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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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NEW YORK AND CHICAGO, JUNE 26, 1924

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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD FIFTY-SECOND YEAR
Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALMER, PRESIDENT GEO. S. MACDONALD, VICE-PRESIDENT & TREAS. F. K. HOPPIE, SECRETARY

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TABLE OF CONTENTS

Copyright, 1924, Lockwood Trade Journal Co., Inc.

Paper Men Attack Tariff on Casein	27
Pacific States Paper Men Meet	28
Franklin Paper Stock Co. Starts Business	28
No Decision in Carey Suit Until Fall	28
New York Paper and Twine Men Organize	28
W. L. Forsyth Heads Victoria Paper Mills	28
Slight Improvement in Chicago	30
Victory Bag Co. Has Outing	30
Geo. K. Gibson Sounds Note of Optimism	30
Salesmen Have Summer Outing	32
Keen Competition in Philadelphia	34
Riegel & Co. in Larger Quarters	34
Power Situation Tempts Financial Interests	36
Simeon Walter Honored by City Council	36
Lawrence Bag Co. to Move	36
NEW YORK TRADE JOTTINGS	40
OBITUARY	40
F. L. Smithe Co. in New Quarters	42
Recent Incorporations	42
EDITORIAL	44
How a Paper Mill Saved Its Railroad	45
To Meet Again Regarding Simplification	45
German Pulp and Paper Prices Increase	45
Rapid Progress on New A. P. W. Co. Pulp Mill	45
New Print Machines Close Down	45
TECHNICAL SECTION	47
May Erect Paper Mill at Covington	56
COST SECTION	57
Current Book Review	60
Exports of Pulpwood From Warsaw	60
Imports of Paper and Paper Stock	62
Pulpwood Operations in Ontario	64
Good Stocks of Paper in Rio Janeiro	64
MARKET QUOTATIONS	66
Glue and Casein Experiments	67
Study Mimeograph Paper Manufacture	67
NEW YORK MARKET REVIEW	68
Finland's Paper Exports	58
Rainier-Hall Waxed Paper Co. Formed	68
MISCELLANEOUS MARKETS	70
Interest in New Pulp Process by Dr. Tingle	70
Commercial Paper Tests	70

Want and For Sale Advertisements, Pages 72, 73 & 74

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PAPER TRADE JOURNAL

Vol. LXXVIII No. 26

NEW YORK AND CHICAGO

Thursday, June 26, 1924

PAPER MANUFACTURERS ATTACK TARIFF ON CASEIN

Henry A. Wise Appeared Before United States Tariff Commission at Washington, Monday, For the American Paper and Pulp Association and Criticized Supplemental Report of the Commission's Experts on Cost of Production of Casein in Argentine — Says Production in the United States is Altogether Insignificant — Dairymen's League Also Presents Arguments

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—Henry A. Wise, of New York City appeared before the United States Tariff Commission on Monday of this week in connection with the casein import duty reduction asked by the American Paper and Pulp Association. Final argument was held but right was reserved to file further briefs if necessary.

A. M. Loomis, secretary of the American Dairy Federation, who handled the opposition to the reduction also appeared before the Commission on behalf of the National Dairymen's Union.

In addition to Mr. Wise, D. Hugh P. Baker, secretary of the American Paper and Pulp Association attended the argument as well as the following: Martine Cantine, of the Martine Cantine Company; and Henry Derby, A. C. Bate, and E. Y. Burskhalter, of the Kalbfleisch Corporation.

Production in U. S. Insignificant

Mr. Wise in opening his argument told the Commission that he considered that the record has already been made in this case and he devoted most of his argument to a criticism of the supplemental statement on casein which the Commission's expert compiled following a close study of the cost of production in the Argentine.

He read into the record figures published by the Department of Agriculture showing the production of butter and casein in the Argentine for the years 1918 and 1922 and he also read into the record detailed figures of dairy products produced in the United States. He told the Commission that the production of casein in the United States is "Utterly insignificant." There is no casein industry in the United States as this product is the production of the reclamation of waste.

Mr. Wise in his argument to the Commission claimed that there are a great many errors in the supplemental statement prepared by the experts of the Commission and he went into some detail in pointing out these errors. He stated that casein is in incidental by-product in the United States and not a regular product. In attacking the Commission's statement Mr. Wise took up particularly the price paid for skim milk for manufacturing casein and he contended that the cost of production between the United States and Argentine are not comparable.

Consumption in U. S.

He also took up the matter of casein consumption in the United States and pointed out what he claimed to be errors in the freight rate charges added by the Commission's experts. He said that the United States is not producing one third of what is needed in this country. He also contended that the Commission's figures

are unfair when the experts tried to compare the price of whole milk in the United States with the butter fat content in the Argentine. Questioned by one of the members of the Commission Mr. Wise said that he did not believe that casein investment costs should be taken into consideration in this case, in either the United States or the Argentine.

Mr. Loomis Speaks for Dairymen

Mr. Loomis on behalf of the dairymen again made the request which was made at a former hearing that investigators of the Commission be sworn and put on the stand. The motion was overruled by the Commission. He also asked whether an application filed by the dairymen at a former hearing asking for an increase in the paper duty had been acted upon and the Commission informed him that it had not been.

He also attacked the Commission's supplemental report and called particular attention to the agricultural phases of the case. He also went into the matter of the cost of skim milk and the Argentine following which he put several witnesses on the stand.

He presented Dr. L. A. Rogers and William White, both of the Department of Agriculture. Dr. Rogers briefly described the methods of casein manufacture and he stated that insofar as he knew casein produced in the United States is as good as that produced in the Argentine. Mr. White spoke entirely of the over-run.

Emery Sniffen Speaks

The remainder of the argument was taken up by Emery Sniffen, of the Dairymen's League who spoke at some length on the cost of skim milk. He contended that whole milk has been used for the manufacture of casein. He asserted that some of the cost methods advocated by the Commission's experts were unsound and he contended that no cost value can be obtained from Argentine. He further stated that the cost of skim milk in the United States is 8.27 cents per pound of casein while he caused considerable astonishment by stating that there is NO cost in the Argentine.

Attorneys for both sides reserved the right to file supplemental briefs with the Commission.

Clayville Paper Mills Sold

UTICA, N. Y., June 23, 1924.—Clayville Paper Mills, Clayville, owned by Clayville Paper Mills Company, Inc., Utica, have been sold to the National Bank of Rochester. The company was adjudicated bankrupt March 7 this year, and the sale was made by W. H. McKnight, trustee in bankruptcy of the firm. The consideration in the sale is \$40,000.

PACIFIC STATES PAPER MEN IN THREE DAYS' CONVENTION

About One Hundred Members Attended Unusually Interesting Series of Meetings at Del Monte Hotel, Del Monte, Cal.—President M. R. Higgins Tells Gathering That A Successful Paper Business Cannot be Conducted on One-Man Principles—H. S. Bonestall Reads Paper on Annual Convention of National Paper Trade Association—L. L. Wirt Addresses Members at Annual Dinner.

[FROM OUR REGULAR CORRESPONDENT.]

DEL MONTE, Cal., June 16, 1924.—“A successful paper business cannot be conducted on one-man principles,” declared M. R. Higgins during his president's address delivered at the seventh annual convention of the Pacific States Paper Trade Association. “A composite of many ideas, suggestions, plans and thoughts is more desirable than those of one man. The reason is that a good average constantly maintained is better than varying degrees of attainment.”

The association's members conferred at Hotel Del Monte on June 12, 13 and 14. Approximately one hundred were in attendance.

The convention opened Thursday noon with the president's address.

Expense of Doing Business

“About the only condition of the war period that we have left with us,” said President Higgins while discussing business conditions in the paper industry, “is the expense of doing business

“Instead of two customers wanting to buy every pound of paper, we have half a dozen competitors competing for the sale of every pound.”

Mr. Higgins, who is president of the National Paper Products Company and vice-president of the Zellerbach Paper Company, then discussed the problems of price-cutting. In this connection, he presented figures which were thought-provoking and were the subject of considerable comment. The figures compared the percentage of price cut with the additional volume of business necessary to maintain profits at a certain level.

“On a 25 per cent margin of profit,” he explained, “a cut of 5 per cent requires 18 $\frac{2}{3}$ per cent more volume of business; 8 per cent requires 35 $\frac{1}{2}$ per cent more volume of business; 10 per cent requires 50 per cent more volume of business; 12 $\frac{1}{2}$ per cent requires 75 per cent more volume of business; 15 per cent requires 112 $\frac{1}{2}$ per cent more volume of business.

“In other words, if you cut your price 15 per cent on a hundred-dollar article, it is necessary to sell \$112.50 worth of additional business before you can make the \$25 profit to which the original sale entitled you.”

Mr. Higgins discussed the peculiar problems of Pacific Coast wholesalers of paper, and mentioned that not the least of these problems was the direct competition from wrapping paper mills.

Cease and Desist Order

The president then summarized the Federal Trade Commission's efforts to cause the association to “cease and desist” on the ground that it acted as a trust.

“The mass of accusations originally brought against us has been reduced to five, which are being legally contended, as we believe them to be an unwarranted interference with our rights. We have not in any way violated either the moral or the Federal law.”

It is expected that the Federal Trade Commission's order will be considered by the United States Circuit Court in the fall.

“The real purpose of our association,” Mr. Higgins said, “lies in improving trade conditions, removing trade practices that are unethical, uncommercial and wrong, and substituting in their place

methods that will put into practice those things that benefit the trade as a whole, and, as an ultimate result, enable each company to obtain a fair return on its investment—adequate reward for the hazards it has undertaken. In short, our purpose is to make commercial life in the paper industry honorable, pleasant and remunerative.”

“The production capacity of this country was speeded up during the war period,” the president said in closing, “far beyond the ability of the home market to consume. The question is, when will it catch up?”

Various Reports Presented

The secretary-treasurer's reports were then presented, and various committees were appointed.

H. S. Bonestall, of Bonestall & Co., San Francisco, read a paper on behalf of Cutler Bonestall, who had been delegated to attend the recent convention of the National Paper Trade Association.

Mr. Bonestall summarized the features of the convention, discussed conditions in the industry and gave hearers the benefit of his observations while in the East.

That the paper industry stands 17 in net return among a number of important industries was one of the interesting facts brought out by Mr. Bonestall.

“This means,” he added, “that 16 industries operate at better net profits. In other words, 16 industries are operated with more intelligence.

“Paper manufacturing, apart from the paper industry as a whole, stands 15 in a list of important industries, considered from the standpoint of net return. This shows that dealers display even less intelligence than manufacturers in their business methods.

“The paper industry *should* be among the first six, in net returns, for it is sixth in importance as an industry.”

Bonestall warned delegates about the ever-increasing tendency of printers to buy in small, broken quantities as orders come in. He reminded delegates that this meant added expense for dealers.

“One of two roads will have to be taken to lead out of this condition so unfair to the dealer,” he concluded. “Either discontinue selling less than the full mill package, or make a certain mark-up for broken packages.

What Mills Survey Shows

“A careful survey of various mills showed overequipment. It would take five years of normal business, with normal increases, to catch up with production equipment now installed and in process of being installed.

“In the immediate future, there will be no reduction in prices based on the actual cost of production. However, we can never tell what a mill might do when it is hungry for business.”

Thursday evening, there was a joint meeting of manufacturers and jobbers. Leaders representing the two interests discussed their problems very frankly, the audience taking part in active debates that cleared up many questions and emphasized the practicability of closer co-operation between mills and jobbers. Samuel Leavenson, of the Crown-Willamette Paper Company, led a discussion on wrapping paper. J. Y. Baruh, manager of the Los Angeles division for the Zellerbach Paper Company, replied to Mr. Leavenson at length. An able address, written by Mr. Howarth, president of the Everett Pulp & Paper Company, Everett, Wash., was read, in his absence, by a representative. H. S. Bonestall replied.

Meetings held on Friday were devoted to consideration of committee reports. One of the most important resolutions passed as a result of these reports was one “favoring 500 pounds by weight, and 100 sheets of material sold by count, as the units of price.” The association also went on record as favoring the simplification program of the Bureau of Standards. Business conditions were discussed, and it was the consensus of opinion that business will be rather dull until fall, when it is expected that there will be more activity.

Annual Dinner Held

The annual dinner was held Friday night. At that time delegates listened to an instructive address by Dr. L. L. Wirt on "Behind the Scenes in Europe."

Saturday's discussions were largely devoted to the cost of doing business. N. A. Schoenbucher, whose address was one of the highlights of the previous convention, delivered an authoritative talk on the subject. Mr. Schoenbucher is cost expert of the National Paper Trade Association.

Saturday afternoon was devoted to golf, and trophies were awarded to the cleverest wielders of the stick that charms. The annual golf-dinner was held Saturday evening.

M. R. Higgins was re-elected president. Vice-presidents elected were: H. S. Bonestell, Bonestell & Co., San Francisco, Cal.; R. H. Miller, Mutual Paper Company, Seattle, Wash.; B. G. Ewing, B. G. Ewing Paper Company, Spokane, Wash.; F. E. Jeffries, Tacoma Paper & Stationery Company, Tacoma, Wash.; T. M. Denison, Blake, Moffitt & Towne, Los Angeles, Cal. B. N. Coffman was continued in office as secretary-treasurer.

Whether the next convention will be held in Portland, Ore., or Del Monte, Cal., will be decided later in the year.

Franklin Paper Stock Co. Starts Business

[FROM OUR REGULAR CORRESPONDENT.]

FRANKLIN, Ohio, June 23, 1924.—The Franklin Paper Stock Company has engaged here in the business of packing and grading rags and paper stock.

The new plant is modern in every respect, being equipped with the latest type of conveyors and electric bailers for the purpose of sorting, cleaning and repacking of rags and paper stock. The plant is also equipped with the latest type of laundry machinery for the production of sanitary wiping rags.

The plant consists of 40,000 square feet of floor space, being located on Main, Sixth and Canal streets, with private siding on the Cincinnati Northern Railway.

The company is the outgrowth of the Dayton Sanitary Rag Company whose business and assets have been acquired.

No Decision in Carey Case Until Fall

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., June 24, 1924.—Word has been received in Holyoke that the decision in the row over the election of the president of the International Brotherhood of Papermakers may not be received until Fall. It is stated that the briefs in the case have not been submitted to the court which recesses in July and August. The case was started by former President Jeremiah T. Carey of Albany, who asserts that the votes elected him president over Matthew H. Parker of Virginia. A large block of votes, including those of Holyoke were thrown out on a technicality and court action was invoked to make that throwing out of votes invalid and seat Mr. Carey, who had the majority of votes if those thrown out are counted.

Receiver Appointed for Elam Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

MARION, Ind., June 23, 1924.—On application of a large creditor, the Farmers Trust and Savings Company was named receiver for the Elam Paper Company, of this city. The company filed written acceptance of such appointment, and waiver of the customary service and notice, with the admission that such receivership would be better for all concerned.

The petitioner for a receiver said that the liabilities of the company are approximately \$350,000, and that the assets do not exceed \$200,000. The Elam Paper Company manufactures writing tablets and stationery.

New York Paper and Twine Organizes

The movement to reorganize the Coarse Paper and Twine Jobbers of New York City resulted in a meeting held Thursday night, June 19, of extraordinary interest and enthusiasm.

The meeting was held at the Broadway Central Hotel and was attended by most of the prominent jobbers of New York City.

Benjamin Kushel of the National Consumers Paper Corporation, who called the meeting to order, outlined in a vigorous speech the need for a dignified and self respecting organization for the promotion of honest and efficient methods in merchandising and for the elimination of existing evils, which can be done only through an organization.

August Lichtenberg made the following valuable suggestions which had the approval of those present:

1. The elimination of stock over-loading among the jobbers.
2. The preparation of means leading to intelligent merchandising.
3. The establishing of an organization emblem and the advertising of same representing to the buying public honest and reliable merchandise.

The following officers were elected:

Benjamin Kushel, president, National Consumers Paper Corporation; Harold Ablowich, treasurer, Columbia Paper Company; August Lichtenberg, secretary.

The meeting ended with the sense of a tangible accomplishment. The next meeting is scheduled to take place at the Broadway Central Hotel, Thursday evening, June 26, at 7 o'clock.

After the regular meeting adjourned, the "Ways and Means" committee met to discuss further action for the welfare of the organization.

Sylvan Levy, of the Meushaw Paper Company and Mr. Samuel Leiman, of Star Paper and Twine Company, volunteered to act as the membership committee. The following participated on the Ways and Means Committee:

Max Wal and Geo. Stall of the Reliance Paper and Twine Company; D. Cohen, Manhattan Paper Company; Bernard Schapiro, Blesden Paper Company; Sylvan Levy, Meushaw Paper Company; Samuel Leiman, Star Paper and Twine Company; Joseph Lazarus, Universal Paper Company; M. M. Cohen, M. M. Cohen & Co.; Jacob Gleckel, Eagle Paper & Twine Company; Harold Ablowich, Columbia Paper Company; Mr. Sussman, Sussman Paper Company; Harry Z. Hyman, L. Hyman & Son.

W. L. Forsyth Heads Victory Paper Mills

[FROM OUR REGULAR CORRESPONDENT.]

FULTON, June 23, 1924.—Wilford L. Forsyth, secretary of the Victoria Paper Mills for the last nine years, last week was elected president of the concern, filling the vacancy caused by the death of Edwin R. Redhead. Mr. Forsyth's election as head of one of the largest paper mills in this county brings to light his long climb from the position of office boy to president.

Mr. Forsyth entered the employ of the Victoria Mills when he was 15 years old and was just out of school in 1898. He has advanced until he has become one of the best known executives in the industry.

During the World War Mr. Forsyth was a "minute man," speaking in the interests of Liberty Loan drives and other war-time projects. He recently completed two successful terms as president of the Fulton Chamber of Commerce.

Frederick W. Snyder was re-elected as vice-president of the Victoria Paper Mills and Haword A. Wilson, cashier of the Citizens National Bank of this city, was named treasurer. Mr. Wilson was also elected to the board of directors, and he will represent the interests of the executors of the Redhead estate, comprising the bank and Mrs. Lucille D. Redhead.

SLIGHT IMPROVEMENT FOUND IN PAPER TRADE AT CHICAGO

Better Feeling Created and Industry Believes Healthier Conditions Are at Hand—Sales Manager George K. Gibson Issues Optimistic Message—Employees of Victory Bag and Paper Co. Enjoy Yacht Outing as Reward for Cutting Down Imperfections in Bag Making—Western Paper Merchants' Association Holds Session at Union League Club—Activities of Paper Trade.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., June 20, 1924.—A slight improvement is reported by Chicago paper houses since a week ago. It is just enough to create a better feeling. Confidence in the general outlook appears to be strengthened and all branches of the industry take it as a substantial sign of returning healthier conditions.

It is true, however, that orders are not coming in in heavy volume but stocks in the hands of consumers are low and judging by the inquiries being received, there will be a strong call for all grades when buying begins in earnest. July and August are not expected to bring any more business than previous years during those months, because hot weather with its vacations always interferes with the general run of business.

Believe Time Here for Bag Increases

Some peculiar things have happened in the paper bag division of the industry of late. One manufacturer reduced prices 25 per cent in the last two weeks. Another, believing the time is here for an increase, marked up his products five per cent and he says that he has had more business in the past week than he ever suspected was waiting to be booked. It had a psychological effect on consumers. Immediately the price went up they began to buy, but while the price went lower or remained at a low figure they held off stocking up. This experience bore out the contention of this producer who says that with such sound basic conditions in the commercial world there is no reason for slow buying.

Inquiries for Paper Stocks Get Stronger

A most gratifying part of the paper stock division this past week has been the increasing number of inquiries for quotations. And these have not been for small quantities, but for large amounts. Mills are apparently preparing for resumption of operations within a short time. Dealers are holding firm for \$1 more on common grades and \$2 more on higher grades, although in general the market has not gone up.

Advice comes from a reliable member of the trade to the effect that coated board and book paper seconds are finding little demand. Not much is looked for over the summer months in this branch of the industry. Prices are holding firm.

Victory Bag Folks Enjoy Yacht Outing

On Saturday, June 14, President and General Manager A. Pareira, of the Victory Bag & Paper Company, with mills at Marinette, Wis., and main office in Chicago, took a group of his employees on a yacht outing as a reward for cutting down imperfections in bag making. At noon, on Saturday, the yacht *Recreation*, owned by Mr. Pareira, left the dock right behind the Victory mill at Marinette for its 50-mile cruise to Washington Island and Detroit Harbor on Green Bay of Lake Michigan. There were 24 of the department heads and adjusters in the group, besides Mr. Pareira, a chef, engineer and pilot. There were 150 meals served on board until the boat returned on Sunday evening, meals equal to any served in the finest Chicago or New York hotels.

On January 1, last, Mr. Pareira put up a chart on which to keep account of all imperfect bags that slipped through, or that came

back unpasted or with open bottoms. The company has always had 90 to 95 per cent perfection in their bags. Mr. Pareira told the boys at that time that if they went along for five months with a percentage of 95 he would give them a trip such as they enjoyed last Saturday. It has also been a custom with Mr. Pareira to give his employees a trip on Saturdays during the warm weather, taking a few at a time each week until all have had the pleasure of such a cruise.

The Victory Bag & Paper Company recently moved its offices from the Midland Transfer Building at 1524 S. Western avenue, to 1957 Conway Building, in the downtown district.

This company has also recently issued a new advertising circular which points out the way in which Victory food containers (paper bags) are packed. Instead of being baled, as most are, these bags



OUTING OF THE VICTORY BAG CO.

are packed in paper board containers, coming to the consumer in perfect condition. This circular opened reveals an entire page of facsimile letters received from paper merchants throughout the country praising the product and the manner in which it is shipped to them.

George K. Gibson Sounds Note of Optimism

A message has just gone forth from the office of George K. Gibson, sales manager of the Wausau Sulphate Fibre Company, to some members of the trade, in which Mr. Gibson cites improved economic conditions as pointing the way toward an era of prosperity. This letter is so timely that it should be read by every member of the industry. Here is what Mr. Gibson says:

"Every cloud has a silver lining"; that is the truest thing ever said. For the past eight or nine months the business world has been overshadowed by a dark indigo blue cloud. There are men who have tried so long to see through it that they have turned indigo blue themselves. They gave up hope and said that this cloud had no silver lining. BUT IT HAS!

"One of the many reasons why business has been dragging for the last year is because the prices of everything which the farmer had to buy were high, and the prices of everything he had to sell were low. How to bridge the gap and bring about the adjustment that was right and necessary has puzzled the brains of not only economists and financiers but also statesmen. We have recently seen the efforts of Congress to help the farmers along uneconomical lines, but happily their plans for such relief were not adopted.

"The little old Law of Supply and Demand has done the trick. For the past six months every thing that the farmer had to buy

(Continued on page 32)

MATHIESON System

What Mills Are Using the Mathieson System?

THIS question is naturally one of the first to be asked by paper mill men interested in the use of Liquid Chlorine and the Mathieson System for preparing bleach liquors. The answer is so impressive that we will let the list speak for itself.

The first installation of the Mathieson System was in the latter part of 1922 at the Port Huron Sulphite & Paper Company's mill, Port Huron, Michigan. At present the System has been adopted and is being used, by the following mills:

- | | |
|--|--|
| Hammermill Paper Company, Erie, Pa. | Crystal Tissue Company, Middletown, Ohio |
| Hamersley Mfg. Company, Garfield, N. J. | S. George Company, Wellsburg, W. Va. |
| Mead Fibre Company, Kingsport, Tenn. | Sweet Bros. Mfg. Co., Inc., Phoenix, N. Y. |
| Champion Fibre Company, Canton, N. C. | Dill & Collins Company, Philadelphia, Pa. |
| Provincial Paper Mills, Port Arthur, Ont. | The Smith Paper Company, Lee, Mass. |
| Port Huron Sulphite & Paper Co., Port Huron, Mich. | |
| Consolidated Water Power & Paper Co., Appleton, Wis. | |
| District of Columbia Paper Mfg. Co., Washington, D. C. | |
| Nekoosa-Edwards Paper Company, Port Edwards, Wis. | |
| Riordon Pulp Corp., Hawkesbury, Ont., Can. | |

Paper mills where the Mathieson System has been installed but is not yet ready for operating, are:

- Kalamazoo Vegetable Parchment Paper Co., Kalamazoo, Mich.
- Paterson Parchment Paper Co., Passaic, N. J.
- International Paper Co., Piercefield, N. Y.

There are also a number of mills which are contemplating installing this System and for which plans are being prepared.

Two important principles form the basis of the Mathieson System: (1) the use of predetermined quantities of all materials, weighed with absolute accuracy, and (2) the utilization of the refrigerative effect of the vaporization of the Liquid Chlorine to counteract the heat of reaction of the Chlorine with the lime. The Mathieson Multi-Unit Tank Car, with its fifteen containers of exactly 2000 pounds net, provides an accurate unit measure of Liquid Chlorine for preparing each batch of uniform bleach liquor.

Let our Technical Department demonstrate the many advantages of the Mathieson System.

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*Bicarbonate of Soda
Liquid Chlorine-Caustic Soda*



*Sesquicarbonate of Soda
Bleaching Powder-Soda Ash*

SALESMEN'S ASSOCIATION HOLDS ITS SUMMER MEETING

Nearly Forty Members Present at Session Held at Stockbridge, Mass.—Auto Tour and Visits to Mills of B. D. Rising Paper Co. at Housatonic and Government Mill at Dalton, Part of Program—Various Notables Make Addresses and Sentiment Is Optimistic—Wise Plan Further Discussed and Members Agree Imports Should Be Placed on Equitable Basis with Domestic Products.

[FROM OUR REGULAR CORRESPONDENT.]

STOCKBRIDGE, Mass., June 20, 1924. The annual summer meeting of the Salesmen's Association of the Paper and Pulp Industry was held at the Red Lion Inn today. Nearly forty members attended, some coming from as distant points as Chicago and Atlanta. They were well rewarded by the interesting discussions of the meetings as well as by the trips of inspection to the mills located in the Berkshire Hills, noted as the Alps of America.

Auto Trip and Mill Visit

After lunch today the party was taken on an auto trip through this scenic wonderland where stops were made at the mills of the B. D. Rising Paper Company at Housatonic, Mass., and the Government Mill at Dalton, Mass.

On return to the inn, an excellent dinner, typical of New England hospitality, was thoroughly enjoyed, after which the business session was continued. During this meeting addresses were made by Walter E. Perry, acting as presiding officer; J. L. Fearing, sales manager of the International Paper Company; Congressman Treadway of Massachusetts; S. L. Wilson, president of the American Writing Paper Company; Dr. H. P. Baker, secretary of the American Paper and Pulp Association; H. H. Reynolds, sales manager of B. D. Rising Paper Company, and George H. Gibson, sales manager of the Wausau Sulphate Fibre Company.

Optimistic as to Business

The sentiment of all speakers was of an optimistic character as to the business outlook for the remainder of the year. Emphasis was laid on the necessity of correcting existing abuses in connection with the importation of foreign made papers.

The Wise plan as originally outlined at the annual meeting was again discussed and it was voted to enlist the support of all domestic interests in adopting a plan which would assist in placing all imports on an equitable basis with the domestic products.

Vote of Thanks Extended

A vote of thanks was extended to the B. D. Rising Paper Company, Crane & Co. and L. L. Brown Paper Company for the courtesies extended the association. Among those present were:

T. W. Harrington and W. E. Perry, Crocker-McElwain Paper Company.

W. S. Cummings, Henry Lindquist and Howard Casey, Chemical Paper Company.

President S. L. Willson, American Writing Paper Company.

John E. A. Hussey and F. H. Savage, International Paper Company (Boston).

J. L. Fearing, International Paper Company (New York).

R. B. Harbison, International Paper Company (Chicago).

George K. Gibson, Wausau Sulphate Fibre Company (Chicago).

Endicott Rantoul, Wausau Sulphate Fibre Company (New York).

Charles Wadham, Crane & Co. (Dalton).

Edwin C. Chadwick, L. L. Brown Paper Company.

Robert W. Post, Westport Paper Company.

Herbert A. Wingate, C. H. Dexter & Sons.

Dr. Hugh P. Baker, American Paper and Pulp Association.

A. M. Daniels, L. L. Brown Paper Company.

Ray Wight and W. G. O'Connell, Crane & Co.
H. H. Reynolds and R. S. Hibbard, B. D. Rising Paper Company.
Philip Weston and Brenton C. Pomeroy, Byron Weston Company.
William O. Srtonach and Milton C. Murray, Byron-Weston Company.

A. L. Newton and B. S. Proper, Eaton-Dikeman Paper Company.
Willard Smith, Smith Paper Company.

F. A. Juckett, Old Colony Envelope Company.

A. A. Tanyane, PAPER TRADE JOURNAL.

E. E. Keough, L. L. Brown Paper Company.

IMPROVEMENT IN CHICAGO

(Continued from page 30)

has been going down in price, and for the past week everything that the farmer has to sell has been going up rapidly. The gap is being automatically closed; the adjustment has been made.

"Wheat prices are up over 14c per bushel from a week ago, and they will go considerably higher. There is an estimated shortage of 500,000,000 bushels in the world's crop. The first car of new wheat from the southwest moved the other day. It got the top of the market, and the rise in the price of wheat is most extraordinary in the face of the fact that America's crop is just starting to be harvested. So the farmers will get the benefit thereof.

"Don't forget that the world for the next four months has to look to America for its supply of wheat. All the authorities on supplies of bread stuffs for the world are united in the prediction that the price that the world will pay for wheat this year will be the highest since 1920. Corn, rye and oats and barley have all advanced splendidly. The farmer is coming into his own now.

"Wheat, grains, breadstuffs are commodities, and what has happened to these commodities will happen to all other commodities. The declines in commodity prices are finished; they are all due to advance. A dollar will buy more this June than next September. Our advice is to buy supplies, including paper now."

Western Merchants Meet in Chicago

A regular session of the Western Paper Merchants' Association was held this week at the Union League Club in Chicago. This organization is composed of paper merchants located in the central western states. Practically all of the time was devoted to a discussion of general business conditions. Officers of the association are: President, G. R. Tolen, Midland Paper Company, Chicago; vice-president, Lawrence Brady, Moser Paper Company, Chicago; secretary, Harry Joyce, Empire Paper Company, Chicago, and treasurer, Harold Lehy, LaSalle Paper Co., Chicago.

Activities of the Paper Trade

Quite a number of outside paper merchants of the central west attended the recent meeting of the Western Paper Merchants' Association, included among them being: George S. Johnston, Western Newspaper Union, Omaha, Nebr.; E. R. Jones, Kansas City Paper House, Kansas City, Mo.; W. J. Herman, E. A. Bouer Paper Company, Milwaukee, Wis.; I. W. Carpenter, Carpenter Paper Company, Omaha, Nebr., and A. M. Burryer, of the Pratt Paper Company, Des Moines, Iowa. C. E. Schoff, of the San Antonio Paper Company, San Antonio, Texas, was in the city also attending the meeting, but he went into Wisconsin on business immediately afterward. His wife and daughter accompanied him as far as Iowa on his trip here, remaining there to visit friends while Mr. Schoff carries on his business.

Alexander Thomson, of the Champion Coated Paper Company, Hamilton, Ohio, was in the city this week, looking after some of the interests of his company.

Three members of the Hammermill Paper Company, of Erie, Pa., were calling on the trade in the Windy City during the past several days. They are: William S. Epply, manager of sales; H. R. Baldwin, assistant manager of sales, and Charles W. Chabot, Jr., advertising manager.

Radically Different in theory and design

THE Vickery Felt Conditioner is radically different from any other machine ever invented to overcome felt troubles.

It is based on the theory that change in the character of the felt is the chief cause of trouble rather than the generally accepted theory that "dirt" causes most of the trouble.

The Vickery Felt Conditioner in actual practice has proved that it—

Increases production because it keeps the felt in proper condition from the time the felt is new until it is worn out without interrupting the continuous production of paper. Shutdowns for felt changing and washing are eliminated.

Gives a more consistent sheet of paper because the felt is in condition all the time.

