PAPER TRADE JOURNAL

Reg. U. S. Pat. Off.

Vol. CIII SEPTEMBER 24, 1936 No. 13

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SIXTY-FIFTH YEAR

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

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PAPER

SIXTY-FIFTH YEAR

PAPER

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Newsprint Output May Be Doubled In Ten Years

Lord Rothermere, Visiting Dominion, Expresses View That Industry Will Again Be Greatest and Most Prosperous in Canada—Whole World Demanding More Newsprint Paper Than Ever—Wood Pulp Supplies Dwindling.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 21, 1936—Viscount Rothermere, head of the *London Daily Mail* chain of newspapers, who is now visiting Canada, in an interview expresses the opinion that before long the newsprint industry will again be the greatest and most prosperous industry in Canada.

The world, he said, faces in the next ten years a very serious shortage of paper. There is not a country in the world which is not demanding more newsprint paper than ever before, the chief reason being that in every country young men and young women, and even boys and girls, have become newspaper readers.

The supplies of wood pulp in the world are dwindling, and he holds that it is because Canada is the greatest remaining source of supply that all the countries of the world will be demanding newsprint from Canada.

"There is no doubt in my mind," he added, "that the next ten years will see the Canadian output of newsprint doubled. Your two and a half million tons a year will become five million tons a year. The price is bound to go up as the demand increases."

Huge Lumber Deal in B. C.

For approximately $4,000,000, the assets of Alberni Pacific Lumber Company, along with one billion feet of timber in the Alberni Canal area on Vancouver Island, have been purchased by Canadian White Pine Company, subsidiary of the rapidly-expanding H. R. MacMillan organization.

The sawmill, one of the largest export plants in western Canada, with a capacity of 125,000,000 feet annually, was bought from the British timber firm of Denny, Mott & Dickson, Ltd., London, who have owned the property for the past eleven years.

The timber, comprising a tract adjacent to the Alberni Pacific's stand, was purchased from the John D. Rockefeller, Jr., interests and represents one of the finest areas of virgin forest on the west coast of Vancouver Island.

Under the new name of Alberni Pacific Lumber Company, 1936, Ltd., the company will initiate at once a huge production programme that will, in the course of the next few months, probably lead to considerable new construction of logging railroads and other facilities. H. R. MacMillan, who now ranks as one of the leading lumber operators on the continent, with the world's largest fleet of lumber carriers under charter, and whose acquisition of sawmills has been one of the outstanding developments in the British Columbia lumber situation recently, will be president of the new company.

Incorporation of the company has been gazetted in Victoria, with authorized capital of $1,500,000. The certificate of incorporation gives the company wide powers to carry on a general sawmilling, logging and operating business, with full authority to acquire or develop roads, railroads, tramways, and trucks, and utilize water power on the property with a view to increasing the electrical installations of the plant.

Record Newsprint Output

Production of newsprint in Canada in August established a new high record for that month, with 270,053 tons, as compared with 235,573 tons in August 1934. For the first eight months of the year Canadian production at 2,034,043 tons exceeded the like period of a year ago by 15.8 per cent., the figure in 1935 having been 1,756,112 tons.

Kraft Mill to be Put Into Operation

From Vancouver it is announced that London and American capitalists are providing the finances for putting into operation the Port Mellon Kraft Mill of Vancouver, Kraft Mills, Ltd., and that it is probable it will be producing early next year. The mill, dock and other facilities were built in 1928, and the mill was virtually completed when the market for Kraft paper collapsed, followed by a complete shutdown of construction.

Pulpwood Cutting Rights Charges Revised

The Quebec government has announced changes in the charges for cutting rights for pulpwood on Crown lands, the object being to provide higher wages for lumberjacks and increased provincial revenue. The announcement was made after a conference between the government and pulp and paper company officials, and the result is that in future payment for cutting rights will be estimated by the cubic foot instead of by diameter, the former basis.

Premier Duplessis, in making the announcement, said:

"The new measure applies only to pulp and paper companies and not to sawmills. Pulp and paper companies

(Continued on page 22)

Paper Mill Workers Meet In Appleton, Wis.

C. K. Boyer, Manager Interlake Division of Consolidated Water Power & Paper Co. Urges Promotion of Industrial Peace Through Mutual Understanding of Employer and Employee—Unemployment Insurance Discussed.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 21, 1936—Unemployment insurance as it affects the worker was one of the principal topics of discussion at the fall meeting at Appleton, Wis., Sunday, September 13, of the Wisconsin and Upper Michigan District Council of Pulp, Paper and Converting Plant Unions. Another theme of the gathering, attended by fifty delegates representing thirteen cities, was the expansion of union organization in the industry.

Wages, hour schedules and working conditions were discussed under the leadership of Thomas Heiss, Jr., Appleton, president of the council, but none of the conclusions was announced. The Wire Weavers' Union asked for support in maintaining a closed shop in Holyoke, Mass., where wire weavers were reported to be on strike. A resolution to that effect was adopted.

C. K. Boyer Makes Principal Address

C. K. Boyer, manager of the Consolidated Water Power and Paper Company's Interlake Division at Appleton, gave the principal address at the closing dinner at Metropolitan Cafe. He said the promotion of industrial peace in America through mutual understanding of the problems of employer and employee can abolish war and promote international peace. He emphasized the importance of industrial education along these lines.

Congressman George J. Schneider of Appleton, an officer of the international paper workers' unions, also spoke urging the unions to maintain harmony, and keep the trend from dissension that may force the United States into world strife. He pointed out how organization brings about better working and living conditions for the worker. Other speakers were Ray Richards, Wisconsin Rapids, Wis., organizer for the International Brotherhood of Pulp, Sulphite and Paper Mill Workers, and James Creed, also of the International Brotherhood.

The next convention on December 6 was awarded to Wausau, Wis.

News of the Industry

Trade problems and practices were discussed at the quarterly session of the Wisconsin Paper Merchants Association at a meeting at the Valley Inn, Neenah, Wis., last week. Speakers included William Gerbrich, of the Central Paper Company, Menasha, Wis., and Dudley Young, of the Edgewater Paper Company, Menasha. Matters to be presented to the convention of the National Paper Trade Association in Chicago September 21 to 23 were discussed. John Addison of Racine, Wis., president of the association, was in charge of the sessions. Fred Boyce, Milwaukee, is the secretary.

Cutting of pulpwood in four and eight-foot lengths makes it possible to ship large quantities successfully on steamships, the Oscar Styffe Timber Operations of Port Arthur, Ontario, has learned following delivery of the first of nine cargoes to the port of Ashland, Wis. This first shipment of 1,500 cords was consigned to the Nekoosa-Edwards Paper Company, Nekoosa, Wis. The method is found to be more satisfactory than rafting, because the hold can be filled with short lengths, and the wood can be piled fifteen feet high on the decks. The wood is unloaded by means of chain slings, and reloaded on freight cars for shipment to the mills. A longer shipping season is made possible, and it is expected larger quantities of wood will be moved this way next season for Wisconsin mills.

An exhibit of the work of Dard Hunter, America's sole manufacturer of hand-made papers, is on display at Kimberly Memorial Library of the Institute of Paper Chemistry, Appleton, Wis., this fall. All but two of the books were printed by Mr. Hunter on paper made by hand in his mill. He has presented several books to the Institute, one of them, "Old Papermaking," a gift of Mrs. Bertha Jacques, secretary-treasurer of the Chicago Society of Etchers.

Examples of Dard's work in the library are: "Primitive Papermaking"; "Old Papermaking in China and Japan"; "A Papermaking Pilgrimage to Japan, Korea and China," and "Old Papermaking." They are limited editions, and represent accounts of 200,000 miles of travel to observe paper making methods.

Dard was honored by the Institute in 1931 with the degree of Litt. D.

Otto Miller, a paper maker at the Biron, Wis., mill of the Consolidated Water Power and Paper Company, is the first to receive a check among the company's employees under the unemployment compensation law. He was laid off when the machine on which he was employed was shut down. The amount of the check was $2.50. This was the difference between what he earned and the minimum of $15 he would be entitled to for the week. The claims are handled for the company's 1,500 employees by J. J. Plzak, claims manager. Wisconsin's unemployment insurance law is in operation eighteen months sooner than other states, because of a state law enacted several years ago.

Tolls will be collected by the Chippewa and Flambeau Improvement Company for the first six months of this year amounting to $100,115, according to approval given by the Wisconsin Public Service Commission. They are divided as follows: Flambeau Paper Company, $10,941; Lake Superior District Power Company, Ashland Dam, $8,987; Ladysmith plant, $2,374; Cornell Wood Products Company, $179; Northern States Power Company, $65,383, and Eau Claire Dells Improvement Company, $12,252. These represent upkeep of water power serving these companies.

An inspection of the Nekoosa-Edwards Paper Company's forest nursery at Nepco Lake was enjoyed last week by 35 members of the Rotary Club at Wisconsin Rapids, Wis. They were served a picnic lunch at the E. P. Gleason estate, and then were taken on an observation tour by George Kilp, the company's forester. The process of seeding, planting and cultivation, and the methods of detecting forest fires on the company's 23,000 forest acres in Wood, Adams and Portage counties were explained. Mr. Kilp pointed out that only 65 acres have been burned in the entire history of forest work, 23 this year during the extreme drought.

Edwin F. Manske, Nekoosa, Wis., and Miss Elizabeth Mary Helke, also of Nekoosa, were married September 10 at the parsonage of Sacred Heart Church of that city. Mr. Manske is employed in the Standards Department of the Nekoosa-Edwards Paper Company.

Chicago Paper Business Steadier Than of Late

Demand for Various Grades of Fine Paper Fairly Satisfactory—Sulphite Bonds Exhibit Strong Undertone—Request for Cover Paper Increases Slightly — Consumer Interest In Kraft Paper Well Sustained.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 21, 1935—Sulphite bonds have given further indication of strength during the week. Krafts, described as the local bellwether, have experienced no obvious set backs, according to local reports. Books were in fair demand, with covers showing a slight increase over last week. Bonds and ledgers, and virtually all of the fine paper grades evidenced optimism over the future outlook. Two or three Chicago executives believe that the paper business in general has far fewer sore spots in it than for many months.

Paper Salesmen Discuss Trade Customs

The weekly meetings of the Midwest Division, Salesmen's Association of the Paper Industry, continue to be featured by some discussion of the progress being made in preliminary work on the simplification and standardization of divisional trade customs. This important work, being undertaken by the American Pulp and Paper Association, has been a chief item on the program for many months and the local salesmen believe that efforts to conform to provisions of the Robinson-Patman Bill offer a good time for the bringing of standardized agreements on uniform wording, subjects and even uniformity in the order of adding differentials.

News of the Industry

The Cromwell Paper Company, Chicago manufacturers and distributors of Special Prepared Tympan Papers, reports a marked increase in export business which is taken as indicative of the great demand for printing in foreign countries, particularly British possessions and the Scandinavian countries. Since January 1 Cromwell has added a number of new foreign distributors, the latest being Trygve M. Engeby of Oslo, Norway, reported one of the largest of the Scandinavian houses.

Chicago distributors of Neenah Paper Company products are benefiting from a Neenah mailing—a demonstration portfolio showing sample letterheads engraved, printed and lithographed on Old Council Tree Bond, a 100 per cent rag content paper. Neenah has also issued an interesting direct mail piece on "You Can't Fool Father Time," featuring a new ledger sheet made by the Wisconsin concern.

E. J. Kanter & Co., 404 North Wells street, Chicago, has a new transparent paper which it is manufacturing and distributing to the trade. The product, known as "Flex-O-Tate," is reported to be non-curling, non-shrinking and moisture proof with non-wrinkling qualities that add to its usefulness for covering and wrapping purposes, register proofing and for other uses.

An example of alertness to the political situation is evidenced by local Hammermill agents who find the Special Candidate Portfolio especially interesting to those who desire to merchandise the political situation to the fullest extent. Suggestions are given as to ways and means of making the most of the political interest. Color specimens and information on the general Hammermill line is also included.

"Ultra," a new gummed paper with a high degree of opacity, is being introduced by the Mid-States Gummed Paper Company. Available in both strong glue gumming and dextrine, "Ultra" is reported to have a super finish combining the good features of coated stock and coming in standard sizes.

The Link-Belt Company announces the acquisition of the manufacturing and sales rights for North America for the Dunford & Elliott rotary louvre drier of which many installations have been made in Europe, Canada and Japan. The drier is described as a mechanically rotated horizontal drum with a series of internal channels near the circumference into which hot air is admitted from a fan. As the drum revolves, fresh channels come underneath the charge but, as the hot air can only enter the channels when they are actually underneath the charge, all the gases must pass upwards through the bed of material. It is reported that the design of the rotary louvre drier, combined with the gentle mixing action assists in causing the hot air to come into intimate contact with every part of the bed, resulting in efficient heat transfer and uniform drying. A new illustrated book, No. 1511, covers full information on the rotary louvre drier.

Paper Demand Active In Boston

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., September 21, 1936—Paper merchants in this market transacted a substantial volume of business last week in the aggregate, according to statements made in the trade. No one interviewed said that business was less than fair, while some made highly optimistic comments. At a large house, an executive intimated that conditions had been fine the last two weeks in white paper, with a definite trend towards the use of high grade stock.

There was a good demand for papers for advertising purposes as well as for bonds and ledgers for office uses. A representative of a large manufacturing concern said that business was much better, with "things picking up." In wrapping paper, sales took place in good amounts. Active fall trading in the stores continued to create a call for wrapping papers. The demand for paper bags was fair, with production behind deliveries, according to a manufacturer's representative.

In box board, reports varied. In some quarters, the movement was a little better, but not any too good. In others, the demand was active. There was a tendency for prices to stiffen; in fact, single white, patent coated news board (bender) advanced $2.50 a ton. Paper stock continued generally in favorable condition. Bagging and rope were firmer.

Bagley & Sewall To Furnish Smith Machine

PITTSFIELD, Mass., September 21, 1936—Smith Paper, Inc., of Lee, manufacturers of cigarette papers, has closed a contract with Bagley & Sewall Company of Watertown, N. Y., for the purchase of a 92-inch paper machine to cost about $150,000. The machine is to be delivered in about five months.

It will be necessary to build an addition to one of the present mills of the company or erect a new building to house the new purchase and it is understood the present plan calls for an addition on either the Eagle or Columbia Mill.

Paper Industry In Ontario On Upward Trend

Mills are Busy and Outlook for the Fall is Promising—F. N. Burt Co. Files Articles of Incorporation in Delaware—Plan for Reallocation of Pulpwood and Timber Limits in Northern Ontario — Makes New Production Record.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., September 21, 1936—With improving business conditions, the industry trade is sharing in the upward trend. Jobbers report that ledger and bond papers are showing a steady increase over the corresponding season of last year and, although the summer months were rather quiet, turnover is now on the gain and the outlook for fall is promising. The mills are kept busy in the book and writing line and newsprint production in August in Canada was some fifteen thousand tons ahead of the same month in 1935 while the showing for the first eight months of 1936 is about 280,000 tons over the first eight months of 1935. Toilet and tissue plants report good business and the printing trade is getting more active. Collections are very fair. In a recent report issued by the Bureau of Statistics, Ottawa, there was revealed an increase of 6.6 per cent in the gross value of production in the pulp and paper industry in the Dominion in 1935, the figures standing at $162,651,282 as against $152,647,756 in 1934. The peak year was in 1929 when the output was worth $243,970,761. Newsprint constituted 84.3 per cent of the total tonnage of paper made in 1935 and amounted to 2,765,444 tons worth $91,762,201, compared with 2,604,973 tons at $86,811,460 in 1934.

F. N. Burt Co. Incorporates in Delaware

For some time past the directors of the F. N. Burt Company, Limited, Toronto, have had under consideration the organization of a subsidiary company under the laws of the State of Delaware to acquire the company's business and assets in the United States and conduct business there. Notice has been sent out by the F. N. Burt Company's directors that such an arrangement would be in the best interests of the company and its shareholders, owing to the fact that domestic company would have many advantages over a foreign corporation in dealing with customers and meeting competition. The directors also point out that Canadian operations are conducted through a wholly owned subsidiary. Dominion Paper Box Company, Limited, whereas in the United States the F. N. Burt Company, Ltd., itself conducts the operations and for this purpose is licensed as a foreign corporation by the State of New York. Under the laws of the State of Delaware a company has therefore been incorporated under the name of F. N. Burt Company, Inc. The new American organization will issue all its stock to the parent Canadian company and an agreement to this effect will be submitted to shareholders at a special general meeting to be held on September 25.

Re-Allocation of Timber Limits

The Ontario government has under consideration the formation of some definite policy with regard to the reallocation of pulpwood and timber limits in Northern Ontario. Requests for new areas from operators who have found increasing markets in the United States for pulpwood have become so emphatic, said Hon. M. F. Hepburn, Premier of Ontario, that some fixed method of handling the situation has to be worked out without delay. He added that the increased markets were due to the action of the provincial government in lifting the export embargo a year ago and reducing stumpage dues and to the fear on the part of United States newsprint producers that another European war would seriously embarrass, if not eliminate altogether their sources of supply. They were quite reluctant to tie up with European avenues when pulpwood could be obtained in generous quantities from Ontario. It will require about six months to complete the kraft pulp mill at Port Mellon, Howe Sound, B. C., for the Port Mellon Operating Company, Vancouver. All machinery for the operation is now on hand and being installed. When the plant is ready it will employ two hundred workers producing kraft pulp in the mill owned by the new concern which recently acquired it from a group of American capitalists associated with F. W. Leadbeatter, of Portland, Ore.

General News of the Industry

The newsprint mill of the Abitibi Power and Paper Company at Sault Ste Marie, Ont. has in the last few years developed some fifty different color formulas for newsprint paper. These range through a wide variety of "whites" to pink, green and other shades. Not so many years ago the output of the Sault mill was all of one standard coloring, but conditions have changed, and the plant has gone in for manufacturing of a more varied character. This has meant more business for the mill and more employment for workmen at Sault Ste Marie.

A new record for production in twenty-four hours was established by the two paper machines of the Great Lakes Paper Company at Port Arthur, Ont., on September 9. The total production of paper for the day, from the two Fourdriniers amounted to over 360 tons. According to officials, this is the highest total made by the mill since it was established several years ago. The big machine, known as No. 11, had an output of over 192 tons of newsprint, while the second machine, known at No. 10, had an output of over 167 tons.

Arthur Sewell, manager of Price Bros. & Co. Ltd., at Matane, Que., has been made manager of the forest operations of the Ontario Paper Company, which is building new mills at Comeau Bay, on the north shore of the St. Lawrence River. Mr. Sewell has been succeeded at Matane by Leopold Hamel, who was formerly manager for Price Brothers at Priceville.

The Brown Corporation of Quebec intends carrying out works on the St. Maurice River, and other water stretches in connection with their forestry operations. The company's timber crib dam at the outlet of Lac a la Carpe Rouge, Routhier Township, County of Laviolette, will be enlarged and improved, and the channel of the St. Maurice River will be deepened by building a rock-filled crib at Petit Rocher Rapids, about 36 miles above Sanmaur, Bourass Township. Other improvements will also be carried out.

Thames Paper Tube Co. Gets Loan

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 23, 1936—During the month of July the Reconstruction Finance Corporation authorized a loan of $4,000 to the Thames Paper Tube Company, of Uncasville, Conn.

