

MEMBER OF THE A. B. C.
FIFTIETH YEAR

Municipal & Business Branch Library
Municipal Building

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

ESTABLISHED IN 1872

Vol. LXXIV. No. 9

NEW YORK AND CHICAGO, MARCH 2, 1922

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

John Aspegren, Pres. B. Lindell, Treas.
J. A. Millar, Gen. Mgr.

SCANDINAVIAN-AMERICAN TRADING COMPANY

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

(Established 1907)

Wood Pulp

Among other brands we sell as Agents:

CASTLE BRAND Extra strong Mitscherlich Sulphite
STOMNE Extra strong Kraft
CHURCH BRAND Bleached Sulphite
UDDEHOLM Bleached Sulphites
UDDEHOLM Strong Kraft
UDDEHOLM Sulphates: Easy Bleaching, Bleachable and Bleached
STORA Strong Unbleached Sulphites
STORA Strong Kraft
STORA Sulphates: Easy Bleaching, Bleachable and Bleached
LION O1 Strong Kraft
LION O Bleachable Sulphate
LION A Easy Bleaching Sulphate

Wire or write us for samples and prices, for immediate or future delivery.

H. R. WOODWARD, Pres. WALTER P. SIMONDS, Treas.

TRAIN SMITH COMPANY

IMPORTERS AND DEALERS IN
ALL GRADES OF FOREIGN AND
DOMESTIC PAPER STOCK
OLD SOUTH BLDG., BOSTON, MASS.

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

145 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

PAGE 19!



PROTECTIVE PAPERS

Glassine Parchmoid
Vegetable Parchment Greaseproof

Diamond Fibre Receptacles of all kinds

Diamond State Fibre Company

Dept. Z

BRIDGEPORT, PENNSYLVANIA (near Philadelphia)

PRICE & PIERCE., Ltd

17 East 42d Street, New York

Sole Selling Agents for
Bathurst Company Ltd.
BATHURST, N. B.

**Kraft Pulp and Easy
Bleaching Sulphite**

INTERNATIONAL PULP CO.

NEW YORK CITY

ASBESTINE PULP * **FILLER**
90% Retention

REG. U. S. PATENT OFFICE

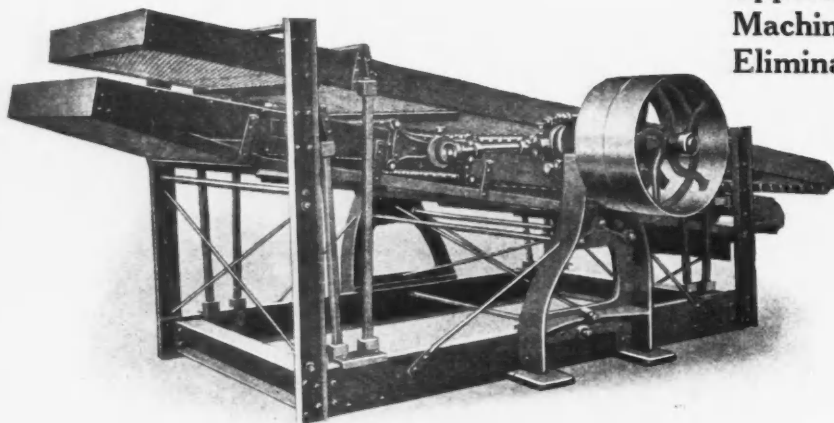
PULP AND PAPER
OF
EVERY DESCRIPTION
HUDSON TRADING COMPANY
300 Madison Avenue
NEW YORK
ESTABLISHED 1886
CABLE ADDRESS: "HUDTRACO," NEW YORK

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

ALL-METAL SHAKER CHIP SCREEN



Structural Steel Frame
Opposed Eccentric Drive
Machinery Steel Trunnions
Eliminates All Vibration

Write
for
Prices
and
Description

WATERVILLE IRON WORKS

WATERVILLE, MAINE

JAMES ROSENBERG, PRES. L. W. BOWMALL, Vice Pres.
AMERICAN WOODPULP CORPORATION
 FOREIGN AND DOMESTIC
CHEMICAL and MECHANICAL
WOODPULPS

Rags, New Cuttings, Bagging, Etc.
Chemicals of All Descriptions

New York—347 Madison Ave.

BRANCHES:
 Stockholm—Sweden
 Helsinki—Finland

Holyoke—J. B. Woodruff, Inc.
 Kalamazoo—F. D. Haskell
 Dayton—R. R. Reed

Missisquoi Pulp and Paper Company

SHELDON SPRINGS VERMONT

White and Tinted Bristols—White
 Blanks—Index Bristol and Special-
 ties in Card Boards.

KNOX WOOLEN CO.

MANUFACTURERS OF

"EXCELSIOR"

*Seamless Felts for
 fast running*

FELTS AND JACKETS

*Satin style Felts
 for fine finish*

1863

FOR EVERY GRADE OF PAPER
 CAMDEN, MAINE

1922

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

**Craig-Becker
 Company**

INC.

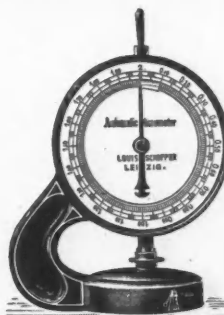
Domestic and Foreign
 Ground Wood and
 Sulphite

52 VANDERBILT AVE.
 NEW YORK CITY

**Schopper Standard Paper Testers
 ARE THE BEST**

11" high

8" wide



THE ORIGINAL MICROMETER

*They last a life time.
 Why buy imitations?*

- | | |
|------------------------------|--------------------|
| Strength and Stretch Testers | Pocket Micrometers |
| Folding Testers | Desk Micrometers |
| Hygrometers | Pocket Scales |
| Testing Acids | Desk Scales |

U. S. A. SOLE AGENTS CANADA
FOREIGN PAPER MILLS, INC.
 72 DUANE STREET NEW YORK



Wayless Manufacturing Corporation

SALES OFFICE: 527 FIFTH AVENUE, NEW YORK.
PULP AND PAPER MILLS AT AUSTIN, PA.



HIGHEST
QUALITY
SULPHITE
WRAPPING
PAPERS

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.
Ware Coated Paper Company, Ware, Mass.
Procter & Gamble Distributing Co.
Mills at Augusta, Georgia, and Memphis, Tenn.
Canadian Kraft Limited, Three Rivers, Canada
Dealers in Wayagamack Kraft Pulp

EASTERN AGENTS of Sulphite Pulp. Made by
Port Huron Sulphite & Paper Co., Port Huron, Mich.

J. ANDERSEN & CO.

FREDERICK BERTUCH, SPECIAL PARTNER
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;
Bergvik and Ala Nya Aktiebolag, Soderhamn, Sweden

Scandinavian Export Agents
TEXAS GULF SULPHUR CO., TEXAS CITY, TEXAS

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 WATERBURY FELT CO.



FELTS and JACKETS

For Every Grade of Paper and Pulp

Correspondence and Orders
Solicited

Manufactured at
SKANEATELES FALLS
New York

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.

LaBoiteaux Merits Your Confidence

To know that the house you are doing business with is above reproach is as important as quality in the merchandise you buy.

You can place full confidence in the LaBoiteaux organization to serve you promptly, efficiently and above all intelligently.

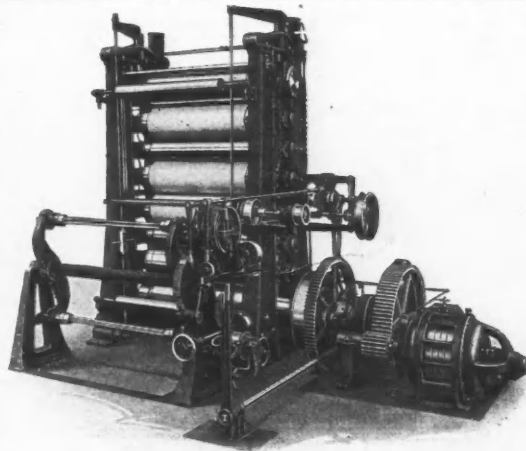
For interesting quotations on

Box Boards
Paper Board Specialties

write to any of our offices.

The C. L. LaBoiteaux Co.

Cleveland Cincinnati Chicago 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 Office:

30 East 42nd St.

New York

WINESTOCK

DE-FIBERING AND DE-INKING PROCESS

PATENTED



Height of Machine Over All, 12 Feet

Produces Strongest, Brightest and Best Pulp Obtainable from Waste Papers.

Capacity—12 to 15 Tons in 24 Hours

It de-fibers and liberates ink and color in one operation. It separates ink and color from fibers, instead of rubbing, grinding or kneading them in.

CASTLE, GOTTHEIL & OVERTON

SOLE SELLING AGENTS IN THE UNITED STATES

200 Fifth Ave. Building

New York, N. Y.

E. D. Jones & Sons Co., Pittsfield, Mass.,

Builders in the United States

Waterous Engine Works Co., Ltd., Builders and Selling Agents for Canada, Brantford, Canada

Felts

Made to Suit Your Individual Needs

**Quality Paper
Quantity Production**

is another way of saying

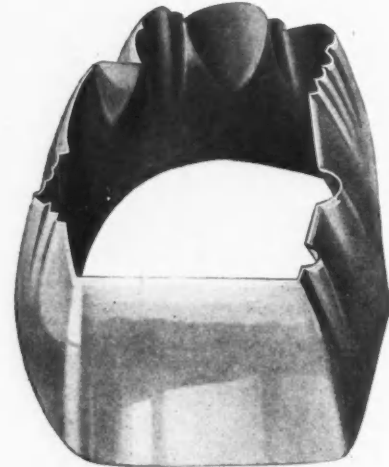
APPLETON

Felts and Jackets

**Appleton Woolen Mills
Appleton, Wis.**

Cutting Dies

of superior quality

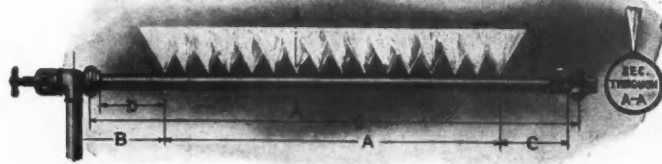


NO matter how intricate or involved the design is, we'll make it and make it right. Every die of carefully selected steel, guaranteed flawless and warranted to give long, satisfactory service. The more difficult your die-cutting problems the more we'll enjoy helping you solve them. Send us a rough sketch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

THE VEDDER "RAINSTORM" SHOWER PIPE



MANUFACTURED BY

THE SMITH & WINCHESTER MFG. CO.

SOUTH WINDHAM, CONN.

ESTABLISHED 1828

BUILDERS OF
 DEPENDABLE MACHINERY
 FOR
THE PAPER MILL

*A Complete Line of
 Paper Bag Making
 Machinery.*

*Undercut and Overcut
 Trimmers.
 Die Cutting Presses.*

2

THE USE OF

Recording Pressure and Vacuum Gauges
 Recording Liquid Level Gauges
 Recording Thermometers, Pyrometers, Tachometers, Psychrometers, etc.



TRADE MARK
BRISTOL'S
 REG. U. S. PAT. OFFICE.

RECORDING INSTRUMENTS

in the Pulp and Paper Mill

Help to secure a more uniform product and improve plant efficiency.

They furnish the operator a guide to the conditions of the processes. The charts supply a record of these conditions which are available for inspection by the management, and which may be filed away for future reference and comparison.

The fact that one large pulp and paper mill has several hundred of Bristol's Recording Instruments emphasizes their value in this industry.

May we send you copy of Bulletin BE-303, describing our line of instruments.

THE BRISTOL COMPANY, Waterbury, Conn., U. S. A.

Branch Offices

BOSTON NEW YORK PITTSBURGH DETROIT CHICAGO ST. LOUIS SAN FRANCISCO

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

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

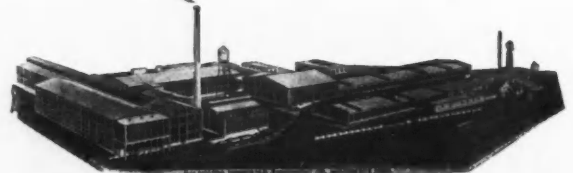
732 Sherman Street
Chicago



*Yours for Bigger
and Better Business*

K·V·P

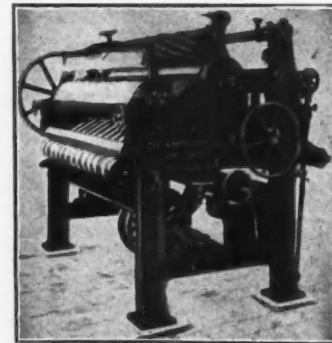
Genuine Vegetable Parchment
Pure White Waxed Paper
Bond—White and Six Colors
Manifold—Substance 8 and 10.



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 Calendars—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.

BOLTON QUALITY

If you have ever used *any* of the Bolton products, Fly Bars, Bed Plates, Jordan Fillings, or Knives of any kind, you found them *HIGH GRADE* in quality and finish and economical in cost.

You can order any of the Bolton Quality line and know that you will find same equally *High Grade*, equally *well finished*, and equally *economical*.

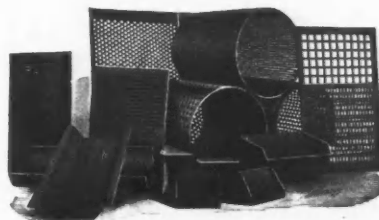
JOHN W. BOLTON & SONS, Inc.
LAWRENCE, MASS.

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

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.

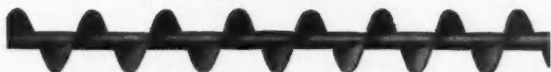
Pittsburgh Office, 915-916 Union Bank Building

CALDWELL SERVICE



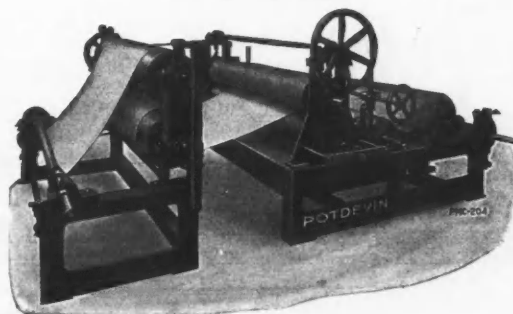
HALF a million dollars worth of well-selected stock, constantly maintained, and an organization keyed up to the theory that plant efficiency is measured by the number of orders shipped on the day of receipt, accounts for Caldwell service. Let us figure on your requirements.

H. W. CALDWELL & SON CO.
LINK-BELT COMPANY, OWNER
CHICAGO, 17th Street and Western Avenue
NEW YORK, 299 Broadway



POTDEVIN

LIGHT and HEAVY
WET or DRY



PAPER WAXING MACHINERY

64 and 80" Widths in Stock.

POTDEVIN MACHINE CO.
1223-38th Street, Dept. 2 Brooklyn, N. Y.



Are made in a thoroughly equipped factory admirably situated to handle and perfectly machine the heavy six and eight inch material required in

Paper Mill Acid Towers and Tanks

Experience covering more than sixty years has taught us how to meet the conditions with which you contend. Our products include every one of the wooden vats and tubs you require. Our expert crews are at your service for any installation of these products.

Send us your specifications and let us quote.



**G. WOOLFORD WOOD
TANK MFG. CO.**

Lincoln Bldg., Philadelphia, Pa.

*When You Think of Wood
Tanks--Think Woolford Tanks*



EVERYTHING IN

PULP & PAPER

J. E. PATTON CO., INC.

**342 Madison Ave.
New York City**

(Cable address - Pulp, N.Y.)



"ALBANY"

FELTS and JACKETS for Paper and Pulp Mills

ALBANY FELTS are adapted for every type of Paper and Pulp Machine, and for every kind of stock. Every one is made of Pure Wool of the very best quality.

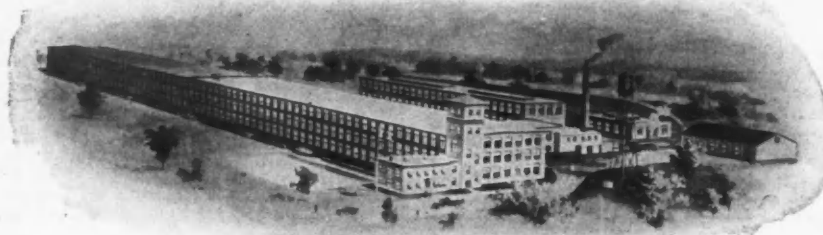
☐ Twenty-five years' experience in making Paper Makers Felts and Jackets has shown us how to make them as best suited to the needs of various kinds of machines and stock.

☐ Every possible effort is made to give our customers the best satisfaction and to weave into our Felts and Jackets the longest possible life.

ALBANY,

ALBANY FELT COMPANY

NEW YORK






SERVING THE JOBBER
— With Quality Products —

We are not selling to the Retailer. Our service extends to the Jobber only. Every Fort Howard product is designed to secure and keep business for the jobber. Our products are consistently good. Each article is made to follow a set standard of quality and quantity.

Fort Howard Paper Co.
 Green Bay, Wis.

The Mullen Paper Tester
 is
practical



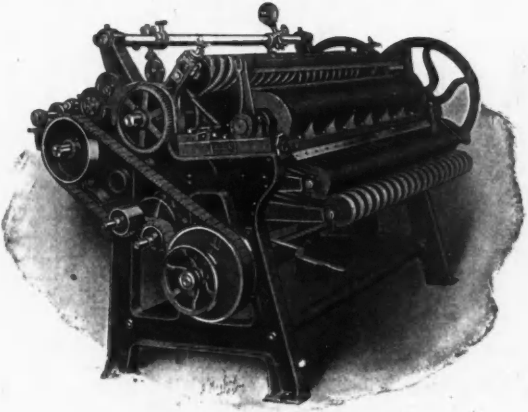
because

of the direct relation of its Bursting Strength Test to actual working conditions. Whether the strain be with the grain or across it, the fibers burst at the weakest spot of the paper, just as would be the case with a sufficient strain on paper in actual use.

Write for further particulars to Dept. P 3

B. F. PERKINS & SON, Inc., Holyoke, Mass.

Paper Cutters
 Single, Duplex and Diagonal



Cutter Knives Patent Top Slitters

HAMBLET MACHINE CO.
 Lawrence, Mass.

Wood Plugs



For paper rolls, made to pattern under shop names in four sizes as follows: **CARD, 3"**; **MANILLA, 2 3/4"**; **NEWS, 2 1/2"**; **DRUG, 2 1/4"**; 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.

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



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.

We offer a full line of

COLORES

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.

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.

Changing a JACKET



**PROFIT
DOLLARS
LOST**



Can you afford to change Jackets frequently?

If you use KENWOOD TAN JACKETS, changes are required less frequently.

BECAUSE they are treated with a special patented TANNING process which makes them thicker, heavier, firmer, stronger, more resistant to friction and abrasion, and to deteriorating action of water and chemicals.

Kenwood Tan Jackets are woven in layers or strata and may be worn away to the very last layer without danger to wires. Are ready for MAXIMUM production as soon as shrunken on.

F. C. HUYCK & SONS

Kenwood Mills, Albany, N. Y.

Manufacturers of

FELTS AND TAN JACKETS FOR ALL
PAPERS, BOARDS AND PAPER MACHINES



If Properly Applied
Ball Bearings

on

Breast Rolls
Table Rolls
Wire Rolls
Felt Rolls
Cylinder Moulds
Primary Press Rolls
and Drives

will save wires, felts and
power.

We apply them properly

ASK US



MEMBER OF THE A. B. C.

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTIETH YEAR

PUBLISHED EVERY THURSDAY BY THE
LOCKWOOD TRADE JOURNAL COMPANY, INC.

LESLIE R. PALMER, President

J. W. VAN GORDON, Vice-President

Telephone { 2380 }
 { 2381 } Vanderbilt
 { 2382 }

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
London Office—Stonhill & Gillis, 58 Shoe Lane

Washington Office—L. M. Lamm, 63 Home Life Bldg.
Western New England News Office—Michael Connor, Holyoke

THE PAPER TRADE JOURNAL is the pioneer publication in its field, and has for many years been the recognized Organ of the Paper and Paper Industry. In circulation is greater than the combined circulations 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 COPIES10 cents

Other Publications of Lockwood Trade Journal Company, Inc.

AMERICAN STATIONER AND OFFICE OUTFITTER (Weekly).....Per year, \$2
LOCKWOOD'S DIRECTORY OF THE PAPER }
STATIONERY AND ALLIED TRADES (Annual) }.....Per copy, \$7

Vol. LXXIV. No. 9

NEW YORK AND CHICAGO

Thursday, March 2, 1922

Table of Contents

News of the Trade:

	PAGE
Production of All Paper During Month of January.....	16
To Build New Mill at Hinsdale, N. H.....	17
Eastern Manufacturing Company Busy.....	17
Purchasing Agents Oppose Long List.....	17
Kaministiquia Pulp Co. Is Sold to T. P. Berkey.....	18
Interlake Company, Toronto, Had Good Year.....	18
General News of Toronto Trade.....	18
Making Wage Readjustments in Fox River Valley.....	20
Wausau Fibre Co. to Issue Stock.....	20
Tomahawk Paper Co., Wisconsin, to Start April 1.....	20
Cost Men to Hold Meetings With the Superintendents..	22
St. Maurice Paper Company Cuts Dividend.....	22
Ask Rail Cut on News Print.....	22
More Confidence in Chicago.....	24
Market in Philadelphia Shows Slight Improvement.....	26
S. B. Tily Joins C. H. Clinton Paper Co., Philadelphia....	26
Changes in the Ward Co.....	26
Revival in Paper Stock on Exchange at Montreal.....	28
Laurentide Power Co. Holds Annual Meeting.....	28
Shawinigan Power Co., Montreal, Holds Annual Meeting..	28
New Foundation for Chemistry of Wood at McGill.....	28
Production of News Print for the Month of January....	30
Conditions in Japanese Paper Market.....	34
Slight Improvement in Boston.....	36
Testify in Hearst Paper Deal.....	36
New York Trade Jottings.....	38
Starts C. K. Urquhart Paper Co.....	38
High Lights on the News Print Situation.....	40
News Print Statistics—1921-1920.....	42
Against Duty on Casein.....	45

	PAGE
Indianapolis Paper Stock Co. Moves Offices.....	45
To Be Technical Adviser of Bureau of Standards.....	45
Recent Incorporations.....	60
Ovar Hylin Returns From Europe.....	60
Trade Marks Department.....	62
A Letter From the Typotheta.....	62
S. Y. Beach Paper Co. to Resume.....	62
Nekoosa-Edwards Co. Elects New Directors.....	62
Riverside Paper Mfg. Co. Elects Officers.....	66

Editorial:

Significant Failures.....	44
Sound Policy for 1922.....	44
Paper Mill Wages Decreasing.....	45

Technical Section:

Use of Clean Water A Preservative For Storing Pulp.....	47
Pumps and Pumping Machinery.....	51
Grindstone Mounting.....	53
Hydraulic Head Flow Box.....	54
Current Paper Trade Literature.....	55

Obituary:

Roger Tileston.....	32
---------------------	----

Market Review:

New York Market Review.....	66
Market Quotations.....	67
Miscellaneous Markets.....	70

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

PRODUCTION OF ALL PAPER DURING MONTH OF JANUARY

Stocks of all Grades Excepting Book, Paperboard, Boxboard and Hanging Increased During the Month—Stocks of all Grades Reported by Manufacturers at the End of January Amounted to 268,702 Tons Including Stocks at Terminal and Delivery Points—In Addition Jobbers and Publishers Reported Stock and Tonnage in Transit Aggregating 198,409 Tons Imports and Exports.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 2, 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 January, 1922. This summary is compared with the month of January, 1921, 1920, 1919, and 1918. The average production is based upon the production for the years 1918, 1919, 1920, and 1921, and the average stocks are based upon the stocks carried for the years 1918, 1919, 1920 and 1921. The production has been classified for convenience into 12 groups 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.

The variation in the number of mills from one period to another is due in part to the fact that some mills do not run continuously on the same 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 January, 1922, compared with January, 1921, 1920, 1919, and 1918, together with average production and stocks.

Grade	Num-ber of Mills	Stocks on Hand First of Month, Net Tons	Pro-duction, Net Tons	Ship-ments, Net Tons	Stocks on Hand End of Month, Net Tons
News Print (Standard and Special Grades of News):					
January, 1922	65	23,934	105,808	103,192	26,550
January, 1921	85	24,763	123,830	116,176	32,417
January, 1920	89	15,369	129,663	128,098	16,934
January, 1919	66	19,408	116,154	114,343	21,219
January, 1918	66	31,713	105,700	108,485	28,928
Average			110,000		25,307
Standard News:					
January, 1922	53	19,607	98,702	96,525	21,784
January, 1921	67	19,573	113,764	106,228	27,109
January, 1920	66	12,338	114,957	112,719	14,576
January, 1919	51	15,656	106,002	105,169	16,489
January, 1918	50	26,482	97,086	96,336	27,232
Average			99,700		20,900
Book (M. F., S. S. C. and Coated):					
January, 1922	81	38,757	73,466	73,760	38,463
January, 1921	93	25,005	64,382	60,507	28,880
January, 1920	98	23,279	96,419	96,152	23,546
January, 1919	80	28,431	70,443	64,836	34,038
January, 1918	90	36,845	74,219	82,082	28,982
Average			73,325		30,305
Paperboard—Total (Straw, Fibre, Leather, Chip, Etc.):					
January, 1922	202	63,018	145,198	145,485	62,731
January, 1921	244	53,104	105,806	100,431	58,479
January, 1920	249	40,329	211,934	209,035	43,228
January, 1919	236	46,196	140,859	133,838	53,217
January, 1918	236	42,411	153,602	161,299	34,714
Average			157,850		49,989
Boxboard:					
January, 1922	122	31,964	105,416	107,897	29,483
January, 1921	144	25,451	74,870	71,625	28,696
Average			111,425		26,048
Wrapping (Kraft, Manilla, Fibre, Etc.):					
January, 1922	126	48,848	65,791	60,133	54,506
January, 1921	142	35,800	44,620	35,179	45,241
January, 1920	151	26,791	70,109	71,247	25,653
January, 1919	160	40,499	50,490	39,592	51,397
January, 1918	160	53,551	48,732	58,978	43,305
Average			59,150		43,482

Bag (All Kinds):					
January, 1922	38	3,085	16,797	16,092	3,790
January, 1921	38	3,031	6,296	5,861	3,466
January, 1920	46	2,087	20,963	20,707	2,343
January, 1919	37	3,408	11,691	11,203	3,896
January, 1918	37	6,498	14,875	16,061	5,372
Average			13,275		3,362
Fine (Writing, Bonds, Ledgers, Etc.):					
January, 1922	100	34,000	27,405	26,074	35,331
January, 1921	105	30,312	22,756	18,320	34,748
January, 1920	110	31,516	32,886	35,611	28,791
January, 1919	114	34,576	27,675	26,176	36,075
January, 1918	114	32,500	28,365	28,690	32,675
Average			26,675		33,192
Tissue (Toilet, Crepe, Fruit, Wrappers, Etc.):					
January, 1922	82	6,185	14,954	14,103	7,036
January, 1921	99	8,774	7,704	7,356	9,122
January, 1920	96	5,697	15,695	15,542	5,850
January, 1919	90	5,490	10,611	9,667	6,344
January, 1918	90	6,683	11,589	11,646	6,926
Average			12,275		6,737
Hanging (No. 2 Blank, Oatmeal, Tile, Etc.):					
January, 1922	21	7,782	7,486	8,179	7,089
January, 1921	26	3,027	9,507	7,735	4,799
January, 1920	26	1,452	9,935	10,427	500
January, 1919	21	2,933	9,180	9,447	2,666
January, 1918	21	6,789	4,304	4,629	6,464
Average			6,950		4,693
Felts and Building (Roofing, Sheathing, Etc.):					
January, 1922	42	8,472	25,608	24,521	9,559
January, 1921	52	13,420	17,885	17,752	13,553
January, 1920	54	5,315	37,733	36,463	6,585
January, 1919	48	7,699	15,039	13,272	9,466
January, 1918	48	8,341	25,910	25,964	8,287
Average			25,025		8,853
Other Grades (Specialties Not Otherwise Classified):					
January, 1922	92	19,563	23,682	23,329	19,916
January, 1921	94	17,160	17,682	16,606	18,236
January, 1920	95	12,482	24,956	23,433	14,005
January, 1919	62	11,310	14,094	14,150	11,254
January, 1918	62	13,382	23,414	23,386	13,210
Average			19,650		14,466
Total—of All Grades:					
January, 1922		253,644	506,195	494,868	264,971
January, 1921		214,396	420,468	385,923	248,941
January, 1920		164,317	650,293	646,715	167,895
January, 1919		199,860	466,236	436,524	229,572
January, 1918		238,113	491,010	521,160	207,963
Average			504,175		220,386

The following stocks were reported on hand at terminal and delivery points on January 31, in addition to the mill stocks shown in the tabulation: News print, 10 tons; Book, 3,407 tons; Fine, 12 tons; Wrapping, 6 tons; and "Other Grades," 296 tons.

Stocks of all grades except Book, Paperboard, Boxboard, and Hanging increased during the month. Stocks of all grades reported by manufacturers at the end of January amounted to 268,702 tons, including the stocks at terminal and delivery points. In addition to these stocks, jobbers and publishers reported news print stock and tonnage in transit aggregating 198,409 tons.

Ratio of Stocks to Average Production

Comparing the stocks on hand at the domestic mills on January 31, with their average daily production based upon the combined production for 1918, 1919, 1920, and 1921, the figures show that:

- News print paper mill stocks equal 6 days' average output.
- Book paper mills stocks equal 13 days' average output.
- Paperboard mill stocks equal about 10 days' average output.
- Wrapping paper mill stocks equal about 23 days' average output.
- Bag paper mill stocks equal about 7 days' average output.
- Fine paper mill stocks equal about 33 days' average output.
- Hanging paper mill stocks equal slightly more than 26 days' average output.
- Felts and building paper mill stocks equal 10 days' average output.
- Miscellaneous paper stocks equal slightly more than 25 days' average output.
- Total paper mill stocks of all grades equal about 13 days' average output.

Imports and Exports

The imports and exports of all grades of paper for December, 1921, compared with December, 1920, as shown by the records of the Department of Commerce were as follows:

	December, 1921		December, 1920	
	Pounds	Value	Pounds	Value
Imports:				
News print	159,273,409	\$6,078,663	163,578,860	\$8,496,635
Book paper	64,244	2,929	1,254,170	149,052
Wrapping	1,653,014	62,941	359,850	36,167
Hanging		25,799		46,522
All other grades (a)		214,440		312,305
Exports:				
News print	3,197,970	144,336	6,580,358	449,906
Book paper	1,487,837	161,193	11,965,414	2,148,212
Paper board		163,444		732,760
Wrapping	2,246,679	152,863	5,168,494	706,753
Bag		70,890		320,630
Fine		172,134		1,317,255
Tissue		81,308		234,323
Hanging		23,609		114,732
All other grades (a)		392,068		1,266,111
Total imports		\$6,384,772		\$9,040,681
Total exports		1,361,845		7,290,682

(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, the value of which amounted to \$6,078,663 for December, 1921, is imported from Canada. The value of the exports of News print in December, 1921, amounted to \$144,336, which is about 2 per cent of the News print imported.

The value of the total imports of all grades was about 5 per cent more than for November, 1921. The value of the total exports for December, 1921, was \$5,928,837 less than the value of the exports for December, 1920, and \$5,022,927 less than the value of the imports for December, 1921.

News print, Book, Wrapping, Paperboard and Fine were the principal grades exported, as to value.

Loss of Production

The idle machine time reported to the Commission is shown by grades in the tabulation attached. The tabulation does not include the machines in 22 mills which were closed down completely. 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 January, 1921, is given by grades and reasons for purposes of comparison.

Grade	Lack of Orders		Repairs		Other Reasons		Total	
	1922	1921	1922	1921	1922	1921	1922	1921
News print:								
Number of machines.....	12	15	10	19	11	3	33	37
Total hours idle.....	3,492	2,568	564	2,582	1,148	627	5,204	5,777
Book paper:								
Number of machines.....	109	117	12	29	7	7	128	153
Total hours idle.....	14,308	22,698	965	6,421	578	1,226	15,851	30,345
Paperboard:								
Number of machines.....	177	215	44	46	69	57	290	312
Total hours idle.....	35,940	58,510	3,640	14,048	14,667	15,347	54,247	87,905
Wrapping:								
Number of machines.....	69	70	25	51	23	27	117	148
Total hours idle.....	9,494	19,004	2,386	8,929	3,483	5,704	15,363	33,637
Bag:								
Number of machines.....	21	15	1	4	6	0	28	19
Total hours idle.....	3,660	4,914	117	430	835	0	4,612	5,344
Fine:								
Number of machines.....	90	70	6	29	19	19	115	118
Total hours idle.....	23,326	19,487	804	8,530	1,987	3,254	26,117	31,271
Tissue:								
Number of machines.....	38	75	23	23	27	12	88	120
Total hours idle.....	6,164	24,486	1,499	4,096	2,436	5,127	10,099	33,709
Hanging:								
Number of machines.....	6	4	1	2	1	1	8	7
Total hours idle.....	2,061	1,857	15	85	54	13	2,130	1,955
Felts and building:								
Number of machines.....	22	30	5	6	10	9	37	45
Total hours idle.....	6,284	6,299	852	671	2,070	2,976	9,206	9,946
Other grades:								
Number of machines.....	53	46	8	17	19	9	88	72
Total hours idle.....	9,069	12,482	731	3,405	2,974	2,201	12,774	18,088
Total number of machines	597	657	135	230	192	144	928	1,031
Total hours idle	113,798	172,305	11,573	49,197	30,232	36,475	155,603	257,977

To Build New Mill at Hinsdale, N. H.

