

# PAPER TRADE JOURNAL

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## BOX BOARD MEN HEAR SECRETARY OF LABOR DAVIS

Official Addresses All-day Session Held at Commodore Hotel and Compliments It on Progress It Is Making On Six-day Week and Three-Tour System—Declares That Time Has Come When the 13 Hour Day and Seven-day Week Cannot Longer Survive—Dr. E. C. Merchant, Statistician of the George H. Mead Co., Speaker at Afternoon Session—About Sixty Members In Attendance

The Box Board Association held an interesting all-day session on Monday at the Commodore Hotel, the morning session being called to order at 11 o'clock by General Manager John R. Mauff. Secretary of Labor James J. Davis made the address of the morning, speaking especially of the work the association has accomplished along the lines of the six-day week and the three-tour system since the conference held at Washington four months ago when various reforms were discussed.

Four months was not a long time in which to accomplish reforms, he said, and yet it was possible to report substantial progress. President Coolidge had expressed great interest in what the association was trying to accomplish and had desired him to extend his cordial greetings on this occasion.

### Reforms Would Be Forced in Time

The speaker referred to the fact that at the Washington meeting on May 2 he had declared that if the association did not take hold of some of these reforms themselves the time was coming when laws would be invoked to compel action along these lines. At the very time he had been saying this Congressional action was being taken on Child Labor legislation. In the same way, he said, he could see the time coming when, unless the 12 and 13 hour day was eliminated, Congress would seek power to regulate it.

Secretary Davis said he was glad the association was disposed to take up these reforms now as a recognition of human rights rather than wait until consideration might be made compulsory. He then told how many mills had since May 2 gone onto the six-day week, how the number had been constantly increasing and how many others had indicated their disposition to go onto that schedule in the near future.

Referring to the three-tour system which is to be inaugurated on January 1, 1925, he declared that 22 plants had gone on the system since the Washington meeting which was exactly the same number as there were operating under that system prior to the meeting.

It had been a source of inspiration to him, he declared, to see that the association was in sympathy to such an extent with the Department of Labor. "The time has come," he said, "for you gentlemen to sit down and engage in some plain talk. It is time for you to realize that the 13 hour day and the seven day week cannot survive. The man who works that many hours has no room in his life for anything else. Let us seek for a common ground of understanding so that no small group shall be allowed to block this reform."

### Many New Members in Prospect

It was announced that the statistics of the Box Board Industry would appear in the next Monthly Survey of the Department of Commerce.

A report was made on the drive which has been started for new members and letters were referred to which had been received from several mills which had indicated their expectation of joining the association at an early date.

There was a discussion of the trade customs and a further discussion of the trade discount. The association at a former meeting signified its intention of conforming to the one per cent in ten days discount but it was stated that many members were still holding to the two per cent. The association reaffirmed its intention of conforming to the one per cent regulation.

A motion was made that the Association join the Chamber of Commerce of the United States. The members were split about even on the question and the matter was finally laid upon the table.

At 1 o'clock the morning session adjourned and the members gave up an hour to luncheon, reconvening at 2 o'clock.

### Dr. E. C. Merchant Speaks

The afternoon session began with an executive meeting at which various reports were made and a number of important subjects discussed. Dr. E. C. Merchant, statistician of the George H. Mead Company then addressed the members, giving a most interesting talk on business conditions and other subjects of interest to the association. The meeting was attended by about fifty members.

## Judgment Against Former Head of Reid Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

ALBANY, N. Y., September 8, 1924.—Judgment of \$1,125 in favor of Dale S. Carpenter of Cohoes was entered in Albany county clerk's office, the judgment being against Benjamin F. Witbeck, who was president and treasurer of the Robert H. Reid Pulp and Paper Company. The action was based on the purchase of a temporary stock certificate by Mr. Carpenter from the late Horace S. Bell, of Albany, signed by Mr. Witbeck as an officer of the Robert H. Reid Pulp and Paper Company, since declared bankrupt. The certificate described an issue of \$100,000 in two-year gold notes.

The court found that the signing, issuance and sale of the certificate was never authorized by the company and that the proposed issue was never authorized or made. The court declared Mr. Witbeck was guilty of "carelessness and negligence in issuing and signing the certificate as an officer of the company without being duly authorized."

The certificate was purchased by Mr. Carpenter for \$938.13. Supreme Court Justice Wesley O. Howard a year ago ruled that the certificate, not being authorized by the company, was not binding on the company and had no value. Mr. Witbeck is now held personally responsible.

## PAPER ORDERS IN CHICAGO SHOW CONSTANT INCREASE

**Situation Is Much More Encouraging Than It Was Only a Short Time Ago—Demand for Paper Stock Also Is Considerably Improved—C. F. Houpt Joins Sales Organization of the Pilcher Hamilton Co.—E. A. Hall, Jr., Tells About Trip to Nekoosa-Edwards Mills and T. W. Koch Tells About Making Glassine Paper at Mills of Hartford City Paper Co. at Pilcher-Hamilton Luncheon.**

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, September 8, 1924.—With an outlook as encouraging as it is in this market there is every reason for optimism on the part of those who constitute it. And there is. It grows with the advance of the season. Whereas a month ago most everybody reported low sales, low demand and were in low spirits, so to speak, now they may figuratively be found with sleeves rolled up, hard at work on new orders coming in and many more in prospect.

Price changes f. o. b. mill in the fine grades of paper have been a minor consideration. There have been very few if any. And as the industry goes into fall and a busy period, there are no indications that any revisions will be made. Some talk circulated in the territory relative to upward changes on rag bonds, but members here feel that this will not materialize.

### Catalog Business Increasing: More Optimism

Catalog makers are beginning to make a showing in the market. Demand from this direction is growing each week. Printers are becoming more active. As a result bonds and coated papers are going stronger. Some plants had been working less than a full week for about two months. Now they are beginning to run on full schedules again. This is but another straw to show which way the wind is blowing and what it is likely to mean for paper merchants and the industry in general within the next few months.

Feeling over the political situation has subsided considerably. Business men feel certain the outcome of Fall's election will be entirely favorable to the prosperity of the nation and are proceeding with plans accordingly.

### Heavy Orders Booked for Coarse Stocks

Consensus of opinion among those who handle coarse papers has it that the demand is just now returning in earnest. In the last week some very large orders were placed by consumers. The sizes of them indicate that stocks were permitted to dwindle to a very low ebb. Enough such orders were booked to give the impression that most larger consumers are in the same condition—small supply and heavy requirements. Therefore, it is a natural conclusion that more sizeable orders are on the way. Prices are pretty much unchanged. A few upward revisions were reported a few weeks ago, but since then quotations have held quite firmly around the same level.

### Paper Stock Goes Strong: Board Mills Business

The rise of old newspaper, No. 1 variety, to \$22 per ton, f. o. b. Chicago, during the last few weeks has caused considerable comment among various members of the trade. Its psychological effect has been that of stimulating optimism, even though it means increased production costs for board and container makers. Other grades of paper stock have also advanced, lower grades more so than uppers, principally because the former receded most and also because the demand has increased perceptibly of late. And it is the old law of supply and demand that regulates the selling price. Then, too, the shortage has not been met and dealers are unable to accumulate stocks.

Board and containers mills are reported to be working with

orders from three to eight weeks ahead. This is considered quite a healthy condition, although many believe it could be much better. Folding box business has been excellent and those who enter that field are enjoying a brisk trade. Corrugated board demand has lagged somewhat, so the report goes. However, there are indications of a pickup in the very near future. Prices have advanced from five to ten dollars per ton on boards and containers in the last month, selling now at about the figure asked during a normal season.

### C. F. Heup Goes with Pilcher-Hamilton

A recent acquisition to the sales force of the Pilcher-Hamilton Company, which markets book and wrapping papers to this territory, is C. F. Heup, a "builder of sales volume" who has had considerable experience in the paper industry during the years he has been in it. Mr. Heup first began with the Chicago Paper Company, as city buyer. Later on he became manager of the Consumers Paper Company, which position he occupied for one year, until the firm was dissolved by its originators. Then he went back with the Chicago Paper Company where he remained until joining the Pilcher-Hamilton staff.

### Salesmen Get Inside Facts on Paper Making

Among several others, there were two outstanding reasons why the September sales luncheon of the Pilcher-Hamilton Company, at which every salesman was present, was of more than passing interest. The first was the word picture given by Sales Manager E. A. Hall, Jr., of the firm, of his recent trip through two of the mills operated by the Nekoosa-Edwards Paper Company, in Wisconsin, where Mr. Hall went to get the ins and outs of paper making.

'Twas just as the boys were finishing up the meal that Chairman Harmon called on Mr. Hall to tell of his trip. He described vividly each detail as briefly as he possibly could, starting first when he alighted from the train from Chicago. He spoke of the enthusiasm over the Nekoosa-Edwards product displayed by Vice-President Nash, of that firm, as he piloted Mr. Hall through the immense operations. And Mr. Hall endeavored, and succeeded, in radiating some of that enthusiasm to his salesmen that they might sell it to the consuming public with equal enthusiasm, for Pilcher-Hamilton has just taken over the Nekoosa-Edwards line of wrappings for marketing here.

The next big reason was the presence of T. W. Koch, of the Hartford City Paper Company, Hartford City, Ind., makers of glassine and greaseproof papers, who explained in equal detail the process of making these papers. Questions were directed at Mr. Koch repeatedly by the salesmen present as they aimed to get all possible information that might assist them in getting more orders.

During August the sales contest included twines. Captain George Schultz's team carried off the prize, while the team headed by John DeVos came in second. Both teams had several of its members away on vacations during the month but even at that they piled up heavy sales of twines.

### National Container Men at French Lick Springs

The next meeting of the National Container Association is scheduled to be held at the French Lick Springs Hotel, French Lick Springs, Ind., on Tuesday, and Wednesday, September 23 and 24. Arrangements are being made by the committee in charge and the secretary, H. S. Adler, in Chicago, to assure an unusually interesting program.

A feature of the meeting, aside from the important subjects on the program, will be a golf tournament, the details of which are being arranged by the Sales Promotion Committee. The tournament is to start at 2:30 p. m., Tuesday. Four prizes will be awarded for the best showing in four events: Bling Bogey Contest, Graveyard Tournament, High Gross and Low Combined Score on the Two Shortest Holes. Indications are that there will be spirited competition in all four events.

Besides the golf tournament and other recreational features available at French Lick Springs, many outstanding subjects of interest to the industry will be given close study and consideration. Dr. Merchant, the association's economist, will be on hand with an up-to-the-minute report on general business conditions.

Progress reports will be submitted by the Sales Promotion, Standardization and Statistical Committees. A detailed report will be submitted showing just what is being done in the way of sales promotion, which includes extension in the use of corrugated fibre boxes in various lines of industry. The Standardization Committee's report on cloth tape standards is also awaited with interest as is the report of the other committees.

At this meeting there will be appointed a nominating committee to present nominations for officers of the association to be voted on at the annual meeting which will be held in New York City in November.

There will also be a full discussion of the Code of Principles of Business Conduct, as adopted by the Chamber of Commerce of the United States and by association members. It is felt that adherence to these principles will make for better conditions in business, and several members have urged that this subject be gone into thoroughly at the meeting.

**Corrugated Box Facings Authorized**

Advice has been received to the effect that the Consolidated Classification Committee has passed favorably upon the association's petition that the thickness of the facings for the 200 pound test corrugated box be changed from .018 inches to .016 inches. It will be recalled that this subject has been pending for a long time. The Association was able to present conclusive evidence to the committee that facings of .016 inch thickness, testing 100 pounds, are proper for the 200-pound test box. Members will be kept informed as to the date this change, as well as several other changes in Rule 41, Consolidated Freight Classification No. 3, will become effective. These matters will be fully covered in a report to be submitted at the meeting by General Manager Browder.

**Rex Paper Co. to Improve Plant**

KALAMAZOO, Mich., September 6, 1924.—Between \$40,000 and \$50,000 are being expended by the Rex Paper Company in improvements to its plant, located east of the city on Lincoln avenue. An addition, brick and steel, three stories high and 50 by 108 feet in dimensions, is being erected at the east end of the present mill. Of this 15,000 square feet of additional floor space, about 2,000 square feet on the second floor will accommodate the new offices. The balance will be devoted to expanding the finishing room and for storage of finished product. The present office space is to be added to the finishing department. O. F. Miller Company has the contract.

Two rotary screens, product of the E. D. Jones & Sons Company, Pittsfield, Mass., will replace the flat screens on the paper machine, insuring a cleaner sheet of paper. Another improvement will be the installation of the Stickle Steam Specialty Company's drying system to provide uniform drying of the coated stock. This system is being installed by the Kalamazoo Blow Pipe Company.

"The improvements in progress are to improve the quality of the mill's output, not increase the general production" said Merrill B. King, president of the Rex Paper Company, while discussing the program now under way. "Last February we changed the schedule of operations in our coating plant from nine hours to 20 hours daily. The result is that 90 percent of our output is now coated paper. As that all has to be hand sorted, we are greatly enlarging our finishing and storage room space."

Mr. King also announced that the position of general sales manager will be assumed by Clarence Buskirk, formerly with the Wolverine Paper Company, Otsego. He succeeds Clarence A. Bradford, vice-president and general sales manager, who has tendered his resignation to head his own company. Mr. Buskirk will report for duty within 30 days.

**July Pulp and Paper Production Statistics**

The July production of paper in the United States, as reported by identical mills to the American Paper and Pulp Association and cooperating organizations, showed a decrease of 2% from June's production, according to the Association's Monthly Statistical Summary of the pulp and paper industry.

This Summary is prepared by the American Paper and Pulp Association, as the central organization of the paper industry, in cooperation with the Binders Board Manufacturers Association, News Print Service Bureau, Tissue Paper Manufacturers Association, Wrapping Paper Manufacturers Service Bureau, and Writing Paper Manufacturers Association.

The figures for July are as follows:

Grade	Number of Mills	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
News print.....	64	113,952	117,916	28,427
Book.....	56	75,314	76,887	36,132
Paperboard.....	103	98,615	98,159	36,290
Wrapping.....	78	39,176	38,133	61,182
Bag.....	21	6,889	7,638	6,735
Fine.....	81	21,070	20,868	39,836
Tissue.....	41	9,553	9,972	10,223
Hanging.....	8	4,379	5,069	3,982
Felts.....	19	13,429	13,467	4,357
Other grades.....	57	18,379	18,013	16,269
Total, all grades.....	...	400,756	406,122	243,433

During the same period, domestic wood pulp production decreased 23%; Mitscherlich Sulphite and Sulphate being the only grades showing an increased production over June, 1924. The July totals, as reported by the American Paper and Pulp Association, through the United States Pulp Producers Association, are as follows:

Grade	Number of Mills	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
Ground wood pulp.....	102	63,706	3,376	147,419
Sulphite, News Grade.....	40	34,096	4,478	14,492
Sulphite, Bleached.....	18	16,991	3,067	2,517
Sulphite, Easy Bleaching.....	4	3,001	520	206
Sulphite, Mitscherlich.....	6	5,397	732	399
Sulphate Pulp.....	12	13,093	2,320	6,074
Soda Pulp.....	12	12,372	2,935	2,935
Other than Wood Pulp.....	...	.....	.....	.....
Total, all grades.....	...	148,656	17,428	174,042

**Making Up Government Paper Specifications**

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 10, 1924.—The Specifications Committee making up the paper schedule for the Government Printing Office is asking for suggestions from paper manufacturers. In this connection the committee is sending out the following announcement:

"The committee preparing, by direction of the Joint Committee on Printing, specifications for the purchase of paper for public printing and binding, has under consideration the question of specifying the sizes in which that paper will be ordered.

"The work of the Government Printing Office is of such a character that an unusual size or a different size from that regularly stocked by the office may be needed in large quantity to meet the needs of the government service, and many advantages would therefore accrue to the Government Printing Office if under each lot number of any particular kind of flat paper, the Printing Office might order any size paper desired within a minimum and maximum width.

"The Committee would be glad to have the views of individual paper makers and dealers on this subject. Any statement should be addressed to Ansel Wold, Clerk, Joint Committee on Printing, Capitol Building, Washington, D. C.

"Should the Committee receive no comments or suggestions on this subject, it will be assumed that it makes no difference to the trade whether specific sizes are called for, or the item reads, 'cut and size,' minimum width so much, maximum width so much."



## REPORT OF NEW ST. REGIS MILL DENIED IN MONTREAL

**Financial Times Declares Story of Company's Plans is Unfounded—Brown Corporation Planning Extensions That Will Run Into Millions of Dollars—Continental Wood Products, Ltd., to Construct Large Kraft Mill in Ontario—Northern Ontario Hears Rumors Regarding "World's Largest Paper Mill" Planned for Construction and Which Will Be of 1,000 Tons Capacity.**

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., September 8, 1924.—It is claimed by the Financial Times of Montreal that the reports from Quebec of the intention of the St. Regis Paper Company to start operations at once on a pulp and news print mill for Canada are unfounded. It says: "The company recently acquired limits and more lately secured land on which these mills will ultimately be built, at Cap Rouge, a short distance above Quebec City. The directors decided definitely against adding immediately to the supply of news print on the ground that a surplus had been established already through recent increases in machines operating at a number of Canadian mills and that until this surplus was taken care of by increased consumption, the St. Regis Company would not carry out its final plans. Initial operations, however, as has been mentioned, have been going up."

### New Steamship to Carry Paper

From Newfoundland it is announced that the steamship *Geraldine Mary*, named after Mrs. Harmsworth, mother of the late Lord Northcliffe and Lord Rothermere, has been launched at Barrow, England. Built to the order of the Anglo-Newfoundland Development Company, the *Geraldine Marie* is 422 feet long, 9,000 tons deadweight, and has a sea speed of 11 knots. It is designed specially to bring paper from the Daily Mail and Daily Mirror Paper Mills in Newfoundland. It can burn either coal or oil fuel and is specially strengthened for breaking through the ice off the coast of Newfoundland.

### Big Kraft Paper Mill

What is stated to be the largest kraft paper mill in Ontario is to be constructed and operated on the Canadian National near Foley by the Continental Wood Products Limited, a subsidiary of the Continental Paper Bag Corporation of New York, according to announcement made at Port Arthur, Ont., by L. E. Bliss, vice-president and general manager. The company will develop its own power from the Kapuskasing river. It owns Trouts Chapleau timber limits, from which it will draw its raw material.

### Brown Corporation to Extend in Canada

The Brown Corporation, a large American concern, which has a sulphate mill at La Tuque, Que., is stated to be planning extensions which will run into millions of dollars. It is understood that in addition to the present sulphate pulp mill, a plant may be erected for the production of sulphite pulp. Quite likely some steps will be taken also to harness some of the valuable power controlled by the company on the St. Maurice River. The company has developed 4,400 h.p. at La Tuque, but controls sites capable of developing 140,000 h.p. Much of this power would be required for the new pulp mill and it is just possible that power might be developed for sale to other industries. At La Tuque, turpentine is now being manufactured and attention is being directed to the possibility of adding to the chemicals manufactured here. The Brown Corporation owns and operates a large modern sulphate mill and lumber mill at La Tuque, representing a cash investment of over \$6,000,000, not counting timber holdings. This plant has a capacity of 220 tons daily. To insure a practically perpetual supply of raw materials, the Brown

Corporation has acquired and owns about 1,000,000 acres of freehold timber lands and holds under lease from the Province of Quebec about 2,000,000 acres of leasehold timber lands. In addition it owns the cutting rights on 160,000 acres of timber land, making total holdings of the Brown Corporation about 5,000 square miles conservatively estimated to contain over 12,000,000 cords of pulpwood. These timber areas are largely situated in the watershed of the St. Maurice River in which district timber lands are in great demand and are recognized as among the choicest land in Canada.

### Story of a 1000-Ton Paper Mill

"The Northern Miner," of Cobalt, says that it hears on the best of authority "that the world's largest paper mill is planned for Northern Ontario. It is to be 1,000 tons capacity, and, Smoky Falls on the Mattagami river, capable of making 200,000 h.p. and the largest and best power site in Ontario north of the St. Lawrence is to be utilized. The Kimberley Clark people are talked of as being interested, and developments in the Mattagami Pulp and Paper Company affairs next month may be a prelude. Smooth Rock Falls may be the paper mill site. A thousand ton mill would use about one hundred thousand horse-power. To feed such a gigantic mill there remain, untouched, some of the best pulp limits in the north, such as the Groundhog, Nagagami and Algoma Eastern limits. Morrow and Beatty have started surveying a railway line from the end of steel on the T. & N. O. westward to Smoky Falls. A half dozen things point to something big stirring. While on the subject of paper, the Miner can say that it learns from an inside source that the merger of Spanish and Abitibi companies is much farther apart than it was three months ago. The deal is not off by any means, but the big amalgamation of several Northern Ontario companies between Quebec and the Great Lakes, which was to follow, has slipped into the background."

### Toilet Brands Registered

Applications for registration of the following brand names have been made in the Toilet Paper Label Registration Bureau of the Tissue Paper Manufacturers' Association:

From July 20, 1924, to and including August 20, 1924:

CAROLINA GARDENS—Paul E. Trouche, Charleston, S. C.

DANIEL BOONE—Rauth Brothers, Chicago.

FORT SUTTER—Blake, Moffit & Towne, New York.

JUSTWUN—Premier Paper Company, New York.

PROPHYLACTIC—National Paper Products Company, Carthage, N. Y.

WITCH-KRAFT—Fort Howard Paper Company, Green Bay, Wis.

The following brand names have been registered in the Toilet Paper Label Registration Bureau of The Tissue Paper Manufacturers' Association:

From July 20, 1924, to and including August 20, 1924:

BANK ROLL—Fort Howard Paper Company, Green Bay, Wis.

CAMPFIRE—Fort Howard Paper Company, Green Bay, Wis.

CONSTITUTION—Stone & Forsyth Company, Boston, Mass.

DEFENDABLE—Hoberg Paper and Fibre Company, Green Bay, Wis.

EVERETT—Carter, Rice & Co., Boston, Mass.

FLUFFY CREPE—Fort Howard Paper Company, Green Bay, Wis.

GIPSY WITCH—Hoberg Paper and Fibre Company, Green Bay, Wis.

LATESTISSUE—Fort Howard Paper Company, Green Bay, Wis.

MOCK—Carter, Rice & Co., Boston, Mass.

NESTOR—Stone & Forsyth Company, Boston, Mass.

NEWESTISSUE—Fort Howard Paper Company, Green Bay, Wis.

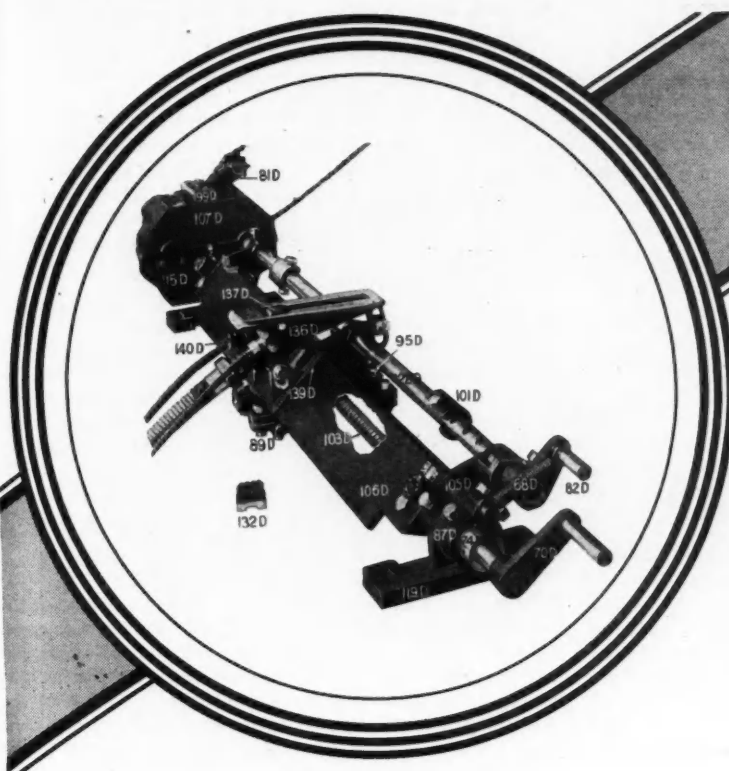
PROCESS (LAVATORY TISCHINE)—Hoberg Paper and Fibre Company, Green Bay, Wis.

SHIRLEY—Wortendyke Manufacturing Company, Richmond, Va.

SUNLIGHT—Hoberg Paper and Fibre Company, Green Bay, Wis.

TRIXIE DIX—Hoberg Paper and Fibre Company, Green Bay, Wis.





