

MEMBER OF THE A. B. C.
FIFTY-FIRST YEAR

LIBRARY RECEIVED
 RECEIVED
 NOV 10 1922
 U.S. DEPARTMENT OF AGRICULTURE

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

ESTABLISHED IN 1872

Vol. LXXV. No. 19 NEW YORK AND CHICAGO, NOVEMBER 9, 1922

{ Per annum, \$4.00
 { Single Copy, 10 Cents

**SCANDINAVIAN-AMERICAN
 TRADING COMPANY**
 50 EAST 42 ST., NEW YORK CITY

We are now booking orders for
KRAFT and SULPHITE
 for shipment over next year.
 Pulp also available for immediate shipment from
 dock.



Diamond-F
PROTECTIVE PAPERS
 Glassine Parchmold
 Vegetable Parchment Greaseproof
 Diamond Fibre Receptacles of all kinds
 Diamond State Fibre Company
 Dept. 27
 BRIDGEPORT, PENNSYLVANIA (near Philadelphia)

TRAIN SMITH COMPANY
Paper Mill Supplies
 10 Milk St. (Old South Bldg.), Boston, Mass.
 Packing Houses: Chelsea, Mass. Branches: London-Liverpool

PARSONS TRADING COMPANY
Paper Exporters
 17 Battery Place New York
 London Stockholm Bombay Shanghai Wellington
 Havana Buenos Aires Mexico Rio de Janeiro Naples
 Parsons Trading Company (Australia), Limited
 Sydney Melbourne

ATTERBURY BROS.
 (INCORPORATED)
 WOOD PULP, RAGS AND PAPER
 STOCK, FRENCH CASEINE
 45 NASSAU STREET (POTTER BLDG) NEW YORK

CABLE ADDRESS: REGHAMMOND NEW YORK TELEPHONE: VANDERBILT 4568-9
R. F. HAMMOND
 342 MADISON AVENUE
 NEW YORK
 WOOD PULP PAPER

PULP STONES
INTERNATIONAL PULP-STONE CO.
 ELYRIA, OHIO

PRICE & PIERCE., Ltd
 17 East 42d Street, New York
 Sole Selling Agents for **Kraft Pulp and Easy Bleaching Sulphite**
 Bathurst Company Ltd.
 BATHURST, N. S.

INTERNATIONAL PULP CO.
 NEW YORK CITY
ASBESTINE PULP + FILLER
 90% Retention
 857. U. S. PATENT OFFICE

Entered as Second-Class Matter June 20, 1879, at the New York Post Office, Under Act of Congress, March 3, 1879
 Published Every Thursday by the Lockwood Trade Journal Co., Inc., New York.

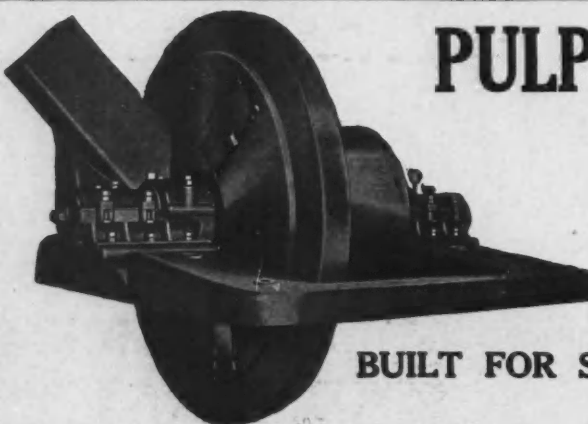
PULP AND PAPER
OF
EVERY DESCRIPTION
HUDSON TRADING COMPANY
300 Madison Avenue
NEW YORK
ESTABLISHED 1888
CABLE ADDRESS: "HUDTRACO," NEW YORK

DANA T. McIVER
High Grade Printing Paper
116 So. Michigan Avenue
CHICAGO

BOOK AND COATED PAPER
Car Lot and Tonnage Contracts


FITCHBURG DUCK MILLS
ESTABLISHED
1844.
FITCHBURG, MASS.
MANUFACTURERS OF
**Standard and Multiple
DRYER FELTS**
English Weave in Two, Three, Four, Five
and Six Ply
60 Inches to 176 Inches in Width
Fine Faced Felts for Fine Papers
Absolutely No Felt Marks in Paper
TRIUNE Three Ply Felts for Coarse Papers

**PULP WOOD CHIPPERS
and SPLITTERS**



BUILT FOR SERVICE

**Wood Room Machinery,
for Pulp Mills, of latest type**



**WATERVILLE IRON WORKS
WATERVILLE, MAINE**

HELICOID CONVEYOR

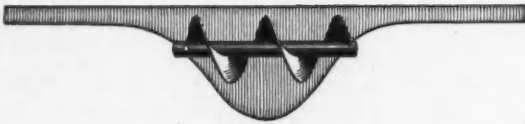
CONTINUOUS flights (without laps or rivets), and heavier flights on larger pipe, make Caldwell Helicoid Conveyor by far the best on the market. It is the recognized standard conveyor of this type.

The price is no more than for ordinary screw conveyor.

H. W. CALDWELL & SON CO.
LINK-BELT COMPANY, OWNER

Dallas, Texas, 709 Main Street—Chicago, 17th Street and Western Ave.—New York, Woolworth Bldg.

CALDWELL



2



What Are Your Paper Tests Worth?

It is generally conceded that tearing tests, made with the hands, are frequently inaccurate. They must be because of the human equation. What such tests are worth is questionable.

On the other hand, tests made with the Elmendorf Paper Tester are accurate—always. A reason why the Elmendorf is used by the American Writing Paper Co., Continental Bag and Paper Co., Robert Gair Company, Kalamazoo Vegetable Parchment Co., and hundreds of others.

The Elmendorf Paper Tester works by gravity, without springs. —Measures the strength of paper with and across the grain.

A request for details will be promptly attended to. Write for further information.

THWING INSTRUMENT CO.

Lancaster Avenue Philadelphia, U. S. A.

ELMENDORF Paper Tester

104

ALVAH MILLER, Pres. TOM T. WALLER, Vice-Pres.
NATH'L L. MILLER, Secy-Treas.

Craig-Becker Company

INC.

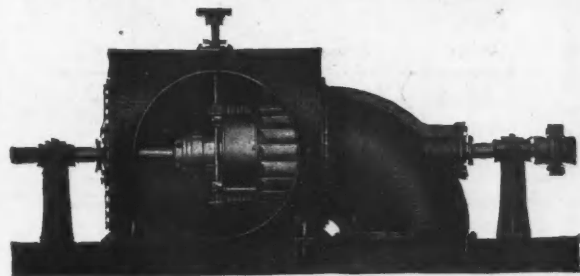
Domestic and Foreign
Ground Wood and
Sulphite

52 VANDERBILT AVE.
NEW YORK CITY

WATER WHEELS

WE MANUFACTURE

Complete Water Power Equipment



McCormick "Holyoke" Turbines.
Head Gates.
Trash Racks.

J. & W. JOLLY, Inc.
Holyoke, Mass.

Catalog. Or representative will call.

2

J. ANDERSEN & CO.
 21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulps


BLEACHED and UNBLEACHED

Agents for Kellner Partington Paper Pulp Co., Ltd. Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden.

ESTABLISHED 1882 INCORPORATED 1921

IMPORT EXPORT
RAGS NEW CUTTINGS
JUTE STOCK ROPE

KATZENSTEIN & KEENE
 (INCORPORATED)
 63 PARK ROW, NEW YORK




That he who buys may know—

We stamp the Jenkins "Diamond" and Signature on every valve we make— as an evidence of our pride in workmanship as a protection to the buyer against substitution as an assurance to the buyer that he is getting genuine Jenkins Valves and genuine Jenkins Service.

If these things are worth while—look for the Jenkins Diamond and Signature! At supply houses everywhere.

JENKINS BROS.
 New York Boston Philadelphia Chicago
 Montreal London



Jenkins Valves
 SINCE 1864

Whalen Sulphite Pulps

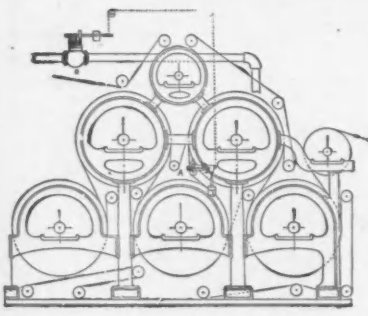
Made from the SITKA SPRUCE of BRITISH COLUMBIA. Noted for Fibre, Color and strength.

SNOWHITE BLEACHED SULPHITE
GLACIER EASY BLEACHING SULPHITE
SWAN STRONG SULPHITE

As exclusive selling agents for the Whalen Pulp & Paper Mills, Ltd., we solicit your inquiries to any of our offices.

Canadian Robert Dollar Co.
 LIMITED
 VANCOUVER, B. C.

U. S. ADDRESSES
 Robert Dollar Co., Robert Dollar Bldg., San Francisco
 Robert Dollar Co., 15 Moore Street, New York, N. Y.
 Robert Dollar Co., Harris Trust Bldg., Chicago, Ill.
 Robert Dollar Co., L. C. Smith Bldg., Seattle, Wash.



WE ARE SAFE IN OUR PROPOSITION
YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES, BUCKLAND, CONN.

Box Boards Paper Board Specialties

Control of Production and Our Mill Connections — what they mean to you.

Quality guaranteed to be highest grade; deliveries to be prompt—when wanted; service to be thoroughly satisfactory; prices to be reasonable.

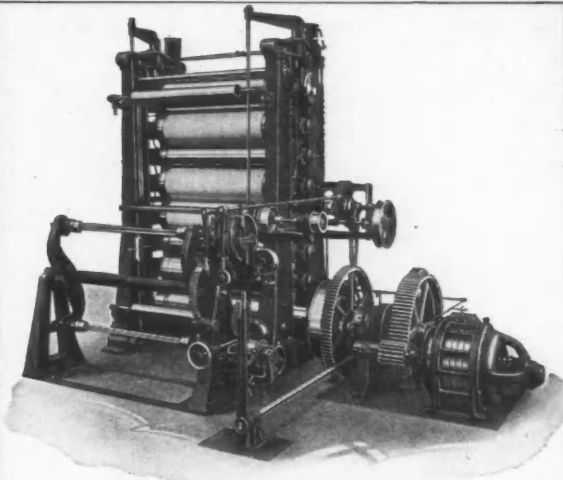
To prove it, write us to-day for samples and prices.

Another LaBoiteaux office at your service

819 Chestnut St. St. Louis, Mo.
Phone Olive 157

The C. L. LaBoiteaux Co.

Cincinnati Cleveland Chicago St. Louis New York



PAPER FINISHING MACHINERY

The Standard for Over 30 Years.

NORWOOD ENGINEERING CO.
Florence, Mass., U. S. A.

BLEACHED *Sulphite Fibre*

THE extent of our production (*daily capacity of 600 air-dry tons*) insures uniform quality, prompt shipments and market prices ☺ ☺ ☺



BROWN COMPANY

founded 1852

PORTLAND MAINE

Mills at Berlin, New Hampshire

NEW YORK CITY
Woolworth Bldg.

CHICAGO
110 So. Dearborn St.

The St. Regis Paper Company and the Hanna Paper Corporation

Daily Capacity, 425 Tons

Newsprint

Catalog

Butchers' Manila

Packers' Oiled Manila

Jute Container Board

Ground Wood and Unbleached Sulphite

Manufacturers of

TARZAN Fibre Shipping Cases

General Sales Offices:

30 East 42nd St.

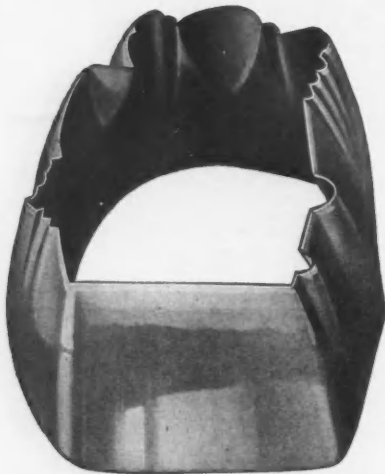
New York

CHICAGO

PITTSBURGH

648 McCormick Bldg. 1117 Farmers Bank Bldg.

Cutting Dies of superior quality



NO matter how intricate or involved the design is, we'll make it and make it right. Every die of carefully selected steel, guaranteed flawless and warranted to give long, satisfactory service. The more difficult your die-cutting problems the more we'll enjoy helping you solve them. Send us a rough sketch or description of what you want and we'll tell you if it is practically possible to produce it.

Circular, oval and elliptical dies in all sizes. Envelope dies for both regular and open-end shapes. Dies for labels and cut-outs of every conceivable kind. Glove dies, shoe dies, cloth-cutting dies—we make them all. Write for descriptive booklet, illustrating 50 different dies, many of which are very intricate, showing what seemingly impossible designs we are able to make.

The INDEPENDENT DIE CO., Inc.
2641 LaSalle Street
ST. LOUIS, MO.



Vortex
DRINKING CUP
(Patented)

June 20, 1916, Reissued June 13, 1922;
March 26, 1918;
April 18, 1922;
Other Patents
Pending

Canadian and
Other Foreign
Patents Granted
and Pending

"One who manufactures,
who uses, or who sells a
device that infringes
a patent is equally
an infringer."

Look for our
trade-mark
"VORTEX"
on all car-
tons and
tubes

It's a "Repeater"

The apparent superiority of Vortex drinking cups makes first sales easy.

Repeat orders come in automatically, practically without solicitation.

These genuine Vortex drinking cups will prove profitable for you to handle.

They are of fine quality, scientifically sterilized, strong, sanitary and convenient.

The price of Vortex cups is amazingly low.

Write for Particulars

THE VORTEX MFG. CO.
421-431 N. Western Avenue
Chicago, Ill.

*Canadian Wm. A. Rogers Ltd., Toronto, Manufacturers
and Distributors for Canada*

Vortex
Drinking Cups

TEXAS GULF SULPHUR

99½ Per Cent. Pure.

Produced from one
of the largest known
deposits in the world.

Texas Gulf Sulphur Company

General Offices

41 East 42nd Street, New York, N. Y.

*Sulphur Deposit and Plant, Matagorda
County, Texas*

COLLINS MANUFACTURING COMPANY

SAMUEL R. WHITING, Pres. and Treas.

Manufacturers of

**LOFT DRIED PAPERS
LEDGERS
BONDS
WRITING PAPERS**

Mill:— North Wilbraham, Mass.

Main Office:

208 Race Street Holyoke, Mass.

ESTABLISHED 1823

SOUTH WINDHAM, CONN.

THE SMITH & WINCHESTER MFG. CO.

MANUFACTURERS OF

PAPER BAG MAKING MACHINERY

AS ILLUSTRATED AND DESCRIBED IN BULLETIN NO. 19

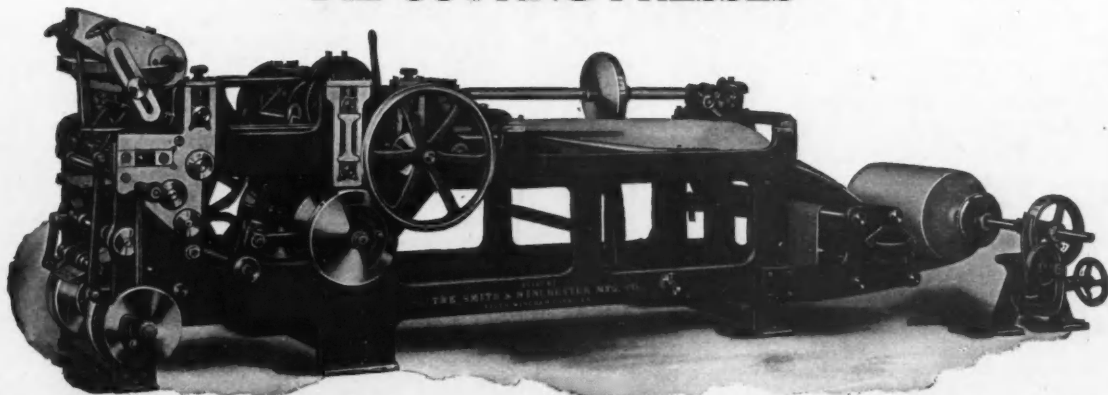
PAPER MAKING—PAPER CUTTING MACHINERY

FOURDRINIER—CYLINDER—WET MACHINES

JORDAN ENGINES—PUMPS—CALENDERS—REELS—CUTTERS—WINDERS—ROLLS

THE RAINSTORM SHOWER PIPE—COLLAPSIBLE CORES

DIE CUTTING PRESSES



OUR NO. 4 NATIONAL BAG MACHINE FOR THE PRODUCTION OF FLOUR, CEMENT AND LIME SACKS; ALSO CHARCOAL BAGS

FINANCING for the Pulp and Paper Industry

Our long experience in industrial financing includes the successful marketing of eighteen issues of the securities of American and Canadian Pulp and Paper companies having net assets of nearly \$150,000,000.

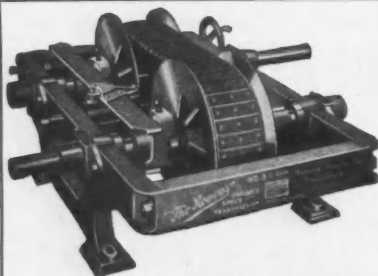
If you desire cash for extension, refunding or additional working capital, let us assist you. Our organization, backed by large resources, is equipped for prompt and intelligent service.

Peabody, Houghteling & Co.

Established 1865

10 S. LaSalle St.
CHICAGO

366 Madison Ave.
NEW YORK



The Reeves

Variable
Speed
Transmission

THE RIGHT SPEED AT THE RIGHT TIME—that is the only solution for getting superior quality and maximum production of your paper goods at the least expense.

"THE REEVES" Variable Speed Transmission does this very thing to absolute perfection; you can get any variation at any time without stopping your machine. Some decided improvements have been made in the construction of "The Reeves" Transmission, such as:

TWO KEYS, FULL LENGTH OF SHAFT between boxes, **LARGER ROLLER THRUST BEARINGS, LARGER DISCS, PATENT EQUALIZING COLLARS.**

all of which tends to give larger wearing surface, greater carrying capacity and longer life. Special High Duty Ball Bearings are furnished for main boxes if desired.

It is the only Variable Speed device with 25 years' service record.

REEVES PULLEY COMPANY
COLUMBUS, INDIANA



EVERYTHING IN

PULP & PAPER

J. E. PATTON CO., INC.

342 Madison Ave.
New York City

(Cable address - Pulp.NY.)



Dietz Toilet Paper Machinery

AND LATEST IMPROVED PATENTED

Automatic Tube Machines

For Making Tubes for Toilet
Paper Rolls, Paper Towel Rolls

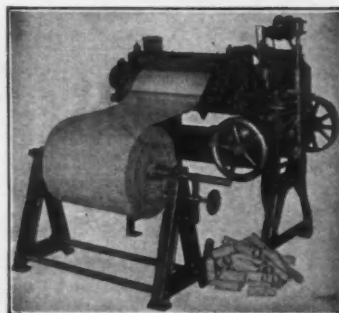
Capable of producing 3,600

**Toilet
Tubes**

per hour direct
from roll.

**Towel
Tubes**

are made at rate
of 1,800 per hour.
Substantially built
and fully guaranteed.



Patented Feb. 22, 1916, May 18, 1920.

Toilet Paper Machines for making Toilet Rolls with or without perforations and machines for making Sanitary Crêpe Paper Towels, Punch Presses for Sheet Toilet Paper, Drop Roll Sitters, Slitting and Rewinding Machines, Side and Center Seam Merchandise Envelope Machines, Photo Mount Beveling Machines, Candy Bag Machines, Punch Presses for Playing Cards, Rotary Card Cutting and Collating Machines, Etc.

DIETZ MACHINE WORKS

126-128 Fountain Street

PHILADELPHIA, PA.

Corner Waterloo St., Below Diamond St., Bet. Front and 2d Sts.

JORDAN FILLINGS

For all makes of Jordans:

Jones
Emerson
Black-Clawson
Dillon
Miami
Noble & Wood
Horne

Uniformly
High
Grade
Quality
and
Finish

Order BOLTON QUALITY next time and see how much longer and better service you can get for a low cost.

Prompt shipments.

JOHN W. BOLTON & SONS, INC.
Lawrence, Mass.

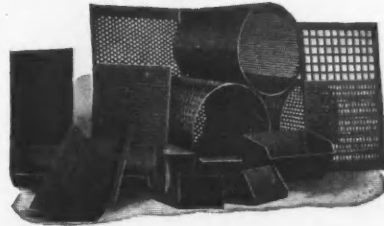
High Grade Fly Bars, Bed Plates, Jordan Fillings and Knives.

3

PERFORATED METAL SCREENS

IN STEEL AND ALLOYED METALS

For Pulp and Paper Mills



Elevator Buckets, Conveyor Flights
and Troughs, General Sheet and
Light Structural Work

Light and Heavy Steel Plate Construction

HENDRICK MANUFACTURING CO.

75 Dundaff Street Carbondale, Pa.

New York Office, 30 Church St.

Pittsburgh Office, 544 Union Arcade

APPLETON FELTS

Quality Paper
Quantity Production

is another way of saying

APPLETON
Felts and Jackets

**APPLETON WOOLEN
MILLS**

APPLETON, WIS.

POTDEVIN'S

20

PAPER BAG MACHINES

TUBERS and BOTTOMERS for

Printed Glassine Bags,
Printed Garment Tubes,
Nail Bags, Sacks & all other types.

POTDEVIN MACHINE CO.

Department 9

1223—38th Street

Brooklyn, N. Y.

SHIPPING INSURANCE

The Use of ELIXMAN CORES

protects your rolls and insures their delivery, to your customer, in perfect condition. They eliminate claims for damages.



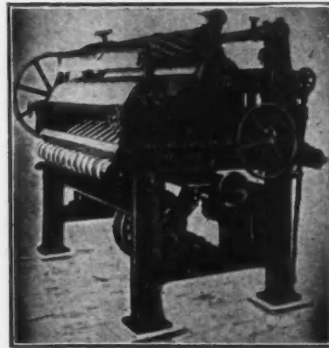
Your two sources of supply are

Canadian Elixman Co.
HAMILTON, ONTARIO

Elixman Paper Core Co.
CORINTH, N. Y.

THE CLARK-AIKEN CO.

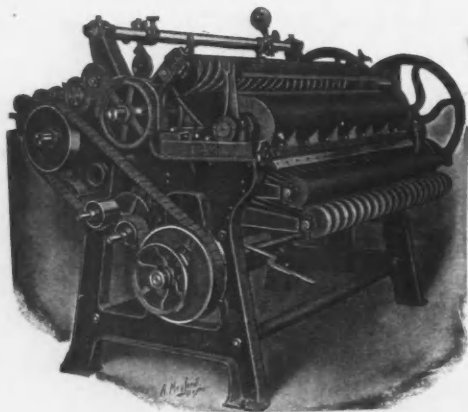
Successors to
H. C. Clark & Son Machine Co.
PAPER MILL MACHINERY
LEE, MASS.



Revolving Paper Cutters—Rag Cutters—Cylinder Paper Machines—Washing and Beating Engines—Chilled Iron and Paper Calenders—Fan and Stuff Pumps—Engine Roll Bars and Bed Plates—

Cylinder Molds—Marshall Drives—Slitters and Rewinders—Reels—Dryers with Improved Packing Boxes—Wet Machines—Gun Metal and Rubber Rolls—Rolls Reground.

Paper Cutters Single, Duplex and Diagonal



Cutter Knives Patent Top Slitters

HAMBLET MACHINE CO.
LAWRENCE, MASS.

Starch

Paper manufacturers generally recognize the value of starch in the manufacture and coating of paper.

To obtain definite results in any desired direction in the preparation of paper, not merely a difference of grade, but a difference of kind or variety of starch is required.

Our carefully controlled and thoroughly standardized processes enable us to produce exactly the various starches which the paper industry has found economical and efficient.

Corn Products Refining Company
17 Battery Place New York


Starch



**MEETING DEMANDS
OF OUR CUSTOMERS**

Jobbers of Fort Howard Products have found each successive consignment of Toilets, Napkins and Towels so good that their business with the retailer and consumer constantly increased on these lines.

Fort Howard Paper Co.
Green Bay, Wis.



Some of the Special Advantages of

THE PERKINS RAG CUTTER

Large capacity
Very low power consumption
Dustless operation
No waste of stock
Clean shear-cut

Write for full particulars to Dept. P-11.

B. F. PERKINS & SON, INC., HOLYOKE, MASS.
Manufacturers of the Perkins Rag Cutter—the Perkins Tensile Tester—The Mullen Paper Tester Perkins Calender Rolls—Perkins Fans



Wood Plugs

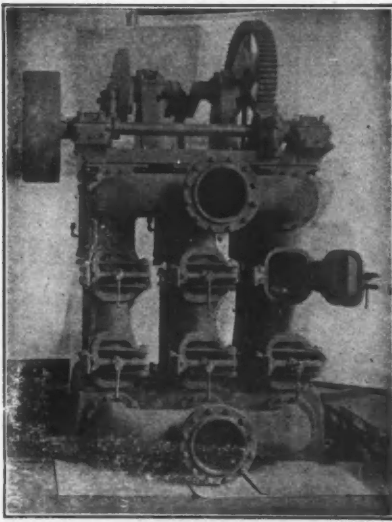


For paper rolls, made to pattern under shop names in four sizes as follows: **CARD**, 3"; **MANILLA**, 2 3/8"; **NEWS**, 2 1/2"; **DRUG**, 2 3/4"; 1 3/4" in length, having 1" hole, and tumble polished when shipped. You should if possible, adjust your needs to these stock sizes, with prospect of prompt shipping in carlots or less, thereby avoiding serious delays in waiting for something special. Samples cheerfully furnished.

O. L. BARTLETT
Eastern Office:
MOUND CITY, ILL. 855 West End Ave., New York, N.Y.

The Black-Clawson Co.
Hamilton, Ohio

Builders of All Types of Paper Making
Machines and Machinery



for
**PAPER
and
PULP
MILLS**

*Successful machines in operation are proof
our work is built right.*

HANS LAGERLOEF, Pres. and Treas.
 ORVAR HYLIN, Vice-President
 MAURICE LONDON, Secretary

Telephones
 Murray Hill { 4246
 4247



Lagerloef Trading Company, Inc.



52 VANDERBILT AVENUE, NEW YORK, N. Y.

Sole Agents in U. S. A., Canada, Mexico and Cuba for
FINNISH CELLULOSE ASSOCIATION, HELSINGFORS, FINLAND
 AND
FINNISH WOOD PULP UNION, HELSINGFORS, FINLAND



TYPE "B" IRON EXTRACTOR

It consists of special magnetic surfaces of great power over which the paper stuff is made to pass. As a result, all the iron and many other foreign substances are completely extracted. Hundreds of these devices are in use daily and no one of them has failed to give complete satisfaction. Write us for Bulletins and full details.

for
PAPER MAKING

THE ROLAND T. OAKES CO., Holyoke, Mass.

CENTRAL MANUFACTURING COMPANY

THE QUICK SERVICE HOUSE

KALAMAZOO, MICH.

Manufacturers of

High Grade Brass and Bronze Screen Plates and Dandy Rolls

OLD PLATES
 CLOSED AND RECUT

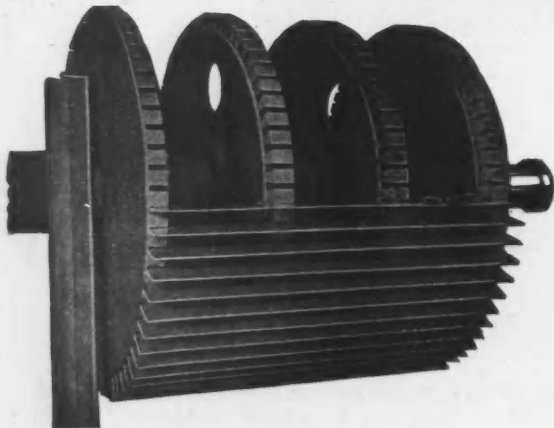


DANDY ROLLS AND
 WATER MARKING

Secure Our
 Prices



We Can
 Please You



Dilts Machine Works, Inc.

Fulton, N. Y., U. S. A.

Manufacturers of

BEATING and WASHING ENGINES
FLY BARS—BED PLATES—
MACHINE KNIVES

Our new KEYED TYPE BANDLESS ROLL is the final result of many Years of Experience.

May we not tell you about its many advantages?

We offer a full line of

COLOURS

and furnish precise directions on application for

Beater Dyeing, Staining and Coating

Half a century's experience enables us to furnish goods answering requirements and to give reliable service

THE HELLER & MERZ CO.

BOSTON CHICAGO NEW YORK PHILADELPHIA SPRINGFIELD, MASS.



KENWOOD MILLS
Albany, N. Y.
Plant

KENWOOD BOARD FELTS

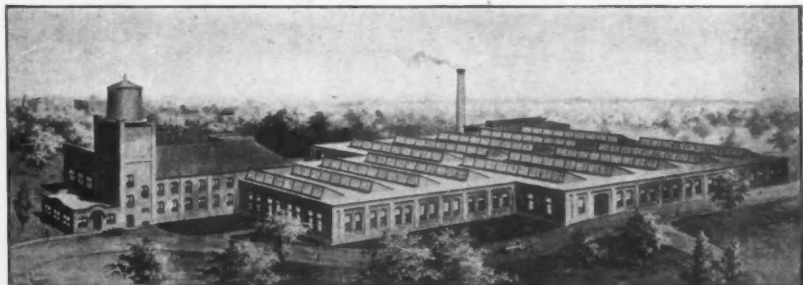
TOP, BOTTOM and PRESS

For HIGHEST production, driest sheet and longest life

Whether the demands of the board market are for finish or for maximum production at low cost, Kenwood Board Felts will give you best results.

F. C. HUYCK & SONS
Kenwood Mills, Albany, N. Y.
Kenwood Mills, Ltd., Arnprior,
Ont., Can.

KENWOOD MILLS, Ltd.
Arnprior, Ontario,
Plant



B. D.

Mackmyra Sulfit Aktiebolag
Bergvik och Ala Nya Aktiebolag
Aktiebolaget Iggesunds Bruk

These Swedish Mills, whom we represent as sole selling agents, are now quoting prices for first open water shipment of 1923.

If you will require Unbleached Sulphite or Kraft Pulp for delivery next spring, permit us to send you our quotations.

EUROPEAN AFFILIATIONS

Aktiebolaget Hugo Hartig
Stockholm - - Hamburg

Sole Selling Agents

BULKLEY DUNTON & COMPANY
75-77 DUANE STREET, NEW YORK

Established 1838

MEMBER OF THE A. B. C.

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTY-FIRST YEAR

PUBLISHED EVERY THURSDAY BY THE

LOCKWOOD TRADE JOURNAL COMPANY, INC.

LESLIE R. PALMER, President

J. W. VAN GORDON, Vice-President

Telephone { 2380 }
 { 2381 }
 { 2382 } Vanderbilt

10 EAST 39TH ST., N. Y., U. S. A.

Cable Address Catchow, New York

Western Publication Office—431 S. Dearborn Street, Chicago
New England Office—Room 46, 127 Federal Street, Boston

Washington Office—L. M. Lamm, 63 Home Life Bldg.
Western New England News Office—Michael Connor, Holyoke
London Office—Stonhill & Gillis, 58 Shoe Lane

THE PAPER TRADE JOURNAL is the pioneer publication in its field, and has for many years been the recognized Organ of the Paper and Pulp Industry. Its circulation is greater than the combined circulation of all other publications in the field. Entered at New York Post Office as second-class mail matter.

Terms of Subscription

UNITED STATES AND MEXICO Per year, \$4; 6 months, \$2; 3 months, \$1
CANADA AND FOREIGN COUNTRIES IN POSTAL UNION Per year, \$6
SINGLE COPIES 10 cents

Other Publications of Lockwood Trade Journal Company, Inc.

AMERICAN STATIONER AND OFFICE OUTFITTER (Weekly) Per year, \$3
LOCKWOOD'S DIRECTORY OF THE PAPER
STATIONERY AND ALLIED TRADES (Annual) } Per copy, \$7

Vol. LXXV. No. 19

NEW YORK AND CHICAGO

Thursday, November 9, 1922

Table of Contents

News of the Trade:

	PAGE
Production of All Paper for September	16
Program for Connecticut Valley Meeting	17
Brisk Demand in Philadelphia Market	18
Strathmore Distributors to Entertain	18
Wilder Bros. Move	18
Tulpehocken Mill in Operation	20
Phil-Fibre Warehouse Burned	20
Printers Visit Riverside Mill	20
H. B. Wadsworth returns from Japan	20
Paper Demand in Toronto Constantly Improving	22
Will Tap New Pulpwood Supplies	22
New Fort William Plant Nearly Ready	22
J. V. Baron Elected Head of Carthage Sulphite Pulp Co.	24
F. L. Moore Goes with U. S. Pulp Products Corp.	24
New York Superintendants to Meet	24
Peshtigo Paper Co. Making Improvements	24
Chicago Paper Men Report General Improvement	26
Moser Paper Co. Reports Business Good	26
Marquardt-Hewitt Corporation Formed	26
Cushnoc and Kennebec Officials Examined	26
Car Shortage Handicaps Paper Mills in Wisconsin	28
Better Coal Supply Insured	28
Thilmany Bag Department Busy	28
F. W. Muir Board Co. to Erect Mill	28
Forest Paper Co. to Reopen Mill	28
Minneapolis Paper Co. in Montana	28
New York Trade Jottings	30
Alaska Welcomes Pulp and Paper Industry	30
Little Insect Killing Minnesota Balsam Trees	30
The German Paper Market	32
Boston Paper Market Active	32
Universal Paper Products Elects Stockholders	32
Disher Paper Co. Moves to New Quarters	32
Bids and Awards for Government Paper	34

	PAGE
Report on Simplification of Page Sizes	36
"McCormick Plan" of Paper Merchandising In Practice	42
Riordon Outlook Improved	52
Big Board Mills at Monroe Busy	54
Trade Marks Department	59
Praise for Text Book Committee	59
Waste Paper in Short Supply	59
Imports of Paper and Paper Stock	60
Exports of Paper and Paper Stock	64
Imports and Exports of Paper and Paper Stock	68

Editorial:

Export Paper Statistics	44
For a Paper Industries Exposition	44

Technical Section:

Discussion on Waste In the Industry at Fall Meeting of T. A. P. P. I.	47
Waste in Pulp and Paper Industry	51
Strong, Quick Cook, Hemlock Sulphite	53
Odorless Manufacture of Chemical Pulp	54
Current Paper Trade Literature	55
Rice Straw as a Papermaking Material	55
The Use of Lime in the Sulphite Pulp Industry	55
Average Tearing Strength of Commercial Papers	56
Behavior of Oxidized Cellulose	56
Mill Costs from a Technical Man's Standpoint	57
Fourdrinier Wire Tension	57

Market Review:

N. Y. Market Review	66
Market Quotations	67
Miscellaneous Markets	70

Want and For Sale Advertisements, Pages 72 and 73

PRODUCTION OF ALL PAPERS FOR THE MONTH OF SEPTEMBER

According to Figures Just Issued by the Federal Trade Commission Mill Stocks of News Print at the End of the Month Equaled Four Days' Average Output, of Book Paper Thirteen Days' Average Output, of Paperboard Nine Days' Average Output, of Wrapping Paper Twenty-three Days' Average Output and of Bag Paper Seven Days' Average Output—Stocks of Other Paper.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 6, 1922.—The attached tabulation is a summary of production, shipments, and stocks of paper mills in the United States, as reported to the Federal Trade Commission, for the month of September, 1922. This summary is compared with the month of September, 1918 to 1921, inclusive.

The average production for all grades, except boxboard, is based upon the production for the years 1917 to 1921, inclusive, and the average stocks are based upon the stocks carried for the years 1918 to 1921, inclusive.

Figures for boxboard prior to March, 1920, were included in paperboard. The average production and stocks for boxboard are based upon the figures tabulated during the period March, 1920, to December 31, 1921.

The production has been classified for convenience into 12 grades, according to the grades of paper manufactured by the reporting mills. Some mills making several grades appear in more than one group which causes duplication in the body of the tonnage tables in the number of mills.

For each grade the number of mills includes all mills commonly operating on that grade, regardless of whether they produced any tonnage of that particular grade during the month. In other words, it includes all mills reporting either production or merely stocks or shipments of that grade.

The stocks of paper carried by different mills depend not only upon the condition of the market but also upon the kind of paper made, trade customs, etc.

Tonnage Summary

Production, shipments and stocks of paper, by grades, for the month of September, 1922, compared with September, 1921, 1920, 1919, and 1918, together with average production and stocks.

Grade	Number of mills	Stocks on hand first of month Net tons	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
News Print (Standard and Special Grades of News):					
September, 1922	83	19,802	125,402	126,494	18,810
September, 1921	86	27,128	98,898	95,785	30,241
September, 1920	81	24,711	121,005	121,123	24,593
September, 1919	74	25,584	111,434	118,687	18,331
September, 1918	63	21,673	95,670	97,020	20,323
Average	..	..	110,000	..	25,307
Standard News (Included in News Print):					
September, 1922	68	16,017	115,899	117,229	14,687
September, 1921	67	22,728	90,627	88,114	25,241
September, 1920	67	21,937	110,200	110,333	21,804
September, 1919	54	21,383	97,702	104,742	14,343
September, 1918	50	16,507	85,661	86,515	15,653
Average	..	..	99,700	..	20,900
Book (M. F., S. S. C. and Coated):					
September, 1922	92	37,473	87,782	88,538	36,717
September, 1921	89	35,160	62,416	61,990	35,586
September, 1920	95	22,686	94,142	95,704	21,124
September, 1919	88	32,978	81,024	85,727	28,275
September, 1918	89	29,548	65,751	65,850	29,449
Average	..	..	73,325	..	30,305
Paperboard—Total (Straw, Fiber, Leather, Chip, Box, Etc.):					
September, 1922	227	59,627	198,248	199,976	57,899
September, 1921	226	62,276	160,207	164,521	58,962
September, 1920	253	38,305	218,743	218,799	38,249
September, 1919	259	52,864	184,897	186,659	51,102
September, 1918	237	39,175	161,775	160,102	40,848
Average	..	..	157,850	..	49,989

Boxboard (Included in Paperboard):					
September, 1922	129	27,362	143,998	144,286	27,074
September, 1921	136	32,160	120,898	121,271	31,787
September, 1920	152	17,368	160,044	159,952	17,460
Average	..	..	111,425	..	26,048
Wrapping (Kraft, Manila, Fiber, Etc.):					
September, 1922	150	62,444	70,329	77,930	54,843
September, 1921	139	62,811	59,095	65,593	56,313
September, 1920	149	23,341	70,917	74,688	18,570
September, 1919	155	51,675	63,353	70,816	44,212
September, 1918	155	33,354	58,891	58,357	33,888
Average	..	..	59,150	..	43,482
Bag (All Kinds):					
September, 1922	48	3,805	19,424	19,764	3,465
September, 1921	43	2,885	13,763	13,634	3,014
September, 1920	40	2,192	18,850	19,027	2,015
September, 1919	45	2,806	19,115	18,905	4,016
September, 1918	40	3,411	15,266	15,186	3,491
Average	..	..	13,275	..	3,362
Fine (Writing, Bonds, Ledgers, Etc.):					
September, 1922	105	37,889	31,576	33,252	36,213
September, 1921	106	37,903	20,555	22,464	35,994
September, 1920	111	27,127	34,207	32,934	28,400
September, 1919	108	36,871	31,923	33,447	35,347
September, 1918	98	27,810	31,607	30,153	29,264
Average	..	..	26,675	..	33,192
Tissue (Toilet, Crepe, Fruit Wrappers, Etc.):					
September, 1922	98	8,451	17,485	18,197	7,739
September, 1921	90	7,451	14,241	14,465	7,227
September, 1920	99	5,237	16,359	15,963	5,633
September, 1919	91	7,170	14,845	15,323	6,692
September, 1918	85	4,715	11,998	11,798	4,915
Average	..	..	12,275	..	6,737
Hanging (No. 2 Blank, Oatmeal, Tile, Etc.):					
September, 1922	28	6,105	7,375	8,108	5,372
September, 1921	23	9,668	5,482	4,933	10,217
September, 1920	25	1,510	10,124	10,254	1,280
September, 1919	22	6,549	7,869	8,864	5,554
September, 1918	20	2,648	5,996	6,346	2,298
Average	..	..	6,950	..	4,693
Felts and Building (Roofing, Sheathing, Etc.):					
September, 1922	48	8,559	39,551	40,200	7,910
September, 1921	44	8,954	27,130	28,306	7,778
September, 1920	53	11,119	31,430	31,794	10,755
September, 1919	52	6,851	31,158	30,018	7,991
September, 1918	49	8,729	22,394	22,775	8,348
Average	..	..	25,025	..	8,853
Other Grades (Specialties Not Otherwise Classified):					
September, 1922	105	20,225	25,916	25,593	20,548
September, 1921	96	18,773	16,139	17,437	17,475
September, 1920	94	14,389	27,241	28,009	13,621
September, 1919	83	15,615	19,972	17,899	17,688
September, 1918	66	9,749	21,860	20,825	10,784
Average	..	..	19,650	..	14,466
Total—All Grades:					
September, 1922	..	264,480	623,088	638,052	249,516
September, 1921	..	274,009	477,926	489,128	272,807
September, 1920	..	170,617	643,018	648,295	165,340
September, 1919	..	239,963	565,590	586,345	219,208
September, 1918	..	180,812	491,208	488,412	183,608
Average	..	..	504,175	..	220,386

The following stocks were reported on hand at terminal and delivery points on September 30, in addition to the mill stocks shown in the tabulation: News print, 510 tons; book paper, 2,728 tons; fine, 204 tons; wrapping, 10 tons; and "other grades," 284 tons; totaling, 3,736 tons.

Stocks of all grades excepting "other grades" decreased during the month. Stocks of all grades reported by manufacturers at the end of September amounted to 253,252 tons, including the stocks at terminal and delivery points. In addition to these stocks, jobbers and publishers reported news print stocks and tonnage in transit aggregating 242,113 tons.

Ratio of Stocks to Average Production

Comparing the stocks on hand at the domestic mills on September 30, with their average daily production, based upon the combined production for 1918 to 1921, inclusive, the figures show that:

- News print paper mill stocks equal 4 days' average output.
- Book paper mill stocks equal 13 days' average output.
- Paperboard mill stocks equal 9 days' average output.
- Wrapping paper mill stocks equal 23 days' average output.
- Bag paper mill stocks equal 7 days' average output.
- Fine paper mill stocks equal 34 days' average output.
- Tissue paper mill stocks equal 16 days' average output.
- Hanging paper mill stocks equal 19 days' average output.

Felts and building paper mill stocks equal 8 days' average output. Miscellaneous paper mill stocks equal 26 days' average output. Total paper mill stocks of all grades equal about 12 days' average output.