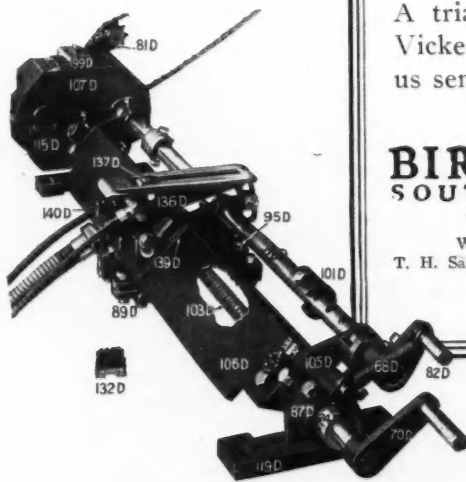
Prolongs the life of felts from 10% to 600%.

A trial will immediately convince you that the Vickery Theory of felt treatment is correct. Let us send you the story.

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., Ltd.
251 St. James Street
Montreal, Canada



BIRD
MACHINERY

6450

VICKERY Felt Conditioner

PHILADELPHIA ENGAGES IN KEENEST OF COMPETITION

Rivalry in Efforts to Secure Orders is at Present Ruling Factor in Paper Market—Coarse Paper Division Meets and Discusses Sales Promotion Methods—Dill and Collins Co. Now Occupying New Quarters in Hering Building—Riegel & Co. Remove to Larger Home—National City Paper Corporation Opens Philadelphia Office—Dr. Hugh P. Baker Addresses Engineers' Club.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., June 23, 1924.—Keen competition for the securing of orders marks the general paper market at the present time. In the fine paper division many low priced bonds have been circulated to create demand and, among the small orders placed, much of the business is in this grade with the lower priced book papers sharing in the second place for keenness in competition. Demand for these grades has been chiefly among the small printing, stationery, and publishing houses but the large enterprises which are engaged in only first class work, usually under contract calling for better grades of printing papers, are buying cautiously except where the price is made sufficiently attractive to induce the placement of tonnage orders.

Coarse papers are firming up to the more stabilized condition of the mill industry. With lessened mill concessions in prices as evidence, dealers are of the opinion that values have struck their lowest ebb for the time being and that unless general business reaches a demoralized condition, which is not likely, there will be a trend to higher markets now that manufacturers have disposed of stocks that were moved in order to make room for new goods or to get rid of slow moving papers in their effort to clean house, or to convert stocks into urgently needed cash. All are agreed, though, that this is a buyer's market and that those houses which were not caught with loaded warehouses of higher priced stocks have been benefited by ability to take advantage of the low mill offerings and are able to dispose of them with fair profit. Krafts have been holding firmly since the reduction of a week or so ago when cutting of $\frac{1}{2}$ cent per pound was made in No. 1. Bogus is off $\frac{3}{8}$ per pound and tissues have been reduced.

Coarse Paper Meeting

With Joseph Weaver, head of the coarse paper department of the Garrett-Buchanan Company, as Chairman, the Coarse Paper Division of the Philadelphia Paper Trade Association met in the Bourse, last Wednesday and discussed conditions relating to the markets of today for Krafts, tissues, manilas and other lines confined to this division. Suggestions for sales promotion in these days of slackened demand were forthcoming and each dealer told of the methods applied in his particular case for obtaining orders.

Riegel & Company, Inc., in Larger Home

With the removal of the Dill & Collins Company from the warehouse and sales offices at 140 N. 6th street last week, Riegel & Company, Inc., took possession of the premises on the first floor of the building which extends to both sides of the entrance to the large commercial structure, vacated by the former company. The stock and offices of the Riegel Company are now being transferred to the new quarters and it is hoped that settlement will be completed by the latter part of June or early July. In the new home the company will be able to take care of the rapidly expanding business and is provided with adequate facilities to store the increased stock of papers carried through the addition to its lines of the Dill & Collins products for which it is one of the Philadelphia distributors. The other distributor is the Thomas W. Price Com-

pany. In addition to the Dill & Collins papers the Riegel Company also represents the American Writing Paper Company, Hammermill and Millers Falls Paper Company lines. The present quarters of the Riegel Company at 46 N. 6th street will be maintained by the firm until the expiration of the lease, unless a desirable tenant is secured before its termination, when it will be given up.

New Quarters for Dill and Collins

Executive and sales offices of the Dill & Collins Company, are now completely removed to the newly acquired quarters on the fifth floor of the Hering Building, 112 N. 12th street, where the firm will maintain its central city location heretofore confined to the first floor of the building at 6th and Cherry streets. The removal of the firm to the Hering Building is in line with the new policy, which became effective a few months ago, for the distribution of the Dill & Collins papers such as books, coated and covers, manufactured in the mills at Manayunk, through the fine paper distributing houses and not direct to the consuming trade as formerly. The Dill & Collins Company already has established a national distribution through paper dealers, having in its list of representatives some of the most prominent firms in the country.

National Corp. Opens Philadelphia Office

A Quaker city office has been secured by the National City Paper Corporation, of 72 Duane street, New York, at 1543 N. 33rd street, under the management of William W. Webster who comes here from the Metropolitan headquarters. Manager Webster will represent the firm in the distribution in Philadelphia and vicinity of its line of bonds, book covers and greeting card stock, among the brands carried being that of the Council and Brightwater bonds and National City Parchments.

Addresses the Engineers' Club

An address on Pennsylvania Forestry was given by Dr. Hugh P. Baker, Executive Secretary of the American Paper and Pulp Association, before the members of the Engineers' Club at the June meeting. He told of the depletion of the forests in this State to such an extent that it was now necessary to import 80 per cent of the lumber used. He told of the gradual decline in the forests' production of the State, which back in 1890 ranked first among the States in lumber producing and which in 1920 was assigned to twentieth place on the list with a production of half a billion feet.

New Die Wiping Paper

There was placed on the market last week for the first time the newest product in die wiping papers produced by the Paper Manufacturers Company, whose half million dollar plant is located at 5th and Willow streets. The new paper has been listed as the "Ivory" grade. It is a stronger, light weight, paper and costs less per 1,000 impressions than ordinary die wiping papers. There was added to the delivery service another three ton Pierce Arrow truck, completing a battery of five trucks of this type in the shipping department.

Box Makers in Atlantic City

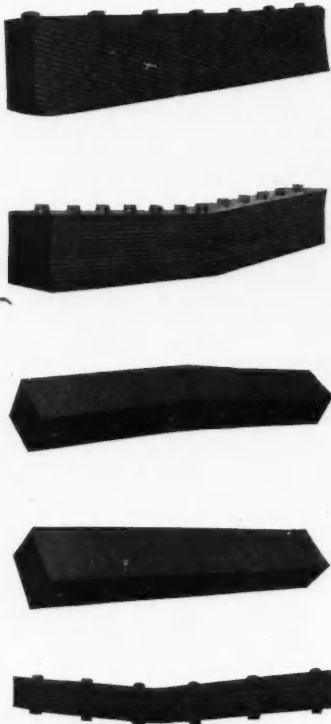
Paper distributors engaged in supplying the paper box industry in this, one of the largest if not the very largest centers in the United States, are preparing to be represented personally and in some cases with exhibits at the conventions of the Central and Eastern Divisions of the National Association of Paper Box Makers whose headquarters are located at 112 N. Broad streets, Philadelphia, and which will be held in Atlantic City, July 15 and 16.

That occasion will be unique in that the two divisions will hold both separate and joint conventions but that both will participate equally in a program of entertainment which has been provided at the Queen of Seashore Resorts. Details of the program have not yet been completed but among the speakers will be Henry Stortz of this city, and chairman of the Joint Cost Accounting Committee

(Continued on page 36)

Dilts

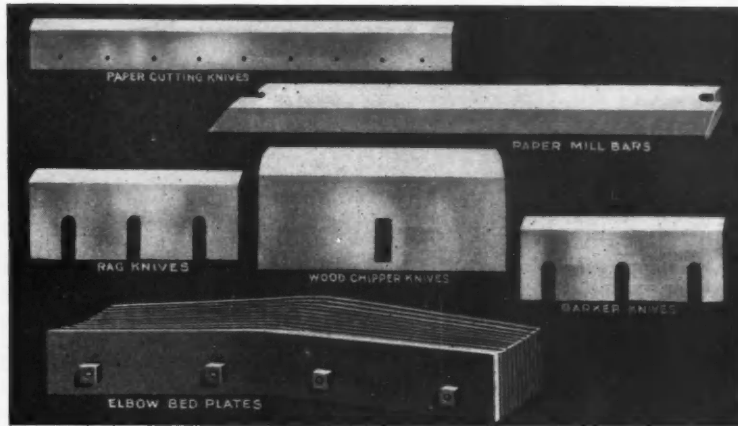
Give the beaterman a chance



Dilts Special Alloy Heat Treated Bed Plates illustrated above:

- Sheet Steel Angle Bed Plate
- Sheet Steel Elbow Bed Plate
- Laid or Solid Steel Plate
- Sheet Steel Straight Bed Plate
- Elbow Sheet Steel Bed Plate (rough)

"Your paper is made in the beaters"



BEATING with skilled beatermen—and Dilts Beating Engines—becomes almost an exact science.

Dilts heat treated special alloy fly bars and bed plates show so little wear that the tackle is practically the same every day in the year.

The beaterman knowing the condition of his tackle is able to do more accurate work.

Larger capacity, faster circulation, greater ease of adjustment, more uniform roll action and the ability to stand up under the most severe service make the Dilts Beating Engine the ideal equipment for your mill.

Dilts

MACHINE WORKS, Inc. FULTON, N. Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

6914

MONTREAL POWER SITUATION TEMPTS FINANCIAL INTERESTS

New Company Not Only Seeks Its Control but Would Also Endeavor to Gain Control of Street Railway System—Canadian Mills Looking to Australia for News Print Business—First Unit of a Straw Pulp Mill at Winnipeg to be Erected This Year—Port Alice Mills of Whalen Pulp and Paper Co., Which Have Been Idle Over Three Months, May Resume Operations in the Near Future.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., June 23, 1924.—It now seems pretty certain that the financial interests behind the Shawinigan Water & Power Company, which supplies power to the pulp and paper mills in the St. Maurice district, will enter into a gigantic scheme for securing control of the power situation in Montreal and the control also of the street railway system of this city. A new company has been formed backed by Montreal Paper Consolidated and Shawinigan Water & Power Companies, and this company is making a proposal to take over the stock of the Montreal Tramways & Power Company in return for stock in the new holding corporation. The official title of the new holding company is United Securities, Limited, of which Julian C. Smith, of the Shawinigan Water & Power Company, is president. The new company is capitalized at \$20,000,000 consisting of 6 per cent non-voting cumulative preferred and common stock, both issues of \$100 par value. It is pointed out that no stock of either class is being issued except for cash at par, or in exchange for shares of Montreal Tramways and Power Company, and Quebec New England Hydro Electric Corporation. It is announced that arrangements have already been made for control of the latter company, which entails also control of Canadian Light and Power Company. It is announced that provision will be made under which Montreal Light, Heat and Power Consolidated and the Shawinigan Water & Power Company will jointly guarantee that United Securities, Limited, will at all times have available earnings or will otherwise be furnished with the funds necessary to pay dividends at the rate of 6 per cent per annum on preferred shares. These companies are joint subscribers for a large block of the securities of the new company which fact will assure the Montreal Tramways and Power Company the means of meeting its obligations, and capital necessary for the extensions which are essential to the progress of the Tram Power group. The association in the enterprise of Montreal Light Heat and Power Consolidated, the country's greatest power distributing company, should prove a bulwark of strength to the new company. The United Securities are offering \$15 per share for Tramways and Power Stock, to be paid for in the securities of the new company, half in six per cent cumulative preferred and half in common, both issues of \$100 par value. A substantial amount of Tram Power shares have already been deposited in accordance with this offer which is open to shareholders up to August 1, 1924.

Acting for News Print Mills

The defeat in the British Parliament of the Imperial preference proposals that were passed by the recent Imperial Conference, seems certain to result in Canada being accorded a preference by Australia. This is the advice received by some of the news print mills which have representatives in Australia trying to make arrangements for Canadian mills to secure business with the Australian publishers that in the last year or so has been turned over to English mills through a preference of \$15 a ton. In addition to A. L. Dawe, who is representing the Canadian-Export Paper Company, Sir John Willison, it is learned, has also been working on behalf of the Canadian mills and it may be presumed that both have been in consultation with the

Australian Government. Cables indicate that the result of their mission has been favorable and that the Government will not delay working out a commercial treaty with Canada once the British preference has been abolished.

Straw Pulp Mill for Winnipeg

The first unit of a straw pulp mill for the manufacture of high-grade paper in accordance with the Devine patent is expected to be erected in Winnipeg, this year. The unit will require fifty tons of straw a day, which is expected to be available in Winnipeg at a price of about six dollars a ton. Experiments made recently in England with samples of Manitoba straw are said to have proved highly satisfactory.

COMPETITION IN PHILADELPHIA

(Continued from page 34)

of the National Association; George F. Barber, Marketing Counsel and Director of Sales Service, Howard P. Beckett; Field Secretary and National Executive Secretary Frank S. Records. The presidency of the National Association, through the election of officers at the Swamscott Convention held last month, was conferred upon a Philadelphian, Frank Stone, head of the Jesse Jones Paper Box Company.

Simon Walter, Honored by City Councils

In order to compliment Simon Walter, head of S. Walter, Inc., on successful passage of the bill in City Councils for the establishment of a Municipal garage, the first to be introduced into the local government, his co-workers in Councils presented him with an "auto." The "auto" was presented with due ceremony upon the announcement of President of Councils Charles Hall, who congratulated Councilman Walters upon his work in behalf of the Ordinance which gives to the newly created Bureau of Automobiles control of operation of all city owned passenger vehicles. Mr. Walters is Chairman of the Transportation Committee of Councils, one of the most important bodies in the city government. He not only was the recipient of the "auto" but was given many other trophies by his brother councilmen in the form of toy motor cycles, wrenches, garage and other miniature tools suggestive of his victory, which was made a gala occasion at the meeting of the City Fathers.

Lawrence Bag Co. to Move to Middletown

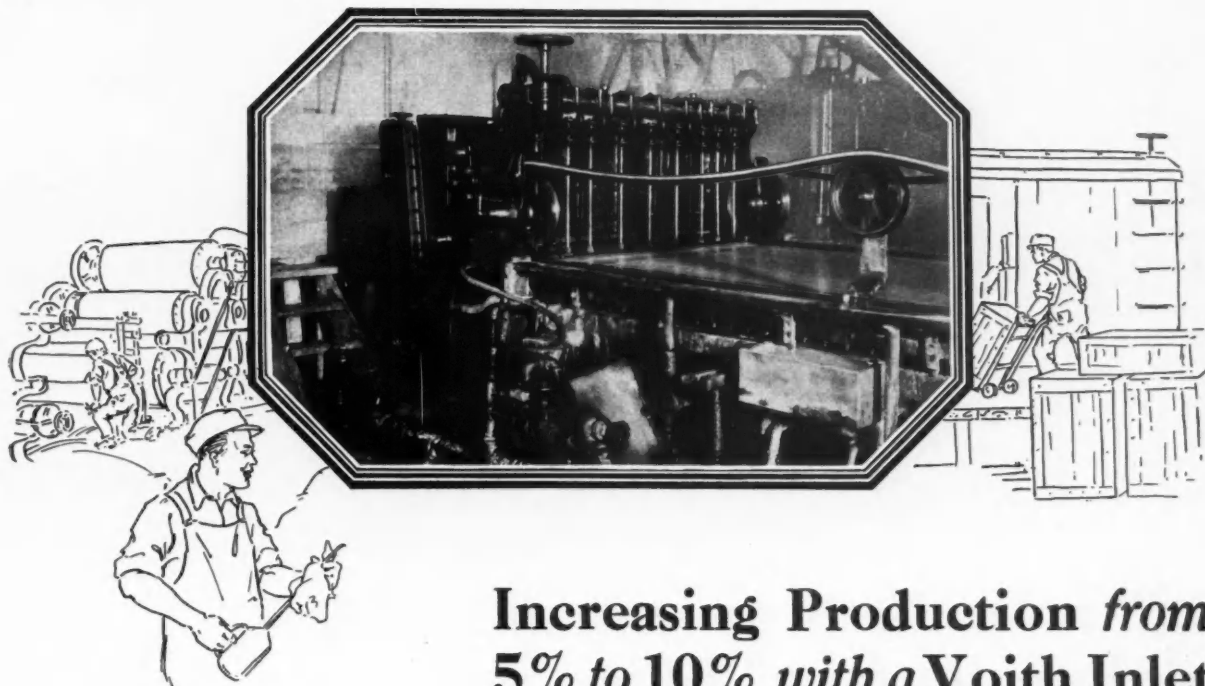
"It's only a few miles from Miamisburg to Middletown, Ohio, from our old home to the new—but it is a tremendous leap in growth," recently stated James Lawrence, President of The Lawrence Bag Company.

"For in three short years, delivering superlative service in the manufacture of bags has enabled us to outgrow our old factory at Miamisburg, and forced us to find larger quarters. This we have done, and sometimes during July we will move into the commodious factory formerly occupied by The Miami Cycle Manufacturing Company, at Middletown, Ohio.

"Famed the length and breadth of America for the bicycles and motorcycles it has produced, this mammoth plant will soon be dedicated to the task of serving better and more bags in a better and bigger way to Lawrence customers. Not the least of these activities will be the manufacture of all grocery, notion, millinery and specialty bags. In addition, we are manufacturing bags of all kinds from the nationally advertised Backus Grey paper.

"Approximately 30,000 feet of space comprise the old factory which witnessed our rapid growth, while in our new Middletown home 100,000 feet—affording double our old capacity—will hum with bee-hive activity that Lawrence patrons may have more bags—quicker!

"With bigger equipment and space, and with better facilities, which our new location affords, we welcome old customers and new to avail themselves of our services."



Increasing Production from 5% to 10% with a Voith Inlet

By making it possible to speed up a Fourdrinier paper machine without pitching the wire, Voith High Pressure Stock Inlets make possible an increase in production of between 5% and 10%, in some cases even more, depending on the stock and the balance of the mill's equipment.

A 200 inch trim machine in a New York mill is probably making book paper at a higher rate of speed than any other machine in the country. Nevertheless, the speed of this machine has been increased 50 per minute by the installation of a Voith Inlet, and a better sheet of paper is made. A like increase in speed resulted in a Pennsylvania mill making bond paper.

We will be glad to give you further information regarding this remarkable new machine and what it is doing. A booklet and full information regarding the above statements will be sent you on request.

The Voith Inlet

1. Makes it possible to speed up the machine as fast as desired without pitching the wire.
2. Makes a sheet of uniform thickness across the entire width of the machine, through minute adjustments easily made.
3. Eliminates all slices and aprons thus reducing the wear on the wire.
4. Gives additional space on the wire for formation purposes. The stock travels the entire length of the wire.
5. Is easily installed and easily operated. It is simple and sturdy.
6. Eliminates foaming and assures a more perfect formation.

VALLEY IRON WORKS Co.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

NEWS PRINT PRODUCERS IN ONTARIO ARE SLOWING DOWN

Production Being Curtailed in Order That Too Large Reserve Stocks May Not be Created—Continental Wood Products Co. Building Cottages for Employees—Annual Report of Pacific-Burt Co. Shows Good Year's Business—Last Winter's Timber Cut in Thunder Bay District Greatest Ever Known—Large Pulpwood Shipments Loaded at Port Arthur Harbor for American Mills.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, June 23, 1924.—There is no material change in the paper situation except the reduction of two dollars in the price of news print, which announcement has been well received by large consumers. The big producers are slowing down in the matter of production in order not to create too large reserve stocks. The paper business generally is not as good as it was last year for the first six months and the mills are adopting a cautious policy. This is evidenced in the contracts for pulpwood and other lines of supplies. A number of projects in the way of extension to plants and the erection of new mills are being held up this year and construction is not likely to proceed until there is a definite turn for the better. Pulp companies are having a rather difficult time as the market is very quiet, mills purchasing only as required and foreign competition cutting into things generally.

Representatives of several German houses who have lately been in Canada seeking to market some light weight papers, have met with a rather indifferent reception. Representatives of English paper concerns coming to the Dominion report a fair business but all buying is from hand to mouth and conservatism characterizes all branches of the industry.

One noticeable feature is that business in the paper line appears to be better in the smaller towns and cities than it is in the larger centers of population. The demand is more normal and all salesmen are getting their principal orders from the small dealers. Printing establishments are also busier in the towns and their requirements furnish a considerable volume of the present trade.

Getting Ready for New Kraft Pulp Mill

The Continental Wood Products Company of Elsas, Ont., of which L. E. Bliss is vice-president and manager, is building a number of new cottages this season for its employees. The engineers of the company are now surveying the water powers and preparing plans for a power dam for the new, 100 ton kraft pulp mill which will be erected at Elsas. Representatives of the company are still in Sweden making a close survey of the kraft mills in that country so that the best ideas on construction and operation will be obtainable. The company operates a saw mill at Elsas, which will cut twelve million feet this season or more than double the output of last season.

Porcupine Co. Is Busy Rossing

The Porcupine Pulp and Lumber Company, of Hoyle, Ont., of which M. E. Crouch is manager, is busy rossing wood at the rate of about 125 cords daily. The company has nine thousand cords of wood in the Porcupine river and about three thousand cords in the pond at Hoyle. The wood came down the drives in nice shape. Labor is plentiful in the north and is being paid at the rate of three and a half dollars a day.

Mr. Costigane on Inspection Tour

A. P. Costigane, secretary and safety engineer of the Ontario Pulp and Paper Makers' Safety Association, was in the Niagara district recently visiting the mills in St. Catharines, Thorold and Merriton, in the interest of Safety Work, in which he reports

much enthusiasm manifested by both employees and management. Mr. Costigane is at present on a tour of the pulp and paper mills in Fort William, Port Arthur, Dryden, Sault Ste. Marie and other points in Northwestern Ontario, and on his return will leave for England where he will spend some time on business.

Mr. Sherriff Leaves for England

W. H. Sherriff, of the Hodge-Sherriff Paper Company, Toronto, who recently returned from a visit to Western Canada, sailed last week for England and will spend several months abroad and on the Continent on business connected with the Wayagamack Pulp and Paper Company of Three Rivers, Que., of which his firm is the selling agent in Canada, Great Britain and France, for the kraft paper and pulp, which the company turns out.

Loading Pulpwood for American Firms

Two large steamers recently loaded pulpwood at Port Arthur harbor for export to American mills. Automatic loaders are taking the place of manual labor. In the sheltered position behind the breakwater where the ships were loaded, not much wood is lost by drifting to shore, but in the open bay at other loading points, the loss is estimated to be 10 per cent, which is quite a figure in the aggregate.

Record Production in Thunder Bay

G. H. Milway, Crown Timber Agent, Fort William, Ont., recently completed his compilation of the timber cut in the Thunder Bay district during the past winter. The records show the cut greater than any previous season. Contracting corporations and individual parties operating in the district reaped a timber harvest that in the aggregate totalled 1,920,623 pieces. The entire winter harvest compares most favorably with that of 1922-3, which is regarded as the record year in the annals of operation. Pulpwood, in which industry many lumbering concerns and contractors were engaged, numbered 334,613 cords.

Notes and Jottings of the Trade

D. McLeod, vice-president of the Backus-Brooks Company, Kenora, Ont., was in Toronto last week attending the fifteenth annual convention of International Rotary. He says that the new news print mill of the Backus-Brooks Company is now in full operation and running smoothly.

Charles V. Syrett, manager of the Victoria Paper and Twine Company, Toronto, was in Belleville last week attending the one hundred and fortieth anniversary of the United Empire Loyalist celebration.

About one hundred publishers, who are members of the Canadian Weekly Newspapers' Association, have left on a six weeks' trip to Great Britain and France. In London, the visitors will be entertained by the Empire Press Union.

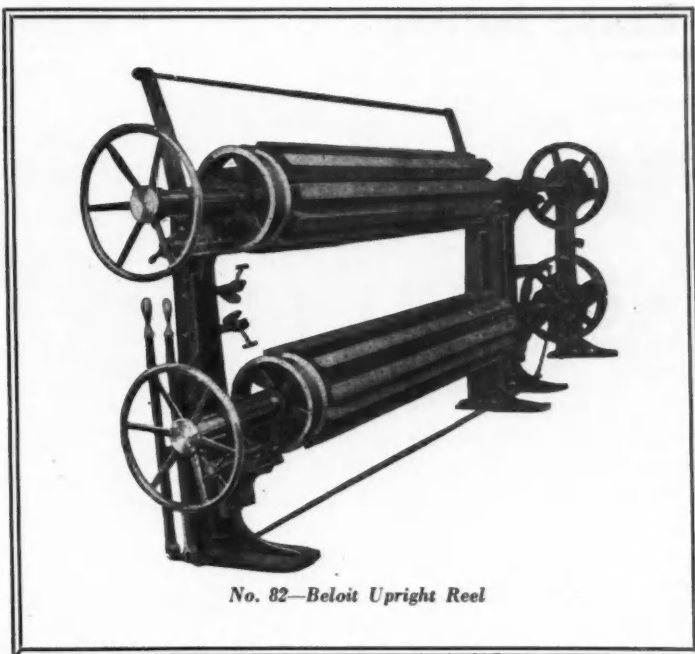
George Brigden, of Brigdens, Limited, Toronto, left recently on a business trip to the Old Country and will be absent several weeks.

A provincial charter has been granted to the Hygrade Corrugated Products, Limited, with head office in London, Ont., and an authorized capital of \$70,000. The company will carry on the business of manufacturing corrugated fiber boxes and containers of all kinds, corrugated paper products as well as cartons, boxes, bags, etc.

The paper supply houses of Toronto are arranging a plan to close down at noon on Saturday of this week and continue closed until Wednesday, July 2, thus giving their employees a three day week-end holiday over Dominion day, July 1.

A large number of paper box manufacturers from Toronto and other Ontario cities left for Ottawa this week where they are attending the ninth annual convention of the Canadian Paper Box Manufacturers' Association.

The annual convention of the Canadian Booksellers and Stationers' Association was held in the Toronto Reference Library last week and was largely attended. One of the features of the gathering was a dinner tendered the delegates by the publishers' representatives.



No. 82—Beloit Upright Reel

Meeting All Requirements For Safety

A STANDARD safety-first upright reel made to conform with strictest regulations of state laws as to clearance between drums, which rotate in opposite directions, making it impossible for a man to get drawn in between them. Spools are made either of wood bat construction or of cast iron, as preferred. Drums are made for end and side adjustment. They are equipped with frictions for use when unwinding. Also equipped with friction clutches for starting and stopping. Special attention given to lubrication of bearings, which are self-aligning. Well built throughout for steady service.

Send Your Specifications to Beloit for Satisfaction

Beloit Iron Works

Established



Beloit, Wis., U.S.A.

Since 1858

New York Trade Jottings

George B. Gibson, former president of the Salesmen's Association was present at Monday's luncheon of the Association.

President Henry W. Stokes of the American Paper and Pulp Association spent yesterday at Association headquarters, giving his attention to various Association matters.

The Pulp and Paper Trading Company, 21 East 40th Street, has been appointed sole selling agent for the paper product of the Cohoes mill of the Mohawk Paper Makers Inc.

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, after attending the casein hearing in Washington on Monday spent Tuesday making other departmental visits.

With its luncheon at the Canadian Club on Monday the Salesmen's Association entered upon its vacation period. Only one gathering a month will be held from now until fall, the next one being on July 14.

The Wax Paper Association will hold a meeting at the McAlpin on July 22 at which time reports will be heard from the standing committees on trade customs, standardization, printing costs and credit bureau service.

The special committee of the American Paper and Pulp Association which is handling the import situation met yesterday at Association headquarters for the purpose of formulating further plans to frustrate the operations of the paper bootleggers.

The Binders' Board Association held its monthly meeting on Monday. There was an excellent attendance of members and all were agreed that the prospects for their branch of the trade are good. While business has been slow they feel that in view of market conditions, they have been getting their share.

According to reports current in the financial district, says the *New York Times*, the International Paper Company will shortly do some financing, probably in the amount of \$10,000,000, to consist of bonds, to meet its program of expansion outlined on the election of A. R. Graustein as President. This program includes the installation of two new machines for newsprint making at Three Rivers, Quebec, or the erection of a plant at Batiscan.

Whalen Pulp and Paper

The Port Alice, B. C., mills of the Whalen Pulp and Paper Company, which have been closed down since the beginning of March, may resume operations in the near future. The plant, which shipped most of its sulphite pulp to Japan, found such a demoralization of the Oriental market, consequent on the drop in the purchasing value of the yen, that it was decided to close up for the time being, pending a stabilization of conditions there. Upwards of 350 employes are engaged at Port Alice. The Mill Creek and Swanson Bay plants have been running continuously.

Britain and U. S. Take Most of Swedish Pulp

WASHINGTON, D. C., June 23, 1924.—Acting Commercial Attache Sorenson, at Copenhagen, states that Great Britain and the United States are taking about 70 per cent of the Swedish shipments of sulphite, bought for delivery through the balance of the year. Buyers from other countries have been very cautious and have only purchased on a hand-to-mouth basis.

Obituary

Frank B. Gilbreth

MONTCLAIR, N. J., June 21, 1924.—Frank B. Gilbreth of this place, who had won fame both in Europe and America as a management engineer, died suddenly a week ago. He was well known throughout the paper industry. In 1923 he addressed the American Paper and Pulp Association at its annual convention and on other occasions he had spoken before the Technical Association, the Newsprint Service Bureau and kindred organizations. He always spoke on "The One Best Way to Do a Job."

In the paper industry field he had achieved much. He was engaged at one time by the St. Croix Paper Company to build the town which is now Woodland, Me. In the space of sixteen months a dam had been built, the mill finished, the town offered housing facilities for 3,000 people and the people were actually there.

The death of Mr. Gilbreth was most tragic. He planned to sail for Europe this week and had gone to the Lackawanna Station in this place to arrange for his transportation. At the station he entered a telephone booth and telephoned Mrs. Gilbreth to send him his passport papers which he needed in order to get his transportation. After telephoning, he hung up the receiver and dropped dead before he had time to leave the booth. Heart trouble was apparently the cause. The deceased was 56 years old. He is survived by his widow and eleven children.

Whiting-Fowler Nuptials

HOLYOKE, MASS., June 24, 1924.—A wedding of much interest in papermaking circles was celebrated last Wednesday at the home of Mr. and Mrs. George F. Fowler of Ingersoll Grove, Springfield, when their daughter, Miss Mary A. Fowler became the wife of William Whiting, treasurer of the Whiting Paper Company of this city and grandson of the founder, the late Congressman William Whiting. His father, William F. Whiting, is president of the Company; and the bride's father is president of the Hampden Glazed Paper and Card Company, and treasurer of the Valley Paper Company, both Holyoke mills.

The ceremony was performed by Rev. Neil McPherson, pastor of the First Congregational church. The bride was attended by the groom's sister, Miss Ruth Whiting, and the best man was the bride's brother, Edward C. Whiting. The ushers were George and Edward Fowler of Springfield. Fairfield Whiting, William Skinner, 2d, Herbert Frink and Joseph Prescott of Holyoke.

A reception followed the ceremony. The bride attended the Westfield schools and Wellesley College and travelled abroad last year. The groom is a graduate of Amherst College. The couple left soon after for New York and will spend three months traveling in Europe before returning to Holyoke to live.

Shepard Crane Co. Gives Land for Park

MONTOUR FALLS, N. Y., June 9, 1924.—Thirty acres comprising the amphitheatre and principal recreation area of Montour Glen, south of the village of Montour Falls, were offered to the Finger Lakes Park Commission by a committee of the Montour Falls Chamber of Commerce. The land is the gift of the Shepard Electric Crane and Hoist Company.