Paper Mill Superintendents Plan Fall Meeting

Pennsylvania-New Jersey-Delaware Division to Convene at Hotel du Pont, Wilmington, Del., on October 16 and 17 — Many Interesting and Instructive Papers to be Presented — Officers for Forthcoming Term to be Elected.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., September 21, 1936—John H. Brougham, of Penn Fibreboard Corporation, York, Pa., chairman of the Pennsylvania-New Jersey-Delaware Division of the American Pulp and Paper Mill Superintendents Association, Inc., announces that plans for the fall meeting of the association are under way. It will be held at Hotel du Pont, Wilmington, Del., Friday, October 16 and Saturday, October 17. The schedule arranged thus far is as follows:

Friday Morning, October 16—Visit to the Hercules Experiment Station as guest of the Hercules Powder Company, and the Paper Makers Chemical Company.

Lunch will be served at 12:00 o'clock noon. O. A. Pickett, director of Hercules Experiment Station and John C. Dieffenderfer of Paper Makers Chemical Company will be the hosts.

For the members and guests who do not wish to play golf—it is suggested that they meet at the Hotel du Pont at 1:15 P. M. and leave to visit the du Pont Dye Works and Organic Chemical Plant. (This will be an interesting trip for all who wish to attend.) J. Carl Schmidt of E. I. du Pont de Nemours & Co. will be the host.

2:00 P. M.—Golf tournament at du Pont Country Club. G. H. Newcomb, manager of E. I. du Pont de Nemours & Co., Philadelphia office, will be the host.

Valuable prizes will be awarded after the tournament.

A cordial invitation has been extended by the Pusey & Jones Company to visit their plant any time during the day, Friday.

Friday Evening—A Get-Together Party has been arranged in the House of Friendship, Du Barry Room, du Pont Hotel.

Saturday, October 17—There will be business sessions all day. A number of interesting papers and motion pictures will be presented including that wonderful sound picture presented through the courtesy of E. I. du Pont de Nemours and Company, "The Wonder World of Chemistry."

Election of Officers—Election of officers at 7:00 P. M., after which there will be a joint banquet with the ladies at the Hotel du Pont. A prominent member of the paper industry will be the guest speaker. This will be an enjoyable evening for everyone since plans have been made for entertainment and dancing. Registration fees will be reasonable.

The manager of the Hotel du Pont has made a guaranteed special rate for the meeting, regardless of size or location of room the price will be $3.50 single and $6.00 double. All those expecting to participate are urgently requested to make reservation early as it is expected this meeting will break all records for attendance.

For the ladies, a special entertainment has been arranged beginning at 12:00 o'clock noon, Saturday, October 17.

Luncheon at the Wilmington Country Club—Mr. and Mrs. W. F. Van Riper (general sales manager, E. I. du Pont de Nemours & Co.) will be hosts.

After luncheon the ladies will be conveyed to the beautiful Longwood Gardens at Pierre du Pont's estate, where a special entertainment will be given.

A very cordial invitation is extended to all paper and pulp mill executives and all branches of the paper and pulp industry to attend the business sessions.

George Madden and his Delawareans Broadcasting Orchestra will furnish the music for banquet and dancing.

Mrs. Alice R. Dow, secretary-treasurer of the association, 47 Chestnut street, Nutley, N. J., will be glad to furnish any further information regarding this Fall meeting.

Paper Business Buoyant

According to reports in this area this past week the paper industry is expected to smash all previous production records, as a result of the heavy demand for most types, particularly wrapping papers. Stores are using more wrapping paper per package and shippers are using more paperboard per unit for shipment than even in 1929, it is said. Newsprint output is rising steadily and the improvement in magazine circulation and lineage is helping the book paper field. Paper for industrial uses is enjoying the best demand in history.

"Many paper box factories are working two shifts, and some twenty-four hours a day," said Harold S. Fuller, president of the National Paper Box Manufacturers Association at a meeting of the Central Division of the Association, on Wednesday, September 16 at Tower Hotel in Reading, at which eighty representatives of the organization were present.

Japan Increases Paper Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 23, 1936—Production of foreign-style or machine-made paper in Japan by the 12 members of the Japan Paper Manufacturers' Association reached a total of 228,513 tons during the second quarter of 1936, registering an increase of 6 per cent compared with the first quarter or with the corresponding three months in 1935. Sales during the second quarter totaled 228,637 tons, an increase of 5½ per cent compared with the first quarter and 7.8 per cent compared with the second quarter of 1935. During both years newsprint production accounted for more than 40 per cent of the total paper production.

A new board mill began operations May 1, at Nuttari, which will add about 20 tons per day to Japanese board output. A newly established paper mill in the Okayama Prefecture, equipped with one 65 inch Fourdrinier machine is expected to be in production by the end of July. This mill will produce thin foreign-style printing paper.

Imperial Paper Corp. Elects Officers

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., September 21, 1936—At the annual meeting of the Imperial Paper and Color Corporation, the following directors for the year were elected: A. F. Brown, Louis P. Brown, D. H. Cowles, A. S. Frazier, K. R. McBride, J. H. Pearsall, J. E. Singleton, Frank Van Sittert and M. L. C. Wilmarth, Glens Falls; F. X. Butler and William Rohe, New York City, and Albert L. Emerson, Warrensburg. Officers chosen included Karl R. McBride, president; D. H. Cowles, vice-president; J. H. Pearsall, treasurer; M. L. C. Wilmarth, secretary.

Obituary

Norman L. Daney

Norman L. Daney, treasurer, general manager and director of the Harris Seybold Potter Company, 4510 East 71st street, Cleveland, Ohio, died Sunday afternoon, September 13, at his residence 21150 Byron Road, Shaker Heights, Ohio, after a long illness.

Known to his friends as "Norm" he was universally loved for his fair dealing and friendliness, as well as highly respected for his managerial ability.

Mr. Daney came to Cleveland from Mount Vernon, Ohio, five years ago and on September 27, 1933 was made general manager of the Harris Seybold Potter Company.

Mr. Daney's career included eight years engineering ex-

NORMAN L. DANEY

perience with the United States Steel Corporation and eighteen years with the Cooper-Bessemer Corporation, Mount Vernon, Ohio. Coincident with his duties as treasurer of the Cooper-Bessemer Company, he acted as treasurer and general manager of two affiliated companies—the Chapman Engineering Company and the Chapman-Stein Furnace Company.

Born in Elyria, Ohio, August 20, 1883, he attended Elyria High School and was graduated in Mechanical Engineering from Ohio State University—class of 1905. He was a thirty-second degree Mason, a member of the Shrine, the Union Club of Cleveland and the Faculty Club of Ohio State University.

Surviving him are his wife, Gertrude Clark and a daughter, Claire E. Funeral services were held at 2:30 p. m. Tuesday, September 15, at St. Paul's Episcopal Church, Coventry Road and Fairmount Boulevard, Cleveland Heights, Ohio. The Reverend Alex Hawke of Mt. Vernon was in charge of the services and the Rev. Don Carey of St. Paul's Church assisted.

Emil A. Peterson

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 21, 1936—Emil A. Peterson, president of the Valley Iron Works, Appleton, Wis., and a pioneer in the paper machine industry, died Sunday, September 13, at his home after an illness of two weeks. He had been in ill health for the last two years. Mr. Peterson was 71 years of age.

At the age of 17, he started work with the Appleton Manufacturing Company of Appleton, makers of agricultural equipment. Several years later he moved to Marinette, Wis., where he worked for the Prescott Company. He returned to Appleton in 1895 as foreman of the Appleton Machine Company. In 1898 he was made superintendent of the Valley Iron Works, became its treasurer and general manager in 1905, and was made president in 1921. He was alert to patents and improvements in paper mill equipment, and kept his company progressing with the newest products.

Mr. Peterson was a thirty-second degree Mason, an active member of All Saints Episcopal Church, a member of the Riverview Country Club, the Chicago Athletic Club, and the Wisconsin Club of Milwaukee. He is survived by one son, Raymond A. Peterson, treasurer of the Valley Iron Works, and two grandchildren.

Funeral services were held at All Saints Church, with the Rev. W. J. Spicer in charge. The plant was closed down for the day and practically all of the employees attended. Sons of the oldest employees of the company were active pallbearers. Among the honorary bearers were F. J. Sensenbrenner, president, and Ernst Mahler, vice-president of the Kimberly-Clark Corporation, and William C. Wing, president of the Fox River Paper Company.

Burial took place at the family mausoleum at Riverside Cemetery, Appleton.

Government Paper Bids

WASHINGTON, D. C., September 23, 1936—The Government Printing Office has received the following bids for 94,150 pounds (350,000 sheets) of halftone book paper: Whitaker Paper Company, at 5.67 cents per pound; John F. Post, Inc., 5.67 cents; Stanford Paper Company, 5.66 cents; R. P. Andrews Paper Company, 5.67 cents; Barton, Duer & Koch Paper Company, 5.67 cents; Paper Corporation of the United States, 5.67 cents; Mathers-Lamm Paper Company, 5.63 cents; and Fitchburg Paper Company, 5.82 cents.

For 10,000 pounds (4,000 sheets) of binder's board: R. P. Andrews Paper Company, 4.6 cents; Barton, Duer & Koch Paper Company, 4.6 cents, and Mathers-Lamm Paper Company, 4.6 cents.

For 5,200 pounds (25,000 sheets) of emerald green coated cover paper: R. P. Andrews Paper Company, 8.66 cents; Stanford Paper Company, 9.19 cents; Barton, Duer & Koch Paper Company, 7.66 cents; Virginia Paper Company, 9.5 cents; Whitaker Paper Company, 7.66 cents, and Reese & Reese, Inc., 8.16 cents.

May Build Pulp Mill on Cashie River

WINDSOR, N. C., September 21, 1936—The Bertie board of county commissioners discussed here recently the possibility of a northern pulp firm building a mill on the Cashie River about 3½ miles below here. J. H. Matthews, local attorney, told the board that the firm was very much interested in the Cashie River site.

The pulp people, according to Mr. Matthews, had told him they would look into the matter further. They had indicated, he said, that of all sites in eastern North Carolina which they had examined, the one near here fits their needs best. They would require a place on navigable water and also plenty of fresh water for the mill itself. Both these requirements are filled by the Cashie River location. Also, the Bertie woods are an ideal source of material for a pulp mill.

The mill would represent an investment of about $2,000,000 and would employ about 1,500 men, said Mr. Matthews.

NEWSPRINT OUTPUT MAY BE DOUBLED

(Continued from page 15)

are able to use the entire log, while in sawmills only a certain part of it is used.

"This will not only mean higher wages for the lumberjacks working for companies operating on Crown lands, but also will mean greater revenue for the province from cutting operations.

"In future provisions will be made that companies exploiting the natural resources of the province, particularly the pulp and paper companies, will pay reasonable wages to employees and assure the lumberjack of proper living conditions.

"We intend to oblige these companies to refrain from overcharging their employees on living expenses, and in this manner reducing the money which they receive at the end of the season's work to a pittance.

"We also will oblige the companies and the companies' stores to pay standard market prices for merchandise which they purchase from farmers and merchants who are situated near the companies' operations.

"I may say that the representatives of the companies who met here today assured us they were willing and anxious to co-operate in every possible manner to assure the workman of his just share of the profits earned from the produce of our province.

"There are three interests which must be protected: The interest of the province, the interest of the workman, the interest of the industrialist. We plan to assure all three of proper protection. Our experience has been, however, that it is the weak who require protection; the strong are capable of protecting themselves." He added.

"We also plan to undertake a wide reforestation programme as soon as circumstances permit. Abuses which were permitted by the last Government have resulted in colossal wastage of our forestry resources. Companies were permitted to cut wood and leave it to rot there for years. The result was forest fires, and insects destroying wide areas of virgin forest lands. Today, because of this, the cost of transporting lumber from forest to mills has increased considerably, and has consequently brought about a corresponding increase in the price of newsprint.

"We have also decreed that all merchandise used by these companies in their operations must be purchased in the Province of Quebec from Quebec firms."

News of the Boston Paper Industry

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., September 21, 1936—At a sales meeting of Carter, Rice & Co., Corp., held at the office of the company Saturday morning, G. P. Bothwell of the Hammermill Paper Company, Erie, Pa., presented the new Dura-Glo Hammermill Cover, as well as the other cover lines manufactured by that company. During the discussion of Dura-Glo, he gave a very convincing demonstration, showing how the cellulose surface served to act as a complete protection against soil and stain of any kind, a feature which makes it particularly suited for use on any piece of printed matter that would be subjected to continual handling. At the conclusion of Mr. Bothwell's talk, Charles Peto, of the Hammermill Paper Company, gave a highly interesting talk in regard to the workability and special features of Hammermill Duplicator Paper and Hammermill Mimeograph.

Storrs & Bement Company is issuing a new price-list, one of the most complete ever produced by a paper house.

Leon M. Poore, treasurer and general manager of John Carter & Company, Inc., has returned from a trip to Quebec, on which he was accompanied by Mrs. Poore.

Extractor Rolls Patent

Downingtown, Pa., September 15, 1936.

Editor, PAPER TRADE JOURNAL:

In looking over the PAPER TRADE JOURNAL of September 3, we saw an article on page 28 describing a patent on a board machine obtained by Daniel Bert of Monroe, Mich. This article does not give the number of the patent.

In the description of this patent, we note that it includes extractor rolls and a suction roll. The article states that—among the patentable features—is a blow pipe for blowing water out of the wire face of the extractor roll previous to its passing through the nip between the top and bottom rolls. We wish to advise you that in the original patent on the extractor roll, No. 1,996,661, issued to Ellis and Sutherland the device described by Bert is covered; so that, in our opinion, it is impossible for him to obtain a patent as is intimated.

We, therefore, ask that you give this letter as much publicity as you gave the article above referred to.

CHARLES L. ELLIS, 1st Vice-President,
Downingtown Manufacturing Company.

To Issue Certificates To Operate Plant

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, September 21, 1936—Jay Leach, as receiver in the suit of James B. Leyes, bondholder, against the Miami Valley Coated Paper Company, Franklin, has been authorized by the United States District court to issue receiver certificates up to $20,000 to obtain money with which to operate the business of the Franklin concern. An order to this effect was entered September 17 by Federal Judge Mell G. Underwood of Columbus.

The receiver's certificates, so issued, are to be a first lien on all property of the company, with priority over all other liens. The receiver also was granted authority by Judge Underwood to hypothecate any or all of the bills receivable created by him during the receivership for the purpose of providing additional working capital to conduct the business as a going concern. The receiver is ordered to file monthly reports to the Court on and after October 5, 1936.

The court also authorized the receiver to employ as his attorneys the firms of Shulman, Winer and Shulman, of Dayton, and Wolf and Rogers of Toledo.

Maine Has Twenty-six Paper Plants

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 23, 1936—Preliminary 1935 census figures for the state of Maine according to the Bureau of Census show that in 1935 there were 26 paper industry plants compared with 25 in 1933. In 1935 these plants employed 7,502 wage earners compared with 6,950 in 1933.

The wages paid these employees in 1935 totaled $8,490,151 compared with $6,340,000 in 1933. The value of the products in 1935 amounted to $59,151,414 compared with $44,356,000 in 1933.

Guests Inspect Deferiet Mill

DEFERIET, N. Y., September 21, 1936—The St. Regis Paper Company was host to about 85 company officials and railroad officials last week, the guests arriving by special trains from New York City. On Thursday morning a tour of the Thousand Islands was made followed by golf and other forms of recreation. The group inspected the local branch of the company on Friday morning and in the afternoon a trip was made to the Oswego plant. From there the party returned to New York City.

Mounted direct on rag boiler, this Bristol's Recording Thermometer makes possible close control over cooking conditions.

Left: For continuously charting rag boiler temperatures,—Bristol's Round Form Thermometer, Model 241, Special pen arrangement prevents ink spillage when in inverted position.

Here's the answer to uniform rag cooking!

Just mount this specially designed Bristol's Thermometer on the boiler as shown in the typical installation above. Then you will have an accurate, continuous, uninterrupted record of temperatures throughout cooking.

There's no need for guessing. The chart reveals every temperature fluctuation,—even while the boiler is revolving. It shows how quickly rags get up to temperature, and how long they are held at this point. Any unusual condition is instantly disclosed.

The result is strictly uniform cooking. There's no dumping before rags are properly processed. The saving in steam is surprising.

Bulletin 384-J contains information you should have,—also two samples of interesting chart records. Write for it.

Right: Rear view, showing sensitive measuring bulb and separable socket in which bulb is mounted. Socket of special alloy to resist corrosive action of cooking liquor. Strong construction to withstand impact of tumbling rags.

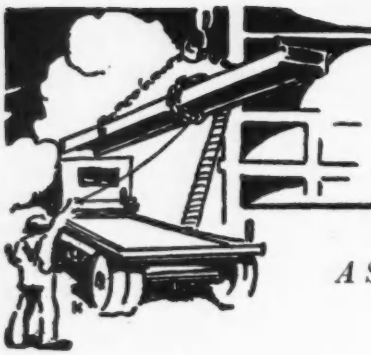
THE BRISTOL COMPANY ✎ WATERBURY ✎ CONNECTICUT

Branch Offices: Akron, Birmingham, Boston, Chicago, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Canada: The Bristol Company of Canada, Limited, Toronto, Ontario England: Bristol's Instrument Company, Limited, London, S.E. 14

BRISTOL'S

TRADE MARK REG. U.S. PAT. OFF.

PIONEERS IN PROCESS CONTROL SINCE 1889



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Middletown, Ohio—The Sorg Paper Company, manufacturer of book and bond papers, sulphate and jute paper specialties, etc., has preliminary plans under way for two new mill additions, to be located on site adjoining local plant of the Lawrence Bag Company, 1730 Grand avenue, manufacturer of paper bags and containers. Work will comprise a two-story and basement unit, 115 x 130 feet, to be equipped for mill service, and one-story structure, 50 x 150 feet, primarily for storage and distribution. Power plant will be enlarged and additional equipment installed for increased service. Entire project is reported to cost over $125,000, including equipment. Charles E. Aull, assistant secretary, is in charge.

Monroe, Mich.—The Green Bay Paper Box Company, Day street, Green Bay, Wis., manufacturer of paper boxes and containers, has approved plans for construction of a new dock on waterfront at Monroe, to be used for loading freighters with paper stocks from local mills for shipment to Green Bay converting plant. Material-handling equipment will be provided for handling and loading large paper rolls, etc. Storage facilities, also, will be arranged. Work will be placed under way at once.

Crystal Lake, Ill.—The Statter Wall Paper Mills, 5916 North West Highway, Chicago, Ill., manufacturer of wall paper stocks, has arranged for lease of one-story industrial building at Crystal Lake, totaling about 23,000 square feet of floor space, owned by Public Service Company of Northern Illinois. Structure is of new and modern type and will be occupied at once by leasing company for main plant, with removal of Chicago mill to new location, where increased capacity will be carried out.

Buffalo, N. Y.—The F. N. Burt Company, Inc., has been chartered under Delaware laws with capital of $100,000, to manufacture paper boxes and containers. New company will succeed to the organization of same name, with plant at 514 Seneca street, Buffalo, specializing in the production of set-up paper boxes for various lines of industry.

Lee, Mass.—Smith Paper, Inc., manufacturer of wrapping papers, tissue stocks, etc., has plans maturing for two new additions to mill, comprising a one-story and basement structure, 140 x 160 feet, to be used as a machine unit, and one-story building, 130 x 130 feet, to be equipped for finishing operations. New units are reported to cost over $125,000, including equipment. R. A. Packard is company engineer in charge.

Ampthill, Va.—The duPont Rayon Company, manufacturer of viscose rayon specialties, has awarded contract for structural steel framing for new multi-story mill units at plant at Ampthill, near Richmond, Va., to the Virginia Bridge Company, Roanoke, Va., and will proceed with superstructure at early date. Project will be of larger proportions than recently announced in these columns, with DuPont Cellophane Company, affiliated organization, manufacturer of transparent wrapping materials, actively interested in expansion program. The buildings will be used for the production of cellulose film products. Entire project will be carried out over a period of months and will represent an investment reported in excess of $750,000, including buildings and machinery. Both companies are interests of E. I. DuPont deNemours & Co., duPont Building, Wilmington, Del. New York offices are at 350 Fifth avenue. Engineering division of parent company will be in charge.