Imports and Exports

The imports and exports of all grades of paper for August, 1922, compared with August, 1921, as shown by the records of the Department of Commerce, were as follows:

	August, 1922		August, 1921	
	Pounds	Value	Pounds	Value
Imports:				
News print	163,559,854	\$5,866,289	148,442,772	\$6,707,612
Book paper	214,743	16,396	10,971	4,782
Wrapping	3,600,895	155,401	980,620	40,187
Hanging		83,013		21,493
All other grades (a)		251,012		249,403
Exports:				
News print	3,878,867	181,077	2,521,143	144,784
Book paper	2,696,048	246,578	1,991,070	205,838
Paperboard		286,810		105,767
Wrapping	2,165,606	160,049	2,116,299	139,112
Bag		79,176		44,089
Fine		173,899		146,519
Tissue		141,605		88,973
Hanging		25,642		12,286
All other grades (a)		382,922		394,282
Total imports		6,372,111		7,023,477
Total exports		1,677,758		1,281,650

(a) Includes some paper already converted into commercial articles.

News print is the only grade of which the United States is a heavy importer. The bulk of this tonnage is imported from Canada.

The value of the exports of news print for August, 1922, was about 3 per cent of the imports.

The value of the total imports of all grades was about 3 per cent more than for July.

The value of the total exports for August, 1922, was less than the imports by \$4,694,353 and was \$396,108 more than the exports for August, 1921.

News print, book, paperboard, fine and wrapping were the principal grades exported as to value.

Loss of Production

The idle machine time reported to the Commission for September, 1922, is shown by grades in the attached tabulation.

The number of machines includes only those machines for which

idle time was reported during the month. It does not include the machines in 32 mills that were closed down completely for the month.

The total number of machines may include duplications because the reports may count the same machine twice, if idle for different reasons during different parts of the month, or if idle part of the time on one grade and part of the time on another.

The reasons tabulated for lost time are "lack of orders" and "repairs." "Other reasons" include "lack of material," "lack of water power," etc.

The time lost in September, 1921, is given by grades and reasons, for purposes of comparison.

Program for Connecticut Valley Meeting

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 6, 1922.—The program for the first meeting of the Connecticut Valley Division of the American Pulp and Paper Mill Superintendents' Association at the Hotel Nonotuck, Saturday, November 18, has been arranged as follows:

FORENOON SESSION

- 9:00—Registration.
- 10:00—Address of welcome.
- 10:30—Address on Association work, by Ed. T. A. Coughlin, technical director, Allied Paper Mills, Kalamazoo.
- 11:00—Election of officers.
- 12:00—Buffet luncheon at Hotel Nonotuck.

AFTERNOON SESSION

- 1:00—"Mill Management Problems," Robert Wolf, R. B. Wolf Company, New York City; "Curling of Paper," H. H. Hackett, Eastern Manufacturing Company, South Brewer, Me.; "Co-ordination of Expense Items in Preparing Departmental Budgets," J. A. Reilly, American Writing Paper Company, Holyoke, Mass.; "Economics of Lighting in Pulp and Paper Mills," J. H. Kurlander, Edison Lamp Works, Harrison, N. J.
- 4:00-6:00—Inspection trips and auto rides.

EVENING SESSION

Banquet at 7:30. Toastmaster, John J. White, treasurer and manager of the Whitmore Manufacturing Company, Holyoke, Mass.

Loss of Production

MONTH OF SEPTEMBER, 1922 (WITH SEPTEMBER, 1921, FOR COMPARISON)

	Lack of Orders		Repairs		Other reasons		Total	
	1922	1921	1922	1921	1922	1921	1922	1921
News Print:								
Number of machines	10	12	6	6	6	13	22	31
Total hours idle	1,106	2,334	204	1,111	512	2,099	1,822	5,544
Book Paper:								
Number of machines	27	155	17	4	22	24	66	183
Total hours idle	1,189	23,836	385	351	292	3,369	1,866	27,556
Paperboard:								
Number of machines	80	117	48	31	76	80	204	228
Total hours idle	12,540	25,934	5,409	2,664	11,372	19,825	29,321	48,423
Wrapping:								
Number of machines	10	65	21	20	21	28	52	113
Total hours idle	1,297	11,455	1,324	2,592	2,073	3,803	4,694	17,850
Bag:								
Number of machines	5	9	4	4	5	13	14	26
Total hours idle	692	1,245	314	265	608	1,489	1,614	2,999
Fine:								
Number of machines	65	112	52	6	30	59	147	177
Total hours idle	8,407	21,906	6,205	863	1,211	12,492	15,823	35,261
Tissue:								
Number of machines	7	34	32	44	20	24	59	102
Total hours idle	1,398	4,230	2,224	4,932	1,032	3,793	4,654	12,955
Hanging:								
Number of machines	0	8	5	0	1	4	6	12
Total hours idle	0	2,337	1,405	0	94	330	1,499	2,667
Felts and Building:								
Number of machines	13	19	10	10	7	9	30	38
Total hours idle	1,689	2,428	1,366	845	222	1,125	3,277	4,398
Other Grades:								
Number of machines	19	48	25	7	15	26	59	81
Total hours idle	1,731	9,080	1,467	544	2,251	4,014	5,449	13,638
Total number of machines	236	579	220	132	203	260	659	991
Total hours idle	30,049	104,785	20,303	14,167	19,667	52,339	70,019	171,291

DEMAND FOR PAPER BRISK IN PHILADELPHIA MARKET

Prices Are Exceedingly Firm and in Many Cases Mills Continue to Take Future Business Only on the Basis of Price to Be Fixed at Time of Shipment—Federal Reserve Bank Statement Reports an Excellent Request for All Grades of Paper—Strathmore Distributors Arrange for Meeting Monday Evening, November 13, at the Hotel Adelpia—Wilder Bros. Move.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, November 7, 1922.—The week's mill price-list showed practically no variations from that of the preceding period, the few changes reported being more in the nature of readjustments than of actual change in value. All prices are exceedingly firm, and in many cases the mills continue to take future business only on the basis of price to be fixed at the time of shipment. The rather anomalous condition of a brisk paper market and of a paper stock market inclined to be draggy continues, but the packers ascribe this apparently contradictory condition of affairs not so much to mercantile conditions as to embarrassed traffic conditions. Because of the interference with freight, the circle of distribution, particularly of the cheap grades of stock, has been restricted and since there is more than sufficient material coming in to the warehouses than is required for immediate local consumption or for points which can be reached by the increasingly popular auto-truck delivery, there was, to some extent, a congestion of stock with the consequent weakening of prices, and although these did not reach the point where a change in quotations can be made the market tended rather to inside than to the outside rates.

Federal Reserve Bank Report

In its diagnosis of conditions in the paper trade, under date of November 1, the Federal Reserve Bank for the third or Philadelphia district says:

"All grades of paper are in excellent request and reports from mills and wholesalers alike show an even better demand than prevailed last month. The improvement in the trade since October, 1921, is most encouraging. Nearly all the mills in this district are operating at capacity on orders for immediate delivery, and in general, manufacturers are refusing orders for future delivery except at prices prevailing on the date of shipment. Wholesalers have noticed a tendency on the part of their customers to anticipate their needs for a longer period and since September orders for future delivery have been more frequent. Moreover, orders are larger than they have been for many months, prices for finished papers of all grades continue their upward movement, and are now about 10 per cent higher than they were on August 31. Stocks at mills are reported as decreasing and are, on the whole, light. Stocks of raw materials are from light to normal, but no mills except those that utilize waste paper report any difficulty in securing them at the new prices. Wholesalers' stocks also are decreasing in some lines, but in most cases this is due to inability to secure prompt delivery from the mill. Many manufacturers are behind in their shipments and freight embargoes on most of the railroads have added to mill delays, so that not infrequently the wholesaler must wait from four to six weeks for his goods to arrive. Transportation delays are reported by mills only on their outbound shipments. Reports on collections vary."

Strathmore Distributors to Entertain

An advance announcement of the purpose of the five distributors of Strathmore papers to entertain at luncheon and at instructive and inspirational educational meetings representative converters of

paper was sent out during the week along the lines forecast in these columns the week before. The announcement of the week sets forth that a Strathmore meeting is to be held on Monday evening, November 13, at 7:30 o'clock, a later announcement to give news of the place. Since the announcement, however, the committee in charge definitely has decided upon the Hotel Adelpia. It is expected that there will be in attendance several hundred printers and publishers, engravers, stationers, electrotypers, lithographers, advertising agency representatives, layout men and commercial artists. Col. B. A. Franklin, vice-president of the Strathmore Paper Company, will talk on "Making a Profit," and C. W. Dearden, sales promotion manager of the Strathmore company, will speak on "Using Mill Advertising." A master printer whose name is shortly to be announced will be the third speaker. A buffet luncheon will be served directly after the meeting and opportunity will be given for an informative observation of the many specimens of printed matter which are to be exhibited. The Strathmore company will bring to the meeting the very remarkable collection of printed matter shown at the recent convention of the Direct By Mail Advertising Association and this is to be supplemented by a very large number of specimens secured from Philadelphia master printers through the activities of the five Philadelphia Strathmore distributors, the Charles Beck Company, A. Hartung & Co., Inc., The Paper House of Pennsylvania, the Thomas W. Price Company and the Raymond & McNutt Company. Representatives of all these concerns are actively engaged in forwarding the collection of these specimens. Richard Hartung and Leon Beck are looking after the exhibits particularly, John Franz and J. B. Tuttle, of the Hartung and Price companies, respectively, are in charge of the luncheon arrangements, and Raymond J. Considine, of The Paper House of Pennsylvania, and Leonard Raymond, of the Raymond & McNutt Company, have immediate charge of the invitations and program. A meeting to perfect the final arrangements will be held later in the week. The present get-together meeting had its inspiration in the very noteworthy gathering which assembled in January last in the Bellevue-Stratford and which was followed by such good results to all concerned that a repetition now and perhaps annually hereafter was decided upon.

Wilder Bros. Move

During the week the entire business of Wilder Brothers was removed to the new headquarters in the large six-story building which the firm recently purchased and located on the southwest corner of Twelfth and Brown streets. Announcements have been sent out to the trade setting forth the new location and giving the telephone numbers of the Bell Poplar 8991, 8992 and the Keystone phone as Park 5471 and 5472. The firm will occupy the large first floor and basement of the building, having subleased the remaining five upper stories. Splendid shipping facilities have been provided, with three street platforms in use, and giving a frontage of 125 feet on Twelfth street, 118 on Brown street and 143 on Olive street. Twenty thousand square feet of floor space is provided for warehousing and executive offices on the first floor. A full line of coarse papers, in addition to a line of specialty papers, useful for leather goods and textile trade, commercial sheet tissue, twine, pattern paper and toiles, are to be carried and these will be enlarged upon by the addition of new lines and larger stocks. Later it is proposed to carry a line of fine papers. Wilder Brothers was established over nine years ago by the present proprietors, C. A. and I. J. Wilder, the original building being located at 30 Strawberry street. The old quarters from which the firm removed during the last week at 148 North Fifth street were occupied for the past five years.

Campaign of American Writing Paper Co.

The beginning of participation by the Typothetae of Philadelphia in the very comprehensive paper and printing consumption campaign of the American Writing Paper Company through its service

(Continued on page 20)

We Still Have a Limited Quantity Unsold

HUSUM KRAFT

For Prompt or
Future Shipment



Write or Wire Us
for Samples and
Quotations

A. J. PAGEL & CO., Inc.

Sole Agents

347 Madison Avenue

New York City

DEMAND FOR PAPER BRISK IN PHILADELPHIA MARKET

(Continued from page 18)

department, of which Joseph A. Borden is head, will be made during the coming week. F. D. Rotellini, who recently joined the Philadelphia branch office in the Bourse, taking charge of the local service department, is co-operating with the Typothetae by personally visiting the master printers and of securing their petition for the receipt of the series of 24 booklet issued by the company. The American Writing Paper Company will supply sufficient copies with the imprint of the Typothetae of Philadelphia and it will attend to their distribution among the master printers. Each of the booklets is designed to open up new channels for the consumption of paper as printed matter and to suggest to the master printer how they may, in the interests of their customers, develop new lines of opportunity. Some time ago Chief Borden appeared before the Typothetae and gave them an exposition of the whole comprehensive plan, which includes, in addition to the 24 booklets specifically addressed to the master printers, a like number appealing to the salesmen of printed matter and to the buyers of printing, but though the Typothetae gave hearty approval to the plan it decided that it was not in a position at that time to enter completely into the project. However, a beginning, in a limited way, is to be made immediately and in the hereafter it may be amplified.

Tulpehocken Mill Put in Operation

During the week the Tulpehocken mill of the Reading Paper Mills Company, of Reading, Pa., with Philadelphia headquarters in the Merchants' and Mariners' Building, at Third and Chestnut streets, were put into operation, after having been closed for over a year. The mills, devoted to the manufacture of rope papers, have been entirely remodeled, new machinery installed, and in first-class condition, are now running on full time. The other mill connected with the Reading Paper Mills, the Packarack and the Reading mill, are running to full capacity in the manufacture of high-grade rag book paper. With the reopening of the Tulpehocken mill, all branches are now in full operation.

Phil-Fibre Warehouse Burned

Fire starting on the upper floor completely gutted the two-story warehouse of the Phil-Fibre Box Board Mills, Inc., manufacturers of paper and cardboard at Wharton Lane and Swanson street late on Saturday night. Thirty employees who were at work in the assorting room when the fire broke out were warned by a railroad man who saw the flame shooting through the roof from the yards in the rear of the building and escaped without injury. The plant covers a wide area extending from Wharton Lane to Tasker street and from Swanson street to Meadow and was of brick construction with exception of some wood beams supporting the roof. Firemen from all central city companies responded to the call of alarm, but were handicapped by the necessity of running lines over the railroad tracks and the bursting of a hose, compelling the assistance of three fireboats to the scene and in addition four locomotives aided in pumping water. The owners of the plant, David Newman and Chester F. Simmons arrived on the scene while the fire was raging, but were unable to account for its origin or to estimate the damage it caused.

Printers Visit Riverside Mill

One hundred and fifty members of the Philadelphia Club of Printing House Craftsmen on Saturday afternoon visited the Riverside mill of the W. C. Hamilton & Sons Company at Miquon on the Schuylkill River, just above Philadelphia, journeyed through every part of this establishment and had papermaking processes described by executives of the company and by several members of the sales organization of the Charles Beck Paper Company, which arranged the mill inspection trip. All the visitors were supplied

with the descriptive volume, telling the story in word and picture of these mills, widely known in the trade as a model of cleanliness.

General News of the Trade

President Norbert A. Considine, of The Paper House of Pennsylvania, returned during the week from his southern trip, from a land which he says is bustling with prosperity because of the high price of cotton, the tariff on sugar and other economic factors which have been beneficial to industry. He found its paper demand for import news print really larger than present stocks on hand made possible of fulfillment. Overflowing of the storage tank on the roof of the paper house caused slight damage during the week to printing and photo-engraving firms which are tenants of the upper floor, but the stock of paper escaped all damage.

E. Latimer, Jr., Fourth and Cherry street, left the city during the week for a two weeks' vacation in the South.

It was inadvertently stated last week in connection with an item regarding H. W. Taylor of the Dill & Collins Company that he was the sales manager of the company, whereas, W. H. Lloyd has been the sales manager since January 1, 1922 and Mr. Taylor is vice-president of the company.

Mr. Wilson Speaks on Aeroplanes in Forestry

MONTREAL, Que., November 6, 1922.—Ellwood Wilson, chief forester of the Laurentide Company, in an address before the Rotary Club in Montreal, said that the use of aeroplanes in forestry had increased knowledge of the forest resources vastly, and shown that they were much more restricted than had been formerly thought. The timber limit was far south of James Bay, farther north in British Columbia, and further south toward Labrador, so the popular idea that all the vacant northern land was a vast forest was all wrong. From the best data he could secure the timber supply of Quebec Province was about 300,000,000 cords, with the annual consumption of about 1,500,000 cords. But it did not work out in practice that all this was available in rotation, since much of it was too remote, and even useless, through swamp, or fires, and the incursions of colonization or destruction by Indians and prospectors. Mr. Wilson's main advice was to cease mining the forests as though there was no end to them, to crop them regularly at 75 year intervals, so as to permit of new growth, to apply proper afforestation methods for this, and above all to guard the timber lands against fires.

H. B. Wadsworth Returns from Japan

H. B. Wadsworth, 51 East Forty-second street, New York, formerly the New York representative of the Meishosha Company, Limited, of Japan, returned on October 28 from a successful trip to Japan.

During his three months' stay there he visited nearly all of the principal paper mills and due to the heavy demand for news print found them to be in a very prosperous condition. While there Mr. Wadsworth secured a substantial amount of orders for paper mill supplies.

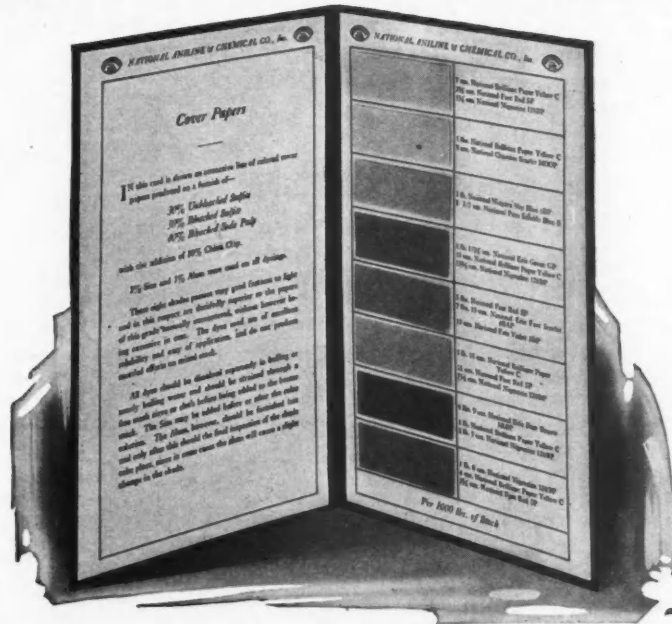
The New York end of the business will be conducted solely by Mr. Wadsworth under a new arrangement which he has concluded with one of the largest importing firms in Japan.

He reports that business in general is rather quiet in the Far East, but that there is every indication that there will be a decided improvement in 1923.

Mr. Wadsworth is being congratulated by his many friends in the trade upon the arrival of a nine-pound daughter, born October 25.



Dyes for Cover Papers



SPECIAL color cards are an important item of "National" service to Paper Mills. The one illustrated above will interest the cover paper manufacturer because it gives in concentrated form the result of years of experience and research in dyeing this grade of stock.

This new color card shows eight attractive shades.

Formulæ are given for producing each shade on a furnish of

- 30% Unbleached Sulfite
- 30% Bleached Sulfite
- 40% Bleached Soda Pulp

with the addition of 10% China Clay.

The result is a line of cover papers in the popular shades unusually fast to light without being excessive in cost for dyestuff. The dyes used are of excellent solubility and easy of application and do not produce mottled effects on mixed stock.

Other special paper cards are in preparation and will be announced as issued. Meanwhile our Paper Experts will be glad to consult with you on your coloring problems.

National Aniline and Chemical Company, Inc.

40 RECTOR STREET, NEW YORK, N. Y.

New York
Boston

Chicago
Hartford

Charlotte
Montreal

Toronto
Providence

Philadelphia
San Francisco

PAPER OUTLOOK IN TORONTO IS CONSTANTLY IMPROVING.

Orders Are Coming in in Larger Numbers and Mills Are Running to Full Capacity—New News Print Plant of the Fort William Paper Co. Is Rapidly Being Gotten Ready for Operation—City of Port Arthur Loses Suit Against the Kaministiquia Paper and Pulp Co.—Temiskaming and Northern Ontario Railway to Tap New Pulpwood Limits—John F. Ellis Observes Seventy-Seventh Birthday.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 6, 1922.—Business in the paper line continues good and the outlook is getting better all the time. Orders are coming in in larger numbers and collections are improving. Mills are now running to capacity and it is believed that trade, so far as prices are concerned, is stabilized, at least, until the first of the year. The tone in conditions governing all grades of paper is firmer than it has been for months. In the rag and paper stock market there is a scarcity of supplies in most lines and dealers are vying with one another in advertising for waste of all kinds. Prices in most instances are attractive. The demand from consuming mills for cotton cuttings is holding up pretty well, but they refuse to increase the prices on any of the grades. Manufacturing stationers are very busy and envelope makers are rushed to meet the holiday requisitions. Book and writing plants report that they have all the orders in hand that they can attend to. News print continues strong and firmness characterizes the pulp market.

Will Tap New Pulpwood Supplies

The Temiskaming and Northern Ontario Railway, which is owned and operated by the Ontario Government, has, despite the temporary losses caused by forest fires, earned \$350,000 during the last fiscal year. There have been heavy shipments of pulpwood. Construction work on the James Bay extension of the railway is progressing. Already 75 miles of the roadbed is under construction and it is expected that the contract for the remaining 95 miles will be let early next year. The extension will tap a new country rich in pulpwood of all kinds.

City Loses Against Paper Co.

Justice Latchford, of Toronto, has dismissed the appeal made by the city of Port Arthur and the Parks Board of that city against a decision of the local master at Port Arthur in July last. The latter disallowed the citizens' claim of \$18,895 for power held in reserve for the Kaministiquia Paper and Pulp Company during thirteen months subsequent to March, 1921. Justice Latchford stated that the only witness called by the Utilities Commission had not said a word to show that the power had been held in reserve and, as no lien was permitted for power held in reserve, it was useless to proceed with the evidence. The local master at Port Arthur had found the city entitled to some \$10,000 for power actually supplied.

New Fort William Plant Nearly Ready

At the weekly luncheon of the Fort William-Port Arthur Kiwanis Club held last week an instructive address was delivered by G. M. Dickson, of the Fort William Paper Company, on the manufacture of pulp and paper, illustrated by diagrams. The new news print plant of the Fort William Company will soon be in operation and the output will be about 150 tons daily. The work of installing the paper machines is progressing favorably, and the record of construction has been one of the quickest in any similar undertaking in Canada.

Veteran Paper Man's Birthday

The many friends of John F. Ellis, of Toronto, honorary president of the Canadian Paper Trade Association, this week extended

congratulations to him on the observance of his seventy-seventh birthday. Mr. Ellis is still in good health and down to business every day in the splendid new warehouse of his company on Adelaide street, West, at the corner of Spadina avenue. He has been a member of the firm of Barber-Ellis, Limited, since 1876, his partner, the late John R. Barber, passing away a few years ago, since when Mr. Ellis has been president of the organization. It is one of the largest manufacturing stationery and envelope houses in the Dominion, with branches in Winnipeg, Calgary and Vancouver. The firm has envelope factories in Brantford and Winnipeg. Mr. Ellis is a former president and for many years was treasurer of the Canadian Manufacturers' Association. He is also a former president of the Toronto Board of Trade and the Canadian Paper Trade Association and was one of the founders of the Commercial Travelers' Association. For many years Mr. Ellis has been one of Toronto's most progressive and public-spirited business men.

Popular Paper Representative

Douglas J. Brown, who has charge of the Hamilton office of the Wilkinson Paper Company, Toronto, was tendered a complimentary dinner recently by the directors and staff of the organization. Mr. Brown was presented with a handsome clock from his associates, together with a check from the firm on the occasion of his recent marriage. Mr. and Mrs. Brown have taken up their residence in Hamilton.

Notes and Jottings of the Trade

T. J. Allen, vice-president of Paper Sales, Limited, Toronto, has returned from a holiday spent in the Kawartha Lakes district.

P. L. Colbert, vice-president of the Valleyfield Coated Paper Company, Valleyfield, Que., and formerly of Toronto, was in the city last week, calling on his many old friends in the trade.

I. H. Weldon and S. F. Duncan, of the Provincial Paper Mills Company, Toronto; John Martin, of Winnipeg, former president of the Canadian Paper Trade Association, and A. G. Pounsford, general manager of the Port Arthur Division of the Provincial Paper Mills Company, have returned from a successful moose and partidge hunting expedition in the neighborhood of Port Arthur.

William Braby, secretary of Wilson-Munroe Company, wholesale paper dealer, Toronto, has returned from an extended visit to his old home in Edinburgh, Scotland. He reports that business in the paper line in the Old Country is fair, but that the export trade is better with Australia than it is with Canada.

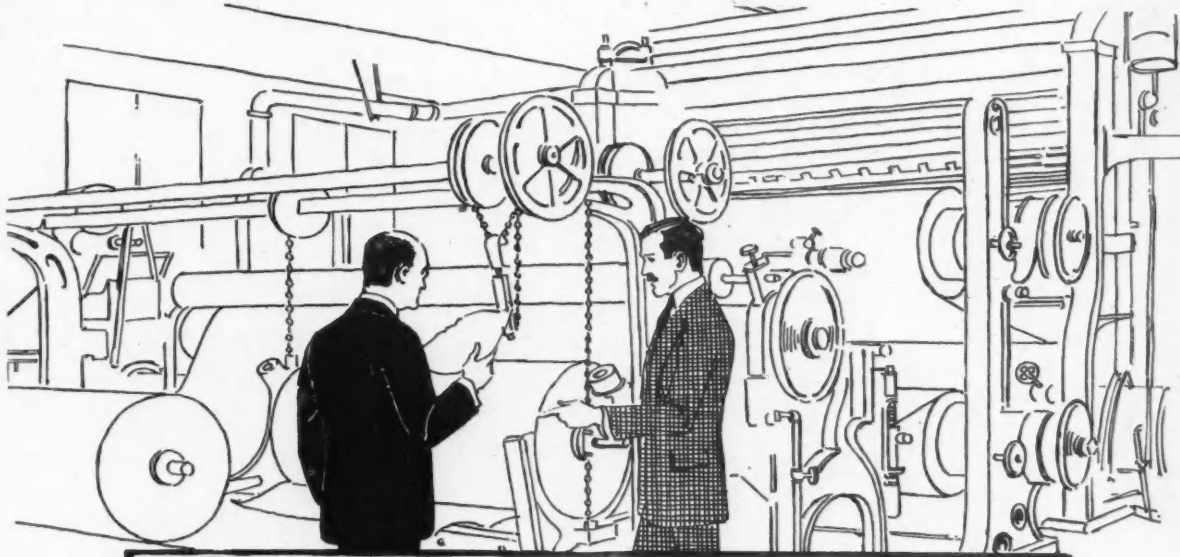
Warwick Brothers & Rutter, manufacturing stationers, Toronto, are very busy with orders for the forthcoming holiday season, and have recently made several shipments of high-grade papers to various cities in South America.

A provincial charter has been granted to the E. Evans Company, Limited, Toronto, with an authorized capital of \$40,000, to deal in paper and paper novelties.

The Wilkinson Paper Company, Limited, has removed from 76 Bay street, Toronto, to larger premises at 63-71 Wellington street, West, where an entire flat is occupied.

The United Carbon Paper Manufacturing Company, Limited, with an authorized capital of \$50,000 and headquarters in Toronto, has been granted a provincial charter to manufacture and deal in carbon papers, typewriter ribbons and stationery supplies.

A charter has been granted to the Transcontinental Paper Company, Limited, to carry on business as manufacturer, dealer and exporter of logs, lumber, timber, pulp, pulpwood and paper and by-products. The capital stock of the company is \$5,000,000 and the head office is in Toronto. It is understood that this company supercedes the Transcontinental Development Company, Limited, which was formed in June, 1921, with headquarters at 85 Bay street, Toronto, care of Tilley, Johnston, Thomson & Parmenter. Over a year ago, the company was awarded the pulpwood concession on the Nagagami River. One of the conditions of the agreement entered into was that the purchasers were to erect a pulp mill and carry out certain other stipulations.



One Way To Overcome Trouble

Rag writings, bonds and ledgers, rope manilas and similar grades of paper present screening difficulties which require special treatment, if trouble is to be avoided.

Our recommendation is to install a

WALPOLE SCREEN

The WALPOLE SCREEN is especially designed for screening long-fibred, slow-working stocks. It maintains continuous production without breaks or shut-downs for washing up. The quality of the stock is uniform because only clean stock is discharged.

Perhaps you will be interested in learning how other mills have overcome their screening difficulties.

BIRD MACHINE COMPANY

SOUTH WALPOLE,

MASSACHUSETTS

Western Representative:
T. H. Savery, Jr., 1718 Republic Bldg.,
Chicago, Ill.

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

THE WALPOLE SCREEN

J. V. BARON ELECTED HEAD OF CARTHAGE SULPHITE PULP CO.

Dr. David S. Balmat, Vice-President and Active Head of the Company Since the Death of James A. Outterson, Resigns After Selling His Entire Holding in the Concern—P. H. Moran, a Paper Maker of Broad Experience, Is Appointed General Superintendent of the Plant—F. L. Moore Is Made President and General Manager of the United States Pulp Products Corporation of Newark, N. Y.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., November 6, 1922.—J. V. Baron, vice-president and general manager of the Sherman Paper Company, was last Thursday elected president of the Carthage Sulphite Pulp and Paper Company to fill the vacancy caused by the death some time ago of James A. Outterson. At the same meeting of directors held in this city, Dr. David S. Balmat, vice-president and active head since the death of Mr. Outterson, tendered his resignation after having sold his entire holdings in the company. Mr. Baron purchased an interest in the company and was elected to the board of directors to succeed Dr. Balmat who announces his intentions of becoming connected with another paper company.

Guy C. Jones was re-elected secretary and treasurer, Lyman Rhodes, vice president of the Equitable Trust Company of New York, was named vice president to succeed Dr. Balmat, and P. H. Moran, a paper maker of broad experience, was selected as general superintendent of the mill.

The new board of directors elected by the stockholders Thursday are: J. V. Baron, Lyman Rhodes, John G. Jackson who is a member of the legal firm of Taylor, Jackson, Brophy & Nash of New York and former legal advisor to the late James A. Outterson, Edward S. Robinette of Stroud & Co., bond dealers of Philadelphia, Pa., and I. Wood DeCant of Carthage.

Mr. Baron and Mr. Moran promptly took up their duties and went to the plant to make arrangements for the management of the mill. The general policy of the company will be continued, although it is said that news print may be made the grade of paper turned out. Wrapping paper is now being manufactured.

President Baron is recognized as one of the leading paper manufacturers in Northern New York. He began the business with the St. Regis Paper Company years ago before the present big mill was built at Deferiet. He was promoted until in 1910 he was made assistant general manager under George C. Sherman as president and D. M. Anderson as general manager. When Mr. Sherman left the St. Regis Mr. Baron went with him as secretary and treasurer of Taggart's Paper Company and a director and stockholder in the concern, which is now the Sherman Paper Company. Upon the death of Mr. Sherman the directors elected Mr. Baron vice president and general manager.

P. H. Moran was night superintendent at the Deferiet mill 20 years ago when Mr. Baron was assistant general manager. He was superintendent of the Herrings mill later after the F. L. Carlisle interests had taken over the St. Regis Paper Company. He started his paper mill activities with the Kimberly-Clarke Company of Neenah, Wis., working at Appleton and Kimberly for 10 years. He then went to Johnsonburg, Pa., as night superintendent of the mill of the New York and Pennsylvania Paper Company. From there he came to the St. Regis Paper Company, then he went to the Oxford Paper Company of Rumford Falls, Maine and later to the Hammerhill Paper Company at Erie, Pa. He became assistant superintendent of the York Haven Paper Company, and later came to Watertown as superintendent of the Cylinder Paper Company now owned by the Hinde & Dauche Company. He was later

at the Herrings plant of the St. Regis, then became manager of the United Paper Board Company, and he relinquished a position with the Cushnoc and Kennebec Paper Companies to take the recent appointment at Carthage.

F. L. Moore Goes with U. S. Pulp Products Corp.

Frank L. Moore of this city, recognized as one of the leading paper manufacturers of the country, has just been elected president and general manager of the United States Pulp Products Corporation with offices and plant at Newark, N. Y. His election took place October 25, at a special meeting of directors and is just announced here by him. He has already assumed the duties of his office. He said Saturday that he would retain his residence in this city but would pass several days each week in Newark.

For many years Frank L. Moore was president and general manager of the Newton Falls Paper Company with main offices in this city. About two years ago he accepted a very flattering offer and sold his plant at Newton Falls to New York interests, retiring from business entirely. Since that time he has maintained a private office in the new Woolworth Building here. Not contented to retire from business in the prime of life, and having many business opportunities urged upon him, he finally took an interest in the Newark concern. The main product of the United States Pulp Products Corporation is an egg carrier, although it has patents on other articles such as cigar holders, plates, candle holders, and various articles that can be made from pulp and paper stock. Old papers are utilized largely in the plant.

In efforts to get Mr. Moore interested during the past year, the success of the egg carrier drew his interest, and after visiting the plant and forming his own conclusions as to the future possibilities of expansion, he made decision.

The company has a factory at Newark of concrete design and 100,000 egg carriers a day are now being turned out. The company has an authorization of \$250,000 in eight per cent preferred stock of which only a part has been issued and \$15,000 in common stock of no par value. Mr. Moore purchased a large block of common stock and considerable preferred stock, making him the largest individual stockholder in the concern.

It is believed here that Frank L. Moore would not take an interest in this corporation unless it showed merit and bright prospects, and that his presence at the helm guarantees a successful future. He entered the paper making business as a young man and worked up through practically every phase of it to superintendent, general manager, president and owner of one of the large mills in Northern New York. His wide experience makes him an expert on every feature of the business. His prominence in the trade made him president for two terms of the American Pulp and Paper Association. It has also demanded his advice and judgment on important national and international problems before committees at Washington.

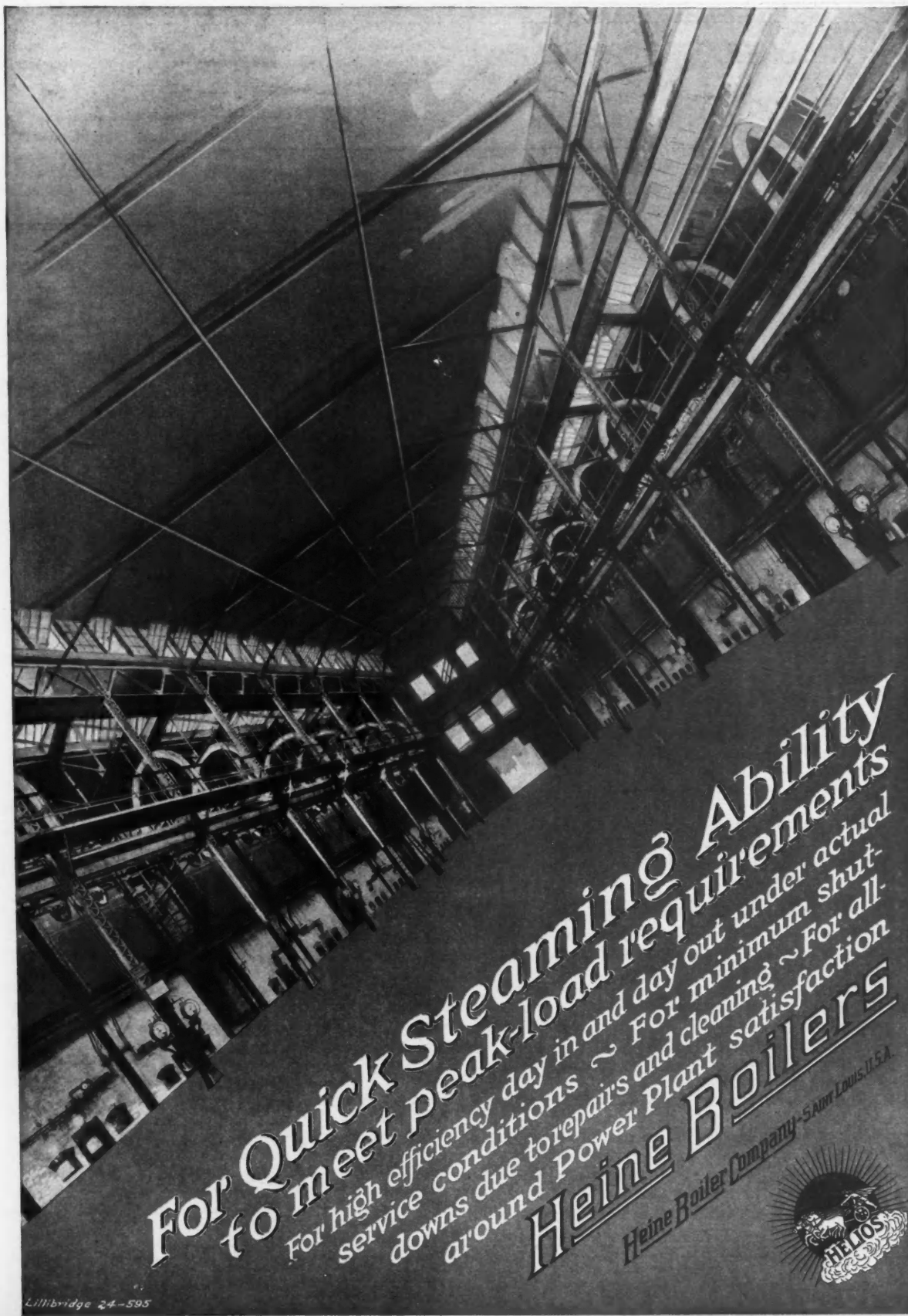
New York Superintendents to Meet

The fall meeting of the Northern New York Division of the American Pulp and Paper Mill Superintendents' Association will be held at the Hotel Woodruff here Wednesday, November 15. An excellent program has been prepared and a large attendance is expected.

Peshtigo Paper Co. Making Improvements

[FROM OUR REGULAR CORRESPONDENT.]

DAYTON, Ohio, November 6, 1922.—J. A. Hedgcock, assistant chief engineer of the Management Engineering and Development Company, of this city, has returned from a week at Peshtigo, Wis., where the Peshtigo Paper Company has been making a number of improvements in their mill under the supervision of the Dayton engineers.



**For Quick Steaming Ability
to meet peak-load requirements**
For high efficiency day in and day out under actual
service conditions ~ For minimum shut-
downs due to repairs and cleaning ~ For all-
around Power Plant satisfaction

Heine Boilers
Heine Boiler Company - Saint Louis, U.S.A.



Lillibridge 24-595

CHICAGO PAPER MEN REPORT A GENERAL IMPROVEMENT

Due to Keen Competition Margins of Profit, However, Are Said to Be Small—Unsatisfactory Railroad Situation in Various Sections of the Country Also Is Proving a Handicap to Normal Expansion of Business—P. A. Van Vlack, President of the Moser Paper Co., Reports Gratifying Improvement in Business During the Past Ninety Days—Other News of the Chicago Trade.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, November 6, 1922.—The general improvement in all lines of business now being experienced in practically all parts of the country is benefitting the Central West and, according to jobbers and mill representatives, is being reflected in the paper industry of Chicago. A gradual improvement has been noted for the past ninety days, the first effects being felt late in August and early in September. Due to keen competition, however, margins of profit are small. It is hoped that with increased volume the market will follow the usual course of a healthy business and a reasonable profit will be the result. That the trade has been expecting an advance in prices has been evidenced by the experience of one jobbing house that issued its revised catalogue, with prices based on replacement values, about thirty days ago. This firm has not had a single complaint from its trade nor have the salesmen reported any protest from customers.

The railroad situation in the East is interfering materially with deliveries of ground wood paper to this market. This is likewise true of conditions in the paper producing sections of Wisconsin. While hopes are expressed for an early return to normal conditions, expectations are that no relief will be had for some time to come.

Mills report orders booked for future delivery that will keep their wheels turning for the next sixty days. The coated paper market is healthy and the kraft market has been greatly strengthened. Eastern kraft mills inform Chicago jobbers that is impossible to accept orders for delivery before January 1. It is also difficult to place orders for jute tags for shipment during the next two months. Fine writing papers and ledger stock has improved slightly in the past week, but this branch of the trade is still weak.

Printers are advertising specials in personal and business stationery for the holidays and report numerous inquiries and sufficient orders to warrant a prediction that this business will be good for the balance of the year.

Moser Paper Co. Reports Business Good

P. A. Van Vlack, president of the Moser Paper Company, reports that business with his company has been very gratifying and that he is well satisfied with the business the company did in October. He says that his firm has noticed a gradual improvement for the past few months, that business done during the month of September showed signs of healthy improvement, October was better than September and that November is starting out in a gratifying manner. Mr. Van Vlack states that the improvement is noticeable in both stock and mill business. In reviewing general conditions of the country and comparing them with conditions in the paper industry, he says that the paper industry does not recover from a period of depression as readily as do most other industries. It takes six months longer for the paper business to stabilize. The present improvement of this industry is therefore natural, coming as it does months after general business first took on signs of healthy improvement. He reports difficulty in receiving shipments from Eastern mills, due to insufficient transportation facilities and railroad congestion at eastern terminals.

Mr. Van Vlack has just returned to his desk in the office of the Moser Paper Company, after a week of duck hunting in Southern Illinois. His harvest was the limit of fifteen ducks on each day of hunting, plus a few geese.

General News of the Trade

H. M. Gimlin, of the Dwight Brothers Paper Company, reports business fairly good, with a slight tendency at slowing up. Some consumers are reported to be waiting the result of advances in paper items put into effect a month ago. A few have indicated their intention of waiting to see if the prices will stick.

W. E. Dwight, president of the Dwight Brothers Paper Company, will leave on November 15, for Florida, from whence he will leave for Europe to be gone for five months. His itinerary calls for visits to France, Italy, Algiers, England and the Mediterranean Sea territory.

At the office of the Champion Coated Paper Company in the Conway Building, it was reported that business in the coated paper line is good and that shipments are coming forward in fine style, as far as the Chicago territory is concerned.

Stationery houses of the city are displaying bookkeeping stock and equipment, writing stationery, cards and other items of paper usually in demand at this time of the year.

Marquardt-Hewitt Corporation Formed

Taking over the paper stock department of C. B. Hewitt & Bros., Inc., 16-24 Ferry street, New York, the Marquardt-Hewitt Corporation started operations November 1, for the purpose of operating a packing plant where all grades of paper mill supplies will be handled.

The new corporation has a capital of \$50,000, and was incorporated under New York State laws by Fred G. Marquardt, George F. Hewitt, Jr., and Albert D. Lorenz. Mr. Hewitt is chairman of the board of directors of the new concern, Mr. Marquardt is president, Mr. Lorenz is vice-president and secretary, Peter J. Breen is vice-president, and Frederick Ulrich is treasurer.

The new company has taken over the five-floor and basement building at 250 Front street running through to 271 Water street, where its offices and packing house will be located. This building contains about 25,000 square feet of floor space, and will be completely equipped for the grading and packing of waste paper in particular and other grades of papermaking material. The company will make a specialty of grading material for the particular requirement of paper board manufacturers.

The telephone numbers of the Marquardt-Hewitt Corporation are Beekman 9930 and 9931, and its cable address is "Marhewcorp," New York.

Cushnoc and Kennebec Officials Examined

[FROM OUR REGULAR CORRESPONDENT.]