Technical Man in the Paper Industry

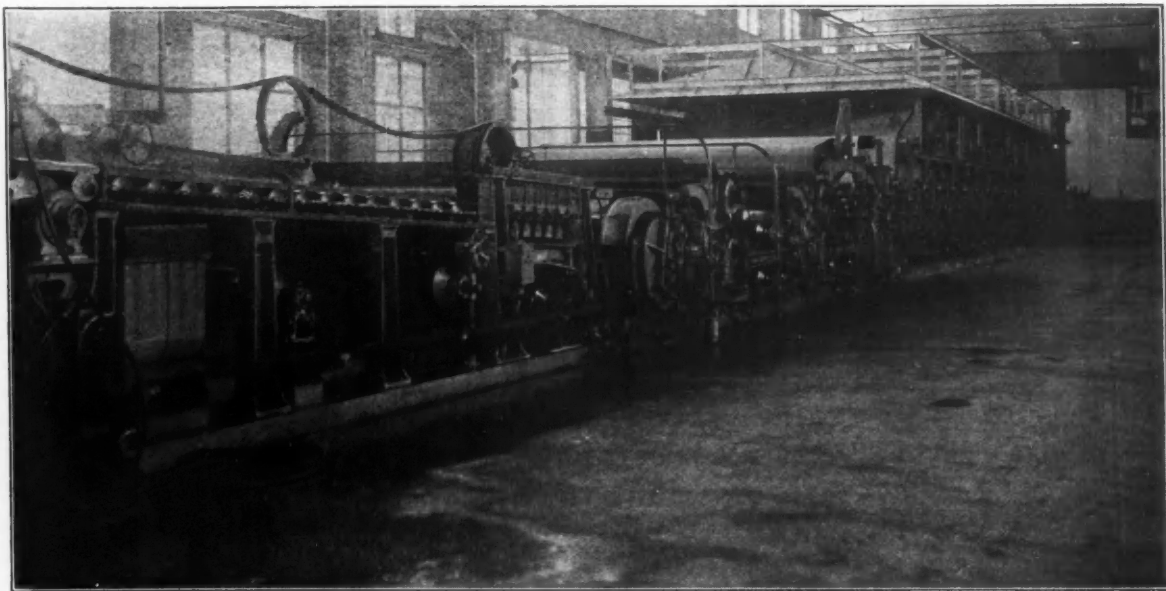
A neat pamphlet has just been issued by *Pulp and Paper Magazine of Canada*, Gardenvale, Que., containing the addresses of George Cahoon, Jr., Sir William Price and George H. Mead, at the Annual Meeting of the Canadian Technical Section, January 23, 1924.

Anyone interested in the attitude of the foremost executives in the industry towards applied engineering education should write for a copy which will be gladly furnished on receipt of 15 cents to cover mailing.

Charles Walmsley & Co. (CANADA) LIMITED

SALES OFFICE
Drummond Bldg.
MONTREAL

Main Office & Works
Longueuil, Que.
CANADA



232" Walmsley Paper Machine recently brought into production in the Belgo-Canadian Paper Company's Mill at Shawinigan Falls, Que.

Producing 85-90 tons of news print per day
at speeds of 750-800 feet per minute

Recent Incorporations

RADIUM TAG AND LABEL COMPANY, Manhattan, New York. Capital, \$5,000. Incorporators: G. Stern, S. Bernstein, E. M. Horowitz. Attorney, D. Henschel, 340 East 79th street, New York.

EAGLE PAPER COMPANY, Hartford, Connecticut. Subscribers Nathan F. Rubin 200 shares common, 50 shares Class A; Julius H. Ginevsky 100; and Alex. J. Tulin 1,200.

STAR PAPER COMPANY, New Haven, Connecticut, to retail stationery, etc. Capital \$50,000. Incorporators. Louis Padovits, New Haven; Morris Granoff, New Haven and Boris Shamoon, Bridgeport.

BERGEN PAPER MILLS SUPPLY COMPANY, Brooklyn, New York, paper makers. Capital \$20,000. Incorporators, A. H. Weinstein, A. G. Grayzel. Attorney, S. D. Spector, 305 Broadway, New York.

PROTEST SAFETY PAPER COMPANY, Manhattan, New York. Capital \$100,000. Incorporators, A. E. Skogg, C. F. Seely, Jr., L. F. Pike. Attorneys, Begg, Begg & Begg, 220 Broadway, New York.

HARTE-MACBETH BLANK BOOK CORPORATION, Manhattan, New York. Capital \$30,000. Incorporators: H. B. Harte, J. B. Macbeth, D. T. Kelly. Attorneys, Kelly, Hewitt & Harte, 42 East 42nd Street, New York.

NEW ART GREETING CARD COMPANY, Manhattan, New York. Capital \$20,000. Incorporators: J. M. Newman, M. Rosenman, I. Schriro. Attorney, A. L. Kramer, 5 Beekman Street.

NATIONAL RAG AND PAPER COMPANY, Milwaukee, Wis. Capital \$6,000; 60 shares par \$100. Incorporators, Michael Shapiro, Leo Hurvitz and Rae Shapiro.

BERNE PAPER NOVELTY COMPANY, Manhattan, New York; capital, \$10,000. Incorporators, F. R. Blitz, R. Pfister and M. E. Sabel. Attorneys, Sabel & Brand, 320 Broadway, New York.

MARX MAIER PAPER MILL SUPPLY CORPORATION, Manhattan, New York; capital, 200 shares common stock, no par value. Incorporators, W. C. Perry, D. C. Smith, W. B. Mendes. Attorney, Duncan Mount, 27 William street, New York.

D. BENEDETTO, Manhattan, New York; paper stock dealers. Capital, \$100,000. Incorporators, D. and J. A. and J. B. Benedetto. Attorneys, O'Callaghan & Altieri, 10 East Forty-third street, New York.

OLD MASTERS PAPER AND PULP CORPORATION, Manhattan. Capital, \$20,000. Incorporators, J. A. Wickham, J. A. Q. Franks, E. S. Higgins. Attorneys, Franks, Wickham & Brown, 25 Broad street.

To Build Envelope Plant at Pleasanton, Cal.

PLEASANTON, Cal., June 16, 1924.—The Griffin Envelope Company will start building a plant soon here on property purchased from the Southern Pacific Railroad. The company has been incorporated and given permission to manufacture and deal in paper envelopes, boxes, towels, windowshades and other paper and pulp products. The concern is incorporated for \$75,000, with T. H. Griffin, W. F. Hall, H. Kolln and A. L. Littlefield of this city and R. Smith of San Leandro as directors. Buildings now standing on the premises are being removed.

F. L. Smithe Machine Co. in New Quarters

It may be of interest to know that the F. L. Smithe Machine Company Inc., 633 West 44th street, New York City, the largest concern in the world manufacturing envelope machinery exclusively, has recently built for its own use, a new factory containing about one hundred thousand square feet of space. The building illustrated is of the newest, most modern steel and concrete construction and is equipped with every appliance for producing machinery along the most approved engineering lines.

This organization was founded in 1904 by F. L. Smithe, who is still active in the capacity of President. At that time, the company occupied a small loft in Thompson street, New York City,

and employed about ten men as compared with the present three hundred. In the past twenty years its growth has been constant. The necessity for larger and better quarters made itself evident at least four times, until the need for a permanent home of proper proportions resulted in this final move to a modern building located so conveniently within easy access to hotels and railroad stations.

The F. L. Smithe Machine Company manufactures machinery for making envelopes of every description. Among the different types of machines which comprise plunger and rotary, sheet feed and roll feed, is the company's newest invention, the "Champion" Web Machine. This machine makes open end catalogue envelopes,



NEW BUILDING OF F. L. SMITHE MACHINE CO.

counter bags and, with some changes in construction, candy bags. The envelopes are made from a roll of paper, the cutting, printing, gumming and folding, all being done in successive operations on the one machine and at a speed of from one hundred to two hundred per minute. This machine has awakened a great deal of interest among envelope and bag manufacturers.

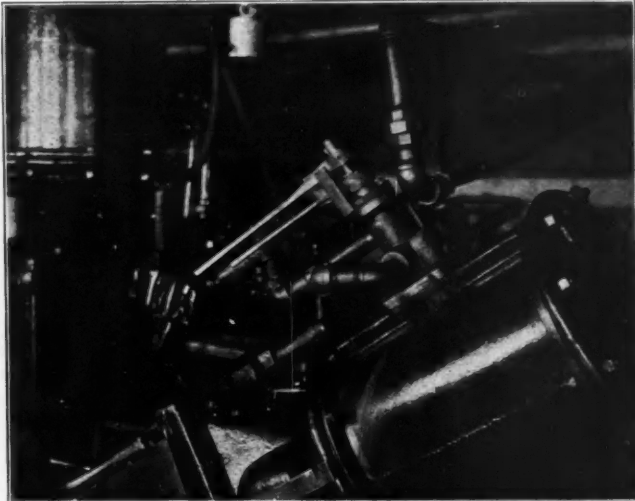
Practical Studies for Paper Manufacturers

J. B. Lippincott Company of Philadelphia has published a book of general interest to those engaged in the paper industry. It is entitled "Practical Studies for Paper Manufacturers" and is by Sheldon Leicester. It is, as a matter of fact, a handbook based on lectures given to students, apprentices, artisans in paper works and others, having special reference to the manufacture of paper and its uses by printers, lithographers, ink manufacturers, stationers, publishers and others handling paper. In a comprehensive way the book takes up the subject of common fibres used in papermaking, the treatment of rags, etc. and then discusses the beating process, hand made paper, Fourdrinier paper machines, damping and supercalendering machines, etc., concluding with a description of physical paper testing, qualitative tests for sizing and printing processes. The book is amply illustrated, there being a frontispiece and 218 illustrations which will be of very great assistance to the student who will find them most helpful in connection with his study of the text. The book also includes an appendix defining the British paper trade customs and another consisting of paper trade tables.

Award for Paper Containers

WASHINGTON, D. C., June 25, 1924.—The Grand Corrugated Paper Company has been awarded the contract by the Bureau of Supplies and Accounts, Navy Department for furnishing the Brooklyn navy yard with 3,000 strawboard shipping containers at \$226.00, bids for which were opened on June 17.

Increases Production 10% to 20%



Combination Operating and Load Regulating VALVE FOR PULP GRINDER

takes place of ordinary valve on each cylinder—instant control of load—no upkeep—no adjustments—operates same as ordinary valve.

EFFICIENT — ECONOMICAL

Made by

Nekoosa Motor and Machine Co.
Nekoosa, Wis.

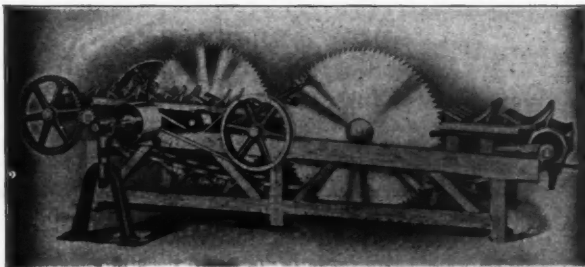
Makers of
Cylinder Molds—Press Rolls—Pulp Grinders—Semi-Automatic Skinners—collapsible shafting.

Increased Capacity Lower Cost Per Cord

THE

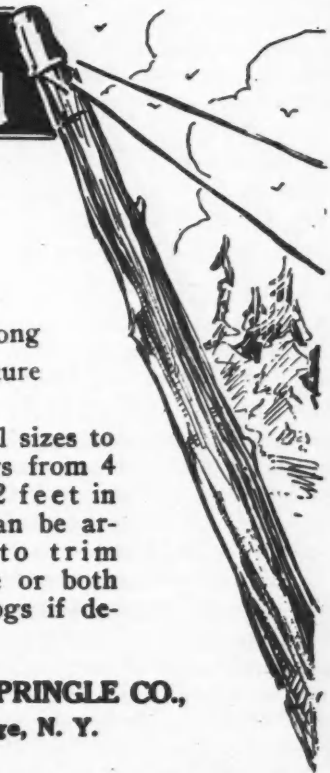
Ryther Slasher

is the most efficient and the lowest cost method of reducing long logs to uniform short lengths suitable for further manufacture into pulp and paper.



Built in all sizes to handle logs from 4 feet to 32 feet in length. Can be arranged to trim either one or both ends of logs if desired.

RYTHER & PRINGLE CO.,
Carthage, N. Y.



E d i t o r i a l

Vol. LXXVIII New York, June 26, 1924 No. 26

HENRY J. BERGER, Editor

DIRECTORY INFORMATION WANTED

Questionnaires have just been sent to the various branches of the paper trade asking for information for the fiftieth edition of Lockwood's Directory of the Paper and Allied Trades. The publishers earnestly hope that these reports will be filled out carefully and that they will be returned early. This co-operation will be appreciated greatly and it will aid immeasurably in keeping the Directory up to the high standard of excellence which this publication has constantly maintained during the past half century.

In filling out the reports just a word of explanation regarding the various sections may be helpful in correcting misunderstandings which constantly occur. Only pulp mills and mills having Fourdriniers, cylinders or wet machines are listed in the pulp and paper mill section, only products of pulp and paper mills are listed in the classified section, only rag and paper stock dealers selling paper mills are listed in the rag and paper stock section, only manufacturers converting paper goods from raw paper are listed in the paper specialties section and only actual owners of brands and watermarks are listed in the brands and watermarks section. The foregoing regulations are strictly adhered to in compiling the Directory with the idea only in mind of making the work most helpful to the greatest number of subscribers.

New concerns especially are invited to send in their names for the various sections of the Directory for which, of course, there is no charge. Many of these are already on file in this office and a questionnaire will be sent them in the regular routine, but information from such concerns sent to this office will be an additional safeguard against omissions of names that should be listed.

Make out the report now and send it immediately to the Lockwood Trade Journal Company, 10 East 39th street, New York.

NEW FOREST EXPERIMENT STATION

To determine proper methods of reforestation in the great forests of the Pacific Northwest the United States Department of Agriculture will establish a forest experiment station in that region on July 1. This station marks the latest addition in the department's plan to establish forest experiment stations in all the principal forest regions of the United States. Its work will consist of determining proper ways and means to prevent forest destruction either by destructive logging, fire, or other agencies and to insure the perpetuation of the forests as growing crops.

"Our demands for paper have practically quadrupled since 1900," says Secretary Wallace in commenting on the new station. "One of the logical regions for an enlargement of the American pulp and paper industry is in Washington and Oregon, which with California contain more spruce, fir and hemlock than all the eastern and lake states combined. If, however, the small existing pulp and paper industry of Washington and Oregon is to be developed to a large size it should by all means avoid the mistakes now so obvious in

the growth of the eastern industry. All new pulp and paper mills should be established on the basis of permanent supplies either from privately owned or publicly owned land, and such supplies can be insured in competition with the demand for the same material from other industries only by intensive methods of forest management for which a forest experiment station must furnish the basis. For a permanent pulp and paper industry, therefore, as for a permanent lumber cut, we must depend upon a forest experiment station to secure the technical knowledge needed on methods of cutting and reforestation."

THE TIME FOR EXPANSION

A message for pulp and paper manufacturers has been sent the PAPER TRADE JOURNAL by Mr. B. T. McBain, of the Nekoosa, Edwards Paper Company of Port Edwards, Wis., which in view of past experiences in the industry, is especially timely. He believes that manufacturers should take advantage of this slack period to prepare for the improvement in business that is certain to materialize before long. He views the situation in which the industry finds itself at present in this way:

"During the period before 1914 there was a lull in expansion in the industry with the result that when the unprecedented demands of the later period came, the paper industry was unable to take care of the demand. Then everyone tried to hurry that new addition at one time with the result that prices of machinery and construction soared way beyond any expectations. As the war time extended, even greater expansion was considered—plans were made for the development of water powers at great distances and timber limits were grabbed up by both old and new interests with eyes pointed toward the future.

"Then came the armistice and a quiet period. Everything was dropped and everyone stood still for awhile. Closely following this period of depression came an improvement and had those who were engaged in building not discontinued operations they would have been in a position to reap the harvest of their foresight in the next peak in the cycle of business. Operations naturally were resumed after the improvement had set in but considerable profits were lost before the plants were able fully to take advantage of the better times.

"The paper industry has just had a very good year. The year 1923 was above par and many mills made a fair return on their investments.

"Every time a slow down occurs we hear the argument 'Labor must take a cut.' While labor is quite an item in manufacturing, it is by no means the largest item, but fourth in line in the paper industry, the others being first, materials; second, fuel and power; third, overhead; fourth, labor.

"There are therefore, three items besides labor of great importance which must be cut before we begin trimming the wings of the goose laying the golden egg, because it is only while labor is 100 per cent employed and being paid living wages, that business continues at the top of the cycle.

"If big business, if investors, if everyone looking to industry for a livelihood would do their expanding in the dull period of the business cycle to take care of the material growth of the country and to take care of their industries to the best advantage in relation to location of the raw materials, there would be a much shorter low period and

quicker straightening out of the line between the peaks and the valleys of the cycle.

"In addition all the business offering would be taken care of satisfactorily as soon as conditions began to improve.

"In New York during the convention of the American Paper and Pulp Association gloom was apparent on every side, many had become decided pessimists and reports were broadcast that all possible expenses were being cut and that expansion programs had been cancelled. This action did not improve but tended rather to accentuate the situation.

"Mr. Manufacturer, if you are favorably located, and if your product is right, why don't you go ahead now and expand? This is the time to do so. Prepare now for the prosperity which is certain to return soon."

How a Paper Mill Saved Its Railroad

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., June 23, 1924.—Just how Michigan's second oldest paper mill, the Plainfield Paper Company's plant (formerly known as the Childsdale mill) was saved its railroad facilities and not left high and dry by the removal of the line running to it, is an interesting bit of history recorded in Kent County.

The mill is located in Childsdale, Algoma township, about three miles from Rockford. It is located on the banks of the River Rogue which runs into the Grand river and many years ago was the seat of a half dozen lumber mills and active in the lumber industry. It used to be said the stream literally ran red due to the thousands of giant cedar logs that floated down its course.

At any rate its water power possibilities were appreciated by the elder Henry B. Childs, who in 1866 erected a paper mill in the little village. It was reached by a spur from the old Grand Rapids and Indiana railroad. It happened that the railroad years later desired to straighten its main line north from Grand Rapids, thus cutting out numerous bad curves and at the same time eliminating three or four river bridges. It was only possible to make these improvements by purchasing certain parcels of land from Mr. Childs. He agreed to the transfer and thereupon deeded to the G. R. & I. the right of way desired, the only provision being that no matter what might happen in the years to come the spur to Childsdale and the mill should be maintained. This was covered in a properly drawn legal document.

With the passing of the elder Childs the property reverted to his son Horace H. Childs. The Grand Rapids and Indiana railroad also passed into the hands of the Pennsylvania system. After several years of operation that road decided that the Childsdale spur was useless and decided to abandon it. As result a force of track men began tearing up rails and ties, much to the consternation of the Childsdale populace. Mr. Childs merely smiled, but just before the work was completed, armed with his paper, he visited the general offices of the Pennsylvania system and laid his case before the proper authorities. The authenticity of the document was established and the railroad officials accepted the inevitable. They at once relaid the entire line, new ties and new rails, thus giving the quiet hamlet better railroad facilities than it had ever enjoyed in the past.

To Meet Again Regarding Simplification

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—In view of the fact that a great many suggestions have been received in connection with the simplification of certain kinds of paper, it is understood that officials of the Simplified Practice Division of the Department of Commerce, have suggested that a further meeting of the Committee on the simplification of paper be held. In this connection, a letter has been addressed to John Sullivan of the Association of National Advertisers who is chairman of the Committee suggesting that a meeting be called.

German Pulp and Paper Prices Increase

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 23, 1924.—Prices on German pulps advanced one rentenmark per 100 kilos (10 cents per 100 pounds) on May 1, according to a report to the Bureau of Foreign and Domestic Commerce from Trade Commissioner Allport, at Berlin. The report dealing with increased prices continues:

The mills are allowing a discount of 2 per cent from the amount of invoice for prompt payment in cash, and a discount of 4 per cent for cash payment in advance of delivery. A further discount of 2 per cent is allowed when payment is made in foreign exchanges exempt from surrender to Reichsbank. Present pulp prices range from 25 rentenmarks per metric centner (\$2.60 per 100 pounds) for unbleached seconds to 35.50 rentenmarks (\$3.24 per 100 pounds) for bleached, first quality.

Inland prices on German news print have also been increased, present quotations being 29.50 rentenmarks per centner (\$3.07 per 100 pounds) for rolls and 30.50 rentenmarks (\$3.18 per 100 pounds) for news print in sheets, an advance of 2.50 rentenmarks (26 cents per 100 pounds) over previous quotations. Prices are f. o. b. buyer's station. The German News Print Manufacturers' Association justifies this increase by the fact that manufacturing costs, and particularly wages and raw material prices, have risen considerably while sales have shown no improvement during recent weeks. In fact the balance sheets of a number of the more important mills show them to have been operating at a loss.

Paper manufacturers in unoccupied Germany have had the benefit of preferential railway rates on goods destined for export to overseas countries since April 28. Inland freight costs will be reduced approximately 30 per cent, and it is believed that this step will improve Germany's position in overseas markets which has not been satisfactory for some time.

The agreement between the pulp and paper manufacturers of the Rhineland and occupied Westphalia and the French and Belgian forces of occupation has been renewed. The new agreement extends only until the end of May and is essentially the same in its provisions as the one expiring in April. Pulp manufacturers of the occupied area have obligated themselves to deliver 1,300 metric tons of chemical pulp to "reparations account" between April 16 and May 31.

Rapid Progress on New A. P. W. Co. Pulp Mill

HALIFAX, N. S., June 23, 1924.—The new pulp mill for the A. P. W. Company at Sheet Harbor is progressing rapidly. The concrete foundations are now all poured, and the contractors expect to begin erecting the brick work almost immediately. The Nova Scotia Power Commission is carrying on the construction of hydro electric development at Ruth's Falls, excavation work for the dam is now completed, and it will not be long before the actual concrete work will begin. Two steam shovels are being worked on a mile and one-half canal, while a large gang of men are at work on the new power house. This work means the expenditure of approximately a million dollars in Sheet Harbor, and the employment of about three hundred men. The contractors have erected several camps, that at Ruth's Falls being in a very picturesque location, at the side of the river.

News Print Machines Close Down

Announcement was made this week by the International Paper Company that because of a slackening of demand for news print, it had closed down the news print machines at four of its small mills, which have a total capacity of a little over 300 tons a day. These mills are at Fort Edward and Glens Falls, N. Y., Wilder, Vt., and Berlin, N. H. It is stated that the International's present production on all grades of paper is about 80 per cent of normal.

**Exclusive****Manufacturers**

or
Ryan-Seaman Process

DRY SATIN WHITE

The Latest Development in The Coated Paper Industry

Casein
Crystal Boro Phosphate
(A solvent for casein)

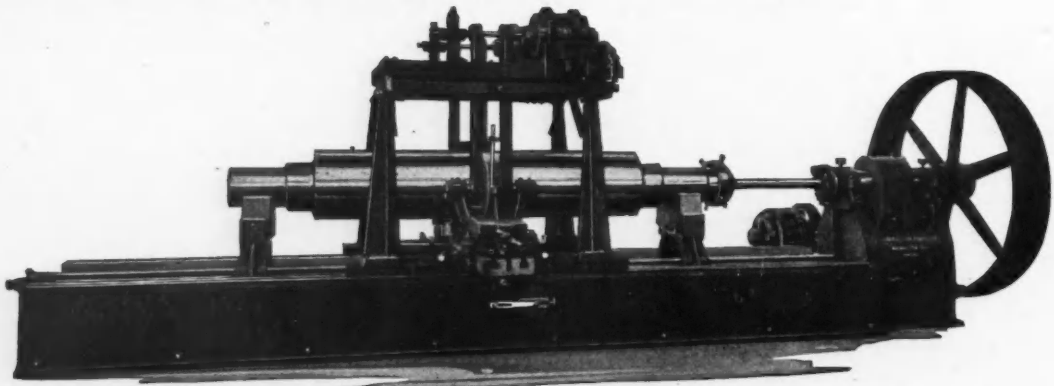
ALUM
Both Commercial and Iron Free
FOR PAPER MAKERS

Pulp Satin White
English China Clay

THE KALBFLEISCH CORPORATION

200 FIFTH AVENUE, NEW YORK, N. Y.

LOBDELL ROLL GRINDERS are the only machines of the kind fitted with automatic crowning device which develops a perfect crown without the use of a guide or former and repeated trying for the correct setting.



LOBDELL Calenders are equipped with Patent Electric Motor, Hydraulic or Ratchet Lift all operated from the floor.

LOBDELL Micrometer Calipers are handy and accurate.

LOBDELL CAR WHEEL CO. Est. 1836 Wilmington, Del. U. S. A.

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. MacNAUGHTON, Secretary

THE UTILIZATION OF WOOD WASTE AND SULPHITE WASTE LIQUORS IN PULP MILLS*

PROF. CARL G. SCHWALBE, EBERSWALDE.¹

The wood waste of sulphite pulp mills is either burned under the boilers or worked up into pulp; in the latter case it has not been possible to entirely eliminate the particles of bark and bast fibers, either by addition to the cooking acid or by a bleaching agent. The manufacture of sugar and alcohol from this waste has, as yet, not advanced beyond the laboratory stage. Carbonization of wood waste has not been undertaken by pulp mills, though it is carried out in saw mills. In several saw mills of the United States, a continuous process has been developed in which the heat developed in the reaction is completely utilized. The principal difficulty in the ordinary carbonization process by dry distillation is the poor utilization of the heat, since both the pieces of wood as well as the air surrounding them are very poor conductors of heat. Another difficulty is the unavoidable overheating of the resulting products of the distillation by the hot walls of the retorts. Better conduction of the heat can be accomplished by the use of an aqueous medium (Bergius). The high temperature (300-400 deg. C.) necessary for the carbonization requires pressures of 100-150 atmospheres. If, however, the water is replaced by a salt solution, there is a lowering of the pressure, though the same high temperature must be maintained.

A "nascent carbonization" may be carried out at temperatures of 200 deg. C. and under (e. g., 180 deg. C.) if one adds to the salt solution a cellulose-hydrolyzing agent; thus a calcium chloride solution might be used with some hydrochloric or sulphuric acid or, even better, with a magnesium chloride solution. Magnesium chloride, in solution, splits off hydrochloric acid at temperatures above 100 deg., so that the addition of acid in the presence of this salt is unnecessary. Magnesium chloride solution is produced in Germany in an unlimited amount in the shape of the final concentration liquors in the manufacture of potash; at present this is a practically worthless by-product of the potash industry and is discharged into the rivers. A similar solution is obtained from sea water by removing the greater part of the sodium chloride (salt) content by concentration. When wood waste is heated with the ordinary waste potash liquor to 180 deg. C., a chemical reaction occurs, with the evolution of heat, so that after the temperature at which the reaction starts is reached, further addition of heat is unnecessary. The carbonization is completed after 4-8 hours; while a very considerable amount of acetic acid and methyl alcohol (wood alcohol) is formed, practically no tar and gas result. Compared with

the ordinary process of dry distillation, the yield of charcoal is considerably higher. With conifers, this yield is 55 per cent as compared with 33 per cent in the dry distillation. The yield of acetic acid is $\frac{3}{4}$ times, that of wood alcohol about twice the amounts which are formed in the dry distillation of conifers. The separation of the charcoal from the salt solution may be carried out so that the resulting product contains less than three per cent of ash. The salt solution is recovered, for the most part, and can be used in a second operation. In addition to the wood waste, bark or peat may be carbonized in a similar manner. Since the operation takes place in a salt solution, a preliminary drying of the peat, either in the air or by artificial addition of heat, is unnecessary, thereby resulting in a considerable saving. The charcoal prepared in this way may be utilized not only as a fuel, but also as an adsorbing medium for the sulphite mills, since it has been established that it is of service in the utilization of the waste liquors.

Sulphite Waste Liquor

Sulphite waste liquors may be utilized in various ways. One method consists in the preparation of sulphite spirit, in which only one tenth of the organic constituents is consumed, while the remainder is found in the distillation residues. The utilization of the organic substances in the sulphite waste liquor as such, that is, as a binding medium ("Zellpech"), adhesive, tanning agent, adsorption charcoal for medicinal purposes, etc., consumes only a relatively small portion of the large quantity of sulphite liquor produced.

A complete utilization of this waste liquor was proposed many years ago by Drewsen. He showed that by heating the liquors with lime under a pressure of 10 atmospheres, the sulphurous acid is split off from its organic combinations, and may be recovered as calcium sulphite, which can be utilized in the preparation of fresh cooking acid. At the same time the organic constituents are recovered as lignin, which can be utilized as a fuel. Rinman has further developed this process in that he utilizes the soluble calcium salts, by adding sodium and calcium hydroxides and distilling, thereby obtaining acetone and acetone oil. Strehlenert has subjected the waste liquors to a carbonization process, under a pressure of 20 atmospheres and at a temperature of 200 deg. C. The process is accelerated by forcing in atmospheric oxygen and the addition of a certain amount of acid. When the resulting product is compressed to a dry content of 60-70 per cent by means of a compression pump, a serviceable fuel is obtained.

The author has attempted to separate the organic substances from

*Translated from the author's manuscript by C. J. West.

¹This appears to be an abstract of an address by Prof. Schwalbe.

sulphite waste liquor by atmospheric oxygen or by chlorine. The addition of a certain amount of milk of lime, which coagulates the waste liquors, does not bring about a satisfactory separation of the organic products. While the decomposition of the calcium salt of the so-called lignosulphonic acid, contained in the waste liquor, may be accomplished by strong acid, without the use of high pressures, the amount of acid necessary is large and its recovery is difficult. The hope that other salts of lignosulphonic acid, such as the magnesium and ammonium, might be more easily decomposed, has not been realized. Further, the reaction of the calcium salt with humic acid has led to no definite result. The formation of sulphuric acid by the addition of selenium to the cooking acid as established by Klason, could not be reproduced in the waste liquor, because of the small amount of loosely bound sulphurous acid present. Finally it has been shown that a separation of the organic substances from the waste liquor may be obtained by the addition to the liquor of wood waste and potash waste liquor (magnesium chloride solution) and heating to 180 deg. C. By this treatment a 60 per cent yield of charcoal is obtained and a clear waste liquor, containing only traces of organic material. It is not necessary, however, to carry out the process of charcoal production in the sulphite waste liquor in order to bring about the separation of the organic matter contained therein. The same object may be accomplished by the addition of the charcoal prepared from wood waste by means of magnesium chloride solution. The charcoal thus acts as a substance with a so-called large internal surface. This can be demonstrated by replacing the charcoal with kieselguhr. In place of kieselguhr, which is not practical because it produces a charcoal with a large ash content, certain lignites may be used. Upon treatment of the sulphite waste liquors by charcoal there is also obtained a certain amount of sulphurous acid, acetic acid and methyl alcohol, in addition to the charcoal. In case the sulphite mill does not have a sufficient amount of wood waste, the necessary charcoal may be obtained from peat or from saw mills. is produced a like amount of organic substances which, in the form of sulphite waste liquors, may be utilized as outlined above. The 800,000 tons of organic material contained in the waste liquors will yield 500,000 tons of charcoal, and probably considerably more acetic. Since Germany produces about 800,000 tons of pulp annually, there acid and methyl alcohol than is needed in Germany.

Large Non-Metallic Gears for Paper Machine

Micarta gears, six feet in diameter and believed to be the largest non-metallic gears yet manufactured, have been built recently by the Western Gear Works of Seattle, Wash., for the Washington Pulp and Paper Company. The gears will be installed on the drying section of a 164-inch Bagley-Sewall paper machine used in the manufacture of news print.

The new gear includes some interesting and unusual features in gear manufacture. It has a pitch diameter of 70 inches, a circular pitch of 2 inches, a face of 8 inches and a bore of 10 inches. The spider for the gear was cast in one piece with a flange on either side, which was machined so that the 110 Micarta segments making up the complete gear would fit snugly in the rim. The Micarta under the gear teeth is approximately $1\frac{3}{4}$ inches thick and is held firmly in place by $\frac{7}{16}$ -inch bolts extending from flange to flange.

These gears will be used to replace a set of cut cast iron gears on the drying section of the paper machine, for the purpose of eliminating the noise and vibration produced by metal gears, operating at high speed. They will operate normally at a speed of approximately 64 r.p.m., or pitch line velocity of approximately 1,200 feet per minute. This velocity may be increased to 1,400 feet at times. At this rate, a continuous sheet of paper 12 feet wide comes off the machine at a speed of 1,000 lineal feet per minute. The machine is driven by a Westinghouse sectional paper machine drive, with 75 to 150 horsepower transmitted into the drying gear train, consisting of 22 dryers in each section. Although all the dryers are geared together, there are two intake shafts and the load is transmitted through each shaft. The starting torque required to start the heavy

dryer drums is, in many cases, four or five times the normal running torque.