Savannah, Ga.—The Union Bag and Paper Corporation, Woolworth Building, New York, N. Y., has begun production in the paper-making division of new plant at Savannah, recently completed, and will gradually step-up output to greater capacity. The mill production is being placed in storage, preparatory to the operation of the bag-making division, which is expected to be placed in service in the near future. As recently reported in these columns, work is in progress on additional plant units at the mill, scheduled for completion early next year, estimated to cost approximately $2,750,000, with equipment. Entire plant will have a rated output of more than 100 tons per day and will represent a total investment of $6,500,000.

Passaic, N. J.—The Paterson Parchment Paper Company, Bristol, Pa., now concentrating operations in a large modern plant at last noted place, has disposed of its former mill property on Eighth street, Passaic, comprising a tract of about 7 acres of land, with group of 30 buildings, fronting on the Passaic River. The purchase has been made by the Passaic Pioneer Properties Company, Passaic, for a reported consideration of $250,000, and will be used by that organization for lease to different industries in various sized units.

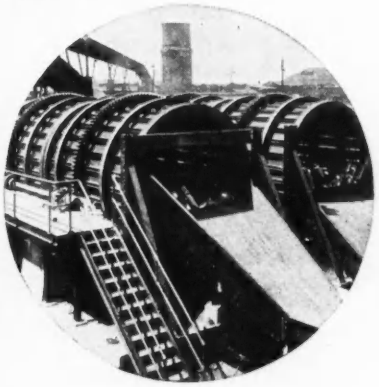
Wilmington, Del.—The National Vulcanized Fibre Company, Maryland avenue and Beech street, has taken out a permit for erection of one-story addition to plant, to be used primarily for office service. No estimate of cost has been announced.

Longview, Wash.—Pulp Division of Weyerhaeuser Timber Company, Tacoma Building, Tacoma, Wash., has begun construction of new one-story addition to mill at Longview, to be used for laboratory service, as recently referred to in these columns, and will push work to early completion. Structure will be 32 x 72 feet, and is reported to cost close to $40,000, including equipment for pulp and chemical research, testing, etc. A. H. Onstad is construction engineer for company, in charge. Charles W. Leo, Jr., Tacoma Building, Tacoma, is architect.

Pittsburgh, Pa.—The Armstrong Cork Company, 24th street, manufacturer of corkboard products, insulating materials, etc., has approved plans for new one-story addition to local plant, on site on Pressley street. It will

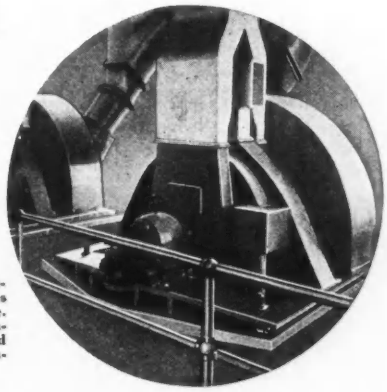
NEW 800 TONS Every 24 hours

Over the horizon come these *new mills* . . . It is significant that they adopted Murray woodroom equipment:



The Murray Branch Barking Drum—not a rivet anywhere. The shoulders, not the bolts, do all the work. Reduces power and maintenance costs. Also furnished *all-welded*—no bolts or rivets.

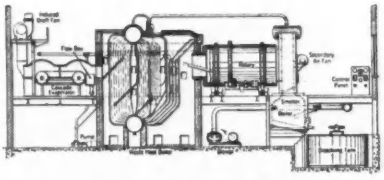
Champion Paper & Fibre Co.
Crossett Lumber Co.
West Virginia Pulp & Paper Co.



Murray Pulpwood Chippers, produce better chips—save power and space. Less sawdust—No vibration—no belts. Furnished direct-connected to synchronous motors.

AND THESE MILLS
Selected the C. E. Murray-Waern Chemical and Waste Heat Recovery System

Hummel-Ross Fibre Corp.
Champion Paper & Fibre Co.
(Canton, N. C. plant)
Ontonagon Fibre Corp.
Champion Paper & Fibre Co.
(Houston, Texas)
Chesapeake Corp.
Central Paper Co.
West Virginia Pulp & Paper Co.



The C. E. Murray-Waern Chemical and Waste Heat Recovery System designed on proven Basic principles. Units operating satisfactorily over long periods under all conditions.

New improved Murray Chip Crusher makes uniform chips out of rejects — saves wood, labor and space. Operates on improved cutting principle — not impact.

D. J. MURRAY Mfg. Co.
WAUSAU • WISCONSIN

be 60 x 80 feet. No estimate of cost announced. General contract has been awarded to the Martin & Nettrour Contracting Company, Diamond Building, Pittsburgh, and work will be placed under way at once.

Fort Williams, Ont.—The Abitibi Power and Paper Company, Ltd., is said to have plans under way for improving and reconditioning of local mill, including machinery replacements and betterments. Entire project is estimated to cost close to $100,000, and is scheduled to begin in near future.

Toronto, Ont.—Staunton's, Ltd., 944 Yonge street, manufacturer of wall paper stocks, has plans for new two-story plant at Vanderhoof and Brentwood streets, Leaside district, to be 100 x 500 feet, equipped for large production. General erection contract has been awarded to Carter-Halls-Aldinger Company, Ltd., 419 Cherry street, Toronto, and work will be placed in progress at once. Awards for plumbing, heating and other miscellaneous finishing work are being let, including contract for sprinkler system to Viking Automatic Sprinklers, Ltd., 330 Bay street, Toronto.

Beauville, Ont.—The Ontario Grape Growers' Association, J. A. Challes, St. Catharines, Ont., secretary, is projecting plans for the construction of a new mill at Beauville, to be equipped for cellulose production, using grape vine and fruit vine waste for raw material, under a special process. New plant will comprise main processing unit, with adjoining buildings for raw material-handling, storage and distribution and other operating service. It is reported to cost close to $150,000, including machinery.

New Companies, Etc.

New York, N. Y.—The Essengee Paper Company, Inc., has been formed with capital of 200 shares of stock, no par value, to deal in paper products of various kinds, including paper bags and containers. Company is represented by the Albany Service Company, Inc., 315 Broadway, New York, N. Y.

Newark, N. J.—The Quickwood Corporation has been incorporated with capital of 2,500 shares of stock, no par value, to manufacture and deal in wallboard and allied products. The incorporators include George Quick and Earl R. Ryno, 1172 Raymond boulevard, Newark.

Hartford, Conn.—The Taylor-Atkins Paper Company, Hartford, formerly operating a mill at Burnside, near East Hartford, has filed preliminary notice of company dissolution under state laws. A Wallace Cudworth, 688 Main street, Hartford, is company representative in the proceedings.

New York, N. Y.—The Allied Loose Leaf Corporation has been organized with capital of 200 shares of stock, no par value, to deal in loose-leaf paper goods of all kinds and other commercial paper goods. New company is represented by M. Edward Bernstein, 150 Broadway, New York.

Lindsay Wire Weaving Co. to Expand Plant

The Lindsay Wire Weaving Company, 14025 Aspinwall avenue, Cleveland, Ohio, manufacturer of woven wire products for the paper and other industries, has plans maturing for new two-story brick and steel addition to plant, to be used for expansion in wire-weaving division, as well as for storage and distributing departments. New machinery and equipment will be installed, and it is understood that considerable required apparatus has been contracted for. Work on new plant unit is scheduled to begin in October. The Osborn Engineering Company, 7016 Euclid avenue, Cleveland, is architect and engineer. A. F. Crossman is president.

A Low-Priced Flow Meter for Measuring the Flow of Water in Paper Mills

By J. F. INDERDOHNEN

Often it is desirable in a paper mill to keep a continuous check on the volume of water used in a process, such as the flow of water to the washers in a rag mill. Such applications, however, do not warrant higher priced

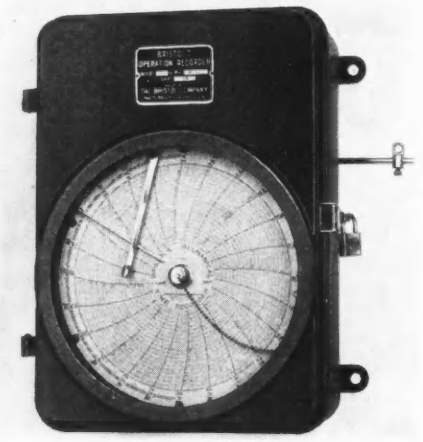


FIG. 1

water flow meters, so one paper mill uses a low priced set up, based on the use of a Bristol Motion Recorder, (See Fig. 1) and a tank and weir made in its own shop.

The tank is of copper, and the inflowing water is introduced through the top. A rectangular weir about 12 inches long and 5 inches high, is cut into the side of the tank. A shield deflects the incoming water to cut down rippling.

A 5 inch (or any other convenient size) copper ball float is connected to the lever arm of the motion recorder. The ball is hung in a copper can just large enough to allow the ball to operate freely. The bottom of the can is below the weir base, and the can is tall enough to cover the maximum height in the tank. In the base of the can is

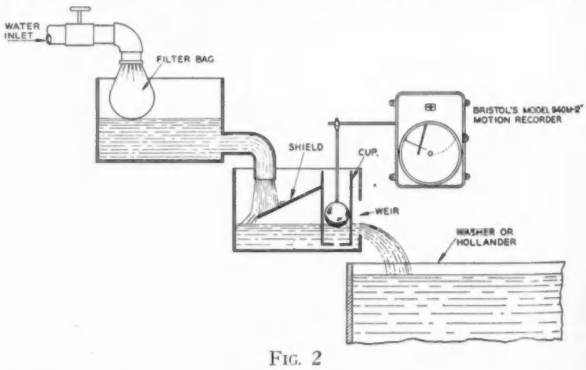


FIG. 2

a ⅛-inch hole to permit the water to attain the same level as in the tank at all times, but to damp out all ripple effects.

The instrument records flow directly based on the weir calibration, which can be computed on the basis of the formula:

FRANCIS FORMULA FOR WEIRS

$Q = 3.33\ L\sqrt{H^3}$

Q = Discharge in cu. ft. per sec.
L = Length in feet
H = Height in feet

CONSTANT *as the TIDES*

Diamond Alkalies owe their being only to man's ingenuity. They are not, as the tides, a product of the immutable laws of the universe; but it has been our special pride to maintain their qualities of purity and uniformity as fixed and predictable from day to day as the tides themselves. Throughout industry there is no greater assurance of dependability in an Alkali than the Diamond Trademark.

DIAMOND ALKALI COMPANY
PITTSBURGH *and Everywhere*

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58% Soda Ash
Bicarbonate of Soda
76% Caustic Soda
Carbon Tetrachloride
Diamond Soda Crystals
Modified Soda
Special Alkalies
Liquid Chlorine

ALKALI

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FUTURE MEETINGS

NEW ENGLAND SECTION, Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Nonotuck Hotel, Holyoke, Mass.

DELAWARE VALLEY SECTION, Technical Association of the Pulp and Paper Industry—Fourth Friday of each month at the Engineers Club, Philadelphia, Pa.

LAKE STATES SECTION, Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway, Hotel, Appleton, Wis.

KALAMAZOO VALLEY SECTION, Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park-American Hotel, Kalamazoo, Mich.

BUYING FORCES AT POWER SHOW

A combination of buying forces, it is expected, will converge at the Twelfth National Exposition of Power and Mechanical Engineering, at Grand Central Palace, in New York, November 30 to December 5, 1936. First, there is the purchasing of machines and equipment to accommodate increasing business in good times. Second, there is the need for normal replacement of equipment which has become obsolete, or which has been outdated in efficiency by new inventions and improvements. Third, there will be a volume of purchasing to overcome the abnormal accumulated obsolescence of depression years.

Cutting power costs is always a prime objective in the purchase of new equipment or in the modernizing of old. It has been stated that industry loses $2,000,000 every day through wasted power. Power saving may be secured by the replacement or modernization of equipment in several departments, notably boiler room, engine room, power service, transmission, heating, ventilating, and air conditioning. In each of these fields the buying movement has begun and is gaining momentum. It is a discriminating movement. Engineers visiting the exposition will be interested in comparing competitive products and observing them in operation. This comparative examination of equipment, "seeing how it works" as well as checking its record, can be accomplished conveniently and quickly at the Power Show. Here leading suppliers assemble to tell their story concisely and graphically to an international audience of engineers, purchasing agents, and company executives.

Equipment on display will include the following classifications: fuels, combustion equipment, refractories, steam generating equipment, steam distribution equipment, piping and fittings, prime movers, pumps and hydraulic equipment, electric generators and motors, electrical transmission, distribution, control, power transmission, control apparatus and precision instruments, power-driven machinery, tools and machine tools, material handling equipment, heating, ventilating, refrigeration, air conditioning, lubricants, operation and maintenance materials.

Steam generating equipment and accessories will constitute a comprehensive section in this year's show. One exhibitor will demonstrate an impulse steam trap said to operate on an entirely new principle. The same exhibitor will show a new tandem blow-off valve to operate at working pressures up to 1500 pounds. Sealing valve and blowing valve are mounted together in a single body made from a forged steel block. Another exhibit will feature an electrically operated return trap. This is combined with a motor driven centrifugal pump, the arrangement effecting maximum efficiency and economy in condensate return and boiler feeding. The combination is suited to a 100 horsepower boiler operating at 125 pounds pressure. It requires only a ⅓ horsepower motor because the pressure in the trap is equalized with the boiler pressure and the pump motor is not required to pump against it. An exhibitor of flexible metal hose will demonstrate a "revolutionary method of connecting platens on presses, molding rubber and plastics." A quick detachable coupling does away with the necessity of returning the steam hose to the manufacturer for repair. The equipment is offered as a guarantee against steam leaks even where the service conditions are unusual or adverse.

Valves and controls, and the latest in piping and fittings for every type of service, will be displayed at the exposition. One company will feature pump governors and boiler feed water controls, the latter designed to reduce any pressure, up to 500 pounds, to ounces, in one operation without the aid of secondary valves. Another exhibit will feature a new water blender to be shown for the first time. The function of this unit is so to mix the hot and cold water as to deliver blended water automatically at any desired temperature. A new make of steam and water mixer will be offered to compete with steam injectors and separate temperature regulators. Other specialties will include pressure controllers, level controllers, float valves, pump governors. Displayed for the first time will be an averaging liquid level control, strictly of mechanical type, particularly adapted to the control of levels in continuous process industries where flow interruption must not be allowed.

In the piping division an interesting exhibit will show special brands of stock pipe-welding fittings designed for use in taking branch lines off the main pipe. The advantages of these fittings are said to include reduction of turbulence and friction, production of a neater take-off, and the securing of a leak-proof joint, of full pipe strength, at savings ranging from 20 to 60 per cent. There will be several exhibits presenting a complete assortment of pipe

fitting tools, open end wrenches, drop-forged socket wrenches, punches, pliers, and so forth. Operating exhibits in this line will feature pipe-cutting and threading.

One of America's oldest construction specialists will call attention to stainless steel expansion joints developed to accommodate expansion in oil lines and in other installations where corrosion is a factor. A feature known as directed flexing is said to eliminate localized stress points. Globe, angle, gate, check, and non-return valves will be offered in bronze, iron, and steel. In this field alloys will be represented in the large valves for handling steam and oil. They are recommended for refinery operations involving high temperatures and pressures.

Machinery and operating plant equipment of every type constitutes a major section of the Exposition. A complete range of hand, portable, and machine tools will be presented and many of these will constitute operating exhibits. In terms of actual operation with the latest equipment, one company will feature sawing, sanding, drilling and grinding. Power transmission accessories will include leather packings and straps, also belting of every conceivable composition, demonstrated in action.

Gasoline, gas, and oil engines will be on exhibition and attention will be called especially to a new type of oil engine designed for continuous service at 1200 r.p.m.

No description will suffice to more than indicate the treasure house of mechanical engineering information and the living catalogue of most modern equipment which the Twelfth National Exposition of Power and Mechanical Engineering will represent.

Makes Pressboard From Cornstalks

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 16, 1936—Production from cornstalks of a hard, dense board, resembling grainless wood, is reported by the National Bureau of Standards, Department of Commerce.

A mechanical treatment, it is pointed out, was found necessary to reduce the cornstalks to fiber bundles of the most suitable length and to soften them to some extent. This procedure was best accomplished by a two-stage treatment in separate machines. After the stalks were reduced to suitable fiber bundles in a water suspension, they were run onto a forming machine and made into wet mats. These were cold pressed to remove some of the excess water and then dried under heat and pressure. The best conditions for drying seemed to be 300°F. and 400 to 500 lb./in.^{2}. The degree of dryness at which the boards should be removed from the hot press was most satisfactorily determined by electrical resistance measurements.

Different types of boards were produced by varying the degree of cooking given the raw material. Stalks digested with water under pressure, followed by the necessary mechanical treatment to reduce them to fiber bundles, produced boards of a density of about 1.0 and a modulus of rupture of 5,000 to 8,000 lb./in^2. By treating cornstalks by mechanical means alone, boards having a density of around 0.7 and a modulus of 2,500 to 4,000 lb./in.^{2} were produced.

The resistance of the boards to the absorption of water was increased by precipitating a rosin or paraffin size on the surface of the fiber bundles preceding the wet mat formation.

Production Ratio Report

These statistics are based upon paper production reports to the American Paper and Pulp Association.

COMPARATIVE MONTHLY SUMMARIES

Month	1936	1935	1934
January	76.1%	65.8%	.....
February	77.9%	70.0%	.....
March	76.0%	70.5%	.....
April	82.3%	70.0%	.....
May	81.6%	69.4%	.....
June	80.7%	72.3%	.....
July (b)	80.0%	67.8%	.....
August	81.5%	70.9%	.....
September (c)	.....	75.0%	59.4%
October	.....	75.6%	64.7%
November	.....	75.3%	61.7%
December (a)	.....	74.3%	62.1%
Year	.....	71.2%	.....

COMPARATIVE WEEKLY SUMMARIES

CURRENT WEEKS, 1936		CORRESPONDING WEEKS, 1935	
*August 8	80.3%	August 10	70.0%
*August 15	80.9%	August 17	70.8%
*August 22	81.5%	August 24	70.4%
*August 29	83.3%	August 31	72.6%
*September 5	80.7%	September 7 (c)	76.6%
*September 12 (c)	83.3%	September 14	72.7%

The following statistics show the number of mills reporting by ratio groups:

	Number of Mills Reporting, Current Weeks					
Ratio Limits	Aug. 8, 1936	Aug. 15, 1936	Aug. 22, 1936	Aug. 29 1936	Sept. 5, 1936	Sept. 12, 1936
0% to 50%	89	93	82	80	80	60
51% to 100%	241	238	249	246	243	177
Total Mills Reporting	330	331	331	326	323	237

* Subject to revision until all reports are received.
These data exclude (a)—Christmas Day, (b)—Fourth of July, (c)—Labor Day.

PAPERBOARD OPERATING RATIOS

According to reports from the National Paperboard Association, per cents of operation, based on "Inch-Hours", were as follows:

Month	1936	1935	1934	Month	1936	1935	1934
January	61%	61%	....	July	69%	59%	....
February	67%	67%	....	August	....	65%	....
March	68%	67%	....	September	....	69%	62%
April	70%	61%	....	October	....	76%	63%
May	68%	61%	....	November	....	70%	56%
June	68%	65%	....	December	....	60%	(a)53%

Week ending Aug. 8, 1936—71%
Week ending Aug. 15, 1936—74%
Week ending Aug. 22, 1936—75%
Week ending Aug. 29, 1936—76%
Week ending Sept. 5, 1936—78%
Week ending Sept. 12, 1936—66%

Regulations Under Walsh-Healey Act

WASHINGTON, D. C., September 23, 1936—The first series of regulations under the Walsh-Healey Government contracts act have been made public by Secretary of Labor Frances Perkins and will immediately be sent to the purchasing officers of all Departments and agencies of the Federal Government in order that they may familiarize themselves with their provisions prior to September 28 when the act goes into effect.