AUGUSTA, Me., November 6, 1922.—A petition of the trustees of the Cushnoc and the Kennebec Paper companies to have two former officers of the companies, R. H. Smith, president, and Edgar G. Barrett, vice-president, both of New York, brought in for examination under the provisions of the bankruptcy act resulted in the two men appearing last week before referee in bankruptcy F. J. C. Little of this city. The hearing was held at the Court House. The former officers were asked to explain how \$73,500 Cushnoc bonds were reissued from the Cushnoc treasury. Another matter for decision was to decide whether the trustees would be granted leave to continue operation of the properties for another year.

Mr. Smith was on the stand all day which was spent in an inspection of the books of the company. He explained financial transactions of the companies, with reference to the bankers of the companies.

EXACT MICROMETER

**Actual
Size**

**Height
6¼ in.**

**Diam.
Dial
5¼ in.**

**Depth
of throat
3⅝ in.**



**Bevel
Plate
Glass**

**Nickel
finish
top**

**Black
enamel
base**

The Exact Micrometer is automatic in its action, and as its name implies, Exact, in recording the thickness, because it is built on the only correct principle. There are no Pinions, no Levers, no Gears of any kind used for transferring the action of the Plunger to the reading Indicator. The Indicator hand is firmly attached to and becomes a part of the measuring Plunger, hence, accuracy.

It contemplates .300, registers .100 around the dial, repeating three times (trip indicator). The graduations are three times as far apart as on any of our previous Micrometers or as on the German Micrometer, hence, are more easily read.

"For Automatic Weighing Scales for giving the weight of 480 sheets or 500 sheets of paper or for ascertaining the weight per M Sq. Ft. of box boards write to us for full description and price."

Write for Life Size Circular

E. J. CADY & COMPANY, 326 West Madison Street, Chicago

These instruments are carried in stock by C. B. Hewitt & Bros., 16-24 Ferry Street, New York

CAR SHORTAGE HANDICAPS PAPER MILLS IN WISCONSIN

Companies in Fox River Valley Said to Making Preparations to Store Large Quantities of Paper Because of Concern About Being Able to Obtain Sufficient Number of Cars to Move Product—Resumption of Navigation on the Fox River Interrupted Last June When Locks Were Destroyed at Little Rapids, Is Insuring Coal Supply for the Winter—Thilmany Paper Co. Busy.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 7, 1922.—Paper mills in Wisconsin and especially in the Fox river valley are seriously handicapped by a shortage of cars. While there is no danger of a shutdown of any of the mills, at least in the immediate future, the shortage is said to be working a serious hardship, because of the difficulty of obtaining raw material and of making shipments.

One of the largest companies in the Fox river valley is making preparations to store large quantities of paper because it believes it will be some time before sufficient cars will be available to move its product. Other companies are providing storage facilities on a smaller scale.

Most of the mills have plenty of wood in their yards to keep them operating. Very little pulpwood is coming into the valley now.

Better Coal Supply Insured

Resumption of navigation on the Fox river, interrupted last June when the locks at Little Rapids were destroyed, is insuring a coal supply for the winter. Navigation on the river never has been heavier than it is at this time and millmen believe that if navigation can be continued long enough they will be able to fill their yards.

Thilmany Bag Department Busy

The bag department of the Thilmany Pulp and Paper Company at Kaukauna, is working almost day and night to keep pace with its orders. The bag mill was started on a rather small scale last spring but has grown rapidly and now employees nearly 100 persons. New machinery constantly is being installed. Much of the machinery has been designed by superintendent Weber who has had large experience in bag mills.

It is understood the Thilmany company is working on plants for other converting plants but no announcement of a public nature has been made. It also is understood that the company is contemplating building its converting plants outside of Wisconsin because of the unsettled political condition here.

Fort Howard Paper Co. Improvements

Work on the two-story addition to the Fort Howard Paper Company plant at Green Bay is progressing rapidly and the contractor expects to have it finished by December 15. The first floor of the addition is completed and supports for the second floor are in place. Bricklayers started work last week on the second story.

Output of the Fort Howard plant will be greatly facilitated by the addition inasmuch as the company now is quite seriously handicapped by lack of space.

A large addition is being built to the Ground Wood Pulp Supply Company, plant at Kaukauna. Several more grinders are to be installed. Company officials say the plant will have a daily capacity of 20 tons when the addition is completed.

General News of the Trade

The Grandfather Falls Paper Company, has filed a complaint with the Wisconsin Railroad Commission charging that it had been

assessed unlawful freight charges on 37 cars of pulpwood. The company names the Northern Pacific, Soo line and Chicago, Milwaukee and St. Paul roads. Repayment of the unlawful charges, with interest, is demanded. The railroad commission has not announced its decision.

The two mills of the Marinette and Menominee Paper Company operated the entire month of October without a lost time accident. The company's bulletin board shows 35 days without an accident.

The sum of \$10,000 will be spent by the forest products laboratory in Madison in co-operation with the woodland section of the American Paper and Pulp Association, in scientific research attempting to get an effectual decay preventative for pulpwood. The annual loss from decay to the pulpwood industry is more than \$5,000,000, it was shown at the annual convention of the pulpwood section of the association in Chicago.

F. W. Muir Board Co. to Erect Mill

[FROM OUR REGULAR CORRESPONDENT]

MORRISTOWN, N. J., November 6, 1922.—The F. W. Muir Board Company, Inc., has secured a site along the Whippany river on the Morristown and Erie railroad and will erect a modern, up-to-date factory with railroad siding at its door operated by steam and electricity, for the manufacture of pattern, friction electric and binder's board.

Franklin W. Muir is the eldest son of the late James A. Muir, well known throughout the specialty board trade. He served a rigid apprenticeship under his father and was closely associated with him in the Jefferson mill for over twenty years.

He was also with the mills of the United Paper and Box Board Company, Inc., of Whippany, N. J., and lately with R. B. McEwan and Son, of that city.

The officers of the company are F. W. Muir, president and general manager; E. Muir, vice-president and Robt. N. McLeod, secretary-treasurer.

Robert N. McLeod the present superintendent of the Manhattan Rubber Company's new plant of Manhattan, N. J. and is a mechanical and efficiency engineer of proven ability.

Forest Paper Co. to Reopen Mill

[FROM OUR REGULAR CORRESPONDENT]

YARMOUTH, Me., November 6, 1922.—The Forest Paper Company's mill at Yarmouth, which has been shut down since the first of last March, throwing a large number of employees out of work, will start operations again on the 13th of this month. It is understood that the mill will start under a new and better wage scale than when closed last spring. Previous to its closing the first of March, the plant was only running on part time and with but part of its full quota of employees, and a reduction in wages from a previous scale was in force. It is now learned that the present wage scale will make up for the reduction previously made and will equal, if not exceed, the wage paid about two years ago.

Minneapolis Paper Co. in Montana

[FROM OUR REGULAR CORRESPONDENT]

BUTTE, Mont., November 6, 1922.—The Minneapolis Paper Company of Minnesota filed articles of incorporation with the clerk and recorder Saturday afternoon. The company was incorporated in Minnesota January 1, 1894, to exist for 30 years. The capital stock is \$50,000 divided into shares at \$100 each. Ward T. Thompson is the local agent upon whom service may be had. Previous to the filing of the incorporation papers, a statement which is required of all foreign corporations contemplating entry into this state for the transaction of business, was filed. The present directors of the company are: Eugene J. Stilwell, L. R. Boswell and E. C. Prewitt, all of Minneapolis.

FOR QUALITY PAPERS
USE

A-1 Bleached Sulphite Pulp

MANUFACTURED BY

Kellner-Partington Paper Pulp Co., Ltd.
Borregaard Norway

SOLE AGENTS FOR U. S.

J. Andersen & Co.

21 East 40th Street

New York, N. Y.

WAYAGAMACK

KRAFT PULP

Uniform in Quality
Essential for Strength Requirement

The Pulp and Paper Trading Company

21 East 40th St., New York, N. Y.

Sole Agents for United States for

CANADIAN KRAFT, Ltd.

Three Rivers, CANADA

New York Trade Jottings

A meeting of the members of the News Print Service Bureau was announced by its secretary, R. S. Kellogg, to be held November 16, at the bureau offices, Canadian Pacific Building, New York.

* * *

A petition in bankruptcy was filed last Friday against the Caldwell Paper Company, Inc., of 244 Lafayette street, by these creditors: David Plotkin, \$500; Henrietta Ruchman, \$500; Elsie Simon, \$250.

* * *

Judge Learned Hand on Monday appointed William Rand, Jr., receiver for the Caldwell Paper Company, Inc., of Lafayette street, under \$1,000 bond. It is stated the liabilities are about \$12,000 and assets about \$2,000.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, New York, will speak on "Forestry—The Future of the Lumber Industry" at the meeting of the New York Lumber Trade Association this Friday night.

* * *

E. Salomon, vice-president of the American Wood Pulp Corporation, 347 Madison avenue, New York, left on a business trip to Europe Thursday of last week aboard the steamer *Paris* and expects to return to New York before Christmas.

* * *

A. W. Pohlman Paper Company, Inc., of 62-64 Gold street, New York, has recently distributed samples of Tip Top Bond, stocked in ten colors beside white, in a convenient blank book form. Samples will be sent to those interested upon request.

* * *

Jenkins Brothers, of 80 White street, New York, announce the appointment of William LeCompte as sales manager in charge of their New York territory. Mr. LeCompte has been a member of the sales organization of this company for twenty-five years.

* * *

In recognition of work he had done in the Ordinance Department during the war, Lieutenant-colonel B. A. Franklin, vice-president of the Strathmore Paper Company, New York, was recently ordered up for examination for colonel in the Ordinance Corps. He has now been notified that he passed the examination.

* * *

The Whitaker Paper Company, of 48-52 Great Jones street, New York, has this week sent to the trade announcements of its line of Christmas cards and stationery, accompanying its letter with a neatly arranged blank book of convenient size demonstrating Printcraft Bond as well as a folder illustrating Spartan Super Book.

* * *

Moving pictures, showing views of paper manufacturing, from the forest to the finished produce, will be a feature of the evening which is being planned by the New York Club of Printing House Craftsmen. Through the courtesy of the S. D. Warren Company, this educational picture will be exhibited at the Hotel Pennsylvania, New York, November 16.

* * *

The Central Paper Company has sold \$1,100,000 of its first mortgage 6½ per cent serial gold bonds, dated Oct. 2, 1922, to a syndicate headed by the Continental and Commercial Trust and Savings Bank and Halsey, Stuart & Co., which will offer the bonds at par and interest. The securities mature serially from October, 1925 to 1942.

* * *

"State Heeds Need of Reforestation" was the title of a special story appearing in the New York *Herald* of November 5. In a letter to the editor of the *Herald*, R. S. Kellogg, chairman of the

National Forestry Program Committee said, in part: "Carefully written articles based upon facts like the one you have just published are an essential factor in the necessary campaign of education. The National Forestry Program Committee is a working alliance of foresters, timberland owners and producers and users of forest products for the purpose of securing an enactment of a broad national forest policy based upon the principle of Federal leadership and co-operation with the States and timberland owners, which will make practicable the establishment of conditions whereunder all our forest land may be kept constantly growing the kinds and qualities of timber that the country must have if progress and prosperity are to continue."

* * *

Warren B. Bullock, director of the information service of the American Paper and Pulp Association, who was senior instructor in the motor transport school of the army at camp J. E. Johnston, Fla., during the last months of the war, has been placed in command of the 376th Motor Transport Command, consisting of seven companies of motor trucks and motor cars, at headquarters of the Twelfth Corps of the United States Army Organized Reserves. The Motor Transport Corps, which was an independent corps during the war, is now part of the Quartermaster Corps, but the company and higher command organization is to be maintained exactly as during the war. Captain Bullock has been instructed by corps area headquarters to proceed at once with the recruiting of his headquarters staff, consisting chiefly of non-commissioned officers, and a first lieutenant and second lieutenant have been assigned to him as adjutant and supply officer, respectively.

Alaska Welcomes Pulp and Paper Industry

[FROM OUR REGULAR CORRESPONDENT.]

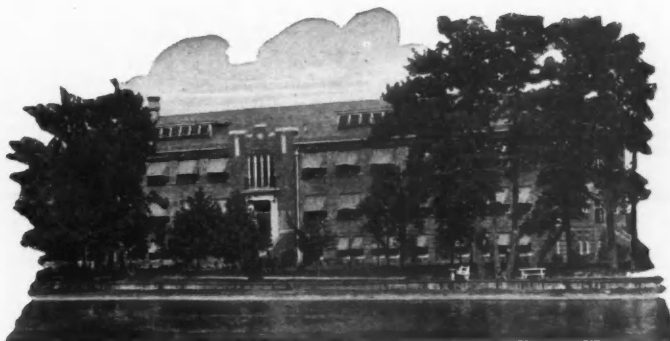
WASHINGTON, D. C., November 6, 1922.—Business in Alaska is improving, according to Associate Forester, E. A. Sherman, who has returned to Washington from a two months' trip in the territory. Exports of high-grade lumber, cut from the Tongass National Forest, he said show a promising beginning.

"The people of southern Alaska are particularly pleased with the efforts of the Forest Service to establish a pulp and paper industry in the territory and with the roads built by the Service and the Bureau of Public Roads," said Mr. Sherman. He further stated that as he came through Ketchikan he saw a five-masted schooner being loaded with lumber from the local sawmill and billed for Australia. The cargo consisted of 1,800,000 feet B. M. of spruce and is part of a 5,000,000 foot order, the remainder of which will be loaded and on its way probably by the first of December.

Mr. Sherman said it was interesting to note also that during the summer the sawmill at Wrangell billed out 45,000 feet of clear spruce which was shipped to the London market. The same mill also made a shipment of 450,000 feet of spruce intended for the eastern market.

Little Insect Killing Minnesota Balsam Trees

All large-sized or Canada balsam in northern Minnesota is threatened with destruction, according to Dr. S. A. Graham, an entomologist of the University of Minnesota. An insect commonly known as the spruce budworm is killing the balsam trees in the northern woods. The tremendous losses caused by the budworm in eastern Canada and Maine a few years ago are now being repeated in Minnesota. As the balsam is second only to spruce as a source of wood pulp for the manufacture of paper, its destruction on such a large scale complicates a situation that has for years been uppermost in the industry. Control of the budworm, says Dr. Graham, will be found only in silvacultural methods. By proper handling of forest growths the outbreaks of the pest can be limited, and in time prevented. There is no immediate remedy.



*The Du Pont Dyestuffs Technical Laboratory,
Deepwater, N. J.*

Double Checked

From the time the crude dyestuff is dry, up to when it arrives at the shipping house, dye experts at the Technical Laboratory control the treatment of each pound of color received.

In each lot of dyestuff, shade, strength and solubility are kept constant by a double system of checking.

The dyeing qualities are always under the observation of a corps of technical demonstrators, among whom are specialists trained in each of the dye-consuming industries.

*You can depend on uniform results
from Du Pont Dyestuffs*

E. I. du Pont de Nemours & Co., Inc.

Dyestuffs Department

WILMINGTON, DELAWARE

BRANCH OFFICES:

New York Boston Providence
Philadelphia Chicago
Charlotte, N. C.



THE GERMAN PAPER MARKET

BERLIN, Germany, October 12, 1922.—The last weeks brought much unrest into the paper trade. The endeavor of every trade to bring its prices up to the level of the Dollar which in August has risen to about 2,000 marks, was the real cause of it. The chemical pulp makers took the first step by proclaiming that they were obliged to treble the prices of sulphite and sulphate pulp, as the pulpwood had become more expensive in the same ratio. Indeed, the wood owners had lately raised their prices almost to the gold level and, besides, about one-fifth of the pulpwood must be imported and paid for in advance in foreign money of high exchange value. Being thus obliged to buy foreign exchange, the chemical pulp makers changed the payment conditions of their customers until then they had asked payment in cash in thirty days after receipt of the invoice; now they asked payment half with the order and half after receipt of the invoice. As wood pulp is very scarce here, the paper-makers had to accept these conditions, and in order to get the money for the prompt payment of the pulp bills they dictated the same conditions to their customers, the paper jobbers and converters. At the same time, they trebled for September their August prices.

Paper Buyers Complain

This announcement caused a big uproar among paper buyers. They were sure they would not be able to enforce the same high prices and troublesome paying conditions on their customers, the users and retailers of paper and paper wares. The different groups held meetings, in which they declared the jump of prices to be unjustified and the conditions as impossible. They pointed to the extreme scarcity of money in Germany caused by the rise of all prices and expenses which prompts everybody to reduce expenditures. Indeed, nobody gets payment from his customers at accurate terms, as even the bankers cannot get paper money from the State Bank, the Government's printing office having been hampered by a strike of the employees in printing banknotes.

Newspapers Get Relief

The newspaper publishers were the first to get relief. Aided by their political influence, they succeeded, some weeks ago, when one kilogram (about 2.2 lbs.) of news printing cost 28 marks, in getting a new law which gives the Government full power of controlling the prices of paper pulp and news print paper. As now 84 marks were asked for this same paper, the Government sent their employees to investigate the calculations of the pulp and news print mills. The effect was that the chemical pulp makers lowered their price for sulphite by 15 per cent and the Government fixed 30 marks as the maximum price for one kilogram of air-dry mechanical wood pulp. We learned in the war-time that as soon as a maximum price was prescribed for a commodity it disappeared from the market. And the same will certainly happen with mechanical wood pulp, as the makers had asked 42 marks for one kilogram.

Conditions of Payment Changed

As the papermakers had declared themselves unable to pay in advance, the chemical pulp makers allowed them, for a short term—until the end of November—to pay one-half of the amount on receipt of the pulp, the other half some weeks later, not in cash but in drafts.

The price of news print paper for September has been lowered to 69 marks the kilogram. Meanwhile, the forest owners constantly raise the prices of all sorts of wood, also of pulpwood. From about 900 marks in July, the price of one cubic metre of pulpwood has risen to 4,000-6,000 marks. The newspaper publishers urge the Government to force the German States, as far as they possess forests, to sell pulpwood for news print paper at about half this price. It is not impossible that they will succeed

also in this by their influence upon the leaders of the political parties.

Exporting Made Difficult

All of the German paper prices having trebled in the month of September, and now still higher prices being announced for October, the German prices have come very near to those of the world market, so that exportation is a difficult matter, more especially, as the Government levies export taxes. In addition to this, export of writing paper is checked to the United States by the new taxation of the Fordney bill.

Boston Paper Market Active

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., November 6, 1922.—Boston paper merchants report an active market for the past week, in fact for the past several weeks and they look forward to increasing betterment of conditions. The recent embargo of the Boston and Maine railroad is causing no end of worry for the Hub distributors because of the fact that the old B. & M. has been the last resort in getting freight through from the west via Canadian lines and the B. & M.

The embargo has been put on eastbound freight from the Canadian Pacific, and Central Vermont railroads. The embargo does not apply to food for human consumption, feed for livestock, perishable products, medicines, news print paper, food containers and railway material.

Cars now en route will not be touched by the embargo shippers have been notified so that Boston paper men hope to receive all their orders which they have been notified have been shipped. The embargoes placed on other lines sometime ago resulted in an abnormal flow of freight over the B. & M. lines.

The activity in the Boston market shows no sign of abatement as yet and merchants are optimistic even in face of the freight embargoes. Many of the slump predictions based on the abnormal demand are groundless, it appears from the continued satisfactory conditions of the market.

The demand for paper here has been growing slowly but steadily for the past few weeks and orders for immediate delivery are being received all of the time by the distributors and the mills in this section of the country are running at capacity, a rate far in advance of that of last year. The coal scare has disappeared entirely by now and the mill men are resting a bit more easy as to where their supplies are coming from.

Universal Paper Products Elects Stockholders

MIDDLETOWN, Ohio, November 6, 1922.—The stockholders of the Universal Paper Products Company, which has been changed to an Ohio corporation, met October 31 and elected the following stockholders: E. T. Gardner, president; Colin Gardner, vice-president; M. S. Johnston, secretary and treasurer; W. H. Swan, Jesse C. Leach, H. L. Dibble, J. J. Hain.

The sales office will be moved to Middletown, starting December 1, but the plant will remain at Clyde until the new factory building is completed here, which will be some time about March 1.

Disher Paper Co. Moves to New Quarters

BUFFALO, N. Y., November 6, 1922.—The Disher Paper Company has just removed to its new building and warehouse at 102 Clinton street. The company will occupy the entire building and will carry a more complete stock than formerly. The firm has been in business in Buffalo for the past twelve years and was compelled to move to the new quarters because of an increasing volume of business.



BELOIT IRON WORKS

Founded in 1858 and
from that time devoting
itself exclusively to the
building of

Paper Making Machines

BELOIT IRON WORKS

BELOIT, WISCONSIN, U. S. A.



BIDS AND AWARDS FOR GOVERNMENT PAPER

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 8, 1922.—The purchasing officer of the Government Printing Office has received the following paper bids:

42,000 lbs. 24 x 38—140 High Finish Sulphite Manila Paper: Maurice O'Meara Company, at \$.074 per lb.; R. P. Andrews Paper Company, \$.0739; Samuel S. Alcorn, \$.0675; Old Dominion Paper Company, \$.06499.

38,000 lbs. 24 x 38—38 Machine Finish Printing Paper, No. 1: Dobler & Mudge, \$.077 per lb.; Old Dominion Paper Company, \$.0731; R. P. Andrews Paper Company, \$.0764; Bryant Paper Company, \$.0725; Kalamazoo Paper Company, \$.0725.

10,000 lbs. 25 x 38—50 White Antique Printing Paper: R. P. Andrews Paper Company, \$.0735 per lb.; Dobler & Mudge, \$.0775; Old Dominion Paper Company, \$.0764; Dill & Collins Company, \$.08; Bryant Paper Company, \$.0732.

5,450 lbs. Yellow Glazed Bond Paper, various sizes: Aetna Paper Company, \$.1706 per lb.; Old Dominion Paper Company, \$.2149 and \$.1739; Dobler & Mudge, \$.185; R. P. Andrews Paper Company, \$.18, and Lee Paper Company, \$.19.

The purchasing officer will open bids on November 10 for the following:

1,000,000 lbs. 22½ x 28½—104 U. S. Postal Card Cream Bristol Board, in 44½-inch rolls.

54,023 lbs. (805 reams), various sizes, White Ledger Paper.

The purchasing officer of the Government Printing Office has received the following bids:

87,200 lbs. 21 x 32 and 22 x 34 Yellow Writing Paper, HMF: Maurice O'Meara Company, at \$.10115; Old Dominion Paper Company, \$.09924; R. P. Andrews Paper Company, \$.088; The Champion Fibre Company, \$.1023; The Whitaker Paper Company, \$.1094; The Aetna Paper Company, \$.12, and Samuel S. Alcorn, \$.111.

225 lbs. 19 x 24—4½ Stereo Tissue Paper: Standard Paper Manufacturing Company, \$.3395 per ream; Sutphin Paper Company, Inc., \$.345; The Whitaker Paper Company, \$.333; Mathers-Lamm Paper Company, \$.310; Dobler & Mudge, \$.350.

50,000 lbs. 26 x 38—No. 50 Chip Board: Mathers-Lamm Paper Company, \$.54.20 per ton; Philip Rudolph & Son, Inc., \$.62.50; The C. L. LaBoiteux Company, \$.55.90; George A. Jaeger, \$.60.00; United Paper Board Company, \$.57.50; R. P. Andrews Paper Company, \$.58.48; Dobler & Mudge, \$.58.20; George W. Millar & Co., Inc., \$.62.00; The Whitaker Paper Company, \$.59.70.

13,000 lbs. 36 x 48 Gray Press Board: Bird & Son, Inc., \$.11 per lb.; Mathers-Lamm Paper Company, \$.1125; R. P. Andrews Paper Company, \$.112; Philip Rudolph & Son, Inc., \$.156; B. F. Bond Paper Company, \$.1215; Diamond State Fibre Company, \$.10; C. B. Hewitt & Bros., Inc., \$.145; The Whitaker Paper Company, \$.175.

40,000 lbs. 26 x 36 No. 1 Binders Board: Kerr Paper Mills Company, at \$.90.00 per ton; Ingalls & Company, \$.82.00; R. P. Andrews Paper Company, \$.104.00; Dobler & Mudge, \$.89.00; Republic Bag and Paper Company, \$.92.00; Denison-Pratt Paper Company, \$.80.00; Witaker Paper Company, \$.77.00; Mathers-Lamm Paper Company, \$.87.90; B. Hewitt & Bros., Inc., \$.79.00.

80,000 lbs. 25 x 30 No. 2 Binders Board: Kerr Paper Mills Company, at \$.82.00 per ton; Ingalls & Company, \$.74.00; R. P. Andrews Paper Company, \$.75.00; Dobler & Mudge, \$.84.00; Republic Bag and Paper Company, \$.86.75; Denison-Pratt Paper Company, \$.70.00; Mathers-Lamm Paper Company, \$.84.85; Wilkinson Brothers & Company, \$.79.80; B. Hewitt & Brothers, Inc., \$.70.00.

5,500 lbs. Manila Oiled Tympan Paper in 38 in. and 48 in. rolls: Whitaker Paper Company, \$.0939 per lb.; Cromwell Paper Company, \$.135; Dobler & Mudge, \$.09; Mathers-Lamm Paper Com-

pany, \$.089; R. P. Andrews Paper Company, \$.16; Great Notch Paper Company, Inc., \$.08875.

1,500 sheets Corrugated Mailing Board, 36 x 36 in.: American Straw Board Company, \$.86.20 and \$110.00 per M; Richmond Corrugated Paper Company, \$114.00; Thompson & Norris Company, \$.86.00; R. P. Andrews Paper Company, \$100.00; Consolidated Paper Company, \$.92.90; Hinde & Dauch Paper Company, \$.73.45, \$.89.45 and \$.99.55; American Paper Products Company, \$150.00; Wilkinson Brothers & Company, \$.77.00 and \$.99.00.

The purchasing officer of the Government Printing Office will open bids on November 15 for 500,000 lbs. 24 x 36—32 White News Print Paper; 17,500 lbs. (350 reams) 20½ x 29—50 White Laid Antique Printing Paper; 56,000 lbs. White Writing Paper, High Machine Finish, No. 13.

Bids will be opened at the Government Printing Office on November 13 for 15,700 lbs. (100 reams) 41 x 52—157 Single-coated Both Sides Book Paper.

The R. P. Andrews Paper Company has been awarded the contract by the purchasing officer of the Government Printing Office for furnishing 2,000 pounds No. 16 U. S. M. O. white writing paper in 8½-inch rolls at \$.12 per pound, bids for which were opened October 16. The same firm will also furnish 4,375 pounds of 21 x 32½—87½ No. 48 buff commercial ledger paper at \$.1885 per pound, bids for which were opened on October 18. The Andrews Company will also furnish 2,000 pounds of back lining paper in 24-inch rolls at \$.045 per pound, bids for which were opened on October 20.

The Bryant Paper Company will furnish 193,900 pounds (2,300 reams) of various sizes white S. and S. C. printing paper at \$.0687 per pound, and The Whitaker Paper Company will furnish 20,800 pounds (200 reams) of 26½ x 41—104 India tint coated cover paper at \$.0985 per pound. The Bryant Paper Company will also furnish 3,800 pounds (500 reams) of 38 x 48—76 white M. F. printing paper at \$.0689 per pound. Bids for these items were opened on October 23.

Will Improve Conveyance of Logs

A charter has been granted to Kapuskasing Rivers Improvement Company, Limited, with a capital stock of \$100,000 and head office at Elsas, in the district of Algoma. The company is empowered to tow, drive and convey timber, etc., along the Kapuskasing River and its tributaries, and to impose tolls or charges on all firms transmitting products of lands, forests and mines other than timber over the rivers. Subject to the provisions of the Timber Slide Company's Act, the company enjoys special powers to acquire and construct dams, slides, piers, booms, etc., and to facilitate the transmission of timber on the Kapuskasing River and its tributaries. The company is also authorized to take over any or all of the improvements made by the Continental Wood Products Company, Limited, on any of the said streams or lakes, and to impose tolls from all persons transmitting timber over certain rivers.

Pacific-Burt Co. Bonds

The Pacific-Burt Company, Limited, manufacturer of counter check books, sales slips, etc., Toronto, of which S. J. Moore, Toronto, is president, is placing on the market a new issue of \$350,000, six and one-half per cent fifteen year, first mortgage, sinking fund bonds. This issue is a first charge on the company as the outstanding capital now comprises \$650,000 common and \$650,000 preferred stock, fully subscribed and paid up. For several years the business of the company has been steadily increasing and for the last four years the average net earnings have been nearly five times the bond interest requirements. The net earnings for the present term are expected to be six times the bond interest.

ROGERS WET MACHINE

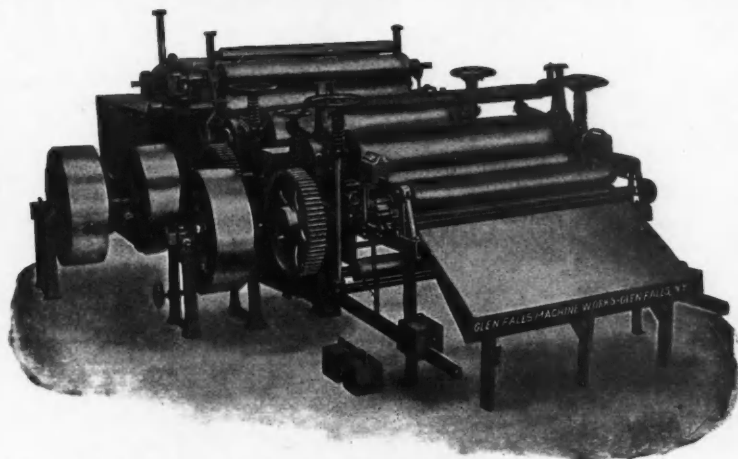


Illustration Shows Rogers Double Press Wet Machine

FOR CHEMICAL PULP—including Sulphite, Sulphate, Soda, also Cotton and Waste Paper fiber.

TYPES—Single and Double Press 72" wide.

CAPACITY—either type 25-30 tons air dry stock per 24 hours.

SHEETS produced by the Double Press Machine uniformly 48% dry. By the Single Press Machine uniformly 40% dry. There is no fold to contain excessive moisture. Sheets are handy size, 33"x36", and are folded once into most convenient bundles for storage, for the beater or for shipping. By this great capacity, high dry test, small amount of floor space per ton pulp produced, exceedingly low cost for labor and maintenance, users are assured that the machine will completely pay for itself within one year, and are promised a handsome return on their investment

WORKMANSHIP AND MATERIAL GUARANTEED

GLENS FALLS MACHINE WORKS Glens Falls, N. Y.

Try Our Split Cams for Your Flat Screens

WOOD PULP

We solicit your inquiries for

- Bleached Sulphite
- Unbleached Sulphite
- Bleached Soda Pulp
- Groundwood
- Kraft

THE MEAD SALES CO.

111 West Washington St., Chicago, Ill. PULP DEPT. Callahan Bank Bldg., Dayton, Ohio.

REPORT ON SIMPLIFICATION OF PAGE SIZES

In connection with the proposed study of the standardization of paper by this Bureau, it was deemed necessary to determine the possible simplification of the sizes and qualities of paper. A committee was, therefore, appointed by this Bureau on August 30, 1921. The chairman and personnel of this committee was changed on February 17, 1922, to those as given in the following report. The Bureau requested this committee to collect data and make recommendations as to the possible simplification of the sizes and the qualities of paper.

It is proposed to submit these recommendations to merchants and manufacturers for criticism and to such other organizations as are believed interested. On receipt of all available data and criticisms, this Bureau will make certain recommendations as based on fact, but it will not be within the province of this Bureau to enforce in any way its recommendations, except by giving publicity to the sustaining data and to the benefits to be derived from a program of simplification.

The Report of the Committee on Simplification of Paper Sizes, appointed by the Bureau of Standards, Department of Commerce, Washington, D. C., as presented September 22, 1922, is as follows:

The Department of Commerce, by the direction of the Honorable Herbert Hoover, Secretary, appointed, through S. W. Stratton, Director of the Bureau of Standards, a committee to investigate the size and grade situation in the manufacture and use of printing papers. The first task of the committee was to recommend a minimum set of standard sizes of book papers, bond and writing papers that would meet every practical demand in printing and publishing.

The members of the committee appointed by Mr. Stratton, representing the following national organizations of buyers and users of printing and paper were:

John Sullivan, secretary-treasurer, Association of National Advertisers, Inc.;

A. E. Thompson, standardization committee, C. H. Dodge and A. P. Allen, alternates, National Association of Purchasing Agents;

F. W. Hume, executive secretary, National Publishers' Association, Inc.;

Maurice Saunders, managing director, National Association of Employing Lithographers;

T. E. Donnelley, C. C. Whinery, alternate, representing the book and directory printers and publishers;

W. J. Eynon, chairman, standardization committee, United Typothetae of America.

G. A. Heintzemann acted as chairman of the committee, and S. L. Willson, vice-president, the Graham Paper Company, acted in an advisory capacity to the committee for the Bureau of Standards.

At the preliminary meetings of the committee, held at the office of the Bureau of Standards, Washington, D. C., March 13, 1922, a program of research in the fields of printing and publishing was determined upon, for the purpose of acquiring data upon which the committee would be able to base its recommendations for simplification, and specific tasks were assigned to each member of the committee.

Suggestive Page Sizes

After nearly five months' work of gathering data, there was compiled, published and distributed a booklet, "Suggestive Page Sizes." This booklet contained tabulation of page sizes that could be cut without waste from three sizes of book paper, with illustrations showing present conditions in respect of sizes of trade papers, magazines, directories, books, house organs, catalogues and general printed literature.

In addition, the booklet included information as to the office and factory forms and letterheads that would cut without waste

from the three flat or bond paper sizes of 17 x 22 inches, 17 x 28 inches, 19 x 24 inches and their doubles.

The three sizes of book paper chosen upon which to base the data as to sizes were 25 x 38 inches, 30½ x 41 inches, 32 x 44 inches and their doubles, and the purpose of issuing the booklet was to show the great variety of sizes possible to be produced from a minimum number of sizes of book papers.

Scope of Inquiry

The editions of the booklet, of 15,000 each, were printed for distribution through the members of the committee, as follows:

Fifty-four local associations (master printer organizations) of the United Typothetae of America, distributed copies of the booklet with a questionnaire to their members and to many non-member printers.

The Association of National Advertisers, Inc., comprising the largest national advertisers in the United States, distributed copies with a questionnaire to its membership.

The National Association of Purchasing Agents distributed the booklet with a questionnaire to its membership.

The National Publishers' Association mailed the booklet with a questionnaire to its membership of periodical, trade and class journal publishers, as well as to non-member publishers.

The Association of Employing Lithographers mailed the booklet with a questionnaire to its membership, as well as to non-member lithographers.

The National Association of Book Publishers mailed copies of the booklet, with questionnaires, to members and leading non-members in the industry.

The Employing Bookbinders' Association of America mailed copies to all pamphlet and bookbinders.

The Direct Mail Advertising Association has offered, through its representative, Robert C. Fay, the full co-operation of its membership.

Copies of the booklet, with a questionnaire, were mailed also to all directory publishers.

Each of the secretaries of national organizations of manufacturers or distributors of commodities were sent the booklet, with a request that the matter be brought before their membership or governing bodies.

Articles explaining the booklet were prepared, and were published in all the printing and allied trade papers.

The reason for this wide distribution of "Suggestive Page Sizes" was not only that the possibilities of a minimum number of sizes of book papers and bond papers could be appreciated, but also that the paper size simplification program should be thoroughly understood and enable the recipients readily to make criticisms and offer suggestions.

Surveys of Printed Literature

In addition to the preparation and distribution of 21,000 booklets and more than 15,000 questionnaires, 14 different surveys were made of current printed literature, in respect of size and fold, representing over 25,000 individual printing jobs. These analyses are exclusive of the surveys made of magazines, trade papers, books, directories, etc. Detailed figures itemizing nine of the surveys were printed in the booklet.

The purpose of these size and fold surveys was to enable the committee to ascertain just what changes in present practice would be necessary in the covering of general printing needs to conform with a simplification program. Incidentally, these surveys served as a check-up on the answers to the questionnaires. The following approximate group page sizes were used as a basis in analyz-

Agents
SUNDS AKTIEBOLAG
STRONG SULPHITE
indirect cooking

PERKINS-GOODWIN CO.
 NEW YORK

PULP and PAPER

Agents
A/S Toten Cellulosefabrik
BLEACHED AND EASY BLEACHING
SULPHITE

ALFRED LEEDS, President
KARL BECKER, Vice President

ERNEST R. COLLINS, Secretary
EDWARD M. MILLER, Treasurer

Becker Paper Corporation

350 Madison Ave., New York, N. Y.

317 Main Street, Springfield, Mass., Branch Office for New England States

Dealers in All Grades of Paper

SPECIALISTS IN

**BOOK PAPER, GLASSINE and EMBOSSED
GLASSINE PAPERS**

Exclusive Distributors for

**WESTFIELD RIVER PAPER COMPANY
RUSSELL, MASS.**

ing these more than 25,000 individual jobs of printing. Any piece of literature under 9 1/4 x 12 1/2 inches that varied 1/8 inch to 3/8 inch in either dimension was included in its nearest group size. The following were the size classifications:

Unstitched Forms		Stitched Forms	
Page	Sheet	Page	Sheet
9 1/4 x 12 1/2	25x38	9 1/4 x 12 1/2	25x38
8 3/4 x 11 3/8	33x45 1/2	8 3/4 x 11 3/8	35x45 1/2
8 x 11	32x44	8 x 11 1/2	33x46
6 1/2 x 9 1/2	25x38	7 3/4 x 10 3/8	32x44
5 1/2 x 8 3/4	35x45 1/2	6 3/4 x 10 1/2	28x42
5 1/2 x 8	32x44	6 x 9 1/2	25x38
4 3/4 x 6 3/4	25x38	5 1/2 x 8 3/8	35x45 1/2
4 1/2 x 9 1/2	25x38	5 1/2 x 7 3/8	32x44
3 3/4 x 6 1/2	26x29	4 1/2 x 6	25x38
3 3/4 x 6 1/4	25x38	4 x 9 1/2	25x38
		3 1/2 x 6 3/4	26x29

These figures reveal the fact that if advertisers, publishers, printers and lithographers co-operate in changing a portion of their present literature specifications only 1/8 inch to 3/8 inch, 87 1/4 per cent of the unstitched circulars, 79 per cent of the booklets, and 86 per cent of the cloth-bound and loose-leaf catalogues could be cut without waste from the following four standard sheet sizes of paper, viz., 26 x 29 inches, 25 x 38 inches, 32 x 44 inches and 35 x 45 1/2 inches and their double sizes. (The small percentage of literature that fell into the 28 x 42 and 33 x 46 sheet size groups is not included in the above percentages.) If the changes were 1/4 inch to 1/2 inch, practically all the literature would come within the above four standard sheet sizes.

In other words, an average of the four classes of literature—unstitched, wire-stitched, cloth-bound and loose-leaf catalogues—showed that only 16 per cent of the total would require special sizes of paper. (Note: It is probable that a good deal of the literature carrying 1/8 inch to 3/8 inch included in the group page size classifications, was printed on sizes of paper made specially to order, or else cut to waste in the binding. It would seem to be obvious that, with the co-operation of the printer and buyer of printing, the possibility of fitting practically 100 per cent of the requirements to a minimum number of standard sizes could be accomplished without any serious inconvenience.)

The following figures show the percentage of literature that fell into each approximate group size. The unstitched circulars were kept separate from the stitched and bound work because, being untrimmed, their page size was a little larger, and also to emphasize the fact that unstitched circular specifications are slightly different from stitched literature.

Page	Sheet	Percentage
9 1/4 x 12 1/2	25x38	3 1/2
8 3/4 x 11 3/8	35x45 1/2	14 1/2
8 x 11 1/2	33x46	3 1/2
7 3/4 x 10 3/8	32x44	9 1/2
6 3/4 x 10 1/2	28x42	4
6 x 9 1/2	25x38	31
5 1/2 x 8 3/8	35x45 1/2	1
5 1/2 x 7 3/8	32x44	2 1/2
4 3/4 x 7 3/4	30 1/2 x 41	2
4 1/2 x 6	25x38	1/2
4 x 9 1/2	25x38	5
3 3/4 x 6 1/2	26x29	11 1/2
Miscellaneous		11 1/2

Page	Sheet	Percentage
9 1/4 x 12 1/2	25x38	3
8 3/4 x 11 3/8	35x45 1/2	14
8 1/4 x 11 1/2	33x46	1 1/2
8 x 11	32x44	4
7 x 10 1/2	28x42	1
6 1/2 x 9 1/2	25x38	11 1/2
5 1/2 x 8 3/4	35x45 1/2	1
5 1/2 x 8	32x44	1
5 1/2 x 7 3/4	30 1/2 x 41	1 1/2
4 3/4 x 6 3/4	25x38	2 1/2
4 1/2 x 9 1/2	25x38	14
3 3/4 x 6 1/2	26x29	36
Miscellaneous		10

Note: The size analysis figures of 1,475 cloth-bound and loose-leaf catalogues were included in the percentage of stitched booklets and catalogues given above. The percentages were as follows:

Inches	Percentage	Inches	Percentage
9 1/4 x 12 1/2	5	5 1/4 x 7 3/8	4 3/4
8 3/4 x 11 3/8	13	4 1/2 x 6	1
8 x 11 1/2	5	4 3/8 x 7 3/4	5
7 3/4 x 10 3/8	9	4 x 9 1/2	1 1/2
6 3/4 x 10 1/2	4	3 1/2 x 6 1/4	1 1/2
6 x 9 1/2	41	Miscellaneous	10
5 1/2 x 8 3/4	2		

The Fold Standardization Phase of Simplification

As a check upon the committee's recommendations of sheet sizes, it was deemed necessary and advisable to consider the fold phase. The following percentages show how the literature in the surveys was folded: 95 7/20 per cent of the unstitched literature conformed to the following regular folds or signatures: 4 pages, 6 pages, 8 pages, 12 pages (letter fold), 16 pages, 24 pages and 32 page folds.

UNSTITCHED CIRCULAR FOLD ANALYSIS OF 9,536 (AVAILABLE FOR INSPECTION) INDIVIDUAL PRINTING JOBS, COLLECTED FROM JANUARY TO SEPTEMBER, 1922

	Percentage
4 page 1 fold	54
6 page 2 parallel	19
8 page 2 parallel	7
8 page 2 r.a.	7
12 page letter fold	6
16 page 2 r.a. 1 par.	1
16 page 3 r.a.	3/4
24 page 3 r.a. 1 par. (double letter)	1/2
32 page 3 r.a. 1 par.	1/20
32 page 4 r.a.	1/20
8-10-12-14-16 page 3 par.	2 13/20
Hand and freak folds	2

Note: The above percentages do not include the folds used for the covers for booklets, nor the folds in multigraphed and form letters, received for survey purposes. If these had been included, the percentages of the one and two fold work would have been higher and those of the three or more fold work would have been less.