On account of the steam heated dryer rolls, located only a foot

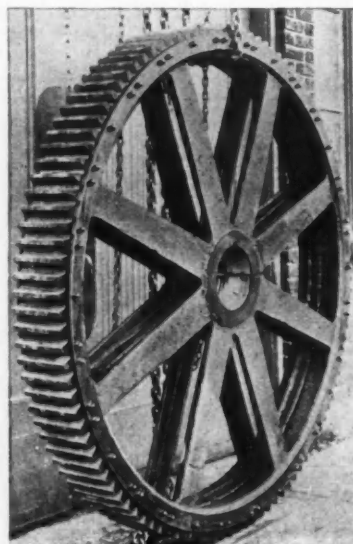


FIG. 1

One of the Large Micarta Gears Made by the Western Gear Company for the Washington Pulp and Paper Company. This Gear is Six Feet in Diameter.

or two from the gears, the temperature of the atmosphere in which these gears will operate is about 100 to 150 degrees F. The gears are not enclosed and are only protected by wire mesh guards.

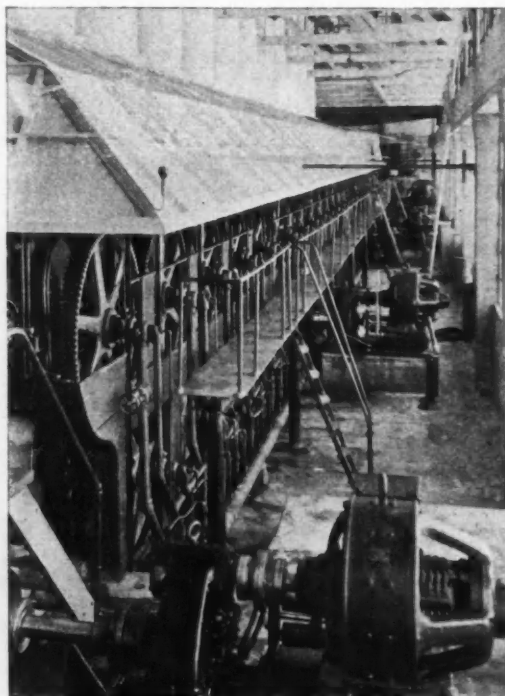


FIG. 2

The Drying Section of the Paper Machine Driven by the Westinghouse Sectional Paper Machine Drive, Showing the Cut Cast Iron Gears Which Will Be Replaced by Non-metallic Gears.

PRODUCING NATURAL SODIUM SULPHATE IN ARIZONA

Western Chemicals, Inc., of Los Angeles, recently started operation of a new plant at Campe Verde, in the Rio Verde region of Arizona, for the recovery of a commercial sodium sulphate from the deposits of thenardite that outcrop along the side of Copper Canyon, a few miles southeast of the old military post. The thenardite (Na_2SO_4) is associated with about 10 per cent of sodium chloride and varying amounts of insoluble impurities, a commercial product being obtained by the aid of a simple washing and drying process. Early attention was drawn to the sulphate content of the deposit because of the ill effects of its use on cattle, as a lick, the idea being prevalent that it contained mostly salt.

The paper and pulp trade requires a product with not more than 5 per cent of sodium chloride, anhydrous and acid free. The problem of meeting requirements has been solved satisfactorily, and an output of 300 tons per day is being maintained, all of which is being shipped direct in carload lots to plants in the Mississippi Valley region.

A primary crusher is arranged so that it can be moved into the deposit as the first cut proceeds. This plan of operation, incidentally, will assist in making a survey of the extent of the mineral, of which several million tons is indicated by present exposures. The initial reduction is to about $\frac{3}{4}$ in., the product then passing to a belt conveyor, by which it is carried to a storage bin, and thence to a fine crusher for reduction to about $\frac{1}{8}$ in. The washing plant consists of a four-unit conveyor operating in troughs, up which the material passes, counter-current to a supply of liquor that is kept saturated in sulphate but undersaturated in chloride. This liquor is removed as concentration is reached; and a byproduct, glauber's salt, is produced by fractional crystallization. The mother liquor passes to evaporation ponds, the crude salt from which may

eventually find a market. The consumption of water in the washing plant amounts to about 1,000 gal. per hour.

The sulphate crystals from the washers are drained by passage over a perforated conveyor and pass to an 8x50-ft. rotary, oil-burning drier, equipped with baffles and exhaust fan. The dried product, which analyzes about 98 per cent pure, is elevated to



THENARDITE (SODIUM SULPHATE) DEPOSIT AT CAMP VERDE, ARIZ.

storage bins, from which it is drawn to motor trucks for conveyance to the railroad at Clarkdale, Ariz. A spur line to the plant is expected to be built in the near future.—*Chemical and Metallurgical Engineering.*

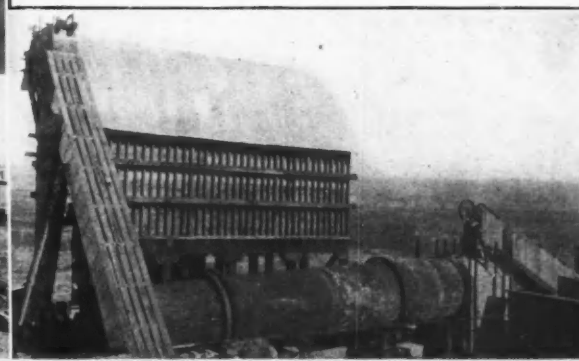
A Measure of the Color Characteristics of White Paper

All manufacturers and users of white papers will be interested in the pamphlet on the subject by the Bureau of Standards as Technologic Paper No. 244.

It describes the colorimeter designed and built by Dr. A. H. Pfund of Johns Hopkins University, Baltimore, Md., for the study of white pigments, but applied by R. E. Lofton of the Bureau to white papers.

It has been shown to be several times as accurate as the unaided eye and serves as a valuable means of classifying varying degrees of whiteness on a numerical basis.

The paper may be obtained for 5 cents from the Superintendent of Documents, Washington, D. C.



Cuts by courtesy of *Chemical and Metallurgical Engineering.*

UPPER LEFT—PRIMARY CRUSHING PLANT. LOWER LEFT—WESTERN CHEMICAL WASHING PLANT. RIGHT—DRIER, ELEVATOR AND STORAGE BIN.

A METHOD OF TESTING BOARD FOR MOISTURE-PROOFNESS*

BY ARTHUR R. HARVEY, THE GARDNER & HARVEY COMPANY



FIG. 1.
External View of Instrument.

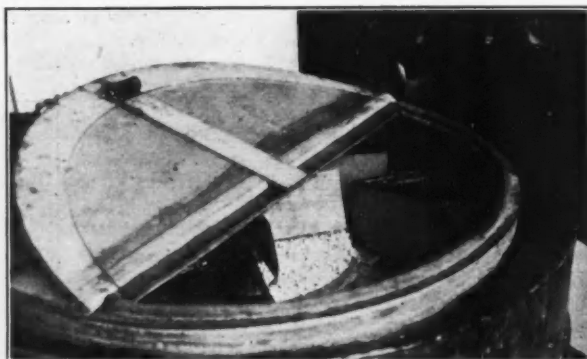


FIG. 3.
Internal View Showing Test Samples and Vanes for Air Circulation.

This test is applied where it is desired to find the degree to which a board will resist the penetration of moisture. The test was developed primarily to be used in connection with "K-B" (an asphalt filled board) and its relation to sizing or water-proof tests has not yet been determined. The method consists in interposing the sample under test between a moist and a dry atmosphere, the amount of moisture passing through the sample found by weight. The test is influenced by a number of factors, some of which are:

Temperature and humidity of moist atmosphere.

Temperature and humidity of dry atmosphere.

Air circulation in moist atmosphere.

Air circulation in dry atmosphere.

The instrument (Figs. 1 and 2) used consists of a circular revolving tray which carries the samples under test and also a drying agent. The whole is encased in an air-tight chamber surrounded

*Presented at the Paper Testing Sectional Meeting Annual Convention TAPPI April 10, 1924.

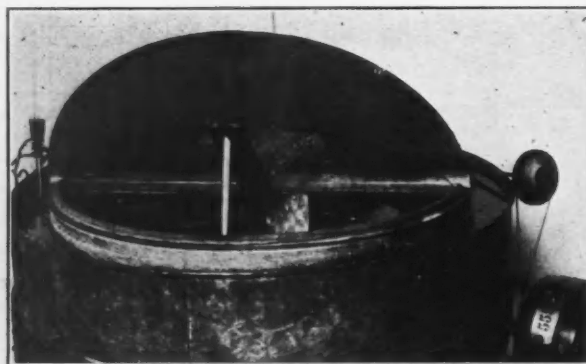


FIG. 2.
Instrument with Cover Raised.



FIG. 5.
First Method.

by a thermostatically controlled water bath. The tray has a diameter of 21 inches and revolves at a speed of 17.5 r.p.m. Small metallic vanes (See Fig. 3) are fastened to the top of the chamber to aid in uniform air circulation.

Eight samples are evenly spaced around the outer edge of the tray and are prepared as described below.

The sample of board to be tested, having an area of 33 sq. in., is sealed around a triangular frame of light tin (See Fig. 4). The box thus formed contains on its bottom a piece of felt saturated with water. The water is introduced through a hole in the top after the box has been completely made up in order to avoid wetting the board at any point while sealing.

The temperature in the desiccator is brought to 77 deg. Fahr. and the samples are placed on the tray and allowed to season for 1 hour before making the first weighing. After running for a period of 2½ to 5 hours, the samples are again weighed and the loss of water determined by difference. "Per cent Moisture-proofness" is a grade assigned to the sample,

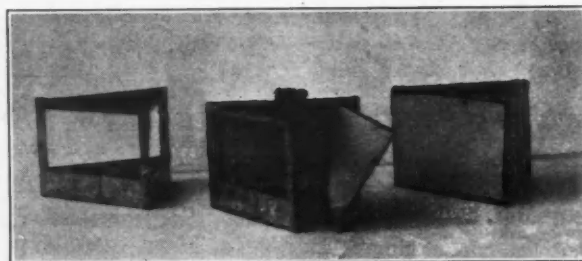


FIG. 4.
Construction of Test Samples.

which represents its position on a scale, the 100 per cent mark of which is reached when no moisture penetrates. The zero of this scale is arbitrarily taken as a penetration of 0.4 gram per sq. in. per 24 hours under the above conditions and represents approximately the penetration through a common grade of Patent White Chip Back board. Since time as well as loss of weight is a factor the "Rate of Loss" is first determined and is expressed as grams lost per sq. in. per 24 hours. From this figure the "Per cent Moisture-proofness" is found as per following equation:

$$\frac{(0.4 - \text{rate of loss}) \times 100}{0.4} = \text{per cent moisture-proofness.}$$

The following example will show the complete computation:

Initial weight	50.2290 grams
Final weight	50.1150 grams
Difference	0.1140 grams
Duration of test	2.5 hours
Area of sample	33.0 sq. in.

(Initial weight was taken after sample had seasoned for one hour.)

$$\frac{0.1140 \times 24}{33 \times 2.5} = 0.0331 = \text{rate of loss}$$

$$\frac{(0.4 - 0.0331) \times 100}{0.4} = 92.7 = \text{per cent moisture-proofness}$$

The above procedure at first thought would appear to be unnecessarily elaborate. However, the method was developed after considerable experimentation with simpler devices. The first attempt to obtain comparative figures on the ability of various boards to withstand the penetration of moisture was made by using the sample to seal a small vessel of calcium chloride (Figs. 5 and 6).

This is a very obvious and simple method, but the results were found to be unreliable and misleading. It is evident that some control must be had to regulate temperature and humidity.

Reversing the atmospheres as in Fig. 7 where the water is placed inside the crystallizing dish and the drying agent outside, was found to permit more rapid determination. Where the samples are



FIG. 7.
Second Method.

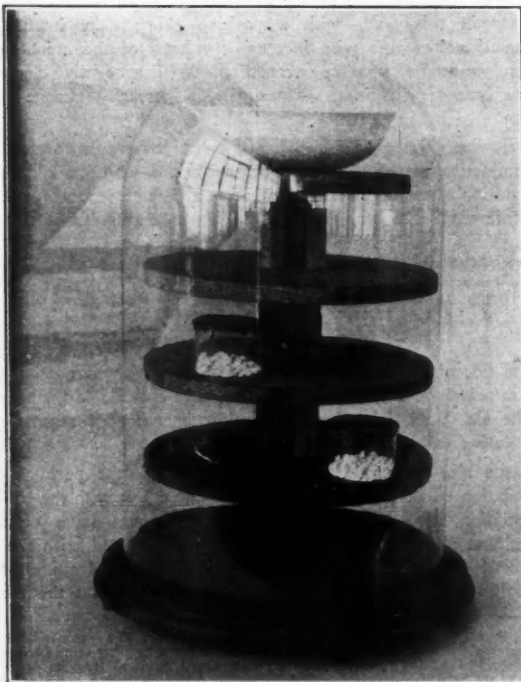


FIG. 6.
Modification of First Method.

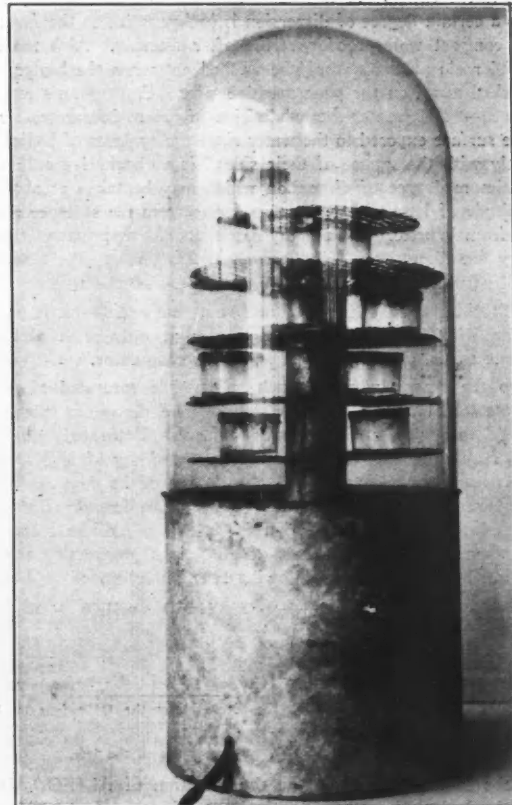


FIG. 8.
Modification of Second Method.

flocculation would have been blotted out. In the case of flocculation with acid reacting salts, Na salts would be formed, which would be concerned with the flocculation and the true flocculation value of the electrolyte would not have been found.

The abietic acid hydrosol was freshly prepared and after a titration analysis was made up to 0.5 per cent. By use of such a dilute sol, it was possible to get a considerable retardation of flocculation so that the separation took place plainly. Size milk, especially in relatively high concentration flocculates, usually, immediately after addition (of the salt), since the traces of aluminum resinates, which originate and precipitate by chemical decomposition, carry down the free rosin. Abietic acid hydrosol requires a longer time for coagulation.

The work was performed experimentally as follows: A row of well cleaned and dried test tubes which were as nearly as possible of the same bore were set up. To one tube 1 cc. of the prepared salt solution was added, to the next, 2 cc. and so on up to 5 cc. Each tube was then filled up to 5 cc. with distilled water. Then 5 cc. of the sol was pipetted into each tube and mixed with the salt solution as quickly as possible by shaking. The tubes were then left quiet and the changes in the sol observed each hour with shaking of the tubes. By shining a flash light through the test tubes it was possible to distinguish a slight decrease in the dispersion even in a sol which still appeared homogeneous. In this moment, the real flocculation was already completed and sedimentation had begun. The little flakes agglomerate together and fall down until the supernatant liquid is water-clear. After 24 hours the changes in condition were, in the main, always completed; after standing another day the tubes showed no essential change in condition.

If the "flocculation concentration" was not reached by two neighboring tubes, in the manner pictured above, that is, flocculation had occurred in one but not in the other, a new series was prepared with finer gradations of the electrolyte concentration within the critical flocculation region. This was done until the same conduct of more neighboring test tubes showed that the end of sensitiveness of the method had been reached. After the flocculation action had been made clear for a single salt by means of this series of investigations a combined investigation was carried out with about 100 test tubes. This made it possible to observe the progress of the changes in condition at approximately the same time. In Table IX are the results of all the flocculation series summarized.

indicator. The NaCl and Na₂SO₄ solutions were prepared by weighing out highly purified preparation, H₂SO₄ by titration, NaHSO₄ by mixing equal parts of normal H₂SO₄ and Na₂SO₄ solutions. In the case of flocculation with gypsum, a solution saturated at 18 deg. cent. was used.

29. FLOCCULATION VALUES.

1. Flocculation Zones. The remarkable phenomena which in mastic flocculation is known as "irregular series," is here found in the flocculation with AlCl₃ and in a weaker measure also with KCl and NaCl.

Generally, an electrolyte produces flocculation the stronger, the more concentrated the solution in which causes the reaction. Contrarily, it is found here, that with increasing concentration after a zone of strong flocculation action, an unflocculating zone and then with increased electrolyte addition, a second flocculation zone appears. A theory of this phenomenon, although not the only one is found in Sieber's²⁸ work.

For comparison of the AlCl₃ flocculation in abietic acid hydrosol, an analogous series of investigations were carried out with mastic sol of the same concentration (Table IX, 3 and 9). As is seen, the unflocculating zone of mastic falls approximately in the same position as that of colophony.

However, R. Sieber found an unflocculating zone with aluminum sulphate, which is, however, much less marked than it is with the chloride. After two hours this effect is still to be recognized with Al₂(SO₄)₃, but after longer standing, flocculation also occurs in this concentration region.

The second flocculation zone lies, in the case of abietic acid hydrosol in the region 0.1 > .03 mil. equivalents; in the case of mastic between the boundaries 0.3 < .03. The maximum concentration,—seen from the unflocculating zone—at which no complete flocculation action will occur, lies therefore consistently at 0.03 mil. equivalents. Thus is proved, what was suspected from the agreement of the ultra microscopic views of the two sols—the physical properties of disperse phase of colophony resemble those of mastic sol, therefore it has suspensoid characteristics. In the meaning of colloidal chemistry terminology, one may not designate rosin size solution as an "emulsion." A true emulsion and especially emulsions subject to solvation would reveal an essentially higher flocculation value, and accordingly would require a considerably greater amount

TABLE IX
FLOCCULATION VALUE, EXPRESSED BY CONCENTRATION—TIME 24 HOURS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
Conc. in Mil. Equiv.	600	550	500	450	400	350	300	275	250	225	200	175	150	125	100	75	50	35	25	20	15	10	7.5	5.0	3.0	2.5	1.0	.5	.2	.1	.05	.03	.01	.005	.003	.001	
1 KCl	a	a	a	a	a	a	a	b	d	b	a	a	b	b	c	d	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d
2 MgCl ₂	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	..	b	..	c	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d
3 AlCl ₃	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	c	c	c	c	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
4 Th(NO ₃) ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	..	b	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d	..	d
5 K ₂ SO ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	c	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
6 MgSO ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	c	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
7 Al ₂ (SO ₄) ₃	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
8 K ₂ C ₂ O ₇ (5% Mastic)	a	b	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
9 With AlCl ₃	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
10 KAl(SO ₄) ₂	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
11 NaHSO ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
12 H ₂ SO ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
13 NaCl	a	a	a	a	a	a	a	a	a	b	d	b	a	a	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
14 Na ₂ SO ₄	a	a	a	a	a	a	a	a	a	a	a	a	b	c	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
15 CaSO ₄	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
16 NaHSO ₃	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
17 C ₂₂ H ₂₁ N ₃ Cl (New Fuchsin)	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a

a.—flocculation in 24 hr.
b.—partial in 24 hr.
c.—slight reduction in dispersion.
d.—no flocculation.

In short the standardization has been considered and carried out with great care. The content of the Al solution was determined gravimetrically as Al₂O₃, Mg was determined as MgP₂O₆. Purified Merck's analytical preparations were weighed out for preparation and standardization of KCl, K₂SO₄ and Th(NO₃)₄ solutions. Calcium citrate was prepared by neutralization of citric acid with KOH until it showed a faint pink with phenolphthalein as a spot

of salts for flocculation which would be very disadvantageous to the technical process.

II. INFLUENCE OF VALENCE.

The univalent K⁺ ion in KCl produces flocculation still incompletely in a concentration of 150 mil. equivalents in 24 hours. The

²⁸ Zellstoff und Papier, 1921, 16.

action decreases still more at 125 and 100 mil. equivalents, 75 mil. equivalents produce flocculation still less. 75 mil. equivalents $MgCl_2$, that is 75/2 millimol, on the contrary, still produce complete flocculation, and only at 10 millimols is there no flocculation to be recognized with the bivalent Mg^{++} ion. The trivalent Al^{+++} ion in $AlCl_3$ has its lowest flocculating zone at the strikingly low concentration of 0.05/3 millimols. *With increasing charge on the cation, the flocculating action increases progressively.* The beginning of flocculation of the K^+ ion lies about 6.5 times as high as that of the Mg^{++} ion, the beginning for the Mg^{++} ions, again, is about 1000 times higher than that of the Al^{+++} ions.

TABLE X

Cation	Cl^+		$(SO_4)^{++}$		Citrate $^{+++}$	
	Decrease in dispersion	No flocculation	Decrease in dispersion	No flocculation	Decrease in dispersion	No flocculation
K^+	150	75	150	100	550	500
Mg^{++}	50	10	50	25	...	...
Al^{+++} .....	.03	.01	1	.5	...	...
Th^{++} (thorium nitrate)	50	50	..	..	...	...

For criticism of the extraordinarily great space between the bivalent $MgCl_2$ and the trivalent $AlCl_3$, it can be proposed that in the Al solution which reacts acid, due to hydrolysis, the H^+ ions take part in the flocculation and assist the action of the Al^{+++} ions.

For refutation of this idea, the proposed scheme for the hydrolysis of $Al_2(SO_4)_3$ in Section 27 must be recalled. From this it results that in hydrous Al salt solutions for each 3 monovalent H^+ ions which are produced by hydrolysis, theoretically a trivalent Al^{+++} ion disappears. However this relation is not strictly realized since the changes in concentration and with them the rule of Oswald's dilution law must still be considered as a correction. But H^+ ions produce flocculation more weakly than Al^{+++} ions in equivalent amounts (Column 7), and therefore a decrease in the flocculation intensity of the Al salt solution, resulting from hydrolysis, may be spoken of rather than an increase due to the split out acid. In any case, one can impart to the $Al(OH)_3$ content of the Al salt solution, an assisting action to the flocculation; that this assumption is justified only under special suppositions, will later be discussed at length.

An exception to the valency rule is made by the quadrivalent $Th(NO_3)_4$. It produces flocculation about as strongly as the bivalent $MgCl_2$. Such exceptions have been found again and again²⁰.

In the case of the sulphates the described regularity is repeated although in weaker progression. The chlorides act at the minimum concentration, which permit recognition of a decrease in dispersion, in the following order: $Al^{+++} : Mg^{++} : K^+$, about a 1 : 1700 : 5000. The corresponding proportion for the sulphate is 1 : 50 : 150.

It is remarkable that all flocculation values lie higher with sulphates than with the chlorides. Accordingly a restrictive action to the flocculation by the higher charged anions is made noticeable, which first appears in the case of the trivalent citrate. This produces complete flocculation only in the extraordinary high concentration of 600 millimols. A comparison of the flocculation values for KCl , K_2SO_4 , and $K_2C_2O_7$ shows that the *peptizing action of the anions increases progressively with the electrical charge, here, in the proportion 1 : 1.3 : 6.7.* Concerning the peptizing action of OH^- ions on colloidal rosin acid, mention has already been made.

The flocculation value can also be expressed by the time which elapses from the addition of the coagulators of equal concentration until a perceptible decrease in the dispersion occurs in the sol. Table XI is such a series of observations and shows the same regularity which was found by the first method. The time measure method is adapted only to comparative flocculations in the same sol. Absolute values are hard to obtain, since the concentration and age of the sol have considerable effect. Abietic acid hydrosol at a

concentration of 0.5 per cent is coagulated, for example by 500 milequivalents $Al_2(SO_4)_3$ in about 4½ hours. At a concentration of 1 per cent it requires only 15 minutes.

TABLE XI

Flocculation values, expressed by time in minutes. Uniform electrolyte concentration = 500 mil equiv. Sol = 0.10%			
KCl	70	K_2SO_4	100
$MgCl_2$	25	$MgSO_4$	40
$AlCl_3$	10	$Al_2(SO_4)_3$	15
$Th(NO_3)_4$	40	.....	.....

No flocculation after 6 days.

Flocculation values have been obtained with some electrolytes for colophony sols by R. Sieber as well as F. Stockigt and A. Klinger (loc. cit.). The last named authors explained the deviation of the absolute magnitude of their values from those of R. Sieber in this way, that the rosin solutions were investigated at different concentrations and dispersions. The writer might connect this conception relative to comparison of his values for beginning of flocculation but emphasizes the falsity, that the valency rule—increasing flocculation intensity with increasing charge on the cation—can be clearly derived by R. Sieber from his investigation. Contrarily, the author establishes the peptizing effect of the anion. However, R. Sieber mentions the stabilizing effect of organic acids as for example, in the occasional practice of sizing using phenols. The observation of L. Sieber²⁰ that in a 0.1 per cent sol, accordingly, strongly hydrolysed, similar to a sodium abietate, $CaSO_4$ effects flocculation only in concentration 10 fold that of $CaCl_2$, confirms the author's theory of the peptizing effect of the anion, while R. Sieber must be believed to infer pure chemical decomposition.

R. Sieber investigated the composition of the precipitate and always found bases from the coagulating salts, but in changing amounts. If he employed mixtures of salts, both bases appeared in the precipitate. To conclude a chemical salt formation from this he held as impossible. It appears as an adsorption phenomenon

²⁰ Zellstoff und Papier, 1921, 185.

(To be continued)

Papermaking Near Kilauea Crater

The following is an abstract from a letter of C. W. Mason, superintendent of Olaa Sugar Company's paper mill, Olaa, Hawaii. Mr. Mason was formerly connected with Powell River Paper Company, Powell River, B. C.

"This Old Hellhole is certainly raising the devil just now. Excuse my French. We are about 30 miles from it at the mill but we get a splendid view from the top of the digester building. In fact, when I am in bed I can see it shooting fire at night as my window is right opposite it. I guess, however, we are pretty safe at that as long as it is not bottled up. It has lots of exhaust space and the crater is getting bigger all the time as the sides keep falling in every time it erupts.

"I motored up to it last Monday and believe me it was a sight never to be forgotten. I view it from a distance of less than a mile and spent several hours watching it. To me it was very fascinating and impressive. While I was there we had a very violent eruption lasting for nearly an hour (they come at intervals of about six or seven hours) and the bowlders were more than shooting up in the air. They would weigh all the way from one pound to a ton. The eruption starts in with huge clouds of inky black smoke rolling out of the crater and then the artillery starts in, sounding like cannons being fired. Then the whole place begins to rock and you get wobbly at the knees and begin to think it's about time to get out.

"Last Saturday there was a bunch of tourists off the S.S. Empress of Canada up seeing the volcano and it erupted while they were there, and they all piled into the nearest cars regardless of to whom they belonged.

"If this old volcano doesn't blow our little island off the may I am going to suggest you hold one of the conventions down here."

²⁰ W. Ostwald: Kollzetischr. 26, 28, 69 (1919). 30, 254 (1922).

CURRENT PAPER TRADE LITERATURE

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

CLARENCE J. WEST, CHAIRMAN

Sulphite Process

Selenium in Pyrites for Pulp Cooking. A. K. Bumazhnaia *Promyshlenost* 2, No. 1, 120-121 (Jan.-Feb. 1923). Pyrites containing 0.017 per cent selenium were used in the preparation of cooking acid. At the time it was not known that Se was present containing 2.08 per cent SO_2 , of which 1.20 per cent was free, nothing and the usual method of procedure was followed. Using an acid irregular was observed until 115 C. was reached, then the liquor darkened rapidly. Between 115 C and 122 C. the SO_2 content fell from 0.59 per cent to 0.19 per cent. On opening the digester the upper layer was found to be a dark mass, while the rest was uncooked chips, partly white, partly black and burned. A second cook with acid of 3.2 per cent SO_2 , of which 1.92 per cent was free, also showed a sudden drop in SO_2 content within 2 hours between 126 C. and 130 deg. from 0.67 per cent to 0.12 per cent. The contents of the digester was of a dark color and incompletely cooked. Qualitative test for Se with HCl gave pink coloration with acid of second cook, but not of the first cook. Another cook using pyrites with 0.010 per cent selenium gave normal results. Nothing unusual, like reddening of the limestone or monosulphite in the tower, etc., was observed in the preparation of the acid for above cooks. Therefore, all of the selenium must have been present as SeO_2 . The critical temperature of 116 C. indicates that cooking acid containing more than a certain amount of selenium is unfit for use.—M. L. C.

Pressure Lock for Digesters. J. K. Ruths. U. S. pat. 1,419,763, June 13, 1922. The pressure lock consists of a short piece of acid-proof piping which is placed immediately back of the acid-proof cutoff check valve of the digester, and back of which is placed an acid-proof check valve opening towards the digester. Opening into the pressure lock, preferably near the check valve, is a small steam (or air, or water) pipe, under a pressure which is always kept above the maximum pressure in the digester. When the boiler pressure is only slightly greater than the maximum pressure in the digester the small steam pipe is fed from a small steam accumulator so as to always have maximum boiler pressure when the pressure in the main steam piping drops owing to a large load being suddenly put on the boilers.—A. P.-C.

Basic Chemical Problems of the Sulphite Process. L. P. Zhrebhoff. *Bumazhnaia Promyshlenost* 2, No. 1, 141-144 (Jan.-Feb. 1923). The chemical composition of lignin is in doubt. The formulas of different authorities do not agree and each is based on a number of assumptions. The carbon content by these formulas is: Cross and Bevan 57.8 per cent, Klason 68.8 per cent, Schultze 55.5 per cent, Koroll 53.6 to 54.9 per cent, Tollens and Lindle 64.2 per cent, Klason (by alcohol and H_2SO_4) 64.9 per cent, Koenig 64.9 and 65.1 per cent. The changes that lignin undergoes in the cooking process are also unknown. The relation of pentosans and hexosans to the other elements in the wood are not clear. Cellulose is probably the product of hydrolysis of the complex, so called, wood. The stronger the reagent used and the higher the temperature the greater the conversion of polysaccharides into monosaccharides. Paen (1840), Schultze (1857), Stutzer (1875), Sasche (1877), Wsicensus (1910) and Klason (1911) consider the constituent parts of the cell walls an accidental mixture of substances, while Fremi (1859), Erdman, Bente (1875), Cross and Bevan, Schwalbe (1911) consider wood as a chemical complex. The author adheres to the latter view. An attempt was made to determine the result of the action of Ca (HSO_3)₂ on the aldehyde and ketone groups at the end of a cook. It was found that as

high as 43 per cent of the total organically combined sulphur was in R-Ca (HSO_3)₂ compounds. The compounds are unstable and break up when the amount of SO_2 is reduced by titration. There must be two kinds of aldehyde-ketone compounds in wood. One kind combines with Ca (HSO_3)₂ only in a neutral medium, while the other kind is stable in acid solution. The first is found only at the beginning of a cook and then disappears, the second increases towards the end of the cook and then rapidly decomposes. The reactions during a cook are not entirely illuminated by analysis of the liquors, since only 50 to 60 per cent of the sulphur used is found in them. The formation of furfural and the hydrolysis of lignin must be studied. The separation of lignin from cellulose does not proceed uniformly, and the finding of the maximum and minimum points would serve to shorten the cooking time. Other problems are the resins and waxes, also the effect of selenium.—M. L. C.

Interdepartmental Co-operation in the Manufacture of Sulphite Pulp. B. T. Larrabee. *Paper Mill* 48, No. 5, 14, 16 (Feb. 2, 1924). A strong plea for co-operation.—A. P.-C.