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**VICKERY**  
**Felt Conditioner**

## PHILADELPHIA TRADE SEES THE DAWN OF BETTER DAYS

**Stock in Most Lines is Moving with Greater Freedom and Price Tendencies Are Being Freely Discussed—Eagle Corrugated and Fibre Products Corporation Acquires Sales Office and Warehouse—Philips Paper Supply Co. Organizes—New Printing Device Developed by Charles Beck Machine Co.—National Gum and Mica Co. Moves to 1305 Germantown Avenue.**

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., September 15, 1924.—Now that the mid-September days have brought about a betterment in the general industrial situation, the paper trade has taken a turn towards the brighter road that leads to the upward business trend. All through the various divisions of the paper distribution field there is noted the brisker demand. Fine papers, coarse and specialties, all are moving with greater freedom than has been noted within the past six months. While this steady upward improvement is being extended all along the line there is now much talk of prices and what the coming market trend may be. During the summertime the mills were either partially or entirely closed down and curtailment of operation meant lessening of production and with the lessened output there came scarcity of stocks. This was true of mills all over the country as well as locally. Dealers who did not take advantage of the low prices and the attractive mill offerings prevailing in the dull dog days are now looking forward to higher prices for the Fall. With the scarcity of paper stock and the steady upward movement of the raw materials the local distributors are confident there is but one solution of the price problem and that is the higher level. A few far sighted distributors have been stocking warehouses with the mill offerings of the earlier summer and will be able to reap the benefits of their sagacity in providing for the future when there was an opportunity to get goods at the lowest levels that have been offered since pre-war days. But those dealers who are not so fortunate are beginning to realize that there is no other alternative than to pay the advancing prices and they anticipate difficulties in the keen competition with the houses that have the cheaper stocks of equal quality. While there is no slashing of values in the general market nevertheless the ability of the far sighted distributors to offer the same goods at the lower levels, and with fair profits, is bound to keep the paper distribution on a keen edge of rivalry for orders for many weeks to come.

The stock market while not so active as it was in the first days of the month is keeping up with demand from mills which show a slackened pace for some of the grades. The high grade stocks are scarce and most active.

### Eagle Products in New Home

A Philadelphia sales office and warehouse has been acquired by the Eagle Corrugated and Fibre Products Corporation, of Brooklyn, N. Y., at 33 S. Front street. Until taking over the combination warehouse and sales office the corporation occupied local offices in the building at 39 S. Front street just a few doors away from the new location. The local branch and distribution center is under the management of H. E. Arader. Through the warehouse facilities the corporation will be able to carry a large stock of corrugated and fibre papers and containers on hand ready for immediate shipment.

### Independent Paper Mills Representative

Samuel S. Alcorn, long identified with the Philadelphia paper trade and now engaged in the mills representation business with offices in the Atlantic Building, has just taken on the sales and distribution of the paper napkins manufactured by the Independent Paper Mills,

Inc. of Brooklyn, N. Y., and will represent that corporation in Philadelphia, Eastern Pennsylvania, New Jersey and Delaware. This line will supplement the various coarse, wrapping and fine papers for which he is local mill representative.

### New Paper Stock Supply House

The Philips Paper Supply Company, has been organized for the purpose of dealing in paper supplies, featuring old papers, and has acquired a warehouse and sales office at 1221 E. Barks street. Although the firm of which Harry Philips is head will deal chiefly in old paper it will also carry some rag stock for mill consumption.

### Pinco Papers Expand Lines

Pinco Papers, Inc., 9th and Bailey streets, Camden, have been developing a new line of Mica Finish Papers used for paper box covers. The new Mica papers are now to be manufactured in all colors and shades and have been stocked among the glazed paper specialties which the Pinco Corporation produces. The Pinco plant is running heavily on the production of gold embossed specialties. Charles E. Griffith has been appointed Sales Manager for the company and Frank Ross has been added to the sales organization taking over the duties of Joseph Maerz who severed his connection with the Camden factory to take over the Philadelphia sales territory for the Matthias and Freeman Company.

### Beck Co. Develops Printing Device

There has been developed in the paper converting machinery manufacturing shops of the Charles Beck Machine Company, 600 Chestnut street, a new printing device which develops a graining effect in paper used in the lining of suit cases and other products of this type and cartons as a substitute for burlap and cloth linings. The new device will print directly on the box board giving the same effect as linings of cloth materials in any design that may be desired. It will take a 48-inch width and was especially made up for a large manufacturer of cheaper grade of suit cases and traveling bags catering to the large chain stores. The machine will be added to the list of paper converting equipment for which the Beck Company carries many patents.

### Goes with Daniel I. Murphy, Inc.

John J. O'Leary of 48 North Front street has discontinued his general merchandising business to enter into association with Daniel I. Murphy, Inc., 4th and Chestnut streets. He will assist John A. Murphy in the operation of buying and selling all grades of foreign and domestic paper making material. Mr. O'Leary has been connected with the trade for the past twenty years and knows all grades thoroughly, having had extensive experience in the grading, selling and buying of paper making material.

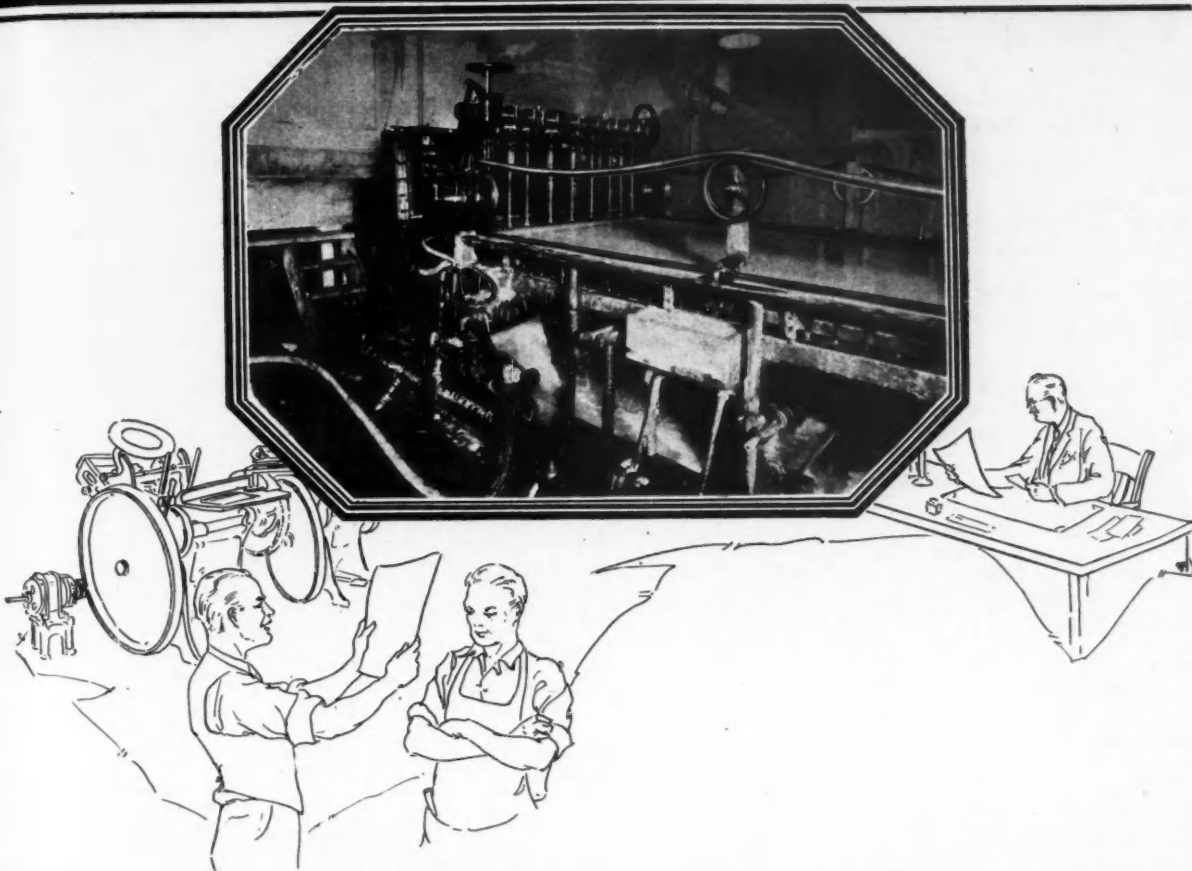
### Norman Hurlock Back from World Tour

Norman Hurlock, head of Hurlock Brothers, 3436 Market street, card board and paper board converters, who has been on a world tour for the past six months, returned this week. Accompanied by his son, Thomas Hurlock, the head of the Hurlock firm sailed around the world, visiting the various branches in South America, Europe and the Orient, where Hurlock Brothers have a globe-wide distribution for its card board cut out and die manufacturing business catering to the box and paper trade.

### Gum and Mica Co. in New Quarters

The National Gum and Mica Company, a subsidiary of the Crescent Color and Chemical Company, manufacturers of colors for paper makers, has secured a large Philadelphia warehouse and sales office with railroad siding on the Reading Railroad at 1305 Germantown avenue. The company manufactures sizing for paper manufacturers and gums and in the Philadelphia distribution center, the two story warehouse just purchased at this address, there will be carried larger stocks of these supplies for local manufacturers. The new quarters provide better shipping facilities than the old location:

(Continued on page 34)



## Why *the* Voith Inlet makes Your Paper *the* Stock that Printers Want

More and more, each year printers are paying closer attention to the printing qualities of the papers they use and the manufacturer of paper cannot disregard this fact.

Of course, strength and color have much to do with the printers' choice and these depend greatly on the raw stocks the paper manufacturers use and the way these stocks are treated before they reach the Fourdriniers.

But surface, formation and lack of variation in

thickness are just as important and they are determined by what happens on the paper machine itself. The use of the Voith High Pressure Stock Inlet makes possible a sheet of uniform thickness across the entire width of the machine, and improves the formation to a remarkable extent. It, moreover, increases production.

The reasons for these improvements and the actual experience of manufacturers of book, bond, wrapping, and waxed papers are ready for your consideration, as soon as we know that you are interested.

### VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue



## BETTER DEMAND REPORTED IN BOSTON PAPER MARKET

**Improvement Extends Pretty Generally Throughout the Trade—In View of the High Cost of Labor and Raw Materials, Mills Assert That They Are Not Getting an Adequate Price for Their Products, But In Spite of This They Are Disinclined to Raise Prices at This Time—Rumors of Kraft Papers Being Offered at Low Prices Tend to Disturb the Market.**

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., September 8, 1924.—The spirit of optimism which was apparent in the market last week seems to have taken a very substantial form in the way of actual orders throughout the paper trade. Of course with the vacation season formerly ended at Labor Day, many have returned filled with fresh ideas and thoughts for business. It is perhaps natural then that many plans which have been tabled pending the end of summer will now be put into operation.

This activity is extending into many industrial lines which use paper in their operations and, of course, any quickened activities on their part is quickly noticed in the paper trade. The shoe business continues to be fair although no large amount of future business has been booked. This means a good demand for box board and tissues as well as some of the special fiber boards actually used in the construction of the shoe.

### Prospect of Price Changes

Mills steadfastly affirm that it will be a mistake to raise prices at this time but it is confidently expected that with business more normal and regular in its demands that some lines will advance quite sharply. Mills claim that they are not getting enough money for their product and cannot continue to stand advancing labor and material costs. It is easy to see that if labor and raw material does advance, as so many predict, there will be nothing left for the mills to do but raise prices. However, it is not desired to create any single deterrent factor in the bid for orders at this time and prices will probably remain as they are until after the new year. There is the very definite sentiment that prices are likely to advance after the turn of the year and the trade seems fairly well acquainted with the fact that certain lines must advance for the best interests of the industry.

Board mills are normal again and able to take care of orders in their regular schedules. Paper stocks are in plentiful supply again and as reported last week, collections of old papers have been a feature of the month and have resulted in large accumulations. For a time the price on paper stock advanced sharply but with ample stocks now available and a waning demand, prices have eased off as was expected. Envelopes and paper bags are the sluggish spots in the industry although of course there is a steady demand for the commercial types of envelopes in standard sizes.

### Kraft Papers at Low Prices

Kraft papers are being offered at very low prices and it is rumored that some New York firms are offering kraft papers in this market at prices as low as 4 cents per pound. This is admittedly pretty low and it is a question in the minds of many just what can be the cause of such a change and what the delivered product will be like.

Of course it is always possible that these are merely offerings and prices quoted to buyers who have no intention of placing business, but, nevertheless, the rumors come from reliable sources. With the general industrial improvement, increased demand will no doubt stiffen prices but at the present time the wrapping and coarse

papers are in a bad way. Demand is light, stocks ample and prices loosely quoted.

Printing papers continue to be in fair demand and printers are very busy. It has been a good season for the printers and publishers. Stocks of book papers are ample and mills are running steadily. No particular advances are looked for as this line is in a good stable condition, running on a regular schedule of production and with orders keeping pace with production.

### General News of the Boston Trade

Among the Boston visitors at the Hammermill Paper Company Conference at Erie, Pa., last week, were the following paper men well known in the trade: A. E. Pratt, Carter Rice & Co., W. F. McQuillan and W. B. Stevenson from the Storrs & Bement Co., and George L. Webb of the Storrs & Bement Co., New Haven Conn., Branch.

Max Frank, buyer for John Carter & Co., Inc., has returned with a heavy coat of tan from two weeks' vacation at Lake Sunapee, N. H. Arthur Hooper, clerk of the corporation, has also returned to his desk after two months spent at Jackson, N. H. Mr. Hooper is one of the oldest employees of this well known jobbing house and has been in their employ for 44 years. He is still very active in the business and sets the pace for many of the younger men.

The Poland Paper Company, Poland, Maine, has produced a new cover stock to be known as "Waterfalls" cover. It is to be made in white and five colors and is produced to round out the bond and ledger stocks made by this same mill and marketed under the brand of "Waterfalls."

Theodore Fennessy, manager of the Boston office for the Whitaker Paper Company, Old South Building, Boston, has just completed his first vacation in several years. He spent the two weeks in roaming or rather driving around quaint Cape Cod and visited all the well known summer resorts in that vicinity.

It develops that a movement is on foot to have mill meetings for next year scheduled far enough in advance so that the dates shall not overlap as some of them did this year. Several mills have been forced to give up their annual get together meetings this year, because the dates conflicted and they could not possibly get the representation they desired at the time they wanted them. Several of the more prominent paper men in Boston are heartily in favor of making up a calendar of events many months in advance. This plan will have two benefits at least. It will establish certain meetings as fixtures and it will also allow sufficient advance publicity so that other mills may definitely decide on their dates without fear of conflicting.

### PHILADELPHIA PROSPECTS BRIGHTER

(Continued from page 32)

at 408 Vine street. The company will dispose of the Vine street property by sale and confine its business to the new home under the management of Milton J. Heim. The sales organization has been increased by the addition, of J. E. Brennan who will travel through the State working out of the Philadelphia branch.

### John M. Connors in Europe

Vice-President John M. Connors of the Fibre Container Company, allied with the Philadelphia Paper Manufacturing Company, Manayunk, is now in Europe touring England and France and will make the return voyage this week. President John Jacobs is spending his vacation days in Cape Cod.

### Fred R. Mann Joins Weber Company

Fred R. Mann, who recently returned from a honeymoon trip extending to the Pacific Coast, has now become associated with the David Weber Company, manufacturers of corrugated containers and papers, 5th and Locust streets. He was graduated from the University of Pennsylvania last June and will begin on the sales staff and learn the container business in all branches.



To Further Serve the Paper Trade

# THE KALBFLEISCH CORPORATION

Announces the Opening, About October First, of a

## New Plant at Kalamazoo, Michigan

For the Manufacture of

# SATIN WHITE

and

# ROSIN SIZE

Other Conveniently Located Plants

BROOKLYN, N. Y.

WATERBURY, CONN.

ERIE, PA.

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CHATTANOOGA, TENN.

# THE KALBFLEISCH CORPORATION

200 FIFTH AVENUE, NEW YORK, N. Y.

Western Representative:

{ PAPER MILLS SUPPLY COMPANY  
PARK AMERICAN BUILDING  
KALAMAZOO, MICHIGAN

## ONTARIO MILLS BUSY BUT PAPER TRADE STILL LAGS

**Wholesale Firms Report That Strenuous Sales Efforts Are Almost Barren of Results—Paper Shares Taken Off Canadian Market for Permanent Investment—Timber Rights in Kittson Bring Record Figure—J. J. McFadden, Ltd. Gets Mill and Timber Limits of Bishop Lumber Co.—Ontario Mills Complying with Licensing Regulation—Canada Paper Co. to Construct Large Dam.**

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, September 8, 1924.—In regard to market conditions the mills are pretty busy at the present time but the jobbing end of the trade has not come up to the volume that was anticipated; this, despite the fact, that sales organizations have never been so energetic in their efforts. Most wholesale firms report that it is only through the exertion of their best endeavors that their sales can be kept up to anywhere near normal. Many of the jobbers are backing up their sales efforts by direct mail advertising, which, of course, helps out on the volume of paper consumption and incidentally adds something to the printing industry which has been quiet of late. Both the jobbing and the manufacturing ends of the paper trade are up against the competition of foreign papers in some lines, but, despite this situation, it must be said that the Canadian-made products are standing up well and the fact remains that there have been no price recessions of consequence.

From a manufacturing standpoint the Canadian paper trade at the present time appears more satisfactory than the jobbing arena. For instance, the book paper mills are all busy, the source of supply being largely confined to the publishing and the catalogue trades. On the other hand, the coated paper mills are running exceedingly light. Board mills are gradually increasing their output and, in this connection, it is worthy of note that the paper box industry, which is a large consumer of board, is running into its busy season and the prospects are bright for a good volume of business this fall. Paper box manufacturers report that there is a particularly good call for set-up boxes at the present time.

### Paper Shares Taken Off Market

It is reported that, during the past few days, about seven thousand shares of paper stock have been taken off the Canadian market for permanent investment. These include large blocks of Spanish River preferred and also a considerable quantity of Abitibi, Price Brothers and Laurentide. This will still further reduce the floating supply of some of these stocks and is in itself an indication of the strong feeling of confidence held by those in closest touch with the industry in the investment possibilities of these securities.

### Good Reception for Canadian Paper

W. H. Sherriff, of the Hodge-Sherriff Company, Toronto, has returned from an extended business trip to Great Britain. He reports an increasingly friendly spirit in the Old Country toward paper products from Canada and especially with reference to kraft paper. Mr. Sherriff spent some time supervising the exhibit of kraft paper made at the Wembley Exhibition by the Wayagamack Pulp and Paper Company, of Three Rivers, Que., for which his firm is the selling agent in Canada, Great Britain and France.

### Profitable Sale of Timber Limit

Upwards of \$330,000 will accrue to the provincial treasury of Ontario on the sale of the timber rights in the greater part of the township of Kittson in the district of Temagami. The successful bidder was Donald McLellan, of Latchford, who gets the rights to cut over a limit of twenty-seven square miles. The price obtained was very high and the cut includes nearly a million feet of spruce

and other pulpwoods. The figure paid for the red and white pine and jack pine was the largest in the history of recent sales.

### Big Transfer of Rights

One of the largest transfers in the woods products line took place during the past week when the Bishop Lumber Company, of Nesterville, sold its mill and timber limits to J. J. McFadden, Limited, of Spragge, Ont. The Bishop Lumber Company recently acquired by purchase four timber berths in the Mississauga Forest Reserve consisting of 144 square miles of pine. The sale was conducted by the Department of Lands and Forests and the net revenue from the transaction to the province will be about two and a half million dollars. The timber has to be cut from the townships within the next five years and turned into a finished product in Ontario.

### Licensing of Mills Progresses

Since Ontario passed a regulation requiring the licensing of all saw mills and pulp and paper mills in the province, the response has been quite active and, although the new regulation went into effect only in July last, already over five hundred plants have complied and many applications are coming in daily. The license fee is a merely nominal one and will enable the department to keep tab on all operations, cutting rights, amount of timber sawed, etc., and prevent squatting, pilfering and pirating which have taken place in some instances in the past.

### Forestry Methods to the Front

The Exhibit Car of the Canadian Forestry Association, which was at the Canadian National Exhibition, Toronto, during the past fortnight attracted a large number of visitors. Officials were kept busy driving home to the passing crowds common sense facts on forest protection. In the International Exhibit building the Canadian Forestry Association put on a continuous motion picture display. The best films on the subject of forest fire prevention that could be obtained were presented and the lectures were both timely and instructive.

### Toronto Carton Council Meets

At the last regular meeting of the Toronto Carton Council, a resolution was passed recommending that the members, in the buying of supplies, give preference to associate members of the Canadian Paper Box Manufacturers' Association, and that the secretary advise the members of the Canadian Association of the adoption of the resolution and send them a list of the names and addresses of the associate members.

### Notes and Jottings of the Industry

H. G. French, of the Allen Paper Company, Toronto, has returned from his vacation at Algonquin Park, Ont.

T. J. Macabe, of Buntin, Reid Company, wholesale paper dealers, Toronto, has returned from attending a reunion of the agents of the Strathmore Paper Company at Mittineague, Mass., of which his firm is the Canadian representative.

C. Howard Smith, of Montreal, former president of the Canadian Pulp and Paper Association, was in Toronto last week calling on the trade.

A. E. Rudd, who is now living in Los Angeles, Cal., and is the founder of the Rudd Paper Box Company, Toronto, spent a few days in Toronto and called upon a number of old friends in the trade.

The annual picnic of the Automatic Paper Company's staff, Toronto, was held recently at Port Dalhousie and a very pleasant time was spent in sports and games.

Robert Brown, manager, and J. R. Marshall, sales manager of the Canadian-Nashua Paper Company, Peterboro, Ont., were in Toronto during the past week on business and report that the plant is operating to full capacity.

Vickers, of London, England, and Canadian Vickers, Montreal, made a fine display of paper making machinery and supplies at the Canadian National Exhibition, Toronto, which has just closed.



*Established 1886*

## G. H. Q.

*To confer with us before you buy your pulp will cost you nothing. To buy elsewhere without first consulting us may cost you a lot.*

*The ever recurring names of the largest paper mills on our contract records from year to year convinces us that the shrewdest buyers regard us as GENERAL HEADQUARTERS for Bleached and Unbleached Sulphite, Kraft and Ground Wood Pulp.*

## **M. GOTTESMAN & COMPANY**

—INCORPORATED—

**18 East 41st Street  
New York, N. Y.  
U. S. A.**

European Offices:  
Stureplan 13,  
Stockholm, Sweden.

## New York Trade Jottings

G. M. Wetmore, sales manager of the Groveton Paper Company, is spending his vacation in New Hampshire and Canada.

\* \* \*

The Import Committee of the American Paper and Pulp Association will meet at 11 o'clock today at association headquarters to further their work. The most important matter up for today's consideration is the financing of the war on the paper "bootleggers."

\* \* \*

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association was at Petersboro, N. H., last week to attend the meetings of the Society for Protection of New Hampshire Forests and took advantage of the occasion to discuss with the director of the New England Forest Experiment Station methods by which the work may be applied to the paper industry.

\* \* \*

The New York Division of the Salesmen's Association of the Paper Industry has made arrangements for the long planned upriver trip to visit Hudson river paper mills. The party will leave New York on Monday night, September 29, returning Wednesday night. The salesmen will visit the West Virginia Pulp and Paper Company, A. P. W. Paper Company, the Martin Cantine and the Tissue Company mills at Albany, Mechanicsville and Saugerties.

\* \* \*

Tuesday was the occasion of the departure of the American Industrial Mission to Mexico. The Mission was organized by American banking, manufacturing and export interests for the furtherance of financial and industrial relations between this country and Mexico. Paper men who are members of the Mission are President Jacob Kindleberger of the Kalamazoo Vegetable Parchment Company, and Edwin Walker of the Maurice O'Meara Company. The party left New York over the Pennsylvania Railroad at 4:50 Tuesday afternoon, picking up various members of the Mission along the way. They will go to Mexico by the way of Dallas, San Antonio and Laredo, arriving in Mexico City next Sunday. There they will be welcomed by Mayor Marcos E. Raya.

### Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 10, 1924.—The Government Printing Office has received the following bids for 32,000 pounds of 21 x 32, 16 No. 9 white sulphite manifold paper; Maurice O'Meara Company, at 12.5 cents per pound; Import Paper Company, at 11.125 cents less 2 per cent; Old Dominion Paper Company, at 11.37 cents; Whitaker Paper Company, at 12.7 cents; R. P. Andrews Paper Company, at 12.6 cents; Dobler & Mudge, at 12.7 cents; Reese & Reese, at 9.39 cents and 8.49 cents; Stanford Paper Company, at 11.5875 cents; Samuel S. Alcorn, at 10.7 cents; American Writing Paper Company, at 11 cents; Barton, Duer & Koch, at 12.84 cents; and Lindenmyer & Harker, at 15.25 cents.

The Printing Office will receive bids on September 12 for 16,000 pounds (1,000 reams) of 21 x 32 16, No. 9 green manifold bond paper.

The Government Printing Office has received the following bids for 121,500 pounds of 31½ x 48 81, No. 20 white sulphite bond paper; Newton Falls Paper Company, at 7.65 cent per pound; R. A. Cauthorne Paper Company, at 7.84 cents; Maurice O'Meara Company, at 7.97 cents; R. P. Andrews Paper Company, at 6.95 cents; Reese & Reese, at 7.447 cents; Whitaker Paper Company, at 7.5 cents; Old Dominion Paper Company, at 7.819 cents; American Writing Paper Company, at 7.77 cents; Aetna Paper Company, at 9.5 cents; C. B. Hewitt & Bros. Inc., at 8.6 cents; Import Paper Company, at 7.7 cents less 2 per cent; and Allied Paper Mills, at 8.5 cents.

The following bids were also received for 2,000 pounds of 17 x 22 20, No. 20 white Declaration bond paper; R. P. Andrews Paper Company, at 32 cents per pound; Reese & Reese, at 27.425 cents; and Southworth Company, at 36 cents.

The Printing Office has also received the following bids for 5,400 pounds of 21 x 32 36, No. 20 yellow sulphite writing paper; Allied Paper Mills, at 7.75 cents per pound; Whitaker Paper Company, at 8.75 cents; Reese & Reese, at 8.87 cents and 8.649 cents; Old Dominion Paper Company, at 8.49 cents; American Writing Paper Company, at 10.24 cents; Maurice O'Meara Company, at 9.4 cents; The Baxter Paper Company, at 8 cents and 8.9 cents; Baltimore Paper Company, Inc., at 12.5 cents and Aetna Paper Company, at 9.5 cents.