The unstitched literature above analyzed was 39 per cent of the total against 61 per cent of stitched forms or vehicles as follows: 46 per cent of the wire-stitched forms were bound in covers, 54 per cent being self-cover booklets.

Combining and averaging the folds used in stitched literature with the folds used in unstitched literature, the percentage of special folds is reduced to less than 1 per cent.

STITCHED BOOKLETS AND CATALOGUES (14,958) ANALYZED ACCORDING TO NUMBER OF PAGES

No. of Pages	Percentage
8 pages	16 1/2
8 pages with cover	4 3/4
12 pages	12
12 pages with cover	4 3/4
16 pages	13 1/4
16 pages with cover	9
24 pages	3 1/2
24 pages with cover	2
32 pages	6 1/2
32 pages with cover	6 1/2
48 pages	2
48 pages with cover	2
64 pages	1/10
64 pages with cover	1
20 pages	2 1/2
20 pages with cover	3 3/4
28 pages	1
28 pages with cover	1 3/4
36 pages	1/2
36 pages with cover	2
40 pages	1/2
40 pages with cover	1 3/4
44 pages	1/2
44 pages with cover	1
56 pages	1/10
56 pages with cover	3/4
60 pages	1/10
60 pages with cover	2/10
52 pages	4/10
52 pages with cover	1/2
Over 64 pages	1/10
Over 64 pages with cover	1

These percentages of folds and number of pages or signatures, separated into unstitched and stitched work, are included in this report to show, in addition, to what extent the standard sheet sizes are used for each kind of fold. No answers to the questionnaires contained a criticism of the folds or page combinations included in the booklet, "Suggestive Page Sizes," and there was no request for special folds or page combinations.

Form Sheet Sizes Recommended

In view of the facts given and tabulated in the foregoing pages



Bristol Instruments in the Paper Industry

The leading paper and pulp mills of this country have found that by the application of Bristol Recording Instruments to many processes, they have been able to obtain a better and more uniform product with a consequent improvement in plant efficiency. The great advantage of a Bristol Recording Instrument over a small indicating instrument lies in the following two points:

BRISTOL'S Recording Thermometers Electric Tachometers and Pressure Gauges

—furnish the operator of any process with an accurate guide as to at just what rate and to what extent the process is taking place.

—furnish a fileable record of the varying conditions which enter into the process and as a check in the hands of the management to see that the best operating conditions are maintained.

The fact that one large paper plant has over a thousand of these recorders in actual operation is not at all surprising when a few of the many advantages of these instruments are pointed out.

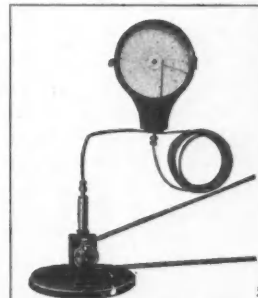
Bulletin BE-306 illustrates some Bristol Recording Instruments that are especially applicable to the paper and pulp industry. May we send it to you?

"With Bristol Instruments You KNOW."

THE BRISTOL COMPANY, Waterbury, Conn.

BRANCH OFFICES:

Boston New York Philadelphia Pittsburgh Detroit Chicago
St. Louis San Francisco



WOOD PULP

QUALITY BRANDS



HISSMOFORS	Strong Unbleached Sulphite
OSKARSTRÖM	Easy Bleaching Sulphite
DIESEN - - -	Bleached Sulphate
ESSVIK - - -	Unbleached Sulphite

STOCKS CARRIED ON DOCK FOR PROMPT DELIVERY

For Samples and Prices Address

Nilsen, Lyon & Co., Inc.

140 NASSAU STREET

NEW YORK

of this report, and as a result of the nation-wide and thorough inquiry made by questionnaire, the members of this committee recommend to the Bureau of Standards of the Department of Commerce that production of book papers be simplified to four sheet sizes of 26 x 29 inches, 25 x 38 inches, 32 x 44 inches and 35 x 45½ inches and their doubles to cover virtually all general printing, publishing and advertising requirements.

The committee also recommends that the sheet size of 30½ x 41 inches and its double size be adopted and recognized as a standard for the use of book publishers. The result of the inquiry made by the National Association of Book Publishers among its members and leading non-members warrants this recommendation.

And the committee considers that the evidence produced as to present practice and the unanimity of desire for, and approval of, simplification is indicated by the answers to the questionnaires, should convince the paper merchants of the country of the advisability of stocking the four recommended sizes.

Sizes for Stitched Booklets, Catalogs, House Organs, Magazines

The following table gives the most popular trimmed sizes for booklets, catalogs, house organs and magazines and the untrimmed folded sizes for circulars and folders that cut and print without waste from the four recommended size sheets:

Booklet, Trimmed Size	Sheet Size	
3 x 6	25x38	38x50
3½ x 6¼	26x29	29x52
3½ x 8¾	35x45½	
3¾ x 5¾	32x44	44x64
3¾ x 6¾	32x44	44x64
4 x 9½	25x38	38x50
4½ x 6	25x38	38x50
5¼ x 7¾	32x44	44x64
5½ x 8¾	35x45½	
6 x 9½	25x38	38x50
6¾ x 6¼	26x29	29x52
7¼ x 10½	32x44	44x64
8 x 9½	25x38	38x50
8½ x 11	35x45½	½ of 38x50
9¼ x 12½	25x38	38x50
10¼ x 15¾	32x44	44x64

Note: The trimmed page sizes that cut without waste from 30½ x 41 inches and 41 x 61 inches are 3¼ x 6¾ inches, 4¾ x 7¼ inches, 7¾ x 9¾ inches.

SIZES FOR UNSTITCHED AND UNTRIMMED CIRCULARS		
Page Size	Sheet Size	
3¼ x 6¼	25x38	38x50
3¾ x 6¾	26x29	29x52
3¾ x 8¾	35x45½	
4 x 5¼	32x44	44x64
4 x 7¾	32x44	44x64
4½ x 9½	25x38	38x50
4¾ x 6¼	25x38	38x50
5½ x 8	32x44	44x64
5½ x 8¾	35x45½	
6¼ x 9½	25x38	38x50
8 x 11	32x44	44x64
8¾ x 11¾	35x45½	
9½ x 12½	25x38	38x50
11 x 16	32x44	44x64

Note: The untrimmed page sizes that cut from 30½ x 41 inches and 41 x 61 inches are 3¼ x 6¾ inches, 5½ x 7¾ inches, 7¾ x 10¼ inches.

The trimmed page sizes allow ¼ inch trim at head, ¼ inch trim at front and bottom. The smaller page sizes allow ⅛ inch trim at top, front and bottom. Tolerance of ⅛ inch in finished work should be permitted.

The 35 x 45½ Inch Size

In regard to the 35 x 45½ inch size, it should be noted that some mills make this size 35 x 45 inches and other mills 35 x 46 inches. A check-up with bookbinders shows that the correct size for an 8½ x 11 inch trimmed booklet and catalogue and its half size, 5½ x 8¾ inch booklet or catalogue should be 35 x 45½ inches to cut without waste.

A very large proportion of the returned questionnaires asked for the 35 x 45½ inch sheet, from which 8½ x 11 inch booklets and catalogues can be cut. This sheet is comparable to the bond paper size from which 8½ x 11 inch letterheads are cut without trim and waste.

With the adoption of the 35 x 45½ inch sheet size, the 33 x 46 inch sheet (page size 8 x 11½ inches) being so close, it is obvious that the few present users of 33 x 46 inches can easily swing to the new size, 35 x 45½ inches, which cuts an 8½ x 11 inch trimmed page size.

The 28 x 42 Inch, 28 x 44 Inch and 33 x 46 Inch Sizes

The 28 x 42 inch, 28 x 44 inch and 33 x 46 inch sizes comprised but 6½ per cent of the literature surveyed. It should be noted that printers or lithographers still requiring these sizes will find no difficulty in securing service on these items during a period of readjustment.

In view of the success of the National Association of Purchasing Agents in popularizing the catalogue size 7¾ x 10½ inches, and the booklet size 5¼ x 7¾ inches, both cutting without waste from the 32 x 44 inch sheet (included in the committee's recommendations), it can, we think, be assumed that the demand for the 28 x 42 inch and 28 x 44 inch sheets will, in a large measure, shift to 32 x 44 inches.

The 26 x 29 Inch Size

The 26 x 29 inch size was included in our recommendations because the surveys showed that 19 per cent of circular and booklet literature fell into the 3½ x 6¼ inch page size group. Practically every questionnaire returned asked for this sheet size. This size, we may add, will serve the needs of those who have been using a 28 x 42 inch sheet for stuffers for 6¾ inch envelopes.

Standard Roll Widths

On jobs where a page size is required that will cut without waste from the four sheet sizes recommended, the following roll widths are suggested as a guide for ordering special mill runs: 25, 30½, 32, 35, 38, 41, 44, 45½, 50, 61 and 64 inches.

Fitting such work to roll widths would result in economy in paper manufacturing and distribution, as all book papers are made in standard roll widths and then cut into sheets. Roll widths give a one dimension standard, and sheets may be cut to any practical length required.

The following are the roll widths for bonds, ledgers and flats: 17, 19, 22, 24, 28, 32, 34 and 38 inches.

Cover Paper Sizes Standardized

The page sizes that cut without waste from the standard book paper sizes recommended will fit to advantage the standard cover paper sizes of 20 x 26 inches and 23 x 33 inches. These cover sizes were recently successfully standardized through the co-operation of the United Typothetae of America and the National Association of Purchasing Agents, and have been endorsed by the Cover Paper Manufacturers' Association.

Standard Bond and Writing Paper Sizes

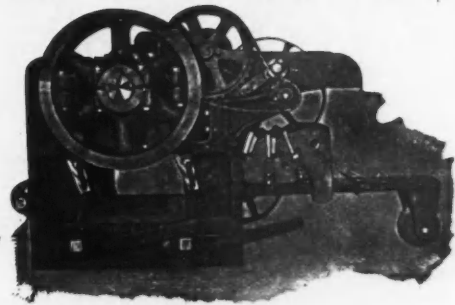
For general office and factory form and letterhead printing it is recommended by the committee that the sizes 17 x 22 inches, 17 x 28 inches and 19 x 24 inches and their doubles be decided upon.

The following sizes are those which cut and print without waste from the three sizes recommended:

No. from Sheet	17x22	22x34	17x28
2 out	11 x17	17 x22	14 x17
4 out	8½ x11	11 x17	8½ x14
6 out	8½ x 7¾	7¾ x17	8½ x 9¾
6 out	5¾ x11	11 x11½	5¾ x14
8 out	4½ x11	8½ x11	7 x 8½
8 out	5½ x 8½	6½ x17	4½ x14
9 out	5¾ x 7¾	7¾ x11½	5¾ x 9¾
10 out	4¾ x 8½	6¾ x11	5½ x 8½
12 out	4¼ x 7¾	7¾ x 8½	4¼ x 9¾
12 out	5¾ x 5½	5½ x11½	5¾ x 7
15 out	4¾ x 5¾	4¾ x11½	3¾ x 9¾
15 out	3¾ x 7¾	6¾ x 7¾	5½ x 5¾
16 out	4¼ x 5½	5½ x 8½	4¼ x 7
18 out	3¾ x 5¾	5¾ x 7¾	4¾ x 5¾
20 out	3¾ x 5½	4¾ x 8½	3¾ x 7
20 out	4½ x 4¾	5½ x 6¾	4¾ x 5½
24 out	3¾ x 4½	3¾ x 8½	2½ x 7
24 out	2½ x 5½	5½ x 5¾	4¾ x 4¾
28 out	2¾ x 5½	5½ x 4½	4 x 4¾
28 out	3½ x 4¾	3½ x 8½	2¾ x 7
32 out	2¼ x 5½	2¾ x 8½	2¾ x 7
32 out	2¾ x 4¾	4¼ x 5½	3½ x 4¾

Don't Use Your Beaters For Rag Cutters

Put in a
GIANT
and cut your stock
thoroughly and evenly



Capacity 2 Tons per
hour
Weight 8500 lbs.
For Roofing and Felt
Stock

NO. 11 TRIPLEX



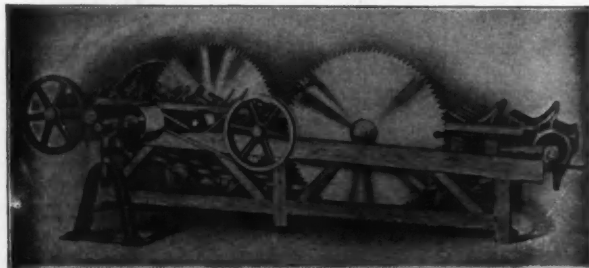
Canadian Manufacturers Under Patents: WATEROUS ENGINE WORKS CO., Brantford, Ont., Can.
I. MARX & CO., London, E. C., sole agents for the United Kingdom

Increased Capacity Lower Cost Per Cord

THE

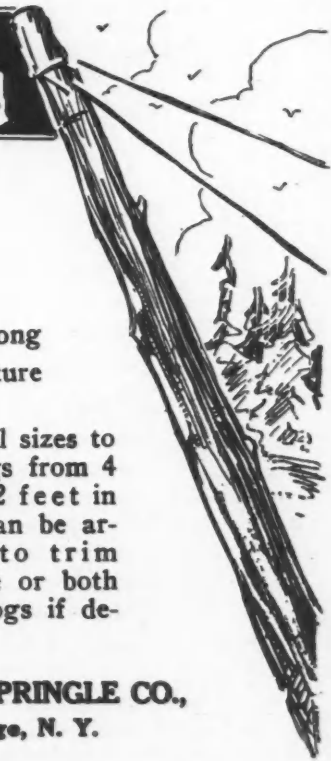
Ryther Slasher

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



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

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



No. from Sheet	28x34	19x24	24x38
2 out	17 x28	12 x19	19 x24
4 out	14 x17	8½x12	12 x19
6 out	11½x14	9½x 8	12 x12½
6 out	9½x17	6½x12	8 x19
8 out	7 x17	4¾x12	9½x12
8 out	8½x14	6 x 9½	6 x19
9 out	9½x11½	6½x 8	8 x12½
10 out	6¾x14	4¾x 9½	7½x12
12 out	8½x 9½	4¾x 8	8 x 9½
12 out	7 x11½	6½x 6	6 x12½
15 out	5½x11½	3¾x 8	4¾x12½
15 out	6¾x 9½	4¾x 6½	7½x 8
16 out	7 x 8½	4¾x 6	6 x 9½
18 out	5½x 9½	4 x 6½	6½x 8
20 out	5½x 8½	3¾x 6	4¾x 9½
20 out	6¾x 7	4¾x 4¾	6 x 7½
24 out	4½x 8½	4 x 4¾	6 x 6½
24 out	5½x 7	3½x 5	4 x 9½
28 out	4½x 7	3¾x 4¾	5½x 6
28 out	4 x 8½	2½x 6	3½x 9½
32 out	3½x 8½	2½x 6	3 x 9½
32 out	4½x 7	4¾x 3	4¾x 6

Special Committee for Bond and Ledger Paper Specialties

The committee recommends that the Association of Manufacturing Bank and Commercial Stationers, the Stationers' and Manufacturers' Association, the National Association of Employing Lithographers, the Lithographers' Co-operative Association, the National Cost Accountants' Association and the Government Printing Office appoint representatives to serve on a special committee to meet with the Simplification Committee, for the purpose of making up a special set of standards for bank checks, drafts, customers' checks, pocket checks, insurance policy forms, legal forms, forms for mortgages, bonds, etc., tariff forms, railroad forms, blank book, loose-leaf ledger and bond paper forms, and other work that comes particularly within the range of those classes of printing and lithography.

Organizations Represented

The following representatives of organizations and members of the committee were present at the meeting on September 22, in the Industrial Building of the Bureau of Standards, Washington, D. C.:

George A. Heintzemann, chairman of the committee.

A. P. Allen, chairman, paper committee, National Association of Purchasing Agents.

W. J. Eynon, chairman, standardization committee, United Typothetae of America.

F. W. Hume, executive secretary, National Publishers' Association.

Maurice Saunders, managing director, National Association of Employing Lithographers.

John Sullivan, secretary-treasurer, Association of National Advertisers, Inc.

F. A. Curtis, Chief, Paper Section, Bureau of Standards, Department of Commerce.

Robert C. Fay, Direct Mail Advertising Association.

W. P. Gildea, Association of Manufacturing Bank & Commercial Stationers.

Robert McGlaughlin, assistant secretary, National Association of Book Publishers.

W. A. Mitchell, Chief of Estimating Division, Government Printing Office.

Elmer C. Smith, assistant secretary, Association of Manufacturing Bank and Commercial Stationers and Lithographers Co-operative Association.

R. W. Summers, Chief of Jacket Section, Government Printing Office.

S. L. Willson, vice-president, Graham Paper Company, Special Paper Expert, Bureau of Standards.

Adoption of Report Recommended

The adoption of this report by the bureau of Standards of the Department of Commerce, is recommended by the Committee on Simplification of Paper Sizes and Grades, as follows:

John Sullivan, secretary-treasurer, Association of National Advertisers, Inc.

Wm. John Eynon, chairman, committee on standardization, of the United Typothetae of America.

Frederic W. Hume, executive secretary, National Publishers Association.

George A. Heintzemann.

Arthur P. Allen, chairman, paper committee, National Association of Purchasing Agents.

Maurice Saunders, National Association of Employing Lithographers.

C. C. Whinery, purchasing agent, R. R. Donnelley & Sons.

This report, as will be observed, contains a great deal of data supporting the committee's recommendations. The committee hopes that these data will prove helpful not only to paper manufacturers and merchants, but also to printers, stationers, lithographers, publishers, and also to makers of printing machinery. The report will, in addition, serve as a guide and help to buyers of printed matter. It is not the purpose of this report to discourage originality. It seeks to bring about economies in printing, publishing and advertising. The report demonstrates that out of the standard sizes of paper recommended can be cut practically all sizes and forms required.

"McCormick Plan" of Paper Merchandising in Practice

The inner circles of the manufacturing and merchandising branches of the paper industry have been awaiting with considerable interest, and not a little curiosity, the further amplification of the original announcement by the American Paper Mills Corporation, of New York City, of its intention to merchandise paper under the so-called "McCormick Plan." This means the absolute elimination of all private brands and the exclusive featuring of standard mill brands of manufacturers whose products have proven their worth. Now that this announcement has been made, the success of the new policy will be closely watched.

There are many points that make the "McCormick Plan" vitally important to the manufacturer, for it assures him one hundred per cent representation, loyalty and co-operation on the part of his distributor by reason of the fact that there are no duplicating or competing lines of other manufacturers carried. For the manufacturer it also becomes in effect the nearest approach possible to direct selling without the necessity for creating and maintaining offices, warehouses and an expensive executive and selling organization.

However, the mere fact that a certain paper is a "mill brand" does not necessarily mean that it complies with all the rigid specifications of accepted standardization. Before mill brands are approved and accepted by the American Paper Mills Corporation they are subjected to complete and thorough analytical and rigorous practical tests. The ultimate buyer and user is thus assured of grades, qualities and values that are practically guaranteed by both the manufacturer and the American Paper Mills Corporation—a consummation the buyer has devoutly wished for and now obtained.

That the plan would be heartily endorsed by buyers was a foregone conclusion, and is evidenced by the daily receipt of letters of approval promising support from many large and reputable firms.

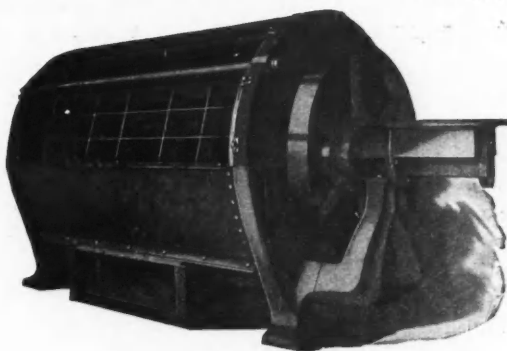
The "McCormick Plan" is also vitally important to the paper merchant for he is thereby enabled to concentrate his investment into accepted standard mill brands, and as no duplicate or competing lines are carried, it not only makes possible closer co-operation with his manufacturer and the ultimate buyer, but makes the sales problem much easier for the selling staff. The natural and inevitable increase in turnover will also make possible and assure lower prices.

Joseph H. McCormick, president of the American Paper Mills Corporation, has spent all of his business lifetime in the manufacturing and merchandising ends of the paper business, and in view of his varied experience is well qualified to speak. It is his unqualified opinion that this plan of paper merchandising is the logical and ultimate one.

"IMPCO" TAILING SCREENER

FOR SCREENING GROUND WOOD TAILINGS

Very Low
Power
and
Upkeep Expense

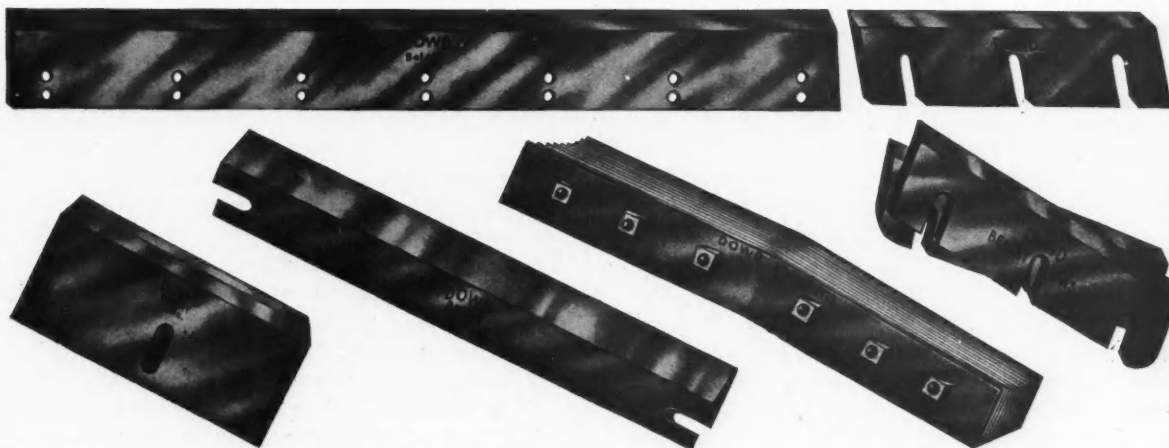


Delivers
Rejections Free
from Good
Stock

ANOTHER UNIT OF OUR CLOSED SYSTEM FOR PULP SCREENING
WRITE FOR FULL DETAILS *CORRESPONDENCE A PLEASURE*

IMPROVED PAPER MACHINERY CO. **Nashua, N. H.**
SHERBROOKE MACHINERY CO., LIMITED, SHERBROOKE, CANADA

Do not pay the price of the best and not obtain it
Roll Bars, Bed Plates, Barker Knives, Chipper Knives,
Rag Knives, Paper Trimming Knives, and Machine Knives
of every description used in paper mills.



Your purchase must be right and you must be pleased. Otherwise the transaction is not in our judgment a success. Let us have your inquiries.

R. J. DOWD KNIFE WORKS

Beloit, Wis., U. S. A.

Editorial

Vol. LXXV New York, November 9, 1922 No. 19

FIFTY-FIRST YEAR

Export Paper Statistics

The exports of paper for August showed no material improvement but continued around the two million dollar mark where they have remained fixed for a number of months past. The figures for the month were \$2,079,436 as compared with \$2,002,332 for July and \$1,436,431 for August a year ago. The exports for the eight months ending with August were valued at \$15,905,766 as compared with \$22,959,453 for the same period last year.

The exports of news print for August as compared with July showed a slight decrease, the figures for the former month being \$181,077 as compared with \$190,527 for the latter. The exports of news print for the eight months ending with August amounted to \$1,707,661 as compared with \$1,712,872 for the same period last year.

The exports of wrapping paper for August were valued at \$146,747 as compared with \$193,792 for July. The exports of wrapping paper for the eight months ending with August were valued at \$1,448,882.

The exports of paper board and straw board for August were valued at \$244,096 as compared with \$164,215 for July and \$80,471 for August of last year. The exports of paper board and straw board for the eight months ending with August were valued at \$1,398,350 as compared with \$1,813,444 for the same period last year.

The exports of writing paper except in papereries for August were valued at \$111,913 as compared with \$80,953 for July. The exports of this commodity for the eight months ending with August were valued at \$777,072.

The exports of tissue and crepe paper for August amounted to \$70,732 as compared with \$66,984 for July. The exports of tissue and crepe paper for the eight months ending with August were valued at \$414,109.

The exports of toilet paper for August were valued at \$54,341 as compared with \$44,849 for July. The exports of toilet paper for the eight months ending with August were valued at \$367,226.

The exports of cover paper for August amounted to \$20,958 as compared with \$13,452 for July. The exports of cover paper for the eight months ending with August were valued at \$139,737.

The imports of paper for August also continued about the same as for the past several months, the figures being \$7,096,421 as compared with \$7,025,277 for July and \$7,701,240 for August of last year. The import of paper for the eight months ending with August amounted to \$55,755,498 as compared with \$64,336,330 for the same period last year.

The imports of news print for August were valued at \$5,866,289 as compared with \$5,608,152 for July and \$6,707,612 for August of last year. The imports of news print for the eight months ending with August were valued at \$45,418,983 as compared with \$54,877,866 for the same period last year.

The imports of rags for August showed a specially large increase being valued at \$516,538 as compared with \$244,506 for July

and \$168,642 for August of last year. The imports of rags for the eight months ending with August were valued at \$2,665,608 as compared with \$1,263,742 for the same period last year.

The imports of all other varieties of paper stock for August were valued at \$414,116 as compared with \$364,313 for July and \$133,531 for August of last year. The imports of all other varieties of paper stock for the eight months ending with August were valued at \$2,490,953 as compared with \$1,414,098 for the same period of the preceding year.

Ground wood to the value of \$358,938 was imported during August as compared with \$417,507 during July and \$371,153 for August of the previous year. The imports of ground wood for the eight months ending with August amounted to \$2,805,868 as compared with \$2,385,288 for the same period last year.

The imports of unbleached sulphate for August were valued at \$1,311,751 as compared with \$1,389,746 for July and \$603,912 for August of 1921. The imports of unbleached sulphate for the eight months ending with August were valued at \$9,379,587 as compared with \$5,140,502 for the same period of the year previous.

The imports of unbleached sulphite for August were valued at \$1,560,603 as compared with \$1,866,799 for July and \$1,046,555 for August of the year preceding. The imports of unbleached sulphite for the eight months ending with August were valued at \$12,017,825 as compared with \$7,456,903.

The imports of bleached sulphate for August were valued at \$28,023 as compared with \$179,964 for July and no imports at all of this commodity for August a year ago. The imports of bleached sulphate for the eight months ending with August were valued at \$472,024 as compared with \$73,738 for the same period last year.

The imports of bleached sulphite for August were valued at \$1,682,188 as compared with \$1,368,606 for July and \$1,130,533 for August of last year. The imports of bleached sulphite for the eight months ending with August amounted to \$10,929,276 as compared with \$5,832,872 for the same period last year.

For a Paper Industries Exposition

The idea to hold a paper industries exposition in connection with the next annual convention of the American Paper and Pulp Association in New York is a most excellent one that it is hoped may be carried out. The endorsement in principle of this idea was voted at a meeting of the executive committee of the association, held since the Chicago fall conference early this month. For nearly two years this question has been under quiet consideration, since it was first broached to the association by Dr. Hugh P. Baker, executive secretary, but the business depression prevented further steps being taken. At the Chicago meeting, however, sentiment was so much more optimistic, that it was thought that it might be an opportune time to hold such an exposition in the Spring of 1923.

The general plan of such an exposition would be the holding of a show devoted chiefly to paper making machinery and supplies, for the benefit of the paper manufacturer who wishes to improve or add to his equipment, but also would be of an educational nature, to give the public an opportunity to understand the problems involved and the nature of the machinery required for the making of one of the products most commonly used by every individual, but whose processes of manufacture are little known.

Because of limited space, no exhibits have been allowed in the hotels where the Association conventions have been held, but this exposition would concentrate under one roof and in orderly form all types of paper making equipment which would interest the manufacturer.

The fact that expositions of the character suggested have for years past proven so popular in various other trades and industries would seem to indicate beyond any doubt that such an exposition could be successfully held in the paper industry.

Paper Makers Seek Factory Efficiency

How the paper industry, conforming to the suggestions of Mr. Hoover, is endeavoring to improve its manufacturing methods through the field of the cost accountants is evidenced by the formal program for the convention of the Cost Association of the Paper Industry to be held at Holyoke, Mass., November 9, 10, 11, just issued by the Association's secretary, Thomas J. Burke.

The elimination of inefficiencies by comparative statistics from various groups of the industry indicating where there are excessive costs in the conversion of raw materials into the finished product is the object to be attained and the result will be greater economy all through the industry.

Because of the wide differences in the processes of manufacture of the different grades of paper, a feature of the Holyoke convention will be group conferences led by specialists in the various divisions, and when statistical data is collected it will be largely along the lines of these grades of paper. Some general figures are applicable to several of the papermaking groups, but each group has its special problems which will be handled independently.

Typical of these conferences will be the following: Writing and cover paper, led by J. A. Reilly, American Writing Paper Company, Holyoke, Mass., chairman of the special committee for this group; tissue and toilet paper converters, E. J. Fitzgerald, Scott and Chester Paper Company, Chester, Pa.; book, H. C. Bradford, Rex Paper Company, Kalamazoo, Mich.; wrapping, A. M. Van Douser, Marathon Paper Mills Company, Rothschild, Wis. The paper board group will be addressed by the representative of a cost accounting firm which has designed a complete cost system for board mills.

A notable feature of the convention will be the banquet, Thursday, November 9, when Col. B. A. Franklin, of the Strathmore Paper Company, will be one of the speakers. Motion pictures on the making of paper will be shown following the addresses.

The program for the three days of the convention includes the following addresses:

Thursday Forenoon—"The Cost Accountant—His Past, Present and Future Place in the Pulp and Paper Industry," S. L. Bush, manager of research, Crocker-McElwain Company, Chemical Paper Company, Holyoke, Mass., president of the Cost Association.

Thursday Afternoon—"A Standard Basis for Comparative Cost Estimates," J. A. Reilly, manager cost and inventory department, American Writing Paper Company, Holyoke, Mass.

Thursday Banquet—"Men Make Systems—Systems Cannot Make Men," Col. B. A. Franklin, vice-president, Strathmore Paper Company, Mittineague, Mass.; "The Executive and the Cost Accountant," E. H. Naylor, secretary of the fine paper manufacturing associations.

Friday Forenoon—"The Use of Ratio Charts in Business," Harold Dudley Greeley, C. P. A. treasurer, National Association of Cost Accountants; "The Value of Comparative Costs," G. A. Ware, assistant secretary, News Print Service Bureau, 342 Madison avenue.

Friday Afternoon—Group conferences of cost accountants.

Saturday—Continuation of group conferences, followed by visits to paper mills in Holyoke and vicinity.

Recent Incorporations

JAMES A. MUIR COMPANY, Whippany, New Jersey, manufacture paper, paper boards, etc.; capital \$100,000. Incorporators, James A. Muir, Elizabeth R. Muir, Louis Muir, Morristown.

RENSSELAER PAPER COMPANY, Manhattan, New York, make paper; 500 shares preferred stock, \$100 each; 100 common, no par value; active capital \$50,000. Incorporators, M. Carberry, S. Berkman, A. Krissoff. Attorney, J. L. Holtzman, Woolworth Building.

THOMAS F. GARVAN, Delaware, paper mill material; capital \$1,000,000. Incorporators, Thomas F. Garvan, Agnes M. Garvan, Edward A. Matthews, Hartford, Conn. Corporation Service Company.

M. S. DOWD CARTON COMPANY, Hartford, Connecticut. To manufacture folding paper boxes. Capital \$50,000. Incorporators, Mortimer S. Dowd, Anna E. H. Dowd and Frances B. Hayward, all of Hartford.

STEVENS PAPER MILLS, INC., Windsor, Connecticut. To manufacture paper. Capital \$200,000. Incorporators, George C. Russell, Hartford, Conn.; Chester N. Stevens, New Rochelle, N. Y. and Lillian T. McManus, Brooklyn, N. Y.

BRANTLEY PAPER COMPANY, Pocatello, Idaho. Capital \$10,000, of which \$5,200 has been subscribed by Thomas Brantley, William E. Snyder and Charles E. Rush.

THE REYNOLDS MANUFACTURING COMPANY, Holyoke, Massachusetts. Capital, \$50,000. Incorporators, Wellington G. Reynolds, August W. Hoffman and Richard B. Lippman, all of South Hadley.

FOREIGN PAPER COMPANY, Manhattan, New York. Capital, \$20,000. Incorporators, F. H. Rice, J. R. Walker. Attorney, J. A. O'Brien, 1402 Broadway.

GATTI PAPER STOCK CORPORATION, Manhattan, New York. Capital \$200,000. Incorporators, N. H. Bowman, H. Cowan, W. Meighan. Attorneys, Smith & Bowman, 38 Park Row.

Several Sales of Timber Limits

Several timber berths, consisting of an area of 187 square miles, were disposed of recently in Toronto by the Ontario Government. The limits are located principally in the Thunder Bay, Sudbury and Algoma districts. The Government has received initial payments of \$78,600 and has guaranteed that the various contracts will be carried out. In connection with the sales the usual conditions govern and particularly the one in regard to the non-export of spruce pulpwood. It is said that prices in all cases were satisfactory, and the concerns which were successful in securing limits were the Continental Wood Products Company, of Elsas; Mageau Lumber Company, Limited, of Field; Pigeon River Lumber Company, of Port Arthur, and the Hope Lumber Company, of Thesalon.

Jacob Kindleberger Honored

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., November 6, 1922.—Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, has been named executive chairman of the Chamber of Commerce membership campaign. The local organization is after a membership of 1,000. Mr. Kindleberger has been a strong supporter in years past. His selection meets with the heartiest approval.

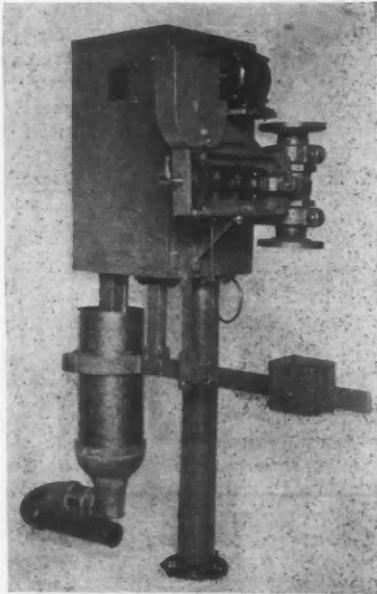
To Take Action on Forest Policy Report

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 8, 1922.—The Board of Directors of the Chamber of Commerce of the United States at their meeting at Dallas, Tex., on November 23, are expected to take action on the forest policy report which has been submitted by special committee. It is understood that Charles S. Keith has filed a minority report.

The Trimbey Automatic Consistency Regulator

(Patented)



A well tested and reliable means of securing **UNIFORM STOCK** for Beater furnish or Paper Machine furnish.

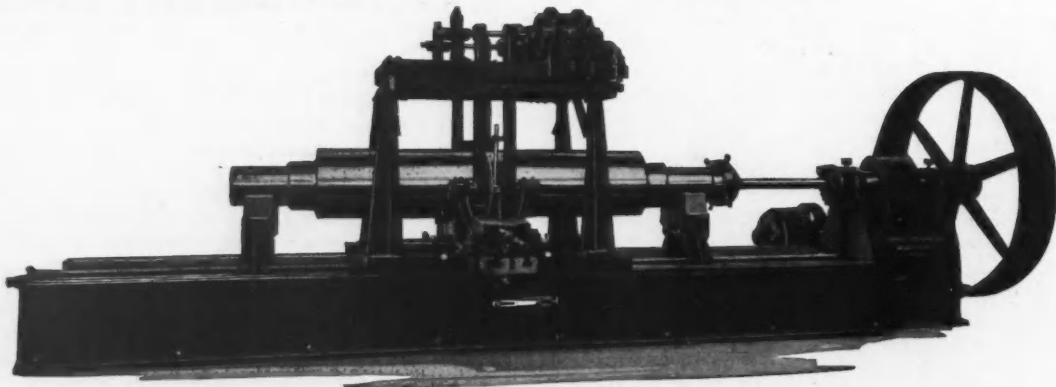
UNIFORM "brushing" action at the Jordan means improved quality.

More than 150 in use in the United States, Canada and Foreign Countries

Ask Us

TRIMBEY MACHINE WORKS
Glens Falls - - - - - New York

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



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

LOBDELL Micrometer Calipers are handy and accurate.

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

Section of the **Technical Association of the Pulp and Paper Industry**



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



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

DISCUSSION ON WASTE IN THE INDUSTRY AT FALL MEETING OF T. A. P. P. I.

The meeting on waste in the industry of the Technical Association of the Pulp and Paper Industry convened at 2:10 o'clock, Monday afternoon, October 9, R. B. Wolf presiding.

CHAIRMAN WOLF: Will the meeting please come to order? I thought it might be a good plan in opening up the meeting to give to the members of the Technical Association just a little idea of the constitution of the committee.

When Mr. Williamson asked me to take the chairmanship of the committee, I told him that I would take it under one condition—that there would be somebody to act as vice-chairman, who could do all the work, and I would only have to come in on the committee meetings and give whatever suggestions were necessary to tie it up with the General Waste Committee of the Federated American Engineering Societies, known as the Hoover Committee, of which I have the honor of being a member.

As I indicated to you this morning, this report, which has been gotten out in a very short space of time, was gotten out by Mr. Bearce, who is the vice-chairman. Mr. Bearce, as you know, is with the News Print Service Bureau and, thanks to Mr. Kellogg, has a staff to assist him in the compilation of the reports as the data comes in. What we are hoping to do is to take these reports and list them, and then find out from the analysis the subjects which are the most important and most productive of immediate results in effecting economies in the paper industry. This report is just a preliminary one, and this being the first meeting at which a full discussion can be held, we would like you to give us the direction we should take.

Fiber Loss in Mill Effluent

As was indicated in the preliminary report, it was suggested that we emphasize mill effluent and barking drum waste. My friend, Harry Fletcher, said this morning that he did not recognize that critter by the name given it, that is, "mill effluent." We can call it anything we want to, but the substance of it is the waste itself, the fiber losses of course going down into the stream which might either be recovered as second quality pulp or prevented from getting into the sewers, where it must necessarily have a lowered value.

Barking Drum Waste

The barking drum waste was suggested because at the meetings there was a great deal of emphasis on the difficulties encountered where barking drums were used. As a pulp mill man primarily, I know the difficulties that we have encountered and I think the

solution of that problem is of very vital importance because a good many mills are faced with the problem of shutting down or stopping the pollution of the streams.

Broke Loss

My friend, Harry Carruth, when the preliminary report went out, rather took exception to limiting the scope of the work to these two subjects. As I wrote him, there was no intention of limiting it; it simply came as the result of a meeting held last year, that these two seemed to be the most predominant things confronting us. Mr. Carruth suggests that the subject of broke loss in paper mills is very important, and as the result of his suggestion Mr. Bearce has worked into this report a suggested method, which happens to be a method that we are using at the Newton Falls Paper Company, of keeping track of the cost of broke; in other words, once a month, before all of those interested, the managers, superintendents and those who see the cost sheets, will be the exact figures of the cost of broke. I would like to hear a very full discussion on that subject this afternoon. I think perhaps the consensus of opinion of the meeting will be that it might perhaps be given precedence over some other things.

It was suggested, coming out on the train yesterday (and I would like to throw this into the meeting for discussion), that in addition to showing the cost of broke in the supercalendar room, in the cutter room, in the rewinder room, that we show the actual cost of mill fiber losses. That can be brought out in the discussion as to ways and means of doing it, but we should have an actual cost value placed on each monthly cost sheet of the mill fiber losses on the per ton of paper turned off the paper machines.

Steam and Power Losses

Another subject which is of very great importance, which I hope will be discussed, is the question of boiler house losses. Mr. Taylor, who is chairman of the Power Committee, has promised to discuss that matter and other members of his organization will discuss it, and I believe that is of very vital importance.

Before closing these few preliminary remarks I would like to ask the Waste Committee to meet with me here immediately after this meeting to discuss the general program for the future as a result of suggestions that are made here.

The meeting is now open for discussion of the Waste Committee report. Perhaps it might be well to dispose of some of these subjects that have already been emphasized. First, Mr. Rue, of the Forest Products Laboratory, is here and I believe has some very

interesting information on the bark disposal. Would you open the discussion, Mr. Rue, on the subject of bark disposal?

Fuel Value Depends on Dryness

J. D. RUE: The results of the work so far on the utilization of bark have taken the line of finding out the most economic point of dryness, particularly of the bark which comes from the wet drum barking. The utilization of bark from the disc barkers and other sources where it is relatively dry, that is, less than 50 per cent moisture, is of comparatively little difficulty. In fact, it then has a very definite fuel value and it becomes merely a study of the most effective and efficient methods of burning it. Wet bark, however, as it comes from the drum barkers, will vary all the way from 50 per cent up to 70 or 80 per cent; in other words, actually saturated with water, and the question of removal of that water mechanically is one of fundamental importance because it seems, from a study of the problem, that the bark must be in the neigh-

under long-time operation, a matter of several weeks or perhaps several months. This information will be available later, I hope, through the combined efforts of the manufacturers and the users of the bark presses.

I want to express, in behalf of the committee, the very cordial appreciation of the very sincere and helpful co-operation given in conducting these tests.

I don't know that it would be necessary to go any further into a discussion of the actual details or results of those tests, because they appear as a formal part of the report.

Fuel Value of Bark

Dry bark has very nearly the same heating value as wood, by actual test, that is, in the neighborhood of from eight to a little over nine thousand B. t. u. per pound. By increasing the amount of moisture in that bark, you will, of course, reduce the amount of actual fuel value. That is brought out very clearly in the committee's report in the two curves that are given. The straight line curve represents the decreasing fuel value of the bark as fed wet, as you increase the per cent moisture. The curved line represents the net heating value of the bark per pound dry weight. You will notice the fuel value increases very rapidly as the moisture is reduced, until you get up to about 50 per cent, between 50 and 60 per cent moisture, when the curve flattens off. So that it is necessary to reduce the moisture well down toward 50 per cent in order to get any high heating value. Fed at 50 per cent dry, the material as fed has a fuel value of about 3,500 B. t. u. per pound.

I think it should be emphasized very strongly that there is great necessity of getting the moisture out in order to work for efficiency in the utilization, getting the fuel value out of the bark.

In studying the uses which are now being made of bark, or rather the methods of handling it, it is almost universally the case that bark is simply disposed of and it is looked upon as a matter for disposal only, and very little attention has so far been given to using it in an efficient manner from the fuel standpoint. I believe I am expressing the opinion of the committee when I say that there are very definite possibilities of getting greater values out of the bark by paying proper attention to the design of furnace, and method of operating it.