Lignone Dust Explosion. Paul W. Edwards. *Paper Trade J.* 78, No. 3, 47-49 (Jan. 17, 1924). Description of a dust explosion which recently occurred at a plant manufacturing "lignone," a product from sulphite waste liquor. Investigations led to the conclusion that it was probably caused by the ignition of pyrophorous carbon formed by destructive distillation of lignone on the superheater pipes, in a lignone dust and air mixture containing enough of the former to form an explosive mixture.—A. P.-C.

Alcohol From Sulphite Lyes. Martin L. Griffin. *Paper* 33, No. 9, 8-10 (Dec. 10, 1923). A criticism of an article by R. H. McKee, showing why the process recommended for recovery of alcohol and fuel from sulphite waste liquor has not been adopted to any extent on this continent. The main reasons mentioned are: uncertainty and irregularity of the sugar content of the liquor, necessity of keeping the waste liquor as concentrated as possible (which works hardship on the pulp mill), presence of free acid or of lime (if the liquor has been neutralized) and of a large amount of scale-forming compounds, finding suitable evaporator, uncertainty of marketing alcohol. Judging from the performance of black liquor recovery plants, the author strongly questions McKee's figures as to the value of the fuel recovered.—A. P.-C.

Sulphite Waste Liquor. Ch. Harnist. *Science et Indus.* 7, No. 108, 65-70 (Jan. 31, 1923). A discussion of the problem of sulphite waste liquor utilization drawing analogy with coal tar utilization, with a review of work already done and suggestions as to the lines which should be followed in further investigations.—A. P.-C.

Recovery of Iodine From Titration Residues. M. Kleinstuck and A. Koch. *Zellstoff U. Papier* 3, 261 (Dec. 1923). An apparatus is sketched and described for the recovery of iodine from titration residues. To these residues, acidified with hydrochloric acid, in a flask, sodium nitrite solution is added through a dropping funnel. The solution is steam distilled, the iodine passing into a flask which is kept cold with running water and to which is attached a reflux condenser. The sublimed iodine is dissolved in potassium iodide solution which may be used for standard solutions.—J. L. P.

Treating Sulphite Waste Liquor. E. L. Rinman. Swed. pat. 51,039, Feb. 22, 1922. *Chem. Abs.* 18, 468. The waste liquor is boiled with further quantities of wood. The liquor concentrated in

this way is treated with alkalis, preferably lime, until a precipitate of lignin and calcium sulphite is formed.—C. J. W.

Furnace for Destructive Distillation of Sulphite Waste Liquor. A/B/Cellulosa. Swed. pat. 51,239, Mar. 8, 1922. *Chem. Abs.* 18, 468. The furnace is built in several stories in which series of cars are placed one after another and connected in such a way that each story forms a horizontal canal. The waste liquor is spread on the cars in thin layers. The necessary heat is applied directly by the distillation gases, which are brought into contact alternately with the waste liquor and with the heating elements placed in a chamber connected with the distillation canals.—C. J. W.

Fermentation of Sulphite Liquors. Erik Haeggglund. *Svensk Kem. Tids.* 35, 165-184 (1923); *Papierfabr.* 21, No. 35, 401-405; No. 36, 409-412 (Sept. 9, 1923); *Chem. Abs.* 18, 466. The formation of acids and aldehyde is first discussed. The aldehyde formation is supposed to be dependent upon the amount of loosely bound sulphur dioxide present. The relation of the hydrogen ion concentration to the alcohol formation is also discussed. The experiments described are briefly as follows: 100 cc. of the liquor are treated in two ways, direct neutralization and fermentation and heated with hydrochloric acid and then neutralized and fermented. Lime and chalk are used in neutralizing. The liquor is aerated during this process. The sludge formed is removed by centrifuging, is washed, and the clear liquor made up to 1 liter. In the acid treatment there is a quantity of hydrochloric acid added which is equivalent to 150 per cent of the free and loosely bound sulphur dioxide. It is then heated for two hours. To each batch the following nutrient is added: Ammonium sulphate 0.25 g., sodium phosphate 0.5 g., and the extract from 1.4 g. sterilized yeast. Twenty g. distillers' yeast in a 20 cc. suspension are then added and the liquors incubated 84 hrs. at 30 deg. The hydrochloric acid completely prevents the formation of aldehydes. The analytical data are given in extensive tables. The initial hydrogen ion concentration of the liquor may vary from 4.1 to 8.5; after fermentation it is in the neighborhood of 4.4. In two series the alcohol averaged 0.57 and 0.65 g. per 100 cc. liquor.—C. J. W.

Alkaline Processes

Chlorine Pulp in Italy. Raymond Fournier. *Papier* 26, 1429-1431 (Dec. 1923). Outline of the establishing of the Cataldi process on a commercial scale in Italy.—A. P.-C.

De Vain's Process in Detail. James Strachan. *World's Paper Trade Rev.*; *Paper* 33, No. 14, 5-7 (Jan. 24, 1924). A discussion of the merits of the process and of its probable future, especially for the production of grass pulps for the manufacture of very high grade papers.—A. P.-C.

Development in Paper Making Machinery. A. N. Russel. *Paper* 33, No. 13, 38, 40 (Jan. 17, 1924). Brief review of some of the more important improvements brought out in recent years.—A. P.-C.

Countercurrent Digestion of Wood. R. T. Haslam and W. P. Ryan. *Ind. Eng. Chem.* 16, 144-146 (Feb. 1924). For rapidity of digestion the law of mass action indicates the advantage of using dilute caustic soda at the start when the lignin concentration is high, gradually increasing the caustic as the lignin content becomes less. This may be accomplished by causing the strong liquor to flow in a counter current direction to the wood chips that are being digested. Experimental work indicates that such a process has the advantage of decreasing the time of digestion by 1/3 to 1/2, increasing the alpha-cellulose content of the pulp, and of producing, in general, a better bleaching pulp. The disadvantage in the runs reported in the article consists in a reduction of yields amounting to 4.4 per cent. A method is suggested of carrying out a countercurrent system of digestion using the customary vertical tank digesters.—A. P.-C.

Consumption of Steam in the Cooking of Rags. Z. Levit and A. Shirotshenkov. *Bumazhuia Promyshlenost* (Russia) 2, Nos. 2-3, 204-204 (March-June 1923). It is possible to calculate the

theoretical consumption of steam in cooking rags. In doing so E. Kirchner (*Das Papier III D*, also in *Wochbl. Papierfabr.* No. 49, 1907, No. 37, 1912) used 0.65 as the sp. heat of rags, while Ditz used 0.323. Since only 6½ to 8 per cent of total steam goes for heating the rags, no great error is introduced by using either of the above values. The heating of the milk of lime takes about 50 per cent of the steam; radiation accounts for 40 per cent. A. Lipgart and S. Fotief (*Pistsheb. Dielo*, Russia, No. 7, 1907) determined the steam consumed from the difference in weight of contents of kettle before and after cooking. This method is tedious. Levit and Shirotshenkov used the following method: To the rags and milk of lime in the kettle a weighed amount of neutral salt was added, of which the Cl. content was determined. The chlorine per unit volume of the alkaline solution is determined by titration with AgNO₃. From these the liters of solution in the kettle were determined (say A kg.). At the end of the cook the amount of chlorine per unit volume is again determined and from this the new amount of liquid calculated (say B kg.). B - A = condensed steam. Allowance should be made for amount of chlorine originally in rags and in the lime. The presence of large amounts of organic matter does not interfere with the chlorine determinations. Folgart's and Moore's methods were used and results agreed. To determine if any chlorine compounds were adsorbed by the rags, the rags were extracted by boiling for 7 to 8 hrs. with negative results.—M. L. C.

Removal of Silicates From Spent Soda Liquor. Carl G. Schwalbe *Zellstoff U. Papier* 3, 259-260 (Dec. 1923). In the soda pulp process, 100 kg. of wood yield 0.17 kg. silicic acid, which appears in the spent liquor, and 100 kg. straw yield 3 kg. silicic acid. In the treatment of the spent liquor, incident to the recovery of the sodium hydroxide, sodium silicate is formed. In the subsequent causticizing process the reaction between the calcium hydroxide and sodium silicate is usually not complete, since a long time is required. Consequently the fresh or "white" liquors contain quantities of sodium combined as silicate. Favorable causticizing and precipitation of the calcium silicate in a crystalline form depends largely on an appropriately prepared milk of lime. From the theoretical standpoint, calcium oxide should be used, so that the heat of reaction with water can be utilized. The specific physico-chemical properties of the lime play an important role in determining the reactivity of the resulting milk of lime. The desired separation of silicate in a crystalline form is brought about by keeping the soda melt liquor and the milk of lime, with intensive agitation, in an autoclave for ½ hr. Such conditions yield a liquor practically free from silicates. The process is especially applicable to rice straw, bagasse, bamboo and other raw materials having a high silica content.—J. L. P.

A Problem of Board Manufacture

We are experiencing trouble with the liner of our board pulling away from the filler when printed and glued to make boxes. We have had many explanations given but as yet we have not been able to find a satisfactory solution.

Answers to this inquiry from superintendents and chemists in boxboard mills will be greatly appreciated.—A MEMBER.

NOTE: A transcript of the responses received from members will be circulated to those who contribute to the inquiry.—THE SECRETARY.

May Erect Paper Mill at Covington, Va.

The following press dispatch from Covington, Va., was printed in the *Baltimore News* of June 18:—

"After six months of investigation and surveys of available sites in Virginia, the Hollingsworth & Vose Company, Inc., of Boston, a large paper manufacturing concern, has purchased the farm of Porter & Clark on Dunlap's creek. They plan to erect a large manufacturing plant which will employ hundreds of people."

Section of the
COST ASSOCIATION OF THE PAPER INDUSTRY
Affiliated with
THE AMERICAN PAPER AND PULP ASSOCIATION
 Conducted by **THOS. J. BURKE, C.A., Sec-Treas**

COST ACCOUNTING AS A BUSINESS INVESTMENT*

By J. A. LACEY, F. C. W. A.

The period of acute depression which Industry, particularly of this country, has experienced for the past three years, and which still unfortunately causes the business world considerable anxiety, may, in the light of future history, assume a salient position in the re-adjustment and stabilization of manufacture.

The immediate post-war boom marked the prodigality of the manufacturing spirit, and as a consequence, manufacturing organization became lax and slipshod; energy became misdirected; labor grossly overpaid; and materials recklessly and unsparingly wasted.

The succession of the slump brought an abrupt qualification and caused the manufacturers to consider the setting of their houses in better order.

The decision was the occasion of introspective research, but it must be admitted that whatsoever thoughts which may have been given to this matter, were in turn greatly qualified by uneasiness for the future; and the economical measures introduced into the reorganization process also savoured of the reckless procedure, and the ruthless consideration such as marked the previous era.

It may have been the case that all departments in a works were among other measures, called upon to face a fixed and definite reduction in the numbers of the staff; or, the policy may have been to lop off a department, or a section thereof, whose activities were not considered as being vital to the manufacturing organization.

It is equally possible that the heads of departments expressed views (for various reasons) of the inadvisability of such a procedure, but being faced with the answer "The Business cannot afford it," all arguments became, as it were, futile arrows hurled at complete proof-armour.

"Business Cannot Afford It"

In uttering the phrase "The Business cannot afford it," the situation in so far as it affects the business as a whole, may have been truly described. There is a greater probability however that the specific departments within the business least able to afford such expense could not be cited; and it is *more* than probable that the internal factors responsible for such a position were unknown, not only to the people connected therewith, but also to the head of the concern itself.

It may be considered that the foregoing is a bold statement to make, but in the great majority of manufacturing organizations, proceedings and results (however tabulated, either in finance or

other statistics) are sparsely recorded from the insular viewpoint, and often without regard to the contributory, complimentary or restraining aspects.

Having arrived at this stage, it would seem only right to expect the introduction of the statement, "That, in order to ascertain whether the business can or cannot afford expense or otherwise be made to pay, the manufacturer must keep cost accounts."

At the onset it must be stated that it is not the intention of this paper to make any such assertion, and for three reasons:

1. It has already been stated to satiety.
2. Many who have made the statement or written of the fact are incapable of showing how it can be done.
3. The hearers or readers of the statement also may be business men desirous, if not anxious, to get in closer touch with their business, who, either by the paucity of coherent interpretation of the principles of cost accounting, or by redundancy or ambiguity of statements concerning details, or perhaps by both, are unable to see where the projected expense of installing a system will furnish as a resultant, in a few crisp statements the much-to-be-desired knowledge.

In my pamphlet on the "Functions of Works Accountancy," the scope of this branch of statistical record, regarded from the viewpoint of business organization, has been set out in great detail.

But whether we recognize the fact or not, there certainly are factors arising in the conduct of a manufacturing business recognized by industries as a whole, which are intolerant of indifference, and it is for the purpose of showing how these are marshalled in the organization, the position which they occupy, and the relationship which they enjoy (or otherwise), that this paper is written.

The Attitude of the Industry

A few weeks ago, Grant Robertson, Principal of Birmingham University, stated that . . . "there was no problem with which one had to deal, in which finance if it was not the whole of it, was ultimately at the root of it. . . ."

However unfortunate this fact may be, it certainly is a truth that in the conduct of business, and in industrial development both at home and abroad, finance becomes the only universal language or interpretative medium.

But within the narrower circle of our home exchanges, or on the occasion of testing relative values of interchanges in the domestic area of any definite trade organization, we sense a disparity in phrase, or ambiguity in interpretation which leaves us in an atmos-

*From The Cost Accountant.

phere of dissatisfaction and doubt, for reasons which will be apparent in due course.

It is an undeniable fact that in any conference regarding price, industry has ever felt the lack of a defined basis upon which discussion may prove enlightening and profitable. Business houses within the scope of a particular trade have (if ever they have) usually adopted a method of price collecting, which has proved to be insulate, and perhaps applicable only to its own particular needs.

But in December of last year (1923) a British Trade Association, representing probably 100 millions of capital, stated in a letter to the Federation of British Industry the following:

"Inasmuch as the cost price is the fundamental upon which selling prices may be based, or profits ascertained which are yielded by an article or group of articles, and seeing that cost accounts are indicative of the efficiency (or lack thereof) of any department or works, it follows that cost accounting must be recognized as a 'works function.'"

That is the considered opinion of the representatives of a vast engineering industry, and is the *first factor* stated in no uncertain terms.

Clearly and without ambiguity is thus pronounced the position and relationship of cost accounting to the manufacturing industry.

Cost Accounting Essential

Cost Accounting is thus defined as being one of the essential factors in the manufacturing organization, and is closely identified in the productive plan of the works.

Any business manufacturer, worthy of the name, has for an objective the development and stabilization of a works that is, primarily a national asset, secondly as a prop in industry generally, and, thirdly, a means of yielding him some return on his investments.

The successful business man is justly jealous of the organization of his business, and is intolerant of any qualifying element that tends to jeopardize the smooth running business machinery. It, therefore, becomes difficult to imagine that within the conceived productive plan of the works that the method of price collecting should be slovenly or haphazard. It is also clear that this function can only truly take a position that will reflect the same unit of efficiency that is consistent with the whole plan of manufacture.

In the past, a difficulty has been experienced by the industry, or by the trade association, or by a group of traders, who have found occasion to enter into investigation in the matter of costs of production, mainly due to the fact that no common ground was found in the methods of price finding.

Swift to recognize this lamentable feature, and in order that in the conduct of the association's business, discussion anent prices might be entirely constructive, and free from misinterpretation, and that speech and phrasing, and the expression of idea might not bear the taint of Babel, a committee was set up to lay down a standard system of Cost Accounting peculiar (in part) to that trade association already mentioned, the system to be arranged and set out in such wise as would enable *all subscribers* to adopt the major principles, and those whose resources would allow to embrace the minor (though no less important) details to the betterment, not of the individual firms, not only of the association, but of the industry as a whole.

If the F. B. I. are actively showing serious concern in the subject of reliable and accurate price finding, and trade associations coming within the scope of the F. B. I. are at unity with the opinion of the parent body, it would seemingly follow, that the individual firms have looked to their respective associations to voice the collective sentiment, therefore one turns to the business man to see how far this sentence finds expression in his business.

Individual Organization

I would put the following query to the business men of my audience, particularly those responsible for the organization of the

COST SECTION

various businesses represented in districts. "How far do you subscribe to the truth of the statement of this trade association?" and further, "How is your answer reflected in the business organization of which you hold some control?"

Today there is not a single business or manufacturing organization that can afford to lose touch (even in the slightest degree) with any of its internal ramifications, neither can it afford even to entirely sink its identity within the trade group which furnishes the combined ambition and vent for its trading; nor can it ignore its measure of capacity with the businesses which take up a competitive attitude with it.

It follows that the measure of the influence which a particular business has upon the trade association in particular; or the industry in general, is by no means necessarily reflected by the size of the business; but it certainly is by the degree of that business's efficiency, whether that business be large or small.

That efficiency is in turn measured by the knowledge and intimacy of each detail of the manufacturing organization. This does not necessarily mean that the director's mind is steeped in an interminable mass of detail, for such a man sunk in such a morass cannot bring any breadth of vision to bear upon industrial management.

But it *does* mean that the organization is modeled upon such lines that the recording of the position of business not only as a whole, but of every facet of its function, is part and parcel of the productive element of the business. That this function is not an adjunct to the organization, but an integral part. That as the manufactured product passes through the varying phases and evolution, so automatically is its state recorded and reflected in the instant position of the business.

Usefulness of Financial Records

It may be that the returns may vary in the manner of record, but the usefulness of a financial recording must not be ignored, and we agree in the main with Grant Robertson's statement.

The question may now be repeated, "How is your answer reflected in your business organization?" It is possible that a business man may state that his answer is in the concrete, and points to his Cost Department. He probably states that he has only to ask for information regarding the costs of a certain job, and he can obtain that information in a very short time. Further details of the costing may be volunteered as to how the cost clerks can go into the works and rapidly glean the desired particulars of materials used or labor expended; how he employs the simple operation of putting a percentage (tested every year) to cover overheads and thus state the cost. The statement is further prolonged and qualified by the remark, "Of course, it is not necessary to find the cost of every job, and for repetition work we get a cost every three months or so."

This state of affairs is by no means an isolated instance of the organization of many manufacturing concerns in the country, and possibly is representative of the majority of firms.

Costing (I used this term with intent), when looked upon from this angle besmirches the real idea, is utterly incomprehensive, obscures (if it does not blind) any vision directed thereupon, and not least is dangerously misleading.

This reveals a phase in the conduct of business which is too often lightly brushed aside, and the subject dismissed with a few curt sentences, and perhaps explained in the term, "It has served my purpose for so many years and is, therefore good enough for my future requirements."

Would you consider this method of price-finding merits, in any degree, the reflection of efficiency? Do you embark upon the normal specific processes of manufacture in the same way as you get those figures which are called costs?

One is so careful to perfect the system of inspection in the works, and talks in terms of micrometer and vernier, but leaves to chance

many an opportunity of applying inspection tests in the conduct of the shops or the business as a whole.

Examining the Facts

Let us examine the facts in manufacture. We may be called upon to produce an article having half a dozen or more varied materials in its constitution. We cannot efface the fact that in the processes of manufacture, we find that the casting used therein has relationship with the cotton waste used by the engine attendant; we find the brass strips cannot dissociate their conditions with the oil used in the bearings of the polishing machine; neither can the aluminum component disclaim identity with the lace of the driving belt of the lathe; the piece of sheet steel is moulded into shape not only with the press tool, but also with the aid of the piece of sulphate of copper which lay upon the bench of some other worker.

The whole of the assembled parts acknowledge the aid of many pieces of paper contingent upon manufacture, and were just as indebted to the typist's note book as they were upon the specific atomic assembly which gave to them their peculiar form.

Nothing was insular in material composition and everything incomplete of itself.

What of Labor? Our examination reveals that the wages of the turner were not paid, only by and with the wages of the wireman. The piece price of the press worker mirrored the salary of the office boy, the driller's earnings were subscribed to by the efforts of the millwright. It would have become a difficult task for the fitter to attain his day rate unless the stoker was engaged upon the same pursuit, and no one in the organization earned anything only with the assistance of every person in the works.

You will see the uselessness of discussing the cost of a selected number of the products. How is it possible to isolate one of the products of a factory and assign to it an equitable cost without true Cost Accounting.

The chief will split pennies in chasing a false accuracy, but never give the slightest consistent regard as to the disposal within the works, and upon the several orders, of say 10,000 pounds of monthly purchases.

Surely the disposition of 10,000 pounds worth of material must be regarded as a matter of prime importance.

But yet there are many hours wasted in discussing figures purporting to be costs, with sublime disregard of the prime principles of business safeguards.

From this you will readily deduce that in arriving at a true cost evaluation, the expense entailed in all sections of the factory have also to be ascertained.

Must Have All Cost Figures

And a third factor may now be stated, "You cannot have the cost of one article of a group, unless you have the costs of all."

On these lines Cost Accounting will reveal the true values of expenditure entailed in the boiler house, in the maintenance department; in the packing room; and the warehouse; of the supervision; of the pattern shop; of the counting house; in fact, of every ramification within the organization.

The equitable distribution of the values of all the elements represented in that figure is the premier service which can be rendered in accounting to that end. Is that service not of importance?

In referring to the already mentioned cost we are not concerned necessarily with the few pence or shillings represented in the labor element of the cost. We are not concerned with the details as details, but we entertain great concern in the business welfare of all the works' pursuits and transactions in their entirety, using the interpretative medium for easy assimilation, and thus we would prefer to consider the wage bill as a whole, segregated into its essential factors which represents to us the only true ambition or function of Cost Accounting.

What have we gained?

We have gained the measure of the efficiency of the conduct of the business in detail, and as a whole. We attain the knowledge of the profit-making capacity of each section of the factory which is reflected in the profit of the whole works. We ascertain the degree of service given by the maintenance department as a measurable factor to the output of the productive departments. We sense perhaps the costly congestion of one productive department as against overplus of the productive capacity of another department that is sparsely fed and thus call into question defects in organization which give rise to such a condition.

Instability Means Loss

Instability in business represents loss of profits. Money invested in a works should be looked upon as a series of minor investments in the individual shops situate within the Works. It cannot be denied that a department which is below its productive capacity is responsible for a decline in profit. Inversely a department that is congested equally, furnishes a quota in the obstruction of profit yielding; and although a business as a whole might give a return upon its capital, yet, with a concrete subscription to the foregoing statement anent Cost Accounting, it might be placed in such an advantageous position as would enable it to considerably augment its return upon its domestic or internal investments.

All this instability indicates the failure to "deliver the goods." The default in delivery of those same goods is the great shortcoming in industry. Many delivery promises are hopeless and misleading, and unfortunately for the honor of business houses become the subject of more untruthful letters than anything else. The default can be traced to one source, inequitable distribution of work, not only in industry, but works. The congestion of departments has incidentally been mentioned, but think of the grave charges lodged against a business organization where departments may not (through bad organization) be exploited to the full measure of their capacities. Cost Accounting furnishes a true reflex of such situations presenting such statistics as will enable the business man to:

1. Fulfil his obligations to the full in the employment of labor, which is a prime duty he owes to the State and to the humanity of which he forms so small a part, and to which he has the privilege of ministering.
2. To return in reasonable measure due interest on his capital; and
3. To honorably maintain the position he holds in industry.

Safeguards and Saving

Some time ago a lecture was given in the Birmingham Chamber of Commerce by Dr. Garrard, wherein the subject of costing was raised, and a questioner asked what would it cost to run a costing system. Dr. Garrard replied that it was a difficult question to answer, but he thought that 5 to 1 per cent might be considered as not an unreasonable sum to expend in the safeguard of one's business outlay.

Last month Mr. Cyril Lloyd, the borough member at Dudley, said: "It seems to me that the preservation of identity of material going through processes of manufacture is very vital to the maintenance of a costing account. It was just in so far as they could maintain that identity that they would be exact in all methods and processes.

"Another problem was how far could they afford to keep costing accounts, but at the same time, in the interests of business and trade progress, it was necessary that as exact a costing system as could be afforded should be adopted. . . ."

If Mr. Cyril Lloyd is reported correctly, it becomes a very difficult matter to associate one's ideas of Cost Accounting in terms of identity of material, and loss of identity as a qualification of exactitude does not necessarily follow, but it is with the latter half of the statement that I would wish to join issue. If we take the statement upon its face value, one would suppose that the less one

could afford in adopting a cost system, so less exact does it become. The best advice one can give is that if you cannot introduce a system that will identify itself in your business organization unimpaired in its exactitude, then don't waste time in the attempted introduction. But so surely as you take the far-reaching view and perfect your safeguards the introduction places beyond any debate any question of afford or increased expense.

It is not the purpose of this paper to prosecute to the full the complete scope wherein Cost Accounting will safeguard the business interest. It scarcely boots me to point out that everpresent danger of wastage within a manufacturing works. Few manufacturers conserve the whole of the materials which they purchased, or by adjustment of design or method preserved economy. A lesser number still are in a position to state the value of the unusable portion of such materials, but it must be agreed that knowledge should be attained.

No Works Manager used his machinery or labor resources to the fullest efficiency—the endeavor so to do is his continual toil, but what would it not profit him and the management to see the true assessment of the loss. What a tremendous fillip would the business have if the fuller measure of production stability could be attained, for the scope for internal development is infinitely profitable. But so much for the works.

We have mentioned the word safeguard in connection with this paper, and of a surety Cost Accounting does assume this attribute.

Helps Determine Policy

Would you not consider it a desirable and useful piece of information to see set down by each individual item of sales, the cost value of the product? Would not this information be of immense value in deciding policy in the conduct of your business? Few firms are monopolists—the majority take up as many lines as their business can conveniently carry often dropping some manufactures purely for the sake of introducing more lucrative lines. One would not wish to pass by any development in accounting that would show the profitable results or otherwise of the individual group of products. No manager would neglect the opportunity of turning to good account such revelations as this could show.

What manufacturer has embarked upon the costly repair jobs? Who has not accepted special work solely for the purposes of advertisement? What manufacturer in his periods of slack trade has not accepted work outside his normal productive lines? But what have these ventures cost? Not only as jobs themselves, but as factors that have retarded the productivity of the whole establishment throwing completely out of balance the whole organization. But the organized process of cost-sales comparison has served to reveal the one hundred and one sources of error which in spite of ourselves do creep in the organization:

- Errors in design.
- Mistakes in drawing specification.
- Surplus material issued from store.
- Indifferent or unsuitable labor.
- Inefficient machinery.
- Delays in production.
- Errors in pricing.
- Mistakes in invoicing, etc.

The accumulative effect of these details of error constitutes a serious drain upon the productive capacity of a works, and not only that but array themselves as a menace to the efficiency of the business. Ordinary processes of checking automatically become by their monotonous repetition partakers of a dulled and humdrum routine, and are obstructive to other units besides themselves.

Cost Accounting reversely must of its inherent nature introduce a revivifying influence upon those responsible for the production programme, ensuring a safeguard over the works as business venture; and finally as an insurance to the stability of Industry.

COST SECTION

Current Book Reviews

An attractive brochure entitled "Wayagamack, A Romance of Canada" has reached the desk of *THE PAPER TRADE JOURNAL*. It was written and prepared for the press by W. H. Sherriff and deals briefly with the history of The Wayagamack Pulp and Paper Company Ltd. of Three Rivers, Canada, and with Kraft paper in general. The history which is chronicled makes very interesting reading and the accompanying illustrations, which are pasted inserts, add materially to the work.

Bradshaw's Limited of Toronto, Canada, has published a booklet which will acquaint the trade with the history, accomplishments and resources of this concern. The company is one of the pioneers of the waxing industry in Canada, having been founded in 1894, so that the present publication may be regarded as a souvenir of the company's thirtieth anniversary. The story of the company and what it has done is told under the title of "The Growth of An Idea." There are several fine illustrations which show the company's new factory, general office, main floor, shipping department etc.

Catalog No. 385 dealing with coal and ashes handling machinery, power house division, has been issued by The Jeffrey Manufacturing company of Columbus, Ohio. It is a substantial book of 212 pages bound in stiff board cover. For almost half a century this company has been a leading source of supply for coal mining and coal handling equipment. The results of this long experience have been combined in this book which will prove a wealth of information to those who have problems concerning the handling of coal and ashes to contend with. There are many illustrations which drive home vividly the message of the text.

The American Scandinavian Alliance is sending out with its compliments a pamphlet which describes and tells the history of the Washington memorial to Captain John Ericsson. The preface is written by Hans Lagerloef and says in part:

"This pamphlet is written as a tribute to the greatest of Swedish-Americans. John Ericsson had the ability and made the opportunities to serve his adopted country, as has no one else of Swedish birth. His service was signal; the brains of his chief, President Lincoln, and John Ericsson decided the unity of our country for all time to come. This pamphlet is further a tribute to the memory of the late S. Adolf Eckberg of New York, who, where others had failed for the last forty years, succeeded in getting the services of John Ericsson officially recognized by our Government."

The illustrations include one of Captain Ericsson, one of Simon Adolf Eckberg and others including "The Battle at Hampton Roads," the John Ericsson Memorial Commission, American Scandinavian Alliance and the Ericsson memorial.

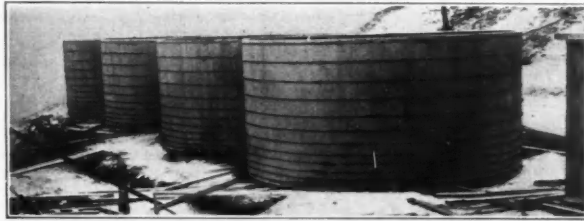
"When Insurance Insures, and When It Doesn't" is the title of a new booklet published by the American Appraisal Company of Milwaukee. The booklet deals with the use of an appraisal in the proper placing and collection of insurance and contains a number of interesting charts on price fluctuations and the operation of the co-insurance clause. Copies will be sent upon request.

Exports of Pulpwood from Warsaw

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1924.—Licenses permitting the exportation of 415,738 tons of pulpwood were issued by the Export and Import Bureau of the Ministry of Commerce, for the nine months period ending February 29, from Warsaw, according to a report received by the Paper Division of the Department of Commerce. Export licenses were issued in February for the exportation of 81,410 tons of pulpwood, representing the largest shipment of this kind since July 1923, when the export restrictions took initial effect. This sudden gain is presumably in anticipation of the March cut in freight rates and actual shipments will probably extend into later months. The bulk of the Polish pulpwood exports have heretofore gone to Germany.

WOOLFORD BUILT STORAGE TANKS

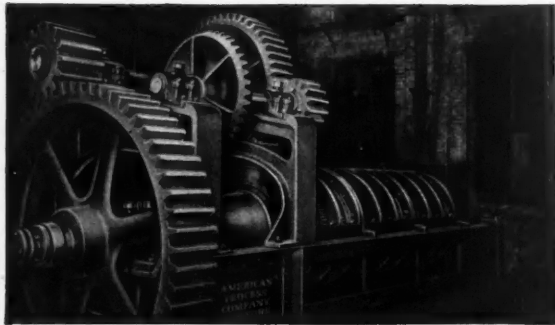


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Imports of Paper and Paper Stock

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NEW YORK IMPORTS

WEEK ENDING JUNE 21, 1924

SUMMARY

News print.....	757 rolls, 237 bls.
Printing paper.....	233 cs., 462 rolls, 449 bls.
Tissue paper.....	.25 cs.
Hangings.....	17 cs., 11 bls.
Wall paper.....	13 bls., 9 cs.
Cigarette paper.....	119 cs.
Baryta coated paper.....	100 cs.
Surface coated paper.....	137 cs.
Colored paper.....	.4 cs.
Filter paper.....	.91 cs., 10 bls.
Drawing paper.....	.19 cs.
Wrapping paper.....	1,390 rolls, 12 cs., 124 bls.
Transfer paper.....	.17 cs.
Writing paper.....	.24 cs.
Miscellaneous paper.....	200 cs., 676 rolls
Hanging stock.....	502 rolls
Photo paper.....	.9 cs.
Rice paper.....	.15 cs.
Decalcomania paper.....	.3 cs.
Roofing paper.....	82 rolls
Marble paper.....	.2 cs.
Basic paper.....	.1 cs.
Parking paper.....	659 bls., 1,667 rolls, 6 cs.
Parchment paper.....	.6 cs.
Tracing paper.....	.6 cs.