The Government Printing Office will receive bids on September 15 for 1,800 pounds (200 reams) of 21 x 32.9, white tissue paper. Bids will also be received on the same date for 2,000 pounds of 22 x 28, 196, blue railroad board.

The Government Printing Office will receive bids on September 17 for 5,000 lbs. of oiled manila tympan paper, 24 x 36, 86, in 48" rolls. Bids will also be received on the same date for 3,200 pounds, 200 reams, 24 x 38, 16, white parafin paper.

The Government Printing Office has announced the following paper awards:

The District of Columbia Paper Mfg. Company will furnish 50,000 pounds (500-reams) of 19 x 24 moss green desk blotting paper at 9.45 cents per pound, bids for which were received on July 30.

The Whitaker Paper Company will furnish 15,000 pounds (1200 reams) of 21 x 32 No. 7 white manifold bond paper at 22 cents per pound and the Southworth Company will furnish 20,000 pounds (1260 reams) of 21 x 32 No. 9 white record manifold bond paper at 29.5 cents. Bids for these items were opened on August 4.

Ten thousand pounds (100 reams) of 19 x 24 100, buff desk blotting paper will be furnished by the Whitaker Paper Company at 841 cents per pound, bids for which were received on August 6.

The Allied Paper Mills will furnish 78,000 pounds (2,000 reams) of 24 x 38 39, yellow sulphite writing paper at 7.25 cents per pound and Samuel S. Alcorn will furnish 40,000 pounds (500 reams) of 25 x 38, end paper at 7.35 cents. Bids for these items were received on August 8.

The American Writing Paper Company will furnish 1,406 pounds of 21½ x 32½ 37, pink antique book paper at 9 cents per pound, bids for which were received on August 11.

The Import Paper Company will furnish 4,800 pounds (300 reams) of 21 x 32 No. 9 green sulphite manifold paper at 13.81 cents per pound and Reese & Reese will furnish 25,000 pounds (250 reams) of 22½ x 28½ 100 lbs., white bristol board at 8.147 cents per pound. Bids for these items were received on August 13.

### Louis Salzer, Vice Pres. Republic Bag Company, Dead

Louis Salzer, second vice-president of the Republic Bag and Paper Company of New York, died of heart disease at his home, 1 West 85th street, Thursday morning, September 4.

Mr. Salzer was 42 years old. He received his early training with the Continental Bag and Paper Mills Corporation and has been associated with the Republic Bag and Paper Company for approximately 12 years, and for the last seven years has been second vice-president. He spent most of his time during the last two years in Europe with headquarters at Berlin, Germany, in charge of the foreign buying for his company. He leaves a wife and son.

The Canada Paper Company, of Windsor Mills, Que., who have warehouses in Montreal and Toronto, is preparing plans for the erection of a dam at Ulverton, Drummond county, Que., which will cost in the neighborhood of \$800,000. It is expected that ten 1/2 will be called for construction in the course of a few months.



# Growing Two Blades of Grass in Place of One

With High Labor Costs, Our Only  
Salvation Is Through Improved  
Methods and Machinery

The NEW BELOIT FOURDRINIER  
is making better paper at a higher speed

**Beloit Iron Works**

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Since 1858



# Editorial

Vol. LXXIX New York, September 11, 1924 No. 11

HENRY J. BERGER, Editor

## VALUABLE WORK BY COST ASSOCIATION

The Cost Association of the Paper Industry, under the direction of its secretary, T. J. Burke, is making a study of the paper industry which deserves the whole souled support of every manufacturer who is invited to participate. The work includes the developing of ratios for the industry as a whole as well as for the different groups of which it is composed as follows:

- The ratio of current assets to current liabilities.
- The ratio of inventory to receivables.
- The ratio of net worth to fixed assets.
- The ratio of net worth to total debt (current and funded).
- The ratio of net sales to receivables.
- The ratio of net sales to inventory.
- The ratio of net sales to fixed assets.
- The ratio of net sales to net worth.

For this purpose Mr. Burke is sending a questionnaire to manufacturers on which they are requested to fill in their balance sheet figures as of December 31, 1923, with the request that if the concern's fiscal year ends at some other time the date be changed to correspond with the fiscal year. The questionnaires are not to be signed, but are simply numbered, so that the identity of the concerns filling them out cannot be disclosed.

As a matter of convenience the industry has been divided into ten groups as follows, for the purpose of this investigation: 0, Absorbent; 1, Boards; 2, Building; 3, Cardboard; 4, Cover; 5, News Print; 6, Printing; 7, Tissue; 8, Wrapping, and 9, Writing.

In sending the questionnaire to the mills throughout the country, Secretary Burke says:

"Your co-operation in this study is earnestly requested. Copies of the report made from the information collected, will be forwarded only to those concerns who make the report possible. We have been studying this matter for the past two years, and believe the resulting information we shall be able to give executives, will prove to be of vital interest and importance to them. Economists state, almost without exception, that we must look forward to a period of declining prices. We are also told, we must face increasingly severe foreign competition. Information which will be developed as a result of the above study, will undoubtedly prove of great assistance to executives in meeting these difficult conditions, because these 'averaged' ratios will serve as a standard for measuring the standing of each concern against the industry's average and the group's average.

"We request therefore, that this letter be handed promptly to the executive who must make the decision regarding your co-operation. Also, that if it does not meet with his approval, he will kindly state the reason why he disapproves.

"We can assure you most emphatically, that all information given will be treated in the strictest confidence."

Similar studies made in other industries have proved of great value. Paper manufacturers will be doing themselves a service by

filling the questionnaire out carefully and returning it immediately to the Secretary of the Cost Association, as the usefulness of the work obviously will be greatly lessened if a representative number of mills in each group does not respond.

## ANNUAL SAFETY CONGRESS

An event of very great importance will be the Thirteenth Annual Safety Congress of the National Safety Council to be held at Louisville, September 29 to October 3, for at that time the story will be told of what has been done in this great safety work during the past year.

The Paper and Pulp section will be prominent in the proceedings, holding its first session at 10 o'clock on the morning of September 30, and having a program of well informed speakers who will speak on various phases of the safety work as applied to the paper industry. This section will also hold a second session the following morning. On its program are the following addresses:

"Health Service Work in Paper Mills," Dr. Louis Frechtling, Director, Department of Industrial Relations, Champion Coated Paper Company; "Hazards of the Sulphate and Soda Processes," Charles Ludwig, Assistant Superintendent, Mead Pulp and Paper Company; "Round Table Discussion of Paper and Pulp Mills Safety Code," led by R. M. Altman, chairman, Paper and Pulp Mills, Safety Code Committee, Marathon Paper Mills Company, Rotschild, Wis.; "A Digest of the Annual Congress Proceedings of the Paper and Pulp Section."

Some industrial features of the Congress will be an extensive report of a study made by nationally known experts on the causes of benzol poisoning; a thorough report of research work into corrosion and its relations to safety in chemical plants; prevention of lead poisoning and health education of our foreign families. Industries are coming more and more to realize that the majority of accidents are due primarily to mental conditions of the individual and this attitude is reflected in the devotion of much time by the various sections of the Council to the fascinating study of the menal causes of accidents. Psychiatrists, psychologists, physicians and surgeons and laymen noted for extensive research into this phase of safety work are included on the Congress program.

The Council will exhibit its new industrial safety film which is being produced at a cost of \$10,000 and from six to ten other films dealing with safety in industry. One hundred new and unique types of safeguards which have been developed during the past year will be shown by lantern slides. Many of the industrial sections will have exhibits in connection with their sessions. These exhibits will consist of the mechanics of accident prevention.

## WAGES IN THE PAPER INDUSTRY

The depression in the pulp and paper industry continues to be reflected by the figures on employment and wages collected by the Bureau of Labor Statistics of the Department of Labor at Washington. Replies to the questionnaire sent out by the Bureau for July were received from 207 paper and pulp plants which gave their employment in June at 53,938, decreasing in July to 51,852, a decrease of 3.9 per cent. The payrolls in these plants also decreased from \$1,383,969 in June to \$1,284,992 in July, a decrease of 7.2 per cent.

One hundred and fifty paper box factories gave their employment

in June at 15,702, decreasing in July to 15,356, a decrease of 2.2 per cent. The payrolls in these plants also decreased from \$328,576 in June to \$309,213 in July, a decrease of 5.9 per cent.

The bureau also received replies from 160 paper and pulp mills which gave their employment in July of last year at 44,291, decreasing in the same month of this year to 42,779, a decrease of 3.4 per cent. The payrolls in these plants also decreased from \$1,165,848 in July of last year to \$1,068,496 in the same month of this year, a decrease of 8.4 per cent.

One hundred and thirty-three paper box plants gave their employment in July of last year at 13,797, decreasing in the same month of this year to 12,939, a decrease of 6.2 per cent. The payrolls in these plants also decreased from \$279,785 in July of last year to \$254,189 in the same month of this year, a decrease of 9.1 per cent.

#### Moosehead Paper Co. to Run Skowhegan Mill

SKOWHEGAN, Maine, September 9, 1924.—The Moosehead Paper Company has been recently organized and will take over the paper mill business at this place formerly carried on by the Skowhegan Paper Company. The officers of the new company are: John J. Moore, chairman of the board of directors; David A. Chapman, president; H. F. Ingraham, vice-president; R. H. Moore, treasurer; L. R. Moore, assistant treasurer and secretary.

The equipment of the mill includes four 1,500-lb. beaters and one 90-inch Fourdrinier, trimming 82 inches. Water and electrical power will be used to operate the mill.

The company will manufacture 30,000 lbs. per 24 hours of white and colored poster, box linings and sulphite and ground wood specialties.

#### Cigarette Paper Imports from France Decrease

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 10, 1924.—Cigarette paper to the amount of 1,254,449 pounds were exported from the Bordeaux consular district to the United States during the six months ending June 30, according to a report to the Department of Commerce from American Consul Memminger. The report continues:

"Exports would appear to have decreased to some extent compared with 1922 and 1923 when the United States received a total of 4,064,363 pounds and 3,168,189 pounds respectively for the calendar years from this district.

"The factories supplying the Bordeaux district are located chiefly in the Pyrenees and the Department of the Arige.

#### Simplification Program Favorably Received

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 8, 1924.—Officials of the Simplified Practice Division of the Department of Commerce report that they are receiving an encouraging number of acceptances to the paper simplification program which was worked out some months ago. It is believed that nearly 80 per cent of acceptances have been received.

It is understood that the binders board manufacturers have signified their willingness to go ahead with a simplification program and it is possible that this will be undertaken shortly.

#### Labor Trouble at Parker-Young Plant Settled

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 10, 1924.—The Bureau of Conciliation, Department of Labor, has information to the effect that the strike of the paper makers of the Parker-Young Company at Lincoln and Livermore, New Hampshire, has been concluded. The Company proposed a decrease of 5 cents per hour in the wages of the paper makers and this reduction has been accepted.

#### Paper Men at Strathmore Town

STRATHMORE, MASS., September 8, 1924.—Last Thursday marked the annual town meeting of Strathmore Town and a representative gathering of the Mill and Merchants' Association was on hand to celebrate. In the morning the guests inspected the advertising exhibit of Strathmore lines and visited the strathmore mills. Luncheon was next enjoyed after which the visitors were welcomed at Memorial Hall by H. H. Morgan of Carter, Rice & Co., president of the association. Col. B. A. Franklin of the Strathmore Paper Company then spoke on "The Human Nature of Selling" which was followed by an interesting discussion.

The election of Strathmore town officials resulted as follows:

Mayor, W. C. McLaughlin, Union Paper and Twine Company, Detroit, Mich.

Fire chief, J. O. Franz, A. Hartung and Company, Philadelphia. Police chief, H. S. Kratz, Alling and Cory Company, Buffalo, N. Y.

Prohibition agents, C. Charnella, Paper House of New England, Springfield, Mass.; C. N. Bond, Arnold-Roberts Company, Augusta, Me.; C. E. Mack, Mack-Elliott Paper Company, St. Louis, Mo.; Graham Blandy, C. A. Esty Paper Company, Worcester, Mass.; W. F. Doyle, Chatfield and Woods Company, Pittsburgh, Pa.; J. W. Reilly, Acme Paper Company, St. Louis, Mo.

Bootlegger, T. J. McCabe, Buntin, Reid, Ltd., Toronto, Canada.

Chicken catcher, John Wilson, a newlywed, of Carter-Rice & Company, Boston, Mass.

Vice squad, L. A. Colton, of San Francisco.

City clerk, C. H. Miles, M. & F. Schlosser, New York City.

Constables, D. R. Merrill, Cleveland Paper Manufacturing Company, Cleveland, Ohio; Andrew Simon, Charles Beck Co., Philadelphia, Pa.; John Appel, Storrs-Bement Company, Boston, Mass.

Overseer of the poor, H. T. Adams, B. W. Wilson Paper Company, Richmond, Va.

Dog catcher, H. M. Zimmerman, Johnson-Albershart Co., Cincinnati, Ohio.

Street cleaner, W. A. Rhodes, Atlanta, Ga.

Motor cycle cop, Wm. Steadman, J. E. Linde Paper Company, New York.

Tax Collector, O. S. Barrie, McClellan Paper Company, Minneapolis, Minn.

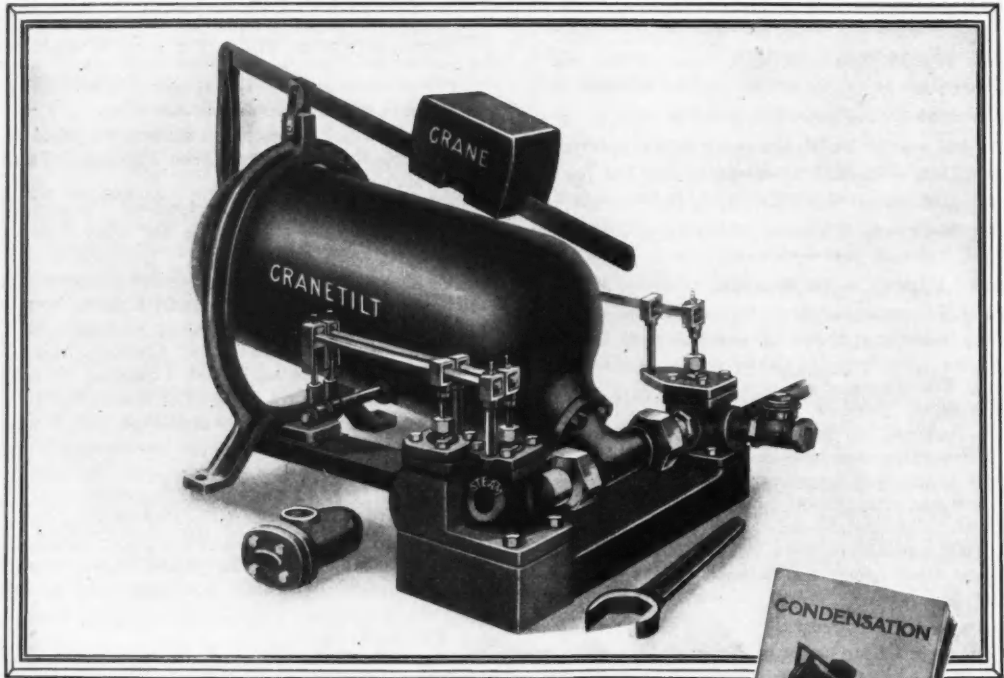
The Friday session was devoted to a number of interesting addresses and the affair wound up with a clam bake at Woronoco Park.

#### Czechoslovak Pulp and Paper Prices

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., September 8, 1924.—The domestic wood pulp and paper market continues to show improvement, and almost all of the Czechoslovak factories are working to their full capacity, according to a report to the Department of Commerce from Consul General C. S. Winans, Prague. In view of the increased demands, especially for cardboard and wrapping paper, and the low stocks of pulp wood in this country, it is expected that a general advance in prices will soon take place. Sweden continues to be a good market for Czechoslovak cardboard and large shipments of wood pulp are being made to England, France and South America. France is also a leading purchaser of Czechoslovak newsprint.

Prices of wood pulp, "Kraft" paper and newsprint, showed very minor changes on the Czechoslovak home market during the last half of June and the first two weeks of July. Increases, amounting to a few hellers only were to be noted in the prices of all grades of domestic wood pulp. Quotations on "Kraft" pulp, imported from Sweden, decreased slightly. The heavier grades of "Kraft" paper were 50 crowns cheaper and the coarser grades of newsprint, 30 crowns cheaper per metric ton, than the prices reported on June 15. (One crown, at the present rate of exchange, is worth, approximately, \$0.029.)



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## Section of the

# Technical Association of the Pulp and Paper Industry



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



Conducted by W.G. Mac NAUGHTON, Secretary

## WASTES FROM PULP AND PAPER MILLS CHEMICALLY CONSIDERED\*

By H. W. CLARK<sup>1</sup>

There are two main points of view concerning pulp and paper-mill wastes: (1) That of the owner of the mill who wishes to discharge wastes of no value into the streams on which the mill is located; and (2) that of the sanitary engineer who wishes to keep the stream in as unpolluted a condition as can be reasonably required.

Where industrial streams are not used for water supply, about all that is necessary in the treatment of industrial wastes is purification sufficient to prevent the stream from becoming a nuisance to the community, on account of its appearance, deposits on its banks, and odors. If possible, it should be kept clean enough to be a source of enjoyment to this community. Where streams are polluted by pulp and paper-mill wastes too large in volume to be properly diluted and cared for by the volume of water into which they go, and this stream must be used farther down on its course as a water supply after filtration, efficient treatment of these wastes is not only desirable, but necessary.

The speaker began to investigate the pollution of streams by wastes from pulp and paper mills about twenty-seven years ago and has been obliged to consider the subject of paper-mill wastes both from the viewpoint of the sanitary engineer and the manufacturer who hesitates to expend large sums to satisfy extravagant demands for the prevention of stream pollution.

Many kinds of wastes result from the making of paper, and a more or less complete classification of them is as follows:

- (1) The wastes from pulp mills where wood, either poplar or spruce, is treated.
- (2) The wastes from digesters in mills making paper from material other than wood pulp, that is, from old rope, carpets, bagging, old paper, etc., and as this stock is treated in digesters, the wastes resemble those from wood-pulp mills.
- (3) The waste liquor, very polluted, produced by washing and beating such stock before it is treated in digesters and made into paper.
- (4) The waste from mills in which rags only are the stock treated with milk of lime in rotary boilers.
- (5) The wastes from making pulp of all kinds into paper.

At present, the wood-pulp mills treat either poplar, spruce, or hemlock, the poplar being treated by the soda process, and the spruce and hemlock by the sulphite process. Owing to the decrease in the supply of poplar, the sulphite process is perhaps gain-

ing materially over the soda process. Two classes of waste liquor are produced, one from each process. At many mills, the digester liquor from the soda process is evaporated and the used chemicals recovered, thus preventing the discharge of much waste liquor. The liquors from the sulphite process generally go to waste, that is, are discharged into the stream on which the mill is located. The following statements concerning two typical pulp mills in Massachusetts, one using the soda process and the other the sulphite process, can be made.

### Soda Mill

In the pulp mill using the soda process, 2,500 pounds of soda ash are used for each charge in the digester, this soda being causticized 90 per cent before use and the residual calcium carbonate resulting from this process used in sizing. Of the 2,500 pounds of soda used in each charge, about 500 pounds is new, whereas the remainder has been recovered from the black ash of previous digestions, the digester liquor having been evaporated and calcined. At this mill about 5,000,000 gallons of this digester liquor is produced annually, of which only about 10 per cent is wasted, being lost during the washing of pulp after digestion, the remainder being exaporated for this recovery of chemicals. The analysis of this waste liquor from the soda process is as follows:

	Parts per million
Total solids (no suspended solids present).....	132,000
Loss on ignition.....	72,100
Fixed solids.....	59,900
Alkalinity (methyl orange).....	39,000
Free ammonia.....	34.00
Albuminoid ammonia.....	72.00
Oxygen consumed.....	27,600

Volume for volume, this liquor is perhaps one hundred times as deleterious to a stream as domestic sewage. It contains a large quantity of organic matter and its oxygen demand, while comparatively slow, is enormous, perhaps twenty times that of average domestic sewage. In 24 hours, 1 gallon of this waste will absorb 10.78 grammes, or 7,544 cu. cm., of oxygen. It is so alkaline—practically 4 per cent—that it destroys bacterial life in the water into which it flows, and it is deadly to fish. Fortunately, the volume wasted is small and will probably decrease as the recovery of chemicals increases in favor.

### Sulphite Mill

A different story must be told of the liquor from the sulphite process. At the plant under discussion none of the digester liquor

\*In Transactions, Am. Soc. C. E., Vol. 86 (1923).

<sup>1</sup>Chief Chemist, Massachusetts Dept. of Public Health, Boston, Mass.

is recovered, about 17,000,000 gallons being discharged annually into the stream on which the mill is located.

The speaker believes that in a few cases this liquor is concentrated by evaporation or is treated so that it becomes useful for certain purposes. It contains 4,000 parts per million of organic acid, which should make its recovery of value. During the World War, experiments were made looking to the recovery or manufacture of alcohol from it. An analysis of this waste from the sulphite process is as follows:

	Parts per million
Total solids (no suspended solids present).....	74,000
Loss on ignition.....	66,300
Fixed solids.....	7,800
Alkalinity (methyl orange).....	-800
Alkalinity (phenolphthalein).....	-5,000
Sulphur dioxide (as sulphurous acid or sulphites).....	400
Free ammonia.....	146
Albuminoid ammonia.....	62
Oxygen consumed.....	34,600

This waste is acid and contains practically as much organic matter as the soda-process waste. Its oxygen demand on the stream it enters, appears to be somewhat less, and it is slightly less deadly to bacteria and to fish. In 24 hours, 1 gallon of this waste will absorb 8.71 grams, or 6,088 cu. cm., of oxygen. There is no reason why the treatment of this liquor should not be demanded where sanitary conditions require it, as it probably can be evaporated and products recovered which would pay at least for the cost of treatment. Neither of these liquors can be satisfactorily treated by any known method of purification other than evaporation and recovery of bodies of value. They are exceedingly inimical to bacterial life, and if mixed with sewage, or other liquors, and passed to filters, they destroy the value of such filters.

#### Paper Mill

As stated previously, wastes from certain paper mills consist of the liquors from washing old stock worked up, from treating this stock in digesters, and from the paper machines. In such mills, soda ash, lime, bleaching powder, white clay, etc., are used and a large part of these chemicals are wasted. There is generally no saving of soda ash or other chemicals in mills using mixed stock. The true wastes, however, are largely carbonaceous, and in order to purify or clarify them satisfactorily, dependence must be had on straining, sedimentation with or without the use of precipitants, and filtration through filters of sand, cinders, or like material. In the treatment of domestic sewage, nitrification by bacterial action is depended on where a high degree of purification is required, but the small amount of nitrogen in paper-mill waste renders this process of little value.

Investigations at the Lawrence Experiment Station showed that when a liquor to be treated contained an  $x$  amount of nitrogen and from 10  $x$  to 12  $x$  of carbon, nitrification would still take place in a filter, but that it was practically killed when the amount of carbon was 13  $x$  or 14  $x$ , or greater. In this investigation, studies of the behavior of paper-mill wastes under certain conditions of filtration were made, together with complete analyses of such wastes, to determine the relative amount of nitrogen and carbon present in them. Some bacterial action, however, does take place in filters receiving carbonaceous wastes, this purification without nitrification being due to certain bacteria which are active under conditions that prevent nitrification, but which cause chemical actions that break down organic matter and result in the setting free of carbon dioxide and nitrogen.

#### Suspended Matter

Much of the organic pollution in paper-mill wastes is in suspension, and a considerable part is quite readily removed by passing the liquors through fine wire screens. In some mills a large part of the pulp formerly wasted from the paper machine is saved in this way, and a large part of the dirt in various wash waters can also be screened out. Besides screening, sedimentation is depended on at many mills to save pulp, and at such places aluminum sul-

phate is also generally used to aid sedimentation. The paper fiber saved in this way much more than repays the cost of construction and operation of sedimentation tanks and the aluminum sulphate used. The aluminum hydrate produced and unavoidably mixed with the pulp used, is of value, generally speaking, in the weighting of paper, and often as much as 4 or 5 grains per gallon of sulphate is used in this saving of fiber. The quantity of oxygen absorbed in 24 hours by wastes from a mill representing the class using mixed stock is shown by Table 2.