HINSDALE, N. H., March 1, 1922.—G. E. Robertson & Company have purchased the site formerly owned by the G. A. Robertson Company and will erect a new paper mill thereon, construction to begin this month. The officers are Gustavus S. Smith, president, and George E. Robertson, treasurer.

Eastern Manufacturing Company Busy

[FROM OUR REGULAR CORRESPONDENT.]

LEWISTON, Me., March 1, 1922.—Mills of the Eastern Manufacturing Company are still running at full capacity as they have been ever since last autumn. During the spring of last year these plants are reported to have gotten down to as low as 20 per cent capacity, but in the summer a steady improvement began which brought them up to 100 per cent, where they have remained.

The sale early in the year of \$2,500,000 worth of bonds gave the company elbow room and brought liabilities down close to \$1,300,000, it is said. This general rehabilitation of working capital has permitted the corporation to maintain its preferred dividends. It is estimated that with the paper and pulp departments operating at 80 per cent of capacity the concern can cover its bond interest, its preferred dividend and have a small surplus for the common stock. With a recovery in general business it is expected that earning power for the common will develop considerably. In 1920 this stock earned over \$5 a share.

In the pulp department at the present time operations are down to 65 per cent of capacity owing to a slight lull, it is reported. Since pulpwood has been written down below replacement cost losses from this end of the business have probably been stopped.

On the Boston Stock Exchange the common stock of the Eastern Manufacturing Company has advanced from \$9 a share, as it was early in the winter, to \$14. In 1919 this stock sold as high as 36½.

Purchasing Agents Oppose Long List

At a meeting of the Executive Committee of the National Association of Purchasing Agents held in Cincinnati, February 21, 1922, the following resolution was passed:

WHEREAS, anything that tends to increase the cost of commodities to the ultimate consumer is decidedly out of line with the spirit of the times, and

WHEREAS, we as Purchasing Agents are endeavoring to curtail

the cost of commodities and are therefore opposed to any increase in the price of materials purchased, therefore be it

RESOLVED, that we oppose the adoption of the so-called Long Price List issued by the United Typothetae of America as applying to the sale of printing paper for the reason that it tends to increase the cost of printing to the ultimate consumer.

KAMINISTQUIA PULP CO. IS SOLD TO T. P. BERKEY

Vice-President and General Manager of the Consolidated Water Power and Paper Co. Pays \$175,000 for the Property at Public Auction—Mill Was Completed in January, 1921, at an Estimated Cost of \$450,000—Said to Be the Intention of the Company to Open the Mill at Once—Lull in the General Paper Demand—Whalen Pulp and Paper Mills Operating Full.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., February 21, 1922.—The estate of the Kaministiquia Pulp and Paper Company, consisting of a fully equipped ground-wood plant of thirty tons daily capacity and sixteen acres of property under a 99-year lease from the corporation of the city of Port Arthur, Ont., was sold by public auction last week at Port Arthur for \$175,000 to George P. Berkey, vice-president and general manager of the Consolidated Water Power and Paper Company of Wisconsin Rapids, Wis.

The mill was completed in January, 1921, at an estimated cost of \$450,000, and was in operation less than three months. U. M. Waite was president and general manager. The Consolidated company is capitalized at \$1,600,000, with a surplus of \$5,991,000. It is stated to be the intention of the company to open the mill at once.

Lull in General Paper Demand

There has been a lull in the general paper demand during the past few days. This is the report of most dealers although there are a few exceptions. The tendency to put off buying is still manifest in certain quarters but it is expected that March will be a good month and the trade will assume larger proportions. Prices remain firm and there have been no changes for months. The talk, which was heard regarding a readjustment of quotations on kraft and other lines of wrapping paper, has now vanished and no alterations in price have taken place. Stabilization is the one thing which the trade is striving for in purchases and production as well as prices and all energies are being bent in this direction.

Western Pulp Plants Busy

Hon. T. W. McGarry of Toronto, who returned recently after spending some time in British Columbia, says that the plants of the Whalen Pulp and Paper Mills, of which he is the president, are now operating to capacity. He regards the outlook as encouraging and says the output of the three pulp mills of the company is being shipped by steamer to New York via the Panama canal and also direct to Japan from Vancouver. Cold weather in the West had somewhat depleted the water supply but not to the extent that the Whales mills had to shut down, as had some other plants. There has also been a considerable absence of rainfall.

Great Lakes Company Gets Extension

The trouble between the Great Lakes Pulp and Paper Company, of Fort William, and the Ontario government has been adjusted for the time being, and the Pic River and Black Sturgeon pulpwood limits of the company, which have been held for some years, will not be confiscated by the provincial authorities. The company has agreed to build a paper mill on the Mission site in Fort William and to this purpose will spend \$400,000 within two years, and the remainder to make up the \$2,000,000 investment required, within three years, when the plant will be completed and in operation. The mill will employ six hundred men when running. The price of power at Fort William will be on a parity with any competitive point served by the Nipigon hydro-electric development and means will be found to bring the figure at the head of the Great Lakes to

a point low enough to ensure its use by the new industry. The negotiations to this end were carried out by Mayor Edmeston of Fort William and the members of the Ontario cabinet.

New Wrapper Machine Ready

It is expected that the new wrapper machine, which has been installed by the Abitibi Power and Paper Company, at Iroquois Falls, Ont., will be running within a few days. The machine has a capacity when running the full twenty-four hours of thirty tons a day. The news print mill of the Abitibi company has seven machines and, during the past year, the capacity of the plant was raised from 250 tons daily to 510, making it the largest news print plant on the continent under one roof.

New Owners Will Soon Start Mill

Thomas Falls, a contractor of Port Arthur in the timber and pulpwood line, was the successful bidder at the sale of approximately 4,500 cords of pulpwood belonging to the Kaministiquia Pulp and Paper Company of Port Arthur. The wood was sold under the woodsmen lien act for wages account brought by a cartage company against the Kaministiquia company and the price paid was in the neighborhood of \$40,000.

Shevlin-Clarke May Not Operate

It is reported that the Shevlin-Clarke Company, of Fort Frances, one of the largest employers of labor in the north, will close down its big lumber mills this season. It is declared that this action, if taken, will be a direct result of the recent legal suit taken by the Ontario government against the company, which resulted in heavy fines being imposed on the concern for alleged improper returns in dues to the provincial authorities.

Interlake Company Had Good Year

At the annual meeting of the Interlake Tissue Mills Company held in Toronto recently, a very satisfactory report was presented for the past year. During 1921 a second machine was installed, 148 inches wide. New beater and stock rooms and other improvements were carried out. The capacity was nearly trebled and, in spite of the depression, the mill operated to within twenty per cent of its total output. George Carruthers was reelected president, I. H. Weldon, vice president and treasurer, and S. F. Duncan, secretary. The company is now making several new specialties, which are finding a splendid market.

Mr. Backus' Suit Is Held Over

The suit claiming one hundred thousand dollars for libel from a Toronto newspaper, which was entered by E. W. Backus of the Fort Frances Pulp and Paper Company, Fort Frances, Ont., over comments on the sale of the English pulpwood concession to him, and which was to have been heard in Toronto last week, has been adjourned owing to Hon. E. C. Drury, Premier of Ontario, and Hon. W. E. Raney, Attorney General of the province, being too busy to attend as material witnesses on account of legislative duties. The trial will now come off in April next.

Notes and Jottings of the Trade

E. H. Wilkinson, of the Wilkinson Paper Company, Toronto, left recently on a visit to England owing to the serious illness of his father.

Archie Reid, of the Valleyfield Coated Paper Mills, Valleyfield, Que., was a recent caller on the trade in Toronto.

D. E. Holmes and R. Gardiner have bought out the interests of the Toronto Paper and Twine Company, Simcoe street, and have taken possession.

H. G. French, secretary-treasurer of the Allen Paper Company, Toronto, who was married lately to Miss Margaret Heron, is receiving congratulations of his many friends in the trade.

It was erroneously stated last week that C. W. Graham, of Buntin, Gillies & Co., Ltd., Hamilton, Ont., was on an extended trip to Florida. Mr. Graham's trip is to California.

WE ARE
SOLE AGENTS

FOR

“STORA”

BLEACHING AND
EASY BLEACHING

SULPHATES

Write or Wire us for
Samples and Quotations

A. J. PAGEL & CO., Inc.

347 Madison Avenue

New York City

MAKING WAGE READJUSTMENT IN FOX RIVER VALLEY MILLS

None of the Manufacturers Are Making Much of a Profit on Their Product and Some Are Operating at a Loss, Which, It Is Contended, Makes It Necessary Either to Cut Wages or Increase Prices—New Yankee Paper Machine of the Park Mills of the Marinette and Menominee Paper Co. Will Be Ready to Start Operations About the First of March—More Pulpwood Arriving of Late.

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., February 21, 1922.—Readjustment of wages of Fox river valley paper mills is in progress now and one company, the Riverside Fibre and Paper Company, already has announced a slight reduction. It was explained that labor costs must be reduced if the price of the paper product is to be brought down where it can meet competition.

The paper industry is continuing to improve gradually, it is said. It was explained that none of the manufacturers are making much of a profit on their product and some still are operating at a loss. This cannot continue and it either is necessary to cut wages or increase prices, it is contended.

Park Mills to Start New Machine in March

The new Yankee paper machine which is being installed in the Park mills of the Marinette and Menominee Paper Company will be ready for operation around the first of March. Installation of the machine is almost completed. The new machine will make glazed tissue paper, a new product for the M. and M. Company and will have a capacity of about 15 tons daily.

A new beater house has been built at the mill and a Niagara beater and a beater of another type is being installed. About 20 additional hands will be employed when the installation is completed. The Marinette and Menominee Company mills now are operating at capacity.

Wausau Fibre Co. to Issue Stock

The Wausau-Sulphate Fibre Company of Mosinee has announced an issue of 7 per cent preferred stock at \$100 a share. The capital secured through this stock issue is to be used exclusively for investing in timberlands to insure the future wood supply of the company.

Claim Compensation for Typhoid Fever

Twenty employees of the John Hoberg Company, Green Bay, have filed claims for compensation with the Wisconsin industrial commission alleging they contracted typhoid fever from using water from a well in the company's plant. The disease was contracted last November when the well was closed.

Hearings on the applications have been held before the commission but the decision has not been announced. Some of the employees who were ill have returned to work while others have not entirely recovered. It is said one death resulted from the epidemic.

Bad Storm in Wisconsin

Wisconsin, and more especially the Fox River valley, is digging itself out of the worst storm in its history. Sleet and rain Tuesday night and Wednesday morning completely isolated the entire Fox River valley, except for wireless, and caused a loss running into millions of dollars. Even now, five days after the storm, it is possible to communicate from Appleton with only two other Wisconsin cities and it may be two weeks before even a semblance of the former telegraph and telephone connections are reestablished.

Appleton and Oshkosh were completely isolated from Wednesday morning until Friday night. The last train arrived in Appleton

early Wednesday morning and was ditched just as it left the city. It was 72 hours later before a wrecking crew could get to the city to clear away the debris and five or six hours later the first train arrived. Telephone and telegraph wires went out Tuesday night and the first long distance line was put into commission Friday noon between Appleton and Neenah, a distance of only four miles. Saturday communication was reestablished with Green Bay, 34 miles distant.

Nearly 2,500 telephone poles and about 700 telegraph poles were broken down in the Fox River valley alone. Orchards valued at nearly a million dollars were ruined by the weight of ice, hundreds of trees in Appleton, Neenah, Menasha and Oshkosh were broken down and several buildings collapsed.

The only communication the valley had with the outside world for 72 hours was by wireless, and several of the stations were commandeered by railroads which used them in an effort to untangle their problems.

Paper mills in Neenah and Menasha were hit the hardest, especially those dependent to any extent on power furnished by the utilities company. The wires between Appleton and the Twin Cities went down and the two places were without light and power for about 36 hours.

It is impossible to learn as this is written how severe the storm was in the Wisconsin River valley. A few meagre reports indicate that considerable rain, sleet and snow fell, but the loss is not nearly as severe as in this district.

Tomahawk Paper Co. to Start About April 1

The Tomahawk Pulp and Paper Company expects to start its new paper mill about April 1 after a shutdown of several months. The company now is installing several large concrete vats and new conveyors.

V. D. Simon, Chicago, is in charge of the company's effort to perfect a de-inking process whereby ink is removed from old paper permitting it to be used with new pulp and the manufacture of paper.

More Pulpwood Arriving

More and more pulpwood is arriving in the Fox river valley. For several weeks wood came only in carload lots but of late entire trainloads have arrived here. The yards are rapidly filling up but it is doubtful if as much wood will be stored this year as last spring.

Water Power Users Reach Agreement

Waterpower users on the Wisconsin river have reached an agreement which, it is expected, will do away with the unequal flow of water for power purposes. All the power users have agreed to permit unrestricted flow of the water seven days a week. Heretofore it has been the practice of some of the companies to draw water out of their mill ponds during the week and on Sunday to shut off the flow of water in order to establish a sufficient head to operate their plants several days.

The condition this year was aggravated by the rather severe winter and the dry season which preceded it. The reservoirs along the river are nearly empty and consequently there was very little reserve water for power purposes. The meeting at Wisconsin Rapids, where the agreement was reached, was called by the Consolidated Water Power and Paper Co. and the Nekoosa-Edwards Co. Eight paper companies and a few power concerns were represented at the gathering.

Dam Named in Honor of M. C. Ewing

Stockholders of the Wisconsin Valley Electric Co. have named the company's new dam, built recently at a cost of \$1,000,000 the "Ewing dam" in honor of M. C. Ewing of the Ewing-Everest Paper Company, who did a great deal toward developing the company. The following officers were elected: C. C. Yawkey, president; B. F. Wilson, vice-president; M. C. Ewing, secretary and general manager.

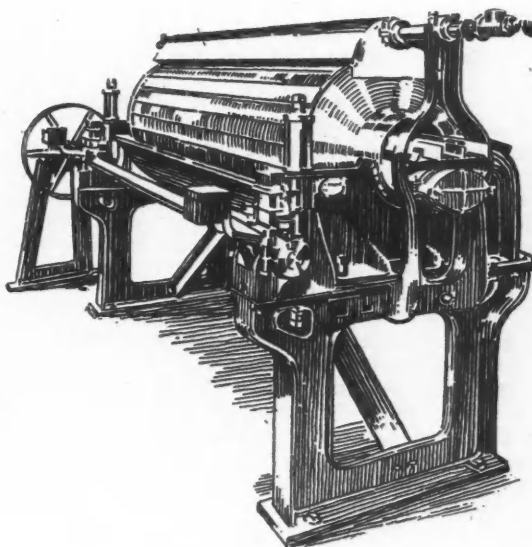
Glance at the Illustration

Note the simple, practical design of the Walpole Screen. There are no superfluous knick-knacks or delicate parts to get out of order.

The Walpole Screen is designed for the particular purpose of screening high-grade rag-stock papers.

It delivers uniformly clean stock and maintains continuous production without breaks or shutdowns for washing up.

Let us send you the details.



BIRD MACHINE COMPANY, South Walpole, Mass.

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

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

WALPOLE SCREENS

88-203

COST MEN TO HOLD MEETING WITH THE SUPERINTENDENTS

Ed. T. A. Coughlin, Superintendent of the Monarch Paper Co., Heads Superintendents' Committee, and N. J. Brisbois, Superintendent of the Sutherland Paper Co., Heads Cost Committee Which Is Making Arrangements for the Big Joint Meeting Which Is to Be Held in Kalamazoo, June 1-3—From Present Indications It Is Believed That Over 1,000 Delegates Will Attend.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 27, 1922.—The Cost Association of the American Paper Industry has voted to unite with the Superintendents' Association of the American Pulp and Paper Mills in the international convention to be held in this city June 1, 2 and 3.

It will be the first international convention ever assembled in Kalamazoo and in many respects the most important trade gathering ever held in this city. Representative paper mill men from Maine to the Pacific Coast States and from many points in Canada will be here to join in the deliberations of the various sessions. In addition there will be supply men by the score and representatives of every line common to the paper industry.

Indications are that there will be well over 1,000 visitors in the city, especially as many of the delegates will be accompanied by their wives. Reservations are now pouring into the Burdick, Park-American, Columbia and Rickman hotels and every effort is being made by the local convention boosters to see that the visitors are furnished with proper accommodations.

President John H. O'Connell, of the American Pulp and Paper Mills Superintendents' Association has named his committee on local arrangements. The leading committee is headed by Ed. T. A. Coughlin, Superintendent of the Monarch Paper Company. N. J. Brisbois, superintendent of the Sutherland Paper Company, is secretary of the committee, while Harry C. Bradford, of the King Paper Company, represents the cost accountants on the committee. Other committees will be named as the occasion requires, the members being taken from among the active superintendents and cost accountants of the Kalamazoo valley mills.

Already conferences are being called to perfect arrangements for a comprehensive, instructive and entertaining program. The many subjects presented at the convention will be handled by experts, no pains are to be spared to secure the best known authority in each line. President O'Connell will preside at the joint sessions.

The annual dinner will be a big affair. President O'Connell announces that he has opened negotiations for two speakers, both widely known, who will each have a valuable message for those present. In addition there will be special music and entertainment features.

The general committee is not overlooking care of the wives of the delegates to the convention. They must be entertained during the convention business sessions and it is planned to make their stay in Kalamazoo in every way enjoyable.

It is the fourth annual meeting of the superintendents' association, previous ones having been held in Chicago, Buffalo and New York City.

Since the organization of the Superintendents' Association, Mr. O'Connell has been very active in promoting and building its influence and efficiency. He was vice-president two terms and in that capacity was actively associated with Fred Boyce, first president elect. Twenty-seven years ago, the time Mr. O'Connell entered the paper industry, he worked with Mr. Boyce. They hadn't seen each other for a period of 23 years. It was at the New York City convention in 1921 that Mr. O'Connell was advanced to the presidency.

Insulating Products Co. to Sell Stock

The Insulating Products Company, 1601-1603 Fulford street, has been granted permission by the Michigan Securities Commission to sell no par value stock to the value of \$70,000. Frank C. Emrick announces the sale will begin this week and be pushed as rapidly as possible.

"At this time we intend to sell 50,000 shares at one dollar a share," said Mr. Emrick. "That will give us a total capital of \$170,000, quite enough for our present needs. We have several big orders in sight from large users of insulating material and at this time are filling an order from the Westinghouse Electric Company."

J. C. Coppock, with the Detroit branch of the Keasby-Madison Company, has resigned to become sales manager of the Insulating Products Company. He will take up his duties immediately.

Rex Paper Co. Re-elects Officers

The Rex Paper Company reports re-election of all officers and directors as follows: President, John F. King; vice-president, C. A. Bradford; secretary, Edwin H. Hacking; treasurer, Merrill B. King; directors, John F. King, Merrill B. King, Edwin H. Hacking, C. A. Bradford, W. M. Loveland, Kalamazoo; A. Aldrich, Beloit, Wis.; William G. Irwin, Columbus, Ind.

St. Maurice Cuts Dividend

It was announced here today that the St. Maurice Paper Company, of Three Rivers, Que., had decided upon making a cut in the annual rate of distribution from 8 to 5 per cent. The quarterly dividend was declared at the rate of 1¼ per cent, being payable March 15 to stock of record March 4.

The St. Maurice Paper Company, Limited, is the Canadian subsidiary of the Union Bag and Paper Corporation, and as the latter company holds the majority of the outstanding capital of the subsidiary the parent company's revenue will be affected to the extent of the cut.

Out of an authorized capital of \$10,000,000 there is issued and outstanding \$7,899,900 of the stock.

It is also announced that the parent company, the Union Bag, has reduced its distribution to shareholders, the dividend having been cut from 8 per cent to 6 per cent per annum.

In connection with these reductions, it would seem that the companies are desirous of bolstering up their working position as much as possible in view of the uncertainties of the present situation.

The St. Maurice Company has a diversified product, of which news print plays only a part, being also producers of kraft, pulp, etc.

Ask Rail Cut on News Print

WASHINGTON, D. C., Feb. 27, 1922.—Present railroad rates on news print and other paper stock are seriously interfering with the sale of these products, T. T. Webster, representing the Pulp and Paper Traffic League, testified today at the Interstate Commerce Commission's hearings on general rate levels. In behalf of the paper industry he petitioned for the removal of all increases given the railroads in 1920.

By thus reducing rates, he asserted, the commission would force the carriers to make reductions in their operating expenses which would correspond to reductions made by the managements of other industries. Mr. Webster said he represented 208 paper mills operating in various parts of the United States.

A. H. Campbell, representing the International Paper Company, said that a particular discrimination had been entailed against Eastern mills in the paper industry by post-war rate increases. He estimated that the increases on paper affecting the International company has amounted to 138 per cent, and that the increases on paper from certain Western producing points during the same period amounted to 62 per cent.

Automatic Micrometer

\$25.00 each, f. o. b. Chicago



BETTER TAKE ADVANTAGE OF THIS PRICE WHILE THEY LAST

E. J. CADY & COMPANY

326 West Madison Street

Chicago, Ill.

MORE CONFIDENCE IS FELT BY CHICAGO PAPER TRADE

Credit and Collection Improving in the Trade—No Sudden Splurge in Buying Expected Although Demand Is Certain to Increase Steadily—National Card, Mat and Board Co. to Have New Quarters Adapted to Its Increased Business—National Association of Corrugated and Fibre Box Manufacturers Has Announced Its Next Meeting for April 19 and 20 at St. Louis.

CHICAGO, February 27, 1922.—The better business spoken of during February, seems to have been almost general in the Windy City. Most of the mill representatives speak with a greater feeling of confidence than they did earlier in the year, and quite a number of the jobbers say that they are doing an increased business. Credits and collections are improving. The consensus of opinion here is to the effect that there will be no sudden splurge of paper buying, but that month after month the volume being moved will grow larger and gradually business will gain momentum with a steady and continual healthy growth.

National Card Co. to Have New Building

The National Card, Mat and Board Company, manufacturer of paper products, now at 218 West Superior street, will have a new building ready for its occupancy about May 1, of this year. Due to the recent growth of this company, which has enjoyed some very good business, it was found necessary to avail itself of larger and more adequate quarters, and a location which would allow of a steady increase in business. Recently this company purchased property at 4318-38 West Carroll avenue, where it has decided to erect a modern factory building, and the building is expected to be ready for occupancy by May. This new factory will cost approximately \$40,000.

General News of the Trade

The Peerless Paper Company, Inc., 612 West Randolph street, recently made an increase in its stock from \$10,000 to \$50,000. This change was made to allow of expansion and in line with the general policy of the firm favoring advancement.

The Eagle Paper Box Company, 2204-10 West Taylor street, was recently granted a charter, under the laws of Illinois, to manufacture and deal in paper products. This company has been capitalized at \$30,000. Officers of the firm are: Samuel L. Steinberg, Harry G. Wexler and F. Wolfberg.

The National Association of Corrugated and Fibre Box Manufacturers, with headquarters in the Republic Building, Chicago, has announced that the next meeting of this organization will be held in St. Louis, Mo., April 19 and 20. The hotel at which this meeting will convene has not yet definitely been decided upon, and due to the objection some members have raised against certain hotels the matter has been referred to a committee. A very interesting program is promised for this meeting, but is not ready for publication. Announcement of the program will be made later.

Berkshire Cost Association Meets

A very enthusiastic meeting of the Berkshire Local Division of the Cost Association of the Paper Industry was held in Pittsfield, Mass., recently at which an address was given by J. A. Reilly, Manager Cost and Inventory Department, American Writing Paper Company, Holyoke, Mass., his subject being, "Some Methods Used in Obtaining, from the Mills, Data for Use in Distributing Direct and Indirect Expenses to Grades or Lots." Copies of charts drawn up by Mr. Reilly were distributed by the Cost Association to those

present and following the address a large number of questions were asked and a lively discussion took place so that the meeting did not adjourn until a late hour.

W. J. Raybold, president of the American Paper and Pulp Association, gave a short address on the value of cost work to the pulp and paper industry and more particularly its value to the executives. Mr. Raybold said that "the cost man has come to be one of the most valuable men in the industry and his worth is being realized more widely. The old fashioned paper maker who guessed at his costs and sold at the market is fast being converted to a belief in the cost man's place in the industry. The value of keeping cost work on a solid footing should be emphasized and the Cost Department should be utilized to nip in the bud impracticable schemes and expensive experiments. It should thus pay for itself and the fact that it is being enlarged where it already exists, and established where it has not existed before, shows that it is paying its way in the industry."

Mr. Raybold concluded by saying that he was much pleased by the enthusiasm and interest shown by the local cost men in their work and in the organization and that he brought the greeting of the officers of the American Paper and Pulp Association to the Cost Association, which Association he said was the most vigorous of the "service" associations affiliated with the American Paper and Pulp Association.

Mr. Raybold's remarks were very much appreciated by those present and a vote of thanks was passed both to him and to Mr. Reilly for their kindness in addressing the meeting.

Problems in Forest Mensuration

The Handbook of Field and Office Problems in Forest Mensuration by Hugo Winkenwerder, Dean of the College of Forestry, at the University of Washington, and Elias T. Clark, associate professor of Forestry at the University of Washington, should prove a valuable asset to woodmen who either explore the forest or who delve into its mysteries from within the four walls of an office room.

The first edition appeared in 1915 and in the second and recent edition numerous improvements and additions have been made especially with reference to making the work more generally useful to practical field and office men. A complete series of problems covering the entire field of forest mensuration has been arranged in a clear and concise way so that the reader may at once plunge into the heart of the subject without having to stumble through a maze of clerical work in a laborious effort to obtain what is wanted.

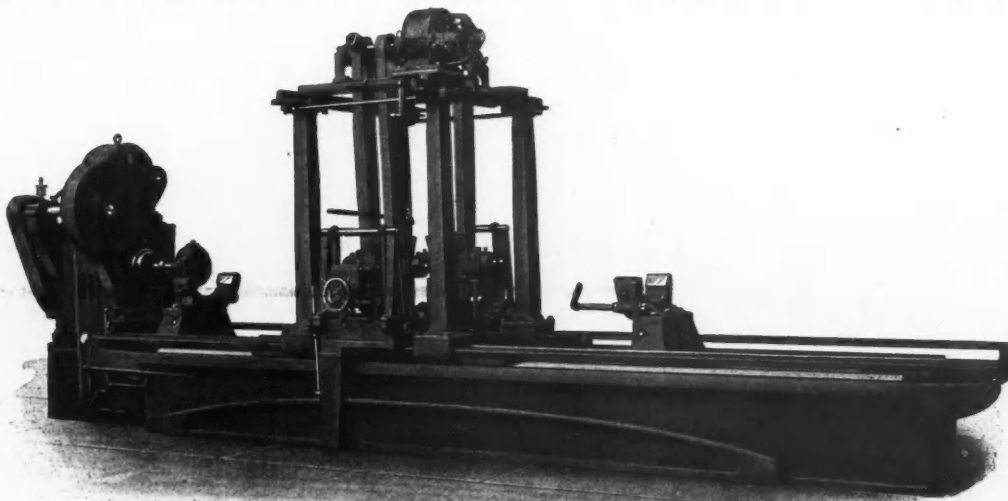
The Handbook is divided into sections entitled as follows: preliminary measurements, use of graphic methods, log rules, preliminary calculations, the construction of volume tables, scaling logs, determination of the contents of stands, general growth studies, sample plot studies, studies in growth per cent, and yield table studies. A highly informative appendix concludes the 133 page volume which has already proved its worth and will continue to do so without doubt.

Utica Paper Co. to Build

UTICA, N. Y., March 1, 1922.—Construction of a new factory for the Utica Paper Company is contemplated in the spring and the lot upon which the factory will be built has been purchased by James E. Mitchell, head of the concern.

The lot is a large one located in Lincoln avenue and adjoining the Sherman Sales Company's property. The business of the company has been increasing rapidly under the guidance of Mr. Mitchell.

Mr. Mitchell founded the Utica Paper Company a number of years ago and has made it a thriving and successful firm. The Lincoln avenue plant will be conducted by Mr. Mitchell in connection with the present home of the company, 16 Genesee street.



ROLL GRINDERS

Made by a Maker of Rolls

When a concern backs its own product to the extent of using it in the manufacture of products which it sells to others, it is the best evidence of quality and merit.

We could not buy a grinder to turn out the Farrel standard of rolls and it became necessary to develop our own grinders.

A Farrel roll grinder installed in your plant will save you time and expense. You can regrind your own rolls just when you want them with the assurance that our years of experience will enable you to get the best results.

Farrel calenders and chilled rolls are known for the highest in quality.

We are the largest makers in the world of these products.

Write for Bulletin 755.

Farrel Foundry & Machine Co.

Established 1848

Ansonia, Conn.

Branch Plant
BUFFALO, N. Y.

MARKET IN PHILADELPHIA SHOWS SLIGHT IMPROVEMENT

Business Put Through During the First Two Months of the Year Has Quite Justified the Forecast of Improvement Made at the Beginning of the Year—Coarse Paper Market, Although Less Satisfactory Than the Fine, Showed Some Betterment During the Closing Days of the Month—Changes in the D. L. Ward Co.—Fine Paper Division of Philadelphia Paper Trade Meets.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, February 27, 1922.—Though admittedly one of the important factors of the fine paper business, the book paper line, is "shot to pieces," the trade as a whole is losing none of the confidence in the future which it developed when the year was on the turn and though the gain by no means actually has been as large as even the moderately optimistic prophesied it would be, actual experiences during the first two months of the year have quite justified the forecasts of better things which were made at the year's beginning. The past week, broken into though it was, by Washington's birthday which was observed as a half holiday by all the distributors, save the Beck Company, which did business until the close of the regular business day, there was nevertheless a slight gain enjoyed by those houses which cater to the larger printing establishments, and this result is brought about by a rather curious condition of affairs—in briefest terms, price slashing to get business. Though the houses concerned are members of the Typothetæ of Philadelphia, whose constant effort through the scientific study of cost is to maintain fair and profitable printing prices and which as a result often had criticism to make of non-members accused of doing business on too small a margin of profit, or at actual loss, thereby placing a handicap on their trade brethren, there has been no criticism of the big fellows who are now engaged in cutting below the market. It so happens that since members of the Typothetæ contribute dues in proportion to their salary rolls, these houses subscribe the largest amounts to the Typothetæ treasury and this may be an element in preventing criticism. From their point of view, prices were reduced admittedly below cost of production solely that organizations may be maintained intact.

There is this consolation in the circumstance, that the price cutters have determined on their course in order that they may be prepared with efficient organizations, to take immediate advantage of the upward swing when that appears. Meanwhile, the distributors catering to this class of consumer are enjoying a fair business, although to some extent at the expense of the paper houses catering to the medium and smaller establishments from whom the work is being taken away by the big fellows. Prices remain unchanged all through the fine paper business and no changes at the close of the month are anticipated, although the jobbers are just as convinced as ever that there will be eventual further decline in mill prices, but there is virtual unanimity in the belief that declines will continue at perhaps infrequent intervals, and each time in only a small amount all through the year. With the experience of charging off many thousands of dollars through depreciation of values last year, the jobbers are disinclined to load up their ware rooms with stock which may depreciate.

The coarse paper market is moving along more sluggishly than the fine paper market, although the closing days of the month show some improvement over the opening and complaint over poor business is not very extensive. Prices are fairly well maintained, save in a few classes of the cheaper grade of stock, where by reason of a larger supply on hand than the demand can absorb,

there is softening of prices in an effort to have the goods absorbed before values shall be reduced at the mill end.

Interest in Mr. Schoenbacher's Address

The trade is still discussing the very memorable meeting of a week ago at which Mr. Schoenbacher delivered the address calling trade attention to the changed conditions in the industry and the necessity for immediately taking steps either to reduce the cost of doing business, or to effect through mill co-operation a larger margin between mill and resale price in order that provision can be made for depreciation, which it is believed is sure to continue throughout all the year. The effect of that meeting on the distributors has been in direct proportion to their feelings of optimism or of pessimism. It is known that immediately after the conference, two of the larger houses made very substantial reductions in their clerical forces, and that a still larger one anticipated the gathering and cut down its employees by notice of termination of service on February 15, March 1 and March 15, by at least a score. Its senior sales force, however, was not affected. The Philadelphia distributors, while not denying the importance of the matters called to their attention by Mr. Schoenbacher and the grave problems of the future which must be solved by the best thought in the trade, still desire to have it clearly understood that conditions in the city of Philadelphia are typical of those throughout the country, and that the report they have received of the status of business and the relationship of distributors to each other in New York particularly, but as well in Boston, Baltimore and other important Atlantic seaboard distribution points, convince them that Philadelphia is really much better off than some of her sister cities of the east. Philadelphia is intensely interested in a solution of the problem of avoiding in 1922 a repetition of the losses sustained in 1921, but Philadelphia recognizes that the issues at stake are such as must be considered from a national standpoint; and that it can only aid by the fullest co-operation in the National movement which Mr. Schoenbacher doubtlessly has in mind.

S. B. Tily Joins C. H. Clinton Paper Co.

Stephen B. Tily, for many years an executive and buyer for the John Wanamaker Stores, has left that institution to become a member of the firm of C. H. Clinton Paper Company. His long experience as a buyer of large volumes of all grades of paper and also printing, fits him especially with an exceptional knowledge of advantage to the paper industry.

