	@	—
White Blk. News	1.90	@	—

Book and Ledger—

Flat Magazine and Book Stock (old)	1.50	@	—
Light and Crumpled Book Stock	1.35	@	—
Ledgers and Writings	1.75	@	—
Solid Ledgers	1.75	@	—

Manilas—

New Manila Cut.	—	@	1.60
Printed Manilas	1.20	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.90	@	—

Folded News .90 @ —

No. 1 Mixed Papers — @ .75

Domestic Rags—
Price to mills, f. o. b. Toronto Per lb.

No. 1 White shirt cuttings	.14½	@	.14½
No. 2 White shirt cuttings	.07½	@	.08
Fancy shirt cuttings	.08	@	.08½
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾

Per cwt. —

Black stockings .04 @ —

Roofing stock:

No. 1	2.20	@	—
No. 2	2.10	@	—
Manila rope	.06	@	.06½
No. 2	1.55	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.53
Ledgers	.13½	@	.40
Writings—			
Superfine	.13½	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.08	@	.11
Book, S. S. & C.	.09¾	@	.12½
Book, Coated	.11½	@	.20
Coated Lithograph	.10	@	.13
Label	.10	@	.13
News	.04¾	@	.05
No. 1 Jute Manila	.12	@	.13
Manila Sul. No. 1	.07	@	.10
Manila No. 2	.06	@	.08
No. 2 Kraft	.05	@	.08
No. 1 Kraft	.07	@	.08
Common Bogus	.03½	@	.04
Straw Board	.55.00	@	.60.00
News Board	.42.50	@	—
Chip Board	.40.00	@	.42.50
Wood Pulp Board	2.75	@	3.00

No. 2 Hard White	3.25	@	3.40
No. 1 Soft White	2.75	@	3.00
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	2.00	@	—
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.45	@	1.60
No. 2 Books, light	1.15	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.10	@	1.15
Old Kraft	2.00	@	2.25
Overissue News	1.05	@	1.10
Old Newspaper	.65	@	.70
No. 1 Mixed Paper	.75	@	.80
Common Paper	.60	@	.70
Straw Board, Chip	.65	@	.70
Binders Bd., Chip	.65	@	.70

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—

New White, No. 1	.13	@	.14
New White, No. 2	.07	@	—
Silias, No. 1	.08	@	.08¾
New Unbleached	.11½	@	.11½
Washable	.05½	@	.05¾
Fancy	.07	@	.07¾

Cottons—according to grades—

Blue Overall	.08¾	@	.09
New Blue	.03¾	@	—
New Black Soft	.06	@	.06¾
New Light Sec-	.03½	@	.03¾
onds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.09	@	.09½
New Black Mixed	.05	@	.05¾

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05½
Miscellaneous	.04¾	@	.05¾

Thirds and Blues—

Repacked	3.40	@	3.60
Miscellaneous	3.15	@	3.25
Black Stockings	4.00	@	4.25

Roofing Stock—

No. 1	2.30	@	2.40
No. 2	2.20	@	2.30
No. 3	1.25	@	1.35
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25	@	nominal
C	1.15	@	nominal

Pulp

(F. o. b. Mill)

Ground wood	28.00	@	30.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	80.00	@	—
Sulphate	65.00	@	—

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Ledgers—

Sulphite	.08½	@	.18
Rag Content	.18	@	.36½
All Rag	.38	@	.50

Bonds—

Sulphite	.07½	@	.14
Rag Content	.16	@	.33½
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.28
News	.04	@	.06½
Book, M. F.	.06½	@	.10¾
Book, Super	.07½	@	.11
Book, Coated	.09½	@	.20
Coated Litho.	.10	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.12	@	.13
Manila, Sul. No. 1	.05	@	.06
Manila, Sul. No. 2	.03¾	@	.04¾
No. 1 Kraft	.06½	@	.06½
No. 2 Kraft	.05¾	@	.05¾
Common Bogus	.03½	@	.04
Straw Board	50.00	@	55.00
News Board	47.50	@	50.00
Chip Board	45.00	@	47.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00