The invitations for bids advertised from that day on will contain the stipulations required by the act and regulations. These regulations which are primarily for the guidance of contracting officers are also of interest to manufacturers and trade associations as they clarify many features of the act about which the Department of Labor has received numerous inquiries.

Of particular interest to industry are the definitions of the statutory exemptions, the meaning of the manufacturer or regular dealer clause, the overtime provisions, and the definition of the classes of employees affected. Other provisions of the regulations deal with the procedure for bringing requests for exceptions and exemptions before the Department of Labor, the keeping of employment records, and the procedure for publishing the decisions. Another set of regulations dealing with the procedure for hearing complaints on violations of the act will be published in the near future.

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Bleachability Determination in Relation To Sulphite Cooking*

By Paul R. Eastwood[1]

Abstract

In studies of the sulphite process designed to determine the influence of factors which govern yield and pulp characteristics, it is important to make comparisons at the same degree of cooking. In this work the bleachability test reported by John and Poppe (3) was used to good advantage in determining the degree of cooking in experimental sulphite pulping studies.

The relation between pulp yield and bleachability as well as a few simple relationships between bleachability and two-stage bleaching are given. From these data calculations concerning the most economic bleachability to which the pulp should be cooked in the production of bleached pulps are presented. A study is also made of the effect of temperature schedule on the yield and properties of the resulting pulps.

Sulphite chemists agree that in a well-regulated sulphite-digesting process the yield and properties of a pulp should be dependent upon the degree of cooking—i. e., upon the extent to which the lignin and cellulosic materials are removed from the wood during the cooking operation. It is important in comparing the yields and properties of sulphite pulps to make the comparison at a common degree of cooking—i. e., on the basis of the proportion of lignin remaining in the pulp; yet one of the most disconcerting features of published researches dealing with the sulphite process is the failure of authors to compare the characteristics of pulps on this basis. One of the chief causes for this situation is that the methods used by the various investigators to determine the degree of cooking do not give concordant results. The writer is introducing this discussion in order to present for consideration a small portion of data obtained in sulphite studies which shows some of the correlations that may be made among data based upon a certain method of determining the degree of cooking.

The degree of cooking could be measured by ascertaining the proportion of lignin in the pulp. Hagglund (*2*) has had excellent success in defining the degree of cooking by means of this determination; in general, however, it is not practical for the sulphite chemist because the lignin content of so-called easy-bleaching commercial pulps is less than 3 per cent. This small range of lignin proportions together with the inherent difficulties of the technic make it difficult to determine lignin content of pulps with the precision required.

Rauchberg (*4*) found that the bleach demand of a pulp is directly proportional to its lignin content. Therefore, the degree of cooking could be ascertained by measuring indirectly the lignin concentration of a pulp through the use of a suitable bleachability test.

The choice of bleachability test depends upon what use is to be made of the results. For example, if it is desired to estimate the quantity of chlorine to be used in bleaching a pulp to a desirable color in a commercial bleachery, the test should be rapid, simple in detail of procedure, and fairly reproducible. However, if the bleachability test is used to determine the degree of cooking in experimental sulphite pulping research, the feature of first importance is the ability to reproduce results on the same pulp week after week when the data are taken by different technicians.

In general, any bleachability test that requires matching the bleached samples to a color standard does not give consistent results. Also, those tests that permit the bleach liquor to pass from a pH of 9 or 10 at the start of the determination to values of 7 or lower at the end do not give reproducible results. The unstability of the bleach liquor at the lower pH, together with the probable chlorination of the yellow precipitate adhering to the fibres as the pH of the bleach liquor drops to 7 or lower, contributes to the nonuniformity of results.

The Kimberly-Clark Corporation has developed a bleachability test that gives reliable and reproducible results (*3*). In brief, the procedure consists of treating 5 grams of unbleached pulp for 3.5 hours at 35 deg. C. with 150 cc. of calcium hypochlorite bleach containing 5 grams of available chlorine per liter and saturated with respect to calcium hydroxide. The weight, in grams of chlorine consumed, divided by the oven-dry weight of bleached pulp and the quotient multiplied by 100 gives the "alkaline single-stage bleachability" of the pulp. The results of this test do not depend on "color matching" but upon the careful control of the three major factors that govern the reaction—namely, time, temperature, and concentration. Tickler samples sent to the various mills owned by this corporation show that plant technicians can check bleachability values within ± 2 per cent of the average value.

* Presented at the meeting of the American Chemical Society, Kansas City, Mo., April 13-17, 1936.

[1] Kimberly-Clark Corp., Neenah, Wis.

It is the purpose of this paper to illustrate the useage of the data obtained from this bleachability test when related to sulphite pulping; but because in commercial practice the overall efficiency of pulping and bleaching is important, a few simple relations between bleachability values and two-stage bleaching practice will also be presented.

Correlation Between Bleach Demand and Bleachability

In this discussion, bleachability or alkaline single-stage bleachability refers only to the chlorine consumption obtained when pulp is subjected to a treatment as described by John and Poppe (*3*). Bleach demand refers to the actual amount of available chlorine used by 100 grams of oven-dry unbleached pulp in a two-stage bleaching process to produce pulps of a given color. The correlation between bleachability and bleach demand, for a given well-controlled two-stage bleachery, is dependent principally upon two items: (*a*) the reflecting power to blue light[2] (diffusion-type colorimeter) to which the pulp is bleached and (*b*) the bleachability of the pulp. It is apparent that, if a pulp with a bleachability of 5.00 is bleached to a low color in a commercial bleachery, it will not consume as much chlorine as it would if bleached to a high color. Therefore, the bleach demand is dependent upon the color attained by the bleached pulp.

TABLE I
EFFECT OF BLEACHABILITY ON BLEACH DEMAND

Bleachability of Pulp	Bleach Demand [a]	Color Attained by Bleached Pulp [b]
4.21	4.08	0.878
4.92	5.41	0.912 [c]
5.40	5.65	0.880
7.00	7.80	0.890
7.21	7.93	0.890

[a] Pulps received three displacement washes between stages of the two-stage bleach process.
[b] Reflecting power to blue light; this does not hold for burned pulps or for sulphite pulps produced from jack pine.
[c] This pulp was overbleached as evidenced by marked decrease in folding characteristics.

[2] Davis (*1*) observed that the reflectance to blue light of a near-white paper or pulp is related to an observer's visual estimate of the brightness of that material in such a way that, in general, an observer visually arranging a group of pulp samples in order of increasing brightness will be found to arrange them in the order of increasing reflectance to blue light. Maintaining constant the reflectance to blue light (mean wave length, approximately 480 mμ) thus made a convenient objective method of holding constant the brightness to which the pulp samples were bleached.

The effect of bleachability on bleach demand in the production of pulps having the same color has been ascertained in studies supplementary to those dealing with experimental sulphite pulping research. A typical correlation is given in Table I. These data (Fig. 1*C*) show that bleachability and bleach demand are practically identical at a bleachability value of 4.80. For bleachabilities lower than this value, the bleach demand is lower than bleachability; for higher values of bleachability, the bleach demand values exceed those for bleachability.

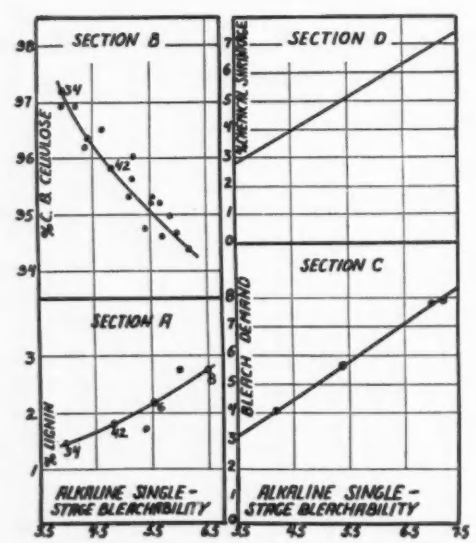

FIG. 1
Correlation between bleachability and chemical properties.

Correlation Between Bleachability and Lignin Content

The correlation between bleachability and the proportion of lignin[3] in pulps makes it possible to check the work of Rauchberg regarding the straight-line relationship between lignin content and bleach demand. Fig. 1*A* gives the correlation between lignin content and bleachability. All determinations were run in duplicate on each pulp. The numbers beside the points, divided by 2, represent the number of pulps tested having identical bleachabilities. Since the bleachability and bleach demand values are identical at a bleachability of 4.80, it is evident that 4.80 grams of chlorine are required to remove 1.82 grams of lignin. Then (4.80/1.82) × (per cent lignin in pulp for a given bleachability) gives the bleach demand at that bleachability. Bleach demands were calculated in this manner and are shown in Table II for bleachabilities ranging from 4.0 to 6.5. The observed and calculated bleach demand values at the same bleachability are in good agreement; the maximum variation is 0.16 per cent.

The ratio, 1.82/4.80 = 0.379, which represents the grams of lignin removed per gram of chlorine, is unusually small. Swanson and Monsson (*6*) found this value to be 0.568, whereas that of Rauchberg (*4*) was 1.026. The magnitude of the value depends upon the degree of whiteness attained by the bleach pulp and upon the technic used and the type of lignin determination employed. The value of the ratio need be of no concern from a practical standpoint as long as all the determinations for one study are consistent.

[3] The methods used for determining the lignin, Cross and Bevan cellulose, 1 per cent sodium-hydroxide-soluble, and total pentosan content of pulps in these investigations were the same as those employed by the Pulp and Paper Section of the U. S. Forest Products Laboratory, Madison, Wis., in 1930.

TABLE II
EFFECT OF LIGNIN AND CELLULOSE CONTENTS ON BLEACHABILITY

Bleachability	Obsvd. Bleach Demand [a]	Lignin in Pulp [b] Per cent	Calcd. Bleach Demand from Lignin Content	Chemical Shrinkage (*4*) Per cent	100 Minus Cross and Bevan Cellulose
4.0	3.80	1.45	3.83	3.35	2.90
4.5	4.45	1.65	4.35	4.00	3.80
5.0	5.10	1.90	5.01	4.55	4.40
5.5	5.80	2.15	5.67	5.15	4.95
6.0	6.45	2.45	6.46	5.70	5.45
6.5	7.10	2.75	7.26	6.30	5.90

[a] Figure 1C. [b] Figure 1A.

Correlation Between Bleachability and Chemical Shrinkage

Rauchberg (*4*) established that the percentage chemical shrinkage incurred during a modern two-stage bleaching process is equivalent of 0.888 times the percentage of chlorine used by the pulp. The result of seventeen chemical shrinkage determinations made in connection with the studies presented in this paper show this value to be 0.91, which is in good agreement with that of Rauchberg. Fig. 1*D* gives the percentage chemical shrinkage, calculated as 0.888 times the bleach demand at a given bleachability *vs.* bleachability. The curve shows that the chemical shrinkage incurred during two-stage bleaching increases linearly from a value of 2.8 to 7.5 per cent as the bleachability increases from 3.5 to 7.5.

Since the purpose of a bleaching operation is to remove the ligneous and coloring materials with the least loss of carbohydrate, the difference between 100 and the percentage Cross and Bevan cellulose in a pulp should give the shrinkage values for a given bleachability to be striven for in commercial bleaching. The relation between bleach-

ability and cellulose content of pulps is shown by Fig. 1*B*. Table II compares the shrinkage values as calculated from Rauchberg's factor and the shrinkage attained in the Cross and Bevan cellulose determination for bleachabilities ranging from 4.0 to 6.5. The results show that the observed shrinkage values during bleaching are from 0.1 to 0.4 per cent higher than those obtained from the cellulose determination. This small difference shows that the chemical shrinkage incurred during two-stage bleaching closely approximates that of the cellulose determination.

With the background of the above presentation relating bleachability to bleach demand and chemical shrinkage in two-stage bleaching, the relation of the results obtained from the alkaline single-stage bleachability test to sulphite pulping will be discussed in the remainder of this paper.

Digester and Auxiliary Equipment

The chrome steel digester was shaped like those used in commercial practice and required approximately 15 pounds of chips per charge. It was equipped with a stainless-steel, centrifugal, acid-circulating pump capable of handling the entire liquid charge once every 3 or 4 minutes. The digester and its contents were heated with electric heaters equipped with the necessary rheostats. Temperature measurements were made with two iron-constantan thermocouples, one placed at the top of the digester and the other near the pump. This apparatus made it possible to follow a predetermined temperature schedule within ± 1 deg. C.

The auxiliary equipment consisted of a lead-lined acid tank, pulsating screen for separating the uncooked chips from the accepted pulp, power agitator, large stock tanks, and copper boxes equipped with wire bottoms used for dewatering purposes.

The screened pulp was made into cakes on a large Büchner funnel; the cakes were air-dried and then sampled for moisture. From these data the yield was calculated. Thus the yield determinations were made with the same precision as are the chemical tests to which the pulps are subjected.

Effect of Temperature Schedule Upon Yield Chemical Properties, and Maximum Bursting Strengths

This field was covered again even though several researches are described in the literature. This study was designed to answer the question: "Do temperature schedules requiring a short period of time from 110 deg. C. (230 deg. F.) to a low maximum temperature give higher or lower yields, for a given degree of cooking, than schedules requiring a long interval of time between 110 deg. C. and a high maximum temperature?" The data presented here afford an opportunity of comparing the physical and chemical properties of pulps when they are cooked to the same degree—i. e., to the same bleachability.

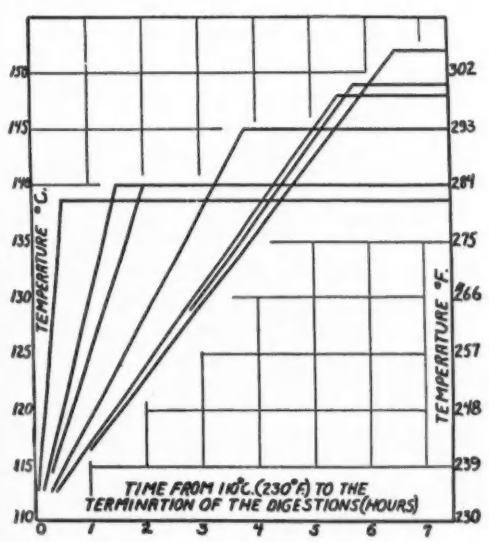

FIG. 2
Effect of temperature upon digestion period.

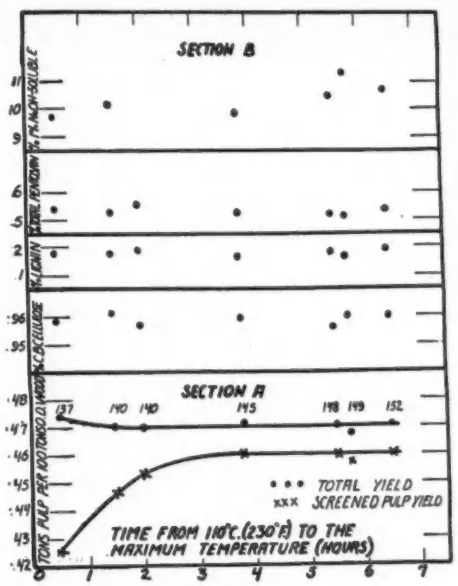

FIG. 3
Effect of temperature upon yield and chemical properties of pulps.

The temperature schedule was the only variable changed; all others were held as uniform as possible. For all digestions, the digester contents were brought to 110 deg. C. during the first hour and a half. The types of schedules followed from this point are shown by Fig. 2. The other digesting conditions were as follows:

1. All digestions were made from the same batch of mill-run spruce chips.
2. Total digesting time, 9 hours.
3. Ratio of acid to wood, 102 gallons to 100 pounds of oven-dry wood.
4. Acid-calcium-magnesium base; total sulfur dioxide, 4.50 per cent; combined sulfur dioxide, 1.25 per cent.
5. Maximum digester pressure, 85 pounds per square inch.
6. All pulps had an alkaline single-stage bleachability of 4.82.

Fig. 3*A* shows the total yield (upper curve) and the screened pulp yield (lower curve) *vs.* time from 110 deg. C. to the maximum temperature. The maximum temperatures are recorded beside the points on the total yield curve. Each of the yield points in Fig. *3A* is the average value of three digestions.

The data show that, for this method of cooking, temperature schedule had no influence on total yield even though the maximum temperatures ranged from 137 deg. to 152 deg. C. (279 deg. to 306 deg. F.). However, temperature schedule affects screened pulp yield in that too short periods of time from 110 deg. C. to the maximum temperature cause the formation of an abnormal quantity of screenings (probably due to poor impregnation of the acid into the chips).

Fig. 4 shows the relation between the maximum bursting strengths of the pulps and the interval of time between 110 deg. C. and the maximum temperature. The pulps were beaten in a Valley Iron Works beater (*5*) for strength

development. The strength data are reported as points per pound per ream; the ream is 25 × 38 inches, and contains five hundred sheets. The curve shows that the maximum bursting strength of pulp increases from 1.07 to 1.23 points with increasing period of time 110 deg. C. to the maximum temperature until the period is 3 hours and 50 minutes long. Periods increasingly longer cause the maximum bursting strength gradually to decrease to 1.08.

A comparison of Figs. 3*A* and 4 shows that the highest bursting strength was obtained for the digestion that produced the minimum of screenings at the lowest maximum temperature. Therefore, it appears that, because of poor impregnation of the cooking acid into the chips before a vigorous digesting reaction begins, periods of time shorter than 3 hours and 50 minutes between 110 deg. C. and the maximum temperature not only produce an abnormal quantity of screenings but also a pulp with inferior maximum bursting strengths. On the other hand, periods of time between 110 deg. C. and the maximum temperature longer than 3 hours and 50 minutes must have given the acid opportunity to penetrate the chips to the same degree as did the period 3 hours and 50 minutes long. Therefore, it appears that the high maximum temperatures used in these digestions were not conducive to the production of pulps with high maximum bursting strengths.

The practical conclusion to be drawn from these data is that at least 3 hours and 50 minutes should be required to raise the temperature of the digester contents from 110 deg. C. to the maximum temperature. Shorter periods cause wood wastage through worthless screenings and produce pulps with inferior maximum bursting strengths, whereas longer periods require excessive quantities of steam to heat the digester contents and at the same time give pulps with poor physical properties.

Fig. 3*B* gives the Cross and Bevan cellulose, lignin, 1 per cent sodium hydroxide solubility, and total pentosan contents of the pulps produced in this study. Each point on these curves is the average of six separate determinations because the digestions were run in triplicate and because each test was run in duplicate. The data show that the type of temperature schedule had no influence on these chemical properties when the pulps had the same bleachability. The values of each of these constituents, expressed as percentage of the oven-dry pulp, are 95.8, 1.80, 5.30, and 10.4, respectively.

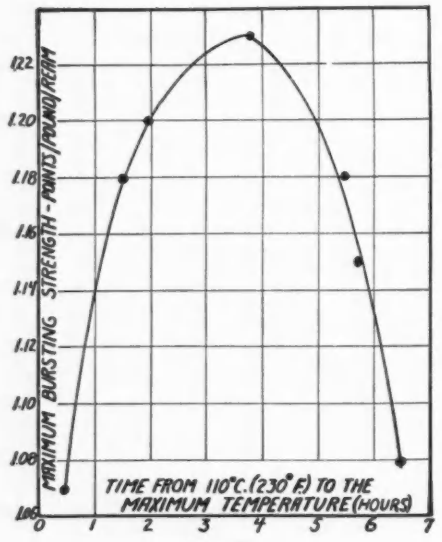

FIG. 4
Effect of time interval on maximum bursting strength.