There are few, if any men, better posted than "Steve" Tily, as he is familiarly known in the business world and he will bring to the Clinton business a knowledge, combined with an activity and experience of considerable value. His long study of the various uses to which paper can be applied and in choosing paper best adapted for all purposes, makes him a valuable adviser as well as a well posted distributor for the products of the C. H. Clinton Paper Company.

Changes in the Ward Co.

Connected with the removal of the small remaining portion of the D. L. Ward Company organization from the old headquarters at 6th and Ranstead streets and their consolidation all on one floor in the Federal Warehouse at Front and Federal streets are personal changes of interest. There are still at the old location a large number of desks, cabinets and the like, but these being superfluous are now being sold off and probably, by the end of the month, the floors will be bare. Sparta Fritz, who for the last year or so was floor manager and occupant of the information desk, will at the close of the month retire from the Ward employ. He has not yet announced his plans. Mr. Fritz has been actively and continuously associated with the paper business for more than a quarter century from his employment by I. N. Megargee & Co. as a salesman. He continued with the firm for almost two decades specializing in the fine paper business. Upon severing his connec-

(Continued on page 60)

**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

REVIVAL IN PAPER STOCK ON EXCHANGE AT MONTREAL

For First Time in Months Principal Paper Stocks Last Week Showed Marked Gains for the Reason Apparently That the General Feeling Seems to Be That the Paper and Pulp Industry Has Passed Its Worst and Has Begun to Improve—New Chair of Industrial Chemistry at McGill University to Pay Special Attention to the Chemistry of Wood.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 28, 1922.—The past week has been notable for revival in paper stocks on the Montreal market, a revival which was as unexpected as it was welcome. For the first time in months the principal paper stocks showed marked gains. No particular reason can be put forward for this except that the general feeling seems to be that the pulp and paper industry has passed its worst and has begun to improve. At the end of last week, this feeling received further support in the announcement by International Paper that it would put into operation additional machines in its mills at Niagara Falls. This is regarded as of significance as illustrating the general tendency of the pulp and paper trade to become more active.

No new developments respecting increased operations on the part of Canadian plants have been heard recently which would have any special significance, but the days of fear and apprehension of what the future might bring forth are undoubtedly gone, and there is no reason to anticipate any development which may cause their return.

Statistics published by the News Print Service Bureau recently have had a beneficial effect, more especially on the news print situation. It was shown, for instance, that from April 1 to October 1 last year, when it was generally considered that newspaper circulation was dropping there actually was an increase of 300,000 copies, while in December the circulation was higher than at the peak of the war in 1918. At the same time newspaper advertising throughout the year decreased only 9 per cent in twenty-three cities.

Laurentide Power Company

The annual general meeting of the Laurentide Power Company, a subsidiary of the Laurentide Company, was held in Montreal during the week. The president, J. E. Aldred, presided, and in a few remarks stated that he thought the shareholders should be more than gratified at the very satisfactory manner in which their company had come through, perhaps, one of the most critical years in the financial history of the country, not only having earned its dividend but finding itself in a very strong position financially. The financial report showed that total revenue for the year ended December 31, 1921, amounted to \$1,237,562 against \$1,040,888 the previous year, and after all expenses, taxes, etc., net operating revenue was \$1,037,020 against \$866,793. After deduction of bond interest and exchange on same, net earnings available for dividends amounted to \$570,741 against \$432,255 the previous year, being equal to 5.43 per cent earned on the capital stock against 4.11 per cent a year ago. After all deductions, surplus was \$13,317 compared with a deficit of \$16,464 a year ago, and with addition of balance forward, profit and loss balance was brought up to \$16,660 as against \$3,343 a year ago.

The company's earnings for the year are from the sale of 107,700 horse-power for the first six months and 117,700 horse-power for the second half of the year, making an average for the year of 112,500 horse-power.

Julian Smith stated that the generator for the second additional unit was now on the ground, and it was only a matter of a short

time before it would be installed and in operation, bringing the capacity of the plant up to 165,000 horse-power.

The following officers and directors were elected for the ensuing year:

Officers—J. E. Aldred, president; F. A. Sabbaton, vice-president; Louis Armstrong, treasurer; W. F. Robinson, secretary, and F. E. McNally, assistant secretary.

Directors—J. E. Aldred, George Chahoon, Jr., Howard Murray, F. A. Sabbaton, A. A. Tilney, Charles R. Hosmer, Edwin Hanson, Julian C. Smith, and J. H. A. Acer.

Shawinigan Power Company

Shareholders of the Shawinigan Water and Power Company, at their annual meeting in Montreal, saw no disturbance of the traditional presentation of an annual exhibit showing dividend requirements met by a comfortable margin. Twenty-five per cent of the power generated by this company is used by pulp and paper mills in the St. Maurice district. Gross earnings for the company at \$4,224,045 show a considerable advance over those of 1920, which were \$3,943,359, while net earnings showed a moderate decrease at \$1,590,812, as compared with \$1,609,042 the previous year. This represents an earning of 7.95 on the \$20,000,000 capital stock of the company, as compared with slightly over 8 per cent in 1920.

The decrease in net earnings is accounted for by a rise in interest charges, not in the operations of the company, the excellent administration of which is reflected in a decline in operating expenses in spite of the larger scope of the company's activities during the period under review. The higher interest charges are shown as a result of the sale of \$4,375,000 of the company's bonds for the purpose of carrying on the construction program. A glance at the items compared in the assets section of the balance sheet gives ample justification for the company's action in this respect, property, machinery, lines, investments and cash all showing substantial betterment over the previous year. Total assets are shown at \$44,193,850 as compared with \$39,566,569 for the year 1920.

After making the usual appropriations and paying the regular dividend on the common shares at the rate of seven per cent there is carried forward a balance of \$155,406 as compared with \$39,593 in 1920, the latter surplus being after the deduction of \$125,000 as a reserve for income tax, no such reserve having been made for last year. This fact accounts for the showing in the profit and loss account of reserves at \$75,000, a decrease of \$125,000 from the preceding year. The report was passed and the directors re-elected.

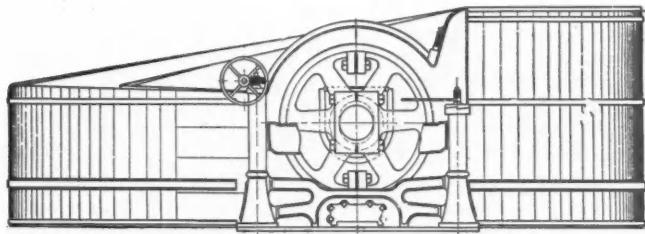
Lumbermen Ask for Lower Rates

The Mountain Lumbermen's Association, embracing Alberta and Eastern British Columbia, at a recent conference in Calgary, decided to memorialize the government to fix lower rates on their products and also to conduct a campaign for wider markets. They have had a hard year on the prairies, where altogether lumber credits extended are estimated to amount to \$26,000,000, and they are now operating on a cash basis or as nearly a cash basis as they can manage. Stocks are low both in yards and at the mills and production is curtailed because of the difficulty of financing and of the lack of orders. They count on the law of averages making this a year of good business on the prairies and perhaps derive a ray of hope from the report of the Survey Board for Southern Alberta to the effect that this law seems to indicate that a return to normal precipitation conditions is inevitable in 1922—and moisture will make all the difference in the world to Alberta and Southern Saskatchewan.

New Foundation at McGill

Under the will of the late Mrs. E. B. Eddy, a new Chair of Industrial Chemistry has been founded at McGill University, Montreal, and the holder of the professorship will devote special attention to the chemistry of wood. The Eddy family has been prominently identified for many years with lumbering and pulp and paper manufacturing.

One company manufacturing liner and wrapping paper solved the problem of obtaining reasonable profit at present day prices and keen competition by cutting production costs through the installation of a "NIAGARA BEATER." The NIAGARA, which is beating charges of old paper and shavings, is giving a production of forty (40) tons per day. It has replaced three (3) pulpers and one (1) mixing engine.



Ask the Mill That Owns One

Valley Iron Works Company
Appleton, Wis.

New York Office, 334 Fifth Avenue
Telephone Pennsylvania 531

PRODUCTION OF NEWS PRINT FOR THE MONTH OF JANUARY

Production for the Month in 1922 Compared with January, 1921, Showed a Decrease Amounting to About 15 Per Cent for Total News Print and 13 Per Cent for Standard News—Mill Stocks, However, of Both Total News Print and Standard News Increased During January, 1922—Jobbers' Stocks of Rolls Were 416 Tons Less at End Than at Beginning of Month.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 1, 1922.—The following is a tabulation of the reports received by the Federal Trade Commission from domestic manufacturers of news print paper, from jobbers buying and selling news print paper and from publishers using news print paper. Import and export statistics of the Department of Commerce are also included in the review. Whenever possible the figures for 1922 are compared with those for the corresponding period of 1921, 1920, 1919 and 1918.

The figures which follow show the results of the commission's tabulation for January, 1918, to 1922, inclusive:

	Number of mills	Stocks on hand 1st of month Net tons	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
Total News Print:					
January, 1922...	65	23,934	105,808	103,192	26,550
January, 1921...	85	24,763	123,830	116,176	32,417
January, 1920...	89	15,369	129,663	128,098	16,834
January, 1919...	66	19,408	116,154	114,343	21,219
January, 1918...	66	31,713	105,700	108,485	28,928
Standard News:					
January, 1922...	53	19,607	98,702	96,525	21,784
January, 1921...	67	19,573	113,764	106,228	27,109
January, 1920...	66	12,338	114,957	112,719	14,576
January, 1919...	51	15,656	106,002	105,169	16,489
January, 1918...	50	26,482	97,086	96,336	27,232

Note—Above figures for total news print do not include hanging paper.

The average production of total news print and standard news, based upon the total combined production for the years 1918 to 1921, inclusive, amounted to 110,000 tons of total news print and 99,700 tons of standard news, for a period corresponding to January. The actual production amounted to 105,808 tons of total news print and 98,702 tons of standard news, which, for total news print was 4 per cent below the average for the four-year-period and for standard news 1 per cent below the average.

The production of news print for January, 1922, compared with January, 1921, shows a decrease, amounting to about 15 per cent for total news print and 13 per cent for standard news.

The production for January, 1922, compared with January, 1920, shows a decrease of 18 per cent for total news print and a decrease of about 14 per cent for standard news.

The decrease of production for January, 1922, compared with January, 1919, amounted to about 9 per cent for total news print and 7 per cent for standard news.

The production of total news print for January, 1922, is about the same as for January, 1918, while standard news shows an increase of about 2 per cent.

Mill stocks of both total news print and standard news increased during January, 1922.

Loss of Production

The following tabulation shows idle machine time reported to the commission for the month of January, 1922. This does not include mills shut down during the entire month:

Reasons	Number machines	Hours idle
Lack of orders.....	13	3,492
Repairs	10	564
Other reasons	11	1,148

Imports and Exports

The imports and exports of printing paper not dutiable (practically all news print) and of wood pulp for the month of December, 1921, compared with the month of December, 1920, were as follows:

	Dec., 1921, Tons	Dec., 1920, Tons
Imports of Newsprint (total).....	79,637	81,789
From Canada	62,945	58,275
Denmark	211	328
Sweden	9,635	5,268
Finland	2,166	2,797
Germany	2,220	14,206
Norway	2,430	840
Other countries	30	75
Exports of news print (total).....	1,599	3,290
To Cuba	954	1,104
Philippine Islands.....	148	130
Argentina	103	1,377
Other countries	394	679
Imports of ground wood pulp (total).....	28,498	22,299
Imports of chemical wood pulp (total).....	117,069	53,008
Unbleached sulphite	57,723	23,218
Bleached sulphite	17,825	13,240
Unbleached sulphate	40,049	15,952
Bleached sulphate	1,472	598
Exports of domestic wood pulp.....	2,617	2,212

The imports of news print for December, 1921, were 2,152 tons less than for December, 1920. The exports for December, 1921, were 1,691 tons less than for December, 1920.

The tonnage to "other countries" under "exports of news print" for December, 1921, includes 49 tons to Japan, 30 tons to Colombia, 24 tons to Mexico, 58 tons to China, 98 tons to Peru, 29 tons to Venezuela, and 40 tons to United Kingdom.

Jobbers' Tonnage

The following tabulation shows the news print tonnage reported by jobbers during the month of January, 1922, compared with January, 1921, January, 1920, January, 1919, and January, 1918, together with commitments to buy and sell:

	On hand first of month Net tons	Received during month Net tons	Shipped during month Net tons	On hand end of month Net tons	Commitments to buy Net tons	Commitments to sell Net tons
Rolls, January, 1922..	2,298	8,889	9,305	1,882	31,945	36,890
Rolls, January, 1921..	3,046	6,869	7,002	2,913	27,125	35,027
Rolls, January, 1920..	1,920	6,721	6,742	1,899	65,526	74,097
Rolls, January, 1919..	3,262	2,898	2,727	3,430	98,269	111,157
Rolls, January, 1918..	2,604	2,074	2,330	2,348	(a)	(a)
Sheets, January, 1922..	4,262	2,592	2,743	4,111	2,064	1,393
Sheets, January, 1921..	6,432	2,640	2,751	6,321	2,930	2,324
Sheets, January, 1920..	3,554	3,244	3,108	3,690	5,996	3,929
Sheets, January, 1919..	7,795	2,870	2,664	8,001	3,336	2,635
Sheets, January, 1918..	6,823	2,397	2,848	6,372	(a)	(a)
Total News Print:						
January, 1922.....	6,560	11,481	12,048	5,993	34,009	38,283
January, 1921.....	9,478	9,509	9,753	9,234	30,055	37,351
January, 1920.....	5,474	9,965	9,850	5,589	71,522	78,026
January, 1919.....	11,057	5,765	5,391	11,431	101,605	113,792
January, 1918.....	9,427	4,471	5,178	8,720	(a)	(a)

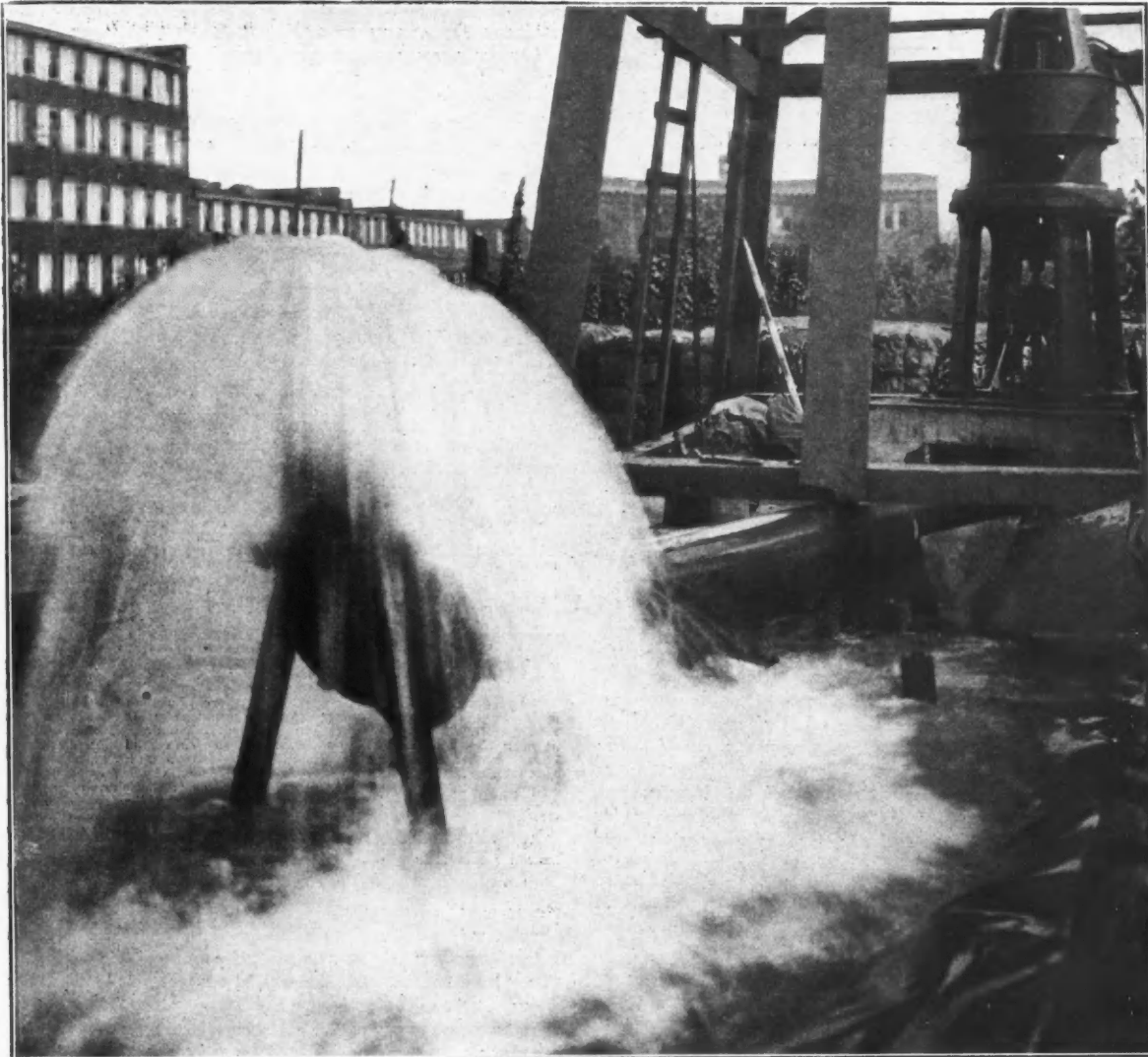
(a) Figures not available.

Stocks of rolls in the hands of jobbers at the end of January were 416 tons less than the stocks in the hands of the same jobbers at the beginning of the month. Stocks of sheets were 151 tons less at the end of January than at the beginning of the month. The net decrease in the total stocks of news print in the hands of jobbers at the end of January amounted to 567 tons.

Commitments to sell roll news were 4,945 tons greater than commitments to buy. Commitments to sell sheet news were 671 tons less than commitments to buy. Total commitments to sell both rolls and sheets were 4,274 tons greater than commitments to buy.

Publishers' Tonnage

Monthly tonnage reports from 665 (a) of the most important newspaper publishing concerns and associations grouped according to the principal business sections of the United States together with
(Continued on page 32)



The above cut shows one of two wells recently constructed by us for The Richardson Company, Lockland, Cincinnati, Ohio, which are furnishing over 7,000,000 gallons of water per day. In a recent letter, Mr. J. M. Richardson, President, said "All of our other present wells are now obsolete"; also, "Our new wells have, in our judgment, added hundreds of thousands of dollars to the value of our property and ended for all time to come the old problem of a plentiful supply of good water."

Our Slogan:

"WATER OR NO PAY"

We construct and equip

Large Capacity Water Wells

Using the Layne Screen
and

Layne Vertical Turbine Pumps

*Sole Selling Agent for Layne
Products in Ohio and Indiana*

THE LAYNE-OHIO COMPANY

WATER WELL CONTRACTORS

837 Dixie Terminal Bldg.
CINCINNATI, OHIO

Obituary

PAWTUCKET, R. I., February 28, 1922.—The death of Roger Tileston, president of the National Coated Paper Company of this city, occurred Saturday night, February 18, at his home, 312 Laurel avenue, Providence, following an illness of several days.

Mr. Tileston came to Pawtucket several years ago from Winchester, Mass., and engaged in the manufacture of coated paper. He then became connected with the National Coated Paper Company and served as the chief executive of the firm for a number of years. He is survived by a wife and an infant son.

Hercules Paper Co. Statement

Creditors of the Hercules Paper Company, of which the Frank Gilbert Paper Company and the Union Waxed and Parchment Paper Company are subsidiaries, are urged to deposit notes and claims with the New York Trust Company in a statement issued by the creditors' committee last Friday. This is provided for in the deposit agreement which will be sent to all the creditors in the near future.

The statement also points out the necessity for unity of action on the part of all with whom the concern has any indebtedness for the protection of the common interests of the creditors. It says further that whether their claims are represented by the outstanding Gold Notes of the corporation, or by promissory notes, acceptances or open accounts all should stand together for the preservation of their rights as a group.

The committee pledges itself to keep in close touch with every phase of the situation and to keep the creditors promptly advised of developments. The members of the committee are as follows: Herbert W. Morse, Vice President of the New York Trust Company, Chairman; John Aspegren, President of the Scandinavian-American Trading Company; D. S. Gottesman, President of M. Gottesman & Co., Inc.; Arthur C. Hastings, of the Craig-Becker Company; James Rosenberg, President of the American Woolpulp Corporation; George E. Warren, Vice President of the Columbia Trust Company.

J. J. Patricof Co. Incorporates

The J. J. Patricof Company has been incorporated under the New York State laws with the capital stock of \$50,000, to deal in paper maker's supplies. Jacob J. Patricof is president of the corporation, Harry Rosenberg, vice president and treasurer, and Morris Reich, secretary. The corporation is a successor of the former partnership of J. J. Patricof Company of 501 Fifth avenue, New York, and its new quarters are now located at 347 Madison avenue, telephone number, Vanderbilt 3440.

All three members of the new firm are well known in the paper stock trade, and have had long experience in handling waste paper, cotton rags and other materials consumed by the mills. J. J. Patricof has been, in the past, affiliated with the Leshner Paper Stock Company of Hamilton, Ohio, for eight years, and for some time had charge of its New York office before embarking in business for himself about a year ago. Messrs. Rosenberg and Reich have been connected with A. Salomon, Inc., and the American Wood Pulp Corporation, both in New York, for the past 10 or 12 years. All three are young men with progressive ideas and methods and their success in the new venture seems assured.

Bids and Awards for Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 1, 1922.—The Purchasing Officer of the Government Printing Office has received the following bids: 3,700 pounds rope Manila paper 24 x 38—74; Dobler and Mudge,

11 cents per pound; Maurice O'Meara Company, 11 cents; The Whitaker Paper Company, \$.0765; R. P. Andrews Paper Company, \$.093; Mathers-Lamm Paper Company, \$.175 and \$.135; Old Dominion Company, \$.1274.

1,810 pounds Salmon Index Bristol Board 22½ x 27½—181: The Whitaker Paper Company, \$.267 per pound; Dobler and Mudge, \$.1825; R. P. Andrews Paper Company, \$.177; Old Dominion Paper Company, \$.1974.

2,400 sheets Gray Melton Board 22 x 28 8 ply: R. P. Andrews Paper Company, \$.061 per sheet; The Whitaker Paper Company, \$.0566; National Card Mat and Board Company, \$.0685 and \$.072; Hurlock Brothers Company, Inc., \$.07; Dobler and Mudge, \$.0665.

100,000 Wood Manila Envelopes 5 x 11½ No. 40: Mathers-Lamm Paper Company, \$.235 per thousand and \$.225 and \$.270; The U. S. Paper Goods Company, \$.360.

NEWS PRINT PRODUCTION IN JANUARY

(Continued from page 30)

a separate tabulation for the agricultural publications show the following results for January, 1922:

Location of publishers (b)	Number of concerns	On hand first of month Net tons	Received during month Net tons	Used and sold during month Net tons	In	
					On hand end of month Net tons	transit end of month Net tons
New England States.....	80	17,548	14,945	14,410	18,083	2,378
Eastern States.....	174	49,015	54,130	58,913	44,232	9,241
Northern States.....	129	49,166	33,953	34,783	48,336	7,327
Southern States.....	76	7,255	8,910	8,486	7,679	2,250
Middle West States..	148	29,244	22,726	24,548	27,422	5,439
Pacific Coast States..	31	10,959	14,401	13,943	11,417	2,144
Farm Papers (c)....	27	6,132	1,445	1,250	6,327	141
Total.....	665	169,319	150,510	156,333	163,496	28,920

(a) This number represents a much larger number of publications. (b) New England includes Connecticut, New Hampshire, Maine, Massachusetts, Rhode Island and Vermont; the Eastern States include Delaware, the District of Columbia, Maryland, New Jersey, New York and Pennsylvania; the Northern States include Illinois, Indiana, Michigan and Ohio; the Southern States include Alabama, Florida, Georgia, Kentucky, Virginia and West Virginia; the Middle West includes Arkansas, Arizona, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wisconsin and Wyoming; the Pacific Coast States include California, Oregon and Washington.

(c) The farm papers for the most part use special grades of news print instead of standard news.

Publishers' stocks decreased 5,823 tons during the month. Average daily tonnage used during January was 180 tons less than the average used in December.

Publishers' stocks and transit tonnage on January 31, represent 39 days' supply at the existing rate of consumption.

The above metropolitan dailies held 63 per cent of the tonnage on hand at the end of the month.

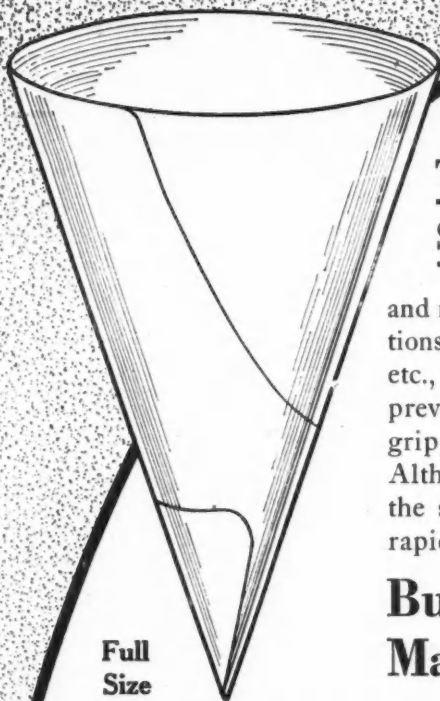
The domestic consumption of standard news by metropolitan dailies using between one-half and three-fourths of a million tons annually for January, 1922, when compared with January, 1921, shows an increase of 5 per cent and an increase of 2 per cent when compared with January, 1920.

Average Prices Paid by Publishers

The weighted average contract deliveries from domestic mills to publishers during January, 1922, f. o. b. mills in carload lots for standard news in rolls, was \$3.756 per 100 pounds. This weighted average is based upon January deliveries of about 50,000 tons on contracts involving a tonnage of approximately 711,000 tons of undelivered paper manufactured in the United States.

The weighted average contract price based on deliveries from Canadian mills of about 24,000 tons of standard roll news in carload lots, f. o. b. mill in January, 1922, was \$3.484 per 100 pounds. This weighted average is based upon the December deliveries on contracts involving slightly more than 324,000 tons of undelivered Canadian paper.

The weighted average market price for January of standard roll news in carload lots f. o. b. mill based upon domestic purchases totaling slightly over 7,000 tons was \$3.685 per 100 pounds. This weighted average may be less than market quotations on account of contract relations, quantity discounts, mill stock ownership and other causes unknown to the commission.



Full Size

**Take Orders for Millions—
Sell at \$2.50 per Thousand**

and make a handsome profit from public institutions, shops, offices, hotels, factories, hospitals, etc., where Burt's Drinking Cups are used to prevent drinking glass epidemics of influenza, grippe, quinsy, pneumonia or just common colds. Although just recently placed on the market, the sales are already tremendous and growing rapidly every day.

**Burt's Drinking Cups Have
Many Distinctive Features**

The finest white paper for the purpose is used.

Wax is not used as the water might taste of it.

Human hands never touch the cups during manufacture.

They don't have to be opened so fingers are not likely to soil inside.

Cups are made to fit the hand so holders are not needed.

They are trebly reinforced so don't close up and spill.

They are of ample capacity to save time.

Their conical shape makes it hard to set them aside for re-use.

There is no bottom to unexpectedly drop out.

Cups are dispensed one at a time.

The hottest drinks are withstood for one using.

The price is exceptionally low.

An aluminum dispenser, holding cups in glass case, can be supplied that is only 18" high and weighs but 15 lbs. when shipped. A single handle supplies one cup for each turn. A dainty chained metal cup holder with handle can be furnished.

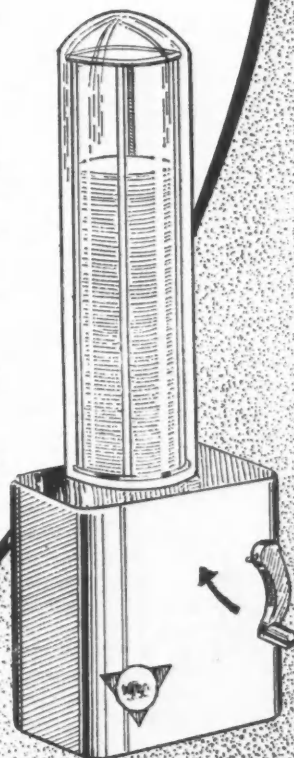
Paper merchants are advised to write at once for full information on this wonderful new money maker before their territory is spoken for.

Full advertising and merchandising helps will be supplied.

F. N. Burt Company, Ltd.

PAPER CUP DIVISION
BUFFALO, N. Y.

*Dispenser is simple,
therefore certain*



CONDITIONS IN JAPAN PAPER MARKET

[FROM OUR REGULAR CORRESPONDENT.]

OSAKA, Japan, January 31, 1922.—The Japan Paper Manufacturers' Association at its mass meeting in December passed a resolution that the present conference prices be maintained for some time to come. The removal of the present limitation of manufacturing capacity also was discussed.

The limitation of production in the manufacture of paper in Japan was debated and decided at the meeting held on November 20, 1920. At the outset, the association's plan was to carry out such limitation on printing paper alone for the following two months ending with January, 1921, but general conditions having gone from bad to worse, it was necessary to practice the limitation on all kinds of paper. Why, then, has the question arisen now when the paper market is still shrouded by depression? There are many reasons for this, namely:

1. After the fall of last year, sales have increased so greatly that some grades have run short of stock.
2. Recently apprehension in connection with imported paper has been reduced somewhat.
3. The exporting business has become favorable of late.
4. In consequence of the foregoing, stock in the market has been lessened.

These may be counted the main reasons, but let us ask if the paper circles are enjoying such conditions that the discontinuance of limited production is needed by manufacturing concerned.

Paper Made and Sold in 1921

To illustrate this, it is necessary to make a comparison of paper manufactured and that sold during the year 1921 as follows:

Months	Amount		
	Manufactured pounds	Amount Sold pounds	Balance pounds
January	40,381,000	35,706,000	4,675,000
February	40,975,000	37,162,000	3,813,000
March	44,213,000	43,169,000	1,044,000
April	44,218,000	43,181,000	1,037,000
May	45,319,000	49,965,000	*4,649,000
June	44,501,000	43,159,000	1,341,000
July	44,631,000	54,634,000	*1,003,000
August	46,243,000	45,745,000	498,000
September	45,559,000	47,688,000	*2,129,000
October	45,969,000	50,209,000	*4,240,000
November	45,658,000	54,873,000	*9,215,000
Total	487,668,000	496,494,000	8,826,000

*Denotes the sales amount exceeded the manufactured amount.

From the above list, it will be noted that the manufactured paper of the members of the Paper Association in January amounted to 40,381,000 pounds as the minimum and in August amounted to 46,243,000 pounds as the maximum, not representing a wide difference on the whole, but making a gradual increase in the amount of local sales. To illustrate this, in January sales amount reached only 35,706,000 pounds and continued to increase monthly up to November with the exception of May when the total was 49,965,000 pounds. Comparing the figure of January with those of November, it represents an increase of about 19,167,000 pounds or more than 50 per cent of increase. Thus a difference between the amounts manufactured and sold has shown quite a new phenomenon, that is to say, in January the market had an over-supply of as much as 4,675,000 pounds which has since been regulated gradually and in May the conditions were reversed, showing a shortage of as much as 4,649,000 pounds after which there were more or less ups and downs until August. In September the figures were 2,129,000 pounds, in October 4,240,000 pounds and in November 9,215,000 pounds. This is, certainly, due to an increase in sales. As the

report puts it, in November the sales of news print rank first, showing 3,000,000 pounds and that of wrapping paper comes last with 200,000 pounds, all of which exceeds the amount manufactured. As regards the aggregated amount until November, it is seen that the sales exceeded the manufactured amount by 8,825,000 pounds which should be regarded a favorable turn for the paper market in general. Though not as yet announced for December, the sales appear to have exceeded the amount manufactured by about 5,000,000 pounds.

Paper Exported and Imported

Next to this, to illustrate that the pressure of imported paper has been a bit mitigated (2nd reason) and that the external business has been increased (3rd reason), it is necessary to compare how and under what conditions these two items fared in the past, on the list below:

Months	Amount	
	Exported pounds	Imported pounds
1921		
January	2,663,000	1,211,000
February	2,856,000	2,089,000
March	4,838,000	2,152,000
April	6,778,000	2,157,000
May	5,246,000	2,271,000
June	4,078,000	2,385,000
July	4,538,000	4,296,000
August	4,426,000	3,121,000
September	5,053,000	3,084,000
October	8,104,000	3,376,000
Total	48,585,000	26,146,000
Same period, 1920	35,356,000	48,606,000
Same period, 1919	45,874,000	31,580,000

As will be seen from the above list, export of paper was only 2,663,000 pounds in January, 1921, and making a gradual increase, it reached in April 6,778,000 pounds, but suffered a more or less decline in months of May to August. Afterwards, it was on an increase, showing 8,104,000 pounds in October, which is a little more than three times that in the month of January. The total exports up to October, show an increase of 13,219,000 pounds and 2,711,000 pounds as compared with same periods of 1920 and 1919 respectively.