CIGARETTE PAPER

H. H. Strauss, Kepwick Hall, Marseilles, 20 cs.
F. P. Gaskell & Co., Indep. Hall, Havre, 40 cs.
Standard Products Corporation, by same, 40 cs.
Liggett & Myers Tobacco Company, by same, 19 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Lapland, London, 9 bls., 1 cs.
A. C. Dodman, Jr., Inc., Celtic, Liverpool, 2 bls.
W. H. S. Lloyd & Co., Minnewaska, London, 15 bls., 1 cs.

HANGING STOCK

Drinhausen Hollkott Paper Company, Eglantine, Rotterdam, 502 rolls.

WALL PAPER

F. J. Emmerich Company, Hansa, Hamburg, 11 bls.
R. F. Friedel, Berengaria, Liverpool, 1 cs.
F. J. Emmerich Company, by same, 2 bls.
Whiting & Patterson, Inc., Berengaria, Havre, 8 cs.

FILTER PAPER

E. Fougera & Co., Berengaria, Bordeaux, 80 cs., 10 bls.
H. Reeve Angel & Co., Lapland, London, 9 cs.
H. Reeve Angel & Co., Vardalia, London, 2 cs.

PHOTO PAPER

T. F. Wilmot, Vardalia, London, 2 cs.
T. F. Wilmot, Minnewaska, London, 5 cs.
J. J. Gavin, Celtic, Liverpool, 2 cs.

RICE PAPER

Arnhold Brothers Company, Tsuyama Maru, Hongkong, 15 cs.

DECALCOMANIA PAPER

C. W. Sellers, Bremen, Bremen, 3 cs.

TRANSFER PAPER

C. B. Richard & Co., Montana, Hamburg, 17 cs.

ROOFING PAPER

G. Joseph & Co., Canopic, Hamburg, 82 rolls.

PRINTING PAPER

B. F. Drakenfeld & Co., Scythia, Liverpool, 31 cs.
M. O'Meara Company, Bremen, Bremen, 19 rolls.
Janeway & Carpenter, by same, 94 rolls.
National City Bank, by same, 99 rolls.
Gallagher & Ascher, Montana, Hamburg, 60 bls.
Reaman Paper Company, by same, 25 rolls.
P. C. Zuhlke, Montana, Antwerp, 144 cs.

Keuffel & Esser, Reliance, Hamburg, 118 rolls.
M. O'Meara Company, Canopic, Hamburg, 21 bls.
Oxford University Press, Franconia, Liverpool, 8 cs.
B. F. Drakenfeld & Co., by same, 23 cs.
Falsing Paper Company, Hansa, Hamburg, 27 cs.
Drinhausen Hollkott Paper Company, by same, 61 bls.
W. Hartmann & Co., by same, 107 rolls.
American Express Company, by same, 222 bls.
J. P. Heffernan Paper Company, Alberta, Trieste, 75 bls.
Wilkinson Brothers & Co., Inc., N. Amsterdam, Rotterdam, 10 bls.

NEWS PRINT

Chemical National Bank, Montana, Hamburg, 290 rolls.
Chemical National Bank, President Harding, Bremen, 108 rolls.
Chemical National Bank, Canopic, Hamburg, 303 rolls.
Drinhausen Hollkott Paper Company, by same, 56 rolls.
J. P. Heffernan Paper Company, Alberta, Trieste, 237 bls.

BARYTA COATED PAPER

Globe Shipping Company, Bremen, Bremen, 100 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Montana, Antwerp, 80 cs.
Gevaert Company of America, Zeeland, Antwerp, 57 cs.

MARBLE PAPER

L. de Jonge & Co., Zeeland, Antwerp, 2 cs.

BASIC PAPER

Globe Shipping Company, Bremen, Bremen, 1 cs.

COLORED PAPER

C. W. Williams, Montana, Antwerp, 4 cs.

WRITING PAPER

American Temper Company, Hansa, Hamburg, 24 cs.

WRAPPING PAPER

Drinhausen Hollkott Paper Company, E. Dawn, Rotterdam, 107 rolls.
F. C. Strype, Montana, Antwerp, 12 cs.
Chemical National Bank, Reliance, Hamburg, 400 rolls.
Chemical National Bank, Alberta, Trieste, 56 bls.
C. K. MacAlpine Company, A. Ballin, Hamburg, 68 bls., 883 rolls.

PACKING PAPER

Wilkinson Brothers & Co., Inc., E. Dawn, Rotterdam, 375 bls., 1,644 rolls.
Republic Bag & Paper Company, by same, 23 rolls.
M. O'Meara Company, by same, 200 bls.
Hensel, Bruckman & Lorbacher, N. Amsterdam, Rotterdam, 6 cs.
Wilkinson Brothers & Co., Inc., Eglantine, Rotterdam, 84 bls.

PARCHMENT PAPER

Massee & Co., Inc., N. Amsterdam, Rotterdam, 6 cs.

TRACING PAPER

E. Dietzgen & Co., N. Amsterdam, Rotterdam, 6 cs.

TISSUE PAPER

G. W. Sheldon & Co., Franconia, Liverpool, 4 cs.
F. C. Strype, Celtic, Liverpool, 21 cs.

DRAWING PAPER

Keuffel & Esser, Reliance, Hamburg, 18 cs.
E. Dietzgen & Co., Suffren, Havre, 1 cs.

PAPER

American Express Company, Suffren, Havre, 12 cs.
Young Publishing Company, Canopic, Hamburg, 201 rolls.

Dell Publishing Company, by same, 359 rolls.
Traders' Paper Company, by same, 58 rolls.
Japan Paper Company, C. Rasso, Genoa, 64 cs.
Thomas & Pierson, Lafayette, Havre, 4 cs.
P. J. Schmeitzer, by same, 25 cs.
City of Paris Dry Goods Company, by same, 23 cs.
American Express Company, by same, 12 cs.
Keuffel & Esser, N. Amsterdam, Rotterdam, 6 cs.
R. Wilson Paper Corporation, California, Glasgow, 54 cs., 58 rolls.

RAGS, BAGGING, ETC.

L. H. Alenheimer, Kepwick Hall, Barcelona, 176 bls. rags.
D. M. Hicks, by same, 175 bls. rags.
McKenzie & Co., Kepwick Hall, Marseilles, 6 bls. rags.
Brown Brothers & Co., by same, 24 bls. rags.
Wilkinson Brothers & Co., Inc., Vardulia, London, 181 bls. rags.
American Express Company, Assyria, Glasgow, 39 bls. rags.
Katzenstein & Keene, Inc., London Mariner, London, 105 bls. rags, 37 bls. new cuttings.
International Acceptance Bank, by same, 199 bls. rags.
National City Bank, Bremen, Bremen, 49 bls. rags.
E. J. Keller Company, Inc., E. Dawn, Rotterdam, 464 bls. rags.
Whaling Waste Products Company, by same, 18 bls. rags.
D. M. Hicks, by same, 12 bls. rags.
Manufacturers' Trust Company, by same, 34 bls. rags.
Reis & Co., by same, 43 bls. threadwaste.
National City Bank, Francisco, Antwerp, 10 bls. rags.
Castle & Overton, Montana, Hamburg, 207 bls. rags.
Castle & Overton, Chicago, Havre, 85 bls. rags, 103 bls. bagging.
Castle & Overton, Egyptian, Egypt, 39 bls. rags.
Castle & Overton, Alaska, Havre, 75 bls. rags.
E. J. Keller Company, Inc., by same, 62 bls. bagging.
Equitable Trust Company, by same, 71 bls. rags.
Katzenstein & Keene, Inc., Alaska, Rouen, 68 bls. rags.
L. H. Alenheimer, Canopic, Hamburg, 130 bls. rags.
E. J. Keller Company, Inc., Andalusia, Antwerp, 73 bls. flax waste.
American Exchange National Bank, by same, 87 bls. flax waste.
E. J. Keller Company, Inc., N. Amsterdam, Rotterdam, 122 bls. paper stock.
E. Butterworth & Co., Inc., by same, 59 bls. paper stock.
Whaling Waste Products Company, by same, 31 bls. rags.
Waste Material Trading Corporation, by same, 101 bls. rags.
S. Birkenstein & Sons, Minnewaska, London, 110 bls. bagging.
Anglo South American Trust Company, by same, 44 bls. rags.
E. J. Keller Company, Inc., Kof. Maru, Leghorn, 317 bls. rags.

OLD ROPE

Castle & Overton, Chicago, Havre, 51 bls. old rope.
E. J. Keller Company, Inc., N. Amsterdam, Rotterdam, 55 coils old rope.
Brown Brothers & Co., by same, 188 coils old rope.
Brown Brothers & Co., Zeeland, Antwerp, 52 bls., 84 coils old rope.
Brown Brothers & Co., Bremen, Bremen, 39 coils old rope.
Brown Brothers & Co., Francisco, Newcastle, 179 coils old rope.
Philadelphia National Bank, by same, 99 coils old rope.

(Continued on page 64)

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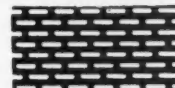
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Imports of Paper and Paper Stock

(Continued from page 62)

International Acceptance Bank, California, Glasgow, 73 coils old rope.

WOOD PULP

H. Hollesen, Inc., Bremen, Bremen, 1,456 bls. wood pulp.

Castle & Overton, by same, 1,335 bls. wood pulp.
Castle & Overton, Stavangerfjord, Sweden, 2,230 bls. wood pulp.

Castle & Overton, E. Dawn, Rotterdam, 247 bls., 56 tons wood pulp.

E. J. Keller Company, Inc., by same, 505 bls., 106 tons wood pulp.

M. Gottesman & Co., Inc., Alberta, Trieste, 1,900 bls. wood pulp.

Johaneson, Wales & Sparre, Inc., Stavangerfjord, Christiania, 125 bls. sulphite pulp.

CASEIN

Kalbfleisch Corporation, Western World, Buenos Aires, 1,668 bags.

PHILADELPHIA IMPORTS

WEEK ENDING JUNE 21, 1924

Franklin Paper Company, E. Dawn, Rotterdam, 521 rolls, 1,144 bls. packing paper.

Wilkinson Brothers & Co., Inc., by same, 32 bls. packing paper.

J. Weber, C. of Eureka, Genoa, 8 cs. paper.
Katzenstein & Keene, Inc., Vardulia, London, 240 bls. rags.

Katzenstein & Keene, Inc., Manch. Mariner, Manchester, 74 bls. new cuttings.

S. Birkenstein & Sons, London Mariner, London, 120 bls. rags.

Eergstrom Paper Company, by same, 307 bls. waste paper.

Textile Trading Company, E. Dawn, Rotterdam, 50 bls. cotton waste.

E. J. Keller Company, Inc., by same, 141 bls. rags.

A. Brown & Sons, by same, 220 bls. rags.
D. J. Murphy & Co., by same, 72 bls. rags.

Castle & Overton, by same, 331 bls. rags.
Castle & Overton, Breedijk, Rotterdam, 632 bls. rags.

Castle & Overton, Skipsea, Marseilles, 342 bls. rags.

Union National Bank, Cabo Ortegale, Leghorn, 216 bls. rags.

Mayer Brothers, by same, 73 bls. rags.
New York Trust Company, by same, 40 bls. rags.

International Acceptance Bank, by same, 151 bls. rags.

Ladenburg, Thalman & Co., by same, 121 bls. rags.

E. J. Keller Company, Inc., Ala, Antwerp, 252 bls. rags.

E. J. Keller Company, Inc., Ludovica, Venice, 101 bls. rags.

E. J. Keller Co., Inc., Legie, Hamburg, 50 bls. rag pulp.

E. J. Keller Company, Manchester Mariner, Manchester, 167 bls. bagging.

W. Brodie & Co., E. Dawn, Rotterdam, 700 bags, 35,150 ks. wood flour.

Johaneson, Wales & Sparre, Inc., Gisla, France, 6,000 bls. kraft pulp.

Johaneson, Wales & Sparre, Inc., Gisla, Kramfoss, 750 bls. sulphite pulp.

Johaneson, Wales & Sparre, Inc., Gisla, Sundsvall, 1,200 bls. sulphite pulp.

BALTIMORE IMPORTS

WEEK ENDING JUNE 21, 1924

The Congoleum Company, Indep. Hall, Dunkirk, 141 bls. rags.

E. J. Keller Company, Inc., Westerner, Rotterdam, 675 bls. rags.

Bemis Brother Bag Company, Indep. Hall, Havre, 52 coils old rope.

Johaneson, Wales & Sparre, Inc., Goron, Gothenburg, 3,900 bls. kraft pulp, 840 bls. sulphite pulp.

NEW ORLEANS IMPORTS

WEEK ENDING JUNE 21, 1924

Castle & Overton, Bruxelles, France, 636 bls. rags.

Castle & Overton, Mont Kemmel, France, 211 bls. rags.

BOSTON IMPORTS

WEEK ENDING JUNE 21, 1924

E. J. Keller Company, Inc., Westcherow, Rotterdam, 15 bls. rags.

Katzenstein & Keene, Inc., Belgian, Antwerp, 121 bls. rags.

Train, Smith & Co., Novian, London, 146 bls. rags.

G. M. Graves Company, by same, 88 bls. rags.
American Express Company, by same, 96 bls. waste paper.

G. M. Graves Company, Naperian, London, 72 bls. rags.

Anglo South American Trust Company, by same, 71 bls. rags.

J. D. Downing & Co., by same, 170 bls. paper stock.

G. M. Graves Company, by same, 69 bls. rags.
Furness, Withy & Co., by same, 28 bls. rags.

Train, Smith & Co., Nessian, Manchester, 130 bls. rags.

E. Butterworth & Co., Inc., by same, 241 bls. rags, 39 bls. bagging, 310 bags hide cuttings, 1 pkge. Buffalo bends.

W. Steck & Co., by same, 71 bls. baggings.
E. J. Keller Company, Inc., by same, 206 bls. bagging.

E. Butterworth & Co., Inc., Mercian, Liverpool, 38 bls. baggings.

Ashworth Speakman, by same, 332 bags hide cuttings.

Train, Smith & Co., by same, 9 pgs. canvas.
E. F. Russ & Co., by same, 1,002 pgs. hide cuttings.

International Purchasing Company, Novian, London, 691 pkg. old rope.

International Purchasing Company, Winifredian, Liverpool, 142 pkgs. old rope.

International Purchasing Company, Naperian, London, 326 pkgs. old rope.

International Purchasing Company, Nessian, Manchester, 52 pkgs. old rope.

E. Butterworth & Co., Inc., Naperian, London, 96 pkgs. old rope.

E. Butterworth & Co., Inc., Mercian, Liverpool, 115 coils old rope.

Train, Smith & Co., by same, 146 pkgs. old rope.

Pulpwood Operations in Ontario

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Canada, June 23, 1924.—The annual report of Hon. James Lyons, Minister of Lands and Forests for Ontario, covering the operations of his Department for the past year, is an interesting and instructive publication. In spite of a falling off last year of about \$1,750,000 in the accruals from timber and pulpwood operations in Ontario, Mr. Lyons is of the opinion that there will be a considerable enlargement in the Department's revenue during the coming year.

Accruals for the year's timber and pulpwood operations total \$3,708,410.23, although the entire revenue of the Department amounted to only \$2,693,421, this being partly due, it is believed, to the inability of certain lumber firms to liquidate their assets covering the season's cut until it was too late to remit before the end of the fiscal year, and also to the closing of the collecting year on time. The expenditure for all branches of the Department increased by \$2,405,000, the totals being, approximately, \$7,000,000 for last year and \$4,649,622 for the year previous.

One of the most serious fire losses since 1917 occurred in 1923, owing, largely, to the dry condition in the woods in the early part of the season. The total acreage burned over of all classes was slightly over 2,000,000 acres, of which 593,000 acres was timberland. In the way of more efficient fire protection, six permanent steel

lookout towers and 23 new wooden towers have been erected, making in all 117 towers, which have been built to date in Northern Ontario. Three hundred miles of telephone lines were built, giving 636 miles of line now completed in Northern Ontario in connection with forest fire protection. There are also in use 54 portable gas engines and pumping units with 2,000 feet of hose for each.

The cut of pine from Crown lands in 1923 approximated 325,000,000 feet, b. m., or over 75,000,000 feet b. m., increase over the previous year, while sawlog timber, other than pine, was cut to the extent of 50,000,000 feet, b. m., possibly 13 percent less than the preceding season. Pulpwood to the extent of over 400,000 cords, was cut on Crown lands as against 300,000 cords for the year previous in addition to over 200,000 cords cut free of dues from settlers' lands.

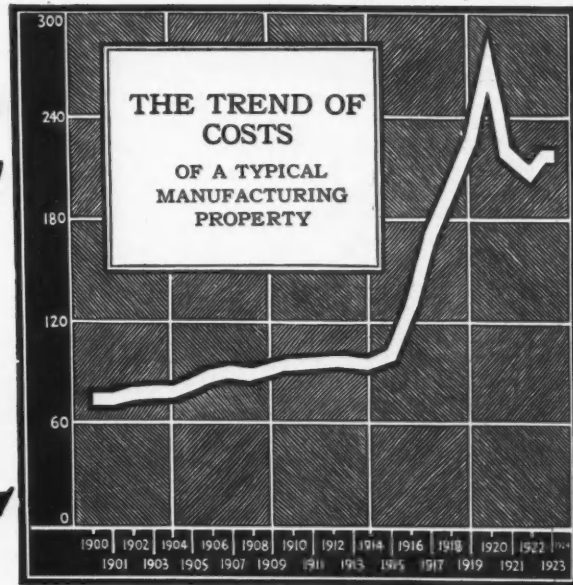
Good Paper Stocks in Rio Janeiro

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 23, 1924.—Paper stocks in Rio de Janeiro are fairly good with large shipments from Germany and the Scandinavian countries on hand, according to a cable received by the Paper Division of the Department of Commerce from Trade Commissioner Embry. The cable states that German prices have advanced 20 per cent during the last two months and buyers are retiring from the market. Competition is strong and American prices are approximately 20 per cent higher than European.



Fire and 1924



How much insurance could you collect this year?

The insurance company contracts to pay to the insured for property destroyed by fire "the actual cash value" at the time of the fire.

It is the duty of the insured to offer acceptable proof of just what property was destroyed and its actual cash value at the time of the fire.

Not more than one business out of three could do this today.

The other two either have never had a competent appraisal of their property for insurance purposes—or, if they have had an appraisal, it is not up-to-date.

It may have been valid in 1922, but it is not up-to-date for 1924.

Every business using continuous American Appraisal service does have its values up-to-date.

If it has a fire today, it can prove tomorrow the actual cash value of the destroyed property at the time of the fire.

It can do it even if its own records are completely destroyed.

For a detailed explanation of the necessity for provable current values in connection with fire insurance, of the inadequacy of "book values," of the dangers of estimated values, and of the economy effected by continuous American Appraisal service, send for our monograph U-6 "When Insurance Insures and When It Doesn't."

THE AMERICAN APPRAISAL COMPANY • MILWAUKEE

Atlanta, Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Indianapolis, Los Angeles, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Seattle, Syracuse, Washington.
The Canadian Appraisal Company, Limited, Montreal, Toronto.

INVESTIGATIONS VALUATIONS, REPORTS — INDUSTRIALS, PUBLIC UTILITIES, NATURAL RESOURCES



An American Appraisal

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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.	55 1/2	56
Abitibi Power and Paper Company, Ltd., Pfd.	98 3/4	99
American Writing Paper Company, Pfd.	2 1/4	2 3/4
Brompton Pulp and Paper Company, Ltd.	30 1/4	31 1/2
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	46	46 1/2
International Paper Company, Pfd.	72	73
Laurentide Company, Ltd.	85	86 1/2
Price Brothers	40 1/4	41 1/4
St. Maurice Paper Co., Ltd.	87 1/2	88
Smith (Howard) Paper Mills, Ltd.	47	48
Spanish River Pulp and Paper Mills, Ltd.	104 1/4	105
Spanish River Pulp and Paper Mills, Pfd.	111 1/4	111 3/4
Union Bag and Paper Corp.	47	48
Wayagamack Pulp and Paper Company, Ltd.	32	35
West Virginia Pulp and Paper Company	50	54

BONDS	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s 1934..	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940..	93	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931..	102 1/2	103 1/2
Belgo Canadian Paper Company, 1st 6s 1943..	93 1/2	94 1/2
Brown Company Serial 6s..	98	98 1/2
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6 1/2s, Series "A," 1944..	93	95
Donnacona Paper Company, Ltd., 1st 6s 1940..	97 1/2	99
Eddy Paper Company, 1st 7 1/2s 1931..	96 1/2	98 1/2
Gair (Robert) Company, 1st 7s 1937..	96	96 1/2
International Paper Company, 1st and Ref. 5s (Series "B") 1947..	86	86 1/2
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..	100 3/4	101 3/4
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947..	96	99
Parker, Young Company, 1st 6 1/2s 1944..	95 1/2	97 1/2
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938..	96 1/4	97 1/4
Peshigo Paper Company, 1st 7s (Series "B") 1942..	92	94 1/2
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943..	96 1/2	97 1/2
Provincial Paper Mills, Ltd., 1st 6s 1940..	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929..	15	19
Riordon Pulp and Paper Company, Ltd., 6s 1942..	80	82
Riordon Company, Ltd., 1st and Ref. 8s 1940..	85	86 1/2
River Raisin Paper Company, 1st 8s 1936..	103 1/2	104 1/2
Smith (Howard) Paper Mills, Ltd., 6s 1934..	94 1/2	95
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941..	101	103
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931..	101	103 1/2
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102 3/4	103 3/4
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper		
Ledgers F. o. b. Mill	11.00	@38.80
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	3.75	@ 4.00
Rolls, transit	3.75	@ 4.25
Sheets	4.25	@ 4.50
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.25	@ 9.00
M.	7.10	@ 8.85
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	75	@ 76
White No. 2	70	@ 80
Colored	1.05	@ 1.90
Anti-Tarnish	1.35	@ 1.90
Kraft	.85	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.75
Imported	4.75	@ 5.20
Manila—		
No. 1 Jute	7.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	4.00	@ 4.50
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.40	@ 2.60
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00

Boards—per ton—		
News	40.00	@55.00
Straw	40.00	@45.00
Chip	37.50	@42.50
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	50.50	@55.50
Wood Pulp	70.00	@75.00
Container	57.50	@65.00
Sulphate Screenings—	4 1/2	@ 90
Coarse	.80	@ 2.00
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25		
lbs.	12.00	@15.00
Bleached, basis 20		
lbs.	14.00	@17.00

Mechanical Pulp		
(Ex-Dock)		
No. 1 Imported	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	@ 3.10
No. 1 strong unbleached	2.60	@ 2.80
No. 2 strong unbleached	2.20	@ 2.40
No. 1 Kraft	2.50	@ 2.85
Sulphate—		
Bleached	3.50	@ 3.65
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.50	@ 4.50

Easy Bleaching Sulphite	2.50	@ 2.90
News Sulphite	2.40	@ 2.60
Mitscherlich	3.00	@ 3.75
Kraft (Domestic)	2.40	@ 2.55
Soda Bleached	3.90	@ 4.10

Domestic Rags		
New Rags		
Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings		
New White, No. 1	13.00	@13.50
New White, No. 2	6.25	@ 6.75
Silesias, No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
Washables	5.50	@ 6.15
Fancy	6.50	@ 7.00
Blue Overall	8.00	@ 8.50
New Blue	5.50	@ 6.00
New Black Soft	4.65	@ 5.15
New Light Sec.		
onds	3.00	@ 3.25
O. D. Khaki Cuttings		
ings	4.75	@ 5.00
Men's Corduroy	4.00	@ 4.25
New Canvas	7.00	@ 7.50
New Black Mixed	2.75	@ 3.00

Old Rags		
White, No. 1—		
Repacked	6.50	@ 7.00
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.00
St. Soiled, White	2.80	@ 3.00
Thin and Blues—		
Repacked	3.62 1/2	@ 3.87 1/2
Miscellaneous	2.90	@ 3.15
Black Stockings	3.75	@ 4.00
Roofing Rags—		
Cloth Strippings	1.90	@ 2.00
No. 1	1.65	@ 1.75
No. 2	1.55	@ 1.65
No. 3	.75	@ .85
No. 4	.90	@ 1.00
No. 5A	1.50	@ 1.60

Foreign Rags		
New Light Silesias	7.50	@ 8.75
Light Flannelettes	8.00	@ 8.25
Unbleached Cottons	9.00	@ 9.50
New White Cuttings	11.50	@12.50
New Light Oxfords	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings	3.25	@ 3.75
New Dark Cuttings	3.00	@ 3.50
No. 1 White Linens	9.00	@10.00
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	4.00	@ 4.50
Ord. Light Prints	3.00	@ 3.50
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Oer. Blue Linens	3.50	@ 4.00
Checks and Blues	2.25	@ 2.50
Dark Cottons	1.50	@ 1.75
Shoppery	1.40	@ 1.60
French Blues	3.25	@ 3.75

Bagging		
Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.55	@ 1.65

Wool, Tares, light	1.40	@ 1.50
Wool, Tares, heavy	1.45	@ 1.55
Bright Bagging	1.15	@ 1.25
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut.	2.40	@ 2.60
Hessian Jute Threads—		
Foreign	2.40	@ 2.60
Domestic	2.10	@ 2.20

Old Waste Papers		
(F. o. b. New York)		
Shavings—		
Hard, White, No. 1	3.25	@ 3.60
Hard, White, No. 2	2.90	@ 3.10
Soft, White, No. 1	2.45	@ 2.70
Flat Stock—		
Stitchless	1.30	@ 1.40
Over Issue Mag.	1.35	@ 1.45
Solid Flat Book	1.20	@ 1.30
Crumpled No. 1	1.90	@ 2.00
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.30	@ 1.40
New B. B. Chips	.50	@ .55
Manilas—		
New Env. Cut.	2.45	@ 2.55
New Cut, No. 1	1.65	@ 1.90
Extra No. 1 old	1.30	@ 1.40
Print	.80	@ .90
Container Board	.60	@ .70
Bogus Wrapper	.60	@ .70
Old Krafts Machine compressed bales	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overseas	.80	@ .90
Strictly Folded	.55	@ .65
No. 1 Mixed Paper	.45	@ .55
Common Paper	.35	@ .40

Twines		
Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.17	@ .18
Dark	.16	@ .17
B. C., 18 basis	.41	@ .42
A. B., Italian, 18		
Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.26	@ .28
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
Fine Tube Yarn—		
5-ply and larger	.20	@ .28
4-ply	.21	@ .24
3-ply	.22	@ .25
Unfinished India—		
Basis	.14	@ .15
Paper Makers' Twine		
Balls	.11	@ .13
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
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	@ .13
Manila Rope	.18	@ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper		
F. o. b. Mill		
All Rag Bond	35	@ 40
No. 1 Rag Bond	25	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	7 1/2	@ 10 1/2
Sulphite Ledger	9 1/2	@ 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	5 1/4	@ 7 1/2
No. 1 S. & S. Co. Book	6 1/4	@ 7 1/4
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3 1/4	@ 4 1/4
News—Sheets, mill	4	@ 4 1/2
No. 1 Manila	4 1/4	@ 6 1/4
No. 1 Fibre	4 1/4	@ 5 1/4
No. 2 Manila	3 1/4	@ 4 1/4
Butchers' Manila	4 1/4	@ 4 1/4

No. 1 Kraft	5 1/4	@ 6 1/4
No. 2 Kraft	5	@ 5 1/4
Wood Tag Boards	4 1/4	@ 6
Sulphite Screenings	2 1/4	@
Boards, per ton—		
Plain Chip	35.00	@40.00
Solid news	37.50	@42.50
Manila Line Chip	47.50	@52.50
Container Lined—		
85 Test	57.50	@62.50
100 Test	62.50	@67.50

Old Papers		
(F. o. b. Chicago)		
Shavings—		
No. 1 Hard White	3.00	@ 3.00
White Envel. Cuttings	3.00	@ 3.00
No. 1 Soft Shaw	2.65	@ 2.75
No. 1 Mixed	1.25	@ 1.35
No. 2 Mixed	1.15	@ 1.25
Ledgers and Writings	1.45	@ 1.50
Solid Books	1.35	@ 1.40

No. 1 Books, Light	1.25	@	1.30
Blanks	1.65	@	1.75
Ex. No. 1 Manila	1.90	@	2.00
Manila Envelope			
Cuttings	2.10	@	2.15
No. 1 Manilas	.95	@	1.00
Folded News (over issue)	.85	@	.90
Old Newspapers			
No. 1	.80	@	.85
No. 2	.65	@	.70

Mixed Papers—			
No. 1	.65	@	.70
No. 2	.55	@	.60
Straw Clippings	.80	@	—
Binders' Clippings	.80	@	—
Kraft	1.90	@	2.00
New Kraft Cuts	2.10	@	2.15
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	\$.33.00	@	—
No. 2	31.00	@	—
No. 3	29.00	@	—
No. 4	29.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper			
Bonds	.09 1/2	@	.53
Ledgers	.15	@	.40
Writings			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Books, M. F.	.09 1/4	@	.12 1/4
Book, S. S. & C.	.11	@	.15
Book, Coated	.14 1/4	@	.20
Coated Lithograph	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07 1/4	@	.08
No. 2 Kraft	—	@	.08 1/2
No. 1 Kraft	—	@	.09 1/2
Common Bogus	.03 1/2	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	45.00
Chip Board	40.00	@	45.00
Wood Pulp Board	2.75	@	3.00
(Carload Lots)			
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.60	@	1.65
Domestic	1.75	@	—
Manila Rope	6.00	@	6.37 1/2
Sisal Rope	1.25	@	—
Mixed Rope	1.30	@	—
Scrap Burlaps	1.00	@	1.25
Wood Tars, heavy	2.00	@	2.13
Mixed Strings	1.30	@	—
No. 1, New Lt. Burlap	2.00	@	—
New Burlap Cuttings	2.00	@	2.25

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard	4.00	@	4.10
White	4.00	@	4.10

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper			
Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08 1/4	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. S. & C.	.07 1/4	@	.12
Books, M. F.	.07 1/4	@	.09 1/4
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.00	@	4.50
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06 1/4	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	42.50	@	45.00
News, Vat Lined	44.00	@	45.00
Wood, Vat Lined	4.75	@	52.50
Filled News Board	45.00	@	47.50
Solid News Board			
No. 4 Finish	60.00	@	—
S. Manila Chip	57.50	@	62.50
Pat. Coated News	75.00	@	85.00

Old Papers

Mixed paper	.50	@	.55
Folded news	.62 1/2	@	.65
Soft white shavings	2.60	@	2.75
Hard white shavings	3.50	@	3.75
Kraft paper	1.90	@	2.00
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.35	@	1.50
Manila paper No. 1	1.70	@	1.75
Solid ledgers	2.50	@	2.75
No. 1 roofing rags	1.65	@	1.70
No. 2 roofing rags	1.50	@	1.60
No. 3 gunny bagging	.75	@	.85
No. 4 Brussels and hard back carpets	1.60	@	1.70
No. 5 roofing rags	.90	@	1.00
A's	—	@	—
B's	—	@	—
C's	—	@	—
No. 6 City dump rags	—	@	—
Manila rope, domestic	.6	@	.6 1/4
Mixed strings	1.20	@	1.35
Jute strings	1.40	@	1.50

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)			
Bond—			
Sulphite	.11	@	.12 1/2
Light tinted	.12	@	.13 1/4
Dark tinted	.13 1/4	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09 1/4	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
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	@	—

Sulphite, bleached	75.00	@	80.00
Sulphate	60.00	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	3.60	@	—
Soft White Book shavings	2.80	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.35	@	—
Light and Crumpled Book Stock	1.20	@	—
Ledgers and Writings	1.68	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas	1.10	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	—	@	.40
Domestic Rags—			
Price to mills, f. o. b. Toronto			
Per lb.			
No. 1 White shirt cuttings	.13 1/4	@	.13 1/4
No. 2 White shirt cuttings	.06 1/4	@	.07
Fancy shirt cuttings	.06 1/4	@	.06 1/4
No. 1 Old Whites	.04 1/4	@	.05
Third and blues	—	@	.05
Black stockings—			
Per cwt.			
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06 1/4	@	.06 1/4
No. 2	1.55	@	—

Pulp

(F. o. b. Mill)

Ground wood	\$26.00	@	28.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	50.00	@	55.00

Glue and Casein Experiments

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—Comparative experiments with different glues and with casein have established the fact that the relative amounts of glue and casein required in coating varies almost directly with the grade of the glue, according to experts of the Paper Laboratory of the Bureau of Standards who have been experimenting for some time with the use of glue for paper coating.