I might add in regard to those tests which were made, that a bone dry content in the pressed bark, of 49.6 per cent was obtained when operating the machine at the rate of 2,980 pounds of bark per hour, figured as bone dry weight. Another machine somewhat closely approached that same figure.

That would mean, by the drum barking method you probably could figure in the neighborhood of 11 to 12 per cent bark by weight of the wood. An actual test which we made in connection with this bark pressing showed, I think, approximately 11 per cent of bark from the wood. I haven't the figures of that converted directly into cords.

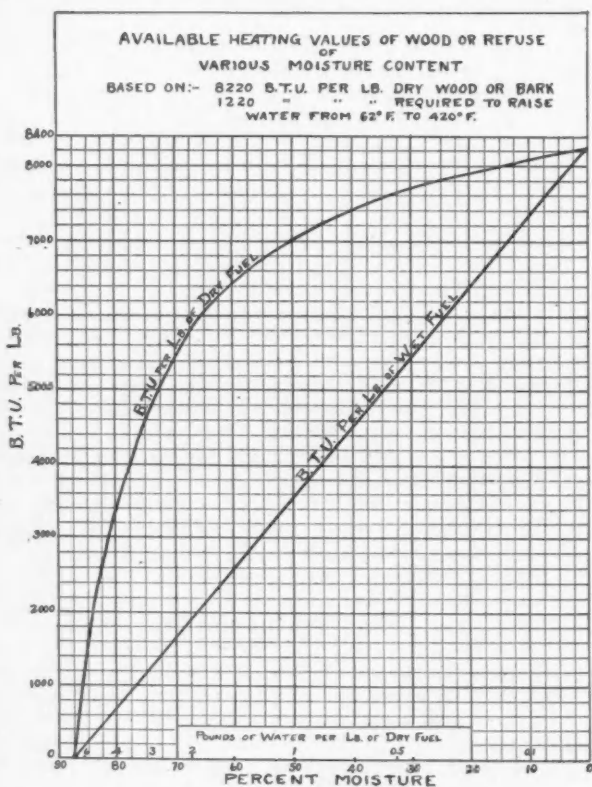
CHAIRMAN WOLF: Are there any further questions with reference to the bark matter?

J. N. STEPHENSON: Mr. Chairman, speaking for one of the bashful members here, could there not be a curve constructed showing for each percentage of moisture left in the bark, the amount of heat required from the available heat units, to evaporate the moisture that was left in the wood, or, to put it the other way, to show the available heat units for heating after the moisture in the wood was driven off?

G. D. BEARCE: Mr. Chairman, isn't this curve on page seven, that is referred to, the one which gives the information that you have in mind; in other words, for each pound of bark, or do you want to convert it directly into cords?

MR. STEPHENSON: No, per pound.

MR. BEARCE: As you see, this curve shown is based on a theoretical heat value of bone dry bark of 8,220 B. t. u. per pound of bark. Now, if that first allowance is made, of 1,220 B. t. u. per pound required to raise the water in the bark from 62 degrees



borhood of 50 per cent, if it is to be efficiently burned and have a definite fuel value.

Bark Presses

The report of the work of the committee will appear as a supplementary publication, covering some tests which were made on existing bark presses, with a view to determining whether or not a product approaching 50 per cent bone dry could be obtained by those presses; and I am glad to say that the results have shown that such is the case. Those tests have only been short tests, a matter of a few hours, and simply demonstrate that the machines will do the work.

We have not attempted to make a study of whether it will do that effectively over an extended period of time. That remains to be determined, and I am very glad to say that both the users and the manufacturers of these machines are sufficiently interested to take up a further study of the actual efficiency of the machines

Fahrenheit, assumed, to 420 degrees stock temperature, that is already taken out in that curve, and the straight line curve can be read directly, showing the heating value of bark of any particular percentage of moisture. This is on a theoretical basis, but at the same time we have had information from actual tests that shows this is very close to actual operating conditions. For instance, you take 50 per cent moisture reading halfway the percentage of moisture down to the foot of the curve and following that line, you cross the straight line curve at approximately 3,500 B. t. u. per pound of bark. But if you have, say, a 70 per cent moisture in that bark, you only obtain approximately 1,600 B. t. u. In other words, if you can reduce that bark from 70 per cent of water to 50 per cent of water, you will get the difference between 1,600 B. t. u. and 3,500 B. t. u., which is a definite heat value which can be reclaimed and remove the water.

Heat of Flue Gases to Dry Bark

J. N. STEPHENSON: Another point, would it be possible to deliver the stack flue gases into what you might call a chute, so arranged that the pressed bark could fall through the rising stack gases into a funnel that would deliver them to the dutch oven? You have 420 degrees in your stack gases.

G. D. BEARCE: That same problem has been brought up before, but I think that is primarily a power house problem. Probably Mr. Taylor can define this a great deal better than I can, but as a usual thing you are obliged to have a certain temperature to get your draft conditions, unless there is forced draft. Then it would be a problem of how much it would cost to acquire these forced draft conditions and the value you would receive in drying out this bark further. You see, it apparently burns very well at approximately 50 per cent moisture, and your point is to further remove moisture by means of the heat from stack gases. That is an interesting phase of it and I don't know of any mill that is equipped to do anything of that nature. However, there may be possibilities in attacking the problem along those lines.

Hammermill Paper Company

CHAIRMAN WOLF: On the question of forced or induced draft in burning bark some time ago when I visited the Hammermill Paper Company I saw them burning bark with induced draft. Perhaps Mr. Obermanns will give us his opinion on the advantage of forced and induced draft.

H. F. OBERMANNS: I don't think I would be able to give you any information on this subject as applied to the burning of bark. I think Mr. Klund, who is connected with the Engineering Department, can perhaps better do that than I because I am merely a papermaker.

F. P. KLUND: A number of years ago we tried a set of hollow blast grates, which were guaranteed to burn almost anything, even ice and snow; but they did not work out very successfully. We have experimented with flat grates, inclined grates, and stokers. At the present time we are using an inclined type of grate which seems to be very successful. The wet bark drops at the top of the incline and rolls down and is dried out and burns as it falls toward the bottom. So far as I know, that has been the most successful type of grate.

As Mr. Rue said a few minutes ago, the greatest trouble in burning wet bark is in reducing the amount of moisture. We get in the neighborhood of about 60 per cent moisture content, sometimes slightly under.

Mr. Stephenson touched on a very important phase of bark burning, and that is the drying of the bark to a greater extent than is possible with presses. With presses, especially the hydraulic type, or any other pressure type, you must give the bark time enough to allow the water to be pressed out. I would question very much if it is possible to get bark under 50 per cent moisture content from the drum type of barker by any press, especially where the wood is wet from being in the water or is wet on account of greenness.

This limits, as I said before, the amount of moisture which can be taken out.

I heard some time ago that one of the mills had been using a rotary drum similar to that used for burning black ash in the soda pulp mill. I do not know how successful it was, but it seems to me something on that general type, taking the waste gases from coal burning boilers, gases which are rather high in temperature, between 400 and 500° F., could be used.

Of course, there is some danger of combustion taking place in these rotary drums, but it is my own personal belief that these temperatures will be so reduced by the amount of moisture in the bark that there will be very little trouble from this cause.

If any of the members present have any information on the subject of rotary driers, I think it would be very interesting. We have had quotations and have investigated the subject more or less with the people who make a business of making driers, but, as every one knows, such driers are extremely expensive and it certainly seems reasonable to suppose that a very simple form of drier will accomplish this result.

CHAIRMAN WOLF: Has any one information on rotary bark burners which they would like to disclose?

MR. KLUND: I might add, Mr. Wolf, that we are consuming all of the wet refuse from our barking drums, but we are using a small amount of sawdust and other refuse from cleaning up defective wood. We are using knots, sawdust, splinters and everything of that sort, which is considerably drier than the wet bark, and this mixed together seems to burn very successfully without the addition of any coal.

Practically all of our wood goes through the drum barkers and the bark comes through wet.

We are using the Thorne barker, and also the Bache Wiig barker. Almost all of our wood at the present time goes through the Thorne barker; that is, about 95 per cent.

SECRETARY MACNAUGHTON: Have you data as to the moisture per cent in the bark going to the press, and after it goes through the press, when it is fed to the furnaces?

As it leaves the Thorne barker, the bark is mixed with water and conveyed in flumes; it is strained out by means of a conveyor with a perforated bottom. As it goes to the press the moisture content is from 69 per cent to a little over 82 per cent. Leaving the press, the percentages of moisture vary from 48 per cent, as a minimum, to 69 per cent. That, of course, depends a great deal, as I say, on operating conditions, and is under the control of the man operating the press.

H. F. OBERMANNS: Enlarging a little on Mr. Klund's remarks, I saw some steam flow-meter tests a few days ago, that show we are getting from 200 to 300 boiler horsepower from the burning of refuse bark. That bark is collected from about approximately 250 cords per day.

CHAIRMAN WOLF: Mr. Brawn, would you tell us the experiences of Pejepsot Paper Company?

Pejepsot Paper Company

W. E. BRAWN: The bark press that we are using at Brunswick is made by the Nekoosa Machine Works and is the plunger type of press, in contrast to the Paulson and the American presses, which are of the roll type. The bark comes from American drums, which are wet drum barkers, and is discharged on a conveyor of wire mesh made by the Spencer Wickwire Works. The water just simply drains away and the bark that goes to the bark press is approximately 18 per cent dry. It will vary, of course, from 12 to 22 per cent, and feeds into the press and emerges at approximately 40 per cent. We have found to operate the press for a higher dry test is too much for the construction of the press, although we have done better than 50 per cent for short periods of time.

This bark goes to a dutch oven, which is just a brick furnace with a herringbone type of grate and a stack. The only dry

material added is the sawdust which comes from sawing the four-foot wood into two-foot lengths as it is fed into the drums. There is no knife-barker waste or any other material added except that sawdust. It burns from one week to the other; it just needs starting up.

We use natural draft. The figures that we have estimated don't show us 200 horsepower for 200 cords. The best we have been able to determine from such tests as we have made is approximately 70 horsepower from 220 cords; but we figure that we are a bit low on that estimate. That is about our status on bark burning at the present time. We have some changes which we contemplate for next year but have not definitely decided on them as yet.

CHAIRMAN WOLF: Has Mr. Gleason anything to contribute?

Nekoosa-Edwards Paper Company

E. P. GLEASON: At the present time we have four distinct kinds of furnaces burning bark. We have the hollow blast grates that Mr. Klund has mentioned, we have the Jones retorts with which we feed coal when we need it (fortunately, we haven't needed it), and we are also burning on the flat grates in a dutch oven, and also with Type E stokers. We have the first installation of the inverted Type E stoker, and to my mind today that Type E stoker is the best combination coal and refuse stoker that I know of. We burn at our Nekoosa plant refuse for about fourteen to fifteen hours a day and then swing immediately over onto coal with practically no change in the flow-meter chart. We have this Type E stoker, both forced draft and induced draft.

We ran a test recently to show how easy it is to waste fuel. We first ran out a carload of refuse with the forced draft on and averaged 38 per cent efficiency of boiler, furnace and grate. We immediately ran in a second carload of exactly the same material, and by watching our conditions we increased the efficiency to 64 per cent. The boiler room men, without realizing it, can get either of those two conditions very readily. With the 38 per cent efficiency, the material was going up the stack, and with the drier refuse we have had some breaching fires that ran the recording thermometer on the economizer right off the chart—that is, with dry refuse. Using the wetter refuse with the hollow blast grates, we get about as good results as we can expect; that is our conclusion.

The entire problem requires a great deal more study than has been given it, and I think that the Light, Heat and Power Committee ought to get busy on it.

CHAIRMAN WOLF: Mr. Taylor, can you enlighten us a little?

Practical Limit of Bark Presses

H. S. TAYLOR: The problem really is wet bark, not dry bark. If the refuse is dry, it can be put in a straight dutch oven with almost any kind of a grate and burn it. If it is wet bark of 60 to 70 per cent moisture content, I think coal is needed to burn it. Using the underfeed stoker, with coal given steadily to that stoker, I think will show the best results today.

With bark presses, I think there is a limit to the water that can be removed with the bark press. I think you have to go farther than a mechanical press to get bark, say, with less than 60 per cent of moisture in it.

The question of flue gases to dry that bark further is a problem; we worked over it in a number of different ways, but it is difficult to get an installation that won't block the draft; in other words, better efficiency is secured in evaporating the moisture in the furnace than outside.

We still find that the underfeed stoker—it may be a Jones or a Type E—will burn the refuse and give you fuel value. You are up against disposal of the wet bark and even if you can get some fuel value out of it you are saving money.

E. P. GLEASON: I don't quite agree with Mr. Taylor that 60 per cent moisture content is the limit for mechanical pressing. We

have had the American bark press working in our mill for two or three years. From our John Edwards Mill we pump the bark with water 800 feet to the press. The average of five months showed 62 per cent water content. We recently installed a Nekoosa press right alongside of it. These are the presses that Mr. Bearce and Mr. La Rue have been testing. We have been watching them quite carefully and we find that in putting a little more weight on the American press and by changing the speed we can get the moisture content down to about 52 per cent without much trouble.

I might say this: If any one has an American press, the first thing I would recommend is to equip it with a variable speed motor and let the operator vary the speed to get a uniform mat of bark under the rolls. Why should you expect a press to give you a uniform moisture content if you don't attempt to spread the bark or feed it to it fairly evenly?

I will say that the two presses side by side look about alike, so far. The advantage of the plunger press is that it takes up the uneven flow of bark to it. In other words, it does not send the bark out until some other bark has come to replace it; so there is an even pressing all the time. On the other hand, the rotary press seems to take a little less power and possibly a little less attention. I will say that the latest development of the plunger press is probably a hundred per cent stronger than the press at Pejepscot Paper Company, and I don't believe that the mechanical troubles will be nearly as great in the later machines being turned out. I believe we can get down to 52 per cent moisture content with the mechanical press. The outlook is really encouraging, and knowing that the reduction from 60 to 50 per cent in moisture content will increase the fuel value 40 per cent should make us all get busy and take care of our presses; put the proper weights on them and vary the speed with a variable speed motor, so that we get the best results.

E. B. WARDLE: Mr. Chairman, I was very much interested in what Mr. Gleason said about pumping bark from the tumbling drums. I would like to ask him if he will tell us a little about what style of pump he used and whether it was necessary to work up the bark at all before sending it to the pump from the barrels?

E. P. GLEASON: Our first experiments along that line were with the common, ordinary silage cutter, and we found that was not heavy enough, so we had the Nekoosa Motor Machine Company make us a heavy silage cutter and we found that it ran for four or five months last year with practically no trouble, and it is running right along today. We have a common fan pump—a six-inch Pusey & Jones pump—and we add enough water to the bark and pump it 800 feet.

Recommendations to the Committee

R. S. KELLOGG: Mr. Chairman, it seems to me the committee in its next report ought to give us information on the cost per cord or per hundred pounds of dry bark, of pressing this bark and getting it down to a burnable condition.

CHAIRMAN WOLF: All right, we will make a note of that, Mr. Kellogg.

Are there any further suggestions you would like to have the committee work on?

H. O. KEAY: I would like to ask if the matter of preparing the bark by the use of waste heat is to be allotted to the Waste Committee or to Mr. Taylor's committee? Is Mr. Taylor going to take the bark at 50 per cent moisture and tell us what he is going to do with it, or are we going to propose what he ought to do with it?

CHAIRMAN WOLF: As chairman of the committee, I would say we would be glad to pass the buck to Mr. Taylor, if he will take it.

H. S. TAYLOR: We haven't worked out any proposition that I would want to recommend on the question of getting the rest of the 50 per cent moisture; it is just a question of trying out and making an experiment, but experiments cost money.

(To be continued)

WASTE IN PULP AND PAPER INDUSTRY*

By B. T. McBAIN, DIRECTOR OF MANUFACTURING, NEKOOSA-EDWARDS PAPER COMPANY

I have been harping on this string for many years. Many of you, no doubt, have read some of my stories on the subject, others have heard me talk about it to gatherings of a few hundred or more. Some say I talk about it in my sleep; probably I do dream about it, for the enormous waste in the industry is enough to give any thinking person a nightmare.

This waste is not alone in one branch of the game, but everywhere from the wood pile to the shipping room, so I will briefly touch on the points which have been forcibly brought to my attention during my twenty or more years in contact with what we all term our "job."

Wood Yard

In the buying of wood, not enough care is exercised by most mills. Rotten wood or wood cut for over a year where the worms have started their boring, should not be piled in the yard for it only contaminates the good wood already in storage. If it must be taken for any good reason, it should be sent direct to the wood room and processed as quickly as possible. The only good reason I know for accepting such wood is that the mill is down because of no wood supply and no other quality can be secured. Wood deteriorates from 5 to 20 per cent each year according to species or kind and much money is lost every year by almost every mill in the country by this deterioration, both because of buying poor stuff and because of storing it with the better grade and allowing it to stand, using the best first. Many mill men are like boys who open their lunch buckets and eat the pie first, the cake next and so on down to the bottom of the lot, always taking the best until it is all gone, or leaving that which cannot be used. When this is done at the wood pile, it contaminates that next piled and greater waste results.

Most wood buyers and scalers are not experienced pulp and paper makers and very few of them, comparatively speaking, ever go into the wood room and watch the wood opened up. Rotten wood makes rotten paper and can make nothing else. Why buy it? There is always a day of reckoning ahead, even though it may be only in the after life for some of us. So I say, keep after your wood buyer. Get your specifications right and then insist upon the contractor supplying what your specifications call for. If all of you will do this, you will be doing more for the industry and your particular mill than many imagine.

Wood Mill

I have said, "Rotten wood makes rotten paper." Keep the rotten wood out, it is a waste, it will burn, but does not even make good fuel.

The sooner the paper manufacturer sees the light, not only regarding rotten wood but regarding wood with the bark on, the sooner greater savings will result. Buying wood with the bark on is a great waste. I hear many say, "You are wrong there. We get great fuel value from bark." So it is in part, but many mills now bark their wood wet with drum barkers and get very little fuel out of the the wet bark. In many places it takes coal to burn the bark and no value comes from the bark. One mill found the bark from 200 cords of wood per day made 70 H.P. The waste was the same as 40 cords, or 20 per cent of the 200 cords with the bark on. This bark cost the same per cord as the wood, or \$13 per cord at the mill, freight considered, or \$600. The mill could have bought 60 tons of coal for the same money and made 1,500 to 1,700 H.P. for the same cost.

*Read before meeting of Superintendents' Association, Rothschild, Wis., Nov. 4, 1922.

I hear someone say, "We cannot get wood with the bark off." You can. If all of you gentlemen here refuse to buy wood with the bark on, where will the wood producer sell his wood? He will come to your requirements and specifications if you have the nerve and backbone to stand for what is right and it is not right that you should be forced to buy rotten wood, or wood with 20 per cent or more waste in the bark.

In the wood mill there is waste. In many plants the waste from the drum barkers is sent to the furnaces wet and is of no fuel value, as stated above. This can be made of value by pressing or removing a greater percentage of the water or moisture than is now done, but it can never, in my opinion, be made an economical fuel to use.

Drum barkers are economical in one way, but very poor substitutes for mechanical barkers from other points of view if you want clean paper. I do not refer to any one brand. They all look alike to me. I would not rather have a barker in the mill than have a drum barker if clean paper is specified in the order, because while they may remove the bark from the sap of the log, they pound part of it right back into the heart and so no amount of washing can remove it. There is a new barker on the market now which does not pound the dirt back into the wood. I believe one is at Kipawa, Canada, and one at Hammermill, in Erie, Pa. I am not advertising any one's product or machinery and, therefore, will not mention the name of the inventor in this paper. You will do well to look it up and look into its claims of efficiencies and economies of wood.

I believe in many wood rooms much good fuel is wasted by sending it to the pulp mill, where as fuel wood it does not make good pulp. Another waste, because the resulting paper is off-quality and not worth what it would be if made of pulpwood.

Ground Wood

I am now down to the ground wood pulp mill. Much labor is wasted in many plants because no record is kept of the men per ton of pulp, no record kept of cords handled per grinder and no record kept of pulp produced per cord or per 100 H.P. which results in pulp and power waste as well. Labor and wood and power cost money. Much pulp is wasted in most plants because of a mistaken idea of white water. Some say, "We cannot use it all"; others, "It slimes up the pipes and is of no value." I know where it has all been used for years and it does not slime up anything.

Water in the manufacture of pulp and paper, in my opinion, is simply a means to an end. It is a conveyor to convey the pulp from the grinders to screens, deckers and wet machines, then to beaters or mixers and paper machines. A rubber belt, chain or bucket conveyor is not thrown away when it has delivered its first load, but is kept continuously in use until worn out, or some better method found for conveying. Why not the same with the water? It can be used, it is being used and you can use it, with 5 per cent to 10 per cent or greater saving, by greater product per cord per man and per 100 H.P.

This gets me down to my oft repeated question, "What is a cord?" Who can answer it? Webster says, "A pile of wood 4x4x8 feet, or 128 cubic feet." Is that a cord?

One mill buys four-foot wood, another eight-foot wood. One buys 3-inch diameter sticks, another any old sized sticks, one buys with the bark on; old wood has more bark than young wood, but cuts have more bark than tree tops. One allows knots to be piled with good, clean wood. Another buys with bark off. Others use hemlock and buy part as cordwood or bolts and part by log scale.

Some use Scribner's scale, some Doyle's, some Spaulding's and some Canadian log scale. All are different, yet one thousand log feet shows on the books in most cases as 2 cords. Then we scientifically prepare our cost figures and compare them with each other. One gets 300 pounds sulphite per rough cord and another 1,000 pounds per 500 log foot cord and another 1,100 pounds per rossed cord, but what is a cord and of what value are these comparative figures? There is a waste of money and time in preparing such figures, but greater waste to the industry as a whole because no one gets what he thinks he is buying when he buys a cord of wood. Why not buy wood by weight? We sell our product by weight. Would any of you consider selling or buying other commodities by measurement? Of course not. Then why buy wood that way? It is the greatest expense you have. It is now the greatest field for waste.

Sulphite

I have given figures in sulphite production under the previous heading, following my question, "What is a cord?" but that is not the only place of waste in the sulphite mill. I believe I have seen more waste in the sulphite mills of the United States and Canada than in the ground wood mills. From acid room to deckers, bleachers or wet machines there is waste in some mills. Some are better than others, but none are perfect.

Imperfect combustion at sulphur burners, leaky gas piping, poor control, poor coolers, systems too small or too large, off-quality acid, leaky blowpit bottoms, leaky decker cylinder packing, waste of white water are all wastes and run into money. All of these can be corrected, have been in some mills and can be in yours.

But I believe the greatest waste in many mills is the habit of blowing a bad cook into the river and try and cover it up instead of running over wet machine as screenings and holding for a grade of paper where it can be used. That off-quality pulp has cost as much per ton as the good stock and you are only throwing good money into the river when pulp is so disposed of. Screenings are worth refining and saving; not one pound should be thrown away. This refers also to ground wood screenings. They can be ground into merchantable pulp.

Steam cost in sulphite making is one of the greatest items of cost outside of wood. If any mill is using over 8,000 pounds steam per ton of sulphite, there is a waste which can be saved.

Paper Mill

Paper machine white water contains from 2 pounds to 5 pounds of stock per 1,000 gallons. One superintendent told me "That does not amount to much," but as there are only 40 pounds of stock to 1,000 gallons in the flow box, this loss is from 5 per cent to 12½ per cent as it goes down the sewer. Some of you save part, some save none, none of you I believe, save all this waste.

Machine hands many times forget, other times refuse to pull the save-all valve when running stock over the wire at felt washing time. It is that time, in many mills, that 100 per cent goes into the river and if a machine makes a ton an hour from 500 pounds to 1,000 pounds of good stock goes to waste, while the felts are being hurriedly washed and the stock not shut off "to save time" putting it over the wire after washing.

Wires, felts, both woolen and cotton, lubricating oil, in fact, almost everything, are wasted more or less through carelessness or thoughtlessness on the part of machine hands. The screenings at the paper machine screens, by so many mills thrown into the river, are valuable and worth saving.

Another source of waste is the improper control of steam in drying. Some mills use 3 pounds of steam per pound of paper. Others 4½ pounds and I know of some using 5 pounds and all making the same grades of paper. If paper can be made with 3 pounds of steam and a steam cost of \$1.80 to \$2.00 per ton, anything over that is waste.

TECHNICAL SECTION, PAGE 233

A poor backtender many days wastes more paper value changing reels than you pay him in wages. If your machine loses over one hour per day on the average washing felts, changing clothing or for any ordinary repairs, there is a waste, 23 hours equals 100 per cent efficiency in up-to-the-minute mills. I know of one mill in Wisconsin today only losing an average of 45 minutes per machine per day. It can be done, is being done and you can do it, if you are not now doing so.

Broke, both wet and dry, make the finished product cost more. It is a waste. Broke comes at reels, at winder, at cutters, at re-winders, supercalenders and in finishing rooms. Much of this waste is also due to thoughtlessness and carelessness. A close check and record posted in conspicuous places will do much to correct this abuse, which results in waste.

Careless handling of the paper from finishing room to storage or shipping rooms causes breakage and waste.

Too much labor is a waste, holding a man today because you might need him tomorrow, is needless waste.

There is one more waste I will call to your attention and then I will close this paper, giving you all a chance to pick it to pieces.

This last is by no means the least. It is waste in heating. Many mills use twice as much coal in winter as in summer. Much of this is waste and can be saved by proper heat control and supervision. Much more can be saved by using the waste heat going out of the mill by the machine hood route. It is being done and you can do it and you can get hot water for your beaters at the same time.

I have tried to call your attention to some of the wastes in the paper industry and to suggest remedies.

No doctor has finished his work by simply telling a man he is sick. The sick man usually knows it. The doctor must prescribe for him and show him the road to recovery of health. I hope my paper will be taken in this light, although I have really only hit the high spots.

This is, in my opinion, one of the many spots where the practical man and the technical man can co-operate to great advantage to both.

Riordon Outlook Improved

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., November 6, 1922.—The news that the Riordon Company, Limited, is immediately resuming operations in the woods, including the Gatineau Valley, was received here with considerable satisfaction. In the Gatineau section it is expected that upwards of 2,000 men will be employed this winter. The announcement turns attention to the position of the company. Operations were commenced at the several mills at different times, and the fact that woods operations are being planned for this winter seems to indicate that wood piles have been greatly reduced in the year.

Shareholders of the company and others are naturally interested to learn what the next step will be. From November a year ago, to July 31, bank loans were reduced from \$4,400,000 to \$2,550,000. It is presumed that since July 31 equally good progress has been made, so that these loans are now comparatively small. The results up to July 31 were achieved by continued operation of the Kipawa and Hawkesbury mills. It is now definitely known that the company's equity in the Gatineau properties has been saved. The higher prices for pulp which have been maintained during the past month, and more, has also been a helpful factor.

What will be contained in the next statement to creditors remains to be seen, but it is certain that the outlook for the salvaging of the company as an entirety has been accomplished in a manner which fully justified the note of hopefulness sounded at the meeting November, 1921, by the late Senator Edwards and others. While the position of creditors cannot be supposed to be clear at the present time, their position is much more reassuring than it was twelve months ago.

STRONG, QUICK COOK, HEMLOCK SULPHITE*

By LEONARD SMITH, OF THE NEKOOSA-EDWARDS PAPER COMPANY, NEKOOSA, WIS.

To the pulpmaker, a hemlock log is indeed an interesting study. As it enters the wood mill upon the conveyor, he assumes that it must have had numerous and well developed limbs, as evidenced by its many knots.

As it passes over the live rolls of the carriage, he is impressed by its wonderful bark, or its delicate inner skin, but, oftentimes, when its interior is laid bare by the saw and the splitter, he is apt to say, among other things, "Surely, beauty is but skin deep."

Being a practical man, as well as a technical man, he is not dismayed, for he realizes that, after paying for a 100 per cent sound log, he must use his ingenuity, to get the most out of it.

Cleaning and Preparing

There are various methods of getting rid of the "beauty spots" (bark and knots), as experience has taught that they are detrimental to the manufacture of strong pulp, if allowed to pass to the digesters in any but in the smallest amount.

The method of sorting and the disposal of the infected wood present a problem in economy versus strength of pulp desired.

If strength is paramount it is advisable to eliminate all of the rot, even to the wasting of a small amount of good wood, due to cross graining. This can be disposed of in a number two grade of pulp.

Chipping

The chipping of the wood is one of the most important steps in the manufacture of strong, quick cook, sulphite.

The foremen of this department should be thoroughly instructed as to the importance of keeping the chippers in first-class condition at all times. Chippers in general work on the same principle, but very erratic and widely different results are obtained from the same chipper due to various causes.

If it were possible to get absolute uniformity in all of the stages of pulp manufacture, the results desired would be easily obtained, therefore once the proper procedure is found, the measure of success is in direct proportion to the degree of uniformity maintained.

Some of the factors which affect the quality of the chips are, the shape of the chipper spout, and the relation of its diameter to the diameter of the wood, the clearance between spout and disc, the condition of wearing plates in the spout, the condition and setting of bed knife, the speed of the disc or number of cuts per minute, the condition of the face of the disc, the cheek plates, and the face plates, the condition of the end thrust bearings, the keenness and setting of the knives and their bevel and thickness for different seasons of the year, and last, but not least, the length of the wood and its shape, whether round or split, and the rate at which it is fed to the spout.

Each of the above has its particular effect upon the uniformity of the chips, but to just what degree, is still a matter of discussion among pulpmakers.

If it were possible to make the proper chip in the chipper, there would be little or no use for rechippers or crushers, and screens would be used only for dust.

The results of tests made on a 47-inch chipper, which will be given later, lead the writer to believe that the above-mentioned result can be obtained, but it is a question if the outlay would be warranted.

Screening and Rechipping or Crushing

The two types of screens are the flat or shaker screen, and the revolving screen, each of which has its advantages as well as its faults.

*Read before the meeting of the Superintendents' Association at Rothschild, Wis., Nov. 4, 1922.

In general, it can be stated that the uniformity of the chips from either type is materially affected by the size of the openings in the plates or wires, the rate of feeding, and the subsequent treatment of the rejections.

Crushers or breakers of various types were at one time quite generally used to break up the chips and slivers before screening, but very good results are now obtained by screening first, and then passing the rejections from the screen to a hammer type of crusher or a rechipper.

Another system of sorting and breaking is as follows: Chips are thrown from the chipper disc against a revolving, iron studded breaker disc, then passed over a very coarse screen—the rejections from which all pass to a hammer crusher, thence to a regular type screen, the rejections from which pass through a rechipper and join the main body of chips which are finally put through a dust screen and thence to the digesters.

This surely is a well-worked-out system in an attempt to correct an evil, but in many cases the same result can be obtained with less expense, by corrections at the chipper, for "once a poor chip, always a poor chip."

The final chance to overcome the irregularities of chipping is to screen to various sizes in different chip bins and cook separately.

To illustrate in a concrete way, some of the factors affecting screening and chipping, the results of a number of tests, are given.

These chip tests were made according to the method used at the time and they served the purpose very well, being a graphic means of locating irregularities.

The chipper used was an 84-inch four-knife chipper, with 13½-inch square spout and 7/8-inch knives set in different ways.

The wood was mixed, round and split, and cut in 24-inch lengths. The speed of the disc was from 150 to 200 r.p.m., being driven by a well-loaded water wheel. Later it was driven by a motor at a speed of 210 r.p.m., with a maximum consumption power consumption of 90 hp.

The chip samples were taken from the chip conveyor, going to the digester. The screen was of the single revolving type, six feet in diameter, with one five-foot section of wire, 1½-inch opening, and two five-foot sections of 7/8-inch opening.

The three testing screens used had 7/8-inch, 1/2-inch and 1/4-inch openings and the grading was figured according to the weights passing each size.

A series of tests were first made to determine the relative merits of a crusher and a rechipper working under the same conditions—that is, on the rejections from the screen. The average was as follows:

	Rechipper	Crusher
Over 7/8"	21.13%	30%
Over 1/2"	52.81	52.32
Through 1/2"	26.05	17.68
Over 1/4"	15.58	9.54
Through 1/4"	10.48	8.14

It showed that the rechipper gave over 8 per cent less coarse chips and about the same amount more of fine chips than the crusher.

Another test made was with different settings of knives, and without crusher or rechipper, but with chipper spout filled to the maximum in each instance.

	Knives set 9/16" opening	Knives set 7/16"
Over 7/8"	24.3%	10.33%
Over 1/2"	62.85	67.63
Through 1/2"	12.75	22.02
Over 1/4"	8.91	15.59
Through 1/4"	3.94	6.45

showing for the 9/16-inch set nearly 14 per cent more large chips and about 10 per cent less smaller chips than the 7/16-inch set, though the latter has about 5 per cent more of desirable chips.

Another interesting comparison of tests showing two extremes is as follows:

Chips Crushed Before Screening Knives $\frac{1}{8}$ " set, $\frac{3}{8}$ " opening January (frozen wood) (Chipper water wheel driven 160-200 r. p. m.)	Rejections Only Crushed Knives $\frac{1}{8}$ " set, $\frac{1}{2}$ " opening August (Motor driven 210 r. p. m.)
Over $\frac{3}{4}$ "	5.29%
Over $\frac{1}{2}$ "	54.46
Through $\frac{1}{2}$ "	40.25
Over $\frac{1}{4}$ "	25.51
Through $\frac{1}{4}$ "	3.14

From the chips running over 85 per cent of desirable quality, sulphite pulp was made in $8\frac{1}{2}$ hours' cooking time with 2 per cent scenings, and from this pulp an all-sulphite sheet of paper testing 9 to 1 point per pound was made.

The test from the 47-inch chipper above referred to was made on balsam sticks which just fit the nine-inch spout. The knives were set $7/15$ inch with $1/2$ -inch opening and the chipper speed was 550 r.p.m. No crusher was needed, as the results show.

Over 1"	.01%
Over $\frac{1}{2}$ "	.93
Through $\frac{1}{2}$ "	.06
	100%

As stated above, these tests are given to illustrate the great irregularities possible in the wood-preparing department, and they in turn will affect directly the strength of the resultant pulp.

Cooking

This is a subject about which there are many arguments and many ideas have been advanced and exploded and it is indeed a fertile field for chemical research, for it is here that practically 50 per cent of the wood is lost.

Not until much of this loss is converted into marketable by-products on a commercial scale can we boast about getting the maximum yield.

It is a fact that at different sulphite mills the cooking is conducted in widely different ways, and yet each claim equally good results.

One must infer from this that the method of cooking is something that must be worked out by experience to fit the existing conditions.

It is a fact that even with a successful method it requires a very good cook or digester man to duplicate results day after day, and it adds greatly to his task if there is a wide degree of variation in the chips for the different charges.

With uniform chips of uniform moisture content, and, using an acid with a minimum test of 3 per cent free SO_2 , it is possible to cook in eight hours, by the direct method, and produce a hemlock sulphite pulp, which, when properly handled in the beaters and on the paper machine, will produce a paper with a strength factor of 90 per cent and even better.

Pulp Screening

This department, also has its particular part in the production of a strong paper, for not all of the pulp blown from the digesters and screened in the ordinary way is suitable for a paper of maximum strength.

Poor chips, as well as irregular cooking practices, will show up in this department, but by trying different arrangements of screens, and sizes of perforations or slots in the plates, the defects can be remedied to some extent.

Very good results can be obtained by making or screening two or more grades of pulp and using the best for strength.

Once obtained, all of the results mentioned can be maintained only through uniformity, from the grade of wood to the finished sheet, and this requires co-ordination and co-operation in each and every department of both pulp and paper mills.

The old system of "passing the buck" in the paper industry originated from lack of co-operation between the pulpmaker and the papermaker, and though not entirely obsolete is fast becoming so, particularly in mills that produce results. Without complete co-operation, best success cannot be attained in any line of endeavor.

TECHNICAL SECTION, PAGE 235

Co-operation, as I understand it, is one of the cardinal principles of the association of superintendents. Its past success has been, and its ultimate success will be, measured directly by the co-operation of its individual members, though they be superintendents or managers.

Odorless Manufacture of Chemical Pulp

STOCKHOLM, October 24, 1922.—Dr. E. L. Rinman, the chemical expert at Cellulosa, Limited, in Stockholm, has just completed experiments with his newly invented method of producing cellulose, which is proved superior in many respects to the old vile-smelling sulphate methods. The experiments have been financed by Cellulosa, Limited, with some help from Swedish cellulose industries in general.

Though very much alike in the actual production of cellulose, the Rinman method and the sulphate method differ essentially in the composition of the boiling solvent and the further treatment of the waste lye. Rinman works with lyes that are free from sulphur, and succeeds in producing chemical products of high value from the organic substances which have been dissolved by the waste lye, while the sulphate method uses sulphur bearing lyes and consumes as fuel the organic substances contained in the waste lyes.

By using sulphur-free lye, Rinman succeeds in making the manufacture of cellulose entirely odorless. This is, of course, a very important feature, since the peculiarly unpleasant odor which is carried from sulphate factories by the winds or drainage water makes them a nuisance to the community, and since it has hitherto been impossible to find any effective remedy for this defect, though innumerable attempts have been made to do so. Rinman has solved the whole difficulty by using sulphur-free lye.

There is, of course, great economic advantage in being able to utilize the large amount of organic substance, comprising 50 to 65 per cent of the volume of the wood, which escapes during the boiling of the cellulose and passes into the waste lye. As far as the alkaline boiling methods are concerned, this problem may now be considered solved by the Rinman process. By applying his process, about 25 per cent of the substance referred to above is conserved in the forms of the highly valuable chemical products methyl alcohol, acetone, ketones, oils and combustible gases, while the soda used for the boiling is regenerated. Methyl alcohol, acetone, and ketones are well-known and much-desired products in the chemical industries, while the oils may be used as motor or fuel oils. By this manufacture of by-products the cost of production of cellulose is reduced by at least \$10 per ton.

Official tests show that the quality of the cellulose obtained by findings have been corroborated in Germany.

The Rinman process is not limited to wood as raw material, but has also proved to be very valuable in producing cellulose from straw, reeds, esparto, bamboo, and other fibrous materials. The new method has been adopted at the German cellulose factory Zellstoffwerke Regensburg, in Regensburg, Bavaria, where it has proved very satisfactory. It is also about to be generally adopted in Sweden. The Rinman method is owned and exploited by Cellulosa, Limited, Regeringsgatan 31, Stockholm.

Big Board Mills at Monroe Busy

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., November 6, 1922.—Word from Monroe is to the effect that the big board mills in that city are running full time. The Consolidated Paper Company, River Raisin Paper Company and the Monroe Binder Board Company mills are all operating 24 hours a day and there is talk of putting on extra men to operate on Sunday. These concerns are now giving employment to about 3,500 hands.

CURRENT PAPER TRADE LITERATURE

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

Properties, Chemistry and Testing of Raw Materials and Finished Product

Rice Straw as a Paper Making Material.—Ch. Groud. *Papeterie*, xlv, 733-736 (Aug. 25, 1922). A brief discussion of the merits of rice straw with an account of tests carried out at the French School of Paper Making, Grenoble. The straw was cut into 3 to 5 cm. lengths, charged into a rotary spherical digester, washing during charging to remove dirt, and steamed for one hour with steam at 1 to 2 kilos pressure. The condensed water was drained out and cooking was carried out with 13 per cent of caustic as a 5° Bé liquor under 3 kilos (about 45 lbs. per sq. in.) for 5 hours. The pulp was defibered and washed, and was bleached cold with 16 per cent bleaching powder as a 4° Bé liquor. The yield was 30 per cent. The pulp was sized with rosin and loaded with starch. It was difficult to run on the machine owing to softness of the sheet and sticking to the presses. The breaking lengths were: machine direction 2,450 m., cross direction 1,868 m., average 2,159 m. The lower portion of the straw would give even less favorable results. The pulp is suitable as a filler in fine papers.—A. P.-C.

Preparation of Paper Pulp from Papyrus.—H. Steinhilber. Fr. patent 538,207, March 15, 1922. *Papier*, xxv, 302-303 (July, 1922). Also, English patent 180,097, July 12, 1922. In the preparation of paper pulp from papyrus, the material is first boiled, steeped or retted, and then subjected to mechanical pressing with simultaneous washing to remove the pith, and then beaten for pulp. The removal of the pith may be effected during the pulping, the mechanical pressing being omitted. A preliminary grading may be effected by splitting off the bark either before or after the boiling or steeping. The waste products, mainly pith, are in wet condition subjected to great pressure, and formed into briquettes, etc., in quantity sufficient to supply the entire fuel requirements for the process.—A. P.-C.

Determination of the Chlorine Consumption Value of Wood Pulp.—R. Sieber. *Zellstoff u. Papier*, ii, 27-29 (1922); *J. Soc. Chem. Ind.*, xli, 409A (June 15, 1922). Tables are given showing that the chlorine consumption values of sulphite pulps as determined by the method previously described (*J. Soc. Chem. Ind.*, xl, 382A, 1921) stands in definite relationship to the percentage of lignin as determined by Willstatter's method. The relationship is not one of strict proportionality but is indicated by a curve. The chlorine consumption value of the pulps is approximately proportional to the bleaching powder consumption. The connections between the above characters will serve as a basis for the numerical classification of the various types of commercial wood pulps, according to their hardness and bleaching qualities.—A. P.-C.

The "Baryta Resistance" of Wood Cellulose.—C. G. Schwalbe and H. Wenzl. *Zellstoff u. Papier*, ii, 75-80 (1922); translation by C. J. West in *PAPER TRADE J.*, lxxiv, No. 25, 50-52 (June 22, 1922). The authors propose the following analytical method to express the percentage of resistant cellulose contained in commercial wood pulps: treat 3 g. of air-dry cellulose with 200 cc. of cold saturated barium hydroxide solution and boil under a reflex condenser for one hour. Filter hot through a finely-perforated Gooch (a filter is not necessary), wash with hot water, treat with cold 1 per cent hydrochloric acid, wash free from barium, and dry 4 hours at 105°C. A correction is made for the ash. The method is capable of more exact control than the usual alpha-cellulose determination, but the results are not entirely equivalent and the "baryta resistance" value is not put forward as a substitute for the alpha-cellulose value. About one-third of the pentosans are dissolved by the barium

hydroxide, and two-thirds by the caustic soda. Lignin is but little affected; rather more is removed from Mitscherlich pulp than from Ritter-Kellner pulp. Cupric-reducing substances are largely but not entirely removed by the baryta treatment. Sulphite pulps of normal types show baryta resistance values distinctly lower than their alpha-cellulose values. Soda and sulphite pulps which have had a separate special alkaline digestion show baryta value higher than their alpha-cellulose values. Specially purified sulphite pulps show approximately equivalent values on the two tests. Information is thus afforded concerning the previous history and chemical condition of the wood pulp.—A. P.-C.