Imports in January were 1,211,000 pounds and from February on they gradually increased, reaching 3,376,000 pounds in October, which is roughly three times as much as in January. From this, it will be thought at once that our market has been oppressed by imported paper, but the fact is quite the reverse, because the total imports up to October, 1921, namely, 26,146,000 pounds, is nearly half as much as for the same period of 1920, which was 48,606,000 pounds. But the pressure of imported paper became greatly increased since last summer and therefore overwhelming imports in the latter parts of 1921 were expected. Here it will be worth while particularly to mention that at the end of November last a certain importing house in Tokio received a firm offer from Germany and Finland, quoting them as follows: "At 16 sen for art paper, 15 sen for printing paper, 12 sen for M. G. cap paper. These prices as compared with those of Japanese paper then ruling, were more than 10 per cent cheaper, therefore they at once cabled back for the acceptance of purchase, but this was not confirmed by sellers in Germany and Finland and instead re-offers at an advance were made as follows: 26 sen for art, 24 sen for printing, 20 sen for M. G. cap."

These, needless to say, being higher than those in Japan, were not closed after all. No one could tell why the market there made

(Continued on page 36)

Service that means 100% Satisfaction



 OUR Pulps have a reputation for highest standards of quality and uniformity.

Among our well-known brands are:

“HAFSLUND BEAR” } Bleached
and “FORSHAGA” } Sulphite

“KLARAFORS” } Easy Bleaching
Sulphite

“HURUM” and } Strong Kraft and
“BAMBLE” } Bleachable Sulphate

Tonnages now available on dock for prompt shipment

We are in a position to take care of your requirements regularly and in a satisfactory manner.

Our services are at your command. Let us have your specifications NOW.

THE
BORREGAARD COMPANY

Inc.

200 FIFTH AVENUE,

NEW YORK CITY

Quality—it means more than price

CONDITIONS IN JAPANESE PAPER MARKET

(Continued from page 34)

such a rapid advance, but this data cannot be lost sight of inasmuch as our market was oppressed by Germany as well as Finland papers to a greater extent in the past.

Condition of Stocks

Finally, it is worth mentioning the condition of accumulation of stock of paper in our market. On the whole, it is not a mistake to state that the accumulation has recently been reduced remarkably. To illustrate this:

The total stock of paper in the business-warehouses throughout Japan amounted to as much as 130,588,000 pounds at the end of 1920 and then gradually decreased to 81,082,000 pounds at the end of November, 1921. On the other hand, it is not difficult to suppose that the paper manufacturers' stock on hand has made a marked decrease thanks to the increasing sales as outlined above, the aggregated amount of stock being estimated at 100,000,000 pounds, of which about 80,000,000 pounds is supposed to be held by Fuji, Oji, and Mitsubishi paper manufacturers, the leading factories in this country. If this estimation be right, the gross total of stock kept by business-warehouses plus that held by manufacturers, will amount to about 180,000,000 pounds, which means a conspicuous decrease as compared with figures shown some time ago. Taken altogether, it is obvious that the paper market in Japan has recently taken a favorable turn generally.

There being many members of the paper association who advocate the release of the limitation of manufacturing capacity, it is very likely that the limitation might be discontinued in the latter part of February, 1922. But it is quite impossible to guess just what condition will appear in the future in the foreign paper market.

Paper Machines to Be Installed

In addition to this, there are many paper manufacturing machines to be installed in our factories during this year, being the ones planned during the boom times. To illustrate this:

Fuji Paper Mills, three 108-inch machines for printing paper; Fuji Paper Mills, two 108-inch machines for printing and wrapping papers; Oji Paper Mills, two 86-inch machines for printing and simili papers; Hokuyetsu Mills, one 87-inch machine for printing paper; Hokkai Mills, one 100-inch machine for printing and news print; total, nine machines, 900 inches.

Comparing the above additional machines with the existing ones belonging to the Paper Association, it means an increase of about 10 per cent and when they are put in operation they will be able to manufacture about 60,000,000 pounds monthly. Though it is as yet unknown when this will be realized, yet it is clear that it will add greatly to the over-supply sooner or later and what is more significant is that our paper manufacturers have reduced their selling price of news print by 10 per cent for news publishers beginning this January. Originally, contract with news publishers being made every June, the contract made in June, 1921, was renewed for the next year at Yen 7.00 per ream (substance 43 pounds), the same price as last period, namely, from June, 1920 to May, 1921, therefore up to next May, this price ought to remain in force. Nevertheless, from the manufacturers' side a reduction in price to the extent of 10 per cent as stated above was proposed to the news publishers from which the inference may be drawn that the paper manufacturers themselves entertain a pessimistic view for the future.

Prices of Paper

Further, considering the relation between the prices of general commodities and paper, according to the investigation made public by the Bank of Japan, an average index-number for prices of all commodities in Tokio, metropolis of Japan, is given at 283.29 in

November, 1921, while paper indicates 343.00, that is to say, above the average index-number. Or of 56 commodities, paper occupies the fourteenth rank. However, prices of commodities are subject to ups and downs due to the conditions of supply and demand generally, therefore it is not at all right to be pessimistic for the future of paper.

As far as prices of general commodities are concerned, it can safely be said that the goods of Japan proper (or Japanese origin) have advanced in prices recently, but such goods common to all countries have a tendency to decline in value being affected by the pressure of the oversea merchandise. In this light, it is generally feared that the price of Japanese paper might further decline in price sooner or later from the influence of the imported paper.

Prices of our paper today are as follows:

Simili paper	at 23½ sen per lb.
Printing paper	at 25 sen per lb.
News print	at 13½ sen per lb.

For export, 5 sen per pound for simili and printing, 4 sen per pound for news print off from the above figures.

Slight Improvement in Boston

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., March 2, 1922.—Despite the blow administered to many paper dealers throughout New England by the big textile strike this section continues to do a favorable business under existing conditions. Paper dealers have been notified in many instances not to hope for any of the usual contracts from the textile mills for many months to come. With this information at hand the jobbers who have been doing business with the textile plants for years are now seeking business in new fields.

However, business in most branches showed a slight improvement over last week with betterment noticed in the box board business, particularly many of the houses receiving large orders as a forerunner to Spring business in shoes, hats, underwear, etc. Incidentally the box manufacturers this week stage their fight against the minimum wage law—seeking a repeal of the present law. Box manufacturers from all over New England are back of the movement and a lively session is expected.

Paper stock trade assumed a brighter tone this week with a firmness noticed in prices and quite a steady demand for roofings. This branch of the trade, however, has not been so responsive to the general increase in business as other branches, but leaders say that for the first time in many months conditions have taken on a much brighter aspect.

Testifying in Hearst Paper Deal

The transcript of examinations before trial of Paul Smith and Frederick L. Moore were filed in the supreme court Thursday, February 23, as part of the record in a suit by William Randolph Hearst to have set aside a sale to him of the Dexter Sulphite Paper and Pulp Company, which he bought for \$3,500,000, on the ground that a commission on the sale was accepted by Carl F. Zittel, who was his representative in the negotiations.

The examinations of Mr. Smith and Mr. Moore set forth an agreement which they say they reached with Zittel and State Senator James A. Emerson, who has since died. They declare that they and Senator Emerson were to receive a commission of \$500,000 on the sale and that at a meeting at Schroon Lake in the Adirondacks Zittel told them Mr. Hearst was in the market for \$20,000,000 worth of pulp and paper property and that he (Zittel) ought to have a share of their commission. Ultimately, they state, they agreed to give him \$125,000.

**GROUND WOOD
CHEMICAL PULPS**

PERKINS-GOODWIN CO.
NEW YORK

PAPER

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.

New York Trade Jottings

Howard Miller, formerly connected with Charles F. Hubbs & Co., has joined the sales force of the Perkins-Goodwin Company.

* * *

George Seaman, president of the Seaman Paper Company, returned to Chicago Saturday, February 24, after passing a week or ten days in the city.

* * *

The Forest Paper Company has just issued for the benefit of its customers a new and attractive set of samples of bonds, writing, gummed and blotting paper.

* * *

The Metropolitan Paper Box Company has renewed its lease on space occupied in No. 192½ to 200 Greene street from Frederick Fox & Co. acting for Murray Gugenheim.

* * *

A. L. Dawe, of the Canadian Exports Company, and Grosvenor M. Jones, chief of the paper division of foreign and domestic commerce, will be in New York for about a week.

* * *

Jacob Seibert, of Price & Pierce, Ltd., is receiving congratulations from his friends upon his marriage Thursday, February 23, to Mrs. Wilma Roe. Mr. and Mrs. Seibert will live in New York.

* * *

The Valley Iron Works, of Appleton, Wis., manufacturers of paper and pulp machinery, has established a branch office at 334 Fifth avenue, to be in charge of H. W. Burns, secretary of the company. Telephone, Penn. 0531.

* * *

Charles Beebe, manager of the Union Talc Company, returned Saturday, February 25, from a week's business trip to New Hampshire and Canada. He reports the general feeling in Canada to be less optimistic than in the States.

* * *

Directors of the Union Bag and Paper Corporation, at their meeting on Thursday, February 23, declared a quarterly dividend upon its capital stock of \$1.50 a share, putting the stock on a \$6 annual dividend basis, payable March 15, 1922, to the stockholders of record at the close of business on March 4, 1922.

* * *

The Poland Paper Company, 200 Fifth avenue, has contributed \$100 to the Joint Vocational Education Fund of the Pulp and Paper Industry, subscriptions for which are being received by R. S. Kellog, secretary of Vocational Educational Committee, 342 Madison avenue, New York.

* * *

G. H. Collingwood, assistant professor of forestry in the United States department of agriculture at Cornell University, will be in New York a few days visiting R. S. Kellog, secretary of the News Print Service Bureau, and W. G. MacNaughton, secretary of the Technical Association of the Pulp and Paper Industry.

* * *

The annual report of the Texas Gulf Sulphur Company for the year ending December 31, 1921, shows a gross income of \$5,882,211. After providing for expenses and federal taxes, net income was \$1,949,374, equal to \$3.07 a share earned on the outstanding 635,000 shares of stock. Dividends of \$635,000 were paid, leaving a surplus for the year of \$1,314,373.

* * *

The sales force of the C. L. La Boiteaux Company has been increased in the person of James C. Hobart, formerly with the Cleveland office. At some time before May 1 the C. L. La Boiteaux Company will remove its offices from 200 Fifth avenue to the Borden Building, 350 Madison avenue, where they will occupy quarters upon the ninth floor better adapted to their increasing business.

A new issue of \$5,000,000 of the Oxford Paper Company's first and refunding mortgage 6 per cent gold bonds, series A, is being offered by Lee, Higginson & Co. at 98½ and accrued interest. Proceeds from the sale of the bonds and \$3,000,000 new preferred stock will be used to retire \$3,000,000 of one year notes, due on June 1, 1922, and other securities and acquire the Rumford Falls Power Company, capital stock.

* * *

The board of directors of the Texas Gulf Sulphur Company has declared a regular quarterly dividend of 50 cents a share payable on March 15, 1922, to stockholders of record at the close of business on March 1, 1922. The board of directors has also declared an extra dividend of 50 cents a share payable on March 15, 1922, to stockholders of record at the close of business on March 1, 1922. The Texas Gulf Sulphur Company last year charged against operations and expenses \$750,000, representing full payment to the Texas Company for a small piece of property in litigation. After this charge and depreciation and dividends there was added to surplus \$1,314,374.

* * *

The Valley-Schuyler Paper Company, lately incorporated, has taken offices at 350 Madison avenue, telephone Murray Hill 2897-8. W. F. Valley, formerly a forester with the spruce wood department of the Great Northern Paper Company, Bangor, Me., and the New York sales force of Dennison Pratt Paper Company, is president of the company, and C. W. Schuyler, formerly with various Canadian mills, is secretary-treasurer. The directors are the above and H. C. Valley. The company is exclusive agent in America for Norwegian mills handling news print, ground wood, and kraft paper, and is doing a general jobbing business and handling all grades of papers from domestic mills with which it has close connection.

* * *

P. G. Gaynor, manager of the Traffic Department of the Paper Association of New York City, reports the volume of traffic in the trade for January to slightly have exceeded that for December. Improvement is slow and not as great as expected. So far this month traffic has been moving better and it is expected that the results of the month will give cause for encouragement. A new uniform straight bill of lading has been adopted by carriers in official, Southern and Western classification territories to become effective March 15, 1922. This new bill of lading proposed by the Interstate Commerce Commission changes the wording of the old form both as to rules and regulations and conditions. For the benefit of merchants having a large supply of the old forms on hand the late changes will be indicated at freight stations with rubber stamps so that the present style may be used until June 30, 1922.

Starts C. K. Urquhart Paper Co.

WAPPINGERS FALLS, N. Y., March 1, 1922.—C. K. Urquhart of Hughsonville and New York City, for a number of years a representative of F. A. Flinn, Inc., paper merchant, New York, has organized the Urquhart Paper Company and has leased the large storehouse on the Millard Dock at New Hamburg, formerly used by the Central Hudson Steamboat Company.

Mr. Urquhart stated this week that the organization of the company had been completed and that a lease for the storehouse had been signed and that several carloads of paper had already been shipped, the first lot to arrive in New Hamburg next week. The company will start off with six men and one young lady who will have charge of the office.

Mr. Urquhart recently purchased a cottage at Hughsonville and for the past two years has spent his summers there.

3,000,000 lbs. of Paper in Rolls

TODAY the yearly capacity of our presses is 3,000,000 lbs. of paper in rolls. This volume of paper reflects, in our business, an increase of 1,800 per cent in six years.

Every Standard Manifold Register is but a means to an end. It is a part of a system—a system that is based on accurate records and these records are written on paper so the growth of the influence of this business can be measured in miles or tons of paper.

More paper means more accurate records; accurate records lead to prosperity for those businesses that use them and so, as our tonnage of paper grows, we read in that fact an increase in the solid prosperity of the country.

Here, then, is a business that is fundamentally based on the use of paper; a business that measures its growth in paper; a business that converts paper to a use that contributes largely to the stability of industry—to the efficiency of the multi-millionaire corporation as well as the owner of the cross-road store.

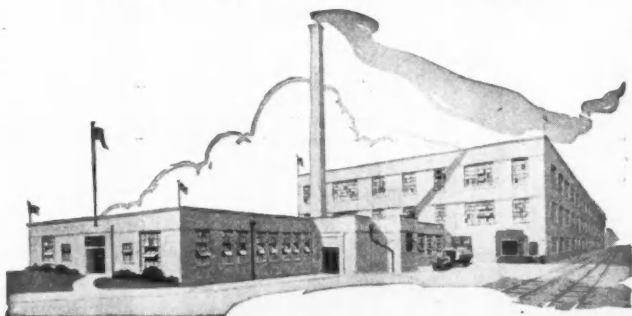
Many prominent paper mills use Standard Registers to enforce their delivery and shipping records. The principle of reducing overhead and preventing duplication of effort applies to the maker of paper as well as the buyer of paper.

There's a Standard System to fit your business. Write our service department today for samples of various forms used by other businesses similar to your own. Just check on coupon the forms you would like to see.

"Roll Printing Costs Less"

The Standard Register Company
200 Albany St., Dayton, Ohio

Our factory is used exclusively for the production of Standard Registers and Roll Printing of manifolding forms.



Check & Pin to Letter

THE STANDARD REGISTER CO.,
Albany St., Dayton, O.

Without obligation, send me booklet and samples of forms showing:

- | | |
|--|--|
| <input type="checkbox"/> Bills of Lading | <input type="checkbox"/> Department Orders |
| <input type="checkbox"/> Express Receipts | <input type="checkbox"/> Repair Orders |
| <input type="checkbox"/> Delivery Receipts | <input type="checkbox"/> Sales Records |
| <input type="checkbox"/> Warehouse Orders | <input type="checkbox"/> Service Station Orders |
| <input type="checkbox"/> Railroad Orders | <input type="checkbox"/> Automatic Cash Drawer & Sales Records |
| <input type="checkbox"/> Warehouse Receipts | <input type="checkbox"/> Hotel Package Receipts |
| <input type="checkbox"/> Invoices | <input type="checkbox"/> Employment Bureau Records |
| <input type="checkbox"/> Purchase Requisitions | <input type="checkbox"/> Telephonic Messages |
| <input type="checkbox"/> Stock Requisitions | <input type="checkbox"/> Telegraphic Messages |
| <input type="checkbox"/> Receiving Orders | |
| <input type="checkbox"/> Shop Orders | |
| <input type="checkbox"/> Stock Records | |
| <input type="checkbox"/> Piece Work Records | |

Standard

Manifolding Systems *and* Roll Printing

HIGH LIGHTS ON THE NEWS PRINT SITUATION

R. S. Kellogg, secretary of the News Print Service Bureau, has just sent the following bulletin to members:

The fact that news print paper is a commodity of remarkably steady consumption in the United States—perhaps even more so than sugar and salt—is once more evident from the latest statistics on the subject.

It is but repeating what is now a well known statement to say that the consumption of standard news print paper—and this is 93 per cent of the total output of news print—increased only 5 per cent in 1920 over 1919, when a new high record was hung up, but it is not so generally realized that the consumption in 1921—a year of general business depression—was but 2 per cent below that of the boom year 1920 and actually 3 per cent more than in 1919.

Economists and statisticians have long known that in a freely competitive market, 5 per cent under or over supply of a commodity will bull or bear the price, and this principle was strikingly illustrated in the news print trade of these two years. In 1920, the small increase in total consumption led to a fear of shortage on the part of many publishers and the price on the open market was bid up to previously unheard of levels—yet when the year closed, and there was opportunity calmly to cast up accounts, it was found that production had increased 10 per cent over the

previous year, that consumption was 5 per cent more than in 1919, and that newspaper publishers had finished 1920 with 50 per cent more paper on hand and in transit than they had at the first of the year. So much for illustration No. 1!

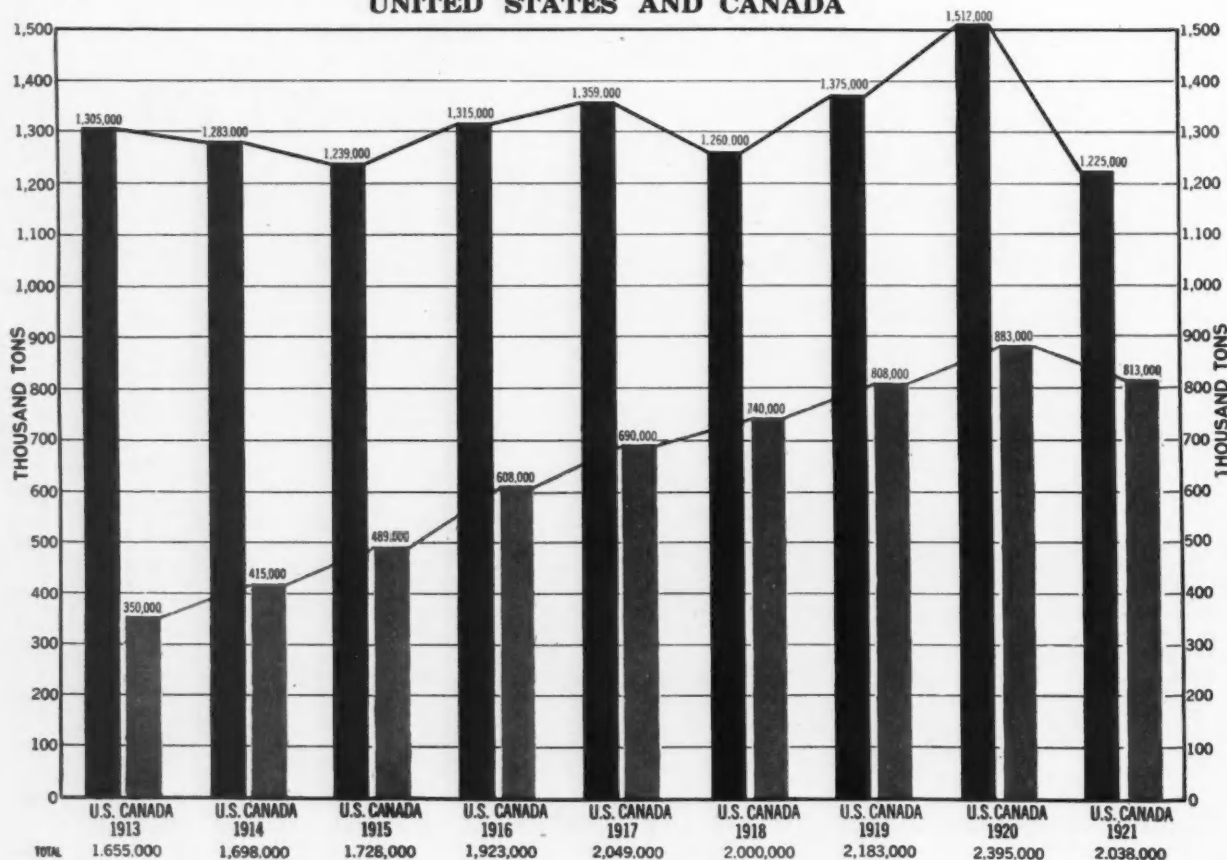
In 1921 we got illustration No. 2. Consumption decreased but 2 per cent from the high point reached the previous year, everybody talked about over-supply and held off from buying, the open market price came down precipitately, and publishers finished with 17 per cent less paper on hand and in transit than they started in with.

The failure to understand and act upon known figures and discernible tendencies cost producers and users most dearly. The publishers paid inflated prices for tonnage beyond their contracts which were reflected through corresponding rises in the constituent raw materials; the manufacturers made large additions to productive capacity at the time of highest construction costs and these new machines were ready to run when the greatest need for them had passed. An already bad situation was aggravated by the continual offering and delivery in our markets of overseas paper at prices which in some cases went far below the American cost of production.

So much for 1920 and 1921. What of 1922?

(Continued on page 42)

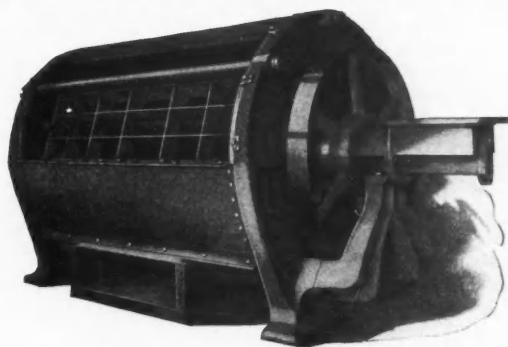
**NEWS PRINT PRODUCTION 1913-1921
UNITED STATES AND CANADA**



NEWS PRINT SERVICE BUREAU.

“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

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 Sales Agents for all of the products of the WHALEN PULP & PAPER MILLS, LTD., in addition to stocks at the mills, we will carry large stocks of the above well-known brands in New York, thus insuring prompt deliveries.

Your inquiries addressed to any of our offices will bring prompt quotations by wire.

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.

FOREIGN OFFICES

Robert Dollar Co.,
Shanghai, Hong Kong,
Hankow, Tientsin,
Ichang, Chungking, and
Pekin, China; Kobe,
Japan; Calcutta, India;
Manila, P. I.; Singapore,
S. S.

THE NEWS PRINT SITUATION

(Continued from page 40)

The high lights available at this time indicate that the pendulum is on the return swing—that consumption of standard news print in the United States this year will be more than last year and probably equal the total reached in 1920.

The man who prophesies is likely to go wrong, but the facts at this writing are:

Newspaper circulation is greater than ever before in the history of the business.

For the last 12 months the larger papers have averaged more pages per issue than during the preceding 12 months.

Newspaper advertising in the larger papers (and they consume over 90 per cent of the total) fell off relatively little in 1921 and the curves which went sharply downward in November-December-January, 1919 and 1920, have held almost level during the past 3 months.

Stocks in the hands of manufacturers are only normal, and in the hands of publishers less than normal.

A low price on the American product and an increase of domestic consumption in Europe will gradually reduce the overseas importations.

The general business situation in America is unquestionably on the mend, the period of liquidation has largely run its course.

With lower operating costs attained or in sight and a better demand for the domestic product, the news print manufacturer should fare better in 1922 than he did in 1921.

News Print Statistics—1921-1920

Production

The total production of news print paper (inclusive of hanging) in the United States and Canada in 1921 and 1920 was, in round numbers as furnished by the News Print Service Bureau:

	1921 Tons	1920 Tons	Decrease Per Cent
United States.....	1,225,000	1,512,000	19
Canada	808	875,000	8
Total	2,033,000	2,387,000	15

There was also a production of some 44,000 tons of news print in Newfoundland in 1921 and 62,000 not included in the above figures that was mostly shipped overseas.

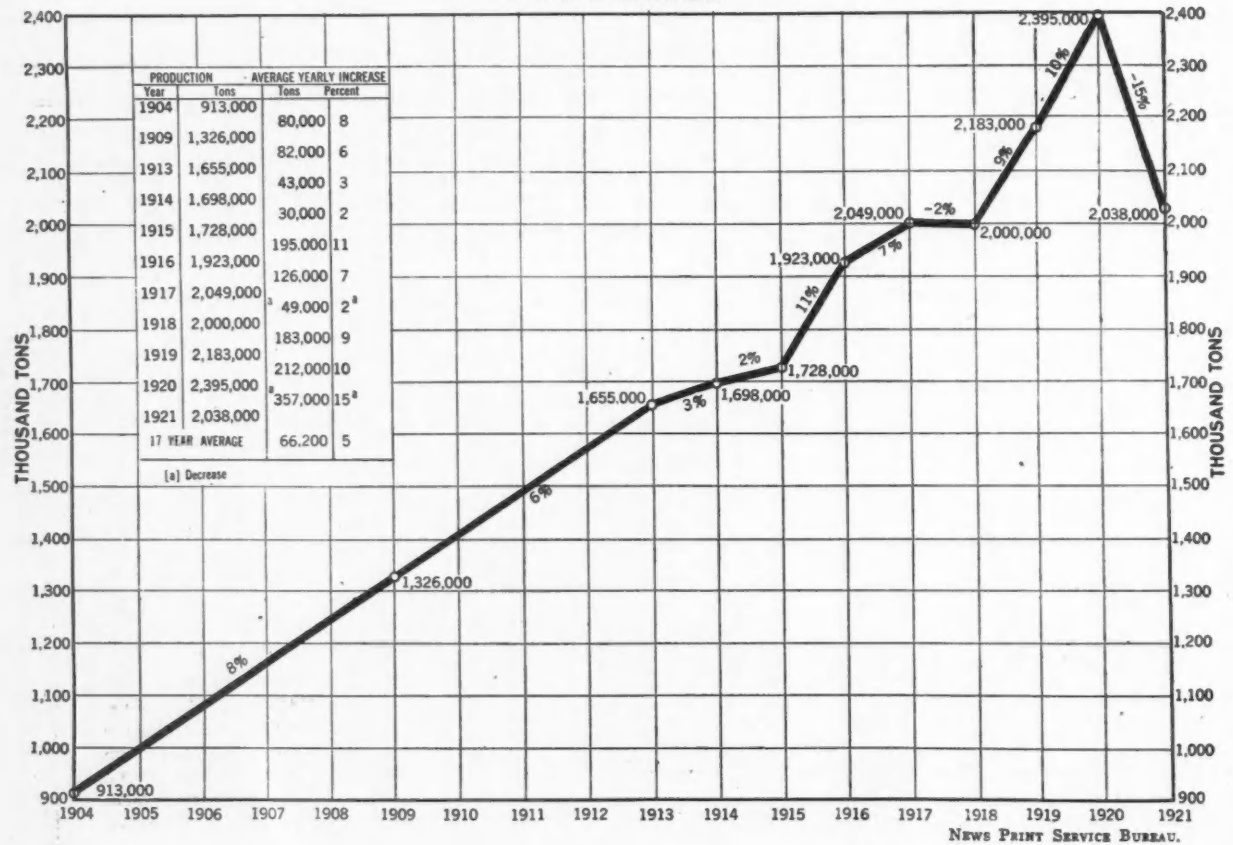
Consumption in the United States (Round numbers only)

	1921 Tons	1920 Tons	Decrease Tons	Per Cent
Total Print.....	1,226,000	1,503,000	277,000	18
Mill shipments.....	793,000	730,000	*63,000	9
Imports	2,019,000	2,233,000	214,000	10
Less export	17,000	46,000	29,000	63
Supply, total print.....	2,002,000	2,187,000	185,000	8
93 Per cent Standard News..	1,862,000	2,034,000	172,000	8
Less increase or plus decrease in publishers stocks.....	+40,000	-91,000	40,000	17
Net consumption Standard News	1,902,000	1,943,000	41,000	2

*Increase.

The consumption of 1,902,000 tons of standard news print in the United States in 1921 was 41,000 tons less than in 1920, or a decrease of 2 per cent but 52,000 tons or nearly 3 per cent more than in 1919.

NEWS PRINT PRODUCTION
U. S. AND CANADA



NEWS PRINT SERVICE BUREAU.

CRANE

Brass Valves

For 75 Pounds Pressure



NO. 1B GLOBE

Globe
Angle
Check



NO. 20B CHECK



NO. 2B ANGLE

THE increased use of piping material in homes, small factories, farms, garages, and water systems where the pressure does not exceed 75 pounds has created a demand for these valves. They may be repacked while under pressure when the valve is fully opened.

We are manufacturers of about 20,000 articles, including valves, pipe fittings and steam specialties, made of brass, iron, ferro steel, cast steel and forged steel, in all sizes, for all pressures and all purposes and are distributors through the trade of pipe, heating and plumbing materials.

SALES OFFICES, WAREHOUSES AND SHOWROOMS:

BOSTON	ATLANTIC CITY	MEMPHIS
SPRINGFIELD	NEWARK	LITTLE ROCK
HARTFORD	CAMDEN	MUSKOGEE
BRIDGEPORT	BALTIMORE	TULSA
ROCHESTER	WASHINGTON	OKLAHOMA CITY
NEW YORK	SYRACUSE	WICHITA
HARLEM	BUFFALO	ST. LOUIS
ALBANY	SAVANNAH	KANSAS CITY
BROOKLYN	ATLANTA	TERRE HAUTE
PHILADELPHIA	KNOXVILLE	CINCINNATI
READING	BIRMINGHAM	

CRANE LIMITED

FOUNDED BY R. T. CRANE, 1855

CRANE CO.
836 S. MICHIGAN AVE.
CHICAGO

MONTREAL, TORONTO, VANCOUVER, WINNIPEG,
CALGARY, REGINA, HALIFAX, OTTAWA.

WORKS: CHICAGO AND BRIDGEPORT

INDIANAPOLIS	ST. PAUL	SEATTLE
DETROIT	MINNEAPOLIS	TACOMA
CHICAGO	WINONA	PORTLAND
ROCKFORD	DULUTH	POCATELLO
OSHKOSH	FARGO	SALT LAKE CITY
GRAND RAPIDS	WATERTOWN	OGDEN
DAVENPORT	ABERDEEN	RENO
DES MOINES	GREAT FALLS	SACRAMENTO
OMAHA	BILLINGS	OAKLAND
SIOUX CITY	SPOKANE	SAN FRANCISCO
MANKATO		LOS ANGELES

CRANE-BENNETT, LTD.
LONDON, ENG.

Editorial

Vol. LXXIV New York, March 2, 1922 No. 9

FIFTIETH YEAR

Significant Failures

Depression has knocked a good many paper interests and knocked them hard in the last months. Little sympathy is felt for those fallen companies that did their bit to cheat the public and to conduct their business on a policy that permitted a square deal only when it was profitable to themselves, but there is feeling for paper interests that have failed and failed honestly on account of unprecedented conditions of foreign competition and domestic disorganization. The acid test to which the paper industry has been put has weeded out many weak sisters but at the same time the test has been over severe and reputable business has suffered since it is impossible to separate the wheat from the tares when they are closely sown together. The annual statements of the largest manufacturers of paper show losses almost without exception. There is small wonder that there has been refinancing, receivership, and failure in the trade.

Since the first days of the United States her home industry has been protected by a tariff barrier. Under the shelter of that barrier there have grown up the greatest manufacturing interests in the world. Manufacturers have been assured for the greater part of the time that this country has flown the stars and stripes that their goods would be demanded at home in preference to foreign made ones. Patriots did not wish to see American capital building up European industry and so protective tariff ruled.

Protection is essential now where it was necessary before since Europe's ability to greatly undersell America is unprecedented by reason of the great disparity in the exchanges. It is unthinkable that American statesmen do not appreciate the situation and are not attempting to meet the exigency, but the fact remains that relief which has been long awaited, must soon be freed from its bonds of red tape and equivocation, if the paper industry is to assume again its position of economic worth and service to the country.

A great depression brought on by the greatest war cannot be dispersed in short order. Since it is expected that it will take time the patience and perseverance of the American business man is steeled for the struggle now well advanced. What steps the government can take to make things easier will be appreciated. Adequate protection is asked for and voted for by the majority of the members of the American Paper and Pulp Association. What is wanted is a flexible tariff that will fluctuate with the everchanging market and at all times afford life-giving protection to American industry.

Sound Policy for 1922

A subscriber has sent to the PAPER TRADE JOURNAL a copy of a bulletin which was sent to the salesmen of the Kalamazoo Loose Leaf Ledger Company by President George P. Wigginton with the request that it be printed editorially. The bulletin contains so much excellent food for thought just now that this request is gladly complied with. The bulletin in part follows:

"Sane business men today are endeavoring in every conceivable way to stabilize industry and to so conduct their business as to solidify the fabric, leaving nothing to undermine or to shake that confidence which is the foundation of successful business.