TABLE 2

Sample	Dissolved Oxygen Absorbed by 1 Gal. in 24 Hours	
	Grammes	Cubic centimete.s
Rotary boiler wastes.....	2.2720	1,589.0
Washer wastes.....	0.4920	344.2
Settled washer wastes.....	0.2272	158.9
Machine wastes.....	0.1136	79.5
Settled machine wastes.....	0.0304	21.2

#### Screenings and Sedimentation

When the speaker first began to study paper mills and their wastes, hardly a "save-all" was in use and none of the elaborate sedimentation and precipitation tanks that are in common use to-day. Besides the saving of machine wastes by the tanks, etc., the pollution of streams is prevented by screens and sedimentation tanks through which are passed the waste liquors from the washing of old stock. About 30 percent of the matters in suspension is generally eliminated in this way by 4 hours of sedimentation and from 90 percent to practically all the matter in suspension can be removed if 75 to 100 grains of aluminum sulphate per gallon, are used. This means from 10,000 to 14,000 pounds per 1,000,000 gal. and is a large amount of precipitant, but is being used in some mills where it is necessary to prevent the pollution of streams. Where several million gallons of waste are produced by one mill, the removal by sedimentation alone of even 30 percent of the matter in suspension means much reduction of river pollution. More than this, sedimentation and filtration can be depended on to treat the mixed wastes for further purification. The rates of filter operation vary with the quality of the liquor being treated, but rates of from 200,000 to 500,000 gal. per acre per day are used with good results. By a combination of all these methods—screening, sedimentation, and filtration—it is often possible to remove 70 percent or more of the primary polluting matters of paper-mill wastes. Apparently, however the only wastes recovered with profit as yet are those from the soda-pulp process and the wastes from the paper machine. Much research work is being done, and it is probable that valuable discoveries will be made.

#### Cunit

The News Print Service Bureau has produced a new word, "Cunit." At a meeting held in Montreal in July of this year it was decided that the unit to be used instead of board feet long measure and the cord, was to be 100 cubic feet of solid wood. A prize was offered for the best suggestion of a name for this unit. After consideration of a number it was awarded to C. W. Halligan, cost accountant of the News Print Service Bureau, who suggested the word "Cunit." This has been definitely adopted by the Bureau in reporting the logging costs.

#### Will Use Pulpwood Bark for Fuel

Realizing the great waste in throwing away the bark taken from logs in the process of preparing them for pulp several pulp and paper companies in Ontario have become interested in a new machine manufactured by the Northern Foundry Company at Sault Ste Marie, Ont., which treats the bark and renders it available for fuel. Recently the machine was given a thorough trial in the presence of several engineers of pulp companies, who have shown great interest in the experiments.

# BLEACHING OF WOOD PULP

## III. The Effect of Temperature on the Bleaching of Sulphite Pulp

By C. E. CURRAN<sup>1</sup>, AND P. K. BAIRD<sup>2</sup>

The experimental data presented in this paper relate to the effect of temperature upon (1) the time of bleaching, (2) the color of the bleached pulp, and (3) the fiber loss or shrinkage resulting from the chemical effect of bleaching.

As regards the time required, the effect of temperature upon bleaching is very pronounced. Its influence upon the reaction has been studied by a number of workers<sup>3, 4, 5, 6, 7, 8, 9</sup> whose conclusions are not all concordant. The object of the present investigation was to measure the effect of temperature under conditions admitting of very accurate control. Four sets of experiments (14 runs in all) were carried out, each set at a different temperature. In every case the selected temperature was maintained with the greatest possible accuracy. All other conditions were kept constant throughout the experiments, special apparatus and standardized methods of procedure and analysis being employed as described in a previous paper.<sup>10</sup>

### Raw Material

The pulp used was an all-spruce sulphite of the type termed commercially "semi-easy bleaching." It had been cooked by the direct-steam or "quick cook" process and was received in the form of steam-dried sheets which were broken up to a cotton-like form in a pulp shredder before use.

The bleach liquor was made up from chloride of lime (commercial bleaching powder) in the usual way except that hydrated lime was added to insure a saturated solution of calcium hydroxide and a liquor of high alkalinity. The clear liquor was siphoned off into a container cooled by running water and its surface covered with a layer of oil to seal it from the carbon dioxide of the air. This supply furnished the liquor for the entire series of experiments and, as will be seen from Table 1, remained practically constant as to chemical composition.

### Experimental Conditions

Experiments were conducted at 21°, 35°, 41°, and 46°C. The other conditions, maintained constant, were: A consistence of 5 per cent; a bleach liquor equivalent to 12.3 per cent bleaching powder based on the oven-dry weight of the pulp; a standard bleach liquor alkalinity of 1.18 grams Ca(OH)<sub>2</sub> per liter. The relative alkalinity ratio of calcium hydroxide to available chlorine was 0.033 (see Table 1).

### Procedure

In these experiments the bleaching apparatus was rotated at a constant speed of 5.7 r. p. m.

The majority of the samples were taken during the first part of the reaction on account of its great initial speed. The point of exhaustion of the bleach was determined by the starch-iodide test and was considered as reached when 30 seconds were required to develop a blue spot on the pulp.

The rate of bleach consumption was determined by examining samples of the pulp and liquor withdrawn at intervals during the

bleaching. The residual liquor pressed from the pulp was analyzed for available chlorine and the pulp preserved for use in subsequent color determinations.

RATE OF BLEACH CONSUMPTION. The experimental data are shown in Table 2.

TABLE 1  
Composition of Bleach Liquor as Examined from Time to Time During the Bleaching Tests.

Analysis No.	Date, 1923-24	Total chlorine, Gms. per liter	Available chlorine, Gms. per liter	Chlorates, per liter	Gms. Chloridea, per liter	Alkalinity, Ca(OH) <sub>2</sub> , Gms per liter	Relative alkalinity
1	Aug. 15...	49.6	36.6	3.85	9.6	1.18	0.033
2	Aug. 28...	...	35.8	...	...	...	1.0
3	Sept. 12...	...	35.4	...	...	...	1.9
4	Sept. 14...	...	35.4	...	...	...	2.5
5	Sept. 28...	...	35.2	...	...	...	2.9
6	Oct. 19...	...	35.1	...	...	...	3.6
7	Nov. 9...	...	34.9	...	...	...	3.6
8	Feb. 5...	50.2	33.7	4.40	12.10	1.04	0.031

### Discussion of Results

The percentage consumption of bleach during the main course of the reaction appeared as a linear function of the logarithm of the time through which the bleaching continued. This relation held for all temperatures tried, as indicated graphically in Fig.

TABLE 2  
Bleaching Data

Run No.	Total time, Min.	Average temperature, °C	Loss in weight of fiber (shrinkage), Per cent	Bleach liquor analyzed (See table 1), No.	Final color Readings, Hess-Ives		Loss of available Cl. per cent	Violet
					Red	Green		
54	720	21	2.6	3	90	88	82	82
55	705	21	1.4	4	91	88	81	81
Average.....	712.5	21	2.0	3	90.5	88	81.5	81.5
52	220	35	3.0	3	91	89	81	81
53	220	35	1.0	2	91	89	82	82
Average.....	220	35	2.0	2	91	89	81.5	81.5
50	120	41	2.7	1	...	...	...	...
51	135	41	2.0	2	91	87	81	81
58	130	41	5.4	6	90	89	80	80
Average.....	128	41	3.4	...	90.5	88	80.5	80.5
56	80	46	3.9	5	...	...	...	...
57	85	46	6.0	5	91	88	82	82
59	85	46	4.7	6	91	88	80	80
Average.....	83	46	4.9	...	91	88	81	81

1. When in excess of 90 per cent of the bleaching agent had been consumed, however, the curve departed from a straight line—the exhaustion of the bleaching agent being delayed beyond the time which a normal extrapolation of the curve would predict. The change in rate may be due to several agencies. One of these might be a variation in the mixing rate. As the speed of the mixer was constant the progressive decrease in the quantity of bleaching agent might possibly result in a less efficient mixing action toward the end of the bleaching and be reflected in decreased speed of the reaction. Another hypothesis is that the starch-iodide end point is inaccurate, since it is quite possible that there are present compounds other than hypochlorites which are capable of giving a blue color with this reagent. Such compounds might persist beyond the true end point.

In view of the results of this work, and taking into consideration data from other sources,<sup>6, 8</sup> the conclusion may be drawn that the same general mathematical relation holds between time and

<sup>1</sup> Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

<sup>2</sup> Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

<sup>3</sup> Baker and Jemison, J. Soc. Chem. Ind., 33, 284.

<sup>4</sup> Nussbaum and Ebert, Paper Trade J., 45, p. 48 (1907).

<sup>5</sup> E. Simonsen, Papier Zeitung 38, 3500, 3523.

<sup>6</sup> Sindall and Bacon, World's Paper Trade Rev., 56, p. 385.

<sup>7</sup> G. K. Spence, TAPPI Papers, Series 4, p. 39 (1921).

<sup>8</sup> E. Sutermeister, Paper 24, No. 26, p. 15.

<sup>9</sup> J. L. A. MacDonald, Paper Makers' Monthly J., 62, p. 157 (1924).

<sup>10</sup> C. E. Curran and P. K. Baird, Bleaching of Wood Pulp; I. Factors affecting the process and their control, PAPER TRADE JOURNAL, vol. 79, No. 1, p. 56 (July 3, 1924).



bleach consumption over a wide temperature range—from 0° to 50°C. at least. Further investigation of the mathematical relation involved, especially as to conditions existing in the early stages of the reaction, will be studied if opportunity is presented.

The data used in the preparation of Fig. 1 were also plotted in Fig. 2 in such a way as to afford a comparison between temperature and time of bleaching at the 100 per cent, 90 per cent, 75 per cent, 60 per cent, 50 per cent and 40 per cent consumption points. An obvious but interesting fact in this connection is the relatively high bleach consumption in the early stages of the reaction. In no case was more than 40 per cent of the total bleaching time required to consume 90 per cent more of the available bleaching agent; the figures are shown in Table 3.

TABLE 3

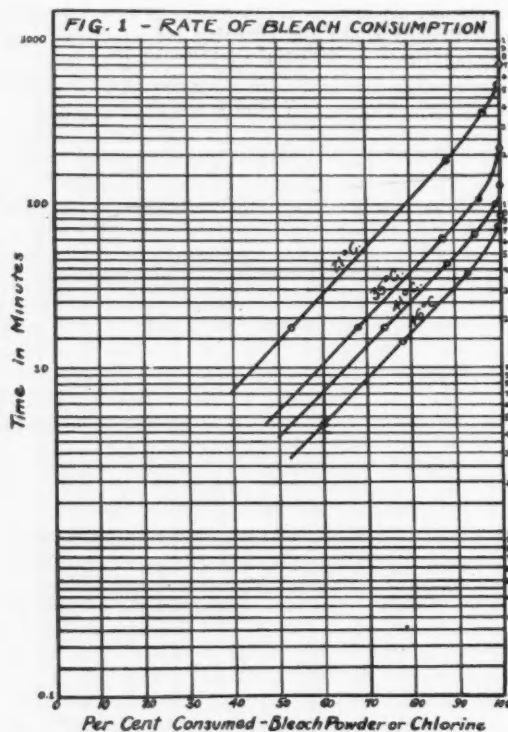
Time Required for 90 Per Cent Bleach Consumption

Bleach temperature. °C.	Total time. Min.	Point of 90 per cent consumption. Min.	Per cent of total time required to reach 90 per cent consumption point.
			Per cent
21	712.5	220	30.9
35	220	75	34.2
41	130	50	38.5
46	84	34	40.5

As shown in Fig. 3, however, the final 10 per cent of bleaching agent is important. It has a distinct effect upon the color, the whitening effect being very pronounced over the period in which it is consumed.

## COLOR.

The effect of temperature upon color was studied by noting the



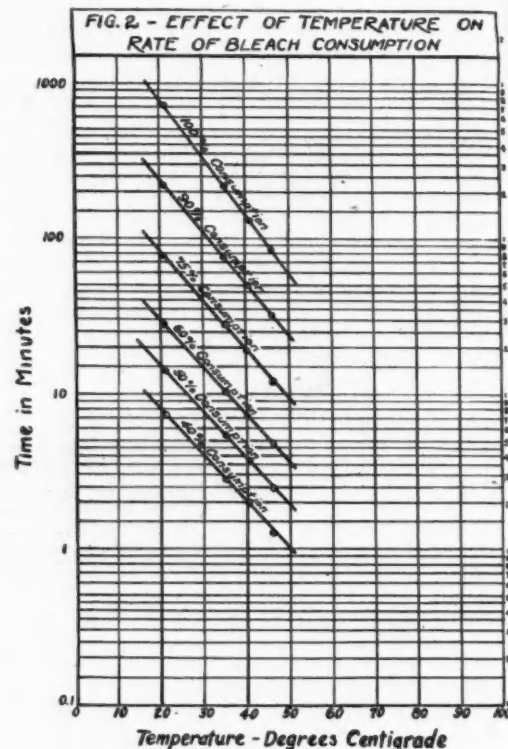
progress of the color change as well as the final color obtained. (Color data are included in Table 2.)

<sup>11</sup> In compiling the tint photometer data the following conventions have been adopted: The primary colors, red, green and violet, are measured in percentages as read directly from the instrument. The lowest of the three readings is assumed to represent the "parts white" in the sheet, on the assumption that equal proportions of the three primary colors present produce white. Luminosity, or amount of light reflected, is obtained by multiplying the observed readiness for red, green and violet by their respective "light intensity factors," 0.19, 0.71, and 0.10.

TECHNICAL SECTION. PAGE 92

The Hess-Ives tint photometer was used for color analyses<sup>11</sup>. While measurements with this instrument are comparative and not absolute, the results are well suited to the requirements of the experiment. By averaging several readings values accurate to about one per cent were obtained.

The relation of chlorine consumption to color change at different



temperatures is shown in Fig. 3. The similarity of the curves and color end points in these respective graphs shows that the temperature was without effect upon the final color of the pulp. This conclusion confirms the work by Spence,<sup>7</sup> although it is somewhat contrary to usual ideas. The thorough mixing of pulp stock and bleach (with absence of localized over- or under-bleaching) which was maintained in the experiment seems to offer the real explanation.

The rate of color change was, naturally, increased at the higher temperatures; but the form of the color curves (Fig. 3.) was similar regardless of temperatures—i. e., the color changes during equivalent periods at different temperatures were about equal. A comparison between color change and bleaching time indicated no simple mathematical relationship.

Although, as already shown, 90 per cent or more of the available bleaching agent was consumed in the early part of the reaction, the greatest apparent change occurred during the consumption period of the final 10 per cent.

The slight darkening effect so often noted at the beginning of a bleaching reaction was observed in these experiments also. It occurred so early in the reaction, however, and was so evanescent that no samples could be withdrawn or color sheets prepared to afford a measure of the nature or extent of the phenomenon. The same effect, which is often more pronounced in alkaline pulps, may possibly be studied in connection with later investigations of the bleaching of soda and sulphate pulps.

## SHRINKAGE

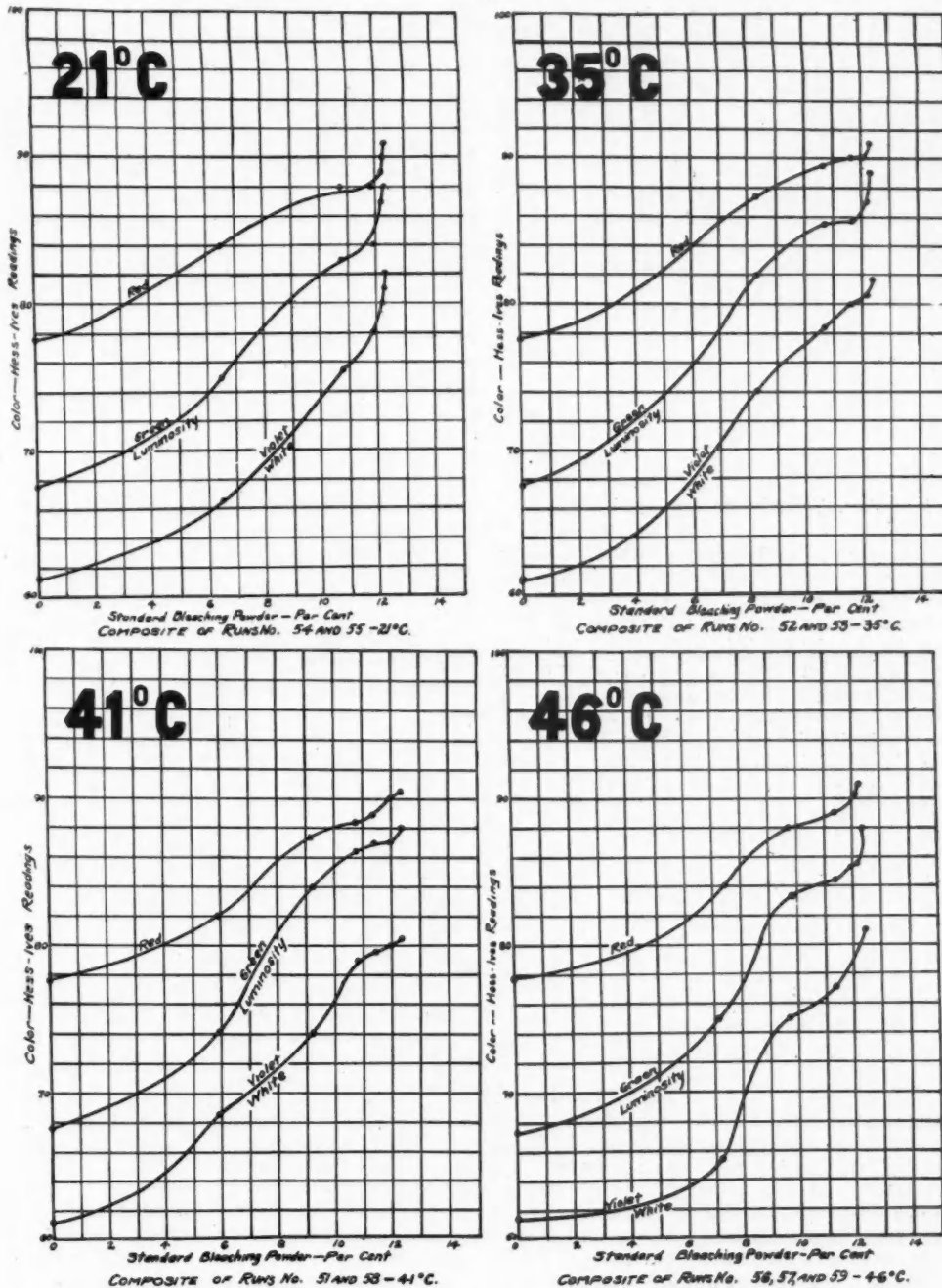
The influence of temperature upon the yield of bleached fiber,



or the shrinkage effect, is indicated in Table 2. Because of the necessity of handling relatively large volumes of pulp and accounting for portions withdrawn for test purposes, this determination became somewhat complicated and liable to error. Considering the circumstances, however, the results may be regarded as satisfac-

- (1) The rate of bleach consumption appears as a linear function of the logarithm of the time during the main course of the reaction and (probably) within temperature limits of 0° to 50°C.
- (2) The final color of the pulp is largely independent of bleaching temperature.

FIG. 3 - EFFECT OF TEMPERATURE ON COLOR



tory. The shrinkage was, in general, slightly greater at the higher temperatures.

**Summary**

In a study of the effect of temperature upon the bleaching of "easy-bleaching" sulphite pulp it has been shown that:

The color changes in equivalent periods of time of bleaching at different temperatures are approximately the same.

No definite relations, however, it will be observed, has been established between the rate of bleach consumption and the rate of color change.

## EUROPEAN PAPER LABORATORIES

BY MURILL F. MERRITT, FORMERLY OF THE BUREAU OF STANDARDS, WASHINGTON, D. C.

While in Europe this spring I gathered some information about paper which may be of interest to the readers of THE PAPER TRADE JOURNAL.

I had corresponded with M. Hery, the editor of *Le Papier* of Paris, France, and so he was the first person I interviewed. I was pleased to learn from him that the Lofton-Merritt stain (used to distinguish between sulphate and sulphite) is used extensively in France and is well thought of. We have been interested in finding to what degree of accuracy one may expect to attain in estimating the percentage of groundwood in newsprint and in answer to this question Mr. Hery said about 10%. I also enquired about the use in France of rubber latex in paper and was told that laboratory experiments have been made but that it is not used commercially.

M. Hery was very helpful in assisting me in securing samples of standard commercial papers which I sent to the Bureau of Standards and also telling me of places of interest which I might visit. He was particularly anxious that I inspect the School of Papermaking at Grenoble.

I also obtained samples of papers from the trade journal *La Papeterie*.

### Paper Making School at Grenoble

While on our way through southern France we found it possible to stop at Grenoble. The school of papermaking was in session the morning I was there. On entering the place I found a crowd of students waiting for a class. Two of them could speak English and were surprised that a woman was interested in papermaking. Mr. St. Hilaire showed me the equipment and gave me samples of experimental papers for our laboratory. Their samples of papers using old newspapers were very interesting. This school possesses the first papermaking machine and it was pointed out with much pride. It is interesting to know that American trade journals and text books are used in the school. In discussing the quality of foreign paper money I found they had never seen any paper money from the United States so I showed them a dollar bill. It was admired so much that I left it with them as a souvenir. The franc notes of smaller denominations are brittle and are often mended with mending tape. As a rule the notes of a hundred francs or more are printed on better and heavier paper.

Most of the wrapping paper I saw was calendered on one surface and rough on the other. In all countries we were in the wrapping paper was about the same quality.

### In German Paper Making Center

Another stop of importance from a paper standpoint was Berlin. Here my time was limited so I obtained the services of a guide and interpreter. He had lived in San Francisco before the earthquake and was saving his money to return there. By taking dilapidated cabs, subways, street car, taxis, and walking we succeeded in covering more ground than I had thought possible.

We first called at the firm of Otto Elsner where "*Der Papier Fabricant*" is published. There I obtained two samples of coated paper, one coated with casein and the other with glue. Casein is preferred by the German trade as it is said to give better printing results and it is also cheaper. Among their trade samples of printing were two cuts that looked familiar. One was of the Woolworth building and the other was of Niagara falls. One of the staff had been in America and had been impressed with these wonders. I was given information as to where to find what I wanted to know. While in the wholesale district I saw many very poor looking people with patched and ragged clothes.

Across the city of Charlottenburg we found the Materials-prufung Laboratory. Prof. Dahlen, who is in charge of the testing of paper informed me that he considered estimations of newsprint combinations

of groundwood and sulphite to within 10% on the average to be very good. In their experience the least error occurs with 50-50 compositions. He also stated that manufacturers use 27% sulphite while 30% is allowed. The German government tests its own papers and is working on additional specifications. They use the estimation method of analysis altogether in determining fiber compositions. They have no method of distinguishing between soda and sulphite fiber. The Herzberg stain is usually used although malachite green and fuchsin are used occasionally. Considerable research work is being carried on in the laboratories by students. There are about 200 persons employed in the Materials-prufung Laboratory.

In Jena, Germany, we stopped to visit the Carl Zeiss works. Professor Löwe showed us through the laboratories where the scientific instruments are assembled. Some new instruments for microscopical work interested me. They have a good artificial light that is attached to the microscope, a new type of binocular eyepiece for a monocular microscope and a very ingenious and compact apparatus for taking photomicrographs that is easy to operate and takes up little more room than an ordinary microscope. Those interested would find this worth enquiring about. At the time I was there there was no printed matter on this new instrument.

### In London

In London I called on Mr. J. N. Stephenson, editor of the *Canadian Pulp and Paper Magazine*. He is in charge of the Canadian Forest Exhibit at the Wembley Park exhibition.

The Canadian exhibit was by far the most attractive, artistic, and original of all. The widest roll of newsprint, some 18 feet wide attracted my attention. The enlarged photographic slides of wood sections were the best I have ever seen. There is always a crowd in front of the samples of Canadian woods used in the paper industry. The English papermakers have a small papermachine and every two weeks a different firm makes runs to illustrate what type of paper they make. I saw an exhibit of hardened casein including combs, jewelry, beads, etc. in a variety of pretty colors.

The engineering building, the biggest building in the world of that type, housed enormous pieces of machinery, automobiles, trains, giant turbines, chemicals, standard stains, the largest glass window ever made (weighing 1700 pounds), scientific instruments, diving apparatus and many other things.

During the time I was there there was a special Textile Show. The cotton industry had a great exhibit with all the processes in action including several weavers making gingham. The Irish linen industry was represented by a weaver who made souvenir napkins with the Wembley seal. There was also a silk industry exhibit in the Hongkong quarter. Artificial silk cloth exhibits in the English section were the best I have seen in any country. The goods appeared to be more durable and there were some interesting weaves and colors. Woolen goods were all displayed and in great variety. In the Australian building as part of their wool exhibit sheep were sheared daily.

### At South Kensington

In South Kensington near my hotel was Imperial Institute. After viewing the exhibits from the colonies consisting of collections of commercial and near commercial fibers I was allowed to visit the laboratories. Here tests are made on products of the British Empire to ascertain if they have commercial value. Many unusual fibers from the colonies have been cooked and made into hand sheets, and form part of the exhibits within the laboratories. I was pleased to see that there were two women on their scientific staff. As with scientific research institutions in this country they have been hard pressed for money as it is hard to educate the general public to the idea that scientific research is valuable.

## 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

### Paper Drying

**Drying Paper.** Ogden Minton. *Paper Trade J.* 78, No. 7, 53-59 (Feb. 14, 1924). A discussion of the disadvantages and faults of the usual method of drying paper as carried out at present, and of the great advantages of drying in a high vacuum, up to 28 in. of mercury, as shown by operation of the author's experimental semi-commercial vacuum drier, with which paper 66 in. wide is easily dried at 215 ft. a minute with five 36 in. driers.—A. P.-C.