The Determination of Alpha-Cellulose.—P. Waentig. *Zellstoff u. Papier*, ii, 12-18 (1922); *J. Soc. Chem. Ind.*, xli, 409A (June 15, 1922). The alpha-cellulose determination, as carried out at present, is an entirely empirical test, and the residue does not represent a purified, resistant, true cellulose constituent of the original pulp complex. It is shown that the ratio of caustic liquor to cellulose, the temperature of maceration, the manner of dilution before filtration, and the mechanical subdivision of the pulp exert considerable influence. The conditions of the test should be most rigidly defined. The following changes in the procedure are suggested: 3 g. of wood pulp to be macerated with 30 g. of caustic soda solution; the paste to be diluted with 5 times its weight of water before bringing on the filter; a constant temperature, say 18°C, to be maintained; time of maceration to be extended, say to 2 hours; state of disintegration of the pulp before treatment to be agreed upon.—A. P.-C.

The Solubility of Sulphur Dioxide in Suspensions of Calcium and Magnesium Hydroxides.—W. T. Smith and R. B. Parkhurst, Mass. Institute of Technology. *J. Am. Chem. Soc.*, xlv, 1918-1927 (Sept., 1922). The article reports an investigation of the solubility of sulphur dioxide in water, milk of lime, and milk of magnesia and includes a description of the apparatus used. Partial pressures of sulphur dioxide up to 760 mm., temperatures from 5° to 60°, all proportions of calcium and magnesium, and suspensions of total alkalinity up to one equivalent per liter were used in the experimental work. The concentration of sulphur dioxide, as sulphurous acid, is found to be proportional to its partial pressure. With solutions of the same alkali concentration, the percentage salting-out effect increases with, but not in proportion to the temperature. With solutions of constant temperature, the percentage salting-out effect increased with, but less than in proportion to, the alkali concentration. Varying proportions of calcium and magnesium have no effect upon the equilibrium concentration of sulphur dioxide as sulphurous acid.—A. P.-C.

The Use of Lime in the Sulphite Pulp Industry.—P. A. Paulson. *Paper Mill*, xlv, No. 26, 14, 16 (July 8, 1922). Brief outline of the theory of the sulphite process and of the preparation of sulphite cooking liquor, comparing the relative merits of milk of lime and tower systems for acid making, and of straight lime and of lime and magnesia acids for cooking.—A. P.-C.

The Use of Starch in Paper Manufacture.—W. A. Nivling. *Paper Mill*, xlv, No. 26, 4-8 (July 8, 1922); *PAPER TRADE J.*, lxxv, No. 2, 32, 34, 36, 38 (July 13, 1922). A description of the properties of starch from a paper making standpoint, and of its use for engine sizing in conjunction with rosin, for surface sizing, for coating, for adhesives, and for wood veneer glue.—A. P.-C.

Testing Colored Materials for Fastness to Light.—H. S. Thayer. *Paper Ind.*, iv, 807, 809, 811 (Sept., 1922); *PAPER TRADE J.*, lxxv, No. 11, 56-57 (Sept. 14, 1922); *Paper Mill*, xlv, No. 36,

20, 40 (Sept. 16, 1922). A description of the construction, operation, and results obtained with the color-fastness testing device, the "Fade-Ometer." It employs the violet carbon arc mounted in a cabinet with 40 specimen holders located at a uniform distance of 10 inches from the arc itself. The importance of the test is discussed.—I. G.

Instrument for Measuring the Degree of Beating of Paper Pulp.—E. W. L. Skark. *Papierfabr.*, xx, 845-852 (1922). An instrument called a "stuff-spindle" has been devised for testing numerically the degree of beating of pulp during its treatment in the hollander. It consists of a hollow metal cylinder terminating at the top in a slender open tube and carrying at the bottom a wire sieve of plain No. 50 mesh, 2 cm. in diameter (3.14 sq. cm. in area). When the instrument is immersed sieve downwards in diluted pulp, water enters the cylinder at a rate depending on the degree of beating, and the time is noted during which the instrument sinks to a mark on the tubular stem. In another form of instrument the stem is graduated in cc. of water passing into the body in one minute. The test is carried out on pulp diluted to a consistency of 0.5 per cent fiber, at a temperature of 15°C. The "stuff degree" is defined as the number of cc. of water passing through the sieve of 3.14 sq. cm. area in one minute at a standard fiber-concentration and temperature.—I. G.

Average Tearing Strengths of Commercial Papers.—Armin Elmendorf. *Paper Ind.*, iv, 790-792 (Sept., 1922). Figures are given for the tearing strength of a number of samples of kraft, bond, and ledger papers supplied by a number of manufacturers. The tests were carried out by the U. S. Testing Company, New York, at a humidity of 45 to 48 per cent, with the Elmendorf Tearing Tester.—A. P.-C.

Transformation of Cellulose Complexes During the Manufacture of Artificial Silk.—W. Vieweg. *Zellstoff u. Papier*, ii, 18-19 (1922); *J. Soc. Chem. Ind.*, xli, 541A (July 31, 1922). The insoluble residue obtained by grinding cellulose with sodium hydroxide solution is the sodium alkyl-oxide of alpha-cellulose, and reacts as such with carbon disulphide, benzoyl chloride, etc. Alkali cellulose having the formula $(C_6H_7O_5)_n NaOH$, is prepared by steeping cellulose in 18 per cent sodium hydroxide solution and pressing the product; this product is unaffected by air or other oxidising agents. The cellulose xanthates capable of spinning contain the complexes $(C_6H_7O_5)_n$ and $(C_6H_7O_5)_n$.—A. P.-C.

Celloisobiose.—H. Ost and G. Knoth. *Cellulosechem.*, iii, 25-38 (1922); *J. Soc. Chem. Ind.*, xli, 409A (June 15, 1922). A description of the procedure followed by the authors to obtain celloisobiose from cellulose (yield 2.5 per cent), and of the properties of the pure compound.—A. P.-C.

Alkali-Soluble Modification of Cellulose.—E. Knoevenagel and H. Busch. *Cellulosechem.*, iii, 42-60 (1922); *J. Soc. Chem. Ind.*, xli, 485A (June 30, 1922). A modified cellulose or hydrocellulose which, even after drying, is completely soluble in cold 8 per cent sodium hydroxide solution is produced by hydrolyzing viscose cellulose with acids. The hydrolysis may be effected by Girard's method, by Lederer's method, but most conveniently by the action of dry hydrogen chloride gas on air-dry viscose cellulose in a closed evacuated vessel at the ordinary temperature. The percentage of acid absorbed corresponds with the quantity of moisture in the cellulose, and by regulating the degree of humidity and the time and temperature of the reaction the conversion can be so controlled that a product completely soluble in 8 per cent caustic soda is obtained, which is reprecipitated substantially without loss on acidification. Only cellulose modified or hydrated in certain ways is capable of forming the alkali-soluble product after hydrolysis. Viscose cellulose yields it most readily.—A. P.-C.

Behavior of Oxidized Cellulose.—E. Knecht and F. P. Thompson. *J. Soc. Dyers and Col.*, xxxviii, 132-136 (1922); *J. Soc. Chem. Ind.*, xli, 497A (July 15, 1922). From a study of the copper num-

ber of cellulose oxidized with permanganate in the cold in the presence of sulphuric acid, it appears that the initial action of the oxidizing agents results mainly in the formation of aldehydic and ketonic groups, while the later action is complicated, possibly by the production of carboxylic groups. Nitration of the oxidized cellulose showed oxidation had taken place at the expense of the hydroxyl groups of the cellulose.—A. P.-C.

Oxycellulose.—E. Heuser and F. Stöckigt. *Cellulosechem.*, iii, 61-74 (1922). Oxycellulose yields furfural and carbon dioxide when distilled with 12 per cent hydrochloric acid, but in relatively small quantities only, maximum values being obtained only with extremely oxidized residues. By digestion under pressure with 1 per cent sulphuric acid, the major portion of the substance which yields furfural and carbon dioxide is split off the hydrolysis, and a barium salt was obtained which showed many of the reactions of glucuronic acid but was not identical with barium glucuronate. This substance is regarded as the "pure" oxycellulose which occurs only in small quantities in combination with a portion of the cellulose in the oxycellulose preparations. It is an aldehyde-carboxylic acid presumably formed by the oxidation of the terminal alcoholic group of a cellobiose residue or of an aldehyde group liberated by simultaneous hydrolysis.—I. G.

General

International Paper Co.'s Mill at Three Rivers, P. Q.—*Pulp and Paper*, xx, 603-604 (July 21, 1922).—Brief description of the finished mill as it appeared in the summer of 1922.—A. P.-C.

The Pulp Industry at Weymouth, N. B.—Arch Beeton. *Pulp and Paper*, xx, 535-537 (June 29, 1922).—A. P.-C.

J. R. Booth's Remarkable Career.—*Pulp and Paper*, xx, 475-477 (June 8, 1922).—A. P.-C.

Vocational Education and the Superintendent.—A. D. Wood, Champion Fiber Co. *Paper Mill*, xlv, No. 22, 14, 44 (June 10, 1922); *PAPER TRADE J.*, lxxiv, No. 23, 50151 (June 8, 1922); *Paper Ind.*, iv, 551, 553 (July, 1922); *Pulp and Paper*, xx, 515-516 (June 22, 1922). An outline of the advantages of vocational education in arousing the interest of the men in their work.—A. P.-C.

Concise Comments on Cost Keeping.—Thos. J. Burke. *Pulp and Paper*, xx, 491-492 (June 15, 1922).—A brief outline of some of the things which the Cost Association is doing.—A. P.-C.

The Human Factor in Production and Cost Accounting.—Geo. D. Bearce and G. A. Ware. *Paper Ind.*, iii, 1097-1101 (Nov., 1921). A plea for close co-operation between the superintendents, production and service engineers, or other department heads responsible for the actual operation of the plant, on the one hand, and the accountants on the other, showing the interdependence of the ones on the other in order that all may do their work with maximum efficiency.—A. P.-C.

An Executive's Viewpoint of Co-operation Between Superintendents and Cost Departments.—G. A. Galliver. *Paper Mill*, xlv, No. 21, 2, 6 (June 23, 1922); *PAPER TRADE J.*, lxxiv, No. 23, 54-58 (June 8, 1922); *Paper*, xxx, No. 14, 11-13 (June 7, 1922); *Paper Ind.*, iv, 403-405 (June, 1922). A plea for thorough co-operation between superintendents and cost accountants.—A. P.-C.

Co-operation Between Superintendents and Cost Accountants.—Joseph Slater. *Paper*, xxx, No. 14, 14, 18 (June 7, 1922); *Paper Mill*, xlv, No. 22, 38, 40 (June 10, 1922). *Paper Ind.*, iv, 415, 417, 419 (June, 1922). A discussion of the value of the cost department in locating waste and enabling the superintendent to eliminate it.—A. P.-C.

Mill Costs from a Technical Man's Standpoint.—W. G. MacNaughton. *Paper*, xxx, No. 14, 29-31 (June 7, 1922); *PAPER TRADE J.*, lxxiv, No. 23, 87-89 (June 8, 1922); *Paper Ind.*, iv, 419, 421 (June, 1922). A plea for greater accuracy in the measurement of quantities of materials used and in keeping track of inventories.

The author takes a typical pulp and paper mill, shows how the several departments should be kept separate from a cost accounting viewpoint, and outlines the items which should be included in the cost records of the various departments.—A. P.-C.

The Cost System and the Superintendent.—F. C. Boyce. *Paper Mill*, xiv, No. 21, 32, 64 (June 3, 1922); *PAPER TRADE J.*, lxxiv, No. 23, 44 (June 8, 1922); *Paper*, xxx, No. 19, 11-12 (July 12, 1922). A plea for co-operation between the manager, superintendent and men to produce best results and lower costs.—A. P.-C.

Budget Basis of Developing Costs.—John Balch, Horace P. Griffiths & Co. *Paper*, xxx, No. 20, 11-12 (July 19, 1922). A discussion of the budget system in cost accounting, showing the danger of using "actual costs" which must necessarily vary considerably owing to varying conditions in manufacturing.—A. P.-C.

The Stores Department.—H. M. Grasselt. *Paper Ind.*, iv, 655-658 (Aug., 1922). A discussion of the function of the stores department, its importance and an outline of a satisfactory system of records.—A. P.-C.

Summer Meeting of the Canadian Technical Section, June 20-22, 1922.—*Pulp and Paper*, xx, 543-544 (June 29, 1922).—Brief account of the meeting held at Iroquois Falls, Ont.—A. P.-C.

The Seven-Phased Standardization of Paper.—R. E. Rindfus, American Writing Paper Co. *Paper Mill*, xiv, No. 23, 28, 42 (June 17, 1922); *PAPER TRADE J.*, lxxiv, No. 4, 32, 34 (July 27, 1922); *Pulp and Paper*, xx, 643-645 (Aug. 3, 1922); *Paper*, xxx, No. 22, 11-13 (Aug. 2, 1922). Standardization in the paper industry has a seven-fold application: raw materials, process, product, line (grade standardization), distribution, prices and uses. The meaning and advantages of each of them are briefly outlined.—A. P.-C.

Co-operative Competition and the Service Associations.—T. J. Burke. *Pulp and Paper*, xx, 607-608 (July 20, 1922). A discussion of the necessity of close co-operation between the four service associations (Technical, Superintendents', Salesmen's, and Cost) affiliated with the American Paper and Pulp Association.—A. P.-C.

General Equipment

The Care of Belts.—*Mon. Papeterie Française*, liii, 145-147 (March 15, 1922). Various formulas are given for the preparation of compounds for the preservation, glueing, and cleaning of belts.—A. P.-C.

Electricity in the Paper Mill. W. W. Cronkhitte. *PAPER TRADE J.*, lxxiv, No. 15, 61-63 (April 13, 1922). Brief outline of the development of the use of electricity in the paper mill in the last twenty years.—I. G.

Automatic Carbon Dioxide Indicator for Flue Gas.—R. B. MacMullin, Mathieson Alkali Works. *J. Ind. Eng. Chem.*, xiv, 628-629 (July, 1922). A description, with diagram, of an apparatus for the continuous automatic analysis of a gas mixture for one constituent, such as CO₂ in flue gas. The apparatus can be made with bottles and glass tubing, and can be assembled compactly in a wooden case 8x20x20 inches, provided with a window through which the readings may be taken. The instrument is accurate to 0.2 per cent CO₂, and will record continuously for two days or more without need of refilling the scrubber or readjusting the zero point.—A. P.-C.

Fourdrinier Wire Tension.—John Kepke, Jr. *PAPER TRADE J.*, lxxv, No. 3, 56 (July 20, 1922); *Pulp and Paper*, xx, 645 (Aug. 3, 1922). Normal operating tensions vary between 6 and 10 lbs. per inch of width, with a maximum probably well under 20 lbs. Samples of 60 and 70 mesh wires gave breaking loads of 133 to 141 lbs. and 113 to 125 lbs., respectively, per inch of width, elongation at rupture of about 20 per cent and 17 per cent respectively, and elastic limits lying between 30 and 45 lbs. per inch width in both cases, the figure for the finer wire being probably higher than for the coarser.—A. P.-C.

Comment on the Standardization of Felts.—Wm. H. Lee, Lockport Felt Co. *Paper*, xxx, No. 14, 20, 22 (June 7, 1922); *PAPER TRADE J.*, lxxv, No. 1, 59 (July 6, 1922). The project is deemed impracticable owing to varying conditions in different mills.—A. P.-C.

Sectional Electrical Paper Machine Drive.—A. J. F. Montabone. Can. patent 222,230, Aug. 15, 1922. A direct current, shunt wound generator with separately excited field is connected through suitable switches with the main bus bars. The exciter also feeds into master field bus bars. Each sectional motor is shunt wound and is connected to the main bus bar through suitable switches, rheostats, etc. In gear or directly connected with the motor is an auxiliary motor generator with field coils in the circuit of the main motor and shunt field coils in circuit from the field bus bars. The armature circuit of the auxiliary motor generator includes supplemental field coils in the main motor and is adapted for connection by a suitable switch to auxiliary or tie bus bars. These coils are differentially wound with respect to shunt field coils supplied from a master field bus bar. When the system is running normally, if the load on one of the motors should decrease, its auxiliary motor generator would operate as a generator and would produce a current strengthening the main motor field, thus tending to lower the speed of the motor, and at the same time it would drive, through the tie bus bars, the other auxiliary motor generators as motors, in addition weakening the fields of the main motors. An increase in load would cause the reverse action to take place. Very close regulation is obtained.—A. P.-C.

"Batik" Designs on Paper.—L. Kolmann. *Papierfabr.*, xix, Fest-u. Ausland Heft, 39-43 (1921); *Chem. Abs.*, xvi, 828 (March 10, 1922). For the production of batik designs on paper a sufficient sizing and a moderate thickness (about 0.1 mm.) of the paper are necessary to obtain white resists. Paraffin wax of melting point 52° C. is a suitable medium for executing the designs. The most satisfactory results are produced with wax at a temperature of 80 to 100°. The cracking of the wax is best performed by irregular crumpling by hand under cold water. The sheet is then transferred without drying to the dye bath, the temperature of which is not over 35°. A suitable concentration of dyestuff is 1 to 2 g. per 1. Any dye suitable for cellulose, or acid dyes which can be fixed by the components of the sizing of the paper, can be used. After dyeing, the wax is removed by steeping the paper in light petroleum. Combination shades and varigated resists can be executed by a second application of the wax designs after the removal of the wax from the first one.—A. P.-C.

List of Abbreviated and Full Titles and of Address of the Journals from Which Abstracts Have Been Prepared for This Issue

Cellulosechem.	Cellulosechemie. Supplement to <i>Papierfabr.</i> , which see.
J. Am. Chem. Soc.	Journal of the American Chemical Society, Charles L. Parsons, Secretary, 1709 G St., N. W., Washington, D. C.
J. Soc. Chem. Ind.	Journal of the Society of Chemical Industry, Central House, 46 and 47 Finsbury Square, London, E. C. 2, England.
J. Soc. Dyers and Col.	Journal of the Society of Dyers and Colourists, Pearl Assurance Buildings, Market St., Bradford, England.
Paper	<i>Paper</i> . 251 West Ninetenth St., New York City.
Paper Ind.	The Paper Industry. 356 Monadnock Block, Chicago, Ill.
Paper Mill.	The Paper Mill and Wood Pulp News, L. D. Post, Tribune Building, 154 Nassau St., New York City.
PAPER TRADE J.	PAPER TRADE JOURNAL. 10 East Thirty-ninth St., New York City.
Papeterie	La Papeterie. 9 Rue Lagrange, Paris (5°), France.
Papier	Le Papier. 16 Rue Du Rocher, Paris (8°), France.
Papierfabr.	Der Papier-Fabrikant. Otto Elsner, Oranienstr. 140-142, Berlin S. 42, Germany.
Pulp and Paper.	Pulp and Paper Magazine of Canada. Gardenvale, Que.
Zellstoff u. Papier.	Zellstoff und Papier. Verlag von Carl Hofmann, Papierhaus, Dessauer Str. 2, Berlin, S. W. 11, Germany.

PUBLICATIONS

of the

Technical Association of the Pulp and Paper Industry

18 EAST FORTY-FIRST STREET
NEW YORK, N. Y.

Manufacture of Pulp and Paper, five volumes. In cloth, \$5 per volume.

Volume I:

Arithmetic.
Elementary Applied Mathematics.
How to Read Drawings.
Elements of Physics.

Volume II:

Mechanics and Hydraulics.
Elements of Electricity.
Elements of Chemistry.

Volume III:

Properties of Pulpwood.
Preparation of Pulpwood.
Manufacture of Mechanical Pulp.
Manufacture of Sulphite Pulp.
Manufacture of Soda Pulp.
Manufacture of Sulphate Pulp.
Treatment of Pulp.
Refining and Testing of Pulp.
Bleaching of Pulp.

Volume IV (in preparation):

Preparation of Rag and Other Fibers.
Treatment of Waste Papers.
Engine Sizing.
Loading.
Beating and Mixing.
Coloring.
Paper Machines.

Volume V (in preparation):

Tub Sized Papers.
Finishing Operations.
Coated and Other Treated Papers.
Manufacture of Special Papers, Boards, etc.
Paper Testing.
Mill Organization.
General Mill Equipment.
Dictionary of Papers, Tables, etc.

Folder for Technical Association Section, 25 cents. Each Folder will accommodate the Section pages for three months.

Address the Secretary
Technical Association of the Pulp and Paper Industry,
18 East 41st Street, New York

Trade Marks Department

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

The following are trade-mark applications pertinent to paper and pulp field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister building, Washington, D. C., or Bush building, 130 West Forty-second street, New York, trade-mark specialists.

As an additional service feature to its readers, the PAPER TRADE JOURNAL gladly offers to them an advance search free of charge, on any mark they may contemplate adopting or registering.

RAINBOW—No. 168,242. The Anchor Paper Company, Cincinnati, Ohio. For wrapping paper.

LIBRARY INDEX—No. 168,103. Chicago Paper Company, Chicago. For bristol board.

ARGENTONE—No. 168,101. Z. & W. M. Crane, Dalton, Mass. For writing paper, mailing envelopes; flat paper, by which is meant, large sheets for printers, lithographers, and converters to cut up into smaller sizes as their needs may require, and paper boards, which are eventually cut up into sizes suitable for correspondence cards, Christmas cards, menus, and other purposes.

CONGRESS—No. 168,054. Marshall Field & Co, Chicago. For toilet paper.

L. H.—No. 167,923. New York and Pennsylvania Company, Castanea, Pa., and New York. For paper—kraft, beaming, warping, stencil board (white and colors), pressboard (white and colors), tissue express (white and colors), electric paper, special parchment manila, express (white and colors), die wiping.

NYPEN—No. 167,921. New York and Pennsylvania Company, Castanea, Pa., and New York. For electric paper, special parchment manila, express (white and colors), book, and writing paper in sheets and rolls; writing envelope paper, lithograph, offset, and bond paper, wrapping paper, soap wrapper paper, wall paper, and machine finish, supercalendered, English finish, white writing, canary writing, M. F. lining, M. F. litho, superlitho, eggshell book, antique laid, school book, M. F. tablet, supertablet, M. F. envelope, superenvelope, M. F. offset, tile stock, end sheet paper, laid mimeograph, alkaliproof M. F., soda pulp, sulphite pulp, kraft, beaming, warping, die wiping, stencil board (white and colors), press board (white and colors), tissue express (white and colors).

WINTER GRAY—No. 153,641. Brown Company, Portland, Me. For wrapping paper.

FINELEAF—No. 166,211. S. D. Warren Company, Boston, Mass. For printing paper of the kind known as make-ready.

VELCOID—No. 155,284. George Vincent, New York. For tracing paper.

MARSHMALLOW—No. 161,513. Union Bag and Paper Corporation, Jersey City, N. J., and New York. For paper bags.

LEMCO BAGS with triangle in center—No. 161,888. The Le Montree Manufacturing Company, Cincinnati, Ohio. For paper bags.

ELEPHANT Paper in picture of an Elephant—No. 154,049. Union Bag and Paper Corporation, Jersey City, N. J., and New York. For wrapping paper.

BEAR Paper in picture of bear—No. 154,048. Union Bag and Paper Corporation, Jersey City, N. J., and New York. For wrapping paper.

RHINOKRAFT Paper on picture of a rhinoceros—No. 154,047. Union Bag and Paper Corporation, Jersey City, N. J., and New York. For wrapping paper.

A & G above word Gotham—No. 160,988. Allan & Gray, New York. For cardboard and fine correspondence paper and envelopes.

A & G above word Tuxedo—No. 160,987. Allan & Gray, New York. For cardboard and fine correspondence paper and envelopes.

SCHOOL BELL—No. 157,673. Arden Bruce Metcalfe, Shelby, Ohio. For blank cash books, composition books, day books, drawing books, and miscellaneous school supplies.

PICTURE representing fancy label with suspended oval at top. No. 168,311. Hampton Roads Paper Company, Norfolk, Va. For writing paper and paper tablets.

INDEPENDENT. No. 168,414. Independent Wall Paper Company, Pittsburgh, Pa. For wall papers.

DIREX. No. 168,337. The Positype Corporation of America, New York. For sensitized photographic paper in rolls and sheets and sensitized photographic postal or mailing cards.

BLUE LABEL. No. 168,308. Hampton Roads Paper Company, Norfolk, Va. For wrapping paper.

HYLOPLATE. No. 167,572. Kimberly-Clark Company, Neenah, Wis. For book paper.

PRIMOPLATE. No. 167,571. Kimberly-Clark Company, Neenah, Wis. For book paper.

WESTVACO. No. 167,279. West Virginia Pulp and Paper Company, New York. For wrapping and book paper.

BREWSTER BOND on fancy panel. No. 167,001. Knight, Allen & Clark, Inc., Boston, Mass. For printing papers.

SATINO SILK CREPE. No. 166,915. The Tissue Company, Saugerties, N. Y. For crepe paper.

HUDSON QUALITY CREPE PAPER, with fancy frame. No. 166,914. The Tissue Company, Saugerties, N. Y. For crepe paper.

Praise for Text Book Committee

The *World's Paper Trade Review*, London, has reviewed the textbooks, *Manufacture of Pulp and Paper*, at considerable length. In its comments much praise is given to the committee preparing this work, and abstracts are of interest:

"No effort is spared by our American friends to extend the knowledge and to improve the methods of pulp and paper manufacture. In this work the technical organizations have joined hands in enthusiasm. One definite result is the publication of a set of textbooks on modern pulp and paper mill practice under the title of *Manufacture of Pulp and Paper*. The task has been undertaken with vision and executed with thoroughness and those who study the contents of the five volumes will obtain a substantial understanding of the art of pulp and paper manufacture. Under the editorship of Mr. J. N. Stephenson, some of the best brains of the papermaking industry of America have been concentrated upon this task which has been brought to successful fruition. The task of preparation has been a colossal one and it is a tribute to the enthusiasm of the promoters that it has been brought so successfully to the point of publication. All who have had any hand in the preparation of the textbooks deserve the warm thanks of the industry, not only on the North American Continent but on this side as well."

Waste Paper in Short Supply

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., November 6, 1922.—The shortage of waste paper in the United States today is a serious drawback according to Charles R. White, secretary of the Box Board Manufacturers' Association and the Eastern Paperboard Manufacturers' Association. Waste paper, as is well known to the trade, forms the base of boxboard and the continual increase in the price during the past few months is seriously affecting the boxboard manufacturers. As a matter of fact, it is understood, that all price lists have been withdrawn by the mills.

Mr. White attributes the greatly increased price of waste paper not only to the increased demand by the mills but to the scarcity of common labor which is used in the sorting of the paper by the second hand and junk dealers. He points out that at the present time the second hand dealer in hiring common labor is competing with the steel and other industries who are at the present time using considerable of this class of workmen. The price of waste paper went up from July to September more than 100 per cent.

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending August 31, 1922, and for the Eight Months Ended August 31, 1922, as Compared with Corresponding Months of Two Previous Years

IMPORTS—PAPER.

PAPER AND MANUFACTURES OF.	August				Eight Months Ended August 31			
	1921		1922		1921		1922	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Books, Maps, etc., and other printed } Free		\$318,468		\$247,894		\$2,984,553		\$2,672,987
matter } Dut.		197,626		202,096		1,455,943		1,486,754
Decalcomania paper, not printed.....Free		9,572		9,920		162,330		66,823
Lithographic Labels and Prints (except								
Post Cards) .....lbs..Dut.	127,338	66,701	222,332	70,844	797,401	537,910	1,248,997	532,748
Paper Hangings .....lbs..Dut.		21,493		83,013		266,854		449,058
Photographic .....lbs..Dut.	219,967	42,304	216,317	42,905	1,213,806	246,678	1,637,148	384,027
Printing Paper—								
News print .....lbs..Free	148,422,772	6,707,612	163,559,854	5,866,289	981,397,136	54,877,866	1,296,157,179	45,415,983
All other .....lbs..Dut.	10,971	4,782	214,743	16,396	1,224,107	180,801	1,004,625	97,693
Post Cards, Souvenir.....Dut.		8,927		6,981		61,214		42,449
Pulp boards, in rolls .....lbs..Dut.	1,437,378	23,069	5,298,418	131,651	27,450,747	804,302	44,657,441	1,154,731
Surface-coated .....lbs..Dut.	37,151	11,096	63,319	12,019	625,248	159,597	615,379	132,510
Wrapping .....lbs..Dut.	980,620	40,187	3,600,895	155,401	6,601,087	338,770	34,155,216	1,322,113
All other .....Dut.		249,403		251,012		2,259,512		1,997,622
Total Paper, and Manufactures of.....		\$7,701,240		\$7,096,421		\$64,336,330		\$55,755,498

CRUDE PAPER STOCK.

Rags (except woolen).....lbs..Free	10,923,511	\$168,642	34,885,888	\$516,538	63,919,822	\$1,263,742	175,323,703	\$2,665,608
All other kinds of paper stock.....Free	7,810,833	133,531	17,310,417	414,116	63,644,811	1,414,098	102,736,348	2,490,953

WOOD PULP.

Mechanically ground .....tons..Free	14,647	\$371,153	12,094	\$358,938	64,638	\$2,385,288	100,521	\$2,805,868
Chemical—								
Unbleached—								
Sulphate .....tons..Free	8,124	\$603,912	22,045	\$1,311,751	54,757	\$5,140,502	158,673	\$9,379,587
Sulphite .....tons..Free	16,676	1,046,555	31,798	1,560,603	82,687	7,456,903	224,496	12,017,825
Total .....tons..Free	24,800	\$1,650,467	53,843	\$2,872,354	137,444	\$12,597,405	383,169	\$21,397,412
Imported from—								
Finland .....tons			2,024	\$106,014			27,726	\$1,283,377
Norway .....tons	40	\$4,280	4,043	203,575	1,542	\$146,062	19,283	1,024,841
Sweden .....tons	8,671	552,150	15,150	808,696	28,284	2,673,925	138,554	7,538,149
Canada .....tons	11,919	844,347	31,343	1,691,353	85,146	7,464,292	182,665	10,694,660
Other countries .....tons	4,170	249,690	1,283	62,716	22,472	2,313,126	14,941	856,385
Meached—								
Sulphate .....tons..Free			383	\$28,023	891	\$73,738	6,956	\$472,024
Sulphite .....tons..Free	12,308	\$1,130,533	20,383	1,682,188	47,729	5,832,872	128,077	10,929,276
Total .....tons..Free	12,308	\$1,130,533	20,766	\$1,710,211	48,620	\$5,906,610	135,033	\$11,401,300
Imported from—								
Finland .....tons			175	\$15,543			7,944	\$473,761
Norway .....tons	607	\$110,384	4,789	379,908	4,975	\$871,872	27,213	2,346,379
Sweden .....tons	995	86,346	2,871	200,528	2,651	299,035	19,632	1,394,716
Canada .....tons	7,580	675,920	12,829	1,108,005	31,815	3,671,827	75,400	6,841,599
Other countries .....tons	3,126	257,883	102	6,227	9,179	1,063,876	4,844	344,845

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.

Colors or dyes, n.e.s.....lbs..Dut.	178,353	\$331,713	241,672	\$413,440	2,130,871	\$2,892,463	2,127,715	\$2,997,262
Imported from—								
Germany .....lbs.	44,346	\$146,950	118,753	\$204,945	669,346	\$969,652	903,248	\$1,197,909
Switzerland .....lbs.	88,074	137,098	104,921	194,501	1,081,040	1,406,548	947,921	1,546,086
United Kingdom .....lbs.	35,556	36,193	10,708	4,820	160,856	220,969	154,530	131,739
Other countries .....lbs.	10,377	11,472	7,290	9,174	219,629	295,294	122,016	121,528
Indigo—								
Natural .....lbs..Dut.			6,628	\$6,017	33,405	\$66,137	10,694	\$12,147
Synthetic .....lbs..Dut.	6,055	\$21,676				33,298	37,540	88,864
Alizarin and alizarin dyes.....lbs..Dut.	22,367	49,206	63,807	76,090	264,458	310,515	343,855	498,969
Lactarone or Casein.....lbs..Dut.	732,393	44,340	1,070,120	109,572	7,262,766	705,716	9,269,414	741,612
Lime, Chlor. of .....lbs..Dut.	922,117	22,425	160,210	9,157	4,251,155	101,243	7,920,904	116,299
Magnetite, not purified.....Free	8,883	118,979	23,947	294,432	33,992	477,288	87,734	1,460,054
Potash, Hydrate of.....lbs..Free	848,575	35,939	539,805	31,452	5,654,202	311,439	11,005,257	607,811
Sulphur or Brimstone.....Free		6				2	113	4,249
China clay or kaolin.....Dut.	10,249	99,637	37,090	425,729	74,830	830,750	174,275	1,894,032

PULPWOOD.

Rough .....cords..Free	16,636	\$262,451	30,325	\$321,283	202,468	\$2,582,549	141,051	\$1,409,614
Feeled .....cords..Free	42,440	472,437	71,113	720,043	622,319	9,317,041	495,591	5,122,753
Reased .....cords..Free	12,658	191,457	22,509	312,540	65,866	1,235,034	72,288	955,596
Total .....cords	71,734	\$926,345	123,947	\$1,353,866	890,653	\$13,134,624	708,930	\$7,487,963

(Continued on page 64)



*Here it is
in a
nut-shell*

**Quality,
Uniformity,
Dependability**



**LAWRENCE
GROCCERS' BAGS**

Our Kraft Bags are made out of the highest quality No. 1 Pure Sulphate Kraft Paper.

Our White Bags are made out of the highest quality Slow-cooked Mitscherlich Spruce Sulphite Paper.

James Lawrence, President

THE LAWRENCE BAG CO.

Miamisburg, Ohio

**THE SHEPARD ELECTRIC
LIFTABOUT**



It doesn't cost nearly so much to handle paper this way

Power lifting with a *LiftAbout*, the new, compact, powerful electric hoist has proved a very safe, speedy and inexpensive method for handling paper—both unloading from trucks and placing it in position on the press.

Into this ½ and 1 ton electric hoist, we have incorporated the same features that have made "Shepards" the best known and most widely used electric hoists in America. It has famous "Balanced Drive," enclosed unit constructions, special hoist motor, oil bath lubrication, Hyatt Roller Bearings—all of which mean steady, consistent operation, care-free service and an *ever-responsive hoist*.

LiftAbouts are made on a quantity production basis and are sold at a price which you'll find much lower than you may have thought a good hoist would cost.

Let us place in your hands a descriptive bulletin, which will give you a good idea of the economies possible for you.

SHEPARD ELECTRIC CRANE & HOIST CO.

378 Schuyler Ave., Montour Falls, N. Y.

Branches in Principal Cities
Member Electric Hoist Mfrs. Assn.



SHEPARD
ELECTRIC CRANES & HOISTS

THE APPLETON MACHINE COMPANY

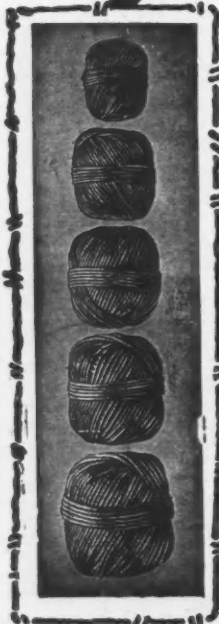


HORIZONTAL WOOD SPLITTERS
 CENTRIFUGAL PUMPS
 CYLINDER MOULDS
 JORDAN ENGINES
 WET MACHINES
 FLAT SCREENS
 AGITATORS
 CHIPPERS
 DECKERS
 ROLLS

APPLETON

WISCONSIN

"AMERICAN"



PAPER MAKERS TWINE TUBE ROPE
 WALL PAPER TWINE HAY ROPE
 FINE AND COARSE POLISHED TWINES
 "AMERICAN" BRAND MANILA ROPE
 "AMERICAN" BRAND TRANSMISSION ROPE

The name "AMERICAN" as applied to cordage means "more value in every way." Send for copy of our General Catalogue, Prices and samples. Address Department M.

Largest Makers of Commercial Twines and Rope in the World

AMERICAN MANUFACTURING CO.
 NOBLE AND WEST STREETS, BROOKLYN, NEW YORK CITY

CORDAGE

Let Them Drink to your business health in cups you sell

each drink a cup—each cup a sale for you and at lowest cost of any cup on the market.

At such prices **SALES RESISTANCE IS NEGLIGIBLE** and our direct advertising assistance in your city will get immediate results as it is now doing in many cities.

Burt's Paper Drinking Cups are made of fine white paper, without wax to make drinks taste, and are reinforced so holders are not necessary. They are kept under glass and cannot be wasted or soiled before use.

Cups retail at one fourth cent—dispensers at five dollars.

F. N. Burt Company, Ltd.
Paper Cup Division
 Buffalo, N. Y.

How Much Industrial Waste Does Your Plant Commit Daily?



Belt Conveyer Handling Coal



Jeffrey Flat and Round Link Chain Conveyer handling cooked straw over beaters in paper and board mill.

ARE you employing modern methods that will bring your works to a high state of efficiency and your operating costs down to rock bottom—or, are you using obsolete expensive and wasteful methods?

Jeffrey Labor-Aiding equipment has eliminated industrial waste in many of the leading pulp and paper mills, through the rapid and efficient handling of Logs, Pulpwood, Pulp Laps, Straw, Bark, Bales, Coal and Ashes and other materials.

A complete line of conveying and Elevating Machinery; Chains; Sprockets; Portable Loaders and Conveyers; Pulpwood Stackers; Crushers; Pulverizers; Shredders; Coal and Ashes Handling Equipments; Electric Industrial Locomotives, etc.

Let Jeffrey Expert Engineers help you to plan the "right equipment."

THE JEFFREY MFG. CO., 931 North Fourth St. Columbus, Ohio

JEFFREY

MATERIAL HANDLING MACHINERY

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 60)

EXPORTS—PAPER.

PAPER AND MANUFACTURES OF.	August				Eight Months Ended August 31			
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper, except printed matter (total).....		\$1,437,431		\$2,079,436		\$22,959,453		\$15,905,766
PRINTING PAPER—								
News Print	2,521,145	\$144,784	3,878,867	\$181,077	24,300,260	\$1,712,872	38,129,635	\$1,707,661
Exported to—								
Canada	53,676	\$4,087	199,860	\$12,550	440,722	\$39,854	1,553,785	\$101,423
Central America				8,716			1,065,648	\$7,419
Cuba	1,922,952	105,309	2,024,047	82,118	11,893,420	777,472	13,192,226	539,631
Argentina					4,262,098	310,300	10,827,788	428,629
Other South America	86,496	\$9,799	424,593	\$19,525	1,792,835	151,095	3,538,892	170,876
China	30,839	1,875	142,494	7,023	272,999	19,933	1,397,359	57,398
Philippine Islands	188,953	11,511	386,893	16,605	2,462,407	176,884	2,473,975	113,382
Other countries	238,229	16,023	555,812	34,540	3,175,779	237,334	4,072,962	238,903
Bible or India paper..... lbs.			2,851	\$315			14,072	\$2,602
Other book paper, not coated..... lbs.	1,991,070	\$205,838	2,693,187	\$246,263	34,493,468	\$5,239,214	18,971,751	\$1,827,942
Exported to—								
United Kingdom	40,493	\$5,995	50,875	\$10,706	256,305	\$60,493	366,521	\$80,087
Canada	297,952	28,567	341,240	\$4,879	2,137,834	268,011	1,687,472	189,557
Central America			35,402	3,578			260,099	29,098
Mexico	602,695	64,261	475,126	37,117	2,839,926	425,779	1,959,251	170,431
Cuba	218,617	13,128	554,934	53,745	3,781,053	600,716	3,558,996	345,374
Argentina	4,641	654	4,702	747	5,509,704	784,290	817,970	72,691
Brazil	37,154	6,578	106,980	10,620	1,112,944	212,793	1,065,527	117,802
Venezuela	24,514	2,477	86,347	9,216	297,902	49,825	499,825	54,720
Other South America	78,776	10,200	143,134	14,933	2,360,798	362,676	980,810	99,312
British India	119,318	11,361	13,503	1,602	1,014,333	144,110	171,413	18,906
China	48,957	6,278	101,595	7,657	2,869,194	498,117	1,516,805	137,980
Japan	155,677	19,581	361,865	26,320	1,686,251	179,815	2,953,036	213,734
Philippine Islands	57,677	5,314	246,347	17,882	2,651,314	467,290	1,564,300	145,136
Australia	100,301	8,417	98,627	9,817	4,537,766	599,619	542,618	52,115
Other countries	204,898	23,027	72,510	7,444	3,438,144	581,067	1,027,108	100,999
Cover paper lbs.			154,247	\$20,958			919,953	\$139,737
Grease-proof and waterproof paper..... lbs.		\$3,144	105,252	13,302		\$99,408	758,042	93,175
Wrapping paper	2,116,299	135,968			18,534,019	1,786,463		
Kraft wrapping			71,733	5,063			594,945	48,188
Other wrapping			1,988,621	141,684			22,620,885	1,400,694
Writing paper and envelopes..... lbs.	146,519		740,385	111,913		3,631,963	4,919,576	777,072
Writing paper, except in papeteries..... lbs.			279,212	35,723			2,397,688	381,152
Surface-coated paper		73,266					626,188	
Tissue and toilet paper..... lbs.			246,622	70,732			1,646,336	414,109
Toilet paper			527,801	54,341			3,561,443	367,226
Paper towels and napkins..... lbs.		15,707	81,819	16,532		124,008	557,900	91,902
Bristols and bristol board..... lbs.			62,817	7,661			1,184,340	128,241
Paper board and straw board..... lbs.	80,471		5,809,336	244,096	1,813,444		33,615,489	1,398,359
Sheathing and building paper..... lbs.			729,957	24,167			3,799,570	142,154
Wall board of paper or pulp..... sq. ft.		17,635	1,272,617	42,714		522,355	6,955,801	257,321
Cigarette paper and books..... lbs.			76,201	27,763			441,601	173,658
Photographic paper			130,028	145,838			978,272	1,000,661
Paper hangings (wall paper)..... yard		12,286	1,454,328	25,642		460,407	11,456,803	288,80
Paper bags		44,089	894,014	79,176		616,829	8,241,399	743,636
Boxes and cartons..... lbs.		102,188	602,257	63,777		890,923	6,423,020	487,916
Carbon paper		23,842	51,167	38,435		354,084	472,411	367,298
Envelopes			213,039	42,734			1,728,969	332,552
Indurated fiber ware..... lbs.			41,029	3,453			263,252	22,650
Playing cards		28,019	179,087	26,445		492,719	3,097,638	362,790
Cash-register and adding-machine paper..... lbs.		9,393	69,600	7,458		125,493	505,275	58,104
Papeteries (writing paper in boxes)..... lbs.		52,989	19,252				202,329	73,427
Other paper and paper products, n.e.s..... lbs.		394,282	3,060,496	382,922		4,473,083	21,906,359	2,816,748
Books, maps, pictures, and other printed matter lbs.		\$1,751,396				\$14,661,516		
Books and Pamphlets..... lbs.			2,308,467	\$730,087			13,507,906	\$4,856,664
Maps and charts..... lbs.			7,569	7,323			78,948	113,383
Music in books or sheets..... lbs.			34,612	23,779			289,945	195,348
Souvenir post cards..... lbs.			29,966	15,581			848,721	137,050
Lithographically printed matter, except post cards and maps..... lbs.			164,393	186,665			1,066,853	794,261
Other printed matter..... lbs.			1,281,831	493,264			13,626,288	4,462,346

WOOD PULP AND PAPER STOCK.