"Notwithstanding the desire on the part of many good men to accomplish this most desirable result, there is one element that has entered into business which seems to have been almost entirely overlooked. This condition, which has prevailed during the past few years, and which can not be too severely criticized, is price competition.

"The depression occasioned by the deflation period has made a great many concerns more or less panicky, and has occasioned a slice in prices in many cases which is far below that which will protect and safeguard the business.

"The buyer is just as guilty as the seller under these circumstances, provided he is sufficiently well acquainted with what he purchases to realize that he is buying below cost. To buy below cost is just as unwise as it is to sell below cost. When he buys below cost he is contributing to the downfall of the business, thus weakening the whole industrial fabric, including his own business. Successful business can not be accomplished unless the largest possible percentage of business enterprises are successful. During the past few years, however, the charge prices of most concerns have been so exorbitantly high that the average purchasing agent today does not definitely know whether he is buying on a fair or unfair market.

"If the price is right, it will show a reasonable percentage of profit over and above cost; but any concern which tries, habitually and continually, to beat down the price it pays for its commodities below what will net a reasonable profit to the seller, is just as unfair and unwise as is the man who can and does profiteer continually, with the exception that probably the former is the more dangerous.

"It remains, therefore, for the buyer to determine what is a reasonable and proper price, and the burden of proof rests with the seller. If the seller is equipped to produce and sell a commodity at a proper price, he can and should be willing to show the buyer his costs and his profits.

"The only way in which business can return to a normal basis is for every concern to sell its goods at a profit, not an exorbitant profit, but a fair return on the investment. If all concerns would maintain a price that would enable them to obtain this fair profit, there would be just as much goods sold, and industry would return very rapidly to a normal level.

"The salesman should be in a position to show his cost and the margin of profit which he exacts on it, and he should have strength and courage enough to insist on prices which he knows are right, and fight it out along this line.

"Salesmen in all lines are a very decided and positive factor today in reaching a more normal condition in industry. They should preach the gospel of square dealing, fair treatment on the part of both the buyer and the seller, and they should exercise, as they have never exercised before, their persuasive powers to keep the market steady and prevent unwise price reduction.

"It is just as dangerous—in fact, it is more dangerous—to sell below cost than it is to sell at an unwise profit. And it is just as foolish for the buyer to beat down his purchases to a point leaving

no margin for the life of the concern from which he may buy, as it would be for him to pay any price that may be asked, regardless of volume of profit added. Every time he has purchased goods below cost he has lowered the vitality of his own industry.

"If this one factor can be brought home to the purchasing departments of the various concerns, and if a real sale policy of buying at a proper price with a reasonable margin of profit always added can be effected, industry will have reached a point where normalcy will be in sight."

Paper Mill Wages Decreasing

The Bureau of Labor Statistics, Department of Labor, has compiled figures based on reports received from 54 paper mills showing their employment and wages paid for the months of January, 1921, and January, 1922. In these 54 mills there were 28,469 persons employed in January of last year as compared with 24,154 in the same month of this year, a decrease of 15.2 per cent. The payrolls decreased from \$727,614 in January of last year to \$575,671 in January of this year, a decrease of 20.9 per cent.

The Bureau also shows a comparison between the employment and wages paid in 55 paper mills in December, 1921, and January, 1922. According to the report there were 24,525 persons employed in December as compared with 24,237 in January, a decrease of 1.2 per cent. The payrolls decreased from \$591,299 in December to \$577,207 in January, a decrease of 2.4 per cent.

The Bureau in connection with changes in wage rates and per capita earnings during the period December 15, 1921, to January 15, 1922, in the paper industry says:

"A decrease of 18 per cent to 54 per cent of the force was reported by one plant. The wages of 58 per cent of the force in one concern were cut 17 per cent. A wage rate decrease of 10 per cent, which affected 89 per cent of the employees, was reported by another concern. Wage reductions ranging from 5 to 10 per cent were made to 68 per cent of the men in one mill. Another mill reported a wage rate decrease of approximately 15 per cent but the number of men affected was not stated. A decrease of 1.2 per cent was reported for January per capita earnings as compared with those for December."

Against Duty on Casein

It is rumored that a duty of 4½ cents per pound may be placed on imported casein. The portent of the rumor is sufficiently momentous to cause large United States paper mills to launch immediately a campaign against such a measure. To that end the matter has been taken up with the American Paper and Pulp Association with the hope of forestalling the Congressional idea before it even has time to be written into a bill.

The use of casein for sizing paper is restricted somewhat by reason of its cost and the extreme care with which it must be handled to effect proper results. In proportion to its importance in paper making it is the greatest factor in the cost and the most expensive ingredient per pound of paper.

Only one-third the casein consumed in the United States is domestic. The other two-thirds is imported almost entirely from Argentina. For a year and more the supply of casein has not been adequate to the needs of manufacturers because the unusually dry seasons in Argentina cut down the volume produced and exported to the United States.

The United States placed an embargo on casein during the war

and the price soared from 14 to 15 cents a pound to 22 to 30 cents a pound. Three months after the removal of the embargo the price fell again to 13 cents a pound. Casein is now quoted at 9 to 10 cent a pound in the New York market.

The rise in the price of a commodity, already so costly as nearly to prohibit its use, caused by the embargo, fell upon domestic consumers as an added burden. Paper mill officials and importers feel that a tariff of 4½ cents on casein will act in the same way as did the embargo and instead of furthering liquidation so essential to the attainment of normalcy it will unduly inflate costs and harass the consumer. England, Germany and France have no protective tariff on casein and there is no reason for the United States to invoke one upon a raw material used in the manufacture of paper when paper itself is protected by a tariff which promises to be increased in the near future.

It is estimated that a duty of 4½ cents a pound on casein, the raw product, will all but cancel the protection now afforded by the tariff on finished paper sized therewith. It is said upon good authority that paper coaters will lose \$1,000,000 a year if this duty, pretending to be efficacious when it actually is destructive, is imposed on the industry. Manufacturers will be obliged to employ inferior sizing materials such as glue and viscose which will only produce inferior grades of paper and further embarrass the consumer.

Judging from the firm stand taken against the proposed duty there is considerable doubt as to whether it will ever mature. The following states plainly the view of the situation as expressed by H. L. Derby, President of the Kalbfleisch Corporation:

Mr. Derby stated that during the last fifteen years that casein has been generally used in the paper coating trade there has continuously been insufficient quantities produced in the United States for the consumption and that more than half of the casein used by the paper trade is imported, and aside from the fact that many paper manufacturers preferred the imported casein is the certainty that it would still be necessary to import nearly as much, if not quite as much, foreign casein to take care of the demands of the trade, even though the duty were put on.

On account of the decline of the dollar in Argentina, Mr. Derby felt sure the Argentine producers would not absorb any of the proposed duty in their price, and such duties would be for the account of the consumers, and accordingly would add to the cost price of their casein.

Indianapolis Paper Stock Co. Moves Offices

LOUISVILLE, Ky., March 1, 1922.—The Indianapolis Paper Stock Company has moved its main offices from Indianapolis to Louisville, and has changed its name to the Winter Paper Stock Company, it has been announced here.

The company is incorporated under the laws of West Virginia, and amended articles making the changes in name and residence have been filed at Charleston, W. Va., Samuel C. Tate, counsel for the company, announced. The corporation is 25 years old and has branches in Cleveland and Columbus, O.; Ft. Wayne, Ind., and Birmingham, Ala.

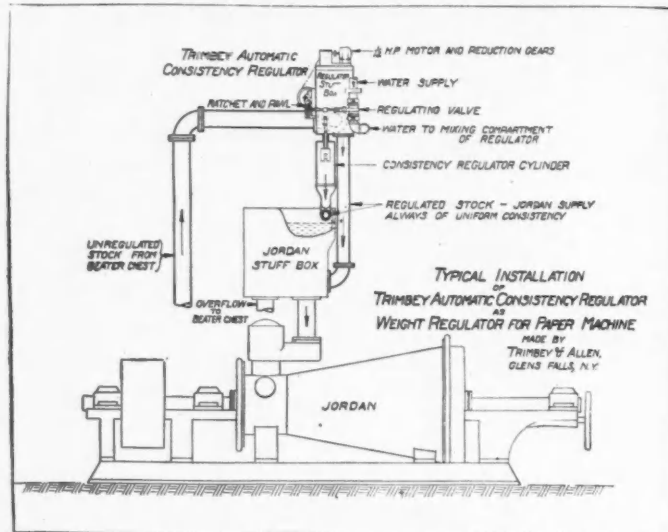
J. J. Winter, of Louisville, is the founder of the concern. H. C. Winter is secretary-treasurer and associate manager of the local plant at Tenth and Rowan streets.

To Be Technical Advisor of Bureau of Standards

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 1, 1922.—S. W. Willson of the Graham Paper Company of St. Louis, Missouri, has been appointed a technical advisor of the Bureau of Standards, during the work which the Bureau is doing in connection with the standardization and simplification of paper and paper products. Mr. Willson was chief of the Pulp and Paper Division of the War Industries Board during the war.

UNIFORM STOCK



This is the machine that will regulate your paper stock to a uniform consistency, thus insuring **UNIFORM BRUSHING ACTION** at the Jordan. Given stock of uniform character and consistency going on to the wire you will get **UNIFORM WEIGHTS** and **UNIFORM RUNNING CONDITIONS**.

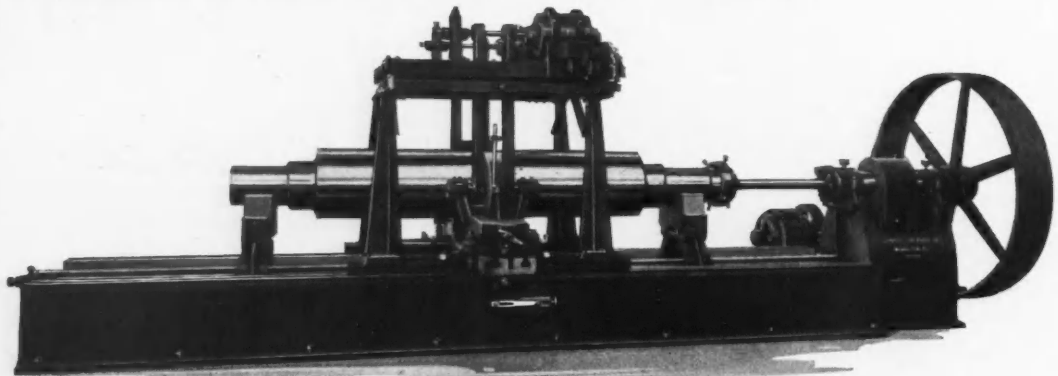
This regulator will also cause to be delivered at Beaters, Mixers or Bleachers, stock of a set, uniform consistency.

TRIMBEY MACHINE WORKS

Glens Falls, N. Y.

M. G. TIBBITTS, Sales Manager

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



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

LOBDELL Micrometer Calipers are handy and accurate.

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

Section of the

Technical Association of the Pulp and Paper Industry



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



Conducted by W.G. MacNAUGHTON, Secretary

THE USE OF CLEAN WATER AS A PRESERVATIVE FOR STORING MECHANICAL PULP*

R. J. BLAIR, PATHOLOGIST, AND E. PARKE-CAMERON, ASSOCIATE CHEMIST, FOREST PRODUCTS LABORATORIES OF CANADA, MONTREAL

Red-hot and moulding in pulp while in storage occur so frequently that every one who has ever stored pulp is familiar with this source of loss and waste. Until a short time ago very little had been done towards solving the problem and finding a way to control the trouble.

Moulds and Fungi to Blame for Losses

The various forms of pulp deterioration are due to the action of wood-destroying fungi and moulds. Each type of trouble-maker is a simple kind of plant and each is able to nourish itself with the substance of the pulp. In order to develop properly the fungi and moulds have other requirements in addition to food. They must have air, a proper amount of moisture and sufficient warmth.

If we undertake to keep our pulp free from attack by any of these invaders it is necessary to store the material in such a way that one or more of the requirements of the mould or fungus plant will be lacking. The food material for the organism may be poisoned by spraying the pulp with a preservative substance. Experiments in this direction have been carried out at the Forest Products Laboratory at Madison, Wisconsin and also at the Kenogami Mills of Price Brothers and Company. A large number of chemicals was used and the results of the experiments indicated that some of the materials employed were satisfactory and could be used commercially at a reasonable cost. However, if one adopted such a method of handling pulp for storage it would require the use of new raw materials and extra labor and equipment. Finally the paper maker might object to the presence of objectionable chemicals in the pulp.

It seemed that some of the other necessary conditions for fungus development lent themselves to experimental study and it was decided to find out something about the moisture requirements of the moulds and fungi. Any of the ordinary plants which grow in our gardens must have a certain amount of moisture in order to develop properly. If the supply of water is too scant the plant withers up and dies, while if there is too much moisture the plant is drowned. The same would be expected to hold true in the case of the organisms which injure pulp. Therefore pulp stored with either too little or too much moisture to permit of fungus development should be safe from attack.

If thus remained to make a choice of experimenting with pulp either too dry or too wet to spoil. When dried too much, ground wood is weakened and is apt to be lumpy when beaten. Storage conditions in a state too wet to spoil remained as a field for experiment.

Facts already known indicated that such methods of storage were well worth a trial. It is an accepted fact that wood which

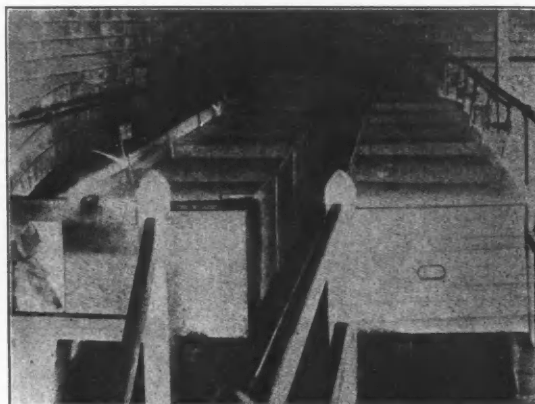


FIG. 1.—TEN OF THE TANKS USED FOR HOLDING PULP STORED IN WATER

is immersed in water or is covered with water-saturated soil is not destroyed by agencies which bring about ordinary decay. Wooden piles which were used for supporting the homes of prehistoric Lake-Dwellers have been recovered in good condition from some of the Swiss lakes. On this continent trunks of trees removed from beds of rivers, where they had remained undisturbed for hundreds if not thousands of years, have been converted into merchantable lumber.

When made into groundwood pulp the only change brought about in the wood is to separate it into fibers or small fiber bundles and it would be reasonable to expect that if stored in water in this finely divided condition there should be no more tendency for it to rot or mould than in the instances just cited. Accordingly an

*Paper read at the annual meeting of the Technical Section of the Canadian Pulp and Paper Association.

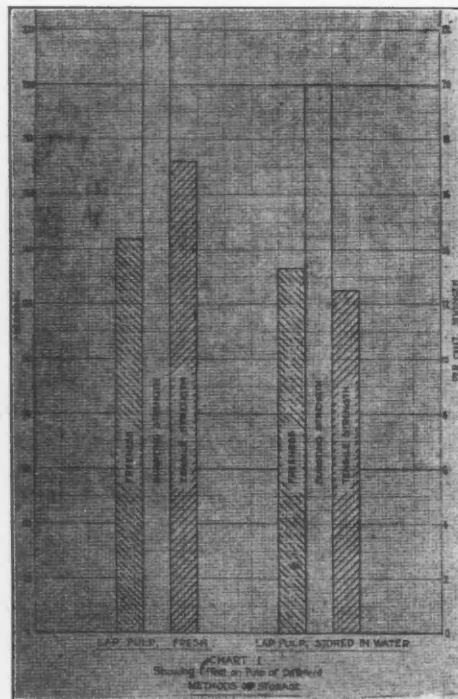
experiment was planned and equipment made for carrying on the work. A number of tanks was built in each of which several laps or sheets of pressed pulp could be placed. For each tank there was a valve for supplying water as required. Each tank was provided with a combined plug and overflow pipe which either permitted the water to drain away quickly or prevented the tank from overflowing when water flowed into it continually.

In June, 1920, the experiment was started and several lots of groundwood were placed in the tanks. Pulp was used in the form of slush, laps and pressed sheets. In some of the tanks the water was changed once a week, in others the change was made every day while in the remaining tanks water entered in a small stream which was never shut off.

In appearance the stored pulp was quite attractive as it was clean and similar to freshly-made pulp. On the surface there was an accumulation of a dark colored slime but this material was entirely superficial and did not penetrate into the body of the pulp. At the time the experiment was started some pulp was left over which was not required. During the time the experimental pulp was in storage these extra laps remained in the same room. They deteriorated so seriously that at the end of the storage period they offered no fair basis for comparison with the pulp stored in water.

Cold Storage Experiment

In addition to the water storage experiments, another one was tried at the same time with pulp in cold storage. Laps of three different kinds of freshly made groundwood were crated up and sent to a cold-storage warehouse where they were held at a temperature of from 34 deg. to 36 deg. F. during the same interval of seventeen months. At the end of that time this lot was tested



in a similar way to all of the other lots. The results obtained from these tests are to be found in the tables and charts which accompany this paper.

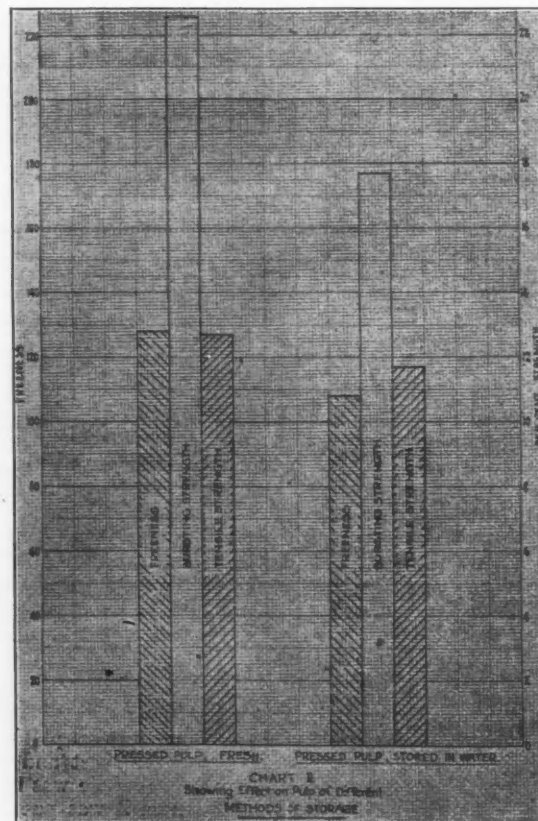
Methods of Testing

The tests carried out consisted of Determinations of Freeness, Bursting Strength and Tensile Strength.

Sampling

An average sample was taken from each tank of stock, thoroughly stirred, and the consistency of it determined in the following manner.

One thousand grams of stock were accurately weighed out in a tared beaker on a large chemical balance. The stock was then poured on to a large Buchner funnel and the water drained off by suction, a piece of well washed bleached calico being used



as the filtering medium. The pat thus formed was transferred to a large clock glass, the calico carefully stripped off, and the pat dried in an oven for three hours at 100 deg., 105 deg. C., cooled in a desiccator and weighed.

From the consistency thus obtained the original sample was diluted to 5 per cent and transferred to the disintegrating machine.

Disintegration

The disintegrating machine consisted of a three inch propeller driven at a high rate of speed (1,700 r.p.m.), inside and close to the bottom of a large inverted bell jar. The object was to open out the stock without any appreciable beating action.

This was found to be best accomplished by means of a treatment of twenty minutes, six litres of 5 per cent stock being used in the machine. This method was adopted as uniform for all pulps used, so that the beating action, if appreciable, would be constant for all samples.

After disintegration the sample was carefully diluted to 0.5 per cent consistency by weighing. It was then ready for the freeness tests and the preparation of the test sheets.

Determination of Freeness

All freeness tests were carried out at a constant temperature of 20 deg. C. which was maintained by means of a small copper

steam coil, and frequent stirring. The freeness tester employed was a modification of the Green apparatus installed in the Laboratories some years ago. The procedure was as follows:

One thousand grams of 0.5 per cent stock were carefully weighed out and transferred to the chamber of the tester, the top screwed home, and the pet cock in the lid closed. The apparatus was then placed in its rack over the funnel, a graduate placed under the side discharge of the funnel, the bottom of the chamber released as quickly and uniformly as possible, the pet cock in the lid opened, and the stock allowed to drain.

Five tests were run for each tank of stock and the conditions of each test kept as constant as possible throughout the whole series of determinations.

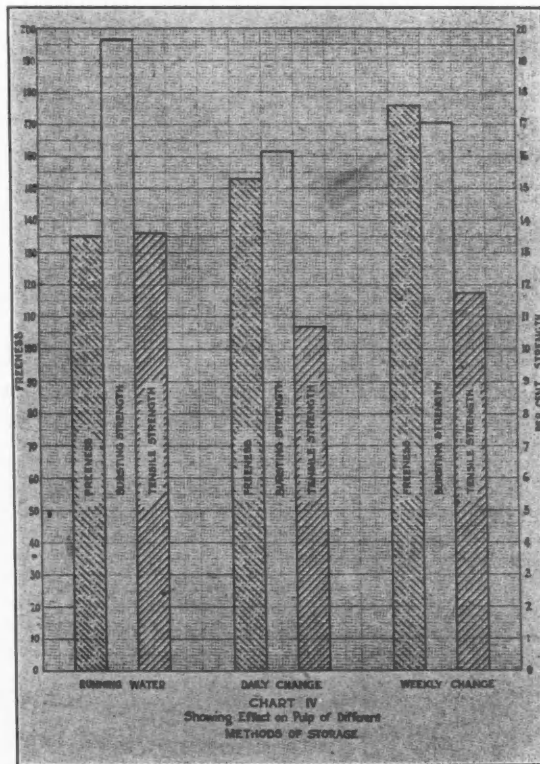
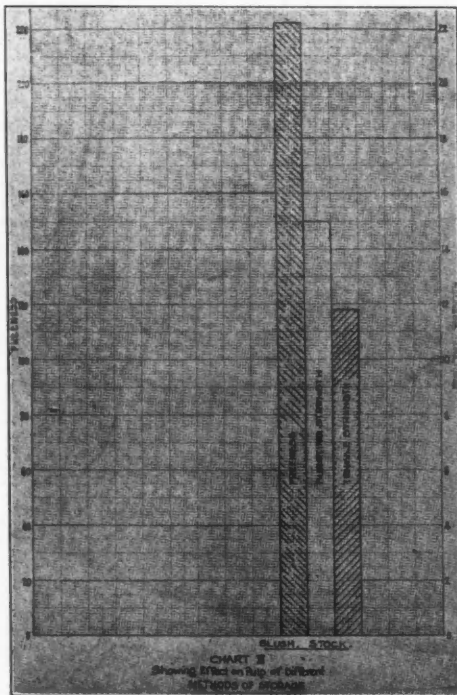
After the flow from the side discharge had ceased, the stock was transferred to a fibreware pail, the chamber of the apparatus thoroughly rinsed into it, the discharge from both orifices of the funnel also added, the whole diluted to approximately five litres and poured into the sheet machine.

Preparation of Sheets

The sheet machine used was one made from the plans of K. G. Wilen of the Wayagamack Pulp & Paper Co. and described by him at the last annual meeting of this Section on January 19, 1921. One slight modification was introduced, that of making the screen plate separate from the body of the machine, thus facilitating the changing of the wire when necessary, but in no way affecting its efficiency. During these tests and throughout a large number subsequently carried out the machine has proved highly satisfactory and it will probably be found difficult to im-

wire. The sheet was couched off on a piece of machine felt and both sheet and felt were placed on a piece of heavy brass plate. A second piece of felt was placed over the sheet and another brass plate laid on top of all. The whole was then pressed with the press as hard down as it was possible to turn it.

After pressing, the brass plates and one felt were removed, and



the sheet allowed to become air-dry while remaining on the other felt. This was done because the weakness of the sheet while wet rendered its removal from the felt without damage extremely difficult. The sheets were allowed twenty-four hours drying on the felts and an additional twenty-four after being removed and before being tested.

The sheets being thoroughly air-dry were cut to a seven-inch square and carefully weighed. From this weight the ream weight was calculated, taking a ream as 480 sheets 24 inches x 36 inches.

Methods of Testing

A strip one inch in width was ruled diagonally across the sheet and reserved for the tensile tests, the remainder of the sheet being used for bursting tests.

Five bursting tests were made on each sheet by means of a Mullen machine, thus giving an average of twenty-five bursts for each lot of pulp. The percentage points per pound as calculated in the usual manner.

The tensile strength was determined on a small machine designed by Mr. L. N. Seaman, formerly of these Laboratories, and described by him in an article in the *Pulp and Paper Magazine*, October 2, 1919. The machine, though somewhat crude, gave at least comparative results for the different lots tested. It is well to point out that the results of the freeness and tensile tests are only of value for comparison in the work actually carried out. Freeness testing is anything but standardized at present and the results of our method of tensile testing can in no way be compared with those obtained for instance by a Schopper instrument under the same conditions.

prove upon materially as a device for making standard test sheets.

It is unnecessary to describe this machine in detail here as a complete description of it may be found in an article by Mr. K. G. Wilen in the *Pulp and Paper Magazine* for January 20, 1921.

After pouring the stock into the chamber of the machine as described above it was allowed to stand until all eddy currents had ceased. The valve was then opened and the sheet formed on the

The method of computing the tensile strength is perhaps rather unusual, but it is simply a calculation similar to that of percentage points per pound from bursting strength. This method gave a figure which could easily be plotted and is not, we think, fundamentally unsound.

Presentation of Results

Table 1 presents in detail average figures obtained from each lot of stock for all the tests made. Table 2 groups the results and

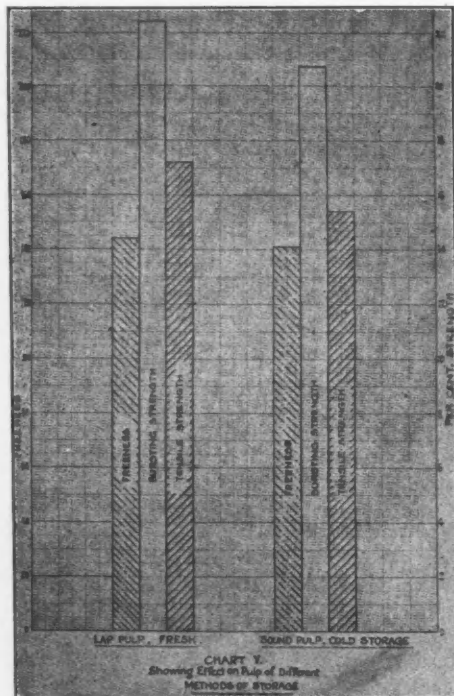


CHART V. Showing Effect on Pulp of Different METHODS OF STORAGE

presents the averages for the various groupings selected. Table 3 summarizes the results presented in the charts.

TABLE.—I. GROUNDWOOD PULP STORAGE.

Condition of Pulp	Sort of Storage	Result of test for:		
		Free-ness	Burst-ing	Ten-sile
Lap	Running water	129	23.06	13.91
Lap	Water changed daily	133	18.55	11.95
Lap	Water changed weekly	137	18.72	11.72
Pressed Pulp	Running water	117	18.65	13.11
Pressed Pulp	Water changed daily	94	16.87	9.59
Pressed Pulp	Water changed weekly	115	17.78	12.45
Slush—Stirred up daily	Running water	276	14.69	11.13
Slush	Water changed daily	231	13.03	10.55
Slush—Undis-turbed	Running water	159	17.25	13.75
Fresh Lap		144	22.43	17.20
Fresh Pressed Pulp		128	23.62	17.72
Laps in cold storage		141	20.72	15.40

GROUNDWOOD PULP STORAGE—TABLE II.

Description of Storage	Results of tests for		
	Freeness	Bursting	Tensile
Pulp laps in water	133	20.11	12.52
Pressed pulp in water	108	17.76	11.72

Slush pulp in water	222	14.99	11.81
All pulps in running water	135	19.65	13.50
Pulp in water changed daily	153	16.15	10.69
Pulp in water changed weekly	176	17.06	11.76
Pulp in cold storage	141	20.72	15.40
Fresh Lapped Pulp	144	22.43	17.20
Fresh Pressed Pulp	128	23.62	17.72

SUMMARY OF MATERIAL PRESENTED IN CHARTS.—TABLE III.

	Freeness	Bursting	Tensile
1.—Lap Pulp.			
Fresh	144	22.43	17.20
Stored	133	20.11	12.52
2.—Pressed Pulp.			
Fresh	128	23.62	17.72
Stored	108	17.76	11.72
3.—Slush.			
Fresh
Stored	222	14.99	11.81
4.—Stored in running water	135	19.65	13.59
Stored in water changed daily	153	16.15	10.69
Stored in water changed weekly	176	17.06	11.76
5.—Lap Pulp.			
Fresh	144	22.43	17.20
Cold storage at 34 deg. 36 deg. F.	141	20.72	15.40

Summary and Conclusions

- 1.—Of the pulp received only part was stored in water. The remaining laps and sheets were left in the building with the storage tanks and were freely exposed to the air. After seventeen months this latter material was found to be in very bad condition.
- 2.—Table III gives actual figures for the results shown in the charts. A comparison between fresh lapped pulp and that stored in water shows that after seventeen months there was slight deterioration in all cases. For pressed pulp the same condition held but was more noticeable.
- 3.—In stored slush stock the freeness was much higher than in the case with either laps or pressed pulp stored for the same length of time under the same conditions and the strength tests were also somewhat lower.
- 4.—In making a comparison between different methods of water storage, running water apparently gave a better result than either a weekly or daily change.
- 5.—In cold storage little deterioration seems to occur.
- 6.—The results indicate that water storage is superior to air storage for groundwood pulp.

Acknowledgments

In conclusion we wish to thank the Laurentide Company, the Belgian Industrial Company, the Donnacona Pulp & Paper Company, Price Brothers & Company and the MacLaren Company for supplying the pulp used in carrying out this series of tests; also those members of the staff of the Forest Products Laboratories of Canada who prepared the charts, and furnished suggestions as to carrying out the experiments.

Bogota Paper Co. Increases Capital

TRENTON, N. J., February 27, 1922.—The Bogota Paper and Board Company, of River road, Bogota, amended its charter in the office of the Secretary of State recently by increasing its capital stock from \$300,000 of 1,000 shares of preferred stock at \$100 per share and 2,000 shares of common stock at \$100 per share to \$500,000, composed of 1,000 shares of preferred stock at \$100 per share and 4,000 shares of common stock at \$100 per share. The concern has 1,000 shares of preferred and 2,000 shares of common stock issued and outstanding at the present time. David E. Stalker is the secretary of the company.

PUMPS AND PUMPING MACHINERY

(Concluded from last week)

In order to assist the Joint International Committee on Text Book: both financially and in attracting criticism of certain sections, the PAPER TRADE JOURNAL has arranged to co-operate with the committee by publishing some of the material submitted to the editor of the text books. In presenting this series of articles to our readers a cordial invitation is extended to assist the committee by suggestions and criticisms of this material. It is hoped that in this way omissions and errors will be noticed and corrected.

CHAPTER XII.

Pump Troubles

It may be safely asserted that more than one-half of the operating troubles originate at the suction side of the pump, and this is particularly true with pumps which have a suction lift.

Where pumps can be arranged so that the water or liquid pumped can flow into the pump suction under a gravity head most of these suction troubles will be avoided and it is only necessary to provide suction pipe connections between the supply and the pump of ample size to allow for a moderate rate of flow and avoid high points or air pockets along the pipe line which will accumulate air and retard the flow.

In the majority of pumping operations connected with pulp and paper mills the gravity feed arrangement can be, and usually is, provided for and therefore these plants are usually comparatively free from suction pipe troubles except that in a good many instances the suction pipes provided for handling heavy stock, particularly in blow pit pumping are much too small in area to permit of a flow sufficiently free, into the suction inlet of the pump. It is recommended for this class of pumping that the area of the suction opening of the pump and the entire suction or feed line between the pump and the tank or other source of supply should be approximately three times the area of the discharge opening of the pump.

For instance a pump having a discharge opening of 6" diameter should have a suction or inlet opening and pipe line at least 10" diameter—and if the pipe is of considerable length it should be 12" diameter.

Where there is a suction lift to be taken care of it should be kept within minimum limits for the reason that it is less difficult to provide the tight joints and connections required for low suction lifts than in cases where a rather high vacuum is required to produce the necessary lift—because in such cases small leakage of air into the suction will expand to sufficient volume and greatly reduce the flow of water to the pump and in some cases the flow may be entirely stopped.

It is probably needless to say that in every case where a suction lift exists that it is necessary to have all joints above the water level up to the pump made as tight as possible against air leakage into the pipes and that any horizontal run of piping should be laid level or preferably with an incline towards the pump and without high spots or air pockets to collect air and retard or cut off the flow to the pump; this is most important and although it seems to be quite generally understood as being essential to successful operation yet there are a good many instances where these instructions are not carried out and the result must invariably be trouble.

Another rather important detail in connection with the construction of a suction pipe is the matter of submergence of the lower end of the pipe in the water supply; this should be carried well down below the low water level to prevent the formation of eddy currents around the pipe, due to the disturbance of the surface of the water and these fill with air which may be drawn down into the suction pipe if the end of it is not sufficiently below the surface of the water.

In cases where foot valves are used at the lower end of the suction pipe or where check valves are installed in the suction line, care should be taken to select valves of such design as will permit an opening equal at least to the area of the suction pipe when the valve port is open; many valves are designed so that they do not have a port opening equivalent to the pipe area and this is very important in connection with centrifugal pump installations where the valve must remain open to permit a steady flow to the pump.