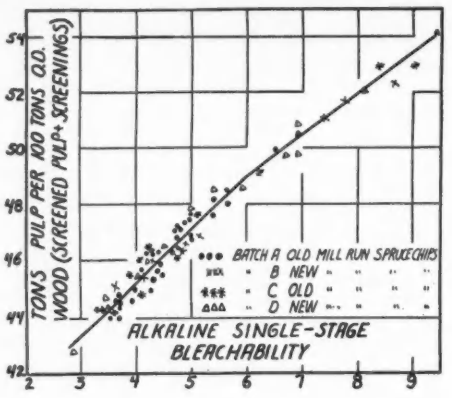

FIG. 5
Relation between total yield and bleachability.

Relation Between Total Yield and Alkaline Single-Stage Bleachability

This subject, although not widely discussed in the literature, is of prime importance to the sulphite industry. It enables sulphite pulp manufacturers to ascertain whether or not their yields, for a given bleachability, are as high as those obtained in an experimental digester where all the conditions are carefully controlled. Also, if the pulp is to be bleached, the relation makes it possible, by balancing the cost of bleach against wood and pulping costs, to calculate the most economical bleachability to which the pulp should be cooked. The latter calculations will be discussed in the next section.

The relation between total yield and bleachability is shown by Fig. 5 for the following cooking conditions:

1. The bleachability of the pulps ranged from 2.90 to 9.45.
2. The digestions were made from four batches of mill-run spruce chips.
3. Total digesting time, 9 hours.
4. One and a half hours to 110 deg. C. for all digestions, 30 minutes to 7.5 hours from 110 deg. C. to the maximum temperature.
5. Maximum temperature, 128 deg. to 157 deg. C. (262 deg. to 315 deg. F.).
6. Maximum pressure, 85 pounds per square inch.
7. Ratio of acid to wood, 61 to 112 gallons per 100 pounds of oven-dry wood.
8. Acid-calcium-magnesium base; total sulphur dioxide, 4.50 per cent; combined sulphur dioxide, 1.25 per cent.

Fig. 5 shows that the total yield of a pulp can be estimated with a probable error of ±0.35 per cent (basis, oven-dry wood). The above list of cooking conditions shows that large variations in maximum temperature, interval of time between 110 deg. C. and the maximum temperature, and ratios of acid to wood give yield-bleachability data that fit this curve as long as the total digesting time is 9 hours, the maximum pressure is 85 pounds per square inch, the acid has a total and combined sulphur dioxide content of 4.50 and 1.25 per cent, respectively, and the same kind of chips is digested.

Relation of Bleachability to Pulping Economy

The relation between yield and bleachability, together with the correlations between bleachability and two-stage bleaching presented earlier, make it possible to calculate the most economic bleachability to which the pulp should be cooked in the production of bleached pulps. If the pulp has a bleachability higher than the optimum, the over-all

efficiency is low because of excessive bleach costs; if the pulp has a bleachability lower than this value, the efficiency is again low because expensive wood has been wasted.

The calculations concerning the most economic bleachability to which the pulp should be cooked will be made on the basis of 100 tons of wood. Obviously the cost of producing the unbleached pulp will not vary with bleachability. Likewise, the cost of labor, equipment, etc., for bleaching will not change with bleachability because a plant built to accommodate 100 tons of pulp per day could handle 105 tons with no added cost. Therefore, the items to be considered are increase in the quantity of screenings, chemical shrinkage, and the quantity of chlorine to bleach the pulps to the same color with increasing bleachability, together with the value of a ton of bleached pulp and the cost of a ton of available chlorine. For convenience, in this presentation bleached pulp will be valued at 55 dollars a ton whereas a ton of available chlorine will cost 60 dollars.

The upper curve of Fig. 6*A* shows the total yield of unbleached pulp *vs.* bleachability. Plant experience indicates that the quantity of screenings increases from 0.5 per cent (basis, oven-dry wood) at a bleachability of 3.5 to 1.5 per cent at bleachability 7.0. Therefore, this amount is deducted to give the screened pulp yield as shown by the middle curve of Fig. 6*A*. The lower curve gives the tons of bleached pulp (all pulps having the same color) produced from 100 tons of wood as calculated from the chemical shrinkage data given in Fig. 1*D*. Fig. 6*B* gives the tons of chlorine required to bleach the pulp produced from 100 tons of wood as calculated from Fig. 1*C*. Figure 6*C* gives the value of the bleached pulp (at 55 dollars per ton) and the cost of chlorine (at 60 dollars per ton). The value of the bleached pulp less the cost of chlorine (Fig. 6*D*) gives the economic efficiency of the entire process. The curve shows that the bleached pulp has a maximum net value when the wood was cooked to produce a pulp with a bleachability of 6.0. If a mill superintendent insists on keeping chlorine costs below one dollar to bleach the pulp produced from a ton of wood, he is losing approximately 40 cents per ton of wood cooked. On the basis of a sulphite mill that requires 200 tons of wood (approximately 200 cords) per day, this amounts to a loss of 80 dollars.

Acknowledgment

The author takes this opportunity to state his indebtedness to C. L. R. deWet and Gordon Welch of the Kimberly-Clark Corporation and to Clyde Arrington, formerly of this corporation, who capably did the experimental work reported here.

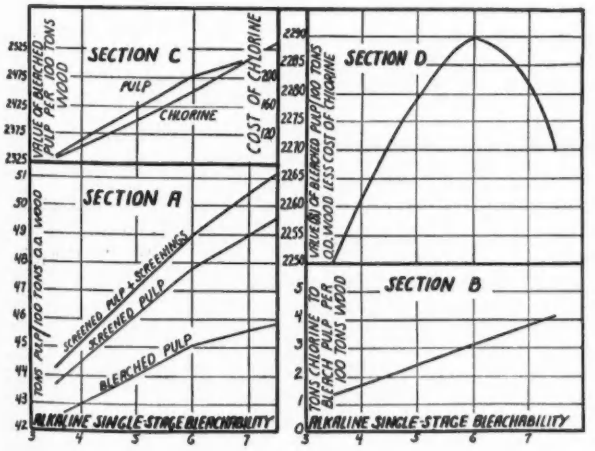

FIG. 6
Relation of bleachability to pulping economy.

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(2) Hagglund, Erik, *Paper Ind.*, 13, 511-15, 518 (1931).
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I. P. Tears Down Turners Falls Mill

TURNERS FALLS, Mass., September 22, 1936—The International Paper Company has a crew of men tearing down some of its buildings.

The International plant was originally constructed by a group of local men and was called the Montague Paper Company. Soon after the turn of the century the plant was sold to the International company. For many years this paper concern was one of the most flourishing in the country and had the reputation of turning out the best newsprint paper manufactured.

For years this mill ran 24 hours a day with only three shut-downs a year, Christmas, Fourth of July, and Labor Day. The employees always received good pay and the town depended to a large extent on the mill.

During the past several years, the local plant has had an erratic existence and has now been closed for over two years.

New England TAPPI To Meet

The New England Section of the Technical Association of the Pulp and Paper Industry will meet at the Nonotuck Hotel, Holyoke, Mass., Friday, September 25th at 6:30 P. M.

There will be a report on the TAPPI Fiber Identification Symposium held in June at the Institute of Paper Chemistry, John B. Calkin, Chemical Engineer of the Dennison Manufacturing Company, will lead the discussion. Other speakers on the subject will include Miss Lena Kelley of The American Writing Paper Company; R. W. McKindly of Arthur D. Little, Inc.; L. B. Tucker of Crane and Company, and F. C. Clark of Skinner and Sherman.

Joseph Hammond of Barss, Knabel and Young, Boston, will demonstrate a new size tester. A new color comparator will also be exhibited.

New TAPPI Company Members

The Executive Committee of the Technical Association of the Pulp and Paper Industry has announced that the following companies have become members:

SKF Industries, Front street and Erie avenue, Philadelphia, Pa., R. H. Demott, general sales manager, will represent the Company in the Association.

Shuler and Benninghofen, Hamilton, Ohio.

Taylor Instrument Company, Rochester, N. Y., to be represented by C. D. De Mers.

E. J. Cady and Company, Chicago, Ill., to be represented by E. N. Walters.

Turner-Halsey Company (Mt. Vernon - Woodbury Mills) New York, N. Y.

Hermann Manufacturing Company, Lancaster, Ohio, to be represented by George Hermann.

TAPPI Notes

L. M. Woodside who has been with International Paper Company, Niagara Falls, N. Y. is now with the Albany Felt Company, Albany, N. Y.

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Machinery

Fourdrinier Wires. Eastwood-Neally Corp. Fr. pat. 790,012 (May 14, 1935).—The wire is woven with a flat, ribbon-like warp and circular weft.—A. P.-C.

Method of Seaming Paper Machine Wires. Hans Kurtz. U. S. pat. 2,020,894 (Nov. 12, 1935).—The last weft wire is removed from each of the two ends to be seamed; the end portions of alternate warp wires are bent vertically upwards, the two ends are brought together so that the bent up warp wires of one end oppose the unbent wires of the other, and each bent up wire is fused on to the unbent end portion of the opposite wire.—A. P.-C.

Wire Fabric Seam. Otto A. Abendroth. U.S. pat. 2,025,491 (Dec. 24, 1935).—The end weft wire at each end is removed, the ends are brought together with the warp wires in overlapping side by side relation, and the warp wires are soldered together, preferably by applying liquid silver solder and heating to 1350°.—A. P.-C.

Seam for Endless Metal Wires for the Manufacture of Coarse Papers and Board. Compagnie Generale d'Electricité Société Anonyme, Paris. Ger. pat. 615,628 (July 20, 1932).—J. F. O.

Method for the Manufacture of Endless Metal Cloths for the Production of Paper and Pulp. H. Kurtz, Reutlingen, Germany. Nor. pat. 55,356 (Dec. 6, 1933). The manufacture takes place through the welding of the warp wires of the metal web.—J. F. O.

Chest with Agitator for the Removal of Water from Fiberous Materials. Ernst Froehlich, Hilm-Kematin. Aust. pat. 141,410 (Dec. 15, 1934).—J. F. O.

Report of the General Meeting of the Vienna Section of the German Pulp and Paper Association, June 7, 1935, at the Frantschach Paper Mill. Papierfabr. 33, No. 35:289-92 (Sept. 1, 1935). Round table discussion of "the mechanical and electrical drive with its relation to the manufacturing process for calenders, cutters and winders," and "critical observations of the old and the new bleaching processes." Description of the Frantschach paper mill, including the preparation and recovery of the cooking liquor.—J. F. O.

Process and Apparatus for Purifying Pulp. André Bergès. Fr. pat. 787,386 (March 14, 1935).—The stock is delivered at high speed into a vertical stationary, cylindrical casing, so as to acquire a high tangential velocity. At the top and bottom the casing is provided with frustroconical portions, the upper one being provided with the discharge outlet for the light impurities and carrying the stock inlet, which opens near the center of the apparatus and the lower one being provided with a discharge outlet for the heavy impurities. At the axis of the apparatus, near the bottom, a series of upwardly pointing cones are preferably provided to facilitate separation of the heavy impurities.—A. P.-C.

The Bauer Pulper. Paper Trade J. 101, No. 18:66, 69 (Oct. 31, 1935).—A brief outline of its design, operation, applications and advantages.—A. P.-C.

Can Electrical Equipment Failures Be Anticipated? E. L. Doty. Paper Industry 17:721-724 (Jan., 1936).—A general discussion of the care and proper handling of electrical equipment.—A. P.-C.

Outstanding Opportunities in Modernization of Electrical Mill Equipment. A. F. Betke. Paper Trade J. 101, No. 18: 58, 60 (Oct. 31, 1935).—A brief description indicating that the right kind of modernization properly carried out reduces costs and increases profits, together with some examples of profitable modernization.—A. P.-C.

Arrangement for the Constant Speed Regulation of an Electric Motor. Siemens Schuckertwerke Akt. Ges. Berlin. Ger. pat. 618,335 (Aug. 23, 1931).—J. F. O.

Safety and Control Switch for Electric Multiple Motor Drives of Coupled Work Machines. Siemens Schukertwerke Akt. Ges., Berlin. Ger. pat. 614,266 (Jan. 28, 1934).—J. F. O.

Regulating Device for Direct Current Motors, Especially for Multiple Motor Drives. Allgemeine Elektricitats Gesellschaft, Berlin. Ger. pat. 618,219 (June 1, 1930).—J. F. O.

Device for Fastening Circular Knives on a Shaft. Goebel A. G. Darmstadt. Ger. pat. 615,176 (June 8, 1933).—J. F. O.

Device for Fastening Knives and Knife Bosses on a Shaft. Remscheider Werkzeugfabrik A. Ibach & Co., Remscheid. Ger. pat. 615,568 (April 4, 1933).—J. F. O.

Power House

Method for the Determination of Bark Losses When Bark Refuse is Used for Steam Production. K. L. Thunholm. Svensk Pappers-Tidn. 38, No. 19: 624 (Oct. 15, 1935).—A method is briefly discussed which may find application in mills which bark wood dry and use the bark refuse as fuel for boiler firing. Long time average values are substituted in a simple formula from which the bark loss may easily be calculated.—C. J. W.

Power Plant Costs in Relation to Production Costs. E. H. Barry. Paper Industry 17: 563- 564 (Nov., 1935).—A brief discussion of the development of an accounting system for steam costs in a paper mill.—A. P.-C.

Modern Heat Insulation in the Pulp and Paper Industry. G. E. Grimshaw. Paper Industry 17: 566-571 (Nov., 1935).—A brief discussion of modern heat insulation, showing how improvement in laboratory equipment for the measurement of heat transfer has rendered it possible to judge of the efficiency of insulation and hence permitted improving heat insulating materials.—A. P.-C.

Purified Steam Economics. Frederick G. Straub. Paper Industry 17:572-574 (Nov., 1935).—A discussion of the difficulties which may be caused by impurities in steam, and of the economies effected by purifying steam.—A. P.-C.

Crystal Tissue Co. Installs New 60,000 lb. Per Hour High Efficiency Steam Unit. Paper Trade J. 101, No. 18:27-28 (Oct. 31, 1935).—A brief description of the new 60,000-lb. per hr. steam generating unit at the Middletown, Ohio, plant at Crystal Tissue Co.—A. P.-C.

Fort Howard Paper Co., Green Bay, Wis., Modernizes

Its Power Equipment. Paper Trade J. 101, No. 18: 31-33 (Oct. 31, 1935).—A description of the new 100,000-lb. per hr. steam generating unit installed recently in the plant, and its performance.—A. P.-C.

Flambeau Paper Co. Installs Filter Plant. Paper Trade J. 101, No. 18: 46, 48 (Oct. 31, 1935).—A description of the water treatment at the mill of the Flambeau Paper Co., and of the 5,000,000-gallon filter plant installed by the Permutit Co., New York.—A. P.-C.

Control Instruments in the Paper Mill. F. R. McDonald. Pulp Paper Can. 36: 678-680 (Dec., 1935).—A brief outline of the history of instruments and the growth of control in the pulp and paper industry, together with an explanation of control engineering and its possible application to the paper industry.—A. P.-C.

Trends in the Development of Power Economics in the Paper Industry. Wilhelm Stiel, Berlin. Wochbl. Papierfabr. 66, No. 41: 768-72; No. 42: 786-89 (Oct. 12, 19, 1935).—Steam power from piston engines and turbines, water power, costs, improvements, and pulp wood grinder installations.—J. F. O.

The Protective Power Ring. A Device for Increasing the Capacity of Flat Belt Drives. Ernst Preger, Leipzig. Paperfabr. 33, No. 34: 285-88 (Aug. 25, 1935). Description and applications.—J. F. O.

The Spiral Heat Exchanger. von Lassberg. Papierfabr. 33, No. 24: 201-06 (June 16, 1935).—The spiral heat exchanger which finds good use in a pulp mill for recovering the waste heat, is described in its construction, operation and its basic principles. Examples of its actual use in practice are given together with pertinent data.—J. F. O.

Means of Increasing the Transmission of Power with Flat Belts. Stephan Kuhne. Papierfabr. 23, No. 45: 372-74 (Nov. 10, 1935).—Brief discussion of belting in general, especially coefficients of friction, and special belting used with grooved pulleys.—J. F. O.

Feed Water Heaters or Economizers. Emile Huc. Papier 39: 31-37 (Jan., 1936).—A brief discussion of the function of the economizer and of its present state of development.—A. P.-C.

Catalytic Removal of Iron from Water. M. J. Shoemaker. Paper Trade J. 102, No. 2: 31-33 (Jan. 9, 1935).—A discussion of the causes of and troubles caused by the presence of iron in industrial waters, more particularly in the paper industry, with a brief description of the Birm process for its removal. "Birm" is a granular filter medium having an active catalytic surface, which under proper conditions, instantly precipitates iron as hydrated ferric hydroxide; the latter readily coalesces to a floc which is filtered out in the bed.—A. P.-C.

Progress in the Preparation of Boiler Feed Water and Mill Water During the Last Three Years. List. Papierfabr. 33, No. 36: 297-300 (Sept. 8, 1935).—Discussion of the treatment of boiler feed water with phosphate in which the author claims that its usefulness is often overstated; treatment of certain types of river water; condensor leakages and sources of contamination of return boiler feed water.—J. F. O.

Printer and Paper

Wishes of the Lithographer Concerning His Paper. Papier-Ztg. 60, No. 81:1429-1430 (Oct. 9, 1935).—The usual paper troubles and the possibility of their elimination are discussed, such as stretching, curling, wrinkling, dusting, etc. In recent years, the gray-moist transfer paper for lithographers was sometimes provided with lines on the back side indicating the machine direction, a practice which should be universally adopted. All paper and board for printing purposes should be cut exactly square.—C. J. W.

Paper Facts for Printers. W. B. Wheelwright. Paper and Printing Digest, Oct., 1935:7-11; Nov., 1935:3-11.—The importance of relative humidity control in printing plants is emphasized. A straight humidifying apparatus is not expensive and will exert a reasonably effective control, reduce static electricity, and prevent the common paper troubles originating in variations of atmospheric conditions. However, for adequate control the year 'round only complete air conditioning will be 100 per cent effective. To aid the printer in selecting paper, a survey is given of the various finishes obtained on the paper machine itself and those requiring special processes, with the function of the product being the prime consideration for selection.—C. J. W.

Machine and Cross Direction of Paper and Board. P. Kersten. Papier-Ztg. 61, No. 6:162-163; No. 8:194; No. 10:225 (Jan. 18, 25, Feb. 1, 1936).—The article describes various methods for differentiating between the machine and cross direction of paper and board. The importance of this knowledge for printer, bookbinder and paper converter is explained by means of practical examples.—C. J. W.

Demands Placed Upon Printing Paper in Rolls. Papier-Ztg. 61, No. 6:158-159 (Jan. 18, 1936).—Even the cheapest printing paper must comply with the printer's demand for a closed and uniform surface, correct amount of filler, sufficient tearing strength and faultless winding of the rolls. Too much filler causes dusting. Brief reference is also made to the troubles caused by static electricity and creasing of paper.—C. J. W.

Mills

New Sulphite Mill in Jakobstad, Finland. Wochbl. Papierfabr. 66, No. 46: 871-73 (Nov. 16, 1935).—The wood is barked in a barking drum of 6 meters diameter and 14 meters long. Sulphur is used and the cooking acid is made in two towers. The digesters are of 300 cubic meters capacity and are provided with forced circulation of the Schauffelberger system. The pulp is dried to about 50 per cent bone dry in a Kamyr machine.—J. F. O.