**Paper Drier.** H. H. Vaughan. U. S. pat. 1,432,645, Oct. 17, 1922; 1,434,170, Oct. 31, 1922. Drier felts are eliminated by providing longitudinal series of holes in the periphery of the drier roll connected through pipes to a suitable suction device. In No. 1,432,645 these holes are connected to longitudinal tapered pipes inside the drier, which in turn are connected to a distributing valve extending through the hollow trunnion almost to the end of the roll, and this pipe turns around a second pipe connected to a suction pump and provided with circumferential slits (which do not extend completely around) which register with the ends of the pipes connected to the holes in the shell of the drier. Vacuum is thus exerted only while the ends of the connecting pipes are opposite the slits; and the distributor is constructed so that any given hole is connected to the suction just before it comes in contact with the paper and that vacuum is released just after the paper has left the drier.—A. P.-C.

**Paper Drying Apparatus.** F. P. Reed assignor to C. C. Orcutt. U. S. pat. 1,431,756, Oct. 10, 1922. The wet web is carried on an open-mesh wire screen over a suitably heated surface (e. g., by means of gas burners). The surface may be either flat, arched, or in the form of rolls. The presence of the wire leaves an air space between the heated surface and the paper, thus preventing the latter from being scorched.—A. P.-C.

**Paper Drying Apparatus.** F. P. Reed assignor to C. C. Orcutt. U. S. pat. 1,432,736, Oct. 17, 1922. The wet web is carried on an open-mesh wire cloth and passed over a casing open at the top, provided with suitable electric heating elements distributed along the length of the casing to ensure even drying. The wire is supported on rolls journaled in the casing along its upper edges. The top of the casing is arched so as to keep the paper under suitable tension. More than one unit can be used, placed either one beside another or one on top of another, if required to obtain complete drying.—A. P.-C.

**Paper Drying Apparatus.** F. P. Reed assignor to C. C. Orcutt. U. S. pat. 1,431,488, Oct. 10, 1922. In the apparatus mentioned in U. S. pat. 1,432,736 (preceding abstract) instead of supporting the paper on a wire screen it is supported on longitudinal endless bands of copper, brass, steel, aluminum, asbestos, etc. or on metallic (preferably brass) wires, suitably spaced from one another and carried on circumferentially grooved rolls.—A. P.-C.

**Paper Drying Apparatus.** F. P. Reed and C. Nelson assignors to C. C. Orcutt. U. S. pat. 1,432,732, Oct. 17, 1922. The wet web is carried on a wire screen, or between two screens, and is passed back and forth through each of a series of double-walled casings. All the units, except the first, have electric heating elements both above and below each strand of the paper, and the waste heat from these units is used in the first unit to heat the paper practically up to the temperature of the others, but without effecting any appreciable evaporating of water from the sheet.—A. P.-C.

**Doll Head for Drying Cylinders.** W. P. Evans. U. S. pat. 1,421,193, June 27, 1922. A suitable diaphragm is fastened between the face of the chamber in the doll-head casting and a ring cast

integrally with the lower half of the bearing supporting the drier trunnion. The end of the trunnion projects through a hole in the diaphragm; and the edge of this hole is clamped between two rings carrying fibrous or metal packing material and abutting against a collar on the end of the trunnion. The pressure of the steam in the chamber in the doll head casting acts on the whole diaphragm, pressing it against the trunnion collar and preventing escape of steam. This construction has the advantage, in the event of rapid condensation in the drier, that the partial vacuum created tends to cause the diaphragm to act so as to admit air and may obviate the use of an air valve, as usually provided for the purpose.—A. P.-C.

**Doll Head for Drying Cylinders.** G. Dod. U. S. pat. 1,425,635, Aug. 15, 1922. Each trunnion of the cylinder is supported by a spherical portion carried either by the doll head (in which case the ball is stationary), or by a stationary annular member surrounding the doll head (in which case the ball is free to swivel within certain limits and to slide bodily with elongation and contraction of the drier roll). Within the ball is placed the steam-tight joint between the doll head and trunnion, passing in a plane through the center of the ball if possible. A tubular member, with necessary attachments, is fixed to the end of the trunnion and extends over the end of the doll head and beyond the ball, and serves to form the bearing proper of the trunnion. Ball or roller bearings are used. This construction overcomes troubles and excessive wear due to misalignment, caused by the doll heads or trunnions being either parallel, but out of line with each other, or not parallel in any plane.—A. P.-C.

**Paper Drying System.** H. Baetz assignor to F. A. C. Skinner and M. G. Skinner. U. S. pat. 1,438,210, Dec. 12, 1922. Hot dry air is discharged through suitable nozzles over the surface of the web, in the pockets formed by the rolls, paper and felts, in a direction substantially parallel to the surface of the paper. This carries away the vapor formed by the drying of the paper, and maintains a relatively dry atmosphere in the immediate vicinity of the sheet, thereby expediting drying and reducing the number of drying rolls required.—A. P.-C.

**Paper Drying System.** H. Baetz assignor to Skinner Bros. Mfg. Co. U. S. pat. 1,438,211, Dec. 12, 1922. This is substantially the same as No. 1,438,210 (preceding abstract) except that the nozzles, instead of discharging the air into the end of the air pocket, discharge it practically across the whole width of the machine, and for this purpose the distributing pipes are each divided into (preferably) three curved nozzles which discharge the air diagonally against the sheet.—A. P.-C.

**Vacuum Cylinder for Paper Machines.** H. B. Thoms. U. S. pat. 1,439,493, Dec. 19, 1922. A vacuum cylinder of large diameter is placed between the couch rolls and the first press, and the paper in passing around this roll is held between the vacuum roll felt and the first press felt.—A. P.-C.

**Machine for Air-Drying Paper.** W. M. Barber. U. S. pat. 1,419,534, June 13, 1923. The paper is conveyed back and forth through a long casing on a set of endless belts consisting of cords or tapes, and hot compressed air is blown against both surfaces of the paper, but more against the top face to prevent it from being blown off the conveyors. The paper is under no appreciable tension, allowing it to contract freely during drying and eliminating the disarrangement of the fibers caused by the draw or tension of the paper in ordinary paper driers.—A. P.-C.



**Paper Machine Drier.** E. Hutchins assignor to International Paper Co. U. S. pat. 1,453,113 Apr. 24, 1923. At the speed at which drying cylinders are usually run the condensate is thrown against the inside of the cylinder by centrifugal force and forms a film which retards conduction of the heat of the steam through the metal. In the present invention this is overcome by providing suitable heat conducting projections which extend through the water film into the steam. These projections are perfectly in the form of helical ribs cast integral with the drier and placed close enough together for the heat to be diffused uniformly so that the paper will be dried evenly, and not in streaks. The ribs have the further advantage that their rotation conveys the condensate to a chamber in the end of the drier where it is removed by means of suitable scoop pipes.—A. P.-C.

**Drier for Coated Paper.** F. P. Reed assignor to C. C. Orcutt. U. S. pat. 1,431,489, Oct. 10, 1922. The paper is carried on an open mesh wire cloth over a casing containing suitable heaters (gas burners or electric elements). In order to distribute the heat uniformly and prevent higher temperatures just above the heating elements, instead of providing the casing with a fixed metal covering over which the wire would travel, a thin flexible sheet metal is used, which travels with and under the wire.—A. P.-C.

**Drier for Coated Paper.** F. P. Reed assignor to C. C. Orcutt. U. S. pat. 1,432,302, Oct. 17, 1922. The paper is coated, and then colored to give an agate or marble paper. Immediately after the color has been spattoned, the paper is subjected to an air blast from a pipe which is given a transverse reciprocating motion. This spreads out the drops of color until they touch one another, and also tends to form wavy lines of color which merge into one another. The paper is then carried under tension over a stationary wire cloth laid on top of a suitably heated metal plate, around a large hollow heated cylinder, and past a set of fans which cool it, drive away excess moisture and tend to equalize the distribution of the remaining moisture throughout the thickness of the sheet.—A. P.-C.

**Drier for Coated Paper.** A. H. Parker. U. S. pat. 1,426,095, Aug. 15, 1922. As the paper comes from the coating machine it is subjected to the action of a series of jets of air, either heated or not, delivered from nozzles extending across its whole width. It is then passed around a large heated cylinder, the coated surface being outside and still subjected to air blasts; and finally it is passed around steam heated drying rolls, the coated surface being in contact with the rolls, whence it passes to the winder.—A. P.-C.

#### Special Papers

**Satin White for Coating Paper.** J. H. Ryan. U. S. pat. 1,470,765, Oct. 16, 1923. A solution of alum is added to hydrated lime, and the mixture thoroughly ground in a pebble mill. Water is then added to produce a comparatively thin suspension which is allowed to settle, the excess of water being drawn off. Size, glue, or the like, is then added, together with some caustic soda, and the whole is reground. A satin white completely free from grit is thus obtained. If it is not to be used to coat paper immediately, the size is not added, but the paste is filtered on a vacuum filter and the residue dried. When required it is mixed with twice its weight of water, treated with size and alkali, and reground.—A. P.-C.

**Coating Unglazed Paper.** Associated Paper Mills, Ltd. Eng. pat. 205,119. Heavy insoluble colors can be used as coatings for unsized or slightly sized papers if the pigments are mixed with size and applied to one side of the paper which is heated before, during or after the application. By this means the paper is coated and glazed simultaneously without being subjected to expansion as would be the case if it were sized in a hollander. The back of the paper may be subsequently sized if desired.—A. P.-C.

**Manufacture of Overlay and Underlay Paper.** H. N. Case assignor to Sears, Roebuck & Co. U. S. pats. 1,445,386 and 1,445,388, Feb. 13, 1923. The invention relates to paper coated on both sides with material which can be etched to produce reliefs suit-

able for use as matrices in subjecting printing plates to the McKee process. The coating composition is contained in a tank having two compartments, which communicate by means of an opening in the bottom of the partition. Means are provided for keeping the coating composition at approximately constant temperature. The paper passes between two rolls in one compartment, while the coating composition is fed into the other compartment to prevent foam troubles. According to No. 1,445,386 means are provided for drawing up the paper from the coating tank and cutting it at regular intervals, after which it is allowed to air dry. According to No. 1,445,388 the coating is scraped off a width of about a quarter of an inch along each edge, and the paper is carried by means of narrow tapes with pin points which puncture the edges and carry it through a casing where it is dried by means of hot air.—A. P.-C.

**Greaseproofing Composition for Fiber Containers.** W. L. Wright. U. S. pat. 1,454,421, May 8, 1923. Paper or paper containers are treated with a composition consisting essentially of a mixture of emulsified cocoanut oil and adhesive solution (gum, casein, gelatine, etc.); or else the mixture can be added to the stock during the process of manufacture into paper. It is particularly suited for the treatment of containers for food products. It makes the paper waterproof and keeps it flexible.—A. P.-C.

**Greaseproofing Paper.** W. L. Wright. U. S. pat. 1,474,502, Nov. 20, 1923. Receptacles of paper or similar material are internally greaseproofed with casein rendered flexible with glycerol. U. S. pat. 1,474,503. This patent specifies a flexible greaseproofing coating of casein or gelatin composition rendered moisture proof by a small amount of tannic acid or acetic acid vapor.—A. P.-C.

**Rendering Paper Grease- and Waterproof.** W. L. Wright. U. S. pat. 1,476,562, Dec. 4, 1923. Paper receptacles are coated interiorly with a greaseproofing composition such as a casein or gelatin mixture, which is treated with acetic acid fumes to render it waterproof by coagulation.—A. P.-C.

**Manufacture of Fat-Impervious Papers.** *Wochbl. Papierfabr.* 54, 1534-1535 (June 2, 1923); *Pulp & Paper* 22, 245-246 (Feb. 28, 1924). Practical directions for overcoming some of the more frequently encountered difficulties.—A. P.-C.

**Bituminous Sheet Roofing and Weatherproofing Material.** C. N. Forrest assignor to the Barber Asphalt Co. U. S. pat. 1,429,728, Sept. 19, 1922. An impregnated roofing felt is faced on one surface with crushed stone, held to the base by means of bitumen, while the inner side of the sheet is given a coating of bitumen which is sufficiently hard and of high enough melting point to prevent it from sticking to other similar sheets with which it is in contact during shipment, but soft enough to adhere to the facing of an underlying similar sheet when exposed to the sun in use.—A. P.-C.

**Method of and Apparatus for Waxing Paper.** W. L. Carter. U. S. pat. 1,429,928, Sept. 26, 1922. The paper is passed through a bath of molten wax, between heated rolls which squeeze out the surplus wax and polish the surface and then through cooled rolls for chilling and setting the wax.—A. P.-C.

**Apparatus for Applying Adhesive Alternately to Both Faces of Sheets of Paper.** W. E. Mollins. U. S. pat. 1,419,466, June 13, 1922. Adhesive is applied by means of two sets of disks, to which the sheets of paper are fed by means of a guide which brings the sheet in contact with the sets alternately, thus applying strips of adhesive alternately to each other.—A. P.-C.

**Photographic Transfer Paper.** H. Egashira. U. S. pat. 1,450,067, Mar. 27, 1923. A smooth paper is given a coating of collodion; to form a transparent film of cellulose ester, and the sensitive photographic emulsion is applied on top. The paper can be pasted on any suitable support (wood, glass, porcelain, etc.), and the paper easily peels off, leaving the image of the support.—A. P.-C.

**Paper Creeping Cylinder.** K. Wandel assignor to Arkell Safety Bag Co. U. S. pat. 1,447,699, March 6, 1923. The paper is passed over a roll having circumferential grooves, to which it is made



to adhere by means of suction acting in the grooves in such a manner that it gradually increases from the point at which the paper contacts with the roll until it leaves it. Creping is effected by removing the paper from the roll by the action of a doctor which fits into the grooves of the roll.—A. P.-C.

**Process of Creping Paper.** K. Wandel assignor to Arkell Safety Bag Co. U. S. pat. 1,436,127, Nov. 21, 1922. The paper is almost completely dried, to give it strength, and it is then suitably creped, preferably by a creping cylinder such as described in U. S. pat. 1,447,699 (preceding abstract), after which it is passed around a few more driers to complete the drying.—A. P.-C.

**Safety Paper.** G. Becker. U. S. pat. 1,431,903, Oct. 10, 1922. Characters are printed on the paper in thin but permanent form, so as to be easily obscured; and a second design is printed on the first which stands out distinctly but is easily destroyed by erasure, showing up the underlying characters.—A. P.-C.

**Reinforced Paper.** P. T. Jackson assignor to Paper Products Machine Co. U. S. pat. 1,446,092, Feb. 20, 1923. Unspun fibers under tension are glued to the paper in the machine direction.—A. P.-C.

**Safety Paper.** B. W. Smith assignor to Todd Protectograph Co. U. S. pat. 1,454,837, May 8, 1923. The paper is first printed with non-erasing ink, and then on top of this, so as to mask it, it is again printed with an erasable ink of the same color as the first ink, so that erasure will show up the permanent ink and detect manipulation.—A. P.-C.

**Composite Metal Foil Sheet.** J. S. Clune assignor to The Conley Foil Co. U. S. pat. 1,445,070, Feb. 13, 1923. A thin sheet of glassine paper is applied to each side of a sheet of metal foil, the adhesive being applied along very narrow closely-spaced parallel lines, which gives the metal foil the desired strength and resistance without unduly impairing its flexibility.—A. P.-C.

**Manufacture of Torn-Edge Paper Sheets.** W. K. Trotman assignor to C. D. Jacobs. U. S. pat. 1,431,709, Oct. 10, 1922. In a cylinder machine the wire is covered with another replaceable wire having heavy circumferential wires of such size that they are barely covered by the pulp when the sheet is formed, and there are also longitudinal wires slightly smaller than the former. When the web passes through the presses and driers, the transverse shrinking of the sheet is sufficient to divide it along the lines made by the first-mentioned wires, while the tension during winding causes the paper to tear along the marks of the second series of wires, thus giving sheets having torn edges on all four edges.—A. P.-C.

**Paper Waxing Machine.** J. A. Martin assignor to Ashland Machine & Paper Co. U. S. pat. 1,439,183, Dec. 19, 1922. The paper is passed over a compensating roll which can be adjusted to give even tension across the whole width of the sheet, in spite of uneven thickness, over a heated roll to heat it to the temperature of the molten wax, between the heated waxing rolls the lower one of which applies the wax and the upper one determines the degree of impregnation by adjustment of the pressure, around a set of three water cooled rolls, and finally to the winding shaft. The winding and unwinding shafts are journaled in a frame which is pivoted halfway between the two shafts, with suitable means for holding it in position during operations. When a roll has been waxed, the device is released and the waxed roll is lowered by gravity.—A. P.-C.

**Paper Gumming Machine.** A. M. Becker assignor to M. Steinthal. U. S. pat. 1,435,197, No. 14, 1922. The paper is fed through feed rolls into contact with a roll, the lower portion of which dips in a tank containing adhesive. A screen is provided near the roll to prevent contact with lumps of adhesive, etc., and the bath is immersed in a water bath maintained at a suitable temperature. Excess of solution is removed from the roll by a scraper consisting of an angle iron with the angle pointing upwardly, and mounted so as to be adjustable according to the thickness of the adhesive and the amount required.—A. P.-C.

**Absorbent Cotton Substitute for Medical Bandages.** J. T. Tong and J. E. Blosser assignors to Scott Paper Co. U. S. pat. 1,453,575, May 1, 1923. Pulp is beaten so as to produce a long wet fiber stock and made into a thin open sheet without any appreciable strength, which is passed around a large drying roll, from which it is removed by means of a doctor which causes a slight creping effect. The sheet is then wound on a roll of large diameter to a suitable thickness and cut longitudinally.—A. P.-C.

**Manufacture of Photographic Papers.** E. Arnould. *Papier* 27, 85-89 (Jan. 1924). Practical manufacturing hints.—A. P.-C.

**Paper Polish.** T. Nelson. Eng. pat. 206,004. This polish is composed of 2.25 lb. of ground shellac and 4 oz. of pure palm kernel fatty acids added to 1 gal. of methylated spirits. It is applied in the same way as French polish.—A. P.-C.

**Copying Paper.** F. May. Eng. pat. 195,586. In order to strengthen the edges of copying paper so that they will not soften by the necessary damping process in the copying machine, they are impregnated with a water-resisting substance which will not greatly add to their thickness.—A. P.-C.

**Imitation Hand Made Paper.** C. Rivage and P. Lesage. Eng. pat. 203,993. To give a broken outline to the edge of the paper, giving it the appearance of being hand made, the edges of the moist paper sheet are drawn against a plate edged and ridged to impart similar markings to the paper.—A. P.-C.

**Transfer Papers.** A. Haigh and H. R. Hart. Eng. pat. 203,816. The transfer paper comprises two outer sheets or webs coated upon their outer surfaces and having disposed between them one or two other sheets of paper, all the sheets being of the same weight and separably secured together.—A. P.-C.

**Waterproof Paper.** E. Fues. Eng. pat. 202,314, Aug. 9, 1923. Addition to 187,987. Neutral salts, such as calcium and magnesium chloride, which under certain conditions exercise an acid action, are employed, in addition to, or in place of, the acid substances used in the process for the manufacture of water resisting paper claimed in the principal patent. Relatively large quantities of colloidal substances such as casein, animal glue, etc., may also be added, and also coloring substances and glycerol sugar, etc.; the latter render the paper flexible. The casein or animal glue may be added in the beater, or the paper may be impregnated with a solution of acid acting substances, formaldehyde and glue. The solutions may be applied cold or heated, and either by impregnating or by coating. The coating process may be carried out in stages, the different reacting ingredients being applied on opposite sides of the paper. The products may be coated with varnish, asphalt, pitch tar, etc., and threads, fabrics, etc., may be embedded in the covering layers thus put on. A cardboard or millboard may be produced by uniting several water resisting webs, or these webs may be combined with other untreated paper webs.—A. P.-C.

**Imitation Gutta-Percha and Leather.** Hydroloid, Ltd. Eng. pat. 207,352, Oct. 25, 1922. Imitation gutta-percha and leather are produced by passing raw paper through a bath of sizing material, e. g., glue, casein or albumin, of 5 to 15% concentration at 35° to 40° C., and pressing between rolls or immediately after immersion. After several hours, hardening materials, such as alum, chromium salts, or formalin, are applied. The material is then softened by treatment with glycerine, or alternately, soap or castor oil may be included in the sizing bath. The sheets are finally coated with a transparent varnish. The addition of sodium hydroxide, up to 2%, or of lactic acid up to 30% on the weight of the dry sizing material, facilitates impregnation in the sizing bath. For combining several layers of treated paper a stronger solution, e. g., 25 to 35% concentration, of the sizing material is employed.—A. P.-C.

**Abrasive Paper for Polishing Purposes.** H. Jackson. Eng. pat. 208,389, Dec. 27, 1922. Waterproof abrasive paper is prepared by coating suitably prepared paper with glue or gelatin and an

abrasive material, and subsequently treating it with alum, tannic acid, formaldehyde, a bichromate, or other organic agent capable of making the glue insoluble.—A. P.-C.

**Composition for Imparting Translucency to Paper.** S. H. Parrish assignor to S. H. Parrish Co. U. S. pat. 1,468,831, Sept. 25, 1923. One part of soy-bean oil is mixed with three of carbon tetrachloride, and this solution is then mixed with another solution formed from eight parts of fir balsam and four parts of turpentine.—A. P.-C.

**Manufacture of Waxed Paper.** *Paper Making* 42, 506-507 (Dec. 1923). A description of the manufacture of waxed paper with a discussion of proper storage conditions and of the desirability of standardizing sizes.—A. P.-C.

**Stencil Sheets.** W. Koreska. Eng. pat. 201,882, Mar. 14, 1923. A stencil sheet for duplicating consists of a fibrous porous base, preferably paper, coated with a composition which includes a derivative of cellulose. Tempering agents, such as resins, oils, fatty acids, wax, gum, rubber and balata, may be added to the composition. The substance or mixture chosen may be dissolved in a volatile solvent where the composition employed is a mixture of cellulose ester with hydrocarbons, fatty substances, oils or rubber. Amyl acetate or a mixture of ethyl ether and alcohol may be used if the esters are mixed with fatty acids or substances soluble in those solvents. Where the coating includes cellulose esters the solvent is allowed to evaporate after the coating is applied.—A. P.-C.

**Manufacture of Paper for Insulating Electric Cables.** Hydroloid, Ltd. Eng. pat. 203,566, Oct. 25, 1922. The process described in Eng. pat. 201,463 is used for the production of insulating paper for electric cables. The paper may be wound under tension, and in a damp or wet condition, so that when the cable is subsequently passed through an impregnating bath of, for example, hot oil, the paper shrinks on to the conductor, giving a compact cable of increased flexibility. To prevent damage to the conducting wires through contact with wet paper, an emulsion of tar, paraffin, or the like, may be used instead of water, so that in the simultaneous drying and impregnating operation a thin film of tar or paraffin is deposited on those parts of the conductor which are in contact with the paper.—A. P.-C.

**Manufacture of Paper for Music Rolls.** Hydroloid, Ltd. Eng. pat. 203,567, Oct. 25, 1922. Perforated paper of a durable nature, capable of withstanding atmospheric changes and therefore suitable for music rolls, cards for sorting and classifying machines, etc., is made by treating paper, preferably before perforation, by the process described in Eng. pat. 201,463. Music rolls intended for use in tropical countries may advantageously be coated subsequently with a thin film of molten or emulsified wax.—A. P.-C.

**Process for Waterproofing Paper.** F. Moeller. Eng. pat. 184,462, Aug. 1, 1922. Thionyl chloride is sprayed into air which is then passed in a chamber through which the paper web is passed at such a rate that the duration of the treatment is one to ten seconds. The air is dried, treated for removal of the hydrochloric acid and sulphur dioxide, and reused for the same process. The thionyl chloride may also be mixed with a porous solid carrier such as talc, etc., and pressed into a solid block with a binder such as clay if necessary, and the under side of this block is immersed in liquid thionyl chloride while the web of paper is passed over the top, contact between the web and block being permissible provided the quantity of reagent absorbed is not sufficient to wet the sheet. Alternately, the paper may be passed over rollers of porous material, mounted in a box, and dipping into the liquid waterproofing agent.—A. P.-C.

**Compound Photographic Paper Sheet.** Associated Paper Mills, Ltd. Eng. pat. 205,118. This process of preparing a non-curling and non-splitting paper sheet suitable for use as a photographic paper consists in coating a finished web with an adhesive which is insoluble in water, and combining it with a web which is

still wet. If desired, two finished webs may be combined, in which case the surface of one is coated with an adhesive and the united sheets passed through a pressing machine.—A. P.-C.

**Metal-Coated Paper.** K. Wickel. U. S. pat. 1,465,107, Aug. 14, 1923. Paper is coated with a metal powder and a bituminous binder, e. g., bronze powder and Vulka-bitumen mixed with carbon tetrachloride.—A. P.-C.

### No Chemical Show This Year

Owing to some confusion which is believed to exist in a few quarters regarding the holding of the next chemical exposition, an announcement has been sent out by the International Exposition Company, under whose management the Exposition of Chemical Industries has been held since 1915. Numerous inquiries have been received by the management which lead it to believe that many interested parties are of the opinion that there will be a chemical exposition this year. This is not the case. There will be no chemical exposition in 1924, the next Exposition of Chemical Industries will be held September 28 to October 3, 1925, at the Grand Central Palace, New York.

"This Exposition will not be held in the United States prior to September 1925"; states the announcement of the management. "Numerous inquiries which we have received, lead us to believe that there is some uncertainty regarding the date of the next Exposition of Chemical Industries. As a result of a vote of exhibitors, taken last year, the decision was definitely reached at that time not to hold the exposition in 1924, but to skip a year and hold the next one in 1925. Owing to the fact that the Chemical Exposition has been held without interruption since 1915, the many inquiries regarding the omission of the exposition this year are only natural."