By far the greatest amount of trouble and replacement in connection with direct acting and other types of valve pumps is with the water valves, in spite of the fact that an extraordinary amount of intelligent engineering skill combined with practical ability has been brought to bear upon the subject of the best designs and materials to be utilized for obtaining the most satisfactory results.

The operating engineer who has pumps of this type under his charge and who has his water valves well in hand has reduced his mechanical troubles to a minimum and it should be the essential business of every pump operator to obtain as complete an understanding as possible of the water valve construction of his pumps and the best type of valves to suit his service condition both in the matter of smooth, quiet operation and freedom from leakage as well as durability.

After the engineer has determined the best kind of water valve to use in his pump he should see that a few spare valves are kept on hand, not only the valves themselves but a few stems or valve bolts, springs if used, and valve seats as well.

Usually it is not necessary to carry a full set of valve parts in stock as spares unless the plant where the pump is installed is located where prompt delivery from the pump factory is not possible for the reason that pump valves usually do not need renewal in complete sets but one or two at a time and if valves are made of rubber composition they will deteriorate if left exposed to the air and sometimes they will dry out and crack so that they become practically useless.

It is therefore considered good judgment to carry a stock of valves about one-half the number of valves and valve parts required to fit out the pump and to order new ones immediately after any of these are used.

No matter what precautions are taken to provide for carrying spare parts in stock there may be times when these are not available and in such cases temporary repairs can be made which will enable the pump to be kept in service until new parts can be provided.

When a pump is out of commission on account of the breaking of one or more of the water valve discs these may be replaced for the time by temporary discs made of metal plates in the case of pumps having water valves of the standard flat disc valve type, and if suitable material for making temporary valves is not available the valve seat opening may be blanked off with a disc of steel plate or wood.

This blanking off can only be done in the case of pumps having two or more valves at each corner, as of course it is not possible to blank off an entire valve area and operate the pump.

There may be times when an entire valve service including the valve seat will get loose and be thrown out through the discharge pipe and not recovered, in such cases the entire valve seat opening may be blanked off as shown by Fig. 52 until a new valve seat can be fitted to the pump.

When valve seats, which are screwed in place in the valve disc, become loose due to corrosion of the threads or stripping it is necessary to re-tap the thread in the valve disc with an oversize tap and secure new valve seats which are threaded larger than standard and which will fit snugly into the threads made in the valve disc by oversized tap and secure new valve seats which are threaded larger than standard and which will fit snugly into the threads made in the valve deck by oversize tap.

When valve seats which are pressed into the valve disc in a bored taper becomes loose the valve seat opening in the deck should be reamed out and new valve seats secured which are turned to a larger diameter than standard so as to insure a tight press fit with the reamed out opening in the valve disc.

In fitting new valve seats the important thing is to have them secured as tight as it is possible to make them in order to prevent them from working loose.

The next most important detail is to have them square and true so that the seating surface is free and horizontal and the valve

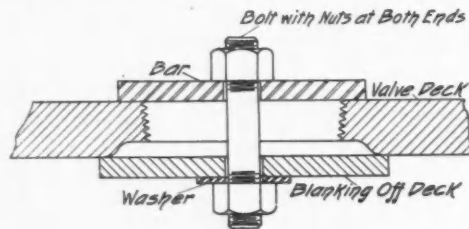


FIG. 52

bolts or stems vertical so as to permit the valve to open and close freely and to seat true and tight.

In starting a reciprocating pump under pressure it may fail because of full water pressure resting on the discharge valves. The air remaining in the pump cylinder is compressed and prevents water from entering the cylinder. It is therefore advisable to have a by-pass between the suction and discharge chambers with an intermediate globe or gate valve to prime the pump.

In starting a new pump, if it does not operate smoothly, usually the first impression is that the steam valves are not properly set. These valves should be the last thing to be disturbed; there is only one proper position for the steam valves on duplex pumps and this position is given them at the testing room of the pump factory before the pump is tested and any changes made by the operator will nearly always prove to be wrong.

Make sure that the suction and discharge connections, water valves and everything connected with the water end is all right. If on starting a new pump or one which has been recently packed it is found that one or perhaps both of the pistons do not make a full stroke the cause can usually be located at the stuffing boxes. They are probably packed too tight.

In properly packed stuffing boxes it is only necessary to draw lightly on the glands in order to prevent leakage, thereby not only saving friction, but having a much smoother working pump.

When the water pistons are packed with fibrous packing, the trouble sometimes arises from the swelling of the packing, causing the pump to operate stiffly or jerky and make uneven strokes. This is especially so when pumping hot liquids and sometimes it is necessary to take out the packing and thin it down.

This is done by stripping a layer from one side of the strand or ring as the swelling is usually lateral. In providing a piston with new packing it is well to soak the packing in warm water over night before fitting it in. New packing should fit the packing space loosely.

Instructions for setting Steam valves on Duplex Pumps.—When ever it should become necessary to reset the steam valves Fig. 53 should be used for reference until the operator becomes proficient and then follow the directions.

Take off both valve chest covers. Move piston rod R on right hand cylinder until piston P strikes cylinder head H. Adjust nuts B so that steam inlet port D is wide open. Then move piston rod in opposite direction until it strikes the cradle head H, and adjust nuts A so that port C is wide open.

In the same way adjust the valves of the left hand cylinder. These instructions assume that long lever is on the left hand side

of the pump (standing at steam end). Pumps having only one nut in the center of the slide valve are adjusted in the same manner. If it is found after adjusting the valve for port C and moving the piston rod in opposite direction that the valve overtravels port D it should be so adjusted that the travel is the same for both sides.

With regard to the troubles encountered with centrifugal pumps the majority perhaps are due to improper priming or the removal of air which interferes with the operation of the pump. Even in cases where there is a possibility of trouble due to air pocketing in the pump casing or in the suction pipe or fittings if there should be a point which is higher than the inlet opening and precautions should always be taken to remove the air before starting the pump.

If there is a head on the suction the air cock on top of the pump casing should be opened up until a full stream of water flows through it when it should be closed and the pump started at once.

In case of a suction lift the pump should be primed before starting the pump in motion according to one of the methods described in a previous chapter.

It is important that the pump should be properly primed before starting for the reason that when the impeller is in motion and the pump casing contains both air and water they become mixed up together and it is difficult to separate the air and work it out of the pump casing.

Bearing troubles are quite often met with in centrifugal pumps though not nearly to the same extent since the almost general adoption of the ring-oiled type of bearing and a better class of design and shop work than was formerly allotted to these machines.

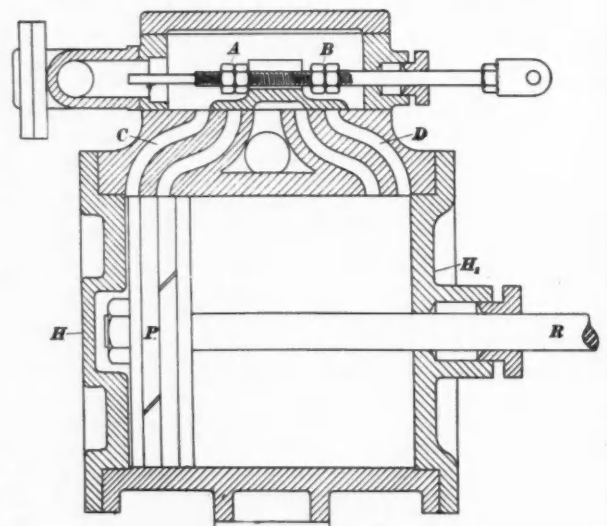


FIG. 53

Overheated bearings are usually the result of: (1) Misalignment of the bearings due to method of installation; the pump should always have the bearing carefully gone over with a level before bolting down to foundation. The bearing should be carefully cleaned out and flushed with kerosene to remove any particles of grit or foreign matter and precautions taken that the alignment is not disturbed by bolting down the pump so as to spring the sub-base.

(2) This may be due to insufficient oil or impaired quality.

With ring-oiled bearings care should be taken that the oil reservoirs are kept filled to the proper level to permit the oil ring to dip well into the oil and with bearings of the old type the cup feeds should be set by experimenting, to feed a supply of oil which avoid heating without being wasteful. With ring-oiled bearings

(Concluded on page 58)

GRINDSTONE MOUNTING

Waldo E. Rosebush, of Spokane, Wash., assignor to the Inland Empire Paper Company, Millwood, Wash., has just been granted a patent on a grindstone mounting wheel the patentee describes as follows:

The object of the invention is to provide a new and improved mounting for grindstones such as are used for pulp mills and other establishments and arranged to securely hold the grindstone in position on the shaft or spindle and to allow of conveniently and quickly releasing and removing a worn out grindstone and replacing the same by a new one.

Another object is to permit of removing a worn out grindstone without breaking it up while held in the mounting.

Another object is to permit of readily reusing a worn out large grindstone of one pulp mill in a pulp mill requiring a stone of less diameter.

Another object is to provide a mounting which is very simple and durable in construction and not liable to get easily out of order.

With these and other objects in view, the invention consists of certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a front elevation of the improved grindstone mounting with parts shown in section; and

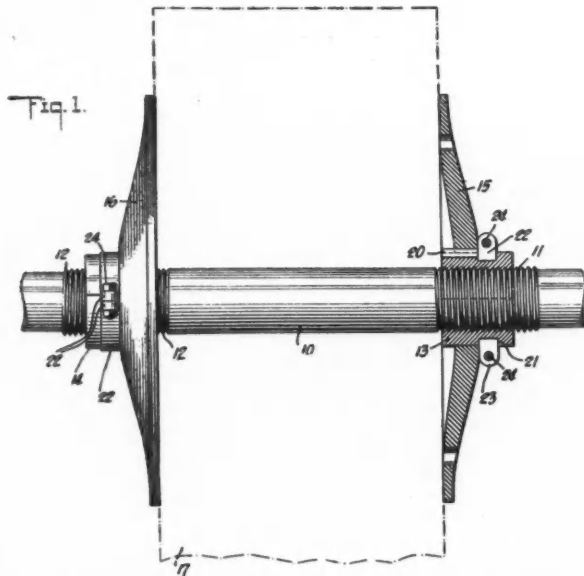
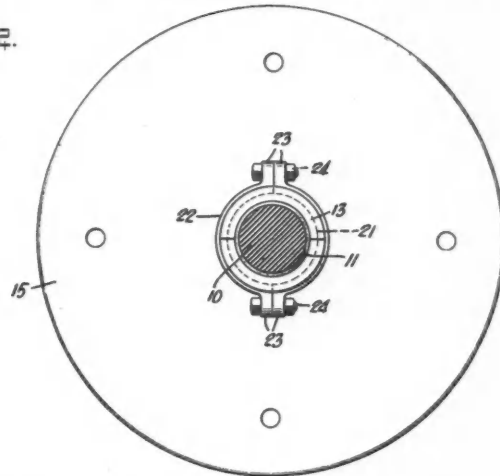


Figure 2 is a side elevation of the same with the shaft or spindle shown in section.

The shaft or spindle 10 is provided with right and left hand screw threads 11 and 12 on which screw bushings 13 and 14 carrying removable dished flanges 15 and 16 bearing against the sides of the grindstone 17 to be held in position on the shaft or spindle 10. Each of the flanges 15 and 16 is removably fitted on the corresponding bushing 13 or 14 and rotates with the same, preferably by the use of a key 20. Each of the bushings 13 and 14 is preferably made in two or more parts to permit of readily placing the bushing in position on the screw threads 11 and 12 or to remove the same therefrom after the corresponding flange 15 or 16 has been removed from the bushing.

Either or both of the bushings 13 and 14 are provided with an annular groove 21 into which fits a collar or a ring 22 made in sections having lugs 23 fastened together by bolts 24. The collar or ring 22 projects a sufficient distance beyond the peripheral face of the corresponding bushing 13 or 14 to provide an abutment for the outer face of the corresponding flange 15 or 16. Thus the

Fig. 2.



flange 15 is supported on the corresponding bushing 13 or 14 and is held against the grindstone by the collar or ring 22 on screwing up the corresponding bushing 13 or 14.

When it is desired to remove the grindstone 17 it is only necessary to remove the bolts 24 to allow of removing the corresponding collar or ring 22 thus releasing the flanges 15 or 16 of its outward strain. The bushing 13 or 14 can now be readily unscrewed from the screw threads 11 or 12 and removed from the shaft, but in case the bushing does not unscrew easily it is only necessary to remove the key 20 to allow of sliding the flange off the bushing endwise. The bushing being in two or more parts can now be readily pried off the corresponding screw thread 11 or 12 to release the grindstone 17 and allow its removal from the shaft or spindle 10.

From the foregoing it will be seen that by the arrangement described the grindstone is securely held in position on the shaft or spindle 10, and this grindstone after being worn can be readily removed and replaced by a new one without requiring breaking up of the stone and allowing the use of such removed stone in a pulp mill requiring a grindstone of smaller diameter.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A grindstone mounting comprising a flange adapted to engage one side of the grindstone, a sectional bushing on which the said flange is removably mounted, and means removably mounted on the said bushing for clamping the sections thereof together and against which butts the outer side of the said flange.
2. A grindstone mounting comprising a flange, a sectional bushing removably carrying the said flange and held on the grindstone shaft, the said bushing having a peripheral groove adjacent the flange, and a sectional collar held in the said groove and against which butts the outer side of the said flange.
3. A grindstone mounting comprising a shaft having a threaded portion, a sectional bushing screwing on the said threaded shaft portion and having an annular groove, a flange removably fitting on the said bushing, a key connecting the bushing with the flange, and a sectional retaining collar fitting into the said groove and against which butts the outer side of the said flange.

HYDRAULIC HEAD FLOW BOX

PORT EDWARDS, Wis., February 27, 1922.

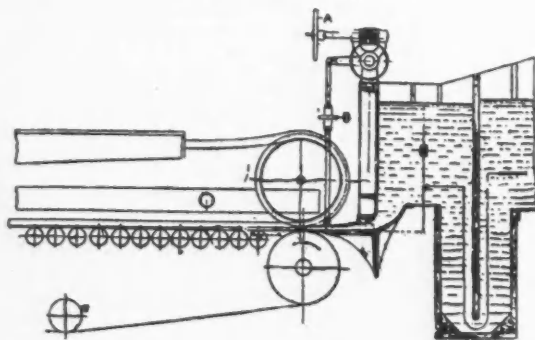
Editor PAPER TRADE JOURNAL:

Recently L. M. Alexander sent you an article on the High Slice vs. Elevated Breast Roll, prepared for him by the writer. Since that was published I have received a number of comments from paper mill men over the country, asking for further information on the point at issue, including letters from some of the larger machinery builders.

The new 164" machine at West Linn, Ore., where the writer was located for a number of years, as resident manager of Willamette Pulp and Paper Company, before the consolidation, is now being operated without an apron, a metal plate being bolted to the flow box and the 24" slice adjusted to this plate for the flow desired, but this does not allow of a hydraulic head sufficient to deliver the stock onto the wire at a speed equal to that of the wire itself.

A recent item, however, on page 55 of the PAPER TRADE JOURNAL of February 2, 1922, describes the idea as well as words can, which item reads:

"A NEW TYPE OF PAPER MACHINE FLOW BOX. Papeterie xlii, 72 (Jan. 25, 1920) Pulp and Paper, xix, 1164 (Nov. 17, 1921)—Translation by A. Papineau-Couture. The apron and



slices are completely eliminated, the stock being delivered through a nozzle which slides out of the flow box and is absolutely independent of the wire, the only parts resisting on the latter being the deckle straps. The height of the partition in the flow box can be very easily adjusted, thereby adapting the rate of flow of the stock to the speed of the wire, so that it is unnecessary to change the slope of the latter while the machine is running. The thickness of the stock can be adjusted by means of a series of 10 or 20 levers spaced along the whole width of the sheet. By suppressing the slices the formation of air bubbles and foam spots on the wire is prevented, and the output of the machine is improved as regards both quantity and quality.—A. P. C."

From this it is noted that the matter is being given thought by others, even though many of the larger machines installed to date have been simply "enlargements of photographs" in this particular.

It is possible that some of your readers may be interested and that they failed to note the item quoted.

Yours very truly,

B. T. MCBAIN,
Director of Manufacturing.

An illustration of the flow box referred to in the translation by Mr. McBain is presented herewith:

Along the same line, at a meeting of the British Technical Section, T. D. Nuttall spoke as follows:

"Relatively speaking, the well or pond of pulp behind the slice is stationary, and the water and fibers are called upon suddenly to assume the velocity of the wire, the tendency being for the fibers

to place themselves in line with the direction of flow. On slow running machines this tendency receives an early check as the water leaves the fibers quickly, and they are deposited in good formation on the wire while under the influence of the shake.

With the wire passing under it at increasing speeds, however, the water does not drop through so readily at normal elevation, and the influence of the flow remains sufficiently long as to disturb the formation of the sheet.

To counteract this, the wire was raised at the breast roll end so as to cause a declivity or pitch to enable the pulp to attain as early as possible the speed of the wire. Some 10 years ago the pitch of the wire was raised to 14 in. and even 18 in. with this object.

With still higher speeds experience showed that even this pitch was not sufficient to prevent the malformation of the sheet, and another method of giving the impetus to the pulp was adopted, viz.:—to increase the depth of the pond behind the slice and by the influence of the head to spout it on the wire at increased velocity.

The theoretical head that is required to spout out water at different velocities is approximately as follows:—

Spouting Velocity Ft. per minute	Head Inches
300	4
400	8
500	13
600	19
700	26
800	33
900	42
1,000	51
1,100	61
1,200	71

There is at the moment a difference of opinion as to which of these methods gives the best results, the deep pond or the inclined wire.

There is a machine making "news" at 1,000 ft. per minute with a pond behind the slice 28 in. deep and the wire pitched 36 in.

There is also a machine making a well-formed sheet of thin kraft papers at 850 ft. per minute with a pond behind the slice of 48 in. and a wire that has a slight rise from the breast roll to the boxes.

The advocates of the high-pitched wire intend to try a wire pitched 84 in. or even 96 in., and those of the deep pond propose to go up to 72 in. It will be very interesting to see the result of the experiments of these two schools of thought on high speeds. Perhaps the best results will be obtained by a combination of the two methods. The wire on the high-speed machine has generally no shake, but in those cases where the shake is retained, stationary slices are used.

Certain-Teed Corp. Net Earnings \$398,397

The Certain-Teed Products Corporation which has numerous building paper mills throughout the country, reports for 1921 gross income of \$3,642,050, against \$5,179,970 in 1920. Net profits after taxes amounted to \$398,397, against \$600,434. The profit and loss surplus on December 31 was \$1,777,535. Robert M. Nelson, in his remarks to stockholders, said:

"Considering the handicaps facing us at the beginning of the year, we think that the showing made at the finish should be more than satisfactory to stockholders. We inherited potential losses from the previous year on contractual obligations for raw materials, and during the first half of the year these losses were somewhat increased by further shrinkage of market values.

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

Recent Developments in Paper Machine Drives.—H. W. Rogers, General Electric Co. *Paper*, xxviii, 22-26 (May 11, 1921).—Discussion of the use of electric motors for driving grinders, screens and agitators, chippers, conveyors, barkers, beaters and washers, jordans, supercalenders and platers and paper machines. The various types of paper machine drives are described and discussed, and the General Electric Type of sectional motor drive described and its merits dwelt upon. (See also *Pulp and Paper*, xviii, 915-916, Sept. 2, 1920. This type of drive is covered by Can. patent No. 209,956, March 29, 1921.)—A. P.-C.

Tropical Fibers for Paper Manufacture.—A. C. Heiny, Tropical Fibers Commercial Co. *Paper*, xxviii, 24-25, 41 (April 27, 1921).—Plants of the banana family are used for making sacks and cordages; but so far the fibers have not been used for paper making because they are not entirely freed from encrusting materials. Pulping tests carried out on the whole stalks showed excessive consumption of chemicals because the stalks contain only about 10% pure pulp, the remainder being lignin, gums, resins, and a large amount of water acidulated with tannic acid which neutralizes part of the alkali of the cooking liquor. After removing water, resins, and gums, there remains about 20% of the weight in fibers, containing less than 50% lignin. A decorticating machine is described, for the treatment of this plant. Other plants than the banana can be treated by it. Tannic acid and alcohol could doubtless be obtained from the waste in quantities that would more than offset the cost of extraction of the fibers for pulp and paper making.—A. P.-C.

Business of Purchasing Department.—"Eagle A Unity"; *Paper*, xxviii, 16 (May 18, 1921).—Good buying has been defined as "the ability to secure raw materials and supplies of proper quality, in time for production requirements, at a satisfactory price." Scientific buying requires a thorough knowledge of the uses for which the materials are required and of the manner in which these materials are produced, a close study of market conditions and familiarity with sources of supply, investigation of the standing of the seller and of his ability to carry out his agreement, permanent records of transactions from the time the requisition is received until payment has been made and all records are closed. Quality should be considered first, then service, and price last. The purchasing department should interview the many salesmen who solicit orders, as many of them are of considerable value and some are indispensable.—A. P.-C.

Turning Boiler Room Wastes into Profits.—E. G. Bailey. *Industrial Power*; *Paper*, xxviii, 21, 41 (May 18, 1921).—The principal heat losses taking place in the boiler room are excess air, unburned combustible gases, high flue gas temperature, and unburned coal. The proper relation between these losses should be determined so that none should be reduced to the extent that another is increased unduly, and operations should be conducted so that the total losses should be a minimum. A study of these losses is the best way of checking up the savings creditable to soot blowers, regulators, various types of stokers, method of operation, etc.—A. P.-C.

Rosin, or Engine, Sizing.—C. Schneider, Knowlton Bros., Watertown, N. Y. *Paper*, xxviii, 22-23 (May 18, 1921).—General discussion of engine sizing from a practical point of view, with a plea for the purchase of sizing chemicals on specification.—A. P.-C.

Development of Suction Rolls.—William Millspaugh, Sandusky Foundry and Machinery Company. *Paper*, xxviii, 15-17, 27-28 (June 15, 1921).—The failures of the early attempts to use suction rolls for papermaking were partly due to the fact that no means were provided to prevent pressure between the packing of the fixed member (the suction box) and the inner surface of the rotating member. This was covered by the first Millspaugh patent; and the first suction rolls were used on cylinder machines. Next came suction couch rolls replacing the two conventional couch rolls of fourdrinier machines. Finally, suction press rolls came into use. The theory of the suction roll, the results obtained in various mills by its use, and its merits are discussed.—A. P.-C.

Classification, Filing, and Indexing System for Pulp and Paper Library.—Carleton E. Curran, Director of Information Dept., Mead Research Company, Dayton, Ohio.—*Paper*, xxviii, No. 19, 9-11, 23, 30; No. 20, 17-19; No. 21, 17-18 (July 13, 20, 27, 1921).—Outline of a scheme of library classification devised to meet the needs of a technical research organization interested in problems relating to the pulp and paper industry and aiming to cover the entire field from pure chemical considerations to semi-commercial production, and even to be suitable for utilization in a factory library or filing system. It was found practical for filing correspondence as well as for the classification of pamphlets and books. The classification scheme is based on the Dewey decimal system, as it is the most flexible and widely applied system yet devised; but considerable liberty was taken with, and exception made to it so far as topics relating to pulp and paper are concerned. Under 676, which Dewey devotes to "Paper and Paper Products," have been placed (1) all subjects relating to pulp and paper, the chemistry and testing of all materials used in their manufacture, and the processes, machinery and equipment employed; (2) the chemistry and properties of cellulose and its derivatives; (3) forestry, because of its importance as a source of raw materials in paper manufacture; (4) factory, laboratory, office, and library administration so far as they relate to the pulp and paper industry. A list is given of the numbers and headings of the classification systems, as regards pulp and paper subjects, and an index of subjects commonly used is appended to the classification.—A. P.-C.

The Beating Process.—C. C. Stewart, Harding Paper Company, Div. A. W. P. Co., Franklin, Ohio. *Paper*, xxviii, No 15, 14, 29 (June 15 1921).—In beating, disintegration depends on the type of beater used, the angle of inclination of the beater roll to the bed plate, the size and weight of the roll, the type of fly bar used, the circumferential speed of the roll, and the grade of raw material. Circulation depends on consistency and propelling. These are briefly discussed.—A. P.-C.

Special Pulp and Paper Course at the University of Maine.—*Paper*, xxviii, 11 (June 15, 1921).—Outline of the summer course given in pulp and paper work at the University of Maine, June 27 to Aug. 5, 1921.—A. P.-C.

The Employee as a Stockholder.—Warfield Webb. *Paper*, xxviii, 9-10, 24 (July 6, 1921).—Description of the employees' stock participation plan which is in force at the Detroit Sulphite Pulp and Paper Co.'s mill. (See also *Pulp and Paper*, xviii, 485-490, May 6, 1920.)—A. P.-C.

Paper Mill Operations.—Nelson R. Davis, S. D. Warren Company, Cumberland Mills, Maine. *Paper*, xxviii, 12-13 (July 6

1921).—A discussion of the importance of properly controlling processes and materials in paper mill operations.—A. P.-C.

A Fabrikoid Apron for the Paper Machine.—DuPont Magazine; Paper, xxviii, 18-19 (May 4, 1921).—Discussion of the merits of fabrikoid as a material for paper machine aprons. The fabrikoid is doubly impregnated with pyroxlyin to render it waterproof. It has a much longer life than ordinary aprons; it stands greater wear from the wire, and buckling, if not eliminated, is reduced to a minimum. It has been tested extensively at the Augustine Mills of the Jessup and Moore Paper Co., Wilmington, Del., and has proved thoroughly satisfactory, more convenient and much more economical than those previously used.—A. P.-C.

Causticizing Problems in the Sulphate Mill.—N. E. Brokaw. Paper, 18-19 (June 15, 1921).—A brief discussion of the influence of the density and strength of the liquor, quality of the lime, amount of lime required, cooking and settling of the liquor, and recovery of the soda from the sludge on the efficiency of causticizing operations.—A. P.-C.

What the Pulp and Paper Industry Means to Ontario.—Edward Beck. Paper, xxviii, 17-19, 40 (May 18, 1921).—An analysis of the pulp and paper industry of Ontario and of the supplies of pulpwood of the province, together with a plea for the proper conservation of our forest resources by means of forest protection, reforestation, and prohibiting the exportation of unmanufactured wood out of the country.—A. P.-C.

Securing the Loyalty of Employees by Proper Welfare Methods.—Paper, xxviii, 9-11 (April 27, 1921).—Description of the welfare work carried out by the Fox Paper Co., Lockland, Ohio.—A. P.-C.

Forestry for the Private Owner.—Paper, xxviii, No. 8, 12; No. 9, 29; No. 10, 18; No. 11, 20; No. 12, 15 (April 27, May 4, 11, 18, 25, 1921).—A discussion of the importance of the farm wood lot and of the proper methods of starting, tending and harvesting it, and of marketing the products.—A. P.-C.

Terms on Which Canadian Pulpwood Rights Are Offered.—H. Merle Cochran, American Vice-Consul, Montreal. Paper, xxviii, 22-23, 40 (April 27, 1921).—Conditions covering the permit to cut pulpwood on certain limits to the east of Lake Winnipeg, in Manitoba Province, covering an area of approximately 718 sq. miles.—A. P.-C.

Ulman Stromer—First Chronicler of Papermaking.—Dard Hunter. Paper, xxviii, 12-14 (May 4, 1921).—Extracts from the diary of Ulman Stromer, the first German papermaker, at the end of the XIVth Century.—A. P.-C.

Summer Course in Pulp and Paper Manufacture at Columbia University.—Paper, xxviii, 15, 40 (May 4, 1921).—Outline of the course given July 5 to August 12, 1921.—P. P.-C.

The Origin of Newspapers.—Wm. B. Reinicke. Paper, xxviii, 16-17, 40 (May 4, 1921).—Historical sketch of the early days of journalism, especially in England.—A. P.-C.

The South as a Source of Paper.—Sidney D. Wells, Forest Products Lab., Madison, Wis. Paper, xxviii, 22 (July 6, 1921).—Tests carried out at the Forest Products Lab. have shown that various Southern pines, which are not suitable for pulping by either the sulphite or soda processes, could quite readily be treated by the sulphate process. The pulp could be satisfactorily bleached, with a bleach consumption of 18-22% (based on the weight of the pulp), in two steps, with a washing operation after each. (See also *Pulp and Paper*, xviii, 1286, F-5, K-17, Dec. 16, 1920.)—A. P.-C.

A Cost System Necessary to Business.—Edward N. Hurley. American Magazine; Paper, xxviii, 25, 38 (May 4, 1921).—Discussion of the importance of a proper cost system.—A. P.-C.

Manufacture of Coated Paper.—Wm. T. Schenck, Champion

Coated Paper Co., Hamilton, Ohio. Paper, xxviii, 13-14 (July 6, 1921).—Notes on the troubles encountered in the manufacture of coated paper.—A. P.-C.

Bleaching of Sulphite Pulp.—B. M. Petrie, vice-president, Eastern Mfg. Co., Paper, xxviii, 20, 26 (July 6, 1921).—A brief discussion of the influence of cooking acid, the method of cooking, and the washing of the pulp on its bleaching qualities, with a brief description of the method of bleaching and of making bleach liquor.—A. P.-C.

The Manufacture of Sulphite Pulp in Europe.—O. L. Berger, G. D. Jessen Company. Paper, xxviii, 15-16, 30 (July 13, 1921).—General outline of the methods of manufacture of sulphite pulp in Europe, contrasting American and European practice.—A. P.-C.

Relation of Business Statistics to Management Control.—Stephen Gilman, International Accountants' Society, Inc. Paper, xxviii, 14-15, 42, (May 11, 1921).—Data regarding departmental expenses and departmental results considered together furnish the executive an effective instrument of control; but one without the other is almost worse than useless.—A. P.-C.

Paper Manufacture in Poland.—Paper, xxviii, 12, 42 (May 11, 1921).—Exposition of the status of the pulp and paper industry in Poland before the war.—A. P.-C.

Notes on the Properties of Antimonial Lead.—Louis J. Gurevich and Jane S. Hromatko. Chem. Met. Eng., xxv, 62-63 (July 13, 1921).—In an investigation into the effects of small amounts of antimony on the physical properties of lead, the following conclusions were arrived at: melting point determinations are too indefinite to be used as a basis for calculating the composition of the lead-antimony alloys; the addition of antimony increases the hardness of the alloy; the maximum tensile strength of the lead-antimony alloy is reached with an alloy containing 10% antimony; the alloy containing 4.5% antimony gives the greatest reduction in area and is the most ductile.—A. P.-C.

Provisions of the Fordney Tariff Bill with Respect to Paper and Timber Products.—Pulp and Paper, xix, 709-712 (July 7, 1921).—Text of the provisions of the Fordney Tariff Bill (introduced in the U. S. House of Representatives on June 29, 1921) with respect to paper and paper products and wood and the manufactures thereof.—A. P.-C.

Boiler Feed Water Purification.—S. P. Applebaum, assistant technical manager, Permutit Co., New York City. Chem. Met. Eng., xxv, 23-26 (July 6, 1921).—Outline of the respective merits of the various methods used for boiler feed water treatment (boiler compound, lime and soda ash precipitation, and artificial zeolite), with special reference to the advantages of the zeolite water-softening process.—A. P.-C.

By-Products of Forest Industries.—Ch. Groud. Paper, xxiv, 250-253 (June, 1921).—Dead leaves have been shown to be suitable for the manufacture of paper; but this is practical only where they can be gathered mechanically. The process of preparation of "vegetable wool" from pine needles is described. It yields as by-products a water suitable for medicinal baths, an essential oil recommended in the treatment of rheumatism, gout, and indurations, a resinous soap, and a viscous, gelatinous, very bitter and very aromatic residue suitable for the manufacture of green soap. When heated this latter product yields a diuretic or sudorific. It can also give a highly-prized carbon black. It is suggested that the residues from the preparation of chestnut and quebracho extracts be used for papermaking.—A. P.-C.

A Study in the Preservation of Pulp and Pulpwood.—Paper, xxviii, 20-23 (July 20, 1921); Pulp and Paper, xix, 781-784 (July 28, 1921).—Preliminary report on an investigation carried out by the Forest Products Laboratory, Madison, Wis., in co-



Every user of Liquid Chlorine will be interested to learn of the development of the

Mathieson
Multiple-Unit Chlorine Tank Car

(Patents Pending)

*A Safe and More Economical
Method of Shipping Liquid Chlorine*

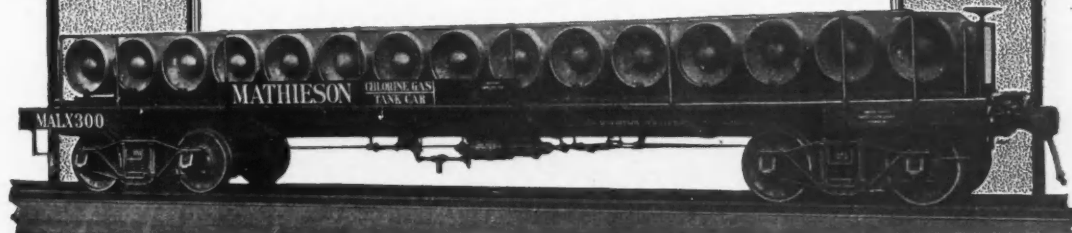
This new idea consists of a specially designed car carrying 15 one-ton individual containers.