Materials of Construction Developments. James D. Miller. Paper Trade J. 102, No. 3: 43-44 (Jan. 16, 1935).—A brief mention is made of a few trends in materials application, together with some references to reports on work on subjects of interest to the pulp and paper industry.—A. P.-C.

Cast Ferrous Alloys in the Paper Industry. F. L. LaQue. Paper Trade J. 102, No. 5: 34-36 (Jan. 30, 1936).—A general and uncritical listing of applications of cast ferrous materials in the pulp and paper industry without any attempt to designate what material is best suited for each purpose.—A. P.-C.

Copper and the Copper Alloy Metals. James T. Kemp. Paper Trade J. 102, No. 6: 35-43 (Feb. 6, 1936).—A description of the chemical and metallurgical properties of copper and its more common commercial alloys.—A. P.-C.

"Stainless" in the Paper Industry. J. C. C. Holding. Paper Trade J. 101, No. 18: 65 (Oct. 31, 1935).—Though there is no known commercially practicable metal or alloy that will stand up forever under the severe chemical punishment to which most paper mill equipment is subjected, various stainless steels have amply demonstrated sufficient superiority over ordinary carbon steel and other alloys to justify their adoption.—A. P.-C.

Weyerhauser's New Pulp Mill. Anon. Paper In-

dustry 17:854-856 (Jan., 1936).—A brief illustrated description of the unbleached sulphite pulp mill of Weyerhauser Timber Co. at Everett, Wash.—A. P.-C.

Wood Room at Bogalusa Paper Co. T. T. Dunn. Paper Industry 17: 857-858 (Jan., 1936).—A description of the wood room at the Bogalusa Mill.—A. P.-C.

Refuse Disposal at the New Brunswick International Paper Co., Dalhousie, N. B. F. L. Allen. Pulp Paper Can. 36: 555-559 (Oct., 1935).—A description of the equipment in use at that mill and of its performance.—A. P.-C.

Wood Handling and Preparing. J. W. Patterson. Pulp Paper Can. 36: 551-554 (Oct., 1935).—A description of the layout and equipment of the wood room of the mill of the E. B. Eddy Co., Ltd., Hull, Que.—A. P.-C.

Stream Pollution

Pollution of the Volga River by the Pravdinskii Paper Combine. R. M. Pavlinova. Bumazhnaya Prom. 14, No. 8: 48-59 (1935); C. A. 30,553.—The pollution of the Volga River by the waste waters of the paper mill and ways of economical elimination of the nuisance are discussed.—C. J. W.

Resin Acids Detrimental to Fish Life. N. Hagman. Finnish Paper and Timber J. 18, No. 1: 32-34, 36-38, 40-41 (Jan. 15, 1936).—Experiments in Sweden and Finland proved that resins and resin acids in the waste liquor from sulphate mills are fatal to fish life when the concentration exceeds 2.5 mg. per liter. Different types of fish kept in cages in the river below the effluent of a sulphite mill lived for weeks; however, when they were placed below the effluent of a sulphate mill they died within a few days. If the sulphate waste contained no resin acids, only mercaptans, sulphides, terpenes, etc., the fish were not affected. All resin determination were carried out according to Cohen's method. The work confirms previous studies made in Germany by G. Ebeling and in Sweden by W. Klingstedt.—C. J. W.

Treatment of Effluents from Paper Mills. John Dickinson and Co. Ltd., Julius Grant, Dorr-Oliver Co. Ltd., Robert F. Stewart and Philip Evans. Brit. pat. 434,225 (Aug. 28, 1935).—Paper mill and like waste containing esparto or other washings having high oxygen-absorbing characteristics, are mixed with effluents from other parts of the paper mill, which contain oxidizing agents or substances capable of forming oxidizing agents, *e.g.*, effluents or sludges from causticizing or bleaching plant, to form a harmless effluent for direct discharge into a river. An apparatus is described.—A. P.-C.

Miscellaneous

Technical Improvements in the Pulp, Ground Wood and Paper Manufacture During the Year 1934. R. Trenschel. Zellstoff u. Papier 15, No. 5:198-201, May, 1935, No. 6:238-240; No. 7:279-82 (May-July, 1935).—From references in the literature of the pulp and paper producing countries the following technical improvements were briefly described; distant control of wood room operations; pilot digester; high pressure sulphite acid process; new sulphur burners and pyrite burners; new method for cooking straw; sulphate waste liquor treatment; manufacture of alcohol from sulphite waste liquor; new pulp grinding systems; beaters and other apparatus for treating paper stock; and improvements throughout the paper machine.—J. F. O.

Management Comparisons in the Pulp Industry. Chr. Schlingmann. Zellstoff u. Papier 15, No. 9:363-66 (Sept., 1935).—Charts and forms to show the costs of operating a pulp mill, divided into fixed and variable charges.—J. F. O.

The Friction Loss in Pipes Carrying Suspensions of Stock. W. Brecht and H. Heller. Wochbl. Papierfabr. 66, No. 14:264-68; No. 18:342-44; No. 20:380-83; No. 23:439-43; No. 25:474-76; No. 28:529-32; No. 31:587-89; No. 34:641-44; No. 38:714-17; No. 40:747-50 (Oct., 1935).—The authors first make a comprehensive survey of all the literature on the subject from the periodicals of all the important paper producing countries, and the important facts gleaned from each article. This is followed by a detailed description of the set-up of the different systems of pipes and fittings for carrying out the numerous experiments and the reasons for each arrangement. Then the ways and means of measuring the pressure are described with diagrams; as well as the effect of quantity of stock, its consistency, the temperature of the stock, the clay content, and the average fiber length. Experiments were also carried out with water to determine its frictional loss. The influence of the diameter of the pipe, the roughness of the interior of the pipe, and the influence of the degree of hydration were also studied by means of numerous curves and graphs.—J. F. O.

Some Effects of Mechanical Treatment of Fibers on Sheet Structure. R. H. Doughty. Paper Trade J. 101, No. 16:31-33 (Oct. 17, 1935).—An outline of material properties and the operation of unit processes, together with a review of semi-quantitative data on the influence of fiber treatment on fiber properties and thence on sheet structure to show how one part of this science can be developed.—A. P.-C.

Wood Pulp Adapted for Chemical Use. Raphael L. Stern assignor to Hercules Powder Co. U. S. pat. 2,028,080 (Jan. 14, 1936).—A relatively thin sheet of loosely felted wood pulp is cut or chipped into lengths preferably of a width less than the thickness of the sheet and at the same time the lengths are split lengthwise into two or more lengths which are of a thickness less than the thickness of the sheet.—A. P.-C.

Invert Sugar as a Plasticizer in Paper. N. R. Pike. Paper Trade J. 102, No. 5:39-42 (Jan. 30, 1936).—An outline of current practice regarding the use of invert sugar as a plasticizing agent together with a comparison with glycerine as to their respective efficiencies.—A. P.-C.

Formulas for Calculating Wood Pulp Production. P. I. Borisov. Leningrad. Oblastnoi Sovet Nauch. Inzhenerno-Tekh. Obshchestva Tzellyulozno-Bumazhnoi Prom. (Problems of Pulp-Paper Production) No. 4:56-63 (1935); C. A. 30:1227.—A mathematical treatment of various phases of wood pulp production.—C. J. W.

Psychology Answers Problem of Color Harmony. Faber Birren. Paper Trade J. 101, No. 15:31-33 (Oct. 10, 1935).—A brief discussion.—A. P.-C.

A Modern Viewpoint on Color Selection. Faber Birren. Paper Trade J. 101, No. 16:29-30 (Oct. 17, 1935).—A brief discussion of the psychological color chart as a basis of study of color harmony.—A. P.-C.

Welding a 288-Foot Penstock. K. C. Rowe. Pulp Paper Can. 36:687-688 (Dec., 1935).—A description of the welding of the new 14-foot diameter, 288 feet long penstock built for the James MacLaren Co., at High Falls, Que.—A. P.-C.

Safeguarding Paper Making Machines. M. W. Dundore. Paper Trade J. 102, No. 1:18-21 (Jan. 2, 1936).—A description of various safety devices for paper making.—A. P.-C.

Paper Grading Progress. John Strange. Paper Trade J. 101, No. 52:21-25 (Dec. 26, 1935).—A discussion of the fundamental social, economic and scientific factors involved in any grading project, together with a view of paper grading accomplished under the N.R.A. codes and a discussion of current activities of the grading committees.—A. P.-C.

Michigan Superintendents Meet

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., September 22, 1936—The first meeting of the 1936-37 season of the Michigan Division of the Superintendents' Association was held at the Park-American Hotel on Thursday evening, September 17, at 7:00 P. M. Fifty were present at the dinner and meeting.

Chairman Otto Fischer called the meeting to order and announced that after listening to the secretary's annual report, the report of the nominating committee for the new officers of the division for the ensuing year, would be heard. Secretary Norman Cowie's report showed the division to be in a prosperous condition with sufficient funds on hand to carry on. Homer E. Stafford, nominating committee chairman, then announced that he, with Arthur Cole, and James Wise, the other members of the committee, recommended the names of all the present officers to succeed themselves for the coming year. A motion to this effect was offered and supported, and carried unanimously.

The officers of the division are Otto Fischer, president; Norman Cowie, secretary; Al Sherwood, first vice-president; and Dan Stacy, second vice-president.

Mr. Fischer, in accepting the office for another year, expressed his hope for a continuance of the cooperation of the members and introduced John Cornell of the *Paper Mill* who responded with a short talk.

The guest speaker was the genial field secretary of the association, G. W. Craigie, who addressed the members. His subject was "Some Ideas on Management," and it was interesting, instructive and well received.

Mr. Tidwell of the Beloit Iron Works gave a short talk, followed by R. F. Hayes, representing the Bagley Sewall Company, who addressed the meeting and finished with running four reels of moving pictures showing manufacturing operations in their plant and then the installed machinery making paper.

Among those present were: F. L. Zellers, French Paper Company; Al Perlick, KVP Company; L. H. LaLiberte, KVP Company, C. E. Kinnie, Bagley Sewall Company; C. K. Gibbs, KVP Company; Merritt Lawrence, General Electric Company; R. M. Radsch, Appleton, Wis.; H. E. Stratton, PAPER TRADE JOURNAL; R. F. Hayes, Bagley Sewall Company; E. W. Cole, Bagley Sewall Company; A. L. Sherwood, Sutherland Paper Company; G. W. Craigie, National Field Secretary; O. F. Fischer, Bryant Paper Company; N. J. Cowie, Secretary, Michigan Division; C. E. Mueller, Paper Makers Chemical Corp.; G. A. Thompson, B. F. Perkins Company; H. L. Buckner, Buckner Process Company; Roy Holden, Stowe Woodward Inc.; Arnold Weller, Sutherland Paper Company; Glen Sutton, Sutherland Paper Company; Walter Wolfe, Mac-Sim-Bar Paper Company; Jake Parent, Noble Wood Company; J. H. Read, W. E. Hooper & Sons; W. F. Snyder, American Cyanamid; Allen Hyer, Black & Clawson; W. C. Hurley, H. Waterbury Company; Arthur Cole, Rex Paper Company; H. Nendorf, Rex Paper Company; P. H. Dumas, Chrome Plating Company; H. C. Pearson, Pioneer Paper Stock Company; J. E. Dannany, Allied Paper Mills; H. B. Freeman, American Cyanamid; P. H. Tigwell, Beloit Iron Works; W. F. Costello, Loughead Company; John Costello, J. M. Huber Inc.; A. E. Hays, Michigan Paper Company; R. L. Barton, Michigan Paper Company; Paul de Gauchery, Michigan Paper Company; H. E. Stafford, Hawthorne Paper Company; H. C. Bradford, Rex Paper Company; John Cornell, *The Paper Mill and Wood Pulp News*.

Adjustable Frame for Lift Trucks

This new auxiliary frame for hand lift-trucks is a boon to all companies who handle skids that vary in underneath clearance. This frame when mounted on a truck 6 inches high in the lowered position can handle skids with an underneath clearance of 6½, 7½, 9½ and 10½ inches. When mounted on a 7 inch high truck it will handle skids with any underneath clearance up to 12 inches.

It operates very easily. You merely run the truck under the skid. Then by pulling the auxiliary handle forward, the auxiliary frame is brought up snug under the skid. The ratchet holding device keeps it in place. Now you are ready to lift the loaded skid.

To lower the auxiliary frame, a slight kick on the release bar, does the trick. It is ideal for any company handling skids of varying heights. It can only be installed on Barrett Lift-trucks made by the Barrett Craven Company, 3255 W. 13th street, Chicago.

Belgian Paper Industry Satisfactory

WASHINGTON, D. C., September 23, 1936—The situation in the Belgian paper industry is fairly satisfactory according to a report from Consul Walter H. Sholes, at Brussels. During the second quarter of the year the market for wood pulp continued very active inasmuch as Belgian paper manufacturers were anxious to cover their requirements.

Paper mills were affected by the general strike which upset Belgian industrial activity last June, but on the whole, operations were not interrupted for more than one week in most mills. Exports were held up for some time but have now been renewed.

EBG and Niagara Alkali Move to Larger Quarters

Beginning October 1 the offices of Electro Bleaching Gas Company and its affiliate, Niagara Alkali Company, will be located in new and more spacious quarters on the 30th floor of the Lincoln Building, 60 East 42nd street, New York, N. Y.

Increased business, resulting in the need for larger and better office facilities, is responsible for this move. Both EBG and Niagara are known for pioneering activities in their respective fields. EBG was the first American producer of liquid chlorine. The Niagara Alkali Company was the first to produce caustic potash and recently carbonate of potash in this country. These activities have brought a steady increase in the volume of the company's business. In the Lincoln Building, these two pioneering companies will have more space and better facilities to serve their customers.

Tomahawk Pulp & Paper Co. Sold

The Tomahawk Pulp and Paper Company, Tomahawk, Wis., was sold by the receivers on July 3, 1936, to a syndicate which includes the Stein-Brill Corporation, whose New York City offices are at 183 Varick street.

To Hear Amendments in Plan for Reorganizing American Writing October 8

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., September 23, 1936—A petition was filed by American Writing Paper Company, Incorporated on September 21, 1936 with the District Court of the United States for the District of Massachusetts for the purpose of proposing certain amendments in the Plan for the Reorganization of American Writing Paper Company, Incorporated dated as of December 30, 1935. The Court has set October 8, 1936 as a date for the hearing on this petition. The main features of the changes and modifications proposed are the following:

I

The proposed new first mortgage is to contain a covenant on the part of the new company to the effect that the $1,000,000 principal amount of new first mortgage bonds immediately issuable on reorganization shall either (1) be used by the pledge thereof to secure the proposed secured notes, Series A or Series B or both, as contemplated by the plan, or (2) be sold before or after the consummation of the plan to provide cash either for the payment in whole or in part of the secured notes, whether Series A or Series B, but only up to such amount as shall be necessary at the net price for which they shall be sold to discharge the amount owing at the time of such sale on said secured notes whether Series A or Series B, or (3) be sold to provide cash for the new company in lieu of the amount that would otherwise be provided through the sale of an equivalent principal amount of secured notes. Said first mortgage is also to provide that the aggregate principal amount of bonds which at any one time may be or become outstanding thereunder shall not exceed $1,000,000.

II

All the provisions of the said plan providing for the issue of the bonds therein designated as second mortgage bonds are deleted.

III

The aggregate authorized principal amount of the bonds designated in the plan as general mortgage bonds are increased from $2,840,000 to $3,040,000.

The aggregate authorized number of shares of stock of the new company is increased from 450,000 to 750,000, of which 304 shares will be reserved for issuance upon the conversion of the general mortgage bonds. Said 304,000 shares shall not be issued for any other purpose.

IV

In lieu of the rights conferred by the plan upon existing creditors and stockholders to acquire in the aggregate $500,000 principal amount of second mortgage bonds and 25,000 shares of stock of the new company for $500,000, there is substituted, on the same terms and conditions, the right of existing creditors and stockholders to acquire in the aggregate $200,000 principal amount of general mortgage bonds and 40,000 shares of stock of the new company for $200,000.

V

In lieu of the undertaking of Thomas H. Blodgett, upon the terms and conditions set forth in the plan, to purchase up to but not exceeding $100,000 principal amount of second mortgage bonds and 5,000 shares of stock of the new company, there is substituted his undertaking, on the same terms and conditions and at the same price, to purchase up to but not exceeding 100,000 principal amount of general mortgage bonds and 20,000 shares of stock.

VI

The general mortgage bonds will provide that at the option of the holders thereof the same may be converted into stock of the new company (1) on or before December 31, 1941, at the rate of 10 shares of stock for each $100 principal amount of such bonds; (2) on or before June 30, 1944 at the rate of 8 shares of stock for each $100 principal amount of such bonds and (3) on or before December 31, 1946, at the rate of 6 2/3 shares of stock for each $100 principal amount of such bonds, subject, however, to any adjustment of interest and dividends and of the rate of conversion as may be prescribed in the general mortgage.

Name Judges for Printing Exhibit

The American Institute of Graphic Arts announce the names of five well known judges, each representing an entirely different phase of the graphic arts, who will select the printing specimens for the annual exhibition of Commercial Printing of the Year which will open October 20 at the Architectural League, 115 East 40th street. These judges are the following:

Lucian Bernhard, designer.

John Coakley, advertising manager, Thomas A. Edison, Inc., West Orange, N. J.

G. B. Dearnley, manager of production, McCann Erickson Agency.

Frederick C. Kendall, editor, *Advertising and Selling*.

Robert R. Updegraff, business counsellor.

The specimens must be received by September 15th, and must have been produced in the United States or Canada since September, 1935. There will be five classifications, as follows:

1. Booklets, books (for advertising), catalogs, house organs; 2. Folders and broadsides; 3. Stationery and forms; 4. Display and novelty pieces; 5. Publication advertisements.

Certificates of merit will be awarded for all entries that may be selected for hanging.

"Detecto" Fraud-Proof Paper

The Baldwin Paper Company, Inc., 233-245 Spring street, New York, in announcing that it is now ready to accept and fill orders from its stock from "Detecto" fraud-proof coated one side label paper, states:

The New "Detecto" Fraud-Proof Coated-One-Side Label Paper is really fraud-proof—it cannot be imitated or duplicated—and it enables the lithographer or printer to cooperate with liquor and pharmaceutical companies—as well as other manufacturers—in preventing the counterfeiting of labels, sealing bands and other printed matter used to identify and protect nationally-advertised products.

By holding a sample to the light, or moistening it and rubbing lightly with the finger it may be noted how quickly the concealed wording inner-marked in the body of the paper flashes out.

"Detecto" Coated-One-Side Fraud-Proof Label Paper can easily be identified with any brand name, trade mark or secret identification.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

CIGARETTE PAPER

Champagne Paper Corp., *Normandie,* Havre, 281 cs.; Liggett & Myers Tobacco Co., *Normandie,* Havre, 27 cs.