Wood Pulp	1,360	\$75,975			16,384	\$1,271,418		
Mechanical wood pulp..... tons							63	\$4,302
Sulphite wood pulp..... tons			1,248	\$72,585			12,433	\$83,393
Soda wood pulp..... tons			551	47,627			2,416	214,651
Kraft wood pulp..... tons								
Other wood pulp..... tons			159	2,495			1,129	66,648
Rags, and other paper stock..... lbs.	4,911,039	59,001	4,878,155	91,847	21,127,427	435,194	55,850,917	916,112

PAPER AND PULP MILL MACHINERY.

Paper and pulp-mill machinery.....		\$153,843				\$1,994,349		
Pulp-mill machinery			45,339	\$2,819			628,230	\$42,870
Paper-mill machinery			199,188	59,833			4,095,751	1,240,335

Howard Bond



Howard Ledger

"The Paper of Many Uses"

Manufactured by

THE HOWARD PAPER COMPANY,

Urbana, Ohio

West Virginia Pulp and Paper Company

Manufacturers of

Supercalendered and Machine

Finished Book and Lithographic Papers

Offset, Envelope and Music Paper, High Grade Coated Book and Label Papers

also

Bleached Spruce Sulphite and Soda Pulp

200 Fifth Avenue
New York

732 Sherman Street
Chicago

*At
Your
Service!*



Sulphite Bond, white and colors
Genuine Vegetable Parchment
White Waxed Papers
Household Specialties



GREASEPROOF PARCHMENT PAPERS

OF STANDARD QUALITY

Purity

Quality Plus

Ashmere

Equally Fine

Berkshire

Stands the Test

OUR PAPERS ARE EXCELLENT FOR MEAT MARKETS, GROCERS AND GENERAL PACKING HOUSE REQUIREMENTS

Mountain Mill Paper Co.

(Write for Samples and Quotations)
MILLS AND GENERAL OFFICES
125 Forest Street, Lee, Mass.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
MONDAY, NOVEMBER 6, 1922.

The first week in November, though cut short by the coming of Election Day, was characterized by exceptional briskness in the activity of the New York paper trade. With less than two months until the new year and the accompanying alterations of price schedules in many lines, practically every grade of paper was subject to a regular and satisfying demand in spite of the fact that the greater part of heavy tonnage buying has been done for the current season.

Looking back over the progress made during the month of October, paper men are, on the whole, well satisfied. While in a few lines business fell short of the mark which had been forecasted during the days of the coal and rail strikes, in most instances substantial advances were witnessed in the undertone of the markets as well as so far as quotations are concerned. October saw an encouraging adjustment in the badly crippled railroad industry. It saw a distinct amelioration of the fuel situation. It saw perhaps the greatest change for the better in the country's economic status of the entire year. Paper manufacturers are booked up, in most cases, well into 1923. Jobbers, dealers, merchants are stocking up with confidence. Above all, the consuming trade has not lagged. From all indications, November will outstrip the preceding month in point of business volume and healthy, regular activity.

The pace which is being set by the news print industry has long ceased to be regarded as a temporary or even seasonal spurt. With the establishment of a contract price for 1923, all element of doubt has been removed from the news print situation. Manufacturers and dealers are confident that the record breaking demand of the present year will continue throughout 1923 and publishers have not published any indications to the contrary. The fact that business has been in such satisfying volume that news print producers have been enabled to set a price for the first part of 1923 which is \$5 per ton lower than the \$80 figure which has ruled for the last quarter of this year, may be taken as a genuine token of substantial progress.

In the book paper industry, merchants in and around New York expressed themselves as well satisfied with the past week's business. Prices have firmed up considerably during the few weeks since price quotations were resumed by the various mills, the advanced schedule maintained by western manufacturers having a noticeable influence. Book mills are pretty well filled up until the end of the year on contract business and small to medium sized orders are reported to be coming in regularly from printers and publishers.

While fine paper export is hovering close to its lowest ebb of the year, a satisfactory activity has been registered in the domestic market during the past week. Holiday buying for many grades of fine paper is well under way and dealers expect prices to hold firm at least for the coming six weeks.

Tissue mills have been operating full blast in an effort to catch up with the heavy demand that now prevails for all grades. Quoted at 85 cents, f. o. b. mill, Manila tissue has been in exceptionally good call, prices on the other grades still being made on a day-to-day basis by manufacturers.

Wrapping paper has been moving to consumers in regular volume, No. 2 domestic kraft being generally quoted at 6.50 to 6.75 cents a pound. Prices are regarded as very firm, with a tendency to advance even more rather than to decline, and a number of producers are signing contracts expressly stipulating that the price at the time of shipment shall obtain.

Board prices are exceptionally firm and business has been accruing to dealers in goodly volume. The slight easing off in raw material prices during recent weeks has been a welcome indication to board producers, but this has been counteracted by the trouble they have experienced in connection with the railroad embargoes.

Mechanical Pulp

News print and board mills are participating actively in the consumption of groundwood, and the past week has witnessed material declines in stocks. Owing to the fact that the demand in this market so greatly exceeds the supply, prices tend to incline upwards, no immediate halting place being in sight. Domestic mechanical pulp has been quoted within the range of \$34 to \$40 throughout the past week, while the pulps of imported quality have been listed at \$38 to \$42 and better. All indications point to a continuance of the demand despite the increased supplies of groundwood which are becoming available now that the grinding season is getting into swing.

Chemical Pulp

With several large New York dealers turning down business owing to the fact that the mills they represent are crowded to capacity, chemical pulps have maintained the strong position they have held for practically the entire month of October. The continuance of a brisk demand on the part of consumers in the face of a general easing off in the stiff price tone of other raw materials, including waste paper, is ample evidence of the firmness of existing pulp prices. The past week brought a few advances in various grades, domestic bleached sulphite moving up to the range of \$4.75 to \$5.25 per hundred pounds.

Old Rope and Bagging

Old rope dealers are not experiencing any difficulty in turning over what odd lots they are able to scrape together, and the undertone of the market appears to have strengthened somewhat during the week. Prices are regarded as steady to firm and no quotational variations have been registered. Scrap has occupied the limelight in the bagging market, moving in goodly volume to tissue manufacturers at 1.10 to 1.25 cents a pound, f. o. b. New York. The demand for roofing bagging has eased off still more and prices on this grade are lower in consequence.

Waste Paper

The lower grades of waste paper have suffered several declines during the past few weeks as a result of the general easy tone which prevails in that market. While the lassitude which has existed in this market recently is regarded as merely a temporary setback, due to the almost complete lack of participation of western mills in the market and the railroad embargoes, advancing prices of all grades of pulp lead packers to believe that waste paper will soon follow suit. The better grades have, in the main, preserved their strength, this being exhibited in the fact that prices have fallen off but slightly. As soon as the embargoes are lifted, a decided change for the better undoubtedly will occur.

Rags

The domestic rag market has continued firm with a substantial activity enlivening the past week's trade. The removal of a few embargoes on cotton cuttings has alleviated to some extent the difficulties which were encountered in this market ten days ago, and while the demand from consumers has been moderate, orders have been for larger tonnages. There was also a noticeable betterment in the tone of the imported rag market last week, the better grades moving at a comparatively brisk pace. Imported roofing rags have, however, failed to register any pronounced advance, but this has been attributed to the fact that the present season is generally slack for the roofing grades and manufacturers are fairly well covered until the end of the year.

Twine

Expecting a considerably augmented volume of sales within the next ten days to two weeks, when the holiday buying season will be well under way, twine dealers state that the tendency of prices is to become firmer, although no advances have yet been made. Business in general was of a greater volume last week than at any time during the preceding month.

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations November 6, 1922:

Table of Paper Company Securities including American Writing Paper Company, International Paper Company, and Union Bag & Paper Corporation.

Paper

Table of Paper prices for F. o. b. Mill, including Ledgers, Bonds, and Writings.

Table of News prices for f. o. b. Mill, including Rolls, Sheets, and Side Runs.

Table of Book, Cased prices for f. o. b. Mill, including S. & S. C. and Coated and Enamel.

Table of Tissues prices for f. o. b. Mill, including White, Colored, and Anti-Tarnish.

Table of Kraft prices for f. o. b. Mill, including No. 1 Domestic and No. 2 Domestic.

Table of Manila prices, including No. 1 Jute, No. 2 Jute, and No. 1 Wood.

Table of Fiber Papers prices, including No. 1 Fiber, No. 2 Fiber, and Common Bogus.

Table of Boards prices per ton, including News, Straw, and Binders.

Table of Wax Paper prices, including Self Sealing White and Waxed Tissue.

Table of Glassine prices, including Bleached, basis 25 lbs. and Bleached, basis 20 lbs.

Mechanical Pulp

Table of Mechanical Pulp prices (Ex-Dock), including No. 1 Imported and No. 1 Domestic.

Chemical Pulp

Table of Chemical Pulp prices (Ex-Dock, Atlantic Ports), including Sulphite and Sulphate.

Domestic Rags

Table of Domestic Rags prices, including Shirt Cuttings, Cotton, and Roofing Rags.

Table of White, No. 1 prices, including Repacked and Miscellaneous.

Table of White, No. 2 prices, including Repacked and Miscellaneous.

Table of Foreign Rags prices, including New Light Siliesias and Light Flannelettes.

Table of Bagging prices (Ex-Dock, Atlantic Ports), including Gunny No. 1 and Foreign.

Twines

Table of Twines prices (F. o. b. Mill), including Cotton and Manila.

Table of India, No. 6 basis prices, including Light, Dark, and B. C. 18 Basis.

Old Waste Papers

Table of Old Waste Papers prices (F. o. b. New York), including Shavings and Flat Stock.

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Table of Paper prices for F. o. b. Mill in Chicago, including Rag Bond, Water Marked Sulphite, and News.

Old Papers

Table of Old Papers prices in Chicago, including No. 1 Hard White and No. 1 Soft Shaw.

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Table of Paper prices for F. o. b. Mill in Philadelphia, including Bonds, Ledgers, and Writings.

Table of Bagging prices for F. o. b. Phila., including Gunny No. 1.

Table of Old Papers prices for F. o. b. Phila., including No. 1, Hard and No. 2, Hard.

(Continued on page 70)

Felt Test—Lowest Cost per Ton

If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts, for ORR felts will produce the lowest cost per ton. They “stand up” under severe usage. Orr durability is acknowledged everywhere. Their strength and long life are as dependable as their reliability and quality.

In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

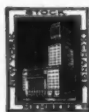
THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

TAYLOR, BATES & CO.

Members New York Stock Exchange
Members New York Cotton Exchange

100 Broadway, New York

Tel. Rector 1140



**BONDS
STOCKS
COTTON**

**Bought and Sold
on
Commission**

BRANCH OFFICE

41 EAST 42nd STREET

Tel. Murray Hill 5631

1864

1922

“EXCELSIOR” FELTS

for every grade of

PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
atin Style felts for finish.
pecial felts to meet every condition.
end us your felt problems.

**KNOX WOOLEN COMPANY
CAMDEN, MAINE**

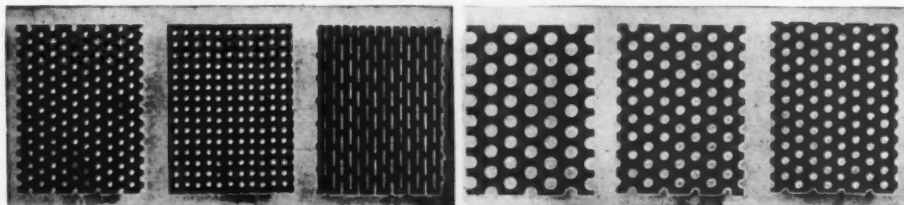
SOLD BY

BULKLEY, DUNTON & COMPANY

75-77 Duane St., N. Y., and direct

PERFORATED METALS

All sizes
and
shapes
of Holes



All kinds
and
thicknesses
of Metal

For Centrifugal and Rotary Screens, Drainer Bottoms, Filter Plates, Pulp Washers, etc.

The Harrington & King Perforating Company

618 No. Union Ave., Chicago, Ill., U. S. A.

New York Office, 114 Liberty St.

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
MONDAY, NOVEMBER 6, 1922.

BLEACHING POWDER.—Dealers in this commodity state that bleach in fair sized quantities is almost impossible to locate under present conditions of production. Scattered lots finding their way to the market are immediately taken up at the advanced price of 1.90 to 2.00 cents and more a pound, the 1923 contract price basis.

BLANC FIXE.—No decided changes have been noted in the status of the blanc fixe market since last week. The railroad embargoes are still hampering outgoing shipments from eastern production centers, but aside from that activity is in regular volume, prices holding at \$80 to \$85 per ton, producers plant.

CAUSTIC SODA.—A very firm market has resulted from the protracted scarcity of caustic in recent weeks, high raw material costs and rail difficulties impeding the normal volume of business. The 60 per cent basis grade of caustic still is quoted around 1.50 cents a pound.

CHINA CLAY.—Each week additional tonnages of English clays are arriving at ports on the Atlantic seaboard and rapidly going into paper mill consumption. The demand has heavily taxed reserve stocks of the imported product, prices holding at \$15 to \$22 per ton, New York. Domestic washed clays are quoted at \$8 to \$11, while unwashed range from \$6 to \$8.50.

CASEIN.—That casein prices will assume a considerably easier tone as soon as present contracts have been filled and dealers stocks are replenished with the forthcoming new crop of the Argentinian product is generally admitted in the New York trade. By next February or March, when the calving season is well under way in Argentine and producers have become adjusted to the greatly increased demand, casein should return to prices in the neighborhood of 12 or 13 cents a pound. Current quotations are firm at 15½ cents to 18.

PAPERMAKERS' GLUE.—Hide glue for tub sizing is enjoying a fairly brisk demand from paper manufacturers although the volume of sales does not quite come up to expectations entertained earlier in the season. It is still listed at 13 to 20 cents a pound.

LIQUID CHLORINE.—While no spurts in demand have taken effect in the chlorine field, dealers are doing a regular amount of business despite the difficulties presented by freight embargoes. Depending upon the container and size of the order, chlorine is being quoted at prices ranging from 5 to 6 cents a pound.

ROSIN.—A steady upward price tendency is the keynote of the rosin situation as the production of naval stores for the current year draws to a close. The papermaking grades, E, F, and G, are now quoted at 6.90 cents a pound, ex dock, New York.

SALTCAKE.—Dealers in saltcake are filled up with orders for the rest of 1922 and the first part of 1923 and the volume of sales hinges directly upon the speed of production. Prices are ever moving upward, current quotations being \$28 per ton on acid cake and \$22 to \$24 on chrome cake.

SODA ASH.—Adhering to its schedule price of 1.20 cents a pound, basis 48 per cent, in bags, soda ash has been in fairly active demand from the paper trade.

STARCH.—The softening influence of this year's bumper corn crop on the starch market serves only in a measure to counteract the strengthening it is receiving due to the heavy demand from paper manufacturing and other sources. Powdered starch is listed at 2.62 and 2.90 cents a pound for bag and barrel lots respectively, the papermakers' grade being quoted at 2.72 and 3.00 cents for these amounts.

SULPHATE OF ALUMINA.—Still quoted at the advanced price of 1.50 to 1.75 cents a pound, commercial aluminum sulphate bids fair to move to an even higher level within the next few weeks owing to difficulties in production and transportation. Iron free sulphate is listed at 2.55 to 2.80 cents a pound.

Market Quotations

(Continued from page 67)

Solid Ledger Stock. 2.25 @ 2.50	New Black Soft. .06¼ @ .06¾
Writing Paper..... 2.00 @ 2.25	New Light Sec.
No. 1 Books, heavy. 2.25 @ 2.50	onds..... .02¼ @ .02¾
No. 2 Books, light. 1.40 @ 1.50	Khaki Cuttings.. .03¼ @ .04
No 1 New Manila. 2.75 @ 3.00	Corduroy..... .03¼ @ .03¾
No 1 Old Manila.. 1.50 @ 1.75	New Canvas..... .07¼ @ .08
Container Manila.. 1.35 @ 1.40	New Black Mixed
Old Kraft..... 2.25 @ 2.50	Old
Overissue News.... 1.50 @ 1.60	White, No. 1—
Old Newspaper.... 1.20 @ 1.25	Repacked..... .06 @ .06¼
No. 1 Mixed Paper. 1.10 @ 1.15	Miscellaneous... .04¼ @ .04¾
Common Paper.... .80 @ .90	White, No. 2—
Straw Board, Chip. .80 @ .90	Repacked..... .03 @ .03¼
Binders Bd'. Chip.. .80 @ .90	Miscellaneous... .03 @ .03¾
Domestic Rags—New	Thirds and Blues—
Price to Mill, f. o. b. Phila.	Repacked..... 200 @ 2.25
Shirt Cuttings—	Miscellaneous... 1.85 @ 1.90
New White, No. 1. 11¼ @ 11¾	Black Stockings... 2.75 @ 3.00
New White, No. 2. .06 @ .07	Roofing Stock—
Silicias, No 1..... .06¼ @ .07	No. 1..... 1.30 @ 1.35
New unbleached..... .10¼ @ .11	No 2..... 1.20 @ 1.25
Washables..... .03¼ @ .04	No 3..... 1.10 @ 1.15
Fancy..... .04¼ @ .05¼	No. 4..... 1.10 @ 1.15
Cottons—according to grades—	No. 5A..... 1.05 @ 1.10
Blue Overall..... .05¼ @ .05¾	B..... nominal
New Blue..... .02¼ @ .02¾	C..... nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper	Wood, Vat Lined.. 72.50 @ 75.00
Bonda..... .08¼ @ .65	Filled News Board.. 62.50 @ 65.00
Ledgers..... .09 @ .55	Solid News Board.. 72.50 @ 75.00
Writings..... .07¼ @ .42	S. Manila Chip... 70.00 @ 75.00
Superfine..... .16 @ .22¼	Pat. Coated..... 85.00 @ 92.50
Fine..... .15 @ .18	
Books, S. & S. C..... .07¼ @ .12	Old Papers
Books, M. F..... .06¼ @ .10	Shavings—
Books, coated..... .09 @ .16	No. 1 Hard White 4.00 @ 4.50
Label..... .08¼ @ .13	No. 1 Soft White 3.75 @ 4.25
News, sheets..... 4.75 @ 6.00	No. 1 Mixed..... 1.50 @ 2.00
News, rolls..... 4.50 @ 5.75	Ledgers & Writings 1.75 @ 2.00
Manillas—	Solid Books..... 2.75 @ 3.00
No. 1 Manila... \$5.50 @ 7.00	Blanks..... 1.70 @ 1.80
No. 1 Fiber..... .07¼ @ .12	No. 2 Light Books. 1.75 @ 1.90
No. 1 Jute..... 10.50 @ 12.50	Folded News, over-
Kraft Wrapping... .06¼ @ .12	issues..... 28.00 @ 30.00
Common Bogus... 3.00 @ 3.50	Gunny Bagging... .85 @ .90
Boards	Manila Rope..... 5.75 @ 6.00
(Per Ton Destination)	Common Paper... 1.20 @ 1.40
Chip..... \$60.00 @ 65.00	Old News..... 1.35 @ 1.45
News, Vat Lined.. 62.50 @ 65.00	Old Kraft..... 2.00 @ 2.25

TORONTO

[FROM OUR REGULAR CORRESPONDENT]

Paper	Sulphite, bleached.. 95.00 @ 100.00
(Mill Prices to Jobbers f. o. b. Mill)	Sulphate..... 75.00 @ —
Bond—	Old Waste Papers
Sulphite..... .11 @ .12¼	(In carload lots, f. o. b. Toronto)
Light tinted..... .12 @ .13¼	Shavings—
Dark tinted..... .13¼ @ .15	White Env. Cut... 4.00 @ —
Ledgers (sulphite).. .09 @ .13	Soft White Book
Writing..... .09¼ @ .12	Shavings..... 3.75 @ —
News f. o. b. Mills—	White Bl'k News 2.10 @ —
Rolls (carloads).. 3.50 @ —	Book and Ledger—
Sheets (carloads).. — @ 4.25	Flat Magazine and
Sheets (2 tons or over)..... — @ 4.50	Book Stock(Old) 2.55 @ —
Book—	Light and Crum-
No. 1 M. F. (car-	pled Book Stock 2.40 @ —
loads)..... 9.00 @ —	Ledgers and Writ-
No. 2 M. F. (car-	ings..... 2.75 @ —
loads)..... 8.00 @ —	Solid Ledgers..... 2.75 @ —
No. 3 M. F. (car-	Manillas—
loads)..... 7.50 @ —	New Manila Cut. 2.10 @ —
No. 1 S. C. (car-	Printed Manilas.. 1.75 @ —
loads)..... 9.50 @ —	Kraft..... 2.50 @ —
No. 2 S. C. (car-	News and Scrap—
loads)..... 8.50 @ —	Strictly Overissue 1.50 @ —
No. 1 Coated and	Folded News..... 1.50 @ —
litho..... 14.00 @ —	No. 1 Mixed Pa-
No. 2 Coated and	pers..... 1.20 @ —
litho..... 13.00 @ —	Domestic Rags—
No. 3 Coated and	Price to mills, f. o. b. Toronto.
litho..... 12.25 @ —	Per lb.
Coated and litho,	No. 1 White shirt
colored..... 14.25 @ —	cuttings..... .10¼ @ —
Wrapping—	No. 2 White shirt
Grey..... 4.75 @ —	cuttings..... .06¼ @ —
White Wrap..... 5.50 @ —	Fancy shirt cut-
"B" Manila..... 5.75 @ —	tings..... .05¼ @ —
No. 1 Manila .. 6.75 @ —	No. 1 Old whites .04 @ —
Fiber..... 6.75 @ —	Thirds and blues .02¼ @ —
Kraft, M. F..... 8.00 @ —	Black stockings... 2.00 @ —
M. G..... 8.15 @ —	Roofing stock:
Pulp	No. 1..... 1.25 @ —
(F. o. b. Mill)	No. 2..... 1.15 @ —
Ground wood... \$30.00 @ 40.00	Roofing stock:
Sulphite easy bleach-	Manila rope..... 6.10 @ —
ing..... 65.00 @ 70.00	No. 2..... 1.50 @ —
Sulphite news grade. 60.00 @ 65.00	Gunny bagging... 1.00 @ —

The Home of Quality

PAPER BAGS

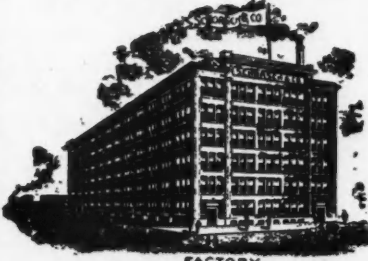
Sacks and Specialties

ESTABLISHED 1901

SCHORSCH & CO.


Manufacturers

500 East 133d Street : New York



FACTORY
132ND TO 133RD ST. & BROOK AVE

This Registered Trade Mark Octagon



on a Paper Bag Vouches for Its Good Quality

The **B** *Quality: It means more than price*

INC PULPS

"FORSHAGA PRIME"

Bleached Sulphite

Limited Tonnages—Fresh consignments now available on dock at Boston, Philadelphia and Baltimore; also for prompt shipment from abroad.

THE BORREGAARD CO., INC.
200 FIFTH AVENUE NEW YORK CITY

Clay


300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Over forty years experience in the clay industry has naturally resulted in the adoption of the most scientific methods and practices. This record of achievement is your guaranty of *clay* of absolute uniformity at prices consistent with M-E quality and service.

Let us submit samples and quote you

MECCO THE MINER-EDGAR CO.
110 WILLIAM ST. NEW YORK



33 WEST 42ND ST., NEW YORK

Ecco Clays 500,000 Tons Annually

DELIVERIES FROM PRODUCER INSURE AND ENABLE YOU TO PRODUCE UNIFORM PAPER

Highest Grades Filler and Coating Clays

WANT AND FOR SALE ADVERTISEMENTS

HELP WANTED

WANTED—Salesman, qualified to sell Waxed and Specially Treated Papers, Plain and Printed, in Washington and Oregon. Write, stating age and experience, to Box 5551, care Paper Trade Journal. N-9

WANTED—Cylinder Machine Tender, accustomed to Specialties. Good wages to competent man. Married man preferred. Address, Box 5574, care Paper Trade Journal. N-23

WANTED—Machine Tender for small slow running Book and Bond Fourdrinier Machine. Sixty-two cents per hour, eight hour day. Steady work. Address, Box 5575, care Paper Trade Journal. N-9

MAN familiar with all grades of Rags and Paper Stock with the acquaintance of Packers and Needs of Paper Mills. One who can command fair amount of business and help take care of office in Packing House. Good steady position to one who can make good from start. In answering kindly state full particulars as to experience, etc. Address, Box 5576, care Paper Trade Journal. N-9

WANTED—Experienced man to install waxing plant abroad. Good salary and expenses paid both ways. About one year's service. Address, Box 5577, care Paper Trade Journal. N-16

WANTED—Foreman for finishing room of high grade Tissue Mill. State salary expected, experience and references. Address, Box 5589, care Paper Trade Journal. N-9

SALESMAN WANTED with Established Trade in paper, paper boards or twine in or adjacent to New York City. Address, Great Notch Paper Co., Inc., 101-103 Varick Street, New York. N-16

SLITTER on Meisel Machine. Good opportunity for capable experienced man. Address, Box 5590, care Paper Trade Journal. N-9

WANTED—Cylinder machine tender on 34" Edwards Attachment Tissue Machine. Wages 58½c. Eight hours. Address, Box 5552, care Paper Trade Journal. N-9

WANTED—Successful Paper Bag, Wrapping Paper and Toilet Paper Salesman, who has large acquaintance with Paper Jobbers, to travel in Pennsylvania. Excellent opportunity for an energetic man. Answer with references and full particulars. Address, Box 5554, care Paper Trade Journal. N-9

WANTED—First Class Machine Tender and Back Tender experienced on Asbestos and Felt. State age, married or single and references in first letter. Address, Box 5555, care Paper Trade Journal. N-16

WANTED—Superintendent for Tissue Mill. State experience and salary required. Address, Box 5565, care Paper Trade Journal. N-9

WANTED:

Beaterman and Back tender for Writing Paper Mill in Middle West.

Eight hour day, steady work and good pay. Address, Box 5534, care Paper Trade Journal. N-9

HELP WANTED

WANTED—Cylinder Machine Tender for Jute Board Mill. Give age and reference in first letter. Address, Roanoke Fibre Board Co., Roanoke Rapids, North Carolina. N-9

WANTED—Beater engineer. Machine Tender, Backtender and Winderman for Mill located in East. Fourdrinier Machine. Three tours. Will pay good wages. No trouble. Give references in first letter. Address, Box 5595, care Paper Trade Journal. N-16

SALESMAN OUTSIDE to represent Wholesale Paper and Stationery House in Washington, D. C., having an established trade with grocery, drug and cigar stores, lunch rooms and miscellaneous retail stores. State references, salary wanted, when available, if can operate automobile, what line merchandising experienced in selling. Address, Box 5594, care Paper Trade Journal. N-9

WANTED—Superintendent for six machine Tissue Mill, going into the manufacture of Twisting and Colored Tissues. Must be high grade man, capable of producing quality paper. First class mill. State experience and give reference in first letter. Address, Box 5593, care Paper Trade Journal. N-23

SALESMEN—Toilet Papers; experienced calling on the better class of jobbers. We manufacture a medium and high grade line of Toilet Papers. Interesting proposition to the right men. Mill at Ballston Spa, New York. Write to Mr. Worthman, Universal Crepe & Tissue Mills, New York. N-16

SITUATIONS WANTED

SULPHITE SUPERINTENDENT—Several years' satisfactory service in present position, desires change. Capable of securing maximum quality production on bleached and unbleached stock. Address, Box 5578, care Paper Trade Journal. N-23

MAN with Executive Ability desires position as mill manager. Years of experience in paper manufacturing. Expert in sales, purchasing, cost, accounting and office supervision. Address, Box 5579, care Paper Trade Journal. N-23

WANTED—Position as night or day ground wood pulp foreman, by young married man, 33 years old. 14 years' experience; Canada or United States. Address, Box 5580, care Paper Trade Journal. N-23

SUPERINTENDENT of ability with many years of experience open for position in Felt Roofing Mill. Guarantee satisfaction. References if necessary. Address, Box 5584, care Paper Trade Journal. N-23

A MAN of experience in Traffic Department Paper Mill desires position. Address, Box 5586, care Paper Trade Journal. D-7

EXPERIENCED BUYER for paper mill, open for engagement. Address, Box 5585, care Paper Trade Journal. D-7

PAPER SALESMAN: New York City, who can produce large amount of business, would like connection with Paper House, or organization, having good mill facilities. Drawing account on commission basis. Address, Box 5596, care Paper Trade Journal. tf

A MAN OF EXPERIENCE, capable of assuming management, or other executive's position, would like connection with Mill where investment can be made. Address, Box 5587, care Paper Trade Journal. D-7

MANUFACTURER'S REPRESENTATIVE desires mill accounts consisting of Wrapping Paper, Toilet Paper, Paper Towels, Paper Napkins, Paper Specialties and Tissue Paper in jumbo rolls. Have years of experience in paper industry and selling to big trade. Address, Box 5588, care Paper Trade Journal. N-9

SITUATIONS WANTED

MAN having good knowledge of sources of supply for paper and board, desires position with reputable paper house as buyer or salesman. Thoroughly familiar with all phases of traffic, accounting, import and export. Address, Box 5558, care Paper Trade Journal. N-9

WANTED—Position by a man with years of valuable experience in paper mills making about all grades of paper. Know the manufacturing details, competent executive, familiar with raw stocks, sales ability. Correspondence solicited with mill officials looking for an assistant on whom they can load the detail, and know it will be handled expeditiously and satisfactorily. Address, Box 5557, care Paper Trade Journal. N-23

POSITION WANTED as boss beaterman or beaterman by an up-to-date color man who is thoroughly experienced. Good references. Address, Box 5559, care Paper Trade Journal. N-16

WANTED—Position as tour boss or night superintendent. Twenty-two years' experience on all grades of box boards and test. Up-to-date on production and quality. Can handle help and get results. Address, Box 5561, care Paper Trade Journal. N-16

WANTED—Position as superintendent or tour boss. Have had 17 years' experience of box board paper making, running all grades. Can furnish good references. Understand handling of men and upkeeping the plant. Address, Box 5562, care Paper Trade Journal. N-9

WANTED—By practical cylinder tissue man, position as superintendent or assistant superintendent. Am able to get production. A No. 1 on repairs and upkeep. References. Toilets or Waxing Tissues. Address, Box 5536, care Paper Trade Journal. N-16

SULPHATE MAN capable and thoroughly experienced, is open for position as superintendent or assistant. Can handle own repairs and maintenance. References. Address, Box 5537, care Paper Trade Journal. N-9

UNIVERSITY GRADUATE with several years' experience wants position with future. Not afraid to start at bottom at any kind of work. Address, Box 5538, care Paper Trade Journal. N-9

SUPERINTENDENT wants position Bond, Book, News, Hanging, Colored Specialties. Good organizer. Knows how to handle help. Best of references. Address, Box 5539, care Paper Trade Journal. N-9

CHEMIST AND CHEMICAL ENGINEER with previous experience in Sulphite and Sulphate Paper Mills, is open for engagement. Now employed. Good references. Address, Box 5475, care Paper Trade Journal. N-9

SUPERINTENDENT good on all grades Box, Card, Tag, Container and heavy cylinder papers, open for position. Good executive, resourceful. Can get results. Address, Box 5540, care Paper Trade Journal. N-16

SUPERINTENDENT of ability desires to make a change. Experienced on all grades of fine Papers, Bond, Ledger, Book, Kraft, Waxing, Manillas, and other Grades. Address, Box 5547, care Paper Trade Journal. D-21

MASTER MECHANIC with a large experience in construction, reconstruction, maintenance and efficiency, desires to make a change. Satisfaction guaranteed. Address, 5517, care Paper Trade Journal. tf

YOUNG MAN having had several years' mill office experience, desires to connect with new organization as assistant to superintendent where there is good opportunity for advancement. Can furnish A-1 references as to ability. Address, Box 5495, care Paper Trade Journal. N-23

SITUATION WANTED as Superintendent of binders board mill. Can make any board that is made on a wet machine. Can give references. Address, Box 5568, care Paper Trade Journal. N-16

SITUATIONS WANTED

NIGHT BOSS or a Machine Tender on Cylinder Machine. 15 years' experience. All grades of boards. Thoroughly reliable and efficient. Address, Box 5570, care Paper Trade Journal. N-16

GENERAL SUPERINTENDENT or manager; progressive young man over 30, college educated. Having broad practical experience with largest paper mills. Thoroughly conversant with modern utilization of waste paper. Also real organizer, desires connection with new organization where advancing opportunities are not limited. Will consider change after December 15. Address, Box 5571, care Paper Trade Journal. N-9

BOSS FINISHER; thoroughly experienced on all grades of paper, having had several years' experience as Boss Finisher, also charge of cutters and calenders. Best of references furnished. Address, Box 5572, care Paper Trade Journal. N-16

WANTED—Position as assistant or tour foreman with a mill desiring a practical man with twenty years' machine experience on sulphite and rag papers. Married, ambitious, good references. Address, Box 5494, care Paper Trade Journal. N-9

FOR SALE

FOR SALE—Two Potdevin Glassine Bag Machines. Perfect condition. Price reasonable. Write for further information. Address, The Peerless Mfg. Co., Norristown, Pa. N-23

BALE PRESS—Logemann 6 M. T. Belt driven. First class condition. Agar Manufacturing Corporation, Bush Terminal, Brooklyn, New York. N-23

FOR SALE—One New Brennen Folder, 60x50. One Gould Suction Pump, used, size 8x10. Two Hoffman Couches, 78"x16". One sixteen roll backstand and shafts for 70" cutter. One Lannoye No. 1 Paper Pulper. Address, Box 5564, care Paper Trade Journal. N-23

FOR SALE—Three cylinder moulds in first class condition, outside Journals 3 1/2" diameter. Could be fitted for roller bearings. Clark Mfg. Co., 79 Merrick Avenue, Holyoke, Mass. N-23

CARS FOR SALE

Fine sturdy standard-gage cars, placed upon the market because of a change in our manufacturing conditions which renders them unnecessary to us. All are in M.C.B.—interchange condition for use on any road.

50—Box—60,000 lbs. capacity.

30—Box—60,000 lbs. capacity

—roofs removed for pulpwood service.

60—Racked for pulpwood or coke—80,000 lbs. capacity.

40—Gondola, flat bottom, 80,000 lbs. capacity.

Present car shortage is increasing rapidly and is expected to reach higher figures than anything since 1916. Cars are offered subject to prior sale, and immediate action is suggested.

Address Box, 5583
Care of Paper Trade Journal
N-23

FOR SALE

FOR SALE—6 Farnum Drives. Complete Triple-Deck frames for 44 Dryers. Will arrange terms to suit. Chesapeake Paper Board Co., Baltimore, Maryland. N-9

FOR SALE—Deane Duplex Fire Pump, 14x 8 1/4x10, capacity 600 gallons per minute. Address, Box 5482, care Paper Trade Journal. N-9

FOR SALE—Envelope machine, adjustable plunger, type, wide range of sizes, practically new. Particularly suitable for specialty work and odd sizes. Address, Box 5592, care Paper Trade Journal. N-16

**GROUND
WOOD MILL**

15 tons, Water power.
5,000 acres. Dwellings, Store and Merchandise. Complete Equipment and Machinery in operation.

Location Caledonia, Queens, Nova Scotia.
Apply to A. Rene Moen, 101 Park Avenue, New York City.

N-9

MISCELLANEOUS

WANTED—Shevlin or any standard type large size Centrifugal pulp screen. Give full particulars and price. Address, Box 5581, care Paper Trade Journal. N-9

WANTED—Cylinder or Fourdrinier Tissue Machine, about 96". State particulars and price. Address, Box 5582, care Paper Trade Journal. N-16

MILL AGENCY WANTED—New York territory on Paper Cardboard, etc., for the Jobbing Trade. Address, Box 5591, care Paper Trade Journal. N-9

PROPOSALS FOR THE SALE OF ELECTROTYPED DROSS, PAPER SHAVINGS, LEATHER SCRAPS, ETC.
Government Printing Office,
Washington, D. C., November 6, 1922.

Sealed proposals will be received at this office until 2 o'clock p. m., December 4, 1922, for the disposal and sale of Electrotyping Dross, Paper Shavings and Leather Scraps from bindery, Old Roller Composition, Refuse Wood, Empty Barrels, and Sawdust which may accumulate, and for the removal of ashes and débris from the Government Printing Office during the six months beginning January 1 and ending June 30, 1923. The right to reject any and all bids and to waive defects is reserved. Detailed specifications of the estimated quantities to be sold, accompanied by blank proposals and giving regulations with which bidders must comply, may be obtained by addressing

GEORGE H. CARTER,
Public Printer

MISCELLANEOUS**SHARTLE**

can fill your requirements in used or new machinery.

**THE SHARTLE BROTHERS
MACHINE CO.**

Middletown

Ohio

N-9

WANTED—Binder Board Machinery, Cylinder Mould, 72" trim, press, etc. Address, F. W. Muir Board Co., Inc., Morristown, N. J. N-9

WANTED TO BUY—Direct from manufacturers, for drop shipment: All Tissue culls, 1 M & 2 M Sheet Rolls of No. 1 Tissue Paper, Pulp Pie Plates, Shirt Boards and any kind of jobs in Counter or Jumbo Rolls of Wrapping Paper. Address, Young Selling Organization, P. O. Box 871, Norfolk, Va. N-23

CASH PAID for old United States Confederate and foreign postage stamps, used on letters prior to 1870. Send samples. James Hardy, 4522 Forrestville Ave., Chicago, Ill. oam-1-yr

MACHINE for paraffining both sides, roll feed, 13 or 24 inches wide. State how heated. Address, Box 5573, care Paper Trade Journal. N-9

Rebuilt Paper Mill Machinery

In Stock and Guaranteed

Not Where Is and As Is

FOURDRINIER TISSUE MACHINE—One 68" FOURDRINIER PARTS—Fusey & Jones 118", 100". Kutter Trowbridge 96"

PRESS PARTS FOR PAPER MACHINES—Fusey & Jones bell crank housing with rolls 18" x 117". Black & Clawson swing arm housing.

DRYERS—Four 48" x 111", one 36" x 80", two 36" x 73", four 48" x 68", one 84" x 67", eleven 43" x 66", two 36" x 48", four 20" x 39".

CHILLED CALENDERS—One 86" six roll, one 62" five roll, one 66" five roll, one 54" five roll, two 58" five roll.

DILLON DOCTOR—For machine calender 60" to 144" face.

SLITTERS & WINDERS—One 120" Warren, one 108" Kidder, one 110" two drum Moore & White.

REELS—Fusey & Jones two drum, Rice, Barton & Fales two drum.

BEATERS—Four N. & W. 72" x 42", one Ditta 62" x 50" iron tub, one Jones 62" x 52", one Dillon 60" x 48", two Emerson 54" x 60", three Downingtown 54" x 42" iron tub, two Emerson 53" x 52", seven Horne 36" x 36", two No. 2 Claffins, two No. 1 Claffins. One 36" x 26" N. & W.

JORDANS—One Appleton Waggy Majestic, two No. 2 Dillon Improved, one Large Horne, two Monarch, one Jones Standard, one Pope brushing engine.

SCREENS—Two 12 plate, two 8 plate, open side Packer screens. Two 6 plate, one Moore & White auxiliary.

STUFF PUMPS—Deane triplex 9" x 8", Goulds triplex 8" x 10", Sandusky triplex 4" x 6", Moore & White duplex 8" x 12", One Beloit duplex 6" x 14". Two 6" Posa.

REVOLVING SHEET CUTTERS—One 82" and 62" Clark, five 61" Hamblets, four 61" Finlays, one 50" Hamblet diagonal, one 42" Finlay.

REAM CUTTERS—One 48" Acme, one 45" Holyoke Seybold.

SUPER CALENDERS—One 52" Holyoke, one 45", one 42", one 36".

WET MACHINES—Four 72" Bagley & Sewall Hydraulic, one 48" Noble & Wood. One Manistee Hog Chipper. One Ryther & Pringle Shredder. We have a large number of pumps and over five hundred calender, press and couch rolls in stock.

FRANK H. DAVIS COMPANY
175 Richdale Ave., Cambridge 40, Mass.

The Pulp and Paper Trading Co.
21 East 40th Street New York City

**DEALERS IN DOMESTIC CHEMICAL AND
MECHANICAL PULPS AND PAPER**

AGENTS FOR

J. & J. Rogers Company, Ausable Forks, N. Y.

E. B. Eddy Co., Ltd., Hull, Canada

Canadian Kraft Limited, Three Rivers, Canada
Dealers in Wayagamack Kraft Pulp

Howard Smith Paper Mills, Montreal, Canada

EASTERN AGENTS of Sulphite Pulp.

Made by Port Huron Sulphite & Paper Co., Port Huron, Mich.

Papier-Zeitung

BERLIN SW 11 (GERMANY)

Founded by Carl Hofman, 1876

appears three times a week

Covers the whole paper trade (paper making, transforming,
stationery). More than 12,500 bonafide sub-
scribers all over the world.

Subscription: 4 Dollars

ANSWER "PRESENT"

When Your

American Red Cross

Opens Its

ANNUAL ROLL CALL

Armistice Day (Nov. 11)

to

Thanksgiving Day (Nov. 30)

You are needed in carrying out the vast peace-time
obligations of your Red Cross, which steadily met the
stupendous tests of the World War.

So Answer

"PRESENT"

At the Annual Roll Call, and Gladly
Pay Your Dollar Membership Fee.

Buchanan & Bolt Wire Company

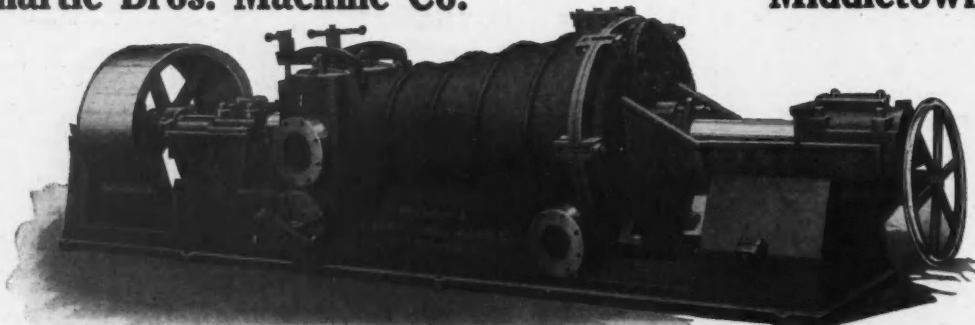
ESTABLISHED 1878 AT HOLYOKE, MASS.