Tarred Felts—

Regular	61.00	@	63.00
Slaters	66.00	@	68.00

Best Tarred, 1 Ply, roll @ 1.60

Best Tarred, 2 Ply, roll @ 1.70

Best Tarred, 3 Ply, roll @ 2.00

No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.90	@	1.00
No. 1 Mixed Paper	.70	@	.75
Box Board, Chip	.70	@	.75

Bagging

Price f. o. b. Boston

Gunny No. 1—

Foreign	1.12½	@	2.00
Domestic	2.00	@	2.12½
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap Burlaps	1.25	@	1.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.50	@	1.62½
New Burlap Cuttings	2.00	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—

New White No. 1	.13½	@	.14
Silias, No. 1	.09	@	.09½
New Unbleached	.12½	@	.13
Washable	.06	@	.06½
Fancy	.07	@	.07½

Cottons—according to grades, Blue

Overall	.09½	@	.10
New Blue	.05½	@	.06
New Black, soft	.06	@	.06¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.50	@	7.00
White No. 2—			
Repacked	5.50	@	6.00
Miscellaneous	4.75	@	5.50

Thirds and Blues—

Repacked	3.75	@	4.00
Miscellaneous	3.00	@	3.25

Roofing Stock—

No. 1	2.25	@	2.37
No. 2	2.12½	@	2.25
No. 3	1.50	@	1.75
No. 4	1.15	@	1.20

Paper Export Information

WASHINGTON, D. C., November 5, 1924.—The Department of Commerce on account of lack of appropriations intends to eliminate the countries of origin and destination in the import and export figures shown in the monthly summary beginning with October, it has just become known.

In this connection John Matthews Jr. chief of the Paper Division of the Department of Commerce has arranged for a special service to the paper industry. He has prepared to extend the special mimeographed circulars covering exports of paper and paper products which are issued monthly by this Division, to include imports as well and show that the countries of origin and destination to the same extent that they are now shown in the printed summary. This new service will make the figures available to the paper industry two or possibly three weeks earlier than the regular printed summary.

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—

Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12

News, f. o. b. Mills—

Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75

Book—

No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—

No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—

Wrapping—

Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, November 12, 1924.

With the election now a thing of the past and President Coolidge elected it was confidently expected that things would begin to move with a little more speed in the paper market. So far these expectations have not been realized by fact. The market is running along just about the same as it has been for the past few weeks with no real change in either one direction or another.

The demand is not all that the dealers and manufacturers might expect. In some of the varieties it is fair, however, and there is enough business around to keep any real depression away from the local situation. In the best grades of writing quite a respectable demand is appearing and the same is true of kraft and wrapping. It is thought that buying for the Christmas trade may have something to do with this. The large stores held off as long as they dared and they are now coming into the market especially for wrapping with good sized orders.

Tissues are also giving every indication of coming demand. They have been in demand in fair amounts during the past week and it is believed that they are going to enjoy an even better week. Dealers say that while they could stand a lot more business they have enough to keep them busy.

Book paper is jogging along at about the same rate of speed. It is always in fair demand and in spite of what was generally supposed to be a year that was not quite up to average a glance at the huge income taxes paid by some of the larger book companies demonstrates the steady call there must have been for this commodity even in a slow market.

Board is having its ups and its downs as usual. Manufacturers say that business is considerably better than it was during the summer but there is still room for great improvement.

The board men are making strenuous efforts to keep prices firm and steady, but there are some concessions being made for large orders. It is believed that this branch of the paper market is due for a big upward turn in December or perhaps even the last of this month.

News print is little changed from last week. The demand is good in contract news and a fair quantity of trading was done on the open market during the past seven days. The mills have plenty to keep them busy although they are not having to run very much over time.

The key to the whole paper situation so far as the next month or or two is concerned lies with advertising. Agencies say that they have contracts that are larger than ever and the result of the National election has given the big advertisers confidence. There seems to be little doubt that as soon as these big contracts make themselves felt in the paper market there will be a great increase in the business done in almost all lines.

Mechanical Pulp

The demand for ground wood continues good. News print manufacturers seem to be buying with an eye to the future unlike those in other fields in the market who are simply buying for immediate need. The mills have all of the work they can comfortably handle.

Chemical Pulp

The chemical pulp market continued spotty with wavering prices on some of the varieties of pulp and dealers willing to make concessions for large orders. There are definite signs of a big improvement, however, and the pulp mills are busier this week than they were last.