Individual tanks are convenient and safe to load, ship, handle and store, and deliver the full quantity of liquid purchased. Constructed of seamless forge-welded steel, pressure tested to 500 lbs. per square inch, which comply with Interstate Commerce Commission specifications.

The entire metal of each container is available for inspection at all times. Individual units cleaned and inspected before each charging.

It is the New and Practical Way to Buy and Ship Liquid Chlorine in Bulk Quantities.

We'll gladly send detailed information to those interested.



THE MATHIESON ALKALI WORKS, (Inc.)

25 West 43d Street, New York, N. Y.
Chicago, Ill. Philadelphia, Pa. Providence, R. I.
Charlotte, N. C.

Works:
Saltville, Virginia Niagara Falls, N. Y.

operation with the Bureau of Plant Industry of the U. S. Department of Agriculture and a group of pulp and paper mills, the main purpose of which were improvement of wood storage practice and preservation of stored pulp. Prevention of decay and molding in stored pulp has been attempted by adding antiseptics to the pulp as it goes over the wet machine, or by adding the chemicals to the laps after removing from the wet machines. In selecting a suitable preservative, the following points must be taken into consideration: effectiveness as an antiseptic, poisonous properties, objectionable chemical discoloration, objectionable odors affecting the workmen, solubility in cold water, and cheapness. Judging from the antiseptic efficiency and freedom from other objectionable features sodium fluoride appears to have given the best results of those preservatives reported on. Borax follows a close second. Boric acid is equal or somewhat superior to borax; but its greater cost throws it out of competition. Sodium dinitrophenolate in 0.125% solution appears very promising, with an antiseptic efficiency equal to anything tried, but the yellowish chemical discoloration of the pulp may prove objectionable for some purposes. But this readily washes out though it leaves the pulp somewhat browner than normal. Sodium bichromate appears to be less favorable than the four above-mentioned substances as the antiseptic efficiency varied rather too widely in the tests and the tendency towards browning and possible softening of the pulp is rather marked, particularly in concentrations of 2% and over. Sodium carbonate and bicarbonate, while quite efficient in 5% solution, brown and soften the pulp too seriously for commercial use. Actual mill tests should be made on each of the above preservatives, applying them at the press roll wherever possible in higher concentrations than formerly so as to reduce losses in the white water.—A. P.-C.

Decay of Pulpwood and Its Effect in the Soda Process.—E. Sutermeister. *Pulp and Paper*, xix, 733, 736 (July 14, 1921).—Detailed description of small scale cooks carried out to ascertain the effect of decay on the yield of fiber and its properties. Six samples of poplar were tested, each being as nearly as possible representative of certain characteristic conditions: green wood, new sound wood, sound wood from storage (2 samples), wood from a tree which had died and become punky while standing, and the rottenest specimen which could be found in the storage pile. Four samples of birch were tested, representing: (1) green wood, (2) perfectly sound wood, (3) an intermediate grade in which decay appeared very general but which was not so punky as (4) which was the rottenest grade available. A cook was also made (under standard cooking conditions) upon a mixture of chips containing 85% sound wood and 15% of the rottenest grade, to determine, if possible, how much harm a small amount of rotten wood would do when cooked with a much larger amount of sound wood. The following results were obtained in these tests: Decay in pulpwood decreases the weight per cubic foot out of all proportion to the shrinkage in volume. Decayed wood gives a much lower yield of pulp by the soda process than does sound wood. The fiber from decayed wood is difficult or impossible to bleach to a satisfactory color. Decay so affects the fibers that they disintegrate very rapidly when beaten. The cost of fiber is increased about 45 to 80 cents per ton by each per cent of thoroughly rotten wood entering the digester.—A. P.-C.

The Manufacture of Esparto Pulp in France.—L. Colas. *Monit. Papeterie Francaise*, lii, 391-395 (July 1, 1921); *Papier*, xxiv, 293-296 (July, 1921).—An analysis of conditions in France which prevented the development of a large esparto industry before the war, and of the conditions which now permit of

the manufacture of esparto pulp which will be able to compete with imported chemical pulps.—A. P.-C.

The Testing of Woodpulp Shipments for Air-Dry Content.—The Emerson Laboratory, Springfield, Mass. *Pulp and Paper*, xix, 757-760 (July 21, 1921).—Suggestions submitted for consideration to the T. A. P. P. I. on the gross weight of shipment; determination of moisture content of the shipment; procedure in case of a discrepancy; procedure in the case of reweighing baled pulp, roll pulp, hydraulic pressed laps, and unpressed laps; procedure for the taking of samples of baled sheet pulp (domestic or foreign), roll pulp (disc method, strip method), hydraulic pressed lap pulp (strip method, wedge method), unpressed lap pulp; procedure for handling of pulp samples after cutting them; and calculation of the air-dry content of a pulp shipment; together with an outline of the considerations involved. (See also *Pulp and Paper*, xix, 550-560, May 26, 1921).—A. P.-C.

PUMPS AND PUMPING MACHINERY

(Continued from page 52)

where the oil is constantly circulated the lubricating qualities are gradually dissipated from the oil and for this reason it should be renewed at regular intervals which are best determined by the operator watching the bearings to note the length of time which a filling of oil will give good service.

With pumps operating at constant speed and with regular running period and oil of one grade it will be found that the proper periods for refilling the oil reservoirs will be quite regular.

(3) Misalignment at coupling of direct connected units, due to the pump and driving unit not being properly lined with relation to each other Flexible couplings should always be used when possible, as they permit of the slight end play and independent rotative and lateral balance of the pump and its driving unit but they are not intended to overcome the troubles due to misalignment of the unit and they will not do so in a satisfactory manner.

The only remedy for this trouble is to loosen up either the pump or the driving unit from the sub-base and re-align carefully with the other member of the unit. Where the two halves of the coupling are of the same diameter with flanges machined straight across these may be used for lining up and leveling.

(4) Side thrust due to belt strains. These may be caused by the position of the driver and driven pulleys as in cases where the belt is in a nearly vertical position, this requires an abnormal belt tension in order to secure sufficient tractive effort in the pulleys for driving purposes.

Such belt drives will never operate satisfactorily, and all belt drives should be arranged as nearly in a horizontal position as the circumstances will permit.

Another cause of this difficulty is the use of pulleys and belts which are not of sufficient contact area to carry the load without excessive tension. This can only be overcome by providing pulleys of ample size and belts of generous width to insure their being well within safe limit for the maximum power to be transmitted. Freedom from bearing trouble as well as reducing belt slippage and frequent taking up due to stretching and lacing troubles are the result of providing pulleys and belts of ample size and easy leads between the pulleys.

(5) Overspeeding the pump beyond the safe limit for which it was designed. This practice will sometimes result in operating a pump at or near the critical speed, at which point it is dangerous to run for any length of time.

Whenever a material speed increase for a pump is contemplated it is advised that the proposed operating conditions be referred to the manufacturer of the pump with request for advice regarding the matter.

(THE END)

Nilsen, Rantoul & Co., Inc.

140 Nassau Street

New York, N. Y.

*Exclusive Representatives
Canada and*



*in the United States,
Mexico for*

Diesen Wood Company

Wiborg,

Finland

MANUFACTURERS OF

Superior Quality Easy Bleaching and Bleached Sulphate Pulps

Stocks Carried at Baltimore and Boston for Immediate Delivery

Write for Samples and Further Information

2



WOOD PULP

GROUND WOOD

for prompt delivery in the Western Market

WE ARE SELLING AGENTS FOR FORT WILLIAM AND GULF

Send us your inquiries

THE MEAD SALES CO.

30 N. La Salle St.
Chicago, Ill.

PULP DEPT.

Callahan Bank Bldg.
Dayton, Ohio.



Recent Incorporations

PYRAMID PAPER PRODUCTS, Brooklyn, New York. Capital, \$10,000. Incorporators, D. Phillips, B. Rous, E. Stein. (Attorney, A. S. Goldberg, 1480 Broadway.)

KNIGHT BROTHERS PAPER COMPANY, Jacksonville, Illinois. Capital stock, \$10,000. J. W. Knight, president; Clayton Carmichael, vice-president; H. T. Knight, secretary-treasurer.

Orvar Hylin Returns From Europe

Orvar Hylin, vice president of the Lagerloef Trading Company, Inc., New York City, the sole representative in the U. S. A. for the Finnish Cellulose Association and Finnish Wood Pulp Union, outlined the present status of the European Paper Trade to a representative of the PAPER TRADE JOURNAL upon his return last week from an extended trip to Europe, comprising Finland, Sweden, Germany, France and England.

Mr. Hylin stated that the Finnish paper industry had experienced a fairly good year in contrast with the somewhat less fortunate situation of this industry in other European countries. The pulp mills in Finland ran steadily throughout the entire period of depression and are now, in most instances, operating at capacity. Stocks of pulp are low, so that an active hand-to-mouth buying is indulged in. In paper lines, the situation is very similar to that obtaining in the pulp field. Business is fair and although profits are small, the industry has been able to show a good result at the end of the year.

Finland is fortunate to have an abundant supply of wood, even to the extent of being in a position to use wood for fuel and in this manner keep down the cost of operation in not having to pay the excessive prices for coal which existed throughout the year 1921. It is believed, however, that as soon as the prices for coal come down to a reasonable level, a great part of the industry will again begin using coal for fuel. Finland is nearly self-supporting; in fact, grain is her only importation of consequence. The abundance of dairy products for home consumption and export assist in stabilizing her economic situation as does her large export of wood products of all kinds, such as lumber and its manufactures, paper and pulp. The luxury taxes and import duties levied on non-essentials have also contributed to make Finland live within her means.

The figures of the balance of trade for the year 1921 are very interesting as compared with those of previous years. The excess of imports over exports for 1921 was Fmk. 197,300,000 or approximately \$4,000,000 in round numbers—for 1920, the excess was Fmk. 700,100,000 or \$14,000,000 and for 1919 it was Fmk. 1,629,500,000 or \$32,600,000. These figures show plainly that Finland is rapidly getting her balance of trade where it ought to be. Moreover, an interesting feature of the Finnish situation is that this country is now practically living within her own resources, which is only true of two other European countries—i. e., Great Britain and Czecho-Slovakia.

Thus far, at least, labor troubles in Finland have been conspicuous by their absence and should not be a cause for great concern for some little time to come.

The Port of Hango on the southwestern extremity of Finland is always kept open, in case of need, by ice-breakers to permit water transportation all the year around. The exception to this came last month, when the port was temporarily closed by great quantities of pack-ice piling up outside of the harbor. It has remained closed up to date, but it is hoped that it may be opened up at any time now. A remarkable fact is that the ferry service between Sweden and Germany has also had frequent interruptions on account of ice conditions—something that has not happened for a great many years. In fact, it is said that the present is the coldest winter that has been experienced in Northern Europe for sixty years.

General conditions in Sweden are less satisfactory, with no immediate prospects for a radical betterment. Labor costs and the high rate of exchange for the Swedish Kronor are playing havoc with general industry. The iron and steel industries in particular have felt the hard times and have practically dropped out of the running for the time being. While the paper and pulp industry is somewhat better off, it is feeling the pinch of depression, although an improvement is looked for in the near future. The Swedish pulp mills, rather than pile up large stocks at high cost of production, are only running sufficiently to take care of the demand and, therefore, stocks on hand are reported to be quite low.

Industry in England and France is starting to retrieve its lost ground. Plants are busier and the demand is picking up. The situation in England is possibly a little worse than in France, due largely to the system in vogue there of compensating idle labor. Popular opinion is turning against this strongly since the unemployed, compensated to nearly as large an extent as the workers themselves, are perfectly content to loaf and permit others to work out the salvation of England's crippled industry.

The finances of the English government are in pretty good shape, but the status of private industry is not quite so fortunate. The reverse is true in France, where private industry is climbing to its feet with alacrity. In England there is much idleness and in France almost none at all.

IMPROVEMENT IN PHILADELPHIA

(Continued from page 26)

tion with it in 1911, he associated himself with Lindsay Brothers, taking charge of the flat and writing department, but only remaining for a year, at the end of which time he went to New York and entered the paper business there. Upon his return to the city he became connected with the cardboard department of the D. L. Ward Company and subsequently became floor manager, continuing as such until the close of 1919 when he became a salesman for the States Paper Company, 7th and Arch streets. When the Ward Company absorbed the States Company, Mr. Fritz resumed his old position as floor manager, remaining as such until the present time.

Raymond Mulhern for four or five years with the Ward organization in the fine paper department has joined the sales organization of E. Latimer, Jr., 126 No. 4th street and Walter Gerhab for an equal period in the Ward fine paper division has transferred his activities to the Monarch Envelope Company.

General News of Philadelphia Trade

The fine paper division of the Philadelphia Paper Trade Association met on Thursday last, Norbert A. Considine, president of the Paper House of Pennsylvania presiding over its deliberations.

Joseph A. Borden, who is devoting all his time to the prosecution of the American Writing Paper Company's printed salesmanship booklet campaign visited the city on Friday of last week, but said that his trip was for social rather than business purposes. Mr. Borden came on from a trip to Providence where the night before the co-operation of that city in the campaign had been pledged, bringing the aggregate now to 22 cities and centers, which through the systematic distribution of the company's series of 12 booklets addressed to printers and an equal number addressed to large consumers, is endeavoring directly to stimulate consumption of printing and indirectly of fine paper.

Leon Beck of the Beck Paper Company, one of the five Philadelphia distributors of the Strathmore papers, returned during the week from a trip to its mill in Maine where there was held a convention of the Mill and Merchants' Association affiliated with the Strathmore Company and of which he is president. The Beck Company is extending its publicity and sales promotion department and to that end has employed Louis K. Shinn as assistant to manager H. S. LeDuc.

**HAMMERMILL
BOND**


**HAMMERMILL
COVER** **HAMMERMILL
LEDGER**

**HAMMERMILL
SAFETY**

HAMMERMILL PAPER CO.
ERIE, PENNSYLVANIA

EASTERN OFFICE 291 BROADWAY NEW YORK CITY

“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

Trade Marks Department

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

The following are trade-mark applications pertinent to paper and pulp filed 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.

ETAMINE—No. 157,785. Whiting Paper Company, Holyoke, Mass. For writing papers and mailing envelopes.

ONE THOUSAND within circle on representation of a seal—No. 157,594. S. Walter, Inc., Philadelphia. For toilet paper.

HIAWATHA PRODUCTS above profile of an Indian—No. 148,275. Hamilton Card and Paper House, Inc., New York. For paper and parchment mailing or correspondence envelopes, statements, bill heads, bond paper, typewriter paper onionskin paper, index cards and filing folders.

A Letter from the Typothetae

CHICAGO, February 26, 1922.

Editor, PAPER TRADE JOURNAL:

My attention has been called to an editorial headed "The Net Price List," which appeared in your issue of February 16.

In the last paragraph you make the following statement:

"The paper trade wants to be fair in this matter and only recently the secretary of the National Paper Trade Association addressed an invitation to the chairman of the Long Price List Committee of the United Typothetae of America for a conference on this matter. This invitation, however, was not accepted."

In the interest of truth may I ask that in the next issue of your publication you correct the error made in this statement?

The fact is that the National Paper Trade Association did not invite the United Typothetae of America to confer on the question of the long price list.

On January 10 the United Typothetae of America received a letter from Wm. C. Ridgway, secretary of the National Paper Trade Association of the United States in which letter appeared the following:

"Some of the paper merchants, as well as printers, have expressed a desire for a conference between accredited representatives from our respective associations, to which delegates, merchants and printers outside our associations might be invited, at which this

question of protection, exclusive of a long price list as a method to obtain that protection, and any other affecting our mutual interest and relations might be fully discussed and considered."

You will observe that the National Paper Trade Association proposed a conference at which conference is was expressly stated that the long price list would not be a subject for discussion. In other words it was proposed that the United Typothetae of America should confer with the National Paper Trade Association but that the long price list would not be considered in such conference.

You must realize that only one reply could possibly be given to such a proposal. This reply was sent by Mr. Parshall, chairman of the Retail Price List Committee of the United Typothetae of America, under date of January 20, and read as follows:

"The Executive Council of the U. T. A. wish me to advise you that we cannot accept your invitation to a conference on the basis proposed.

"Yours very truly,

"J. LINTON ENGLE."

S. Y. Beach Paper Co. to Resume

SEYMOUR, Conn., March 1, 1922.—The old S. Y. Beach paper mill is in the hands of a new corporation that plans to resume work in the spring. Even the old dam, gone to rack and ruin these many months, is to be rebuilt, the low rambling brick mill will be guarded against encroachments of the weather, and the whole place will hum with activity just as soon as possible.

Officers of the new company which will run the mill are Sharon Beach, president; H. J. Farren, vice-president; Ralph Beach, secretary, and Fred Aal, treasurer. Directors will be, in addition to these officers, Edward S. Swift of New Haven, and J. F. and Walter Cochran of the Durham Paper Company. The concern still will be known as the S. Y. Beach Paper Company.

Nekoosa-Edwards Co. Elects New Directors

Two new directors have been elected by the Nekoosa-Edwards Paper Company. They are L. M. Hanks of Madison and George W. Kibby of Chicago.

Mr. Hanks is president of First National bank of Madison and a son-in-law of the late Senator Vilas, an early stockholder in the Nekoosa-Edwards Company. Mr. Kibby represents the estate of the late A. W. Patten of Chicago. He is head of Kibby & Co., Chicago, leather goods manufacturers. It is said both men represent large blocks of stock in the company.

EASTERN **EP** **COMPANY**
MANUFACTURING

BLEACHED SULPHITE

ADPAX

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

PAPER

*"It more than Wraps-
It Advertises"*

Based on sound
principles

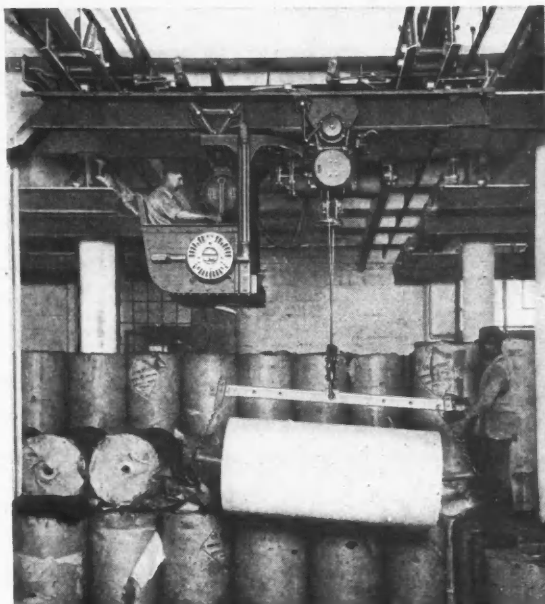
Backed by a sound
sales plan

2

FRED C. STRYPE
320 Broadway, New York

SHEPARD

ELECTRIC CRANES & HOISTS



To all points without change

A "Shepard" picks a load at one extreme of the plant, conveys it to the other, transports it from building to building, and to all points indoors and out, "stopping over" wherever desired.

The necessary equipment for every operation of handling is concentrated in one complete unit—a Shepard Cage Controlled Hoist operated on a Shepard Transfer Crane and suitable monorail track.

The savings in time and labor that "Shepard" makes are a vital factor in lowering production costs.

Shepard Engineers are widely experienced in planning successful handling systems for paper mills. These men can devise the easy, rapid, and economical lifting and conveying method for your mill. Their services are freely extended. There is no obligation in inquiring.

SHEPARD ELECTRIC CRANE & HOIST CO.

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

Branches in Principal Cities.

Member Electric Hoist Manufacturers' Assn.



Economy that endures

Consider the cost of a valve by the service it gives, for it is the valve that gives dependability for the longest time that proves most economical.

A valve to be good and satisfactory under all conditions must be strong enough and made for maximum service, not merely the average—Jenkins Valves are such valves.

Know the genuine by the Jenkins "Diamond" and signature

JENKINS BROS.

New York Boston Philadelphia Chicago
 Montreal London



Jenkins Valves

SINCE 1864

ROGERS WET MACHINE

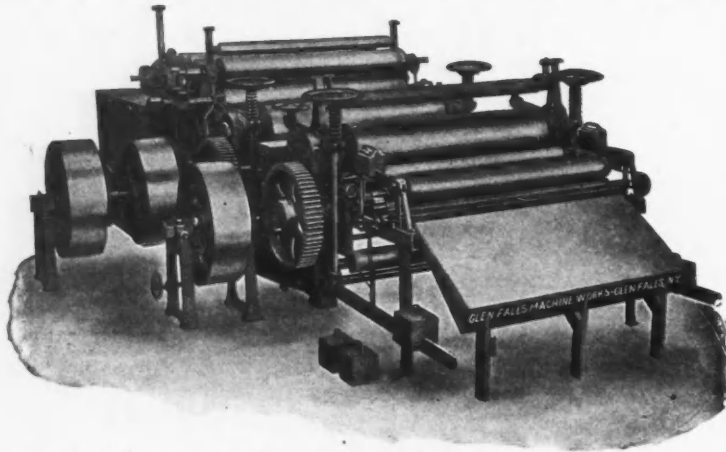


Illustration Shows Rogers Double Press Wet Machine.

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

See our exhibit at the Seventh National Exposition of Chemical Industries, 8th Coast Artillery Armory, New York, Week of September 12th.



Lower run of a Jeffrey Pivoted Bucket Carrier for handling Coal and Ashes in power plants. Write for descriptive Catalog No. 210-W.



A series of Plain Chains, for carrying logs direct to stackers, or diverting to barkers thru openings in side of trough.

JEFFREY

MATERIAL HANDLING MACHINERY

For Pulp and Paper Mill Service

is adapted to all sizes of plants for the handling of Logs, Pulpwood, Pulp Laps, Straw, Bark, Coal and Ashes, etc.

A complete Line of

Conveyors: Wire Cable, Belt, Bucket Apron, Spiral, Chain Scraper and other types.

Bucket Elevators—Chains

Portable Bucket Loaders, Conveyors and Car Unloaders.

Crushers—Pulverizers—Shredders

Electric Industrial Locomotives.

Jeffrey Expert Engineers, with years of experience in solving just such problems as yours are at your service to assist you in the selection of the right kind of Material handling machinery to meet your requirements.

The Jeffrey Mfg. Co., (931 North Fourth St.) Columbus, Ohio

Oversold Its Product

as the result of the insertion of

A ONE-HALF PAGE—ONE TIME

The reproduced letter of The Fitchburg Process Company best tells the story of the result producing power of the Paper Trade Journal. Note what it says:

G. B. WALLACE, JR.

TOM T. BUCK

The Fitchburg Process Company
Fitchburg, Massachusetts

February 16, 1922.

Paper Trade Journal,
10 East 39th St.,
New York.

Mr. A. A. Tanyane

Gentlemen:-

Confirming conversation with Mr. Tanyane this morning, we would appreciate your withdrawing our advertisement in the Paper Trade Journal, which we advised you to insert for four issues. We find that we have received so many inquiries that we are unable to give concerns the proper amount of attention.

We were very much pleased with the response to our advertisement, and congratulate you on having a magazine that so apparently reaches the entire paper making field.

Kindly send to us your bill at your earliest convenience, and oblige,

Very truly yours,

Dictated
G. B. Wallace, Jr/C

THE FITCHBURG PROCESS COMPANY

The PAPER TRADE JOURNAL having a circulation greater than the combined circulations of all its contemporaries, possesses a reader confidence which insures to its advertisers a profitable return on their investment.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, March 1, 1922.

The New York paper market is quiet on the whole although the general trend is toward greater activity as fundamental conditions governing the trade slowly improve and confidence begins to return to manufacturers and consumers. Buying has been anything but brisk for some weeks and the fact that consumers are under-supplying themselves rather than oversupplying shows that the depression has taught well its lesson in economy. Then too, there has not yet been a complete restoration of confidence and money is not easy. Most authorities agree that these conditions will show little improvement until fall so that a very quiet spring and summer may be anticipated. The very strenuous effort now bent in effecting sales indicates keen competition which bids fair to continue until fall at any rate, keeping prices from rising materially in the meantime. Profits during the next months must come from decreased cost of production and not from increased prices. A more perfect standardization than now exists in the paper industry would assist in reconstructing what the late months of disorganization have accomplished. The paper trade associations realize the value of standardization and are doing much to impress its importance upon and spread its doctrines through the trade. The production of all grades of paper in the United States last year was 27 per cent less than in 1920 and 13 per cent less than in 1919 and 1.6 per cent more than in 1914, according to the figures of the American Paper and Pulp Association. The greatly depressed buying power of the public necessitated a lowering of production in accord with all rules of good judgment and common sense. There has been enough of inflation and now the paper interests are striving and striving hard to put the industry upon a sound economic basis where conservative prosperity will rule.

The news print market shows little change, still maintaining its encouraging activity. The expected increase in the volume of advertising is slowly taking place and as an important factor in the news print situation is doing much to strengthen the market. Production of news print for 1921 was 1,226,189 tons; for 1920, 1,511,968 tons; and for 1919, 1,374,517 tons, indicating about as small a fluctuation as could be expected considering the untoward conditions that lately confronted business.

While business is not yet brisk in the book paper market it is generally felt that those concerns that actually exert themselves to find buyers will be rewarded for their efforts and not only will be enabled to stand by during the becalmed period, but will be in an excellent position when active trading again bursts forth as it is most certain to do in the fall of 1922. Little price fluctuation is expected in the book paper market in the next few months except that occasioned by the seasons. Book paper production was 725,992 tons in 1921; 1,104,464 in 1920; and 913,823 in 1919.

The fine paper market is firmer if any change at all may be noted. Production of all grades but the cheap sulphite bonds lags considerably and is not yet back to normal. Only a small fraction of the demand is from those in a position to contract orders for any great period in advance. Most inquiries are for rush orders which are more costly to produce and in the end less satisfactory to buyers than contract delivery would be. The production of fine paper in 1921 was 242,485 tons; in 1920, 389,322 tons; and in 1919, 343,762 tons.

It is still difficult to find any appreciable demand for tissue. Production is slow and the market is quiet generally. Inasmuch as economic factors influencing the market are showing improvement it is felt that the present quietude is wholly temporary. Tissue production in 1921 was 148,142 tons; in 1920, 177,477 tons, and in 1919, 155,400 tons.

Kraft is still holding its position of strength. Producers find little difficulty in marketing their product and some of the larger

mills have their production sold out for a month to six weeks in advance at the present time, in marked contrast to the condition obtaining in the other markets. Most mills have set their price for No. 1 domestic at 7.50 cents a pound although two mills of prominence quote the same at 7.00 cents a pound. The production of wrapping paper in 1921 was 782,468 tons; in 1920, 1,043,812 tons; and in 1919, 869,631 tons.

The board market rivals the tissue market successfully in dullness. The fact that the trade is not well supplied holds out some assurance of more activity in the near future. Production is light with some plants operating on part time. Production of board for 1921 was 1,664,931 tons; for 1920, 2,313,449 tons; and for 1919, 1,950,037 tons.

Mechanical Pulp

The mechanical pulp market is depressed. Buying is almost wholly of the hand to mouth variety. Consumers realize that it would be greatly to their advantage to contract for their pulp but the general feeling tone has not yet developed sufficiently to create much confidence. Prices have been holding steady and are scheduled for little change in the next few weeks.

Chemical Pulp

The chemical pulp market is not active although still holding its own. Foreign pulp is still an important influence in the market although a school of the more optimistic believe that its competition will not tend to keep prices long at the low figures now quoted. Heavy freight charges add greatly to the cost of the pulps and interfere considerably with the movement of large quantities. Less German pulp is in the market than for some time much to the improvement of the general feeling.

Old Rope and Bagging

There has been a slight improvement in the old rope and bagging market although its movement is not normal as yet. The paper mills are taking more old rope and bagging and the demand from them promises to increase, since confidence is slowly returning to buyers. A good volume of inquiries is received and a fair volume of business transacted.

Waste Paper

The waste paper market reveals a fairly firm tone in spite of more or less concerted efforts on the part of buyers to obtain lower quotations. The mills are taking somewhat larger lots, although the demand is still restricted. It is felt that prices will go no lower since those at present quoted just barely cover costs of collection and packing. A considerable amount of over-issue news is going to Asia at the present time with the result that, while the demand here is subnormal, the supply also is negligible.

Rags

The rag market shows little activity. Buyers have not yet brought much pressure to bear on the market even to sound out the price situation, and although the present condition gives little cause for optimism the actual betterment in fundamental economic conditions should soon be felt. Prices show a tendency to fluctuate and to rise for the most part.

Twine

A slight improvement is noticeable in the twine market where sales are on the increase. Prices are firm and unchanging for the most part.

Riverside Paper Mfg. Co. Elects Officers

GLASTONBURY, Conn., February 27, 1922.—At the annual meeting of the stockholders of Riverside Paper Manufacturing Company the following board of directors was elected: A. B. Goodrich, C. E. Goodrich, Henry H. Hunt, Carl F. Dean, R. A. Hardin. At a meeting of the directors immediately following, A. B. Goodrich was elected president and R. A. Hardin secretary.

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations February 28, 1922:

STOCKS	BID.	ASKED.
American Writing Paper Company, pref.	25 1/2	49 1/4
International Paper Company, com.	48 3/4	49 1/4
International Paper Company, pref., stamped.	67	67 1/2
Union Bag & Paper Corporation.	64	67

Because of the unusual conditions prevailing in the various markets quotations are more or less nominal.