Makers of Highest Grade Fourdrinier Wires, Dandy Rolls, Cylinder Covers, Brass Wire Cloth
of all Meshes for Paper, Pulp and Coating Mills—Quality Guaranteed

We make a Specialty of Fine Wires for Magazine and Book Papers

The Shartle Bros. Machine Co.

Middletown, Ohio





L A W S O N
 PAPER ROLL PLUGS
 SUCTION BOX COVERS
 DRY AND WET BROKE CARS
MENASHA WOOD SPLIT PULLEY CO.
 Menasha, Wisconsin
 PAPER MILL SUPPLIES FOR 38 YEARS

SLITTERS and SPECIAL MACHINES

for use in paper industry
C. BENNINGHOFEN & SONS
 Hamilton, Ohio
 Send us your requirements regardless of what they may be

Missisquoi Pulp and Paper Company

SHELDON SPRINGS VERMONT

White and Tinted Bristols—White Blanks—Index Bristol and Specialties in Card Boards.

The Paper Trade Journal

is the only publication in its field

A MEMBER OF
The Audit Bureau of Circulations

ESTABLISHED 1862

FOURDRINIER WIRES

DANDY ROLLS
CYLINDER
MOLDS

CHENEY BIGELOW WIRE WORKS
SPRINGFIELD, MASS.

MANUFACTURERS

Paper Mill Wire Cloth, Bank and Office Railings and Grill Work



BLEACHED SULPHITE

FREDERICK L. SMITH
 21 EAST 40TH STREET, NEW YORK
PULP AND PAPER MILL ENGINEER

GEORGE F. DREW

MILL ARCHITECT AND ENGINEER
 Consulting and Operating
BRUNSWICK, MAINE
SPECIALTY: Pulp, Paper and Saw Mills
 Cotton, woolen, worsted, cordage, silk mills, and their equipment.
 Appraisals, adjustments.

V. D. SIMONS

Industrial Engineer
 Pulp and Paper Mills, Hydro-Electric and Steam Power Plants,
 Electrification Paper Mill Properties
39 S. La Salle St. CHICAGO

THOMAS L. TOMLINES & SON
CONSULTING ENGINEERS

ASSOC. M. AM. SOC. C. E.; 317-319 CITY BANK BLDG.,
 M. AM. SOC. M. E. SYRACUSE, N. Y.
 Paper, Pulp and Fibre Mills, Hy- Steam Power Plants, Plans and
 draulic Developments, Hydro- Specifications, Efficiency
 Electric Plants Engineering
CONSULTATION AND REPORTS

HARDY S. FERGUSON CONSULTING ENGINEER

Member AM. SOC. C. E., Member AM. SOC. M. E.,
 Member Eng. Inst. Can.
286 FIFTH AVENUE, NEW YORK CITY
 Paper, Pulp and Fibre Mills, Including Building and Complete
 Mechanical Equipment, Water Power Development, Dams,
 Storage Reservoirs and Other Hydraulic Structures,
 Examinations, Reports, Estimates of Cost, Designs,
 Specifications, Valuations

WILLIAM T. FIELD

Consulting Engineer
286 Broadway, New York, N. Y. **Flower Bldg., Watertown, N. Y.**
DESIGNS ESTIMATES REPORTS

GEORGE F. HARDY

M. AM. SOC. C. E., M. AM. SOC. M. E., M. ENG. INST. CAN.
Mill Architect and Consulting Engineer
 Langdon Building, 309 Broadway, New York
SPECIALTY: Paper, Pulp and Fibre Mills, Water Power Develop-
 ments, Steam Power Plants, Plans and Specifications
 Evaluations, Reports, Consultation
 Cable Address: "Hardistock," A B C 5th Edition, Bedford, McNeill.
 Western Union-Bentley's.

VITALE & ROTHERY
FOREST ENGINEERS

527 Fifth Avenue New York, N. Y.

J.H. WALLACE & COMPANY.
 TEMPLE COURT BUILDING
 NEW YORK CITY, U.S.A.
 CABLES. TRIPLEK. N.Y.

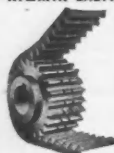


ENGINEERS & CHEMISTS
 INDUSTRIAL DESIGN
 PLANT IMPROVEMENT
 LABORATORY TESTS

J. O. Ross Engineering Corp.

30 E. 42nd St.
CHICAGO NEW YORK CITY BOSTON
VAPOR ABSORPTION SYSTEMS

ATLANTA BALTIMORE BOSTON CHICAGO CHARLOTTE, N. C. CLEVELAND DETROIT



MORSE CHAIN DRIVES

A POWER SAVER FOR POWER USERS

Morse Chain Co. Ithaca, N. Y.
 HIGH SPEED SILENT RUNNING FLEXIBLE
 GEARING FOR POWER TRANSMISSION.

Address Nearest Office

KANSAS CITY MINNEAPOLIS MONTREAL NEW YORK ST. LOUIS PITTSBURGH

Experience Counts
 In Making
TIMBER ESTIMATES

JAMES W. SEWALL
 Old Town, Maine Forest Engineer Davidson Bldg., Washington, D. C.
Largest Cruising House in America

THE BRADLEY SALES AGENCY

Is open to listings of Eastern Canadian Timberlands.
 Hardwood and Freehold Pulpwood Lands are in active
 demand at present.

205 St. James St., Montreal, P. Q.
 512 Bank of Montreal Bldg.

H. B. PRATHER & CO.

CONSULTING ENGINEERS
PAPER AND PULP MILLS
 REPORTS, PLANS, ESTIMATES, SPECIFICATIONS, SURVEYS
 AND SUPERVISION OF CONSTRUCTION
KIRBY BLDG. CLEVELAND, OHIO

SANFORD RILEY STOKER CO.
 WORCESTER, MASS.

Makers of
RILEY STOKERS
 BOSTON NEW YORK CINCINNATI

"A type to meet every stoker need"



PHILADELPHIA CHICAGO

PITTSBURGH ST. PAUL

MURPHY IRON WORKS
 DETROIT, MICH.

Makers of
MURPHY FURNACES
 BUFFALO DENVER CLEVELAND

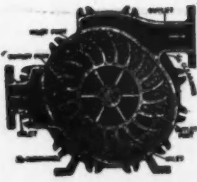
THE
MANAGEMENT ENGINEERING AND DEVELOPMENT Co.
7TH FLOOR CITY NATIONAL BANK BLDG.,
DAYTON, OHIO.

DESIGN, CONSTRUCTION AND OPERATION
OF
PULP PAPER AND FIBRE MILLS
WATERPOWER DEVELOPMENT
STEAM POWER PLANTS.

PLANS AND SPECIFICATIONS
EVALUATIONS AND REPORTS
.. CONSULTATIONS ..

Stebbins Engineering & Manufacturing Co.
Watertown, N. Y.
Designers, Equippers and Operators
Sulphite, Soda and Sulphate Pulp Mills
Digester and All Acid Proof Linings

E. BUTTERWORTH & CO., Inc.
CHARLES H. WOOD, Pres. LEWIS JENNINGS, Treas.
Boston Office, 136 Federal St. New York Office, 1123 Broadway
PAPER MAKERS' SUPPLIES
Agents for "S" Brand and Snow Brand Bleached Sulphite Pulp



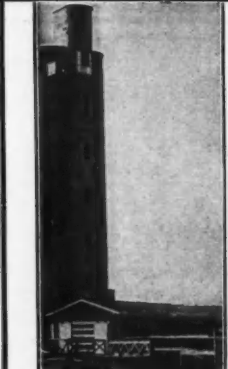
**EFFICIENT SUCTION
ROLL OPERATION** de-
mands the **NASH HYTOR**
THE NASH ENGINEERING CO.
SOUTH NORWALK, CONN.

**CRANE
BRASS VALVES**

UNITED STATES TESTING COMPANY, Inc.
316 Hudson Street **CHEMISTS** New York City

Microscopical Examination, Physical Tests and Chemical Analysis of Paper. Official Chemists to the American Paper and Pulp Association, Association of American Woodpulp Importers, etc. We analyze Fuels, Chemicals, Dyestuffs, Intermediates, Gasoline, Oils, Paints, Soaps, Greases, Waxes, Water for Drinking or Boiler Purposes, Woodpulp, etc.

SHERMAN PAPER COMPANY
Manufacturers of Roll Newsprint
ENTIRE PRODUCT FOR 1922 CONTRACTED.
Mills at
Felts Mills, Great Bend and Lefebvre, N. Y.
Main Office
Trust Co. Building, Watertown, N. Y.



67 JENSSEN
**Two-Tower Acid
Systems now in oper-
ation or building.**

*Normal Prices Today Govern Our
Installations*

Every second Sulphite Mill on this continent is using our Towers and Making Money by Making Better Acid.

G. D. Jenssen Company
200 5th Ave. New York, N. Y.

Charles W. Bell
Consulting Specialist

In the Manufacture of **PAPER BOX BOARD, TEST BOARD, FIBRE BOARD AND STRAWBOARD**

And their fabrication into **SHIPPING CONTAINERS, (Corrugated and Solid Fibre) FOLDING BOXES, etc.**

Forty years' practical experience in all departments—Equipment, processes, formulae, trade customs, management, order and planning system. Markets, sales, estimating, prices, contracts, materials, supplies, collections, arbitrations, receivership and valuations.

"Let Me Help Solve Your Problems"
Consultation Strictly Confidential. Correspondence Solicited
Address—1047 Grand Avenue, Dayton, Ohio

STRATFORD PAPER CO. 160 Cornelison Ave.
Jersey City, N. J.

High Grade Fourdrinier Tissues in Stock for Immediate Delivery

Paper Stock

NOW IS THE TIME TO BUY OUR RAW MATERIALS

Out of our forty different grades of paper stock you are assured a steady, reliable source for procuring raw materials in practically every branch of paper making. Having specialized for 35 years in this one field you can depend upon a clean, well-packed, uniform product throughout; fulfillment of delivery promises; and because of our output of 300 tons daily, big tonnage at all times. Write us your wants.

Mendelson Bros. Paper Stock Co., General Offices: 919 So. Michigan Ave., Chicago, Ill.
Long Distance Phones, Harrison 2840 and 5557



Mills:
Austin, Pa.
Sales Office:
527 Fifth Ave., New York

RED CAP FIBRE

AND OTHER

HIGH GRADE
SULPHITE
WRAPPING
PAPERS

LINDSAY BROS., Inc.

Keystone Mill Division

MANUFACTURERS OF
MANILA, WHITE AND KRAFT
WAXED PAPERS
SURFACE AND DRY WAXING

804-806-808 Sansom Street
PHILADELPHIA, PENNA.

JAMES ROSENBERG, Pres. L. W. BOWMALL, Vice-Pres.
AMERICAN WOODPULP CORPORATION
FOREIGN AND DOMESTIC
CHEMICAL and MECHANICAL
WOODPULPS

Rags, New Cuttings, Bagging, Etc.

New York—347 Madison Ave.

BRANCHES:
Stockholm—Sweden
Helsingfors—Finland

Holyoke—J. B. Woodruff, Inc.
Kalamazoo—F. D. Haskell
Dayton—R. R. Reed

BLUE RIDGE FIBRE

Bleached Soda Pulp

Manufactured and sold by

COLUMBIAN PAPER COMPANY
BUENA VISTA, VIRGINIA

Samples and prices upon application

PAPER MAKERS CHEMICAL CO.
WESTERN PAPER MAKERS CHEMICAL CO.

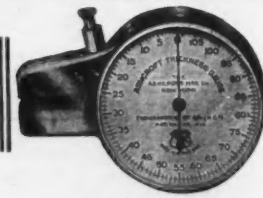
EASTON HOLYOKE KALAMAZOO
JACKSONVILLE PENSACOLA ST. AUSTELL

CLAYS ROSIN SIZE
SATIN WHITE FOAM KILLER

FELT SOAP and OTHER SPECIALTIES



**The Ashcroft
Paper Tester**



**The Ashcroft
Thickness Gauge**

Actual necessities for all those who make, sell or purchase paper in any form. The thousands in daily use testify to their efficiency.

THE ASHCROFT MFG. CO.

119 West 40th Street New York
29 North Jefferson Street Chicago, Ill.
16 High Street Boston, Mass.
Canadian Sales Agents: The Canadian Fairbanks Meter Co., Montreal and Toronto.

THE WATERBURY FELT CO.



**FELTS and
JACKETS**

For Every Grade of Paper and Pulp

Correspondence and Orders
Solicited

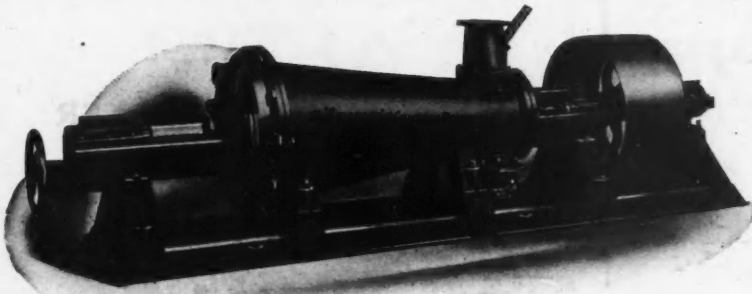
Manufactured at
SKANEATELES FALLS
New York

SUPERIOR CHEMICAL CO.

JOLIET, ILLINOIS

Manufacturers

**PAPER MAKERS' and FILTER
ALUM**



EMERSON MFG. CO.

LAWRENCE, MASS.

See the Second-Hand Machinery ads and note the ABSENCE of

EMERSON BEATING ENGINES

They seldom wear out and are never thrown out. PERFECT CIRCULATION. NO "PADDLING."

The "EMERSON" JORDAN does its work with half the power required by others of no greater capacity.

WRITE FOR DETAILS

WE specialize in durable Fourdrinier Wires and Cylinder Wires in any metal desired up to and including 120 mesh in plain woven, double warp, triple chain, and twisted weaves.

Save two-thirds the cost and three-quarters of the expense of putting on brass and bronze wires by using our nickel alloy wires.

Joseph O'Neill Wire Works

Port Chester, N. Y.

Established 1906

F. L. Smithe Machine Co. Inc.

MANUFACTURERS OF

ENVELOPE MACHINERY

for making any style envelope, regular or special. Printed, stamp embossed and tissue lined envelopes.

Also die presses, tension machines, and metal clasp machines, and all other machinery used in manufacture of envelopes.

Designing, pattern making and machine work.

150 Eleventh Avenue, New York City,
New York, U. S. A.

LINDSAY FOURDRINIER WIRES

are THE wires

For Fast News Machines

or any others

Nuf Sed

THE LINDSAY WIRE WEAVING CO.

Collinwood Sta.,

Cleveland, Ohio

Perforated Metal Screens

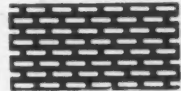
For Pulp and Paper Mills



STEEL, COPPER, BRASS, BRONZE
and other Alloys

.066 Inch Round

punched for Centrifugal and
Rotary Screens, Pulp Washers,
Drainer Bottoms, Filter Plates, etc.



1/4 x 1/4 Inch Slots

CHARLES MUNDT & SONS

53-55 FAIRMONT AVE.

JERSEY CITY, N. J.

WILLIAM A. HARDY & SONS COMPANY, Fitchburg, Mass., U.S.A



The Union Sulphur Company

Producers of the Highest Grade
Brimstone on the market . . .

ABSOLUTELY FREE FROM ARSENIC OR SELENIUM

The Largest Sulphur Mine in the World

CALCASIEU PARISH, LOUISIANA

Main Offices: Frasch Building, 33 Rector Street, New York

ALUM

FOR THE PAPER MAKER

Manufactured by

The Jarecki Chemical Co.

QUALITY

SERVICE

Sole Selling Agents

ISAAC WINKLER & BRO.

CINCINNATI :: :: NEW YORK

"DRAPER" FELTS

For Any Grade of Paper or Pulp

ARE GUARANTEED

To Give Entire Satisfaction

MANUFACTURED BY

DRAPER BROS. CO., CANTON, MASS.

GRISSINGER

Patented

AUTOMATIC

TUBE

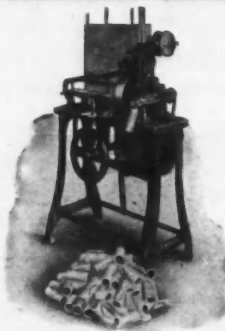
MACHINE

Wire Stitched Tube

TOILET PAPER
MACHINERY

GRISSINGER MACHINE WORKS
PHILADELPHIA, PA.

Patented { June 24, 1913.
August 10, 1915.



We Are Equipped For
**Heavy Paper Mill
Tank Construction**
Material and Design to
meet your require-
ments.

Installation anywhere by
our own Experts.

Let Us Estimate.

G. Woolford Wood Tank Mfg. Co.
LINCOLN BLDG. PHILADELPHIA, PA.

When You Think of Wood Tanks Think
Woolford Tanks.

250 to 1000 H. P. WATER TUBE BOILERS

Immediate Delivery

Our new high grade water tube boilers, 250 to 1000 H. P., ready for
immediate delivery from points in the East, North and Central West.

Steel encased or for brick setting. Immediate delivery can be made from
Chicago or our Eastern Headquarters in New Jersey, opposite New York City or
Bilidell, Louisiana near New Orleans.

Our low, quick sale price offers a saving of from 25% to 50%.
Your old equipment will be taken in on a liberal exchange arrangement.
Our thoroughly posted engineers are waiting to give you expert service and com-
plete details.

Quick action will enable us to guarantee quick installation.

HARRIS BROTHERS COMPANY

West 35th and Iron Sts.

CHICAGO

WHEN IN NEED OF

**Fly Bars and Bed Plates
Beater Valves and Hydrants
Beater Rolls or Repair Parts
Beating Engines**

WRITE US

DAYTON BEATER AND HOIST CO.
DAYTON, OHIO

FOREIGN and DOMESTIC

Paper Stock

New Cuttings
and Rags

Jute Stock

Sizing, Sulphite

and Soda Pulps

200 FIFTH AVE. NEW YORK

CASTLE, GOTTHEIL & OVERTON

New 1923 Edition

OF

LOCKWOOD'S DIRECTORY

OF THE

PAPER AND ALLIED TRADES

Published September 21st

Contents of the 48th Annual Edition

All the paper and pulp mills in the United States, Canada, Mexico, Cuba and South America

City Address of Mills and Mill Supply Houses
 Classified List of Paper Mill Products, Canada
 Classified List of Paper Mill Products, United States
 Classified List of Pulp Mill Products, Canada
 Classified List of Pulp Mill Products, United States
 Coated Paper Manufacturers
 Envelope Manufacturers
 Glazed and Coated Paper Manufacturers
 Idle Mills
 Mill Officials
 Pad Manufacturers
 Paper Merchants, Canada
 Paper Merchants, United States
 Paper Stock and Rag Dealers
 Paper Bag Manufacturers
 Paper Box Manufacturers
 Paper and Pulp Mills in Canada
 Paper and Pulp Mills in United States

Paper Mills in South America
 Paper Specialties
 Papeterie Manufacturers
 Prepared Roofing Paper Manufacturers
 Stationers in Canada
 Stationers in Cuba
 Stationers in United States
 Statistical Table of Mills
 Tablet Manufacturers
 Tag Manufacturers
 Toilet Paper Manufacturers
 Trade Associations
 Twine Manufacturers in United States and Canada
 Vegetable Parchment Paper Manufacturers
 Wall Paper Printers
 Watermarks and Brands
 Waxed Paper Manufacturers

Send in your order NOW**Price \$7.00 a copy, express prepaid.**

PUBLISHED BY THE

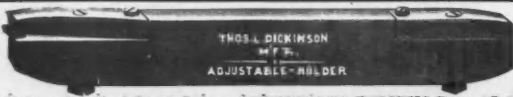
LOCKWOOD TRADE JOURNAL CO., INC.

10 East 39th Street, New York

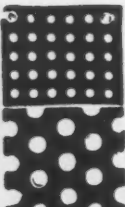
**SLITTERS
AND
WINDERS**
SAMUEL M. LANGSTON COMPANY
CAMDEN, N. J.

AGALITE FILLER
UNITED STATES TALC CO.
GOUVERNEUR NEW YORK

WILLIAM B. DILLON
DILLON & BARNES
Paper Mill Products and Supplies
52 VANDERBILT AVENUE, NEW YORK
Telephone, 7353 Murray Hill


Special Shaped Carbon, Black Diamond POINTS FOR TURNING Paper, Cotton
Unilid Iron and Hardened Steel Calendar Rolls, Hard Rubber, Fibre, etc.
Successor to John Dickinson. Established 1796.
Agents for Great Britain, G. W. BURTON, GRIFFITHS & CO.,
Ludgate Square, London.
Manufactured by **THOS. L. DICKINSON** 21 Gold St. NEW YORK

FELTS
H. WATERBURY & SONS CO.
ORISKANY, N. Y.


**MANHATTAN
PERFORATED METAL CO.**
Office and Works: 237-239 Centre St.,
New York
PERFORATORS
of COPPER, BRASS, ZINC, ALUMINUM,
TIN, STEEL, IRON, Etc.
Write for Copper, Brass, Tin or
Aluminum Catalog.
Brass and Copper Centrifugal and
Juice Strainer Plates a Specialty


FRANKLIN PAPER CO. HOLYOKE,
MASS.
MANUFACTURERS OF
Index Bristols, White Bristol Blanks, Etc.

Established 1895
DANIEL M. HICKS
(INCORPORATED)
PAPER MILL SUPPLIES
200 FIFTH AVENUE, NEW YORK CITY

Salomon Bros. & Co.
IMPORTERS OF
All Grades of Rag and Paper Stock
200 FIFTH AVENUE, NEW YORK
COTTON WASTE :: LINTERS :: RAMEE

Penn Paper and Stock Company
PACKERS OF ALL GRADES OF
WASTE PAPER
240 N. FRONT STREET PHILADELPHIA

Manufacturers
of
All Special
Small Roll
Products

Adding
Machine,
Cash Register,
Die Wiping,
Hand Rolls,
Etc., Etc.
PAPER MANUFACTURERS CO., Inc., Phila., Pa.

UNION TALC COMPANY
Finest Grades of Agalite
132 Nassau Street New York

CAMACHINE
SLITTERS AND ROLL-WINDERS
WINDERS REWINDERS
CAMERON MACHINE CO. BROOKLYN, N. Y.

WOOD FLOUR

Various degrees of fineness and either fibrous or granular.
Made from first growth Spruce and Pine, by approved processes.

UNION WOOD FLOUR CO., INC.
Hudson Falls, N. Y.

BELLE ALKALI COMPANY, Belle, W. Va.
PURE CHLORINE BLEACH CAUSTIC SODA
in cylinders and tanks BELLE BRAND 76%—Solid and Flake
Arnold Hoffman & Co. Inc., Sole Agents, PROVIDENCE BOSTON NEW YORK
PHILADELPHIA CHARLOTTE

BAKER MANUFACTURING CORPORATION

Formerly
BAKER & SHEVLIN COMPANY

Sole Manufacturers of

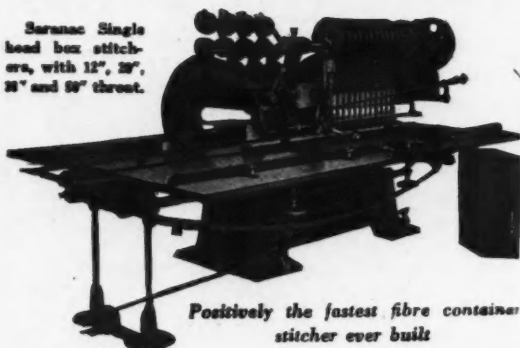
THE MAGAZINE GRINDER

Have you seen the article which was read before the Paper Makers' Convention on Relative Efficiency of the Automatic Magazine and Pocket Grinders? If not, and you are interested, kindly advise and we will send you a copy.

BAKER MANUFACTURING CORPORATION, Saratoga Springs, N.Y.

25 to 40 shipping containers per minute can be made on a Saranac Automatic Multiple Head Stitcher

Saranac Single
head box stitch-
ers, with 12", 20",
28" and 36" throat.



Positively the fastest fibre container
stitcher ever built

IT is equipped with twelve stitching heads, so that any number from 1 to 12 staples can be driven at one time. Either a single or double row of staples, or single row with the tie stitch, are automatically driven. It takes less than five minutes to change from the largest to smallest size containers.

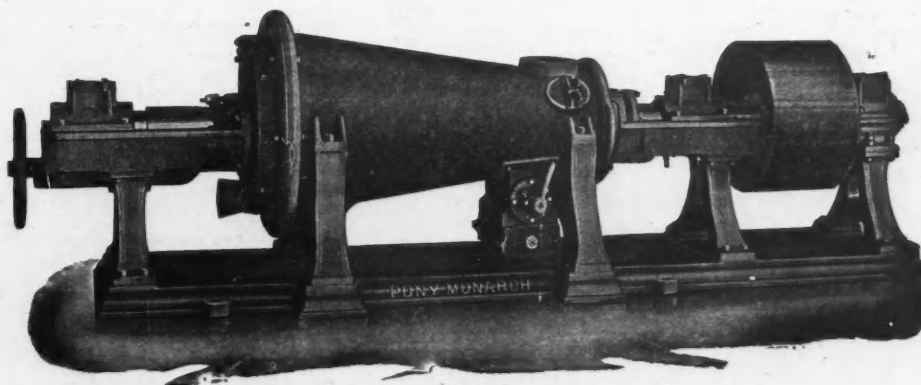
Write for Full Particulars.

We also manufacture Bottom Sealing Machines.

Saranac Machine Company
Benton Harbor, Michigan

WE MAKE
BEATERS AND
JORDANS OF
QUALITY

SIX SIZES OF
JORDANS,
BEATERS,
FROM ¾ LBS.
TO 3000 LBS.



The Noble & Wood Machine Co., Hoosick Falls, N.Y.

CLASSIFIED INDEX TO ADVERTISEMENTS

PAPER EXPORTERS.	Page	PLUGS.	Page	SUCTION BOX COVERS.	Page
Hudson Trading Co.	2	Menasha Wood Split Pulley Co.	75	Menasha Wood Split Pulley Co.	75
Katzenstein & Keene, Inc.	4	PLUGS (Wood).		SULPHITE, BLEACHED AND UNBLEACHED.	
Parsons Trading Co.	Front Cover	O. L. Bartlett.	11	J. Anderson & Co.	4 and 29
PAPER MANUFACTURERS.		PULP STONES.		The Booregaard Co., Inc.	71
Bayles Mfg. Co.	78	International Pulp Stone Co.	Front Cover	Brown Co.	5
Becker Paper Corporation.	37	Lombard & Co.	87	Bulkley, Dunton & Co.	14
Collins Mfg. Co.	7	PUMPS.		Butterworth & Co., Inc.	77
Diamond State Fibre Co.	Front Cover	Frederick Iron & Steel Co.	—	Canadian Robert Dollar Co.	4
Eastern Mfg. Co.	75	Hayton Pump & Blower Co.	—	Craig-Becker Co., Inc.	3
Eaton, Dikeman Co.	—	Hudson-Sharp Machine Co.	—	Eastern Manufacturing Co.	75
Fort Howard Paper Co.	11	J. & W. Jolly, Inc.	3	Mead Sales Co., The.	—
Franklin Paper Co.	82	Shartle Brns.	73 and 74	Price & Pierce, Ltd.	Front Cover
Hanna Paper Corporation.	5	PUMPS (Vacuum).		Pulp and Paper Trading Co.	74
Howard Paper Co.	65	The Nash Engineering Co.	77	SULPHUR.	
Missisquoi Pulp & Paper Co.	75	PRESSURE BULKERS.		Texas Golf Sulphur Co.	7
Mountain Mill Paper Co.	65	B. F. Perkins & Sons, Inc.	11	Union Sulphur Co.	80
St. Regis Paper Co.	5	RAG CUTTERS.		TANKS (Water, Oil, etc.).	
Sherman Paper Co.	77	B. F. Perkins & Sons, Inc.	11	Biggs Boiler Works Co.	—
Stratford Paper Co.	77	Taylor, Stiles & Co.	41	W. E. Caldwell Co.	—
Wausau Sulphite Fibre Co.	—	RECORDING INSTRUMENTS.		New England Tank & Tower Co.	87
West Virginia Pulp & Paper Co.	65	Bristol Co., The.	39	Stearns Lumber Co., A. T.	—
PAPER AND PULP MACHINERY.		General Electric Co.	—	Tokheim Oil Tank & Pump Co.	—
American Voith Contact Co.	86	RECORDING TACHOMETERS.		Woolford Wood Tank Co.	80
Appleton Machine Co.	62	Bristol Co., The.	39	TEMPERATURE RECORDING.	
Baker Mfg. Co.	83	General Electric Co.	—	Bristol Co.	39
Beloit Iron Works.	33	ROLL GRINDERS.		General Electric Co.	—
Bird Machine Works.	23	Lobdell Car Wheel Co.	46	TIMBER ESTIMATES.	
Black-Clawson Co.	21	ROSIN.		The Bradley Sales Agency.	76
Clark-Aiken Co.	10	Hercules Powder Co.	—	James W. Sewall.	76
Frank H. Davis.	73	ROSIN SIZE.		TIME RECORDS.	
Downingtown Mfg. Co.	36	Arabol Mfg. Co.	87	Bristol Co.	39
Glens Falls Machine Works.	35	Paper Makers Chemical Co.	78	General Electric Co.	—
Hudson-Sharp Machine Co.	—	Western Paper Makers Chemical Co.	78	TRANSMISSION MACHINERY.	
Improved Paper Machinery Co.	43	ROTARY BLEACHING BOILERS.		H. W. Caldwell Co.	3
J. & W. Jolly, Inc.	3	Biggs Boiler Works Co.	—	Hill Clutch Co.	—
Sandy Hill Iron & Brass Co.	74	SAVEALLS.		Reeves Pulley Co.	8
Shartle Bros. Machine Co.	73 and 74	Bird Machine Co.	23	Weller Mfg. Co.	—
Smith & Winchester Mfg. Co.	7	J. & W. Jolly, Inc.	3	J. & W. Jolly, Inc.	3
Trimble Machine Works.	46	SATIN WHITE.		TURBINES.	
Valley Iron Works Co.	—	The Kalbfleisch Corp.	—	J. & W. Jolly, Inc.	3
Waterville Iron Works.	2	Paper Makers Chemical Co.	78	TURPENTINE.	
PAPER MILL AGENTS.		Western Paper Makers Chemical Co.	78	Hercules Powder Co.	—
Dillon & Barnes.	82	SCALES (Paper).		TWINES.	
McIver, Dana T.	2	Fred Baker.	—	American Manufacturing Co.	62
PAPER AND PULP MILL BROKERS.		E. J. Cady & Co.	27	National Patent Reed Sales Co.	—
Gibbs-Brower Co.	—	Foreign Paper Mills.	—	VALVES.	
PAPER SPECIALIST.		SCREENS.		Crane Co.	77
Charles W. Bell.	77	Beloit Iron Works.	33	Tenkins Bros.	4
PAPER STOCK.		Bird Machine Co.	23	VAPOR ABSORPTION SYSTEMS.	
Atterbury Bros.	Front Cover	Central Mfg. Co.	12	Ross Engineering Co.	76
Butterworth & Co., Inc., E.	77	Wm. A. Hardy & Sons Co.	3	VENTILATING FANS.	
Castle, Gottlieb & Overton.	80	J. & W. Jolly, Inc.	79	B. F. Perkins & Sons, Inc.	11
Gambinsky Bros.	88	Union Screen Plate Co.	85	Ross Engineering Co.	76
Hicks, Daniel M.	82	SHREDDERS (Pulp and Paper).		VEGETABLE PARCHMENT PAPERS.	
Mendelson Bros. Paper Stock Co.	77	Valley Iron Works Co.	27	Kalamazoo Vegetable Parchment Co.	65
Penn Paper & Stock Co.	82	SKYLIGHTS.		WATER WHEELS.	
Salomon Bros. & Co.	82	E. Van Noorden & Co.	87	American Voith Contact Co.	86
Train-Smith Co.	Front Cover	SLASHERS.		J. & W. Jolly, Inc.	3
PAPER TESTERS.		Ryther & Fringle Co.	41	WAX PAPERS.	
Ashcroft Mfg. Co.	78	SLITTERS AND REWINDERS.		Lindsay Bros., Inc.	78
E. J. Cady Co.	27	Beloit Iron Works.	33	WOOD FLOUR.	
Foreign Paper Mills.	—	C. Benninghofen & Sons.	75	Union Wood Flour Co.	82
B. F. Perkins & Sons, Inc.	11	Cameron Machine Co.	82	WOOD PULP IMPORTERS.	
Thwing Instrument Co.	3	Dietz Machine Works.	8	American Wood Pulp Corp.	78
Valley Iron Works Co.	3	Grissinger Machine Works.	80	J. Anderson & Co.	4 and 29
PAPER TUBE MACHINERY.		Samuel M. Langston Co.	82	Ira L. Beebe & Co.	87
Dietz Machine Works.	8	Menasha Wood Split Pulley Co.	75	The Booregaard Co., Inc.	71
Grissinger Machine Works.	30	SODA PULP.		Bulkley, Dunton & Co.	14
PAPER WAXING MACHINERY.		Columbia Paper Co.	78	M. Gottesman & Co.	—
Potdevin Machine Co.	9	SPLICING TISSUES.		Hammond, R. F.	Front Cover
PERFORATING MACHINES.		E. M. Sergeant Co.	12	Hudson Trading Co.	2
Dietz Machine Works.	8	STARCH.		E. J. Keller Company.	87
PERFORATED METAL.		Corn Products Refining Co.	10	Lagerloef Trading Co.	12
Harrington & King Perforating Co.	69	STEAM SPECIALTIES.		Mead Sales Co., The.	35
Hendrick Mfg. Co.	9	Crane Co.	77	Nilson, Lyon & Co., Inc.	39
Manhattan Perforated Metal Co.	82	Open Coil Heater & Purifier Co.	—	A. J. Pagel & Co., Inc.	19
Charles Muntz & Sons.	79	STITCHING MACHINERY.		J. F. Patton & Co., Inc.	8
PIPE (Genuine Wrought Iron).		Saramac Machine Co.	83	Perkins-Goodwin Co.	37
A. M. Byers Co.	—	STOCK REGULATORS.		Scandinavian-American Trading Company,	Front Cover
Reading Iron Co.	—	Trimble Machine Co.	—	WOOD ROLLS.	
PRESS ROLLS.		STOKERS.		Rodney Hunt Machine Co.	—
Rodney Hunt Machine Co.	—	Murphy Iron Works.	76		
		STRAW MAKING.			
		Samuel M. Langston Co.	82		

Fitchburg, Mass., U. S. A. UNION SCREEN PLATE COMPANY Lennoxville, P. Q. Canada

UNION BRONZE SCREEN PLATES
(Best phosphorized Cast Metal)

ROLLED BRASS
(Union Quality)

Old Plates RECLOSED and RECUT to accurate gauge.

UNION BRONZE SCREWS for Screen Plates

UNION BRONZE SUCTION BOX PLATES

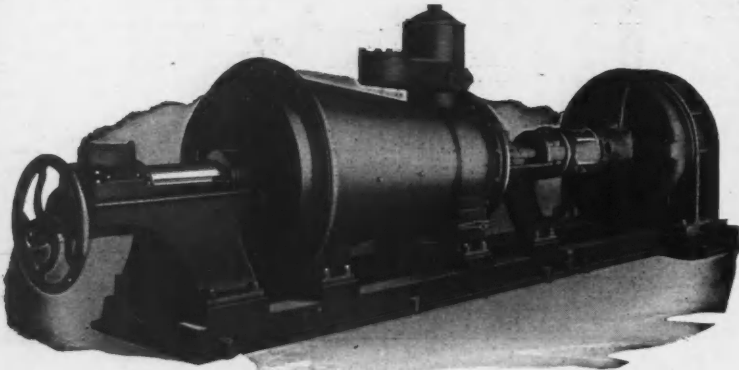
Immediate Delivery of the Largest Orders. Satisfaction Guaranteed.

THE UNION WITHAM SCREEN PLATE VAT AND FASTENERS

THE ORIGINAL THE BEST
Over One Thousand in Successful Operation Recommended by Screen Makers



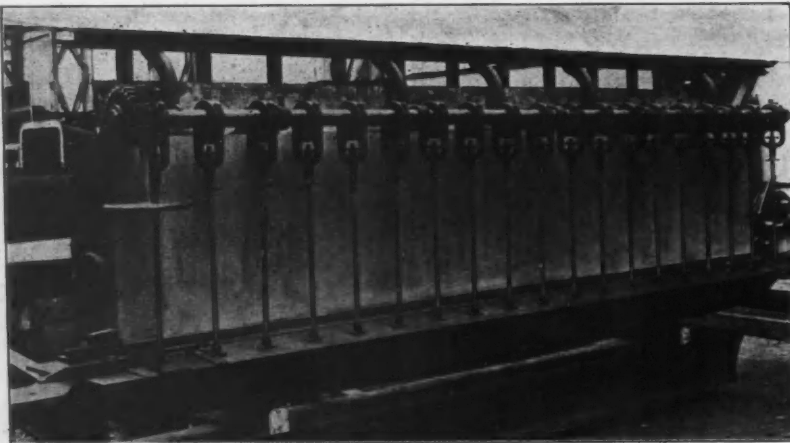
THE DILLON JORDAN



Our latest Improved Machine, three sizes; belt or direct connected motor driven. All Bearings self-oiling, adjustable and water-cooled. Fitted with Standard Steel Knives, Special Heat Treated Steel, Bronze, or Manganese Steel Plug and Shell Lining.

For full particulars apply to

DILLON MACHINE CO., Inc.
Builders of Paper Mill Machinery
Lawrence, Mass.



Patent Applied for

F. O. B. Canadian or American Factory

Voith High Pressure Stock Inlet

No slices, no aprons. More wire surface. Individual adjustment over entire width of machine.

30 to 40% Longer Life of Wire

Write for Bulletin 11

American Voith Contact Co
280 Madison Ave. New York

DOWNINGTOWN

CYLINDER MOULDS

It is nothing uncommon for owners of Downingtown Cylinder Moulds to report that they have been using them for an almost incredible number of years.

Downingtown makes moulds from

30" to 60" in diameter, any length to meet your requirements.

The method used in their manufacture, insures a true surface, longitudinally and radially.

Inquiries Invited

DOWNINGTOWN MANUFACTURING CO.

Paper & Pulp Mill Machinery

DOWNINGTOWN, PA., U. S. A.

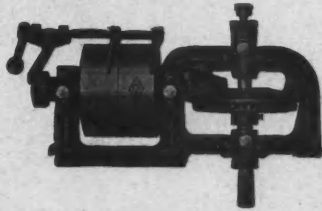
Dry Rosin Size



Brittle and easily soluble. Cheapest size out. Cheaper than mill made size. Also our hot and cold water sizes; standard quality. Cleaner, more uniform and economical than either mill made sizes or those offered by our competitors. Also Arabol Paper Size, Splicing Gums, Condensed Paste Powder, Paper Makers' Starches.

Arabol Manufacturing Co.
100 William Street NEW YORK

AGITATOR DRIVES



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

NEW ENGLAND TANK & TOWER CO.

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

E. J. KELLER COMPANY
INCORPORATED

200 FIFTH AVENUE
NEW YORK

FOREIGN AND DOMESTIC
PAPER MAKERS' SUPPLIES
CHEMICAL AND MECHANICAL PULPS
COTTON, JUTE AND FLAX WASTES
EAST INDIA MERCHANDISE

Van Noorden Skylights



are as
Indispensable

To a modern Paper Mill as its important inner equipment. "DAYLITE" means Nature's light without weather or condensation drip.

E. VAN NOORDEN & CO. 103 Magazine St. Boston, Mass.

PULP STONES

of absolutely the finest quality

Lombard & Co., Incorporated

Importers and Dealers
236-238 A Street : BOSTON, MASS.
Branch at Montreal, Canada

ESTABLISHED 1861

IRA L. BEEBE

CYRUS E. JONES

IRA L. BEEBE & CO.

132 Nassau St., New York

IMPORTERS AND DEALERS IN



WOOD PULP

"TYLER" FOURDRINIER WIRES



RUN straight and true and are long-wearing.

Widths up to 250 inches, in brass, bronze and phosphor bronze.

Also Cylinder Faces and Washer Wires.

THE
W. S. TYLER COMPANY
Cleveland, Ohio

COLORS FOR

PAPERMAKERS

KUTTROFF, PICKHARDT & CO.
INCORPORATED

128 Duane Street - - New York

BOSTON - 157 Federal St. PHILA. - 111 Arch St.
PROV. - 52 Exchange Pl. CHI. - 305 W. Randolph St.

EASTWOOD
WIRE MFG. CO.
FOURDRINER WIRES
BELLEVILLE, NEW JERSEY, U.S.A.

**THE WM. CABLE
EXCELSIOR WIRE MFG. CO.**

Established 1848
Incorporated 1876-1898

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

Write for Price List

74-90 Ainslie St. **BROOKLYN, N. Y.**

Don't Guess at Important Matters
**BOWSER'S SPEED or MOTION
INDICATOR** is indispensable

in obtaining a UNIFORM speed of machinery, and is one
of the most PROFITABLE little devices ever put in a
mill. Will pay for itself in 30 days. Dial 12 in. in
diam. Weight, 10 lbs.

The N. P. Bowser Co., South Bend, Ind.

NATRONA
Porous Alum
MANUFACTURED BY
PENNSYLVANIA SALT MFG. COMPANY
PHILADELPHIA

Hamilton Top Felts
run until worn out, with less trouble of
"picking" on machine than any other
make of top felts can show. A trial is
invited.

SHULER & BENNINGHOFEN
HAMILTON, OHIO

**C. K. WILLIAMS & CO., EASTON
PA.**

Proprietors of the Fenna, Dry Paint
and Color Works and the Helios Dry
Color, Chemical and Copperas Works
of Allentown, Pa.

Manufacturers, Miners and Importers
of Coloring Materials, such as Venetian
Reds, Red, Brown, Black, Yellow,
Oxides, Chrome and other Colors,
also Paper Fillers—as Agalites, Mineral
Pulp, Talc, China and other Clays.

**COLORS FOR PAPER
MANUFACTURERS' USE**

YES, we admit that's "GOING SOME"
"G.B." 3RDS & BLUES

Excel in Color, Strength and Net Contents.
But we guarantee it and prove it.

Inquiries solicited

GUMBINSKY BROS. CO.
America's Largest Packers of Rags and Waste Paper
2261 South Union Ave., Chicago, Illinois

STAR CLAY CO.
CLAY
WHITE CHINA CLAY
SPECIALLY ADAPTED TO PAPER MAKERS USE
MERTZTOWN, PA.

**FOURDRINER
CYLINDER
WASHER** **WIRES**

50 years' experience as wire makers
insures highest quality of product

**"Appleton Wires
Are Good Wires"**

Appleton Wire Works Appleton, Wis.