"At the same meeting in 1923, where time and place for the next Chemical Exposition were discussed and decided upon, the exhibitors decided by a large majority to hold all future expositions in New York, and selected the Grand Central Palace for 1925. New York was decided upon as the logical place to hold the expositions in the future, because it was believed to offer the best location and conditions to attract the greatest number of people interested in the Chemical Industries from all parts of the world. So that the matter may be definitely understood, the next Exposition of Chemical Industries will be held at the Grand Central Palace one year from this September, during the week of September 28 to October 3, 1925."

### Testing Kraft Pulp for Strength

We are using the ball mill and run a curve of strength versus time of beating for each test. This is rather cumbersome since the rate of hydration of kraft pulp usually is so low that the maximum strength is not developed under two to two and a half hours beating. We have also tried out the agitation method and the freeness tester, but they do not seem to tell us what we want.

We would greatly appreciate it if you or one of the members could give us some information on this subject.—A MEMBER.

I am frank to say that the only methods I know of trying pulp for the strength, except the agitation method you mention, are in the pebble mill or in a laboratory beater.

If it requires two and a half hours in the pebble mill to develop the maximum strength of sulphate pulp I believe that if it were attempted to shorten the time in a laboratory beater it would be impossible to control its adjustment so as to get concordant results.

My understanding is that Mr. Wilen at Wayagamack has always used the pebble mill, and other well known kraft mills do the same. It might be possible to shorten the time by using a heavier charge of pebbles. As replies to the question are received I will pass them to you in blank and later distribute a transcript of them to those who contribute.—SECRETARY.

# Section of the COST ASSOCIATION OF THE PAPER INDUSTRY

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## ELEMENTS OF A FINANCIAL INVESTIGATION\*

BY RALPH G. DAVIS, C. P. A.

The financial investigations made in the past, prior to the financing of large corporations, upon which the public investor largely depended to base his judgment in the purchase of mortgages, notes, or shares were very limited in scope and failed to procure certain essential facts that we now consider of vital importance properly to safeguard the interests of prospective investors. A detailed audit by a firm of reputable accountants, and a valuation of physical properties by a firm of recognized appraisal engineers, were usually considered sufficient to satisfy the bankers responsible for the disposal of a corporation's securities or stock interest.

Such an investigation is no longer adequate. The constant progress in business development, the interest displayed by the general public in corporation investments during recent years, the new problems caused by our tax legislation and changes in manufacturing methods, all combine to demand a more detailed study of every phase of each particular organization, and the possible effect of the new conditions upon the future trend of its operations.

The accountant must still share his burden with the appraisal engineer in this particular undertaking, but the scope of the former's duties has been greatly enlarged and the introduction of a skilled industrial engineer familiar with the problems of the particular business is gradually being recognized as an essential feature of such an investigation.

In the following outline, or program, of a modern financial investigation, an attempt has been made to segregate clearly the accountant's and engineer's duties. No doubt, it will be subject to considerable adverse comment among members of the two professions due to vast differences of opinion in regard to the respective duties of each, but the indicated assignment seems to the writer the most logical division of responsibilities.

### Accounting Requirements

1—A detailed audit of the earnings of the business over a period of years as far back as may be consistent and necessary. An audit of balance sheet items as of the date of the balance sheet. Both earnings and balance sheet items should be analyzed in such detail as to conform to the requirements of the exhibits and schedules submitted to the various state "Blue Sky" commissions. The adequacy of the accounting system should be ascertained and constructive criticisms made relating thereto.

2—A study of the management and organization of the general offices and sales branches, charting the present organization structure and comparing it with the ideal form, indicating the advantages

attained thereby. This should also be accompanied by a study of the office personnel, ascertaining the weaknesses and strong points of each major and minor executive and offering constructive criticism for definite improvement.

The information required in the investigation of personnel is as follows:

- A—Name.
- B—Position.
- C—Duties.
- D—Age.
- E—Salary.
- F—Bonus or profit-sharing arrangement.
- G—Percentage of stock ownership.
- H—Length of service with the company.
- I—Is he a relative or descendant of organizers of business?
- J—Previous working experience.
- K—Personality.
- L—Reputation.
- M—Any special interests or hobbies.

It should be particularly noted whether the managing executives have a large or controlling pecuniary interest in the business.

From the standpoint of organization the following questions should be answered:

- Is there a definite plan of organization?
- Has the management definitely outlined to each department or division its necessary duties and responsibilities?
- Is there a proper correlation between departments?
- Has a vocational study been made of each man to ascertain his fitness for the position occupied?

3—Is the necessity for financing caused by past inefficiency of management or is it a justifiable provision for future expansion or preservation? Or is the business which is to be expanded and developed a new one rather classified as a speculative development and not an investment? The need of financing or refinancing usually arises on account of one or more of the following conditions: (1) the refunding of bank loans; (2) the procurement of additional working capital; (3) the acquisition of new plant and equipment or controlling interests in other companies or units; (4) the sale of a large stockholder's interest either upon his retirement or to interest the public in a business previously operated as a close corporation; (5) the sale of large holdings for other purposes as the diversification of holdings; (6) a pending reorganization; (7) frozen inventories, or (8) the refunding of prior issues.

4—Operating history—Date of organization—Growth in capital—

\*Management and Administration.



ization—Has the growth of net capital invested during the period of existence been largely out of earnings?

5—A study of the administrative policy relating to the following phases of any business is vital.

#### 1—SALES AND SERVICE—

- A—Stability of prices.
- B—Perfection in line or style of goods carried.
- C—Standard of quality.
- D—Distribution centers and sales by localities.
- E—Arrangements with dealers.
- F—Quality of service rendered.
- G—Facilitation of deliveries, repairs, and adjustments.

#### 2—CREDITS AND COLLECTIONS—

A—Basis adopted; "cash and carry," long or short term or installment. Comparison made with basis of credit usually extended in this class of business.

- B—Credit policy in dealings with customers.
- C—Relationship between credit and other departments.
- D—Records kept.

#### 3—ADVERTISING—

- A—General plan—Special or continuous.
- B—Local or national.
- C—Choice of mediums.
- D—Limitation or control of expenditures by budget, percentage of sales, or otherwise.

#### 4—PURCHASING—

A—As to basis—whether of the speculative type or largely dependent upon maximum and minimum requirements to insure proper turnover of merchandise.

- B—Organization of price records and orders and centralized control over the investment in inventories.
- C—Policies of payment which insure benefit of all discounts and allowances.
- D—Steps taken to secure scheduled delivery, eliminating necessity of plant shut-downs due to lack of materials.
- E—Co-operation of purchasing executive with executives of other departments.

6—WORKING CAPITAL REQUIREMENTS—Under this heading attention should be given the following vital points:

#### 1—INVENTORY ANALYSIS—

- A—Peak and low periods during year.
- B—Bearing of the conditions existing at both periods upon accounts and notes payable and working capital rates.
- C—Relationship of existing unfilled orders to present inventory.
- D—Result of purchase commitments upon future inventory and working capital.
- E—Relationship of uncompleted production schedule to inventories.

#### 2—Estimated requirements to finance the business.

A—Application of working capital ratios ascertained from a study of past net working capital as related to inventory turnover and volume of sales, after eliminating exceptional factors, to compute current working capital requirements.

B—Also considering required additional fixed investment if necessary to sustain increased volume.

### Industrial Requirements

1—Appraisal of buildings, machinery and equipment and valuation of inventories by responsible engineers, technically acquainted with the operating requirements.

2—In examining the facilities for the manufacture of the company's product, it is necessary to find out whether the company: Is equipped to meet competition; owns or leases its property; can convert its property to other uses; is protected against labor troubles;

### COST SECTION

compares favorably with competitors in investment ratio or equipment to total capital.

3—The management and organization of the factory and its branches should be studied, the present organization structure being charted and compared with the ideal form. This also includes a study of the personnel, to determine the weaknesses and strong points of each superintendent and foreman.

The information required in the investigation of factory personnel is the same as required for office personnel under "Accounting Requirements."

4—A study should be made of the elements which either tend to benefit or handicap the business—such as markets, location, transportation, demand, competition, local labor conditions, and the general prosperity or depression now existing in this particular industry, together with any other of the important factors affecting general business. A study and report should be made of the following factors which may materially affect future possibilities:

- A—Variation in sources of material supply.
- B—Expiration of valuable patents and copyrights.
- C—Stability of public favor.
- D—Possible changes in local labor conditions.
- E—Possible changes in transportation facilities.
- F—Possibilities of new inventions in similar lines changing many external conditions.

G—General classification of the company's product as a luxury, specialty, or necessity, and the possibility of a change in the general classification in the near future due to varying styles or natural changes. Is the manufacture of the product largely dependent upon activity in any special industry. Does transportation cost limit distribution? Is the product universally used or markets limited? Is the product of a monopolistic or highly competitive nature?

H—Ability of the management to adjust business to changing conditions.

L—Possibilities of future control of distribution monopolies, if they now exist.

### Dr. Merchant Addresses Salesmen

"If American business men will shake off the cloak of pessimism which too often inclines them to be frightened unduly at minor changes in business conditions, America in general and the paper industry in particular can look forward for two or three years to come, barring unforeseen world-wide developments, to a period of prosperity," said Dr. E. O. Merchant, statistician for the George H. Mead Company, before the Salesmen's Association of New York, with the reopening of the periodical luncheons of the New York division, held at Hotel Belmont Tuesday noon.

"We are now in a period of revival after a period of depression," he added, "and some of the more sensitive branches of the industry have already felt a notable upturn in business. All factors favor coming good business, such as money rates, world conditions, and the agricultural situation in the west. In some branches, there has already been such a flood of orders, due to panic buying of merchants, that the business curve has gone so high that there may be a slight waiting period before the increase continues.

"Let no one be frightened by the coming election, for there is no reason to anticipate that the change in the business cycle will revert back from revival to depression, before passing through a period of prosperity, and this has never yet happened."

Dr. Merchant before making this optimistic statement about the future told by what indices he based his belief, and added that in his opinion the settlement of the international situation would not for two or three years bring Germany into a competitive field in this country, for its first move will be to improve conditions at home. America can anticipate, Dr. Merchant believes, increased opportunity in the export market, rather than immediate increased competition from imported paper, but warned that the domestic mills must continue to closely watch unfair foreign competition in the form of misclassification.



# ADMINISTRATIVE CONTROL AND RESPONSE\*

BY WILLARD E. HOTCHKISS, EXECUTIVE DIRECTOR, NATIONAL INDUSTRIAL FEDERATION OF CLOTHING MANUFACTURERS.

In business concerns that have grown up under a single management there is frequently found a certain pioneer type of all-dominating executive who combines with authority and driving force such mastery of detail that he is able to embody in his own person the elements of administrative control. In other cases, as a business has grown, a group of executives through the habit of thinking and working together have created a sort of joint personality through which unified control has been maintained.

## Personal Control

Personal control of this sort is usually forceful, but in many cases it lacks balance. An individual or a small group that has retained personal control after a business has come to have an intricate structure of division and sub-divisions is likely to focus attention on certain details that come within the scope of their own experience and to neglect other details that may be more important. A more serious weakness of personal control is the stake which it places on the hazard of human life. The very qualities which enable pioneer management to retain personal control tend to defeat the transmitting of such control to successors.

By way of paradox, it may happen that the development of personal control comes in the second generation rather than the first. One large and highly organized business has come to my notice, in which a general executive when he saw the business becoming complex, secured an understudy to carry most of the detail for which he was responsible. In these circumstances the understudy was compelled to become a master of detail, but under the inspiring leadership of his chief and with the aid of an unusual mental equipment, he became also a master of policy and is now an unusually able general executive. He is, however, a type that tends to attract control of detail in his own office; unless he should later develop the rare ability of his predecessor to train and inspire a successor, the kind of control that now obtains in the business cannot be expected to perpetuate itself.

There are few executives, be they second generation or first, that have the capacity to control the diverse activities of a large modern business by means of personal mastery of details. Failing this, control must be exercised through a staff. The composition of a staff may vary according to the nature and traditions of a business, but it will normally include the heads of important departments like production and sales, and in many cases includes advisers such as consulting technical or industrial engineers, lawyers, and outside accountants. In certain circumstances, also, creditors are represented. Whatever special services are attached to the general manager's office, as well as the viewpoint of stockholders, are reflected in the staff through the general executives of the business.

Theoretically, staff meeting is a place where the various influences of a business can be set off against each other, where ideas can be picked to pieces until those that survive take shape in wise decisions and well-considered plans for making them effective. While staff organization is usually thought of as an instrument for unifying policy, it is clear that unity of policy can exist only in name unless decisions reached in staff councils are carried out in the same spirit in which they are made. This means that from the staff there must be reflected back through the line the impulse of a central control which keeps practice and procedure consistent throughout all branches of a business and in harmony with general policy.

The question to what extent staff organization achieves its theoretical aims in any given case must be answered with reference to the circumstances of that case. The efficiency of a machine depends on the people who operate it. Special influences that tend

to undermine management unity may be as active with a staff organization as without it, and it is inevitable that at times particular interests that may not coincide with the general interests of a business should be represented on the staff with a driving force that has to be reckoned with both in the making of policies and in carrying them out.

## Control of Specialized Functions

Any highly organized business today has numerous specialized functions, each in the charge of technicians in the particular field. The question arises: How can a non-technical management coordinate such functions? Management, of course, has resort to its own technique as represented by such devices as a scientific budget, perpetual inventory, standard accounting, and comprehensive statistical records and reports. Good management will make judicious use of such of these devices as fit the particular situation.

But there is a human side to control that goes beyond the scope of mere mechanical devices, and it is on this human side that control is most likely to be ineffective. Mechanical control depends to an appreciable extent on the use of language, but the people to whom language is addressed do not always draw from it the meaning it is intended to convey. A teacher of literature once expressed surprise that a certain narrowly orthodox student showed so much approbation of Emerson. Closer inquiry showed that he was filtering his Emerson through John Wesley. Management policies and instructions frequently undergo similar purification in transmission.

## Importance of Personality

In the last analysis the human aspect of control is a matter of personnel, both of the people who exercise control and those who come under it. A strong personality in any department of a business may exert an influence even from a minor position that will greatly promote or impede administrative control. Per contra, a weak person by failing to exert an influence he is supposed to exert may upset the best of paper plans. One of the most essential steps in unifying the administrative procedure of a business is to locate the less obvious centers of influence and to make sure that all the hidden forces are squarely behind the kind of practice and procedure required to make general policies harmoniously effective throughout the business.

Among the circumstances that tend to disturb the balanced control toward which staff organization is directed is the fact that management is frequently centered in a person who has a departmental slant. A sales manager who has come to bear the label and carry the responsibility of a general executive is likely in his thinking to be a sales manager still. If a general manager has come up from the production department he may easily overweight the views and problems of major and minor executives in production. If he was trained as an engineer or a lawyer he tends to approach decisions from the angle of his original profession. Finally, if he has grown up as a pioneer general executive of the sort referred to above, the tradition of that position usually sticks to him even though personal control has been replaced by staff direction on paper.

## Sales Department Influence

The sales department in a business is almost always in a position to exert a strong influence on staff councils, irrespective of the background of the general manager. The reason is not far to seek. Prosperity centers in sales. A successful sales department produces profits, within limits, even in spite of unwarranted burdens elsewhere; except for sales the activities of all the other departments are without meaning. In these circumstances a sales executive is frequently able to marshal arguments for his views which other

\* Management and Administration.

departments are reluctant to over-ride. By the same token the sales department is likely to assume considerable latitude in executing staff decisions. If the relative independence of a sales department is a matter of policy that rests on mature council it need not seriously conflict with proper administrative control. But when, as frequently happens, the dominance of sales influence proceeds from uncorrected assumption, an atmosphere is created that tends progressively not only to weaken staff control, but to encourage loose administration and wasteful practice within the line organization of the department.

In certain cases tradition attaches such importance to some key position in a business as to give it substantial immunity from central control. I have recently had occasion to consider the relation of designing to general policy in the manufacturer of men's clothing. Designing is the function around which the manufacture of ready-made clothing has developed, and the designer in the clothing business has traditionally occupied a strategic position. A designer's worth to a business is supposed to reside in his skill and artistic sense, but at the same time his function is to design models that the public will buy. Designing is a kind of work in which business and temperament easily become confused and it is never possible to say accurately to what extent a designer's sales motive is diluted by certain artistic whims.

Control over designing has had to make headway against strong resistance based on tradition and general impressions. From the designer's standpoint constant experiment and variety of models are sure to bring returns which the records may not reveal. Obviously there can be no business without sales and no sales without designing, and so a chain of plausible theory is built up through which in many cases a large part of the sales program and shop practice for a house has been predetermined in the designer's workroom. Expressed in general terms this means that important executive functions are lodged with a specialist who usually lacks qualification for management responsibility.

#### Relation of Control to Costs

Without proper control the cost of sterile models may run to large amounts. The piece rate structure in a clothing factory is built up from base rates for all standard operations. New operations involve differentials from the base. Even with the best possible management in the shop, deviations from habitual practice tend to add to direct labor cost out of all proportion to the mere increase in the amount of work. Moreover, small unit output per model disturbs shop balances and tends to impede the flow of work through the factory. It also increases cost of supervision. Every production process that makes for efficient shop practice and proper cost is hampered by a multiplication of slow selling models.

Control in this instance requires accurate records, model by model. It involves careful budgeting of that part of designing that represents laboratory expense chargeable to overhead, as distinct from unit factory cost. Control over adding and withdrawing models is affected by style and house policy, but here, too, decision as to what models should be pushed needs to rest on the fullest possible use of recorded data, both in respect to sales and to relative cost. It goes without saying that such decisions are the province of a staff or central management, as they are too important to be arrived at by any single functional specialist.

The reaction of designing and sales on shop practice leads into the question whether to control production by sales or sales by production. In a number of competitive industries it has been assumed that a production department existed for the purpose of manufacturing goods to supply whatever demand the sales department was able to create. It may be a moot question in any case whether the manufacturing waste that results from adjusting production to fluctuations in sales is greater than the possible loss of sales or the burden of moving surplus that results from following a fixed program of manufacture. The tendency in well managed concerns, however, seems to be towards adopting a reasonable man-

ufacturing program based on equipment and careful sales estimates, and then working a careful program for sending goods through the factory. It is clear that a policy of adjusting sales activity to a production program has the effect of tempering the influence of sales viewpoint in reaching staff decisions.

#### Centralizing Control

The degree to which control of departmental operations should be centralized in a general office is largely a technical question, the answer to which is found in the nature and size of the business and the background from which its organization has been built up. In some cases the answer will be found through actual experimentation in which there is a comparison of costs in units of different size and forms of organization. The growing complexity of modern business, and the magnitude of the interests combined under one ownership are creating strains which mere organization technique can scarcely compensate. Viewed in these larger dimensions, policy and control are not two problems but merely two phases of the same problem. The directing intelligence essential to handling the problem successfully must include varying combinations of technical equipment and human insight in the central management and at strategic points throughout the business structure.

#### Securing Proper Response

Wise management considers not only control but response to control, and this tends to replace arbitrary authority with human intelligence as an instrument of control. In this connection a recent experience related by an executive of a nation-wide business is illuminating. In order that the business might be in a position to expand its equipment to meet growing demand, it became necessary at specific intervals for the operating force to keep an extra record of service rendered. As a departure from routine practice this requirement caused irritation and finally resulted in cessation of work throughout a large unit of the company. Central management in trying to resolve the difficulty by the human intelligence method, discovered that in enforcing the practice of recording traffic the management of the local unit had specifically denied the force any information concerning the reasons for the extra service and had repeatedly impressed upon them that it was their duty to perform the service and not ask questions about it. Careful explanation of reasons underlying the requirement changed the leader of the revolt from a rebel to an ally, and the object lesson enabled the central management to take a big forward step in selling the human intelligence method to subordinate executives.

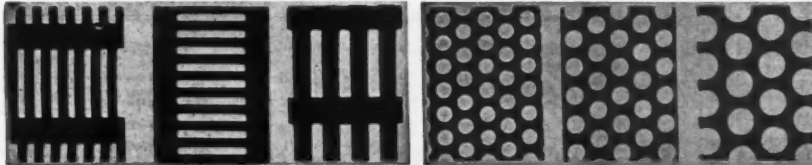
In a broad sense, both control and response to control require some understanding not only of shorttime requirements but of the long-time ends towards which policy and practice are directed. In those large concerns whose activities frequently are as complex and many-sided as society itself, this is not a simple specification to execute. In the last analysis it becomes a problem in education and personnel.

Plant education is a special phase of the general problem of personnel, adequate discussion of which would carry too far afield. One of the main objects of such education, whether carried on in systematic courses or merely as a by-product of personnel management, is the maintenance of mutual understanding and mutual confidence, which after all is the foundation of control.

The tendency towards bringing larger and more complex business units under joint control makes the building up of mutual understanding and confidence more and more a determining factor in successful management. The variety of interests and activities that fall within the province of a single management makes it necessary to utilize the most perfect organization technique that can be devised, but by the same token it is scarcely possible through technique alone to maintain in large scale business the kind of control that will insure uniform purpose and uniform efficiency throughout the business. To this end, business technique must have behind it in management the impulse of a large caliber intelligence operating in an atmosphere of understanding and confidence.

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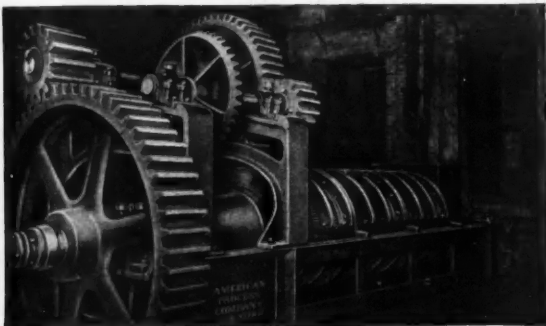
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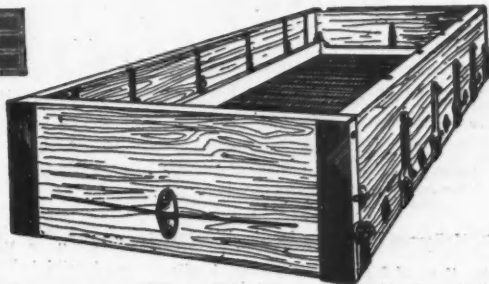
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# Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

## NEW YORK IMPORTS

WEEK ENDING SEPT. 6, 1924

### SUMMARY

News print.....	995 rolls, 484 bls.
Printing paper.....	529 bls., 278 cs., 51 pgs., 804 rolls
Wall paper.....	28 cs., 2 crates, 3 pgs., 1788 bales
Wrapping paper.....	1,290 bls., 7,401 rolls, 53 cs.
Cigarette paper.....	174 cs.
Writing paper.....	21 cs., 281 bls.
Paper hangings.....	6 bls., 2 cs.
Decalcomania paper.....	9 cs.
Filter paper.....	18 cs.
Drawing paper.....	29 cs.
Hanging stock.....	1,072 rolls
Packing paper.....	823 bls., 11 cs.
Kraft paper.....	196 rolls
Transfer paper.....	3 cs.
Tracing paper.....	1 cs.
Copy paper.....	10 cs.
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Surface coated paper.....	405 cs.
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Metal paper.....	27 cs.
Cellophane Paper.....	6 cs.
Miscellaneous paper.....	210 cs., 1,416 rolls, 349 bls.

### CIGARETTE PAPER

Standard Products Corp., Editor, Havre, 112 cs.  
J. P. Moullon, Roussillon, Bordeaux, 9 cs.  
P. J. Schweitzer, De Grasse, Havre, 53 cs.

### WALL PAPER

Whiting & Patterson Co., Inc., Berengaria, Havre, 2 cs.

H. Malz, Belgenland, Antwerp, 2 crates.  
A. C. Dodman, Jr., Inc., by same, 5 cs.  
F. A. Binder, Hannover, Bremen, 2 pgs.  
The Prager Co., N. Amsterdam, Rotterdam, 723 bls.

J. W. Hampton, Jr., & Co., by same, 256 bls.  
F. J. Emmerich, Hansa, Hamburg, 2 cs.  
R. F. Downing & Co., Inc., Mauretania, Southampton, 2 bls.

R. F. Downing & Co., Inc., by same, 1 cs.  
A. C. Dodman, Jr., Inc., by same, 3 cs.  
A. C. Dodman, Jr., Inc., by same, 1 pgs.  
Whiting & Patterson Co., Inc., Mauretania, Havre, 17 cs.

J. W. Hampton, Jr., & Co., Ryndam, Rotterdam, 280 bls.

The Prager Co., by same, 525 bls.

### PAPER HANGINGS

A. C. Dodman, Jr., Inc., Franconia, Liverpool, 1 bl.

W. H. S. Lloyd & Co., Minnetonka, London, 5 bls.

W. H. S. Lloyd & Co., by same, 2 cs.

### HANGING PAPER

Drinhausen Hollkott Paper Co., Hansa, Hamburg, 548 rolls.

Drinhausen Hollkott Paper Co., Deutschland, Hamburg, 524 rolls.

### PRINTING PAPER

Drinhausen Hollkott Paper Co., Deutschland, Hamburg, 42 bls.

F. D. Ramon, by same, 3 cs.

Kennedy Bros. & Co., Verbania, London, 2 cs.

W. Hartmann & Co., by same, 212 rolls.

Seaman Paper Co., by same, 124 rolls.

Traders Paper Co., by same, 228 rolls.