The statement quoted almost universally, that five parts of glue is required, as compared with four parts of casein, is certainly incorrect, as it holds only for the lower grade gone glues, say the experts. This permits the use of much smaller amounts of glue than formerly thought necessary and leads to the possibility of producing a more flexible paper than can be obtained otherwise. The practical limit to which the decrease in amount of glue can be pushed is set by the clay suspending property of the glue. In this regard a certain hide glue was found to be exceptional, permitting working with as little as 8 per cent of glue based on the weight of the clay. Apparently the commonly accepted superiority of casein in this respect needs qualification.

Study Mimeograph Paper Manufacture

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—The Paper Laboratory of the Bureau of Standards has been making a study of the manufacture of mimeograph paper from repulped paper stock. The stock used was made from fiber book papers, it being digested in a rotary boiler with a small amount of soda-ash, washed and debarked in a beater, and run into paper without bleaching.

Several different machine runs were made, using varying amounts of clay filler and rosin size, and varying the manner of finishing. Mimeographing tests of the papers were made, the best results being secured with paper containing small amounts of rosin size and clay and with a rough machine finish having only a slight calendering.

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.	55 1/2	56
Abitibi Power and Paper Company, Ltd., Pfd.	98 1/2	99
American Writing Paper Company, Pfd.	2 1/2	2 3/4
Brompon Pulp and Paper Company, Ltd.	30 1/4	31 1/4
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	46	46 1/2
International Paper Company, Pfd.	72	73
Laurentide Company, Ltd.	85	86 1/2
Price Brothers	40 1/4	41 1/4
St. Maurice Paper Co., Ltd.	87 1/2	88
Smith (Howard) Paper Mills, Ltd.	47	48
Spanish River Pulp and Paper Mills, Ltd.	104 1/4	105
Spanish River Pulp and Paper Mills, Pfd.	111 1/4	111 1/4
Union Bag and Paper Corp.	47	48
Wayagamack Pulp and Paper Company, Ltd.	32	35
West Virginia Pulp and Paper Company	50	54

BOVES	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934..	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940..	93	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931..	102 1/2	103 1/4
Belgo Canadian Paper Company, 1st 6s 1943.....	93 1/4	94 1/4
Brown Company Paper Co., Ltd.	98 1/2	98 1/2
Cardage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6 1/2s Series "A", 1944.....	93	95
Donnacona Paper Company, Ltd., 1st 6s 1940.....	97 1/2	99
Eddy Paper Company, 1st 7 1/2s 1931.....	96 1/2	98 1/2
Gair (Robert) Company, 1st 7s 1937.....	96	96 1/2
International Paper Company, 1st and Ref. 5s (Series "B") 1947.....	86	86 1/2
Mattagami Pulp and Paper Company, 1st 6s 1937.....	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949.....	20	25
Owego Falls Corporation, 1st 8s 1942.....	100 3/4	101 1/4
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947.....	96	99
Parker, Young Company, 1st 6 1/2s 1944.....	95 1/2	97 1/2
Pateron Parchment Paper Company, 1st 6s (Series "A") 1938.....	96 1/2	97 1/2
Peabody Paper Company, 1st 7s (Series "B") 1942.....	92	94 1/2
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943.....	96 1/2	97 1/2
Provincial Paper Mills, Ltd., 1st 6s 1940.....	98	100
Riondon Pulp and Paper Company, Ltd., Gen. 6s 1929..	15	19
Riondon Pulp and Paper Company, Ltd., 6s 1942.....	80	82
Riondon Company, Ltd., 1st and Ref. 8s 1940.....	85	86 1/2
River Raisin Paper Company, 1st 8s 1936.....	103 1/2	104 1/2
Smith (Howard) Paper Mills, Ltd., 6s 1934.....	94 1/2	95
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941..	92 1/2	95
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931..	101	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102 1/2	103 1/4
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper		
Ledgers F. o. b. Mill	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	3.75	4.00
Rolls, transit	3.75	4.25
Sheets	4.25	4.50
Side Runs	3.25	4.00
Book, Cased—		
S. & S. C.	7.25	9.00
M.	7.10	8.85
Casted and Enamel	9.00	14.00
Lithograph	9.00	14.00
Tissues—		
White No. 1	.75	.76
White No. 2	.70	.80
Colored	1.05	1.90
Anti-Tarnish	1.35	1.90
Kraft	.85	1.10
Manila	.75	.80
Kraft—		
No. 1 Domestic	5.50	6.25
No. 2 Domestic	5.00	5.75
Imported	4.75	5.20
Manila—		
No. 1 Jute	7.50	9.00
No. 2 Jute	7.75	8.50
No. 1 Wood	4.75	5.25
No. 2 Wood	4.00	4.50
Butchers	4.00	4.50
Fibre Papers—		
No. 1 Fibre	5.50	5.75
No. 2 Fibre	4.75	5.25
Common Bogus	2.40	2.60
S. Screening	5.25	5.75
Card Middle	4.00	5.00

Boards—per ton—		
News	40.00	55.00
Straw	40.00	45.00
Chip	37.50	42.50
Binders' Boards	70.00	75.00
Sgl. Mla. L. Chip	50.50	55.50
Wood Pulp	70.00	75.00
Container	57.50	65.00
Sulphate Screenings—		
Coarse	.80	.90
Refined	1.75	2.00
Ground Wood—		
Screenings	20.00	25.00
Glassine—		
Bleached, basis 25		
lbs.	12.00	15.00
Bleached, basis 20		
lbs.	14.00	17.00

Mechanical Pulp	(Ex-Dock)	
No. 1 Imported	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	3.10
No. 1 strong unbleached	2.60	2.80
No. 2 strong unbleached	2.20	2.40
No. 1 Kraft	2.50	2.85
Sulphate—		
Bleached	3.50	3.65
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.50	4.50

Easy Bleaching Sulphite		
White	2.50	2.90
News Sulphite	2.40	2.60
Mitscherlich	3.00	3.75
Kraft (Domestic)	2.40	2.55
Soda Bleached	3.90	4.10

Domestic Rags		
Prison to Mill, F. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	12.00	12.50
New White, No. 2	6.25	6.75
Silencia, No. 1	7.50	8.00
New Unbleached	10.50	11.00
Washables	5.50	6.15
Fancy	6.50	7.00
Blue Overall	8.00	8.50
New Blue	5.50	6.00
New Black Soft	4.65	5.15
New Light Sec.		
onds	3.00	3.25
O. D. Khaki Cuttings—		
tings	4.75	5.00
Men's Corduroy	4.00	4.25
New Canvas	7.00	7.50
New Black Mixed	2.75	3.00

Old Rags		
White, No. 1—		
Repacked	6.50	7.00
Miscellaneous	5.50	5.75
White, No. 2—		
Repacked	4.25	4.50
Miscellaneous	3.75	4.00
St. Soiled, White	2.80	3.00
Thirds and Blues—		
Repacked	3.62 1/2	3.87 1/2
Miscellaneous	2.90	3.15
Black Stockings	3.75	4.00
Roofing Rags—		
Stripplings	1.90	2.00
No. 1	1.65	1.75
No. 2	1.55	1.65
No. 3	.75	.85
No. 4	.90	1.00
No. 5A	1.50	1.60

Foreign Rags		
New Light Silencia	7.50	8.75
Light Flannelettes	8.00	8.25
Unbleached Cottons	9.00	9.50
New White Cuttings—		
New Light Oxford	7.75	8.25
New Light Prints	7.25	7.75
New Mixed Cuttings—		
tings	3.25	3.75
New Dark Cuttings	3.00	3.50
No. 1 White Linens	9.00	10.00
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	4.00	4.50
Ord. Light Prints	3.00	3.50
Med. Light Prints	2.40	2.50
Dutch Blue Cottons	3.50	4.00
Ger. Blue Cottons	3.00	3.25
Ger. Blue Linens	3.50	4.00
Checks and Blues	2.25	2.50
Dark Cottons	1.50	1.75
Shoppers	1.40	1.60
French Blues	3.25	3.75

Bagging		
Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.60	1.70
Domestic	1.55	1.65

Wool, Tares, light		
Wool, Tares, heavy	1.40	1.50
Bright Bagging	1.15	1.25
Sound Bagging	.90	1.00
Manila Rope—		
Foreign	6.25	6.50
Domestic	6.50	6.75
New B. Cut	2.40	2.60
Hessian Jute Threads—		
Foreign	2.40	2.60
Domestic	3.10	3.20

Old Waste Papers	(F. o. b. New York)	
Shavings—		
Hard, White, No. 1	3.25	3.60
Hard, White, No. 2	2.90	3.10
Soft, White, No. 1	2.45	2.70
Flat Stock—		
Stitchless	1.30	1.40
Over Issue Mag.	1.35	1.45
Solid Flat Book	1.20	1.30
Crumpled No. 1	1.90	2.00
Solid Book Ledger	1.80	1.90
Ledger Stock	1.30	1.40
New B. B. Chips	.50	.55

Manilas		
New Env. Cut	2.45	2.55
New Cut, No. 1	1.65	1.90
Extra No. 1 old	1.30	1.40
Print	.80	.90
Container Board	.60	.70
Bogus Wrapper	.60	.70
Old Krafts Machine compressed bales	1.65	1.75
News—		
No. 1 White News	1.65	1.75
Strictly Overseas	.80	.90
Strictly Folded	.55	.65
No. 1 Mixed Paper	.45	.55
Common Paper	.35	.40

Twines		
Cotton—(F. o. b. Mill)—		
No. 1	.45	.48
No. 2	.41	.43
No. 3	.40	.42
India, No. 6 basis—		
Light	.17	.18
Dark	.16	.17
B. C. 18 basis	.41	.42
A. B. Italian, 18		
Basis	.51	.61
Finished Jute—		
Dark, 18 basis	.26	.28
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
Fine Tube Yarn—		
5-ply and larger	.20	.28
4-ply	.21	.24
3-ply	.22	.25
Unfinished India—		
Basis	.14	.15
Paper Makers' Twine		
Balls	.11	.13
Box Twine, 2-3 ply	.14	.15
Jute Rope	.15	.16
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	.13
Manila Rope	.18	.19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper	F. o. b. Mill	
All Rag Bond	35	40
No. 1 Rag Bond	25	35
No. 2 Rag Bond	14	25
Water Marked Sulphite	9	12
Sulphite Bond	7 1/4	10 1/4
Sulphite Ledger	9 1/4	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	5 1/4	7 1/2
No. 1 S. & S. Co.		
Book	6 1/4	7 1/4
Coated Book	8	10
Coated Label	8	10
News—Rolls, mill	3 1/4	4 1/4
News—Sheets, mill	4	4 1/4
No. 1 Manila	4 1/4	6 1/4
No. 1 Fibre	4 1/4	5 1/4
No. 2 Manila	3 1/4	4 1/4
Butchers' Manila	4 1/4	4 1/4

No. 1 Kraft	5 1/4	6 1/4
No. 2 Kraft	5	5 1/4
Wood Tag Boards	4 1/4	6
Sulphite Screenings	2 1/4	
Boards, per ton—		
Plain Chip	35.00	40.00
Solid news	37.50	42.50
Manila Line Chip	47.50	52.50
Container Lined—		
85 Test	57.50	62.50
100 Test	62.50	67.50

Old Papers	F. o. b. Chicago	
Shavings—		
No. 1 Hard White	3.00	3.00
White Envel. Cuttings	3.00	3.00
No. 1 Soft Shav.	2.65	2.75
No. 1 Mixed	1.25	1.35
No. 2 Mixed	1.15	1.25
Ledgers and Writings	1.45	1.50
Solid Books	1.35	1.40

No. 1 Books, Light	1.25	@	1.20
Books	1.65	@	1.75
Ex. No. 1 Manila	1.90	@	2.00
Manila Envelope			
Cuttings	2.10	@	2.15
No. 1 Manilas	.95	@	1.00
Folded News (over size)	.85	@	.90
Old Newspapers			
No. 1	.80	@	.85
No. 2	.65	@	.70

Mixed Papers			
No. 1	.65	@	.70
No. 2	.55	@	.60
Straw Clippings	.80	@	—
Binders Clippings	.80	@	—
Kraft	1.90	@	2.00
New Kraft Cuts	2.10	@	2.15
Roofing Stock, f. o. b. Chicago, Net Cash			
No. 1	\$13.00	@	—
No. 2	11.00	@	—
No. 3	9.00	@	—
No. 4	29.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Bonds	.09 1/4	@	.53
Ledgers	.15	@	.40
Writings			
Superfine	.15	@	.30
Extra fine	.12	@	.22
Fine	.10	@	.20
Fine, No. 3	.10	@	.25
Fine, No. 3	.10	@	.20
Books, M. F.	.09 1/4	@	1.24
Books, S. S. & C.	.11	@	.15
Books, Coated	.14 1/4	@	.20
Coated Lithograph	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.12
Manila Sul., No. 1	.88	@	.10
Manila No. 2	.87 1/4	@	.08
No. 2 Kraft	—	@	.08 1/4
No. 1 Kraft	—	@	.09 1/4
Common Bogus	.03 1/4	@	.04
Shaw Board	.55.00	@	60.00
News Board	42.50	@	45.00
Chip Board	40.00	@	45.00
Wood Pulp Board	2.75	@	3.00

No. 2 Hard	3.25	@	3.50
White	3.00	@	3.10
No. 1 Soft White	3.00	@	3.10
No. 2 Soft White	1.75	@	1.80
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	2.00	@	—
No. 1 Books, heavy	1.80	@	1.90
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.20	@	1.25
Old Kraft	2.25	@	2.50
Overseas News	1.25	@	1.35
Old Newspaper	.75	@	.90
No. 1 Mixed Paper	.70	@	.75
Common Paper	.50	@	.60
Straw Board, Chip	.75	@	.80
Binders Bd., Chip	.75	@	.80

Domestic Rags—New.

Price to Mill, f. o. b. Phila.			
Shirt Cuttings			
New White, No. 1	.12 1/4	@	.13 1/4
New White, No. 2	.07	@	—
Silesias, No. 1	.08 1/4	@	.08 1/2
New Unbleached	.11	@	.11 1/2
Washable	.05 1/4	@	.05 1/2
Fancy	.07	@	.07 1/4
Cottons—according to grades			
Blue Overall	.09	@	.09 1/4
New Blue	.03 1/4	@	.04
New Black Soft	.06	@	.06 1/4
New Light Sec-			
onds	.03 1/4	@	.03 1/2
Khaki Cuttings	.05 1/4	@	.06
Corduroy	.04	@	.04 1/4
New Canvas	.10 1/4	@	.11
New Black Mixed	.05 1/4	@	.05 1/2

Old

White, No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05 1/4	@	.06
Miscellaneous	.04 1/4	@	.05 1/4
Thirds and Blues—			
Repacked	3.75	@	—
Miscellaneous	3.00	@	—
Black Stockings	4.00	@	4.50
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.65	@	1.75
No. 3	1.15	@	1.20
No. 4	1.25	@	1.35
No. 5A	1.40	@	—
B	1.25	@	nominal
C	1.15	@	nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08 1/4	@	.42
Superfine	.16	@	.36
Fine	.15	@	.18
Books, S. & S. C.	.07 1/4	@	.12
Books, M. F.	.07 1/4	@	.09 1/4
Books, coated	.09	@	.13
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.00	@	4.50
Manilas			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06 1/4	@	.67
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)			
Chip	42.50	@	45.00
News, Vat Lined	44.00	@	45.00
Wood, Vat Lined	—	@	52.50
Filled News Board	45.00	@	47.50
Solid News Board			
No. 4 Finish	60.00	@	—
S. Manila Chip	57.50	@	62.50
Pat. Coated News	75.00	@	85.00

Mixed paper	.50	@	.55
Folded news	.62 1/4	@	.65
Soft white shavings	2.60	@	2.75
Hard white shavings	3.50	@	3.75
Kraft paper	1.90	@	2.00
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.35	@	1.50
Manila paper No. 1	1.70	@	1.75
Solid ledgers	2.50	@	2.75
No. 1 roofing rags	1.65	@	1.70
No. 2 roofing rags	1.50	@	1.60
No. 3 gunny bagging	.75	@	.85
No. 4 Brussels and hard back carpets	1.60	@	1.70
No. 5 roofing rags			
A's	.90	@	1.00
B's		@	
C's		@	
No. 6 City dump rags		@	
Manila rope, domestic	.6	@	.64
Mixed strings	1.20	@	1.35
Jute strings	1.40	@	1.50

TORONTO

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

Sulphite	.11	@	.12 1/4
Light tinted	.12	@	.13 1/4
Dark tinted	.13 1/4	@	.15
Ledgers (sulphite)	—	@	.15
Writing	.09 1/4	@	.10
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Books—			
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 Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Sulphite, bleached. 75.00 @ 80.00

Sulphite 60.00 @ 65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	2.60	@	—
Soft White Book shavings	2.80	@	—
White Blk. News	1.60	@	—
Wash and Ledger—			
Flat Magazine and Book Stock (old)	1.85	@	—
Light and Crumpled Book Stock	1.80	@	—
Ledgers and Writings	1.60	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas	1.10	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overseas	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	—	@	.40
Domestic Rags—			
Price to mills, f. o. b. Toronto			
Per lb.			
No. 1 White shirt cuttings	.13 1/4	@	.13 1/2
No. 2 White shirt cuttings	.06 1/4	@	.87
Fancy shirt cuttings	.06 1/4	@	.06 3/4
No. 1 Old Whites	.04 1/4	@	.05
Third and blues	.04 1/4	@	.05
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06 1/4	@	.06 3/4
No. 2	1.55	@	—

Glue and Casein Experiments

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—Comparative experiments with different glues and with casein have established the fact that the relative amounts of glue and casein required in coating varies almost directly with the grade of the glue, according to experts of the Paper Laboratory of the Bureau of Standards who have been experimenting for some time with the use of glue for paper coating.

The statement quoted almost universally, that five parts of glue is required, as compared with four parts of casein, is certainly incorrect, as it holds only for the lower grade gone glues, say the experts. This permits the use of much smaller amounts of glue than formerly thought necessary and leads to the possibility of producing a more flexible paper than can be obtained otherwise. The practical limit to which the decrease in amount of glue can be pushed is set by the clay suspending property of the glue. In this regard a certain hide glue was found to be exceptional, permitting working with as little as 8 per cent of glue based on the weight of the clay. Apparently the commonly accepted superiority of casein in this respect needs qualification.

Study Mimeograph Paper Manufacture

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—The Paper Laboratory of the Bureau of Standards has been making a study of the manufacture of mimeograph paper from repulped paper stock. The stock used was made from fiber book papers, it being digested in a rotary boiler with a small amount of soda-ash, washed and defibered in a beater, and run into paper without bleaching.

Several different machine runs were made, using varying amounts of clay filler and rosin size, and varying the manner of finishing. Mimeographing tests of the papers were made, the best results being secured with paper containing small amounts of rosin size and clay and with a rough machine finish having only a slight calendering.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, JUNE 25, 1924.

The slight improvement which developed in the paper market a little over a week ago was short lived. Such improvement as there was did not show any disposition to keep up the past week. The market has sagged back into its old tracks, business is as sluggish as ever and, if anything, it is even more so. News print demand has suffered a let up but this is merely looked on as temporary and causes no alarm as the cut in demand was anticipated and is considered as logical under the conditions. The producers simply attribute it to the effect of the new price announcement.

The market is, at the present writing, just about as near to a standstill as possible. This week properly is an off week, for about all that New York is thinking of is the Democratic National Convention and that interest is by no means confined to New York. The hot weather arrived with both feet last week and has continued this week, which has not tended to stimulate buying any.

Prices are holding firm and this is the amazing feature of today's market conditions. Rarely has the trade experienced so long a period with prices practically remaining unchanged. There have been many times, during this period, when radical changes have apparently been inevitable and yet the changes did not take place. In face of every and all conditions the prices, almost without exception, have refused to move in either direction and they show no more disposition to stir just now, nor so much, as they did a week ago.

There is little price cutting resorted to in order to entice the buyers out of their attitude of hand-to-mouth buying. Prices are too low as it is to justify such methods and besides there is nothing to indicate that price cutting would do much toward causing the buyers to loosen up. They are too determined not to buy and, where price cutting has been resorted to, it has usually resulted in dissatisfaction. In fact there have been instances during this dull period when prices have been cut and yet the stock has remained a drug on the market with no one eager to take advantage of the special prices. Those who have tried it have learned their lesson and are not repeating their mistakes just now.

News print continues the feature of the market. In spite of the slackening in demand and of the hold-off because of the better price obtainable in a few days, news print still commands a superior call as compared with all other items in the paper list. After July 1 it will undoubtedly strike a new pace.

Fine papers are holding their own. Ledgers and bonds are having the best demand although it is not what it was two weeks ago.

Coarse papers are not so good nor have they been for some time. They have also participated in the general falling off tendency.

Tissue and manila experienced a particularly dull week and kraft lagged badly.

The board men, who have experienced a little improvement in conditions recently, say that the demand in this department remained about the same during the past week, orders being slow but inquiries indicating an interest which should develop into better business very soon.

Mechanical Pulp

The prices for mechanical pulp remain the same, there is no change in demand and the general market conditions are unaltered.

Chemical Pulp

Business is continuing about the same as far as chemical pulp is concerned. A fair number of orders were placed the past week. Good imported pulp continues scarce but this will be soon taken care of, as the shipments which were held up while the Baltic navigation was closed will soon be here.

Rags

There has been a pretty fair demand the past week for the better grades of rags but the lower grades have been in and out. Roofing rags are in better demand and the mills are buying a little further ahead. This may not be generally true but it is certainly true of sixty per cent of the mills. Future buying is being engaged in on a little more liberal scale, throughout the rag market, in fact.

Old Rope and Bagging

Old rope and bagging seem to have just about sufficient vitality to hold their own. The demand is light and the prices remain unmovable.

Waste Paper

The waste paper market is at this writing just the opposite to the rag market in the attitude of its buyers. Whereas the mills are loosening up and buying more for the future as far as rags are concerned, the opposite is true in the waste paper market and buying continues to be of the closest hand-to-mouth variety. Mixed papers are reported as a bit easier.

Twine

Twine, having shown a little more activity a week ago, has slowed up again. There is little buying at the present time. Prices, however, continue firm.

Finland's Paper Exports

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 23, 1924.—American Consul Davis at Helsingfors, has sent the following report to the Department of Commerce on exports of pulp and paper from Finland:

The situation in the paper markets was not favorable during the first quarter of 1924, although an improvement was noticeable during March, inquiries being received from the Scandinavian countries, France, and England for higher qualities of paper and from the two last-named for news print. Prices continue unsatisfactory and severe competition is still being experienced from some of the Scandinavian mills. The market for mechanical groundwood was very poor at the beginning of the year, but showed a slight improvement during February and the demand continued fairly good during March, but prices remained low. The demand for chemical pulp has been good throughout the quarter, with an upward tendency in prices during February. The pulp and paper market does not as yet seem to have been affected in any way by the Norwegian lockout.

Exports of paper from Finland during March, according to official statistics, amounted to 8,568 tons, compared with 11,518 tons during February, 1924, and 14,887 tons during March, 1923. Exports of mechanical groundwood and cardboard during the same month amounted to 4,232 tons and 1,220 tons, respectively, while exports of chemical pulp are recorded as 9,120 tons dry weight, of which 7,699 tons represented sulphite and 1,781 tons sulphate.

Ramier-Hall Waxed Paper Co. Formed

[FROM OUR REGULAR CORRESPONDENT.]

MEMPHIS, Tenn., June 23, 1924.—The Ramier-Hall Waxed Paper Company has purchased from the Tennessee Fiber Company the buildings forming what is known as the south plant of the latter company at Linden avenue and the Southern railway.

The Ramier-Hall Waxed Paper Company recently was organized by a number of Memphis men, with J. F. Ramier, formerly with the Memphis Power and Light Company, as the head, and R. W. Hall, an experienced waxed paper manufacturer, secretary and general manager.

Machinery now is being ordered for the plant. Paper will not be manufactured, but will be waxed at the plant here.

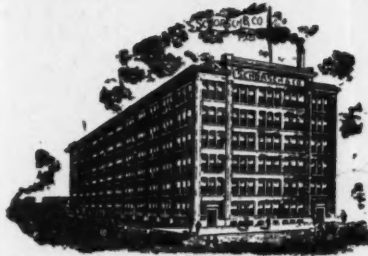
The Home of Quality

PAPER BAGS and SACKS

This Registered Trade Mark Octagon

GLASSINE BAGS—SPECIALTIES

Operating a Modern Printing P.



FACTORY
132ND TO 133RD ST. & BROOK AVE

SCHORSCH & CO.

Manufacturers

Established 1901

on a Paper Bag vouches for Its Good Quality

500 East 133rd Street New York

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.

Woolen manufacturers since 1856.

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

SPRINGFIELD

MASS.

J. ANDERSEN & CO.

21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulp

BLEACHED and UNBLEACHED

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

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, JUNE 25, 1924.

Despite the fact that something of an improvement was registered throughout the paper market a week ago, the chemical market, which should have reflected this improvement almost immediately, failed to do so. In fact, the chemical market which has been in a very bad condition for weeks became worse if anything during the past week. The state of the market is such that buyers of some of the commodities are cutting their buying contracts. Dealers have hopes that the better conditions of the paper market will have a wholesome effect for them before another week passes. Such an improvement is inevitably felt by betterment in the chemical market and the dealers find it hard to believe, at this time, the rule should fail to work. Prices are going up as a rule, salt cake being the only item to suffer a cut a week ago.

As has been the case for some time, the paper industry continues to show little interest in chemicals, while some of the other industries and trades which have been carrying the market along are showing less interest than they have been doing. This has thrown the market into a pessimistic state for, if these sources of business fail to any great extent, the chemical dealers will practically be left high and dry until some wave of good fortune fans the buying demand into life again. It is a discouraging condition to say the least, especially at this time when the hot weather is coming on which cannot be expected to aid matters materially. Something is radically wrong and the dealers, not entirely convinced just what it is, have no other alternative than to sit quietly by and await developments.

BLANC FIXE.—Blanc fixe which has been one of the most favored of the commodities, as far as demand is concerned, has undergone no great change. The demand has been falling off gradually recently but the call is still better than for most of the other items in the chemical list. What orders are received come, almost without exception, from the painting trade and the rubber industry. The price is from \$75 to \$80 a ton for the powder, and from \$50 to \$55 for the pulp.

BLEACHING POWDER.—The stock of bleaching powder is increasing a little in the market. The demand has been very slight and the week has brought no improvement. As long as the textile industry remains slack, bleaching powder has little to look forward to. The price, however, remains at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—The same moderate demand for caustic soda continued during the past week. There has been no change and the price is still 3.10 cents a pound on a flat basis at the works.

CASEIN.—There is every indication that casein is going to firm up a little although the same price is still being quoted as a week ago. This commodity achieved distinction during the week because of an increased demand. The price is from 10½ to 11 cents a pound.

CHINA CLAY.—China clay had an especially good week, the demand being excellent considering the general condition of the market. Some orders of very good value were booked, most of them coming from the pottery trade. The price is from \$16 to \$20 a ton for the imported grades and from \$12 to \$15 a ton for the domestic grades.

CHLORINE.—No change has occurred in chlorine. The demand is lighter than a week ago if such a thing is possible but the price is still holding at from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—There has been no change in rosin. The recent cut in price brought no very marked increase in demand. The price is from \$5.75 to \$5.80 for 280 pounds.

SALT CAKE.—Salt cake which had undergone two recent cuts in price came down another peg during the week, the price being slashed a dollar a ton. This further concession, however, has failed to bring any increased demand for salt cake, buyers apparently

being beyond the reach of price appeal. The price is now from \$17 to \$20 a ton.

SODA ASH.—The demand for soda ash is still falling off which is simply a continuation of its record for some time. So little interest is shown in this commodity that buyers are not taking out their contracts. The price holds at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina is not showing any improvement. There was no new business during the past week and buyers are cutting their contracts. The demand for this commodity is reported as much better throughout the West than it is in the East. The price is still from 1.30 and 1.35 cents for the commercial grade at the eastern works and from 2.15 to 2.35 cents a pound for iron free.

SULPHUR.—The demand for sulphur is falling off but the price holds at from \$18 to \$19 a ton.

TALC.—The demand for talc has also shown a slight falling off during the past week but the price remains undisturbed. It is quoted at from \$16 to \$17 a ton.

Interest in New Pulp Process by Dr. Tingle

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., June 23, 1924.—Local paper mill men are interested in the new pulp process, a report on which has come from Oregon and predicts a new method of making heavy grades of dark paper.

There is little known here of the new process aside from newspaper reports and there is, of course, the question of the method being practicable in local mills. The report as coming from Eugene, Ore., follows: "A new process of producing paper pulp from wood, in which shavings and similar cull material of the ordinary paper pulp mill may be included to give a satisfactory pulp for making heavy grades of dark paper, has been developed by Dr. Alfred Tingle, former research chemist for one of the leading pulp and paper mills of Canada.

"Dr. Tingle has been experimenting at the University of Oregon laboratories, at the invitation of Dean O. F. Stafford who recently developed a process of utilization of mill waste in the carbonization and wood distillation industries.

"In Dr. Tingle's new pulp making process, all danger of overcooking smaller pieces of wood waste while larger pieces remain uncooked, is avoided. Doctor Tingle also says the new process is much simpler and less expensive.

"The application of Dr. Tingle's 'digestion' method which he believes may prove applicable to waste products of the lumber industry, will produce a product which can compete with kraft pulp when applied to high grade spruce chips, he says.

"The process involves a double treatment of wood. The chips or shavings are first digested under pressure with a solution made from lime and sulphur. The product is then crushed into a fine soft pulp on a certain very cheap acid which itself at present is only a waste product from another manufacture."

Commercial Paper Tests

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 25, 1924.—The Paper Laboratory of the Bureau of Standards has completed tests of a large number of commercial papers used for the outlook aperture of window envelopes.

Particular attention was given to determination of transparency and gloss, as high transparency and absence of glare are the prime requirements. Very few samples, it is understood, met both requirements, high transparency usually being accompanied by pronounced glare. The samples which were satisfactory in both respects were produced by processes especially modified to produce the desired results. The gloss of these papers was determined by means of the Ingersoll Glarimeter and the transparency with the Marten's Photometer.

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.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

FOR SALE

Paper Mill near New York City. Fully equipped with two Fourdrinier Machines trimming 78". Ample Beater and Jordan Capacity. Producing 25 tons 24 hours of book, waxing and specialties. Good shipping facilities. Fine manufacturing water and 650 H.P. water power. Buildings brick and stone. Price and terms very reasonable.

Gibbs-Brower Company

Paper and Pulp Mill Brokers

261 Broadway, New York City

Telephone—Barclay 8039

166 West Jackson St., Chicago, Ill.

Telephone—Wabash 1388

OUR MOTTO: "SERVICE FIRST"

THE WORLD'S LARGEST PACKERS

ANY GRADE
QUANTITY

RAGS

and

Paper Stock

GUMBINSKY BROS. CO.

UNION & LUMBER STREETS

CHICAGO, ILL.

THE WM. CABLE EXCELSIOR WIRE MFG. CO.



Established 1848
Incorporated 1870-1898

Manufacturers of
Superior Fourdrinier
Wires
Brass, Copper and
Iron Wire Cloth of
every Description.
Best Quality of
Wire Ropes.

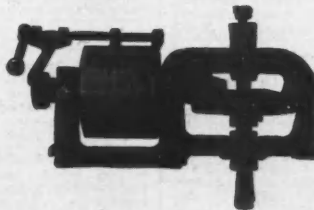


Write for Price List

74-90 Ainslie St.

BROOKLYN, N. Y.

AGITATOR DRIVES



Six Stock Sizes
Special Designs
"NETT-CO" line
is complete from
smallest to largest.

NEW ENGLAND TANK & TOWER CO.

30 CHURCH ST., N. Y. EVERETT, MASS.

WANT AND FOR SALE ADVERTISEMENTS

HELP WANTED

CLASSIFIED ADVERTISEMENTS—4c a word, double rate for display (heavy faced type). Minimum charge \$1.00.