WALL PAPER

F. J. Emmerich, *Hamburg,* Hamburg, 1 ble.; Titan Shipping Co., *Stavangerfjord,* Hagastrom, 7 bxs.

PAPER HANGINGS

W. H. S. Lloyd & Co., *American Farmer,* London, 8 bls., 4 cs.

NEWSPRINT

N. Y. Times, *Markland,* Liverpool, N. S., 297 rolls; N. Y. Tribune, *Markland,* Liverpool, 1,834 rolls; World Telegram, *Markland,* Liverpool, N. S., 261 rolls; Brooklyn Daily Eagle, *Markland,* Liverpool, N. S., 800 rolls; South Norwalk Sentinel, *Markland,* Liverpool, N. S., 65 rolls; Westchester Newspapers, Inc., *Markland,* Liverpool, N. S., 46 rolls; Clinton Paper Corp., *Markland,* Liverpool, N. S., 670 rolls; ———, *G. T. D.,* Gatineau, 303 rolls; ———, *Stavangerfjord,* Skien, 309 rolls; ———, *Romsdalshorn,* Port Alfred, 928 rolls; ———, *Novasli,* Port Alfred, 2,369 rolls; Gilman Paper Co., *Ragnhildsholm,* Norrkoping, 864 rolls; Brooklyn Times, *Ragnhildsholm,* Norrkoping, 360 rolls; Jay Madden Corp., *Raghildsholm,* Kotka, 260 rolls; Bank of Montreal, *P. T. Dodge,* Cornerbrook, 6,851 rolls; Jay Madden Corp., *Washington,* Hamburg, 96 rolls; Jay Madden Corp., *Scanstates,* Wiborg, 707 rolls; Bank of Montreal, *Humberarm,* Cornerbrook, 5,365 rolls; International Paper Sales Co., *Humberarm,* Dalhousie, 1,511 rolls; International Paper Co., *Humberarm,* Dalhousie, 1,948 rolls.

PRINTING PAPER

L. A. Consmiller, *Washington,* Hamburg, 77 cs.; Burroughs Wellcome, Co., *American Farmer,* London, 10 cs.

WRAPPING PAPER

Schwartz & Co. Inc., *Black Tern,* Antwerp, 2 cs.; Standard Products Corp., *Black Tern,* Antwerp, 2 cs.; F. C. Strype, *Black Tern,* Antwerp, 2 cs.; M. M. Cohen, *Ragnhildsholm,* Mantyluoto, 87 bls., 156 rolls; ———, *Ragnhildsholm,* Mantyluoto, 1,701 rolls; F. C. Strype, *E. Francqui,* Antwerp, 6 cs.

PACKING PAPER

Gevaert Co. of America, *Black Tern,* Antwerp, 9 cs.

FILTER PAPER

H. Reeve Angel & Co. Inc., *Britannic,* London, 5 cs.; P. H. Petry & Co., *American Farmer,* London, 1 cs.; C. Schleicher & Schull Co. Inc., *Hamburg,* Hamburg, 4 cs., 4 bls.

DRAWING PAPER

Keuffel & Esser Co., *Washington,* Hamburg, 54 rolls; Japan Paper Co., *American Farmer,* London, 1 cs.; H. Reeve Angel & Co. Inc., *American Farmer,* London, 8 cs.; Devoe & Raynolds Co., *American Farmer,* London, 7 cs.

SURFACE COATED PAPER

Gevaert Co. of America, *Black Tern,* Antwerp, 32 cs.; Gevaert Co. of America, *Pennland,* Antwerp, 67 cs.; J. J. Gavin, *Hamburg,* Hamburg, 7 cs.

BASIC PAPER

Globe Shipping Co., *Washington,* Hamburg, 3 cs.

PHOTO PAPER

J. J. Gavin, *Aquitania,* Southampton, 1 cs.; Freedman & Slater, *Hamburg,* Hamburg, 4 cs.

DECALCOMANIAS

Sellers Transportation Co., *Hamburg,* Hamburg, 18 cs.

WRITING PAPER

Globe Shipping Co., *Washington,* Havre, 8 cs.

CARD BOARD

P. H. Petry & Co., *Hamburg,* Hamburg, 7 cs.

STRAW BOARDS

———, *Veendam,* Rotterdam, 68 rolls.

MISCELLANEOUS PAPER

Morilla Co., *Normandie,* Havre, 9 cs.; Schneider Bros., *Normandie,* Havre, 3 cs.; Keller Dorian Paper Co., *Normandie,* Havre, 11 cs.; T. N. Fairbanks, *Excalibur,* Genoa, 1 cs.; Jay Madden Corp., *Hamburg,* Hamburg, 9 bbls.

RAGS, BAGGINGS, ETC.

J. Cohen & Son Co. Inc., *Britannic,* London, 66 bls. paper stock; ———, *Britannic,* London, 7 bls. rags, 92 bls. paper stock; The Barrett Co., *Britannic,* London, 212 bls. rags; ———, *Pilsudski,* Gdynia, 181 bls. rags; Darmstadt Scott & Courtney, *Black Tern,* Rotterdam, 7 bls. bagging scrap; Great Eastern Packing & Paperstock Corp., *Black Tern,* Antwerp, 63 bls. rags; B. D. Kaplan, *Black Tern,* Antwerp, 8 bls. rags; ———, *Carinthia,* Liverpool, 53 bls. rags; J. Cohen & Son Co. Inc., *Carinthia,* Liverpool, 19 bls. new cuttings; ———, *Pennland,* Antwerp, 114 bls. bagging; Philadelphia National Bank, *Pennland,* Antwerp, 77 bls. rags; ———, *Cameronia,* Glasgow, 125 bls. rags; ———, *Excalibur,* Alexandria, 78 bls. rags; R. Blank, *Excalibur,* Alexandria, 143 bls. old cottons; Castle & Overton, Inc., *Excalibur,* Alexandria, 67 bls. bagging, 207 bls. rags; W. Steck Co., *Excalibur,* Alexandria, 264 bls. rags; E. J. Keller Co. Inc., *Excalibur,* ———, 482 bls. rags; Stone Klous & Co. Inc., *Scanstates,* Gdynia, 29 bls. rags; S. Shapiro & Sons, Inc., *Scanstates,* Gdynia, 29 bls. rags; Wertheimer Bag Co., *Fort Townshend,* Halifax, 90 bls. bagging; Irving Trust Co., *Black Condor,* Rotterdam, 117 bls. rags; ———, *Cold Harbor,* Liverpool, 12 bls. rags. 14 bls. bagging; ———, *American Farmer,* London, 88 bls. paper stock; E. J. Keller Co. Inc., *Pipestone County,* ———, 213 bls. rags; E. J. Keller Co. Inc., *Montreal Maru,* ———, 133 bls. paper stock.

GLUE STOCK, ETC.

———, *Pennland,* Antwerp, 250 bags bone glue; National Adhesive Co., *Hamburg,* Hamburg, 120 bags topaz glue.

OLD ROPE

F. Stern, *Veendam,* Rotterdam, 47 coils; Banco. Coml.

Italiane Trust Co., *American Farmer,* London, 69 bls., 115 coils.

CASEIN

American British Chemical Supplies, *Southern Prince,* Buenos Ayres, 134 bags; ———, *Hamburg,* Hamburg, 70 bags; ———, *Schurbek,* Buenos Ayres, 833 bags.

CHINA CLAY

Whitaker Clark & Daniels, *Sea Glory,* Bristol, 390 bags.

WOOD PULP BOARDS

———, *Ragnhildsholm,* Viipuri, 250 rolls; Jay Madden Corp., *Hagnhildsholm,* Kotka, 353 rolls, 276 bls.; Jay Madden Corp., *Scanstates,* Wiborg, 16 bls.

WOOD PULP

Perkins Goodwin & Co., *Pilsudski,* Gdynia, 809 bls. wood pulp, 125 tons; Lagerloef Trading Co., *Ragnhildsholm,* Viipuri, 7,102 bls. sulphite; Lagerloef Trading Co., *Ragnhildsholm,* Kotka, 135 bls. sulphite, 145 bls. sulphate; Lagerloef Trading Co., *Ragnhildsholm,* Rauma, 1,365 bls. sulphite; Lagerloef Trading Co., *Ragnhildsholm,* Rauma, 950 bls. sulphate, 390 bls. mechanical pulp; Castle & Overton, Inc., *Scanstates,* Wilborg, 1,851 bls. wood pulp, 365 tons; ———, *Stavangerfjord,* Oslo, 1,315 bls. mechanical pulp; The Borregaard Co. Inc., *Stavangerfjord,* Sarpsborg, 504 bls. sulphite; Irving Trust Co., *Stavangerfjord,* Oslo, 2,003 bls. mechanical pulp; Castle & Overton, Inc., *Hamburg,* Hamburg, 1,315 bls. wood pulp, 263 tons; Pagel Horton & Co. Inc., *Tana,* Gefle, 1,665 bls. sulphate, 333 tons; Pagel Horton & Co. Inc., *Tana,* Gefle, 250 bls. sulphite, 50 tons; Tradesman's National Bank Trust Co., *Tana,* Norrsundet, 2,010 bls. sulphate, 430 tons; Perkins, Goodwin & Co., *Tana,* Sundsvall, 600 bls. sulphite, 100 tons; Perkins Goodwin & Co., *Tana,* Sundsvall, 2,100 bls. sulphate, 350 tons; Gottesman & Co., Inc., *Tana,* Sundsvall, 150 bls. sulphate, 25 tons; Perkins Goodwin & Co., *Tana,* Gothenburg, 1,270 bls. kraft pulp; Perkins Goodwin & Co., *Tana,* Gothenburg, 254 bls. sulphate; Gottesman & Co. Inc., *Tana,* Gothenburg, 1,800 bls. sulphate; Pagel Horton & Co. Inc., *Tana,* Hernosand, 300 bls. sulphite; Bank of N. Y. Trust Co., *Tana,* Hernosand, 3,000 bls. kraft pulp; Price & Pierce, Ltd., *Tana,* Hernosand, 3,000 bls. sulphate; Bulkley Dunton & Co., *Tana,* ———, 125 bls. sulphite, 25 tons.

ALBANY IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Gottesman & Co. Inc., *Tana,* Ronnebyredd, 3,045 bls. dry pulp; Bulkley Dunton & Co., *Tana,* ———, 1,625 bls. sulphite; Pagel Horton & Co. Inc., *Tana,* Gefle, 7,375 bls. sulphite, 1,000 bls. sulphate; Stora Kopparberg Corp., *Tana,* Gefle, 250 bls. dry pulp; Price & Pierce, Ltd., *Tana,* Gefle, 900 bls. sulphite; Price & Pierce, Ltd., *Tana,* Ljusne, 1,800 bls. sulphate; Perkins Goodwin & Co., *Tana,* Sundsvall, 750 bls. sulphite; ———, *Tana,* Sundsvall, 40 bdls. wall board; E. M. Sergeant Pulp & Chemical Co., *Tana,* Gothenburg, 710 bls. kraft soda pulp; Pagel Horton & Co. Inc., *Tana,* Hernosand, 3,080 bls. sulphate; Pagel Horton & Co. Inc., *Tana,* Hernosand, 2,400 bls. sulphite.

PORTLAND IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Gottesman & Co. Inc., *Sandhamn,* Sweden, 1,050 bls. wood pulp.

NEW LONDON IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Bulkley Dunton & Co., *Dalhem,* ———, 1,500 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

E. J. Keller Co. Inc., *Excalibur,* ———, 163 bls. rags; International Purchasing Co., *Black Condor,* Rotterdam, 222 coils old rope; G. van Gelder, Inc., *Black Condor,* Rotterdam,, 100 bags skin glue; Ludlow Manfg. Ass'n., *Black Condor,* Antwerp, 137 bls. flax waste; ———, *Black Condor,* Antwerp, 90 bls. cotton waste, 238 bls. rags; Andrews Paper Co., *Black Condor,* Antwerp, 2 cs. wrapping paper; Royal Manfg. Co., *Black Condor,* Antwerp, 213 bls. cotton waste; Meredith Linen Mills, *Black Condor,* Antwerp, 115 bls. flax waste; Ayres, W. C. Jones Co., *Black Condor,* Antwerp, 43 bls. cotton waste; ———, *Black Condor,* Antwerp, 121 bags bone glue; Irving Trust Co., *Black Condor,* Antwerp, 58 bls. bagging; Parsons & Whittemore, Inc., *Liberty,* ———, 1,375 bls. wood pulp; Gottesman & Co. Inc., *Tolken,* Sweden, 620 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Philadelphia Inquirer, *Ragnhildsholm,* Norrkoping, 502 rolls newsprint; Jay Madden Corp., *Ragnhildsholm,* Kotka, 187 rolls newsprint; ———, *Ragnhildsholm,* Mantyluoto, 906 rolls, 304 bls. wrapping paper; Lagerloef Trading Co., *Ragnhildsholm,* Viipuri, 1,016 bls. sulphite; Lagerloef Trading Co., *Ragnhildsholm,* Rauma, 1,100 bls. sulphite; J. W. Hampton Jr., *Scanstates,* Wiborg, 397 rolls newsprint; Johaneson Wales & Sparre, Inc., *Scanstates,* Gdynia, 1,650 bls. wood pulp, 165 tons; F. Whitaker Co., *Scanstates,* Copenhagen, 28 bls. rags; R. Blank, *Black Condor,* Antwerp, 61 bls. rags; J. M. Hagy Waste Works, *Black Condor,* Antwerp, 45 bls. rags; M. Friedman, *Black Condor,* Antwerp, 90 bls. rags; E. J. Keller Co. Inc., *Black Condor,* ———, 63 bls. rags; ———, *Cold Harbor,* Liverpool, 37 bls. bagging; Bulkley Dunton & Co., *Dalhem,* ——— 1,500 bls. wood pulp.

CAMDEN IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Lagerloef Trading Co., *Scanstates,* Wiborg, 4,572 bls. sulphate, 914 tons.

WILMINGTON IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Castle & Overton, Inc., *Scanstates,* Wiborg, 4,338 bls. wood pulp, 867 tons.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

———, *Cold Harbor,* Manchester, 8 bls. rags; Bulkley Dunton & Co., *Malaren,* ———, 875 bls. wood pulp; Bulkley Dunton & Co., *Karpfanger,* ———, 4,125 bls. wood pulp; Gottesman & Co. Inc., *Malaren,* Finland, 250 bls. wood pulp; Gottesman & Co. Inc., *Malaren,* Sweden, 600 bls. wood pulp.

CHARLESTON IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

E. J. Keller Co. Inc., *Saccarappa,* ———, 119 bls. bagging.

MIAMI IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

———, *Novasli,* Port Alfred, 2,206 rolls newsprint.

SOUTH HAVEN IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Price & Pierce, Ltd., Honnor, ———, 1,000 bls. bleached sulphite.

MONTREAL IMPORTS

WEEK ENDING SEPTEMBER 19, 1936

Price & Pierce, Ltd., *Norefjord,* ———, 15,000 bls. unbleached sulphite; Pagel Horton & Co. Inc., *Norefjord,* Sweden, 5,050 bls. wood pulp; Gottesman & Co. Inc., *Norefjord,* Sweden, 4,750 bls. wood pulp; Gottesman & Co. Inc., *Dagmar Salen,* Sweden, 6,000 bls. wood pulp; Pagel Horton & Co. Inc., *Dagmar Salen,* Sweden, 1500 bls. wood pulp; Pagel Horton & Co. Inc., *Drammensfjord,* Sweden, 25,480 bls. wood pulp; Gottesman & Co. Inc., *Drammensfjord,* Sweden, 6,970 bls. wood pulp.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, September 23, 1936.

Sentiment in the local paper market is optimistic. Demand for the various grades of paper is persistent and the outlook for the closing months of the year is promising. Sales forces of the leading paper organizations are resuming activities. The price situation is irregular and requires adjustment.

The newsprint paper market continues active, with advertising lineage and circulations running ahead of last year's record. Production has been speeded up to take care of current requirements. Stocks at the mills have declined and the statistical position of the industry is improving.

Business in the fine paper market is well sustained. Demand for book, cover, bond and ledger papers is satisfactory for the time of year. Prices are steady and unchanged. Tissues are going forward in good volume. The coarse paper market is firmer. Activity is resuming in the paper board industry.

Mechanical Pulp

The position of the ground wood pulp market is practically unchanged. With the end of the long drought, manufacturing operations are normal once more. Supplies are moving into consumption at a steady pace. Quotations on both domestic and imported mechanical pulp are holding to schedule, in most instances.

Chemical Pulp

Steadiness prevails in the chemical pulp market. Bleached sulphite and kraft pulp continue firm, with offerings limited. Bleachable grades of unbleached sulphite are in excellent request. Bleached kraft, also, is attracting more interest. Other grades of chemical pulp are holding up well.

Old Rope and Bagging

The old rope market is stronger. Demand for domestic and imported old manila rope is better, while small mixed rope is moving freely. Old rope prices are firmer. Some improvement transpired in the bagging market. Demand for scrap and gunny bagging is improving. Roofing bagging is fairly steady.

Rags

No radical changes transpired in the domestic rag market. Demand for new and old cotton rags is rather light at present, although there is still considerable interest displayed in grades suitable for export. Roofing grades are moderately active. Foreign dark cottons are exhibiting a strong undertone.

Waste Paper

The paper stock market is irregular. Although board mill activity has increased, quotations on the lower grades of waste paper are spotty, especially on folded news, which is easier. The higher grades are fairly steady. White envelope cuttings and hard and soft white shavings are little changed. Book stock is slightly stronger.

Twine

Conditions in the local twine market are improving and demand for the various varieties should be quite heavy from now until the end of the year, at least. Inquiries for future needs are numerous, indicating many good orders to come in the near future. Prices are fairly steady despite keen competition.

Joy Products Starts at Little Falls

[FROM OUR REGULAR CORRESPONDENT]

LITTLE FALLS, N. Y., September 21, 1936—The Joy Products Corporation, recently organized for the manufacture of cellulose diapers, is now operating in leased quarters in this city. The business was started a few months ago by William Peck in a Carthage mill but it failed to receive the support of business men in that place as originally planned. Consequently, the entire business was moved here where a number of local residents are being employed. The product turned out by the company is the invention of Mr. Peck who experimented with it for some time before deciding to place it on the market. It is expected that the company will find a ready market for its product here.

Valves and Fittings—Standard Marking

A new edition of the MSS "Standard Practice" covering MSS Standard Marking System for Valves, Fittings, Flanges and Unions, SP-25-1936, has just been issued by the Manufacturers Standardization Society of the Valve and Fittings Industry.

The method of applying the general rules for marking as set forth in SP-25 is more specifically visualized in this new edition, by the inclusion of a number of tables definitely outlining the standard method of applying uniform markings to a wide variety of products.

SP-25 is one of a series of "Standard Practices" developed and published by the Manufacturers Standardization Society of the Valve and Fittings Industry. Copies of SP-25-1936, price 50 cents each, may be secured from the Society—420 Lexington avenue, New York, N. Y.

Bryant Opens Cincinnati Office

The Bryant Paper Company, with mills at Kalamazoo, and sales offices at New York, Chicago and San Francisco, announces the opening on October 1, 1936, of an additional sales office in the Union Central Building at Cincinnati, to better serve its clientele in the Ohio Valley, Kentucky, Indiana and Tennessee district.

The office will be under the direction of George O. Comfort who has been with the Bryant Paper Company for a number of years and has spent practically all his life in the book paper business. He enjoys a wide circle of friends. The new telephone number will be Main 4176.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, September 23, 1936.

BLANC FIXE—The position of the blanc fixe market is practically unchanged. Prices are generally holding to schedule. The pulp is quoted at $42.50 to $45 per ton, in bulk; while the powder is selling at 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER—Conditions in the bleaching powder market are fairly satisfactory. Shipments against contract are moving in normal volume for the season. Prices are steady. Bleaching powder is quoted at $2 to $2.25 per 100 pounds, in drums, at works.

CASEIN—The casein market continues firm. Domestic standard ground is quoted at 17½ and finely ground at 18 cents; while French and Argentine standard ground are selling at 17 and finely ground at 17½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA—Paper mill demand for caustic soda is brisk. The contract movement is well up to average. Prices are steady. Solid caustic soda is quoted at $2.55 to $2.60; while the flake and ground are selling at $2.95 to $3 per 100 pounds, in drums, at works.

CHINA CLAY—The china clay market is exhibiting a strong undertone. Contract shipments are moving freely. Imported china clay is still quoted at $12.50 to $21 per ton, ship side; while domestic paper making clay is selling at $6.50 to $12 per ton, at mine.