Traders Paper Co., by same, 34 bls.

Traders Paper Co., by same, 145 cs.

Street & Smith Corp., by same, 83 rolls.

M. O'Meara Co., Stuttgart, Bremen, 74 rolls.

M. O'Meara, by same, 135 bls.

B. F. Drakenfeld & Co., Laconia, Liverpool, 32 cs.

J. P. Heffernan Paper Co., Martha Washington, Trieste, 106 bls.

Melby, Kuttroff & Co., Inc., by same, 5 rolls.

C. Steiner, Republic, Bremen, 41 bls.

H. Reeve Angel & Co., Inc., by same, 75 bls.

H. Reeve Angel & Co., Inc., Minnetonka, London, 4 cs.

Keuffel & Esser, Hansa, Hamburg, 78 rolls.

Furness, Withy & Co., Ltd., Rhode Island, Leith, 15 cs.

Perry, Ryer & Co., Columbia, Glasgow, 66 cs.

C. Steiner, N. Amsterdam, Rotterdam, 11 cs.

Pulp & Paper Trading Co., by same, 64 bls.

Drinhausen, Hollkott Paper Co., Ohio, Hamburg, 32 bls.

### NEWS PRINT

Parsons & Whittemore, Bremen, Bremen, 672 rolls.

J. P. Heffernan Paper Co., Martha Washington, Trieste, 484 bls.

H. Reeve Angel & Co., Inc., Republic, Bremen, 140 rolls.

W. Hartmann & Co., Minnekahda, Hamburg, 183 rolls.

### WRITING PAPER

Guibout Freres, Berengaria, Havre, 15 cs.

A. Murphy & Co., by same, 3 cs.

Bernard Judae & Co., by same, 2 cs.

R. H. Macy & Co., by same, 1 cs.

J. P. Heffernan Paper Co., Martha Washington, Trieste, 241 bls.

Republic Bag & Paper Co., by same, 40 bls.

### TISSUE PAPER

Meadows, Wye & Co., Baltic, Liverpool, 6 cs.

Iwai & Co., Tatsuno Maru, Kobe, 7 cs.

T. D. Downing & Co., Resolute, Hamburg, 3 cs.

P. C. Zuhlke, Belgenland, Antwerp, 138 cs.

L. de Jonge & Co., by same, 101 cs.

Gevaert Co. of America, by same, 32 cs.

Gevaert Co. of America, Lapland, Antwerp, 31 cs.

P. C. Zuhlke, by same, 103 cs.

### BARYTA COATED PAPER

Globe Shipping Co., Hannover, Bremen, 236 cs.

Globe Shipping Co., Bremen, Bremen, 101 cs.

Globe Shipping Co., President Roosevelt, Bremen, 51 cs.

Globe Shipping Co., Lutzow, Bremen, 51 cs.

### WRAPPING PAPER

C. K. MacAlpine Co., United States, Copenhagen, 477 bls.

P. H. Petry & Co., Columbia, Glasgow, 76 webs.

C. Steiner, N. Amsterdam, Rotterdam, 12 cs.

M. O'Meara Co., by same, 614 bls.

M. O'Meara Co., by same, 914 rolls.

Wilkinson Bros. & Co., Inc., Ohio, Hamburg, 155 bls.

Bernard Judae & Co., Hansa, Hamburg, 33 cs.

Republic Bag & Paper Co., Liverpool Maru, Hamburg, 64 rolls.

Birn & Wachenheim, Ryndam, Rotterdam, 8 cs.

Chemical National Bank, Drottningholm, Gothenburg, 6,347 rolls.

Chemical National Bank, by same, 10 bls.

Fidelity International Trust Co., Deutschland, Hamburg, 34 bls.

### PACKING PAPER

M. O'Meara Co., Anaconda, Rotterdam, 91 bls.

Republic Bag & Paper Co., by same 315 bls.

Hudson Trading Co., by same, 5 cs.

I. P. Heffernan Paper Co., Hansa, Hamburg, 406 bls.

J. P. Heffernan Paper Co., N. Amsterdam, Rotterdam, 11 bls.

Import Paper Co., by same, 6 cs.

### KRAFT PAPER

Arkell Safety Bag Co., Drottningholm, Gothenburg, 196 rolls.

H. Reeve Angel & Co., Inc., Verentia, London, 12 cs.

H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.

Sussfield, Lorsch & Schimmel, Majestic, Havre, 1 cs.

### DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 6 cs.

Keuffel & Esser, Laconia, Liverpool, 6 cs.

Keuffel & Esser, Hausa, Hamburg, 8 cs.

J. E. Dietzgen & Co., Deutschland, Hamburg, 9 cs.

### COPY PAPER

Iwai & Co., Tatsuno Maru, Kobe, 10 cs.

### BASIC PAPER

Globe Shipping Co., Bremen, Bremen, 5 cs.

### TRACING PAPER

E. Dietzgen & Co., Deutschland, Hamburg, 1 cs.

### METAL PAPER

Hensel, Bruckman & Lorbacher, Deutschland, Hamburg, 20 cs.

Hensel, Bruckman & Lorbacher, Hannover, Bremen, 7 cs.

### DECALCOMANIA PAPER

L. A. Consmiller, Hannover, Bremen, 9 cs.

### TRANSFER PAPER

Atlantic Forwarding Co., Hannover, Bremen, 1 cs.

### CELLOPHANE PAPER

Du Pont Cellophane Co., Paris, Havre, 6 cs.

### PAPER

The Eleto Co., Paris, Havre, 15 cs.

Globe Shipping Co., by same, 39 cs.

Guibout freres, by same, 23 cs.

Susquehanna Silk Mills, America, Bremen, 4 cs.

P. J. Schweitzer, Rochambeau, Havre, 25 cs.

Japan Paper Co., Suffren, Havre, 10 cs.

DuPont Cellophane Co., by same, 3 cs.

Cocna Morrison & Co., by same, 2 cs.

W. J. Byrnes, by same, 7 cs.

Whiting & Patterson Co., Inc., Mauretania, Southampton, 4 cs.

H. Reeve Angel & Co., Inc., Tatsuno Maru, Kobe, 3 cs.

M. O'Meara Co., Drottningholm, Gothenburg, 310 rolls.

M. O'Meara Co., by same, 263 bls.

C. K. MacAlpine & Co., by same, 37 bls.

C. K. MacAlpine & Co., by same, 686 rolls.

E. H. Sergeant Co., by same, 1 cs.

J. P. Heffernan Paper Co., M. Washington, Trieste, 66 cs.

New York Trust Co., by same, 10 bls.

F. L. Kramer & Co., Minnetonka, London, 4 cs.

M. O'Meara Co., Hansa, Hamburg, 39 bls.

Japan Paper Co., Majestic, Havre, 4 cs.

Bank of New York, United States, Christiania, 420 rolls.

### RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., Westphalia, Hamburg, 2630 bls. rags.

E. J. Keller Co., Inc., by same, 100 bls. rag pulp.

E. J. Keller Co., Inc., K. I. Luckenbach, Kobe, 250 bls. rags.

E. J. Keller Co., Inc., United States, Copenhagen, 544 bls. rags.

G. M. Graves Co., Columbia, Glasgow, 69 bls. baggings.

E. J. Keller Co., Inc., Verentia, London, 161 bls. twines.

E. J. Keller Co., Inc., N. Amsterdam, Rotterdam, 443 bls. rags.

Philadelphia National Bank, by same, 51 bls. rags.

Atlantic Exchange Bank & Trust Co., by same, 229 bls. rags.

Chemical National Bank, by same, 139 bls. rags.

Northern Metals Selling Co., by same, 3 bls. rags.

D. M. Hicks, Inc., by same, 80 bls. rags.

R. F. Downing & Co., Inc., by same, 44 bls. new cuttings.

R. F. Downing & Co., Inc., by same, 38 bls. bagging.

R. F. Downing & Co., Inc., by same, 189 bls. rags.

P. Berlowitz, by same, 33 bls. rags.

Baring Bros. & Co., Cameronia, Glasgow, 86 bls. paper stock.

Chemical National Bank, Bremen, Bremen, 46 bls. rags.

National City Bank, by same, 157 bls. rags.

S. Birkenstein & Sons, by same, 142 bls. rags.

E. J. Keller Co., Inc., by same, 392 bls. rags.

L. H. Abenheimer, by same, 175 bls. rags.

Brown Bros. & Co., by same, 187 bls. rags.

(Continued on page 60)



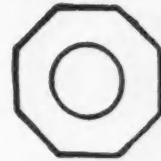
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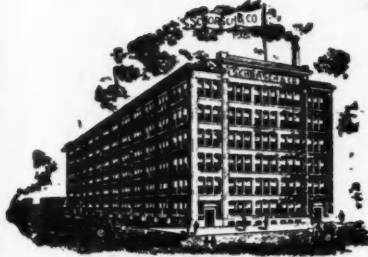
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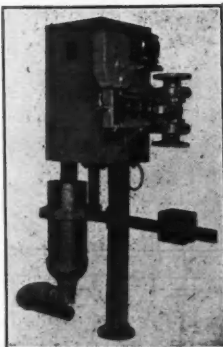
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## Imports of Paper and Paper Stock

(Continued from page 60)

Pagel, Horton & Co., Inc., Hannover, Bremen, 1,600 bls. wood pulp.  
 Castle & Overton, by same, 475 bls. wood pulp.  
 Bulkeley Dunton & Co., by same, 700 bls. wood pulp.  
 Castle & Overton, Anaconda, Rotterdam, 640 bls., 161 tons wood pulp.  
 Castle & Overton, Taurus, Christiania, 2,000 bls. wood pulp.  
 S. Birkenstein & Sons, Sahale, Antwerp, 322 bls. rags.  
 E. Butterworth & Co., Inc., by same, 38 bls. rags.  
 E. J. Keller Co., Inc., by same, 88 bls. rags.  
 J. L. Vandiver, by same, 289 bls. flax waste.  
 Atlantic Exchange Bank & Trust Co., by same, 325 bls. rags.  
 Castle & Overton, by same, 50 bls. rags.  
 Philadelphia National Bank, by same, 42 bls. rags.  
 Union National Bank, by same, 192 bls. rags.  
 D. J. Murphy, Sahale, Rotterdam, 83 bls. rags.  
 G. W. Millar & Co., by same, 1 bl. rags.  
 Philadelphia National Bank, by same, 119 bls. rags.  
 Castle & Overton, by same, 49 bls. rags.  
 Brown Bros. & Co., by same, 4 bls. rags.  
 E. J. Keller Co., Inc., by same, 59 bls. rags.  
 E. J. Keller Co., Inc., Breedyk, Amsterdam, 147 bls. rags.  
 E. J. Keller Co., Inc., West Campgaw, Hamburg, 70 bls. rags.  
 Castle & Overton, Dania, Copenhagen, 475 bls. rags.  
 Castle & Overton, Breedyk, Rotterdam, 160 bls. rags.  
 Castle & Overton, Dorelian, Hamburg, 133 bls. rags.  
 Castle & Overton, Dorelian, Bremen, 133 bls. rags.  
 Castle & Overton, Northwestern Miller, London, 370 bls. waste paper.  
 Philadelphia National Bank, by same, 115 bls. rags.  
 D. M. Hicks, Inc., by same, 276 bls. rags.  
 Brown Bros. & Co., by same, 275 bls. rags.  
 E. J. Keller Co., Inc., City of St. Joseph, Genoa, 184 bls. cotton waste.  
 J. A. Steer, Jessmore, Belfast, 65 bls. rags.  
 D. J. Murphy, Anaconda, Rotterdam, 768 bls. rags.  
 G. W. Millar & Co., by same, 174 bls. rags.  
 Castle & Overton, by same, 156 bls. rags.  
 Philadelphia National Bank, by same, 171 bls. rags.  
 Philadelphia National Bank, Hannover, Bremen, 101 bls. rags.  
 Union National Bank, by same, 69 bls. rags.  
 Chase National Bank, by same, 183 bls. rags.  
 L. H. Abenheimer, by same, 52 bls. rags.  
 National City Bank, by same, 152 bls. rags.  
 Belgian Bank, by same, 282 bls. rags.  
 National Bank of Commerce, by same, 216 bls. rags.

### NEW ORLEANS IMPORTS

WEEK ENDING SEPT. 6, 1924

Castle & Overton, City of Weatherford, Rotterdam, 191 bls. rags.  
 Lagerloef Trading Co., West Haven, Tacock, 250 tons chemical pulp.

### BALTIMORE IMPORTS

WEEK ENDING SEPT. 6, 1924

Pagel, Horton & Co., Inc., Trondhjemsfjerd, Gefte, etc., 4,600 bls., 800 tons sulphate pulp.  
 Pagel, Horton & Co., Inc., by same, 5,375 bls., 925 tons sulphite pulp.  
 Bulkeley Dunton & Co., by same, 1,375 bls., 275 tons sulphite pulp.  
 Hartig Pulp Co., by same, 750 bls., 150 tons sulphite pulp.  
 Price & Pierce, Ltd., by same, 1,600 bls., 200 tons sulphite pulp.  
 Johaneson, Wales & Sparre, Inc., by same, 500 bls., 100 tons sulphite pulp.  
 Scandinavian Pulp Agency, Inc., by same, 625 bls., 125 tons sulphite pulp.  
 Scandinavian Pulp Agency, Inc., by same, 1,625 bls., 250 tons dry pulp.  
 E. J. Keller Co., Inc., by same, 660 bls., 98 tons dry pulp.  
 Pagel, Horton & Co., Inc., by same, 500 bls., 50 tons dry pulp.  
 H. Hollesen, Hannover, Bremen, 380 bls. wood pulp.  
 Bulkeley Dunton & Co., by same, 2,050 bls. sulphate pulp.  
 Bulkeley Dunton & Co., Tanafjord, Gefte, 750 bls., 152 tons sulphate pulp.  
 Pagel, Horton & Co., Inc., by same, 1,125 bls., 177 tons sulphate pulp.  
 Johaneson, Wales & Sparre, Inc., Tanafjord, Hornosand, 7,374 bls., 1,229 tons sulphate pulp.  
 Johaneson, Wales & Sparre, Inc., by same, 1,350 bls., 225 tons sulphite pulp.  
 Hartig Pulp Co., Tanafjord, Iggesund, 200 bls., 25 tons sulphite pulp.  
 M. Gottesman & Co., Inc., Liverpool Maru, Hamburg, 700 bls., 106 tons wood pulp.  
 Johaneson, Wales & Sparre, Inc., Stureholm, Gothenburg, 762 bls. sulphite.  
 Johaneson, Wales & Sparre, Inc., Stureholm, Sundsvall, 1,010 bls. sulphite.  
 Johaneson, Wales & Sparre, Inc., Pennsylvania, Gothenburg, 2,625 bls. kraft, 250 bales sulphite.

### BOSTON IMPORTS

WEEK ENDING SEPT., 6, 1924

Charles E. Joslin, Mariana, Halifax, 81 bls. old canvas.  
 Hartig Pulp Co., West Haven, Rotterdam, 270 bls. wood pulp.  
 Maurice O'Meara & Co., by same, 1,631 reels packing paper.  
 Castle & Overton, by same, 254 bls. wood pulp.  
 A. Vcyck, by same, 508 reels strawboard.  
 Lee Higginson & Co., Dorelian, Hamburg, 136 bls. old rags.  
 Second National Bank, by same, 241 bls. old rags.  
 International Acceptance Bank, by same, 22 rolls printing paper.  
 F. Anderson & Co., by same, 550 bls. sulphite pulp for New York delivery.  
 Rogers & Webb, by same, 194 reels cardboard, 502 rolls wrapping paper, 54 bls. old rags.

Hanseatic Corp., by same, 55 rolls printing paper.  
 Second National Bank, West Campgaw, 534 bls. old rags.  
 Edwin Butterworth & Co., by same, 82 bls. old rags.  
 Stone & Donner Co., by same, 2 cs. paperware.  
 International Acceptance Bank, Inc., by same, 5 rolls paper.  
 On order, by same, 153 bls. old rags.  
 Bedix Paper Co., by same, 15 cases pasteboard goods, 7 cases wallpaper, 15 bls. pasteboard.  
 E. J. Keller Co., Inc., by same, 54 bls. old rags.  
 Lee Higginson & Co., by same, 54 bls. old rags.  
 W. N. Proctor Co., by same, 6 cs. pasteboard.  
 Katzenstein & Keene, Mississippi, London, 217 bls. old rags.  
 American Express Co., by same, 47 bls. old rags.  
 On order, by same, 22 bls. old rags.  
 Old Colony Trust Co., Samaria, Liverpool, 132 coils old rope.  
 G. F. Malcolm, by same, 10 cs. tissue.  
 Price & Pierce, Naples Maru, Scandinavia, 1,000 bls. dry sulphite pulp.  
 Guarantee Trust Co., by same, 500 bls. dry sulphite pulp.  
 Johaneson, Wales & Sparre, by same, 1,200 bls. wet brown mechanical wood pulp.  
 Hartig Pulp Co., Inc., by same, 300 bls. dry sulphite pulp.  
 Johaneson, Wales & Sparre, Inc., by same, 500 bls. unwrapped sulphite pulp.  
 Hartig Pulp Co., by same, 350 bls. unwrapped sulphite pulp.  
 Scandinavian Pulp Assn., by same, 875 bls. dry sulphite wood pulp.  
 Hartig Pulp Co., by same, 1,588 bls. sulphite pulp.  
 J. Anderson & Co., Inc., by same, 8,030 bls. wood pulp.  
 Price & Pierce, by same, 2,650 bls. wood pulp.  
 Pagel, Horton & Co., Inc., by same, 3,000 bls. wood pulp.  
 Bulkeley Dunton & Co., by same, 4,150 bls. wood pulp.  
 International Acceptance Bank, Dania, Scandinavia, 20 pkgs. wrapping paper.  
 Borregaard Co., Pennsylvania, Scandinavia, 672 bls. dry wood pulp.  
 J. Anderson & Co., Inc., by same, 3,630 bls. dry sulphite pulp.  
 Marquaardt, Blake & Decker, Valemore, Liverpool, 48 cs. print paper.  
 Geo. M. Graves, Inc., by same, 121 bls. waste paper.  
 American Express Co., by same, 22 bls. old rags.  
 Lagerloef Trading Co., Natirar, 1,033 tons chemical pulp.  
**PHILADELPHIA IMPORTS VIA BOSTON**  
 Price & Pierce, Naples Maru via Boston, Scandinavia, 1,950 bls. sulphite pulp.  
 South American Trust Co., Capulin, London, 60 bls. rags for paper stock.  
**BALTIMORE IMPORTS VIA BOSTON**  
 Castle & Overton, West Haven via Boston, Rotterdam, 1,336 bls. wood pulp.  
 Geo. M. Graves, by same, 129 bls. old rags.  
 On order, by same, 190 bls. old rags.  
 British American Tobacco Co., by same, 24 cases printed cigarette papers.

### Water Powers of Southeastern Alaska

The Federal Power Commission has just issued a valuable and interesting report entitled "The Water Powers of Southeastern Alaska," by J. C. Dort, Hydroelectric Engineer, United States Forest Service.

In it are brought together all the known data of the water powers of this part of Alaska to which considerable attention has been directed for several years as a possible location for news print paper production.

While the resources of spruce and other pulp species as paper-

making raw material have been recognized, considerable doubt has existed as to continuous power in sufficient quantity and at a reasonable cost to warrant development in paper. The report shows the locations and analyzes the conditions of each of the projects considered as possible of development, and it deserves careful study. Without doubt the conditions brought out in a recent bulletin (1241 of the United States Department of Agriculture) make it probable that we may expect some intensive study of Alaskan conditions in the very near future and the possibility of a mill being established somewhere in that territory.



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Stocks		BID	ASKED
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Abitibi Power and Paper Company, Ltd., Pfd.	100	101	
American Writing Paper Company, Pfd.	3	3 3/4	
Brompton Pulp and Paper Company, Ltd.	33 3/4	33 3/4	
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.	86	87	
Price Brothers	42 1/2	43 1/2	
St. Maurice Paper Co., Ltd.	86	88	
Smith (Howard) Paper Mills, Ltd.	31	32	
Spanish River Pulp and Paper Mills, Ltd.	108 1/4	109	
Spanish River Pulp and Paper Mills, Ltd., Pfd.	118 3/4	119	
Union Bag and Paper Corp.	37 3/4	38 3/4	
Wayagamack Pulp and Paper Company, Ltd.	36	37	
West Virginia Pulp and Paper Company	50	54	

Bonds		BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934..	102	103	
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940..	94 1/2	96 1/2	
Abitibi Power and Paper Company, Ltd., Con. 8s 1931..	102 1/4	104 1/4	
Belgo Canadian Paper Company, 1st 6s 1943..	95 1/2	95 1/2	
Brown Company Serial 6s..	99	100	
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..	94	95	
Donnacona Paper Company, Ltd., 1st 6s 1940..	98	100	
Eddy Paper Company, 1st 7 1/2s 1937..	94	95 1/2	
Gair (Robert) Company, 1st 7s 1937..	99 1/4	99 1/4	
International Paper Company, 1st and Ref. 5s (Series "B") 1947..	85	86	
Mattagami Pulp and Paper Company, 1st 6s 1937..	58	60	
Mattagami Pulp and Paper Company, 1st 7s 1949..	20	23	
Owego Falls Corporation, 1st 8s 1942..	101 1/2	102	
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947..	97 1/2	99 1/2	
Parker, Young Company, 1st 6 1/2s 1944..	95 1/2	97 1/2	
Pateron Parchment Paper Company, 1st 6s (Series "A") 1938..	96	98 1/2	
Pestigo Paper Company, 1st 7s (Series "B") 1942..	92	94	
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943..	98 1/2	99	
Provincial Paper Mills, Ltd., 1st 6s 1940..	98	100	
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929..	17 1/2	19	
Riordon Pulp and Paper Company, Ltd., 6s 1942..	91	92	
Riordon Company, Ltd., 1st and Ref. 8s 1940..	94	95	
River Raisin Paper Company, 1st 8s 1936..	103	104	
Smith (Howard) Paper Mills, Ltd., 6s 1934..	95	95 1/2	
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941..	94	96	
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931..	102 1/2	104	
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	106	107	
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77	

### Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.65	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.15	@ 4.40
Side Runs	3.25	@ 1.50
Book, Cased—		
S. & S. C.	8.00	@ 9.50
M. F.	7.50	@ 8.85
Canted 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	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@ 8.50
No. 2 Jute	7.75	@ 8.25
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.25	@ 3.75
Card Moulder	4.00	@ 5.00

Boards—per ton—		
News	47.50	@50.00
Straw	50.00	@55.00
Chip	37.50	@42.50
Binders' Boards	75.00	@80.00
Sgl. Mil. Ll. 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	@13.00
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	@ 3.15
No. 1 strong unbleached		
bleached	2.75	@ 3.00
No. 2 strong unbleached		
bleached	2.50	@ 2.75
No. 1 Kraft	2.75	@ 2.85
Sulphate—		
Bleached	3.50	@ 3.65
(F. o. b. Pulp Mill)		
Sulphite (Domestic)		
Bleached	3.50	@ 4.50

Easy Bleaching Sulphite	2.60	@ 3.00
News Sulphite	2.50	@ 2.75
Mitscherlich	3.00	@ 3.50
Kraft (Domestic)	2.75	@ 3.00
Soda Bleached	3.90	@ 4.10

### Domestic Rags

New Rags		Prices to Mill, f. o. b. N. Y.
Shirt Cuttings—		
New White, No. 1	13.50	@14.00
New White, No. 2	6.50	@ 7.00
Silicias, No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
Washables	5.50	@ 6.15
Fancy	6.50	@ 7.00
Blue Overall	7.75	@ 8.25
New Blue	5.00	@ 5.50
New Black Soft	4.75	@ 5.25
New Light Seconds		
O. D. Khaki Cuttings	3.00	@ 3.25
Men's Corduroy	4.50	@ 4.75
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	6.25	@ 6.75
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	3.75	@ 3.90
Miscellaneous	3.00	@ 3.25
Black Stockings	3.50	@ 3.75
Roofing Rags—		
Cloth Strippings	1.90	@ 2.00
No. 1	2.40	@ 2.50
No. 2	2.30	@ 2.40
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.80	@ 1.50

### Foreign Rags

New Light Silicias	7.50	@ 8.75
Light Flannellets	8.00	@ 8.25
Unbleached Cottons	9.00	@ 9.50
New White Cuttings	11.50	@12.50
New Light Oxford	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings		
No. 1	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
Shoppery	1.40	@ 1.60
French Blues	3.25	@ 3.75

### Bagging

Prices to Mill F. o. b. N. Y.	
Gunny No. 1—	
Foreign	1.70 @ 1.80
Domestic	1.65 @ 1.75

Wool, Tares, light	1.40	@ 1.50
Wool, Tares, heavy	1.40	@ 1.50
Bright Bagging	1.25	@ 1.40
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	2.25	@ 2.50
Domestic	2.10	@ 2.20

### Old Waste Papers (F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.50	@ 3.75
Hard, White, No. 2	3.00	@ 3.25
Soft, White, No. 1	3.00	@ 3.25
Flat Stock—		
Stitchless	1.60	@ 1.70
Over Issue Mag.	1.60	@ 1.70
Solid Flat Book	1.55	@ 1.65
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.90	@ 2.00
Ledger Stock	1.60	@ 1.70
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	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	1.00	@ 1.10
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales		
	2.10	@ 2.20
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.95	@ 1.05
No. 1 Mixed Paper	.75	@ .85
Common Paper	.55	@ .65

### Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .43
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B., Italian, 18		
Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.30	@ .31
Light, 18 basis	.28	@ .30
Jute Wrapping, 3-6 Ply—		
No. 1	.30	@ .33
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' Twines		
Balls	.12	@ .13
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.20	@ .40
Amer. Hemp, 6s	.30	@ .33
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .13
Sisal Lath Yarn—		
No. 1	.11	@ .15
No. 2	.14	@ .18
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	25	@ 35
Water Marked Sulphite	9	@ 12
Sulphite Bond	6 1/2	@ 10 1/4
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 1/2	@ 7 1/2
No. 1 S. & S. C.	6 1/2	@ 7 1/2
Coated Book	8	@ 10
Coated Roll	8	@ 10
News—Rolls, mill	3 1/2	@ 4 1/2
News—Sheets, mill	4	@ 4 1/2
No. 1 Manila	4 1/2	@ 6 1/2
No. 1 Fibre	4 1/2	@ 5 1/2
No. 2 Manila	3 1/2	@ 4 1/2
Butchers' Manila	3 1/2	@ 4 1/2

No. 1 Kraft	5 1/2	@ 6 1/2
No. 2 Kraft	4 1/2	@ 5
Wood Tag Boards	4 1/2	@ 6
Sulphite Screenings	2 1/2	@ 3 1/4
Manila Tissue, 20x30 sheet	7	@ —
White Tissue, 24x36 sheet	7	@ —
Boards, per ton—		
Plain Chip	\$45.00	@ 47.50
Solid news	47.50	

Ledgers and Writings
Leds ..... 1.75 @ 1.80
No. 1 Books, Light 1.35 @ 1.40
Blanks ..... 2.00 @ 2.10
Ex. No. 1 Manila. 2.00 @ 2.10
Manila Envelope
Cuttings ..... 2.10 @ 2.15
No. 1 Manila ..... 1.30 @ 1.40
Folded News (over issue) ..... 1.15 @ 1.20
Old Newspapers—
No. 1 ..... 1.05 @ 1.10
No. 2 ..... .95 @ 1.00

Mixed Papers—
No. 1 ..... 1.00 @ —
No. 2 ..... .80 @ .85
Straw Clippings ..... .95 @ —
Binders' Chippings ..... .95 @ —
Kraft ..... 2.25 @ 2.35
New Kraft Cuts ..... 2.50 @ —
Roofing Stock, f. o. b. Chicago, Net Cash—
No. 1 ..... \$42.00 @ —
No. 2 ..... 40.00 @ —
No. 3 ..... 38.00 @ —
No. 4 ..... 38.00 @ —

Old Waste Paper
(In carload lots, f. o. b. Toronto)
Shavings—
White Env. Cut. 3.60 @ —
Soft White Book shavings ..... 2.80 @ —
White Blk. News 1.75 @ —
Book and Ledger—
Flat Magazine and Book Stock (old) 1.25 @ —
Light and Crumpled Book Stock 1.10 @ —
Ledgers and Writings ..... 1.50 @ —
Solid Ledgers ..... 1.50 @ —
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 ..... @ .60
Domestic Rags—
Price to mills, f. o. b. Toronto Per lb.
No. 1 White shirt cuttings ..... .13 3/4 @ .13 3/4
No. 2 White shirt cuttings ..... .06 3/4 @ .07
Fancy shirt cuttings ..... .07 @ .07 3/4
No. 1 Old Whites. .... @ —
Third and blues ..... .05 @ .05 3/4
Per cwt.
Black stockings. .04 @ —
Roofing stock:
No. 1 ..... 2.20 @ —
No. 2 ..... 2.10 @ —
Manila rope ..... .06 @ .06 3/4
No. 2 ..... 1.55 @ —

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper
Bonds ..... .09 3/4 @ .53
Ledgers ..... .15 @ .48
Writings
Superfine ..... .15 @ .20
Extra fine ..... .12 @ .22
Fine ..... .20 @ .30
Fine, No. 2 ..... .20 @ .25
Fine, No. 3 ..... .15 @ .30
Book, M. F. ..... .09 3/4 @ .12 3/4
Book, S. S. & C. .... .11 @ .15
Book, Coated ..... .14 3/4 @ .20
Coated Lithograph. .10 @ .15
Label ..... .05 @ .07
News ..... .10 @ .15
No. 1 Jute Manila .12 @ .13
Manila Sul. No. 1 .08 @ .10
Manila No. 2 ..... .07 3/4 @ .08
No. 2 Kraft. .... @ .08 3/4
No. 1 Kraft. .... @ .09 3/4
Common Bogus. .... .03 3/4 @ .04
Shaw Board ..... .55.00 @ 60.00
News Board ..... 42.50 @ —
Chip Board ..... 40.00 @ 42.50
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

No. 2 Hard
White ..... 3.25 @ 3.40
No. 1 Soft White 3.10 @ 3.25
No. 2 Soft White 2.00 @ 2.25
No. 1 Mixed ..... 2.00 @ —
No. 2 Mixed ..... 1.25 @ 1.30
Solid Ledger Stock. 1.65 @ 1.85
Writing Paper ..... 1.50 @ 1.75
No. 1 Books, heavy 1.45 @ 1.60
No. 2 Books, light. 1.15 @ 1.25
No. 1 New Manila. 2.40 @ 2.50
No. 1 Old Manila. 1.50 @ 1.75
Container Manila. 1.25 @ 1.40
Old Kraft ..... 2.15 @ 2.25
Overissue News ..... 1.05 @ 1.10
Old Newspaper ..... 1.05 @ 1.40
No. 1 Mixed Paper. .80 @ .90
Common Paper ..... .65 @ .70
Straw Board, Chip. .65 @ .70
Binders Bd., Chip. .65 @ .70

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper
Ledgers—
Sulphite ..... .08 3/4 @ .18
Rag Content ..... .18 @ .36 3/4
All Rag ..... .38 @ .50
Books—
Sulphite ..... .07 3/4 @ .14
Rag Content ..... .16 @ .33 3/4
All Rag ..... .36 3/4 @ .51
Writings ..... .08 3/4 @ .20
Superfines ..... .20 @ .48
News ..... .04 @ .06 3/4
Book, M. F. ..... .06 3/4 @ .10 3/4
Book, Super ..... .07 3/4 @ .11
Book, Coated ..... .09 3/4 @ .20
Coated Litho. .... .10 @ .15
Label ..... .09 3/4 @ .15
Jute Manila No. 1. 12 @ .13
Manila, Sul. No. 1. .05 @ .06
Manila, Sul. No. 2. .03 3/4 @ .04 3/4
No. 1 Kraft. .... 6 3/4 @ .06 3/4
No. 2 Kraft. .... .05 3/4 @ .05 3/4
Common Bogus ..... .03 3/4 @ .04
Straw Board ..... 50.00 @ 50.00
News Board ..... 47.50 @ 50.00
Chip Board ..... 45.00 @ 47.50
Wood Pulp Board 80.00 @ 85.00
Binder Boards ..... 75.00 @ 85.00
Tarred Felts—
Regular ..... 61.00 @ 63.00
Slater's ..... 66.00 @ 68.00
Best Tarred, 1 Ply, roll ..... 1.50 @ 1.60
Best Tarred, 2 Ply, roll ..... 1.70 @ 1.80
Best Tarred, 3 Ply, roll ..... 2.00 @ 2.10

Domestic Rags (New)
Price f. o. b. Boston
Shirt Cuttings—
New White No. 1 .13 3/4 @ .14
Silesias, No. 1. .... .09 @ .09 3/4
New Unbleached. .12 3/4 @ .13
Scrap Burlaps ..... 1.25 @ 1.50
Wool Tares, heavy. 2.00 @ 2.13
Mixed Strings ..... 1.50 @ 1.62 3/4
New Burlap Cuttings 2.00 @ 2.25

Bagging
F. o. b. Phila.
Gunny No. 1—
Foreign ..... 1.75 @ 1.85
Domestic ..... 1.75 @ 2.00
Manila Rope ..... 5.00 @ 5.50
Sisal Rope ..... 2.50 @ —
Mixed Rope ..... 1.25 @ —
Scrap Burlaps ..... 1.00 @ 1.25
Wool Tares, heavy. 2.00 @ 2.13
Mixed Strings ..... 1.00 @ —
No. 1, New Lt. Burlap ..... 3.50 @ 3.75
New Burlap Cuttings 3.50 @ —

Domestic Rags—New.
Price to Mill, f. o. b. Phila.
Shirt Cuttings—
New White, No. 1 .12 @ .13
New White, No. 2 .07 @ —
Silesias, No. 1. .... .08 3/4 @ .08 3/4
New Unbleached. .11 3/4 @ .11 3/4
Washable ..... .05 3/4 @ .05 3/4
Fancy ..... .07 @ .07 3/4
Cottons—according to grades—
Blue Overall .... .09 3/4 @ .09 3/4
New Blue ..... .03 3/4 @ .03 3/4
New Black Soft. .06 @ .06 3/4
New Light Sections—
Khaki Cuttings. .... .03 3/4 @ .03 3/4
Corduroy ..... .04 @ .04 3/4
New Canvas ..... .10 3/4 @ .11
New Black Mixed .05 @ .05 3/4

Old Papers
Shavings—
No. 1 Hard White 4.00 @ 4.25
White Blank News. 1.75 @ 2.00
Manila Env. Cuttings ..... 2.80 @ 3.00
No. 2 Hard White 3.25 @ 3.50
No. 1 Soft White. 3.10 @ 3.25
No. 2 Soft White. 2.25 @ 2.50
No. 1 Mixed ..... 1.60 @ 1.75
No. 2 Mixed ..... 1.25 @ 1.50
Solid Ledger Stock. 2.00 @ 2.25
Writing Paper ..... @ 1.70
No. 1 Books, Heavy 1.60 @ 1.80
No. 1 Books, Light 1.40 @ 1.50
No. 1 New Manila. 2.50 @ 2.60

Domestic Rags (Old)
Price f. o. b. Boston
White No. 1—
Repacked ..... 7.50 @ 8.00
Miscellaneous ..... 6.50 @ 7.00
White No. 2—
Repacked ..... 5.50 @ 6.00
Miscellaneous ..... 4.75 @ 5.50
Thirds and Blues—
Repacked ..... 3.75 @ 4.00
Miscellaneous ..... 3.00 @ 3.25
Roofing Stock—
No. 1 ..... 2.25 @ 2.37
No. 2 ..... 2.12 3/4 @ 2.25
No. 3 ..... 1.50 @ 1.75
No. 4 ..... 1.15 @ 1.20

Old Papers
F. o. b. Phila.
Shavings—
No. 1, Hard ..... 3.40 @ 3.60
White ..... 3.40 @ 3.60

White, No. 1—
Miscellaneous ..... 7.50 @ 8.00
White, No. 2—
Repacked ..... .05 @ .05 3/4
Miscellaneous ..... .04 3/4 @ .05 3/4
Thirds and Blues—
Repacked ..... 3.65 @ 3.85
Miscellaneous ..... 3.15 @ 3.25
Black Stockings. 4.00 @ 4.50
Roofing Stock—
No. 1 ..... 2.30 @ 2.40
No. 2 ..... 2.20 @ 2.30
No. 3 ..... 1.15 @ 1.20
No. 4 ..... 2.10 @ 2.20
No. 5A ..... 1.40 @ —
No. 5B ..... 1.25 nominal
C ..... 1.15 nominal

TORONTO

Paper
(Mill Prices to Jobbers f. o. b. Mill)
Bond—
Sulphite ..... .11 @ .12 3/4
Light tinted ..... .12 @ .13 3/4
Dark tinted ..... .13 3/4 @ .15
Ledgers (sulphite). .... @ .13
Writing ..... .09 3/4 @ .12
News, f. o. b. Mill—
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 @ —
"R" Manila ..... 5.50 @ —
No. 1 Manila ..... 6.50 @ —
Fiber ..... 6.50 @ —
Kraft, M. F. .... 7.00 @ —
M. G. .... 7.15 @ —

Pulp
(F. o. b. Mill)
Ground wood ..... \$27.00 @ 28.00
Sulphite easy bleaching ..... 55.00 @ 60.00
Sulphite news grade 50.00 @ 55.00
Sulphite, bleached. 75.00 @ 80.00
Sulphate ..... 60.00 @ 62.50

Vessel Adapted to Paper Carrying

Vickers Limited has built a cargo steamer for the Anglo-Newfoundland Development Company, which has been specially designed for the carriage of paper in rolls. The vessel is 422 feet long between perpendiculars and has the following other dimensions: Breadth moulded, 56 feet deep; depth moulded to upper deck, 38 1/2 feet; tween deck height, 7 1/2 feet; boat deck height, 8 feet; load draft, 26 1/2 feet; deadweight, 9,000 tons; speed (on service), 11 knots.

The vessel is specially strengthened and constructed for encountering ice. It has three continuous steel decks and the tween decks and holds are arranged for the stowage, with the minimum of waste space, of rolls of paper measuring 2 feet 9 inches in diameter and 6 feet long. These rolls are stowed on end and placed in position under the beams.



## New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,  
WEDNESDAY, September 10, 1924.

The cooler weather of the past week has acted as a real stimulant on the paper market. For several weeks the market has been registering a slow improvement but last week, for the first time, the improvement was really pronounced and bordered on a genuine revival of business all along the line. The week previous had been a trifle discouraging, not because business had failed to show a gain but because that gain had not come up to expectations. The past week, however, has brought encouragement to the paper men for it has told them that there may yet be justification for their hopes of a Fall business that will not be far from normal even if it should fail to be normal. There is at this time a growing disposition to buy for the future while for a long period past buying has been almost entirely for the urgent need of the hour. Nothing could better indicate the healthier tone of the market than this loosening up on the part of the buyers. Mills are running at nearer capacity than for some time. Many that were closed for a time are running again while many others which were running on a reduced schedule have either returned to their customary schedule or to an increased schedule. Taking a long look ahead, the paper men still believe that the paper business will show slow but steady advancement during the Fall and that all that is needed to enable it to round out the year in a satisfactory manner is the setting at rest of all those doubts and vain imaginings which are apt to retard business during a presidential year. No matter what happens at the election in November it cannot help but improve business, believe the paper men. All the arteries of business are certain, they maintain, to function properly after election is over and American business knows just what to depend on. Some time ago there was considerable stock accumulation but this has been materially cut down during the period when production was being curtailed. Stock is today moving about as fast as it is being produced so that further accumulation in the near future is not likely unless business should suffer a reaction. Prices are standing still but they are tugging at the ropes. They have fluctuated but little for weeks and now the tendency is to advance and it would seem as though an actual spurt upward in many of the items could not hold off a great deal longer. The progress of the market from this time on, through the Fall and into the Winter, should be attended by some interesting developments and they may start at almost any moment.

While actual business is becoming more plentiful both in number of orders and in their volume, the number of inquiries are also multiplying. This is taken as an indication of a healthy interest, a strong inclination to buy and yet a hesitation to act on that inclination. One large buyer was asked why he was holding back and his answer was probably characteristic of what is in the minds of many. "I am too uncertain about what lies ahead," he said. "I feel that business is going to be good and that I should order much more than I am ordering but there is a chance that I am wrong and I cannot afford to take the chance." And so, while the disposition is there, the market must wait until greater assurance brings the orders that are holding back.

News print is fast getting back to its own now, the past week being the best week it has seen in some time. The publications are now returning to their normal size. The returns of vacationists from shore and mountain are giving them their usual quota of readers and the big advertisers, realizing that they are getting their own audience back again, are increasing their advertising space and helping to swell the number of pages in the big metropolitan editions. This will have its effect on the news print mills and another month will probably find the total production much nearer capacity than it is today.

Writing papers are showing a decided improvement although they

are not yet back where they should be. The board demand continues to show a marked improvement and even tissues, which have been having a slow call, are coming back gradually to better demand.

Book papers and all grades of fine stock are progressing favorably due to better conditions in the printing trades. Real impetus in all these lines is looked for within the next two or three weeks.

### Mechanical Pulp

During the past week the pulp market held firm. All the better grades are in excellent demand. Mechanical pulp business is more plentiful and the conditions are eminently satisfactory to the pulp men.

### Chemical Pulp

Chemical pulp is enjoying an increased demand. The foreign grades are especially in demand. The price tendency is upward and an advance within a short time is looked for.

### Rags

The rag market continues strong. New and old rags of all grades are in greatly improved demand. Roofing rags are still in big demand. There is still a shortage of stock and while the collectors, spurred on by better financial incentives, are putting their best foot forward and bringing much stock into the market, it does not yet bring the supply back to normal. The shortage which has existed cannot be made up in a minute and it will probably be some time before buyers can depend upon getting just what they want just when they want it.

### Old Rope and Bagging

Old rope and bagging are having a better call now than for some time, the last week's business being particularly good. The market, however, is not yet just back where it should be.

### Waste Paper

There is a much improved tone in the waste paper market. There is an improved demand for all items. There is little accumulation of stock and such stock as is available is assured of being promptly moved. Little price cutting is being done at this time.

### Twine

Twine has certainly taken a turn for the better. Prices hold firm but do not change. Now that the tide has turned there should be a flood of business for the twine men for the buyers have been holding back their orders for a long time and have now apparently reached the time when they must buy.

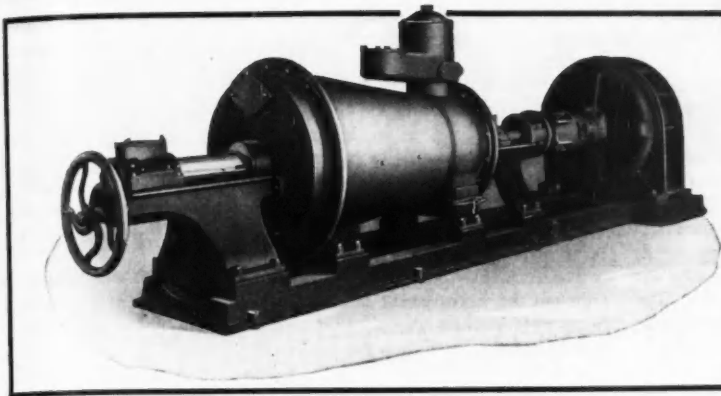
### Lettercraft Paper Co. Incorporates

KALAMAZOO, Mich., September 8, 1924.—The Lettercraft Paper Company, authorized capital \$10,000, has filed articles of incorporation with the secretary of state and will engage in the manufacture and sale of box papers, envelopes, tablets, etc. The company was organized by Archibald McColl, who holds a majority of the stock and is president and treasurer. The other officers are George L. Irvine, vice president and Stuart Irvine, secretary. The new concern has engaged space from the Kalamazoo Tank and Silo Company, 500-506 Harrison street. It begins operations immediately.

### Southern Paper Co. Opens at Galveston, Tex.

GALVESTON, TEX., September 8, 1924.—The Southern Paper Company, opened for business here at 2012 Avenue B, on September 1. The firm will deal in wholesale papers, twine, etc., and will take for its territory Galveston and that part of the mainland this side of Alvin.

Mr. L. Dreyfus, the manager, has had more than six years' experience in the paper business in Galveston and is well acquainted with the trade. The company's location is part of the building until recently occupied by Beers, Kenison & Co.



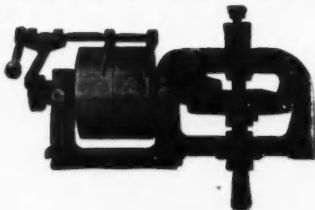
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## Miscellaneous Markets

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The chemical market continues to pick up, reflecting the better business conditions which are generally prevailing and the encouraging betterment which is favoring some of the leading chemical-using industries. While it is true that orders are not coming in from the paper industry any too plentifully it is also true that there has been an increased interest from this source during the past two weeks and that this will be even more pronounced as the paper mills get running on better schedule where they are still running slack. The ruling element in the market continues to be the spirit of cautiousness which governs the buying to an extent that is almost without precedent. Buying beyond immediate needs is still very limited and the buyers are not growing more generous than they have been. For some reason or other they have evidently made up their minds not to trust the future for anything but to let the sufficiency of the day regulate their transactions. Such an attitude, maintained for so long a time, cannot be without some strong reason and it is very possible that politics may be the root of the trouble. The political situation is exceedingly complex, guesses as to the outcome are at wide variance and the average business man is rapidly getting into a frame of mind where nothing that can happen will be able to surprise him. It is natural that a man impelled by political doubts and misgivings might move with unaccustomed diffidence in his business transactions at such a time and so it is a reasonable conclusion that the political doubts and fears will have to be removed before business can get back where it belongs.

At this writing it may be said that the chemical market is slowly coming back and that conditions prevailing there are much more encouraging than they were a little while ago. Now is the time of year when new schedules are being looked for and the announcement of these will probably lend new interest in the early future.

**BLANC FIXE.**—There is nothing new to be said regarding blanc fixe this week. The demand is still very weak and the market is without any quantity of available stock due to the fact that production is being kept down to a point where over accumulation of stock will be eliminated. The price still stands at from \$75 to \$80 a ton for the powder and from \$50 to \$55 for the pulp.

**BLEACHING POWDER.**—There is considerable speculation just now as to what the new schedule for another year will be on bleaching powder. There is little buying at the schedule which now prevails and which the works are apparently determined to hold to. It is the general opinion that, in view of present conditions, a good deal of difficulty will be met with maintaining the schedule now prevailing. The price is from 1.90 to 2.15 cents a pound.

**CAUSTIC SODA.**—There has been no new price schedule on caustic soda announced as yet and there is little change in this commodity. The tonnage is moving very well and the demand is fairly satisfactory. There was an improvement if anything during the week. The price is from 3.10 to 3.15 cents a pound on a flat basis at the works.

**CASEIN.**—Casein continues to lead a dragging existence. There is no animation to the buying. The current prices are being quoted by some of the manufacturers for the remainder of the year but not much further business is being booked. The price is from 10½ to 11 cents a pound.

**CHINA CLAY.**—China clay had an exceptionally good week and is doing very nicely. Better business has come to the industries which depend on great supplies of this commodity. There has been no change in price and it is not likely that there will be any for some time. It is selling from \$16 to \$20 a ton for the imported grades and from \$12 to \$15 a ton for the domestic grades.

**CHLORINE.**—Practically the same things may be said of chlorine as have already been said of bleaching powder. A new price schedule is being looked for and is being awaited with considerable interest.

While the demand is some better it is still off. The price remains at from 4.50 to 7.00 cents a pound in tanks.

**ROSIN.**—Rosin, the price of which has taken a series of forward jumps, underwent no change during the past week. The foreign demand is excellent and the home demand is also showing improvement. The price is \$6.00, although frequent sales are constantly being reported at a higher figure.

**SALT CAKE.**—Salt cake has been going right ahead, registering commendable improvement. The contract business is constantly increasing. The price is down a trifle, from \$17 to \$20 a ton now being quoted.

**SODA ASH.**—Soda ash grows in better demand as time goes by although the improvement is slow as is characteristic of the times. Some good business was placed during the week. The price remains at 1.38 cents a pound on a flat basis at the works.

**SULPHATE OF ALUMINA.**—Sulphate of Alumina is in better demand than for some time and the past week was a particularly good one for it. There has been no change in price, however, the present quotation being from 1.30 to 1.35 cents for the commercial grade at the Eastern works and from 2.10 to 2.25 cents a pound for iron free.

**SULPHUR.**—There is only a trivial demand for sulphur. Such buying as there is strictly of the hand to mouth order. The price holds at from \$18 to \$19 a ton.

**TALC.**—Talc which has been picking up after a very dull period continues to respond to an improved demand. The price, which is from \$16 to \$17 a ton, almost seems like a permanent fixture.

### For Forest Fire Protection in California

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., September 8, 1924.—That the entire pulpwood supply of the State of California will be exhausted in fourteen years at the present rate of usage and destruction, is the statement made by George G. Barnes, president of the American Reforestation Association, before members of the Commercial Board of Los Angeles. According to statistics the total acreage of the state is about 128,000,000 acres; every year 4,000,000 acres are being destroyed by fire and 8,500,000 are being cut.

A \$100,000,000 bond issue was proposed by Mr. Barnes for state fire protection and reforestation. Of this amount \$32,500,000 was proposed for actual reforestation over a period of years; \$16,500,000 for repurchase of potential forest areas for replanting; \$27,000,000 for adequate forest fire prevention and suppression.

"Timber losses, with the resulting lessening of water and power resources, are responsible for increased living costs, for higher transportation rates and increased rent, taxes and building costs," declared Mr. Barnes. "It is a sad commentary on our vision that the trail of American civilization should be marked by stumps and fire-blackened tree trunks."

Jay W. Stevens, chief of fire prevention bureau of the National Board of Underwriters, has completed arrangements for a huge mass meeting in San Francisco, October 6, for the purpose of spreading the gospel of fire prevention. Los Angeles' Board of Supervisors has passed a resolution prohibiting smoking and hunting in the forest and brush lands of Los Angeles county. In San Diego county miles of brush and timber land have been burned. Several heavy timbered districts have been destroyed in San Bernardino county, more than 8,000 acres being burned.

### New Western Advance Bag & Paper Co.

MONTPELIER, Vt., September 8, 1924.—An amendment to its articles of association has been filed in the Secretary of State's office by the Advance Bag and Paper Corporation of Texas, a Vermont corporation with its place of business at Brattleboro, by which it changes the name of the corporation to the Western Advance Bag and Paper Company, Inc. The amendment was filed by R. L. Fitts, of Brattleboro, president and clerk.