"HELP WANTED" ADVERTISEMENTS—4c a word, double rates for display (heavy face type). Minimum charge \$1.00.

"SITUATION WANTED" ADVERTISEMENTS—4c a word, double rates for display (heavy face type). Minimum charge \$1.00. If repeated 1/2 rate will be charged for each consecutive repetition.

All Classified, "Help Wanted" and "Situation Wanted" advertisements must be prepaid except those running charge accounts.

WANTED—One good Sealer and Finisher on Bond and Book Papers. Address, Box 7392, care Paper Trade Journal. J1-10

WANTED—Machine Tender for 82 inch Cylinder Machine on Specialties. Reply giving full information, references and salary required. Address, Box 7393, care Paper Trade Journal. J1-10

AN OLD ESTABLISHED printing ink manufacturing company has an opening for an experienced salesman, or one who has called on the printing trade selling a kindred line. In replying, state experience and territory covered. Address, Box 7394, care Paper Trade Journal. Jn-26

WANTED—Good Beater Engineer on Book papers. Must be a good colorman and thoroughly understand washing and bleaching of old papers. All day work, good wages and bonus to right man. Address, Box 7395, care Paper Trade Journal. J1-3

MAN thoroughly experienced in the import and export of old and new rags, cuttings, rope, wipers, etc., and who can speak German, can connect with a new company of substantial means specializing in this line of business. Excellent opportunity. State experience, references, etc. Address, Box 7396, care Paper Trade Journal. Jn-26

PAPER SALESMEN—Old established Paper and Twine House seeks experienced salesmen with established trade. Wonderful opportunity, salary or commission. All replies confidential. Address, Box 7397, care Paper Trade Journal. Jn-26

SALESMAN familiar with New York trade wanted by fine paper house. Salary or commission. Reply confidential. Box 57, Station D., New York Post Office. Jn-26

SUPERINTENDENT wanted for one machine Mill making News, Board and Kraft Specialties. Location Eastern Massachusetts. State age, salary and qualifications in first letter. Address, Box 7342, care Paper Trade Journal. J1-3

WANTED—Two beater foremen and two back tenders for new 4 cylinder machine making test board, manilla and chip. State wages expected and experience. E. M. Sligh, Sonoco Products Company, Hartsville, S. C. Jn-26

WANTED—Bag Machine Adjusters. State age, family, experience, salary desired. Bag Factory in Chicago district. Address, Box 7364, care Paper Trade Journal. J1-10

SUPERINTENDENTS, EXECUTIVES, ENGINEERS, \$3,000-\$25,000, will find our individual, confidential service an effective medium to make desired connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not employment agency. Inquiries only solicited from persons with records of successful performance and stability. Jacob Penn, Inc., 305 Broadway, New York. J1-10

WANTED—General Foreman—A practical papermaker, who thoroughly understands the manufacture of light weight Fourdrinier specialties, with and without the use of Ground Wood. Must be a good color man; also, of good executive ability. State age, experience, salary required; also include copies of testimonials. Address, Box 7359, care Paper Trade Journal. Jn-26

HELP WANTED

WANTED

Machine Tenders, Back Tenders, Third and Fourth Hands, Digester Cooks, Multiple Effect Evaporator Men, Ash Burners, Liquor Makers, etc., for a new sulphate mill. Located in the South, 2 miles from a city of twenty thousand with good schools, churches, etc. Only A-1 men of good habits, experience and good health wanted. Give details of experience and references in first letter.

The Brown Paper Mill Co., Inc.
Monroe, La.

Jn-26

SITUATIONS WANTED

BEATER ENGINEER would like to make change. Experienced on Sulphite rag and rope stock, all grades. Steady, reliable and efficient. References. Address, Box 7398, care Paper Trade Journal. J1-3

BOSS FINISHER desires a position. 12 years of finishing department experience in four mills making Wrapping, News, Tissue and some Glassine and Greaseproof. Mill clerical work. Shipping and taking complete charge as Boss Finisher over Tissue and Wrapping Layboy Cutters, Rewinders and Ream Cutters. Able to make efficient help and obtain maximum results. Can furnish good references. Address, Box 7399, care Paper Trade Journal. J1-10

SUPERINTENDENT—Experienced on Fourdrinier and Cylinder machines making various grades test, wrapping, bond and board, is open for engagement. Middle age, married, executive. Address, Box 7382, care Paper Trade Journal. J1-17

YOUNG SCANDINAVIAN, Technical graduate, with experience from large Scandinavian paper mill making book, writing and newsprint papers, desires position as machine man. Steady and willing worker. Best of references. Address, Box 7384, care Paper Trade Journal. Jn-26

WANTED—Position as Millwright. Fifteen years' experience in paper plants, a good machinist who can draw, lay out work, and is up in all branches of mill repairs. Good working conditions rather than excessive pay desired. References. Address, Box 7385, care Paper Trade Journal. Jn-26

WANTED—A position as machine tender on Fourdrinier machine. Have had six years experience running machine. Address, Box 7367, care Paper Trade Journal. Jn-26

WANTED—Position by capable Beater Engineer—any stock or grade of paper. Address, Box 7366, care Paper Trade Journal. A-7

SUPERINTENDENT of many years experience all grades of colored crepe papers, crepe kraft, waterproof crepes, florist crepe, fireproof papers. A-1 Colorman. Understand thoroughly the converting of waxed papers. Modern and up-to-date. Address, Box 7272, care Paper Trade Journal. J-26

GENERAL SUPERINTENDENT—Eighteen years' practical experience on Kraft and special Krafts, machine crepe kraft, tissues, toilet, fruit wraps, wax, tissue for creping, twisting, tissue specialties; Cylinder and Fourdrinier machines. Expert on colors, good mechanic, reference. Address, Box 7271, care Paper Trade Journal. J-26

SUPERINTENDENT—17 years' experience on bond, waxing, tissues, folding, chip and bristol boards. Expert on colors. Good mechanic. Up-to-date practices. Best of references. Address, Box 7314, care Paper Trade Journal. Jn-26

BOSS FINISHER—thoroughly experienced on all grades of paper, having had several years' experience as Boss Finisher, also charge of cutters and calendars. Best of references furnished. Address, Box 7317, care Paper Trade Journal. J1-10

SITUATIONS WANTED

SERVICE OF HIGH GRADE SALESMAN, THIRTY-EIGHT YEARS OF AGE, AVAILABLE AFTER JULY 15TH, AM SELLING APPROXIMATELY FIFTY CARLOADS OF PAPER BAGS, IN ADDITION TO A NUMBER OF CARS OF OTHER PAPER PRODUCTS ANNUALLY. JOBBING TRADE, SMALL WESTERN TERRITORY. DESIRE DIRECT MILL OR FACTORY CONNECTION WHERE REMUNERATION, BASED ON COMMISSION, WILL BE COMMENSURATE WITH RESULTS PRODUCED. ADDRESS, BOX 7381, CARE PAPER TRADE JOURNAL. Jn-26

SULPHITE SUPERINTENDENT—Up-to-date in practices. Understands all acid making and cooking processes thoroughly. Practical as well as technical. Best of references. Address, Box 6652, care Paper Trade Journal. J1-10

PULP AND PAPER MANUFACTURERS—In present time of keen competition you undoubtedly are figuring how to keep down costs. Would you not like to have a competent graduate engineer to go over the mill with you and then make up an estimate and report. You will be backed by 17 years' experience in operation, design and construction of mills, also steam power and electrification of mills. Please answer without the least obligations to Box 7339, care Paper Trade Journal. Jn-26

ASSISTANT SUPERINTENDENT—8 YEARS' FINE AND COARSE MILL EXPERIENCE—3 YEARS MACHINE EXPERIENCE—CHEMICAL ENGINEER—DESIRES POSITION WITH PROGRESSIVE CONCERN WHERE RESULTS GUARANTEE ADVANCEMENT—NOW EMPLOYED—LOCATION PREFERABLY NEW YORK OR NEW ENGLAND. ADDRESS, BOX 7387, CARE PAPER TRADE JOURNAL. Jn-26

SUPERINTENDENT, now employed, would like to change. 20 years' experience on all grades of Tissue, Towing, Crepe, Waxing on Harpers and Cylinder Machines, know how to get production. Up-to-date on all repair work. Know how to handle help to get results. Can give best of references. Address, Box 7270, care Paper Trade Journal. J1-10

SALESMAN—College graduate, age 31, several years experience in pulp, paper, and paper box manufacturing, present employed, wishes position in sales line. Address, Box 7386, care Paper Trade Journal. J1-3

SUPERINTENDENT wants position. 10 years experience on all the better grades of combination and container board. Thoroughly familiar with modern methods of operation and maintenance of every department. Can put mill in shape to produce quality and production. Can furnish references as to ability. Address, Box 7375, care Paper Trade Journal. J1-10

GENERAL SUPERINTENDENT—PRODUCTION MANAGER OR MILL MANAGER. LONG EXPERIENCE ON PULP, PAPER AND BOARD. WELL UP ON MODERN PRODUCTION METHODS, PLANT MANAGEMENT AND COSTS. TECHNICAL TRAINING IN CHEMISTRY AND CHEMICAL TECHNOLOGY. ADDRESS, BOX 7333, CARE PAPER TRADE JOURNAL. J1-3

PULP AND PAPER MILL ENGINEER—Technical graduate, married, age 36, fourteen years experience in applied structural and mechanical engineering of pulp and paper mills. Capable of assuming the technical responsibility of your plant from the drafting board to the erected job. Correspondence solicited. Address, Box 7389, care Paper Trade Journal. J1-3

MILL MANAGER—Long experience on chip, combination, straw and container boards, desires to make new connection. Now operating large mill. Address, Box 7376, care Paper Trade Journal. J1-10

PAPER BAG Machine Adjuster—Flat and square, sack, self-opening, specialties, printing, wishes position. Address, Box 7377, care Paper Trade Journal. Jn-26

SITUATIONS WANTED

SUPERINTENDENT—experienced in manufacture of all grades of Box Board seeks position where intelligent, honest effort and results will be appreciated. Have successful record for quality production at minimum costs. Best references. Address, Box 7390, care Paper Trade Journal. Jn-26

EXPERT PAPER MILL ENGINEER—Electrical, Steam, Combustion, would like to become connected with Paper Company, Architect or Engineering Company. Capable of taking charge of department mentioned above also all piping on new construction, maintenance, or both, in one or more mills. If interested, Address Box 7245, care Paper Trade Journal. J-26

WANTED

WANTED—Used One or Two Pound Experimental Pulp Beater. State price and Condition. **THE CELOTEX COMPANY**, Box 26, MARRERO, LA. Jn-26

WANTED—Variable Speed Engine, 100 to 150 H. P., for Paper Board Machine. Chesapeake Paperboard Co., Key Highway & B. & O. R. R., Baltimore, Maryland. Jn-26

WANTED—To buy used Cylinder Mold 36" diameter by 73" face, shaft approximately 99" x 2 7/16. What have you? Price shipping point. Address, Box 7391, care Paper Trade Journal. Jn-26

MISCELLANEOUS

SEALED PROPOSALS will be received from manufacturers of banknote or other fine papers, until 12 o'clock m., Friday, June 27, 1924, and then opened for furnishing to the Department of Labor during the fiscal year to end June 30, 1925, certificate of naturalization paper of the highest quality containing the distinctive features of the paper now used by the department. Full information upon this subject will be given upon application to the division of Publications and Supplies of the department, at whose office samples of the paper required may be examined. Proposals are to be made by letter, no blanks for this purpose being furnished, and they should be addressed to the Division of Publications and Supplies, Department of Labor, Washington, D. C., and the envelope in which they are inclosed marked in the lower left-hand corner "Proposals for distinctive safety paper." The Department reserves the right to reject any or all bids. Jn-26

WE OFFER opportunity to brokers, jobbers or salesmen to handle our line of Waterproof Papers "All that the name implies." References. **Waterproof Paper Products, Inc.**, Herkimer, N. Y. Jn-26

FOR SALE

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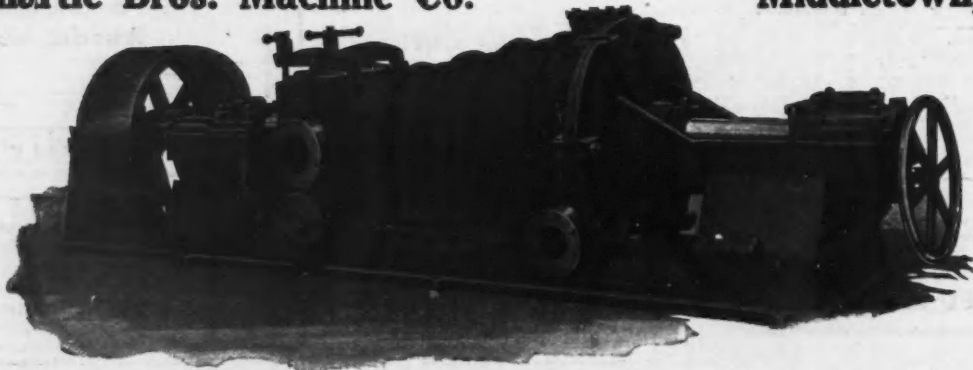
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Ja-26

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CHEMISTRY OF PULP AND PAPERMAKING, by Edwin Sutermeister (1920). A practical book for paper mill chemists, superintendents and students. It is based on notes and experiences of the author during a long term of service as chemist in the industry as well as study of the literature related to the subject. It assumes a moderate knowledge of chemistry on the part of the reader. (\$6.)

PULP WOOD AND WOOD PULP, by Royal S. Kellogg (1923). A treatise on the basic raw material for paper with statistical data of production and consumption of pulp wood, wood pulp and newsprint paper in North America. There are also chapters on the properties of North American pulp wood, the timber supply and timber production from a practical forestry standpoint. (\$4.)

MANUFACTURE OF PULP AND PAPER, in five volumes, edited by J. Newell Stephenson. Volumes I and II (1921) deal with mathematics and sciences such as electricity, chemistry and hydraulics in their relation to the paper industry. Volume III (1922) is an authoritative and up-to-date treatise on the Preparation and Treatment of Wood Pulp. Volume IV (1924) covers Preparation of Rags and Waste Papers, Beating, Sizing, Coloring and a Description of the Four-drum Paper Machine. Volume V (in preparation) will be published during 1924 or early in 1925 and covers the Manufacture of Paper and general mill equipment. A set of textbooks covering American practice designed for study and reference. (\$5 per volume.)

THEORETICAL METHODS OF ANALYSIS, by Roger C. Griffin (1921). An excellent handbook for analytical chemists. The chapter on Wood Paper and Paper-making Chemicals is especially valuable. (\$6.)

MODERN PULP AND PAPER MAKING, by G. S. Witham, Jr. (1920). A practical American treatise which gives particulars of every phase of papermaking from the sawmill to the press room. (\$6.)

A TEXTBOOK OF PAPERMAKING, by C. F. Cross and E. J. Bevan. Fifth edition, containing additional matter with collaboration with J. F. Briggs. A very good treatise covering English practice. (\$9.)

THE TREATMENT OF PAPER FOR SPECIAL PURPOSES, by Louis Edgar Andes (1907). The processes of manufacture for a variety of paper products are outlined. It is not a working manual, but it contains a collection of formulas and furnishes for parchment and grease-proof papers as well as for a whole series of novelty papers. (\$3.)

THE ACTION OF THE BEATER, by Dr. Sigurd Smith (1923). An exhaustive treatise based on five years' study and systematic investigation in a paper mill. A valuable book for technologists of papermaking. Translated from the German by Renold Marx. Foreword by C. F. Cross. (\$3.50.)

PAPER TESTING METHODS, by the Committee on Paper Testing of the Technical Association of the Pulp and Paper Industry (1922). A practical treatise on the analysis and testing of paper. Microscopical, chemical and physical processes described with the apparatus employed. (\$3.)

CLASSIFICATION AND DEFINITION OF PAPER TERMS. By F. A. Curtis and Clarence J. West. Price \$1.50.

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Downingtown Mfg. Co.
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Hermann Mfg. Co., The
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Paper Makers Chemical Co.
R. T. Vanderbilt Co.
United Clay Mines Corp.
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cal Co.

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Bertha-Consumers Co.

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Mayer Coating Machines Co.

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Foreign Paper Mills, Inc.
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Paper Cutters.
Hamblet Machine Co.
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CLASSIFIED INDEX TO ADVERTISERS

For page positions, see *Alphabetical Index*

Paper Manufacturers.
 Ajax Paper Mills
 Brown Co.
 Collins Mfg. Co.
 Diamond State Fibre Co.
 Eastern Mfg. Co.
 Eaton-Dikeman Co.
 Fort Howard Paper Co.
 Franklin Paper Corporation
 Howard Paper Co.
 Hubbard, C. A.
 Kalamazoo Vegetable Parchment Co.
 Missisquoi Pulp & Paper Co.
 Mohawk Paper Makers, Inc.
 Mohawk Valley Paper Co.
 St. Regis Paper Co.
 Sherman Paper Co.
 Storrs & Bement Co.
 West Milton Paper Mills, Inc.
 West Virginia Pulp & Paper Co.

Paper Mill Agents.
 Scott, Frank L.,

Paper and Pulp Machinery.
 Appleton Machine Co.
 Bagly & Sewall Co.
 Baker Mfg. Co.
 Beloit Iron Works
 Biggs Boiler Works, The
 Bird Machine Co.
 Black-Clawson Co.
 Clark-Aiken Co.
 Frank H. Davis
 Dilts Machine Works Co., Inc.
 Downingtown Mfg. Co.
 Farrel Foundry & Mach. Co.
 Hudson-Sharp Machine Co.
 E. D. Jones & Sons Co.
 Sandy Hill Iron & Brass Co.
 Shartle Bros.
 Smith & Winchester Mfg. Co.
 Trimby Machine Works
 Valley Iron Works Co.

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 Dillon & Barnes

Paper and Pulp Mill Brokers.
 Gibbs-Brower Co.

Paper Stock.
 Atterbury Bros.
 Castle & Overton, Inc.
 Gumbinsky Bros.
 Hicks, Daniel M.
 Leshner Paper Stock Co., Inc.,
 The
 Mendelson Bros. Paper Stock
 Co.
 Penn Paper & Stock Co.
 Salomon Bros. & Co.
 Train, Smith Co.

Paper Testers.
 Foreign Paper Mills, Inc.
 B. F. Perkins & Son, Inc.
 Thwing Instrument Co.
 Valley Iron Works

Paper Tube Machinery.
 Dietz Machine Works
 Grissinger Machine Works

Paper Waxing Machinery.
 Mayer Coating Machines Co.
 Potdevin Machine Co.
 John Waldron Corporation

Perforating Machines.
 Dietz Machine Works

Perforated Metal
 Harrington & King Perforating
 Co.
 Hendrick Mfg. Co.
 Manhattan Perforated Metal Co.
 Charles Mundt & Sons

Pipe Threading Machines.
 The Curtis & Curtis Co.

Plugs.
 O. L. Bartlett

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 Appleton Machine Co., The
 Dodge Manufacturing Corp.
 J. W. Hewitt Machine Co.
 Rodney Hunt Machine Co.

Pulp Stones.
 Smallwood-Low Stone Co.

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 Appleton Machine Co., The
 Buffalo Steam Pump Co.
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 Foreign Paper Mills, Inc.
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 cal Co.

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 cal Co.

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 ment Co.

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Index to Advertisers

	Page		Page
A			
Ajax Paper Mills.....	5	Downington Mfg. Co.....	—
American Appraisal Co... 65		Draper Bros. Co.....	69
American Engineering Co. —		Drew, George F.....	75
American Mfg. Co.....	2	E	
American M. P. M. Works —		Eastern Mfg. Co.....	—
American Process Co.....	61	Eastwood Wire Mfg. Co..	84
Anderson & Co., J.....	69	Eaton-Dikeman Co.....	61
Appleton Machine Co.....	—	Electrical Testing Labora-	
Appleton Wire Works....	83	tories	76
Appleton Woolen Mills... 10		Elixman Paper Core Co..	—
Arabol Mfg. Co.....	—	Emerson Mfg.....	12
Arnold, Hoffman & Co.,		F	
Inc.....	—	Farnham Mfg. Co.....	—
Atterbury Bros., Inc	76	Farrel Foundry & Machine	
Austin Co., The.....	—	Co.....	—
B			
Badenhausen, Phillips....	6	Ferguson, Hardy S.....	75
Bahr Bros. Mfg. Co., Inc.	77	Fibre Making Process Co. —	
Baker Mfg. Corp.....	—	Pitchburg Duck Mills....	—
Barlett, O. L.....	—	Foreign Paper Mills, Inc..	3
Becker Wood Pulp Co. of		Fort Howard Paper Co....	5
America, Inc.....	—	Foxboro Co., Inc., The... —	
Beebe & Co., Ira L.....	83	Franklin Paper Co.....	—
Beloit Iron Works.....	39	Frederick Iron & Steel Co. —	
Benninghofen & Sons Co. —		G	
Bertha-Consumers Co.....	3	G. B. Stock Xylite Grease	
Biggs Boiler Works.....	83	and Oil Co.....	—
Bird Machine Co.....	33	General Electric Co.....	17
Black-Clawson Co.....	—	Gibbs-Brower Co.....	71
Borregaard Co., Inc.....	63	Goodyear Rubber & Tire	
Bowsher Co., The N. P....	12	Co., Inc.....	—
Bridgeport Safety Emery		Gottesman & Co., Inc., M. —	
Wheel Co., The.....	—	Graton & Knight.....	9
Bristol Co., The.....	—	Grissinger Machine Works	80
Brown Co.....	—	Gumbinsky Bros. Co.....	71
Buchanan & Bolt Wire Co. 12		H	
Buck, Kiaer & Co.....	—	Hallenbeck, M. T.....	75
Buffalo Forge Co.....	—	Hamlet Machine Co.....	—
Buffalo Steam Pump Co..	—	Hammermill Paper Co....	19
Bulkley, Dunton & Co....	11	Hanna Paper Corp.....	6
C			
Cable Excelsior Wire		Hardy, George F.....	75
Mfg. Co., Wm.....	71	Hardy & Sons Co., Wm. A. —	
Cameron Machine Co.....	—	Harrington & King Perfor-	
Campbell & Co., John....	—	ating Co.....	82
Casein Mfg. Co., The....	11	Hayton Pump & Blower Co.	77
Castle & Overton, Inc....	83	Heller & Merz Co.....	10
Central Mfg. Co.....	—	Hendrick Mfg. Co.....	11
Cheney Bigelow Wire Wks.	69	Hercules Powder Co.....	—
Clark-Aiken Co., The....	10	Hermann Mfg. Co.....	—
Coe Mfg. Co.....	2	Hewitt, J. W., Machine Co. —	
Collins & Co., Geo. Z....	—	Hicks, Daniel M., Inc....	76
Collins Mfg. Co.....	7	Higman Co., John W....	61
Columbian Paper Co.....	80	Hoggson & Pettis Mfg. Co. 5	
Columbian Rope Co.....	20	Howard Paper Co.....	63
Combustion Engineering		Howell-Donaldson, Inc....	76
Corp.....	75	Hubbard, C. A.....	—
Coolidge, P. T.....	75	Hudson-Sharp Machine Co. —	
Corn Products Co.....	—	Hunt Machine Co., Rodney —	
Craig, H. G., & Co.....	26	Huyck & Sons, F. C.....	—
Crane Co.....	—	I	
Crocker-Wheeler Co.....	—	Industrial Dryer Corp....	—
Curtis & Curtis Co.....	77	International Pulp Co.....	—
D			
Davis, Frank H.....	73	International Salt Co.....	—
Dayton Beater & Hoist Co. —		J	
Dayton Globe Iron Works	77	Jeffrey Mfg. Co., The....	—
Diamond States Fiber Co. 83		Jenkins Bros.....	4
Dickinson, Thos. L.....	77	Jensen Co., G. D.....	—
Dietz Machine Works....	11	Johanneson, Wales & Sparre,	
Dillon & Barnes.....	76	Inc.....	—
Dillon Machine Co.....	82	Jones & Sons Co., E. D... 84	
Dilts Machine Works, Inc. 35		K	
Dodge Mfg. Co.....	—	Kalamazoo Tank & Silo Co. 81	
Dorr Co.....	18	Kalamazoo Vegetable	
Dowd Knife Works, Inc.,		Parchment Co.....	63
R. J.....	—	Kalbfeisch Corp., The... 46	
		Keller Co., E. I., Inc.....	—
		Klipfel Mfg. Co.....	—
		Knowlton Co., M. D.....	—

	Page
Knox Woolen Co.....	11
Kuhn, Anton D. J.,	81
Kuttroff, Pickhardt & Co., Inc.	4
L	
Lacey Securities Corp.....	3
Lagerloef Trading Co.....	12
Langston Co., Samuel M.	21
Lawrence Bag Co., The... ..	13
Leather Belting Exchange.	—
Leavitt Machine Co.....	—
Lennig & Co., Inc., Chas.. ..	—
Leshner Paper Stock Co., Inc., The	—
Lewellen Mfg. Co.....	—
Lindsay Wire Weaving Co.	83
Lobdell Car Wheel Co.....	46
Lockport Felt Co.....	14
M	
McLaurin-Jones Co.....	—
Machinery Co. of America	—
Management Engineering & Development Co.	—
Manhattan Perforated Metal Co.	—
Mathieson Alkali Wks., Inc.	31
Mayer Coating Machine Co.	—
Mead, Patton & Co., Inc.. ..	16
Mead Sales Co.....	16
Mendelsohn Brothers Paper Stock Co.	76
Metcalf & Eddy.....	—
Miner-Edgar Co.	69
Missisquoi Pulp & Paper Co.	4
Mohawk Paper Makers, Inc.	5
Mohawk Valley Paper Co., Inc.	6
Monroe Chamber of Commerce	—
Moore & White.....	—
Mundt & Sons, Chas.....	63
N	
Nash Engineering Co.....	7
National Aniline & Chemical Co.	25
Nekoosa Motor & Machine Co.	43
New England Tank & Tower Co.	71
Noble & Wood Machine Co.	—
Norma Co. of America, The	—
Norwood Engineering Co.	—
O	
Oakes, Roland T.....	—
Ohio Cultivator Co., The.. ..	12
Oliver Continuous Filter Co.	—
O'Neil Wire Wks., Jos... ..	80
Orr Felt & Blanket Co... ..	71
P	
Paper Makers Chemical Co.	81
Paper Mfrs. Co., Inc.....	—
Penn. Paper & Stock Co.. ..	76
Pennsylvania Salt Mfg. Co.	77
Perkins-Goodwin Co.	15
Perkins & Sons, B. F., Inc.	8
Pickles, W. F.....	—
Potdevin Machine Co.....	13
Price & Pierce, Ltd.....	76
Front Cover	
Pulp & Paper Trading Co.	80
R	
Reeves Pulley Co.....	—
Roberts Mfg. Co., F. W.. ..	77
Ross Engineering Corporation, J. O.	75
Russ Co., E. F.....	77
Ryther & Pringle.....	43

	Page
S	
St. Regis Paper Co.....	6
Salomon Bros. & Co.....	76
Sandy Hill Iron & Brass Works	15
Saranac Machine Co.....	—
S. C. Regulator Mfg. Co.. ..	—
Scandinavian Pulp Agency, Inc.	—
Schorsch & Co.....	69
Scott Co., Frank L.....	—
Seaboard Air Line Railway	24
Sewall, James W.....	75
Shartle Bros. Machine Co., The	74
Shepard Electric Crane & Hoist Co.	8
Sherman Paper Co.....	76
Shuler & Benninghofen....	—
Simons, V. D.....	75
Smallwood-Low Stone Co.	77
Smith, Frederick L.....	75
Smith & Winchester Mfg. Co.	13
Smithe Machine Co., F. L.	14
Standard Oil Co. of Indiana	—
Stearns Lumber Co., A. T.	6
Stebbins Eng. & Mfg. Co.	75
Stickle Steam Specialties Co.	—
Storrs & Bement Co.....	4
T	
Taylor, H. S.....	75
Taylor, Stiles & Co.....	8
Technical Economical Corporation	73
Texas Gulf Sulphur Co.. ..	7
Textile-Finishing Machinery Co.	—
Thwing Instrument Co....	—
Train, Smith Co.....	76
Trimby Machine Works.. ..	—
Turner, Halsey Co.....	—
Tuttle & Co., Inc., Stewart	—
Tyler Co., W. S.....	83
U	
Union Bag & Paper Corp.. ..	—
Union Screen Plate Co....	10
Union Sulphur Co.....	76
Union Talc Co.....	—
Union Wood Flour Co., Inc.	77
United States Testing Co., Inc.	76
Universal Crepe and Tissue Mills	—
V	
Vacuum Oil Co.....	—
Valley Iron Works.....	37
Vanderbilt Co., R. T.....	—
Vitale & Rothery.....	75
Vortex Mfg. Co.....	—
W	
Waldron Corp., John.....	75
Wallace & Co., J. H.....	75
Wamsley & Co., Ltd., Chas.	41
Wandel, Kurt	73
Waterbury & Sons Co., H.	77
West Milton Paper Mills, Inc.	81
West Virginia Pulp & Paper Co.	4
Western Paper Makers Chemical Co.	81
Westinghouse Electric & Mfg. Co.	23, 63
White Tar Aniline Corp... ..	3
Williams Co., C. K.....	83
Woolford Wood Tank Mfg. Co.	61
Y	
Yale & Towne Mfg. Co... ..	—

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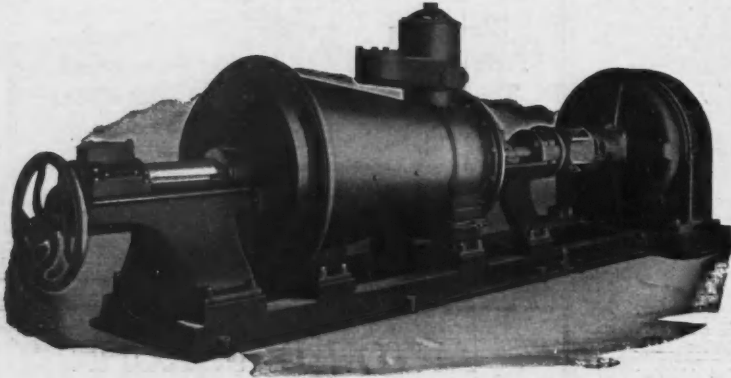
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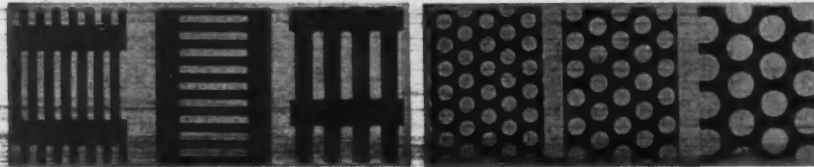
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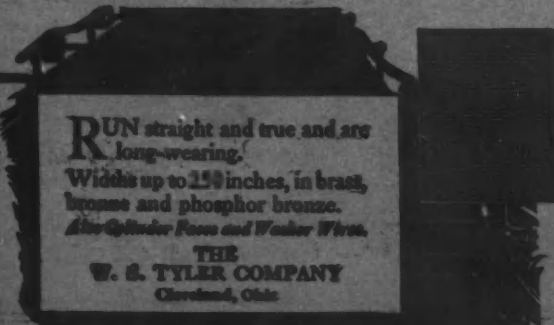
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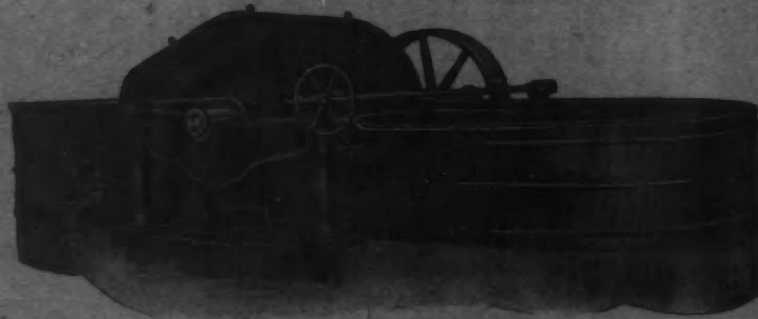
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