Rags

The demand for rags continues to be pretty good with prices very firm with an upward tendency. Importations have shown some increase during the past week, and dealers say that they have all of the business they can comfortably handle. There is no cessation

of this good business in sight and as more buyers realize this they are coming into the market to take advantage of present prices before they go any higher.

Old Rope and Bagging

The demand for old rope and bagging continued to be good during the week. Bagging particularly seemed to find favor with the mills and prices remained firm.

Waste Paper

Waste paper was in good demand in some of the better grades during the week and in not quite so good demand in some of the lower. There were signs of a general improvement, however, and dealers seem to be optimistic about the immediate future.

Twine

Twine continued to be in fair demand during the past week. Prices remain the same but they are firm and no concessions of any amount are being made.

To Protect Sheets of Gummed Paper

The McLaurin-Jones Company has made up for the benefit of their distributors an innovation which should be of interest to the paper trade. This is in the form of a heavy cardboard cap, hinged



NEW DEVICE FOR PROTECTING GUMMED PAPERS

across the center for use in protecting sheets of gummed paper after a package has been broken.

Jobbers know that after a package of paper is once broken there is every likelihood that it will later be found unfit for sale. This is especially true with gummed paper because atmospheric changes attack the gum, causing contraction and expansion. It is right here where the cardboard protectors being put out by the McLaurin-Jones Company comes in to fill a long-felt want.

The 1925 Edition of Lockwood's Directory of the paper trade is now ready for delivery.



Will this partition be an "orphan"?

Real dollars are being invested but the books probably will never show them

This partition when erected may represent an investment of \$500, which will never appear on the books of account. Materials are drawn from supplies; erection is done by regularly employed plant labor. Both are charged to expense.

Not an important item in itself, but these changes and improvements are going on every day. In a certain large concern, an analysis of their properties revealed a total of over a million dollars worth of property for which there was no record.

The most expeditious and efficient means of assuring the inclusion of all legitimate expenditures in capital, of differentiating between capital and expense charges, of assuring a proper basis for depreciation,

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, NOVEMBER 12, 1924.

Dealers in chemicals have been a little disappointed at the continued apathy in the market now that the election has been brought to a successful finish. As one man remarked, "After last Tuesday we all thought our desks would be cluttered up with orders, but the plain fact of the matter is that they are not." This may be due in part to the fact that the manufacturers of some of the leaders of this market are holding off on the announcement of their fall contract prices for the coming year. In spite of the fact that it is generally thought that these will be just about the same as last year buyers seem to be waiting to hear the news before they come into the market for any futures. Meanwhile all prices remain the same.

BLANC FIXE.—The demand for fixe jogs along at about the same rate of speed as it did last week. It is neither bad nor good. The quotation has been stationary at from \$75 to \$80 a ton for the powder and \$50 to 55 a ton for the pulp.

BLEACHING POWDER.—The market for bleach is hanging fire at the present time waiting for the announcement of the contract price for next year which is confidently expected to be 1.90 cents a pound—the same as the low range in the present market. The high range is around 2.15 cents.

CAUSTIC SODA.—Caustic has been in fair demand although there has been no improvement over last week. Buying is fairly steady and prices are firm with few if any concessions being made. The price remains at from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—There were some signs of increased buying in the casein market during the week. These were no more than a suggestion in the shape of one or two large orders that were apparently picked up with an eye to the future. The price remains at 10¼ to 10¾ cents a pound.

CHLORINE.—In the chlorine market, too, there is some hesitancy pending the announcement of new prices. It was believed that the manufacturers would make this announcement immediately after election, but for some reason they do not seem to be ready to do so yet. Meanwhile the price remains at from 4.50 to 7 cents a pound in tanks.

ROSIN.—Naval stores are in pretty good demand still, but this is said to be due to other industries and not to buying by the paper industry. The price is keeping firm in the neighborhood of \$6.

SALTCAKE.—Saltcake is not all that the dealers and the manufacturers might desire. Apparently the paper mills are not particularly interested and buying is languid. There have been few large orders and those that have gone through the market are only for immediate use. The price remains at \$17 to \$20 a ton.