CHLORINE—Demand for chlorine from the paper mills is persistent. The contract movement is fairly heavy. Prices are holding to formerly quoted levels, without difficulty. Chlorine is selling at $2.15 to $2.55 per 100 pounds, in tank cars, at works.

ROSIN—The rosin market continues strong. Paper making gum rosin is quoted at $6.20 and wood rosin at $6.05 per 280 pounds, gross weight, in barrels, at Savannah. Seventy per cent rosin size is selling at $3.11 per 100 pounds, in tank cars, at works.

SALT CAKE—Activity in the salt cake market is well sustained. Contract shipments are moving in good volume. Salt cake is quoted at $12 to $13; chrome salt cake at $11 to $12 per ton, at works; while imported salt cake is selling at $12 to $13 per ton, ship side.

SODA ASH—The soda ash market is in a strong position. Demand from the paper mills is persistent. Prices are holding to schedule. Quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.05; in bags, $1.20; and in barrels, $1.50.

STARCH—There were no further changes in the starch market. Supplies are moving into consumption in a normal manner for the season. Special paper making starch is quoted at $4 per 100 pounds, in bags; and at $4.27 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA—Business in the sulphate of alumina market is holding up well. Shipments against contract are moving freely. Prices are firm. Commercial grades are quoted at $1.35 to $1.60; and iron free at $2 to $2.25 per 100 pounds, in bags, at works.

SULPHUR—The sulphur market continues steady. Yearly contracts are quoted at $18 per ton, in bulk, on orders of 1,000 tons, or over, and $20 on smaller quantities. On spot and nearby car loads the quotation is $21 per ton. All quotations are in car lots, at works.

TALC—Steadiness prevails in the talc market. Demand from the paper mills is normal for the time of year. Prices remain unchanged. Domestic talc is quoted at $16 to $18 per ton, at eastern mines; while imported talc is selling at $23 to $30 per ton, on dock.

Market Quotations

Paper

Rag Content Bond & Ledgers—Delivered Zone 1

	Bonds	Ledgers
100% Rag Ext. No. 1	.36	.37
100% Rag	.28	.29
75% Rag	.21	.22
65% Rag	.18	.19
50% Rag	.15	.16
25% Rag	.12½	.13½

Sulphite Bond & Ledgers—Delivered Zone 1

	Bonds	Ledgers
No. 1 Sulphite	7.50 @ 8.50	
No. 2 Sulphite	6.50 @ 7.50	
No. 3 Sulphite	6.00	7.00
No. 4 Sulphite	5.50	6.50

Book, B Grade, Cased

S. & S. C.	5.85 @ 6.60
S. & S. C. Litho.	6.10 @ 6.85
M. F.	5.60 @ 6.35

No. 4 Grade

Coated and Enamel	6.80 @ 7.65
Coated Litho	6.80 @ 7.65

Tissues—Per Ream—

White No. 1	.82½ @ —
White No. 1 M. G.	.77½ @ —
White No. 1½	.62½ @ —
White No. 2	.60 @ —
Anti-Tarnish M. G.	.67½ @ —
Colored	.80 @ —
Kraft	.67½ @ —
Manila	.60 @ —
Unbleached Toilet	2.60 @ 3.30
Bleached Toilet	3.94 @ 5.26

Paper Towels—

Unbleached	2.10 @ 3.35
Bleached	3.30 @ 3.70

Manila—

No. 1 Jute	9.00 @ 9.25
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.00 @ 5.25
No. 2 Wood	3.50 @ 4.00

Fibre Papers—

No. 1 Fibre	4.25 @ 5.50
No. 2 Fibre	4.00 @ 4.75

(Delivered New York)

News, per ton—

Roll, contract	41.00 @ —
Sheets	46.00 @ —

Kraft—

No. 1 Northern	4.25 @ 4.75
Standard	4.00 @ 4.12½
Southern	3.87½ @ —
Glazed	4.37½ @ —
Striped	4.62½ @ —

Boards per ton—

News	30.00 @32.50
Chip	32.50 @35.00
Sgl. Mla. Ll. Chip	45.00 @47.50
Jute Lined Chip	47.50 @50.00
Kraft Liners	62.50 @65.00
White Pat. Coated	57.50 @60.00
Binders Boards	67.00 @75.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—

Moist	24.00 @25.00
Dry	24.00 @25.00

(Delivered)

No. 1 Domestic and Canadian	27.00 @28.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—

Division 1	2.70 @ 3.30
Division 2	2.65 @ 2.75
Division 3	2.60 @ 2.70

Prime Qualities—

Class 1. All Prime Easy Bleaching	2.05 @ 2.10

Other Than Easy Bleaching—

Class 2. Higher than Standard	2.00 @ 2.05
Class 3, Standard	1.95 @ 2.00
Class 4. Lower than Standard	1.90 @ 1.95

(On Dock, Atlantic Ports)

Kraft Bleached	3.00 @ 3.25
Kraft Light & Strong	2.10 @ 2.20
Kraft No. 1	1.85 @ 2.10
Kraft No. 2	1.70 @ 1.85

(F. o. b. Pulp Mill)

Kraft Domestic	1.80 @ 2.00

(Delivered)

Soda Bleached	2.60 @ —

* Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—	
New White, No. 1	7.50 @ 7.75
Silesias No. 1	5.50 @ 5.75
New Unbleached	8.25 @ 8.50
New Soft Blacks	3.75 @ 4.00
Blue Overall	6.50 @ 6.75
Fancy	3.00 @ 3.25
Washables	2.25 @ 2.50
Mixed Khaki Cuttings	3.50 @ 3.75
O. D. Khaki Cuttings	4.25 @ 4.50

Old Rags

White, No. 1—	
Repacked	3.25 @ 3.50
Miscellaneous	2.75 @ 3.00
White, No. 2—	
Repacked	2.25 @ 2.50
Miscellaneous	1.75 @ 2.00
Thirds and Blues—	
Repacked	2.00 @ 2.25
Miscellaneous	1.90 @ 2.00
Roofing Rags—	
No. 1	1.75 @ 1.80
No. 2	1.15 @ 1.25
No. 3 (bagging)	1.10 @ 1.15
No. 4	1.10 @ 1.15
No. 5A	.80 @ .90

Foreign Rags

New Rags

New Dark Cuttings	2.25 @ 2.50
New Mixed Cuttings	2.00 @ 2.25
New Light Silesias	4.50 @ 5.00
Light Flannelettes	4.50 @ 5.00
New White Cuttings	7.00 @ 7.50
New Light Oxfords	4.00 @ 4.50
New Light Prints	3.00 @ 3.25

Old Rags

No. 1 White Linens	7.50 @ 8.00
No. 2 White Linens	6.50 @ 7.00
No. 3 White Linens	4.50 @ 5.00
No. 4 White Linens	2.25 @ 2.50
No. 1 White Cotton	4.25 @ 4.75
No. 2 White Cotton	3.25 @ 3.75
No. 3 White Cotton	2.50 @ 2.75
No. 4 White Cotton	1.90 @ 2.15
Extra Light Prints	2.00 @ 2.25
Ord. Light Prints	1.75 @ 1.85
Med. Light Prints	1.55 @ 1.65
Dutch Blue Cottons	2.25 @ 2.50
French Blue Linens	3.50 @ 4.00
German Blue Linens	2.50 @ 2.75
German Blue Cottons	2.00 @ 2.25
Checks and Blues	2.00 @ 2.25
Linsey Garments	2.15 @ 2.25
Dark Cottons	1.90 @ 2.10
Old Shopperies	1.75 @ 2.00
New Shopperies	1.75 @ 2.00
French Blues	2.25 @ 2.50

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—	
Foreign	2.10 @ 2.15
Domestic	1.75 @ 1.85
Wool Tares, light	1.50 @ 1.75
Wool Tares, heavy	1.85 @ 2.05
Bright Bagging	1.70 @ 1.75
Manila Rope—	
Foreign	2.50 @ 2.95
Domestic	2.75 @ 3.00
Jute Strings	2.00 @ 2.25
Sisal Strings	2.00 @ 2.10
Mixed Strings	.80 @ 1.00

Old Waste Papers

(F. o. b. New York)

Shavings—	
White Envelope Cuttings	2.55 @ 2.65
Ordinary Hard White No. 1	2.25 @ 2.35
Hard White No. 2	2.10 @ 2.20
Soft White No. 1	1.95 @ 2.05
Flat Stock—	
Stitchless	.65 @ .75
Over issue Mag	.65 @ .75
Solid Flat Book	.55 @ .60
Crumpled No. 1	.35 @ .40
Ledger Stock	.85 @ .90
New B. B. Chips	.30 @ .35
Manilas—	
New Env. Cut	1.75 @ 1.85
New Cuttings	1.35 @ 1.45
Old Kraft Machine—	
Compressed bales	1.15 @ 1.30
News—	
No. 1 White News	1.15 @ 1.25
Strictly Overissue	.50 @ .60
Strictly Folded	.40 @ .45
No. 1 Mixed Paper	.35 @ .40

Twines

(F. o. b. Mill)

(Soft Fibre)

Coarse Polished—			
India	.13¼	@	.15¾
Belg. White Hemp	.14¼	@	.17¾
India Compress	.13¾	@	.14¾
Fine Polished—			
Fine India	.21½	@	.23½
Special	.19½	@	.21½
Unpolished—			
Box	.12	@	.12½
Paper Makers	.09	@	.13½
Tube Rope	.10	@	.15½
Wall Paper	.11	@	.14½
Wrapping	.15½	@	.21
Special	.15	@	.15½
Soft Fiber Rope	.12½	@	.12¾

(Hard Fibre)

Bond	.10½	@	.19
Anchor	.10	@	.11½
Manila	.21	@	.28

CHICAGO

Paper

(F. o. b. Mill)

Rag Bond	.12	@	.40
Water Marked Sulphite Bond	.06¾	@	.11
Sulphite Bond	.05½	@	.07¼
Superfine Writing	.18	@	.24
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06½
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.06½
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News, per ton—			
Rolls, contract	42.00	@	—
Sheets, open	47.00	@	—
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	35.00	@	—
Patent Coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope Cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.60	@	.70
Solid Books	.50	@	.60
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.40	@	.50
Overissue News	.40	@	.45
Old Newspapers—			
No. 1 Folded News	.42½	@	.45
No. 1 Mixed Paper	.25	@	.30
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

Rag Content Bond & Ledgers— Delivered Zone 1	Bonds	Ledgers
100% Rag Ext. No. 1	.36	.37
100% Rag	.28	.29
75% Rag	.21	.22
65% Rag	.18	.19
50% Rag	.15	.16
25% Rag	.12½	.13½

Sulphite Bond & Ledgers— Delivered Zone 1	Bonds	Ledgers
No. 1 Sulphite	7.75	8.75
No. 2 Sulphite	6.75	7.75
No. 3 Sulphite	6.00	7.00
No. 4 Sulphite	5.50	6.50

F.o.b. Mill

Book, M. F.	5.00	@	—
Book, S. S. & C.	5.25	@	—
Book, Coated	6.15	@	—
Coated Lithograph	6.15	@	—
No. 1 Jute Manila	10.50	@	—
Manila Sul., No. 1	6.75	@	—
Manila No. 2	4.25	@	—
No. 1 Kraft	6.00	@	—
Southern Kraft	5.00	@	—
News Print Rolls	40.00	@	—
Straw Board	40.00	@	45.00
News Board	40.00	@	—
Chip Board	37.50	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94

Domestic Rags (New)

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

Shirt Cuttings—			
New White, No. 1	.08	@	.08½
New White, No. 2	.04½	@	.05
Light Silesias	.05½	@	—
Silesias, No. 1	.04½	@	.05
Black Silesias, soft	.03½	@	.04
New Unbleached	.06	@	—
Washable, No. 1	.02	@	.02½
Blue Overall	.06	@	.06½
Cottons—According to grades—			
Washable, No. 2	.02½	@	.04½
New Blue	.01¾	@	.02¼
Fancy	.03	@	—
New Black Soft	.04	@	.04½
New Light Seconds	.03½	@	.04
New Dark Seconds	1.75	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.04	@	.04½
No. 2 Mixed	.03½	@	.04
Corduroy	.02	@	.02¼
New Canvas	.04	@	.04½
New Black Mixed	.02	@	.02¼

Domestic Rags (Old)

White No. 1—			
Repacked	4.00	@	4.50
Miscellaneous	3.00	@	3.50
Thirds and Blues—			
Miscellaneous	2.00	@	—
Repacked	2.25	@	2.50
Black Stockings (Export)	4.50	@	5.00
Roofing Stock—			
Foreign No. 1	2.20	@	2.25
Domestic No. 1	1.50	@	—
Domestic No. 2	1.40	@	—
Roofing bagging	1.10	@	—

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	2.00	@	—
Domestic	2.25	@	—
Manila Rope	2.25	@	2.50
Sisal Rope	2.00	@	2.25
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	2.00	@	2.50
No. 2	.90	@	1.00
Wool Tares, heavy	3.00	@	3.25
Mixed Strings	1.00	@	1.10
No. 1 New Light Burlap	3.00	@	3.50
New Burlap Cuttings	2.50	@	2.75

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.30	@	2.40
No. 2 Hard White	2.10	@	2.20
No. 1 Soft White	1.80	@	1.85
No. 2 Soft White	1.40	@	1.45
No. 1 Mixed	—	@	.85
Solid Ledger Stock	1.50	@	1.60
Ledger Stock, white	1.15	@	1.20
Ledger Stock, colored	.85	@	.90
No. 1 Books, heavy	.65	@	.70
Manila Cuttings	1.80	@	1.90
Print Manila	.55	@	.60
Container Manila	.55	@	.60
Kraft Paper	1.10	@	1.20
No. 1 Mixed Paper	.45	@	.50
Straw Board Chip	.40	@	—
Binders Board Chip	.40	@	—
Corrugated Board	.60	@	.65
Overissue News	.60	@	—
Old Newspapers	.40	@	—

BOSTON

Paper

Rag Content Bond & Ledgers— Delivered Zone 1	Bonds	Ledgers
100% Rag Ext. No. 1	.36	.37
100% Rag	.28	.29
75% Rag	.21	.22
65% Rag	.18	.19
50% Rag	.15	.16
25% Rag	.12½	.13½

Sulphite Bond & Ledgers— Delivered Zone 1	Bonds	Ledgers
No. 1 Sulphite	7.50	8.50
No. 2 Sulphite	6.50	7.50
No. 3 Sulphite	6.00	7.00
No. 4 Sulphite	5.50	6.50

F.o.b. Mill

Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06¾
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	—
No. 2 Kraft	.04½	@	—
(Delivered New England points)			
Southern Kraft	.04	@	—
News Print Rolls	39.50	@	—
Straw Board, rolls	.009	—	@35.00
Filled News Board	40.00	@	45.00
Chip Board	37.50	@	40.00
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated News Board (Bender)	57.50	@	67.50
Wood Pulp Board	70.00	@	75.00
Binder Boards (Standard Grade)	67.00	@	75.00

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.00	@	2.10
No. 1 Soft White	1.75	@	1.85
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.50	@	1.75
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.85	@	.90
No. 1 Books, heavy	.60	@	.70
No. 1 Books, light	.50	@	.60
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.50	@	1.60
No. 1 Old Manila	.60	@	.65
White Blank News	1.10	@	1.15
No. 1 Kraft	1.15	@	—
Mixed Papers	.35	@	—
Print Manila	.55	@	.60
Container Manila	.27½	@	—
Old Newspapers	.40	@	.42½
Overissue News	.50	@	—
Box Board Chips	—	@	.25
Corrugated Boxes	.47½	@	.50
Kraft corrugated boxes	.95	@	1.00
Screening Wrappers	.40	@	.45

Bagging

(F. o. b. Boston)

Manila Rope—			
Foreign	2.40	@	2.65
Domestic	2.50	@	—
Transmission Rope	1.20	@	1.30
Jute Rope	2.12½	@	2.25
Jute Carpet Threads	1.00	@	1.10
Gunny No. 1—			
Foreign	1.90	@	2.00
Domestic	1.75	@	1.80
Bleachery Burlap	4.25	@	4.50
Scrap Burlap—			
Foreign	1.90	@	2.00
Domestic	1.60	@	1.75
Scrap Sisal	1.90	@	2.00
Scrap Sisal for Shredding	2.10	@	2.25
Wool Tares, heavy	1.90	@	2.00
New Burlap Cuttings	2.00	@	2.25
Australian Wool Pouches	2.35	@	2.50
Heavy Baling Bagging	1.85	@	2.20
Paper Mill Bagging	1.65	@	1.70
Bagging No. 2	1.10	@	1.25

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.03½	@	.03¾
New White No. 1	.07¾	@	.07¾
New White No. 2	.04	@	.04¼
Silesias No. 1	.06	@	.06¼
New Black Silesias	.03½	@	.04¼
Soft Unbleached	.07½	@	.08
Blue Cheviot	.06¼	@	.06¾
Fancy	.03	@	.03¼
Washable	.02	@	.0250
Cottons—According to grades—			
Blue Overalls	6.25	@	6.75
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.03¾	@	.04¼
Corduroy	.02¼	@	.03
New Canvas	.04	@	.05
B.V.D. Cuttings	.07½	@	—

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	—	@	2.75
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	1.90	@	2.00
Miscellaneous	2.00	@	2.25
Twos and Blues	1.75	@	2.00
Thirds and Blues—			
Repacked	1.37½	@	1.75
Miscellaneous	1.25	@	1.62½
Black Stockings	3.90	@	4.00
Roofing Stock—			
No. 1	1.45	@	1.50
No. 2	1.28	@	1.35
No. 3	1.15	@	1.25

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.70	@	2.00
New White Shirt Cuttings	6.50	@	6.75
Dutch Blues	2.25	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.75	@	1.90
Old Linsey Garments	2.12½	@	2.37½
New Silesias	5.00	@	5.75

TORONTO

Paper

Bond—Delivered—			
No. 5 White	.10¾	@	—
No. 6 White	.10	@	—
No. 5 Tints	.11¾	@	—
No. 6 Tints	.10½	@	—
No. 5 Golden Rod	.12¾	@	—
No. 6 Golden Rod	.12	@	—
Ledgers—			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F.	6.50	@	6.75
No. 2 M. F.	6.25	@	6.50
No. 3 M. F.	5.00	@	5.35
No. 1 S. C.	7.00	@	7.50
No. 2 S. C.	6.50	@	7.00
No. 3 S. C.	5.50	@	6.00
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	13.00	@	—
Wrapping—delivered—			
Rag Brown	4.75	@	—
White Wrap	3.50	@	—
"B" Manila	4.80	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
Kraft, No. 2	5.40	@	—

(F. o. b. Cars Toronto)

News, per ton—			
Rolls (contract)	Nominal		
Sheets	Nominal		

Pulp

Ground wood	27.00	@	—
Unbleached Sulphite	42.00	@	—
Book (Class 1)	58.00	@	—
Writing (Class 2)	59.00	@	—
Select (Class 3)	60.00	@	—

Old Waste Paper

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

Shavings—			
White Env. Cut	2.00	@	2.25
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Book and Ledger—			
Flat Magazine and Book Stock (old)	.80	@	.90
Light and Crumpled Book Stock	.70	@	.80
Ledgers and Writings	.90	@	1.00
Manilas—			
New Manila Cut	1.25	@	1.40
Printed Manilas	.50	@	—
Kraft	1.00	@	1.60
News and Scrap—			
Strictly Overissue	.55	@	—
Strictly Folded	.50	@	—
No. 1 Mixed Paper	.40	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.07½	@	.07¾
Fancy Shirt Cuttings	.02¾	@	.03