SODA ASH.—The demand for soda ash continued steady and quite strong during the week although this, too, is not because of any great volume of buying by the paper mills. The price is still quoted at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—The demand for sulphate of alumina remained the same during the week with no further acceleration. The price was quoted at from 1.30 to 1.35 cents a pound on the commercial grade and 2.10 to 2.25 cents on the iron free.

SULPHUR.—Sulphur continued at from \$18 to \$19 a ton.

TALC.—Talc is unchanged at from \$16 to \$17 a ton.

MacAndrews & Forbes Runs New Machine

The new machine which for more than a year has been in the process of installation in the plant of the MacAndrews & Forbes Company in Camden was last week placed in operation for the first time. The new equipment consists of a 110 inch machine producing box board. It will give the firm an additional tonnage of 60 tons per day.

Recent Incorporations

OVERSEAS PAPER TRADING COMPANY, Wilmington, Delaware, exporting, importing. Capital, \$200,000. Corporation Service Company.

ART-BUILT PAPER BOX COMPANY, Brooklyn. Capital, \$8,000; Incorporators, H. Argule, S. Stern, A. Gladstone. Attorney, A. L. Kramer, 5 Beekman Street, New York.

COSMOS PAPER NOVELTY CORPORATION, Manhattan, New York, Capital, \$10,000. Incorporators F. R. Blitz, M. E. Sobel, J. Gillis. Attorneys, Sobel & Brand, 320 Broadway, New York.

GENESEE PAPER MILLS, Scottsville, Monroe Company, New York, 1,000 shares common stock, no par value. Incorporators: D. F. and M. J. Lawless, T. J. Hargrave. Attorneys, Hubbell, Taylor, Goodwin & Moser, Rochester, N. Y.

HYDE PAPER COMPANY, Colorado. Capital \$50,000. Incorporators: E. P. A. Cessna, Verne Hyde, home office, Pueblo.

CENTRAL INDIANA PAPER COMPANY, INCORPORATED, Indianapolis, Indiana Capital, \$10,000; wholesale and retail dealers in paper and paper products. Directors, L. V. Nowlin, James E. Bingham, C. H. Nigh.

NEW ENGLAND SAFETY PAPER COMPANY, Massachusetts. Capital, \$1,000,000, represented by 20,000 shares of \$50 par common stock.

THE UNITED PAPER BOX MANUFACTURING COMPANY, Cleveland, Ohio, manufacturing, buying, selling and trading in paper boxes, paper goods, and paper substitutes of every kind. One thousand shares of no par value and \$100,000 prepared stock. D. B. Gordon, C. R. Berne, A. J. Schanfarber, J. A. Lowell and E. L. Mueller all of Cleveland.

To Be Superintendent of Auglaise Board Co.

[FROM OUR REGULAR CORRESPONDENT.]

ST. MARYS, Ohio, November 8, 1924.—L. T. Murphy, who has been superintendent of the plant of the Auglaise Box Board Company here for the past five and one-half years, has gone to Franklin, Ohio, to become superintendent of the plant of the Franklin Board and Paper Company.

W. F. McClellan, superintendent of the American Writing Paper Company, Windsor Locks, Connecticut, will take over the superintendency of the local mill. Until his arrival R. F. Burns, assistant manager and James Stinson, night superintendent, will be in charge of the mill.

New Shepard Electric Hoist Catalogue

The Shepard Electric Crane and Hoist Company, Montour Falls, N. Y., has just issued a new catalogue of electric hoists which is a very attractive work. The book is completely descriptive of the floor operated hoists made by the company and is the most comprehensive book of its kind ever issued.

It describes each type of floor operated hoist made by the Shepard Electric Crane and Hoist Company, illustrates an installation, gives a portrait view of the hoist, clearance drawing and dimensions, and complete information regarding capacities, heights of lift, prices, etc.

Boston Paper Trade to Meet

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., November 12, 1924.—The Annual Fall meeting of the Boston Paper Trade Association will be held at the Exchange Club on Wednesday evening, November 19. Among the speakers for the occasion are Gerrit Fort, vice president of the Boston and Maine Railroad and Ralph P. Robinson who was chief assistant of Captain Donald Mac Millan on the latter's expeditions to Baffin Land and North Greenland.