Paper	Domestic Rags
F. o. b. Mill.	New
Ledgers.....10.50 @ 30.00	Prices to Mill, f. o. b. N. Y.
Bonds.....9.00 @ 55.00	Shirt Cuttings—
Writings—	New White, No. 1. 9.75 @ 10.00
Extra Superfine... 14 @ 25	New White, No. 2. 6.00 @ 6.50
Superfine..... 13 @ 20	Silecias, No. 1. 6.00 @ 6.50
Tub Sized..... 10 @ 16	New Unbleached. 8.75 @ 9.50
Engine Sized..... 9.00 @ 15.00	Washables..... 3.25 @ 3.75
News—f. o. b. Mill—	Fancy..... 4.50 @ 5.00
Rolls, contract... 3.50 @ —	Cottons—according
Rolls, transit... 3.75 @ 4.00	to Grades—
Sheets..... 4.00 @ 4.50	Blue Overall..... 5.75 @ 6.00
Side Runs..... 3.25 @ 3.50	New Blue..... 4.00 @ 4.50
Book, Cased—f. o. b. N. Y.—	New Black Soft. 3.25 @ 3.50
S. & S. C..... 6.70 @ 7.50	New Light Sec.
M. F..... 6.45 @ 7.25	onds..... 2.75 @ 3.00
Coated and En-	O. D. Khaki Cut-
amel..... 8.00 @ 10.00	tings..... 3.25 @ 3.50
Lithograph..... 8.00 @ 10.00	Carduroy..... 2.25 @ 2.40
Tissues—f. o. b. N. Y.—	New Canvas..... 6.00 @ 6.50
White, No. 1..... .75 @ .80	New Black Mixed 2.75 @ 3.25
Colored..... 1.00 @ 2.00	Old
Anti-Tarnish... .82 1/2 @ .85	White, No. 1—
Silver Tissue... 1.50 @ 2.70	Repacked..... 5.75 @ 6.25
Manila..... .75 @ .80	Miscellaneous... 4.50 @ 4.75
Kraft—f. o. b. Mill—	White No. 2—
No. 1 Domestic... 7.00 @ 7.50	Repacked..... 3.00 @ 3.25
No. 2 Domestic... 5.75 @ 6.50	Miscellaneous... 2.25 @ 2.50
Imported..... 6.00 @ 6.50	St. Soiled White... 1.50 @ 1.65
Screenings..... 2.50 @ 3.50	Thirds and Blues—
Manila—	Repacked..... 1.50 @ 1.75
No. 1 Jute..... 8.50 @ 9.00	Miscellaneous... 1.10 @ 1.25
No. 2 Jute..... 7.75 @ 8.50	Black stockings. 2.25 @ 2.50
No. 1 Wood..... 5.00 @ 6.00	Cloth Strippings. 1.05 @ 1.15
No. 2 Wood..... 4.25 @ 4.75	No. 1..... 1.10 @ 1.15
Butchers..... 4.25 @ 4.75	No. 2..... .95 @ 1.05
Fiber Papers—	No. 3..... .70 @ .80
No. 1 Fiber..... 6.00 @ 6.25	No. 4..... .70 @ .80
No. 2 Fiber..... 3.25 @ 5.50	No. 5A..... .90 @ 1.00
Common Bogus... 1.75 @ 2.25	Foreign Rags
Card Middles... 4.00 @ 5.00	New Light Silecias 6.00 nominal
Boards—per ton—	Light Flannelettes. 6.75 nominal
News..... 40.00 @ 45.00	Unbleached Cottons. 7.50 nominal
Straw..... 40.00 @ 45.00	New White Cut-
Chip..... 37.50 @ 40.00	tings..... 9.50 nominal
Binders' Board... 70.00 @ 75.00	New Light Oxforas 6.00 nominal
Spl. Mia. Ll. Chip. 60.00 @ 65.00	New Light Prints. 4.50 nominal
Wood Pulp..... 75.00 @ 90.00	New Mixed Cut-
Container..... 65.00 @ 70.00	tings..... nominal
Wax Paper—	New Dark Cuttings. 1.90 @ 2.10
Self Sealing White	No. 1 White Linens 9.50 @ 11.00
28 and 30 lb.	No. 2 White Linens 6.50 nominal
basis..... 11.00 @ 12.75	No. 3 White Linens 5.00 nominal
Waxed Tissue... 1.40 @ 1.50	No. 4 White Linens 3.50 nominal
Glassine—	Old Extra Light
Bleached, basis 25... .14 @	Prints..... 2.25 nominal
Bleached, basis 20... .16 @	Ord. Light Prints.. 1.75 nominal
Mechanical Pulp	Med. Light Prints. 1.50 nominal
(Ex-Dock)	Dutch Blue Cottons 2.10 nominal
No. 1 Imported... 34.00 @ 36.00	German Blue Cot-
F. o. b. Pulp Mills.)	tons..... 1.65 nominal
No. 1 Domestic... 29.00 @ 31.00	Ger. Blue Linens.. 3.50 nominal
Chemical Pulp	Checks and Blues.. 1.50 nominal
(Ex-Dock, Atlantic Ports.)	Dark Cottons..... 1.10 nominal
Sulphite (Imported)—	Shoppery..... .95 @ 1.00
Bleached..... 4.25 @ 5.00	French Blues..... 2.00 nominal
Easy Bleaching... 3.00 @ 3.25	Bagging
No. 1 Strong un-	Prices to Mill f. o. b. N. Y.
bleached..... 2.75 @ 3.00	Gunny No. 1—
No. 2 Strong un-	Foreign..... .75 @ .80
bleached..... 2.50 @ 2.75	Domestic..... .65 @ .75
No. 1 Kraft..... 2.75 @ 3.00	Wool, Tares, light. 1.20 @ 1.40
Sulphate—	Wool, Tares, heavy 1.20 @ 1.40
Bleached..... 4.00 @ 4.50	Right Raging... 1.20 @ 1.30
(F. o. b. Pulp Mill.)	No. 1 Scrap..... .75 @ .85
Sulphite (Domestic)—	Sound Bagging... .75 @ .85
Bleached..... 4.50 @ 5.00	Manila Rope—
Strong unbleachd.. 2.50 @ 3.00	Foreign..... 4.50 @ 4.75
Easy Bleaching	Domestic..... 4.75 @ 5.00
Sulphite..... 2.75 @ 3.50	New Bu Cut..... 2.00 @ 2.15
News Sulphite... 2.50 @ 3.00	Hessian Jute Threads—
Mitscherlich... 3.25 @ 3.75	Foreign..... 4.25 @ 4.50
Kraft (Domestic) 2.50 @ 3.00	Domestic..... 4.00 @ 4.25
Soda bleached..... 4.00 @ 4.25	Mixed Strings... .90 @ 1.00

India, No. 6 basis—	17 @ 18
Light.....	17 @ 18
Dark.....	38 @ 40
B. C. 18 Basis....	50 @ 60
A. B. Italian, 18	25 @ 26
Basis.....	26 @ 28
Finished Jute—	
Light, 18 basis..	
Dark, 18 basis..	
Jute Wrapping, 3-6	
Fly.....	
No. 1.....	22 @ 23
No. 2.....	30 @ 31
Tube Rope—	
4-ply and larger.	14 @ 16
Fine Tube Yarn—	
3-ply and larger.	18 @ 20
4-ply.....	19 @ 21
3-ply.....	20 @ 22
Unfinished India—	
Basis.....	15 @ 16
Paper Makers Twine	
Balls.....	12 @ 14
Box Twine, 2-3 ply	16 @ 17
Jute Rope.....	12 @ 14
Amer. Hemp, 6....	32 @ 34
Sisal Hay Rope—	
No. 1 Basis.....	14 @ 16
No. 2 Basis.....	12 @ 14
Sisal Lath Yarn—	
No. 1.....	13 @ 14
No. 2.....	10 @ 12
Manila Rope.....	17 @ 18

Old Waste Papers	
(F. o. b. New York)	
Shavings—	
Hard White, No. 1	4.00 @ 4.25
Hard White, No. 2	3.25 @ 3.50
Soft White No. 1	3.20 @ 3.30
Flat Stock—	
Stitchless.....	1.50 @ 1.60
Over Issue Mag.	1.50 @ 1.60
Solid Flat Book..	1.40 @ 1.50
Crumpled No. 1..	1.05 @ 1.15
Solid Book Ledger.	2.00 @ 2.25
Ledger Stock.....	1.75 @ 1.85
No. 1 White News	1.75 @ 1.85
New B. B. Chips	.47 1/2 @ .52 1/2
Manilas—	
New Env. Cut... 2	.40 @ 3.15
New Cut No. 1..	1.60 @ 2.00
Extra No. 1, Old	1.60 @ 1.70
Print.....	.90 @ 1.00
Container Board..	.60 @ .70
Bogus Wrapper... .60 @ .65	
Old Krafts, machine compressed	
Bales.....	1.85 @ 2.00
News—	
Strictly Overissue	.80 @ .85
Strictly Folded..	.55 @ .65
No. 1 Mixed Paper	.50 @ .55
Common Paper... .35 @ .40	

CHICAGO

Paper	
F. o. b. Mill.	
All Rag Bond....	35 @ 40
No. 1 Rag Bond..	30 @ 35
No. 2 Rag Bond..	18 @ 20
Water Marked Sul-	
phite.....	10 @ 14
Sulphite Bond....	9 @ 12
Sulphite Ledger..	12 @ 13
Superfine Writing	19 @ 25
No. 1 Fine Writing	15 @ 23
No. 2 Fine Writing	13 @ 21
No. 3 Fine Writing	9 @ 13
No. 1 M. F. Book.	6 1/2 @ 7
No. 1 S. & S. C.	
Book.....	6 1/4 @ 7 1/4
Coated Book.....	8 1/4 @ 10 1/4
Coated Label.....	8 1/4 @ 10 1/4
News—Rolls, mill.	3 1/2 @ 4 1/2
News—Sheets, mill	3 1/4 @ 4 1/4
No. 1 Manila.....	5 1/4 @ 6 1/4
No. 1 Fiber.....	5 1/2 @ —
No. 2 Manila.....	5 @ —
Butchers' Manila	4 1/4 @ —
No. 1 Kraft.....	7 1/4 @ —
No. 2 Kraft.....	6 1/4 @ —
Wood Tag Boards	5 @ —
Screenings.....	3 @ —
Boards, per ton—	
Plain Chip.....	35.00 @ 40.00
Solid News.....	40.00 @ 45.00
Manila Lined	
Chip.....	47.50 @ 55.00
Container Line—	
85 Test.....	60.00 @ 65.00
100 Test.....	65.00 @ 70.00

Old Papers	
Binders' Board... 80.00 @ 90.00	
Solid Wood Pulp. 80.00 @ 90.00	
Straw Board..... 35.00 @ 40.00	
Filled Pulp Board. 60.00 @ 65.00	
Shavings—	
No. 1 Hard White	3.00 @ 3.25
No. 1 Soft Shaw.	2.50 @ 2.75
No. 1 Mixed.....	1.00 @ 1.10
No. 2 Mixed.....	1.00 @ 1.10
White Envel. Cut-	
tings.....	3.25 @ 3.50
Ledgers and Writ-	
ings.....	1.50 @ 1.75
Solid Books.....	1.25 @ 1.50
No. 1 Books, light.	.90 @ 1.00
Blanks.....	1.65 @ 1.75
Ex. No. 1 Manila..	1.90 @ 2.00
Manila Envelope	
Cuttings.....	2.00 @ 2.25
No. 1 Manilas... 1.20 @ 1.30	
Folders News (over	
issue).....	.85 @ .90
Old Newspaper... .80 @ .85	
Mixed Papers.... .70 @ .75	
Straw Clippings.. .70 @ .75	
Binders Clippings.	.70 @ .75
Kraft.....	1.75 @ 2.00
New Kraft Cuts... 2.00 @ 2.25	
Roofing Stock, f.o.b.	
Chicago, Net	
Cash—	
No. 1.....	27.00 @ —
No. 2.....	25.00 @ —
No. 3.....	23.00 @ —
No. 4.....	23.00 @ —

PHILADELPHIA

Paper	
FROM OUR REGULAR CORRESPONDENT.]	
Bonds.....	.10 @ .60
Ledgers.....	.15 @ .40
Writings—	
Superfine.....	.15 @ .20
Extra fine.....	.12 @ .22
Fine.....	.20 @ .30
Fine, No. 2.....	.20 @ .25
Fine, No. 3.....	.15 @ .20
Book, M. F.....	.06 @ .09
Book, S. S. & C..	.08 @ .15
Book, Coated....	.08 @ .15
Coated Lithograph.	.10 @ .15
Label.....	.08 @ .15
News.....	.05 @ .07
No. 1 Jute Manila.	.12 @ .13
Manila Sul., No. 1	.08 @ .08 1/2
Manila No. 2.....	.07 1/2 @ .08
No. 2 Kraft.....	— @ .08 1/2
No. 1 Kraft.....	— @ .09 1/2
Common Bogus... .02 1/2 @ .03	
Straw Board.....	35.00 @ 45.00
News Board.....	32.50 @ 35.00
Chip Board.....	27.50 @ 32.00
Wood Pulp Board.	90.00 @ 100.00
(Carload Lots)	
Binder Boards—	
Per ton.....	\$65.00 @ 75.00
Carload lots....	60.00 @ 65.00
Tarred Felts—	
Regular.....	48.00 @ 50.00
Slaters.....	54.00 @ 56.00

Bagging	
F. o. b. Phila.	
Best Tarred, 1-ply	(per roll)..... 1.35 @ 1.50
Best Tarred, 2-ply	(per roll)..... 1.00 @ 1.15
Best Tarred, 3-ply.	1.50 @ 1.65
Gunny No. 1—	
Foreign.....	.90 @ —
Domestic.....	.85 @ —
Manila Rope.....	4.00 @ 4.50
Sisal Rope.....	.75 @ .80
Mixed Rope.....	.75 @ .80
Scrap Burlaps... 1.00 @ 1.25	
ool Tares, heavy.	2.50 @ 2.75
Mixed Strings... .75 @ .80	
No. 1, New Lt... .75 @ .80	
Burlan.....	.75 @ .80
New Burlap Cut-	
tings.....	1.75 @ 2.10
Old Papers	
F. o. b. Phila.	
No. 1 Hard	
White.....	3.50 @ 3.75
No. 2 Hard	
White.....	3.00 @ 3.25
No. 1 Soft White.	3.00 @ 3.25
No. 2 Soft White.	1.75 @ 2.00
No. 1 Mixed.....	1.50 @ 1.75
No. 2 Mixed.....	1.00 @ 1.25

(Continued on page 70)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING FEBRUARY 25, 1922

SUMMARY

News Print.....1,356 rolls, 85 bls.
 Printing Paper.....463 bls., 23 cs., 227 rolls.
 Packing Paper.....1,243 bls.
 Wrapping Paper.....109 rolls.
 Parchment Paper.....29 cs., 5 rolls, 220 bls.
 Weaver Paper.....2,674 rolls.
 Filter Paper.....87 bls., 60 cs.
 Cigarette Paper.....709 cs.
 Tissue Paper.....12 bls., 12 cs.
 Wall Paper.....1,899 rolls, 8 cs., 17 bls.
 Photo Paper.....1 cs.
 Tracing Paper.....34 cs.
 Surface Coated Paper.....167 cs.
 Miscellaneous Paper.....188 bls., 255 rolls, 108 cs.

CIGARETTE PAPER.

American Tobacco Co., Maryland, Bordeaux, 600 cs.
 Liggett & Myers Tobacco Co., Olen, Havre, 20 cs.
 Rose & Frank, by same, 31 cs.
 P. Lorillard, Aldgate, Marseilles, 28 cs.
 British American Tobacco Co., Cedric, Liverpool, 30 cs.

TISSUE PAPER.

Wilkinson Bros. Co., Inc., Cedric, Liverpool, 10 bls.
 Meadows, Wye & Co., by same, 2 bls.
 Meadows, Wye & Co., by same, 12 cs.

PAPER HANGINGS.

A. C. Dodman, Jr., Co., Cedric, Liverpool, 17 bls.
 W. H. S. Lloyd & Co., Maine, London, 35 bls.

WALL PAPER.

R. F. Downing & Co., Maine, London, 31 bls.
 The Prager Co., Seydlitz, Bremen, 187 rolls.
 A. C. Dodman, Jr., Co., Kroonland, Antwerp, 8 cs.
 A. C. Dodman, Jr., Co., Kroonland, Antwerp, 8 bls.
 The Prager Co., by same, 1,681 rolls.
 A. Murphy & Co., Cedric, Liverpool, 9 bls.

PHOTO PAPER.

J. J. Gavin & Co., Cedric, Liverpool, 1 cs.

TRACING CLOTH.

Keuffel & Esser, Cedric, Liverpool, 34 cs.

SURFACE COATED PAPER.

Defender Photo Supply Co., Seydlitz, Bremen, 167 cs.

NEWS PRINT.

Chemical Nat'l Bank, Seydlitz, Bremen, 124 rolls.
 Haring Paper Corp., United States, Copenhagen, 149 rolls.
 E. C. Melby, by same, 130 rolls.
 Guaranty Trust Co., by same, 352 rolls.
 Equitable Trust Co., by same, 85 bls.
 Nat'l Bank of Commerce, Tyrifjord, Kristiania, 86 rolls.
 M. Gottesmann & Co., Schoharie, Hamburg, 323 rolls.
 Hudson Trading Co., Wurttemberg, 192 rolls.

PRINTING PAPER.

C. B. Hewitt & Co., Ottar Jarl, Kristiansand, 20 bls.
 J. F. Noland, by same, 443 bls.
 B. F. Drakenfeld & Co., Cedric, Liverpool, 23 cs.
 Chemical Nat'l Bank, Wurttemberg, Hamburg, 192 rolls.
 Gerhard & Hey, by same, 35 rolls.

PACKING PAPER.

J. L. N. Smythe & Co., Wurttemberg, Hamburg, 97 bls.
 Republic Bag & Paper Co., Schoharie, Hamburg, 403 bls.
 Wilkinson Bros. & Co., by same, 743 bls.

WRAPPING PAPER.

V. Touri, Themistocles, Piraeus, 109 rolls.

PARCHMENT PAPER.

F. C. Stryfe, Kroonland, Antwerp, 26 cs.
 F. C. Stryfe, by same, 5 rolls.
 N. J. Worsted Spinning Co., Hudson, Bremen, 3 cs.
 Republic Bag and Paper Co., Schoharie, Hamburg, 220 bls.

WEAVER PAPER.

Republic Bag and Paper Co., Schoharie, Hamburg, 2,674 rolls.

FILTER PAPER.

H. Reeve Angel & Co., Noordam, Rotterdam, 5 cs.
 A. Giese & Son, Maryland, Bordeaux, 17 bls.
 J. Manheimer, by same, 70 bls.
 E. Fougera & Co., by same, 55 cs.

PAPER.

Wilkinson Bros. & Co., Inc., Schoharie, Hamburg, 10 bls.
 J. B. Harris & Co., Inc., by same, 12 bls.
 J. B. Harris & Co., Inc., by same, 103 rolls.
 Agar Berusson Corp., by same, 108 rolls.
 Agar Berusson Corp., by same, 56 bls.
 A. Murphy & Co., Paris, Havre, 29 cs.
 Judson Freight Forwarding Co., by same, 9 cs.
 Ladenburg, Thalman & Co., Schoharie, Hamburg, 44 rolls.
 Ladenburg, Thalman & Co., by same, 110 bls.
 Keuffel & Esser, Wurttemberg, Hamburg, 70 cs.
 Baer Bros., Hudson, Bremen, 5 cs.
 Globe Shipping Co., by same, 26 cs.
 Richardson Bros., Cedric, Liverpool, 10 cs.
 H. Lindenmeyr & Sons, Maine, London, 11 cs.
 P. C. Zuhlose, Kroonland, Antwerp, 50 cs.
 Guaranty Trust Co., Seydlitz, Bremen, 534 rolls.
 Chemical Nat'l Bank, United States, Copenhagen, 277 rolls.
 Chemical Nat'l Bank, by same, 305 bls.
 Chemical Nat'l Bank, by same, 88 rolls.

RAGS, BAGGING, ETC.

F. P. Gaskeff & Co., Schoharie, Hamburg, 187 bls. rags.
 Salomon Bros. & Co., by same, 55 bls. rags.
 Salomon Bros. & Co., by same, 51 bls. cotton waste.
 M. O'Meara Co., by same, 292 bls. rags.
 Royal Waste Mfg. Co., by same, 65 bls. cotton waste.
 A. Salomon, Inc., by same, 62 bls. rags.
 E. J. Keller Co., Noordam, Rotterdam, 38 bls. paper stock.
 W. Hughes & Co., by same, 112 bls. paper stock.
 Maurice Frank Co., by same, 38 bls. rags.
 Ayres, Lane Co., Siam City, London, 100 bls. cotton waste.
 Albion Trading Co., Cedric, Liverpool, 289 bls. rags.
 Brown Bros. & Co., by same, 78 bls. rags.
 Mutnick Bros., by same, 228 bls. rags.
 B. D. Kaplan, by same, 394 bls. rags.
 R. D. Kaplan, Scythia, Liverpool, 106 bls. rags.
 Mutnick Bros., by same, 222 bls. rags.
 Salomon Bros. & Co., Idaho, Antwerp, 375 bls. rags.

Irving Nat'l Bank, Kroonland, Antwerp, 72 bls. flax waste.
 P. Berlowitz, Maryland, Bordeaux, 134 bls. rags.
 E. J. Keller Co., Schoharie, Hamburg, 40 bls. rag pulp.
 E. J. Keller & Co., Idaho, Antwerp, 315 bls. rags, 60 bls. bagging.
 E. J. Keller Co., United States, Copenhagen, 630 bls. bags.
 E. J. Keller Co., Janus, Brest, 1,040 bls. rags.
 Castle, Gotthel & Overton, Edgehill, Antwerp, 204 bls. bagging.
 The Barrett Co., Nonian, Manchester, 159 bls. rags.
 Stone Bros., Sherwin Co., by same, 104 bls. rags.
 M. O'Meara Co., by same, 112 bls. bagging.
 American Exchange Nat'l Bank, by same, 67 bls. flax waste.
 Arrowhead Mills, Seydlitz, Bremen, 42 bls. rags.
 Guaranty Trust Co., Norfolk Range, Dundee, 40 bls. paper stock.
 J. Spunt & Co., Bones Castle, Shanghai, 307 bls. cotton waste.
 F. W. Frost & Co., by same, 357 bls. cotton waste.
 American Wood Pulp Corp., United States, Copenhagen, 630 bls. rags.
 H. J. Reed, Janus, Brest, 1,432 bls. rags.
 Chase Nat'l Bank, Wurttemberg, Hamburg, 42 bls. rags.

WOOD PULP.

Hudson Trading Co., Wurttemberg, Hamburg, 392 bls.
 Castle, Gotthel & Overton, West Inskip, Hamburg, 634 bls.
 Nat'l Bank of Commerce, Schoharie, Hamburg, 1,506 bls., 219 tons.

Equitable Trust Co., by same, 1,000 bls., 150 tons.
 Brown Bros. & Co., by same, 680 bls., 102 tons.
 Guaranty Trust Co., Wurttemberg, Hamburg, 392 bls., 60 tons.
 Brown Bros. & Co., Hudson, Bremen, 3,250 bls., 650 tons.
 Central Union Trust Co., Tyrifjord, Kristiania, 1,600 bls.
 M. Gottesmann & Co., Schoharie, Hamburg, 1,096 bls.
 M. Gottesmann & Co., Tyrifjord, Trandhjin, 1,600 bls.

CASEIN.

A. Klipstein & Co., Siam City, London, 220 bags, 24,275 lbs.
 Atterbury Bros., Samatra, Buenos Aires, 600 bags, 36,000 kilos.
 First Nat'l Bank of Boston, by same, 910 bags, 50,050 kilos.
 J. A. & W. Bird & Co., by same, 2,264 bags, 108,741 kilos.
 J. A. & W. Bird & Co., Longvaar, Buenos Aires, 834 bags, 50,004 kilos.
 Atterbury Bros., by same, 1,250 bags, 75,000 kilos.

OLD ROPE.

N. E. Beizen, Idaho, Hull, 35 coils.
 Brown Bros. & Co., by same, 294 coils.
 Brown Bros. & Co., Pioneer, Antwerp, 70 coils.
 International Purchasing Co., by same, 115 coils.
 Stone Bros., Sherwin Co., by same, 195 coils.
 E. J. Keller Co., Noordam, Rotterdam, 85 coils.
 Katzenstein & Keene, Inc., by same, 183 coils.
 American Wood Pulp Corp., Hudson, Bremen, 117 coils.
 Atlantic Nat'l Bank, Aldgate, Marseilles, 105 coils.
 E. J. Keller Co., Kankahar, Algiers, 200 coils.

CHINA CLAY.

Niagara Wall Paper Co., Cedric, Liverpool, 229 bags.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 25, 1922

Globe Ticket Co., Schoharie, Hamburg, 111 pgs. paper.
 Paper House of Pennsylvania, by same, 112 bls.
 Paper House of Pennsylvania, by same, 253 rolls.
 Salomon Bros. & Co., by same, 175 bls. rags.
 Castle, Gotthel & Overton, by same, 68 bls. rags.
 Coal & Iron Nat'l Bank, by same, 643 bls. rags.
 Castle, Gotthel & Overton, by same, 732 bls. Wood Pulp, 146 tons.
 E. J. Keller Co., Oregonian, Hamburg, 261 bls. rags.
 E. J. Keller Co., Missouri, Antwerp, 333 bls. rags.
 E. J. Keller Co., Schoharie, Hamburg, 407 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 25, 1922

C. K. Mac, Alpine, Texas, 168 bls., 2,368 rolls wrapping.
 Castle, Gotthel & Overton, Elmsport, Antwerp, 270 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING FEBRUARY 25, 1922

Hudson Trading Co., Selma, 676 rolls news print.
 Hudson Trading Co., Nocalula, 75 rolls news print.
 E. J. Keller Co., De La Salle, Rouen, 395 bls. bagging.

NORFOLK IMPORTS

WEEK ENDING FEBRUARY 25, 1922

Hudson Trading Co., Mississippi, 231 rolls news print.

Howard Bond



Howard Ledger

"The Paper of Many Uses"

Manufactured by

THE HOWARD PAPER COMPANY,

Urbana, Ohio

POWER TRANSMISSION MACHINERY

AND

AGITATOR EQUIPMENT

FOR

PULP AND PAPER MILLS

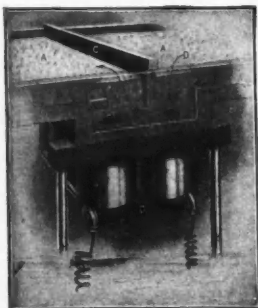


Hill Collar Oiling Bearing
Cleveland Type
(PATENTED)

THE HILL CLUTCH CO.

NEW YORK OFFICE:
56 CHURCH ST.

CLEVELAND, OHIO

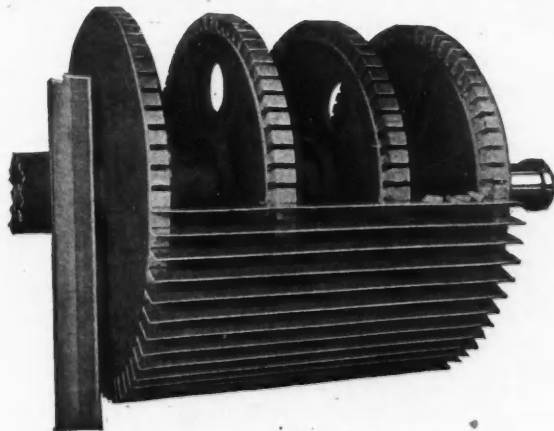


TYPE "B" IRON EXTRACTOR

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.



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?

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, March 1, 1922.

ALUM.—The alum market is only moderately active for the trade continues to supply itself with small lots that are absolutely necessary. Price are firm with ammonia alum quoted at 3.65 to 3.75 cents a pound for the lump, 3.75 to 4.00 cents a pound for the ground, and 4.15 to 5.25 cents for the powdered.

BLEACHING POWDER.—The bleach market is quiet with only small lots moving. The mills are supplied with small lots only and should soon be in the market. Imported bleach sells at 1.80 cents a pound and domestic at 1.90 to 2.10 cents a pound.

BLANC FIXE.—Slight improvement is noticeable in the blanc fixe market and a better feeling exists throughout the trade. Blanc fixe pulp is quoted at \$40 to \$50 a ton, and powdered blanc fixe at 3.50 to 3.75 cents a pound.

BRIMSTONE.—The sulphur market holds firm and dealers consider prospects for a good year to be excellent. Domestic brimstone is quoted at \$18 to \$20 a ton, f. o. b. New York, and \$16 to \$18 a long ton at the mines.

CASEIN.—Although the demand for casein is only increasing slowly there is a marked lack of the commodity in the market due to small arrivals from South America and low domestic production. Rumor of a 4½ cent a pound duty on imported casein should stiffen the market and cause increase in price now at 9.00 to 10.00 cents a pound.

CAUSTIC SODA.—Some betterment is apparent in this market where inquiries and deals closed are more numerous. The contract price is 3.50 cents a pound on the basis of 76 to 78 per cent and this price is shaded slightly in second hands.

CHINA CLAY.—The china clay market is quiet. Domestic unwashed now sells at \$6 to \$8 a net ton, washed at \$8 to \$10, and imported at \$13 to \$18.

LIQUID CHLORINE.—The liquid chlorine market is fairly active. Prices are firm at 6.00 to 8.00 cents a pound depending upon quality in 100 pound cylinders, f. o. b. works. Consumers using ton containers and tank cars can obtain lower prices than those quoted.

ROSIN.—Trading in the rosin market is still light although dealers are optimistic for the near future. Grades E, F, and G are selling at 5.40 per barrel of 280 pounds net.

SALTCAKE.—A firmer trend is noticeable in the saltcake market. The glass manufacturing business is picking up and the demand from paper mills on the increase. The production of muriatic acid is still subnormal and spot supplies of saltcake are rapidly absorbed. Chromecake sells at \$18 a ton and acidcake at \$20.

SATIN WHITE.—The demand for satin white is steady but not for large volumes. Supplies are adequate and the trade awaits a normal demand from the paper industry to again conduct a prosperous business. Price fluctuates around 2.10 cents a pound.

STARCH.—Larger volumes of starch are moving and the market shows a firmer tone on the whole. Prices are firm with starch quoted at 2.22 cents a pound for bags and 2.50 cents a pound for barrels, carload quantities.

SULPHATE OF ALUMINA.—The reduction of transportation rates will materially benefit this market which is already showing a slight betterment due to the slowly increasing activity of the paper mills. The commercial grade sells at from 1.50 to 1.60 cents a pound and the iron free grade at 2.60 to 2.75 cents a pound.

SODA ASH.—The soda ash market is quiet with the foreign product selling at 1.75 to 1.85 cents a pound and the domestic at 1.75 to 1.90.

TALC.—The talc department is doing better and orders for very sizeable lots have been contracted within the last week. Better underlying conditions in the paper trade are having their effect and confidence is returning slowly and surely. Talc is now quoted at \$10 to \$12 a net ton.

Market Quotations

(Continued from page 67)

Solid Ledger Stock. 2.00 @ 2.25	New Black Soft. .03 @ .03 1/2
Writing Paper. 1.80 @ 2.00	New Light Sec- .02 1/2 @ .02 3/4
No. 1 Books, heavy. 1.50 @ 1.75	Khaki Cuttings. .02 1/2 @ .03 1/4
No. 2 Books, light. 1.25 @ 1.50	Corduroy .02 @ .02 1/2
No. 1 New Manila. 2.75 @ 3.00	New Canvas. .07 1/2 @ .08
No. 1 Old Manila. 1.50 @ 1.75	New Black Mixed 3.00 @ 3.25
Container Manila. 1.00 @ 1.10	Old
Old Kraft. 1.90 @ 2.00	White, No. 1—
Overissue News. .75 @ .80	Repacked. .06 @ .06 1/2
Old Newspaper. .50 @ .60	Miscellaneous. .04 1/2 @ .04 3/4
No. 1 Mixed Paper. .45 @ .50	White, No. 2—
Common Paper. .40 @ .50	Repacked. .03 @ .03 1/4
Straw Board, Chip. .40 @ .45	Miscellaneous. .02 1/2 @ .03 1/4
Binders' Bd. Chip. .40 @ .45	Thirds and Blues—
Domestic Rags—New.	Repacked. 1.85 @ 2.00
Price to Mill, f. o. b. Phila.	Miscellaneous. 1.55 @ 1.75
Shirt Cuttings—	Black stockings. 1.75 @ 2.25
New White, No. 1. .09 1/2 @ .09 3/4	Roofing Stock—
New White, No. 2. .05 @ .06	No. 1. .90 @ 1.00
Silesias, No. 1. .05 @ .06	No. 2. .80 @ .90
New unbleached. .08 1/2 @ .09	No. 3. .70 @ .80
Washables. .03 1/2 @ .03 3/4	No. 4. .75 @ .85
Fancy. .05 @ .05 1/2	No. 5A. nominal
Cottons—according to grades—	B. nominal
Blue Overall. .05 @ .05 1/2	C. nominal
New Blue. .02 1/2 @ .02 3/4	

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper	Wood, Vat Lined. 47.50 @ 50.00
Bonds.07 1/2 @	Filled News Board. 40.00 @
Ledgers.09 @	Solid News Board. 42.50 @ 45.00
Writings.07 @	S. Manila Chip. 42.50 @ 45.00
Superfine.13 @	Fat. Coated. 70.00 @ 75.00
Fine.12 @	
Books, S. & S. C.06 1/2 @ .07	Old Papers
Books, M. F.05 1/2 @ .06 1/2	Shavings—
Books, coated.09 @	No. 1 Hard White. .64 @ .04 1/2
Label.09 1/2 @	No. 1 Soft White. .03 @ .03 1/4
News sheets. 4.00 @	No. 1 Mixed.07 1/2 @ \$8.00
News, rolls.05 1/2 @	Ledgers & Writings. .02 @ .02 1/2
Manilas—	Solid Books.01 1/2 @ \$1.35
No. 1 Manila. \$6.75 @	Blanks. \$1.30 @ \$1.40
No. 1 Fibre. 8.00 @ 9.00	No. 2 Books Light. .60 @ .70
No. 1 Jute. 2.50 @	Folded News, over
Kraft Wrapping. 2.00 @	issues. \$11.50 @ 12.00
Common Bogus. 3.00 @	Mixed paper.50 @
	Gunny Bagging.80 @
Boards	Manila Rope.01 @ .04 1/2
(Per Ton Destination)	Comm'n Paper. 8.00 @
Chip. \$37.50 @—	Old News.80 @
News, Vat Lined. 39.00 @ 40.00	Old Kraft. 1.75 @

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper	Sulphite bleached. 95.00 @ 105.00
(Mill Prices to Jobbers f. o. b. Mill)	Sulphate. 75.00 @
Bond—	Old Waste Papers
Sulphite. 12 1/2 @ 14	(In carload lots, f. o. b. Toronto)
Light tinted. 13 1/2 @ 15	Shavings—
Dark tinted. 15 @ 16 1/2	White Env. Cut. 4.00 @ —
Ledgers (sulphite). @ 14 1/2	Soft White Book
Writing. 11 1/2 @ 15	Shavings. 3.35 @ —
News, f. o. b. Mills—	White Bk News 2.00 @ —
Rolls (carloads). 3.50 @ —	Book and Ledger—
Sheets (carloads). — @ 4.25	Flat Magazine and
Sheets (2 tons or	Book Stock
over). @ 4.50	(old). 1.45 @ —
Book—	Light and Crum-
No. 1 M. F. (car-	pled Book Stock 1.30 @ —
loads). 10.00 @ —	Ledgers and
No. 2 M. F. (car-	Writings. 1.80 @ —
loads). 9.00 @ —	Solid Ledgers. 1.80 @ —
No. 3 M. F. (car-	Manilas—
loads). 8.50 @ —	New Manila Cut. 2.00 @ —
No. 1 S. C. (car-	Printed Manilas. 1.00 @ —
loads). 10.50 @ —	Kraft. 2.25 @ —
No. 2 S. C. (car-	News and Scrap—
loads). 9.50 @ —	Strictly Overissue. .90 @ —
No. 1 Coated and	Folded News.90 @ —
litho. 15.00 @ —	No. 1 Mixed Pa-
No. 2 Coated and	pers.60 @ —
litho. 14.00 @ —	Domestic Rags—
No. 3 Coated and	Price to mills, f.o.b. Toronto.
litho. 13.25 @ —	Per lb.
Coated and litho.	No. 1 White shirt
colored. 15.25 @ —	cuttings.09 1/2 @ .10
Wrapping—	No. 2 White shirt
Grey. 4.75 @ —	cuttings.05 1/2 @ .05 3/4
White Wrap. 5.25 @ —	Fancy shirt cut-
"B" Manila. 5.75 @ —	tings.05 1/2 @ .05 3/4
No. 1 Manila. 7.50 @ —	No. 1 Old whites. .04 @ —
Fibre. 7.25 @ —	Thirds and blues .02 @ .02 1/2
Kraft, M. F. or	Per cwt.
M. G. 8.75 @ —	Black stockings. 2.00 @ —
	Roofing stock
Pulp	No. 1. 1.25 @ —
(F. o. b. Mill)	No. 2. 1.15 @ —
Ground Wood. \$25.00 @ \$32.50	Roofing stock
Sulphite easy blea-	Manila rope.04 1/2 @ .04 3/4
ching. 70.00 @ 75.00	No. 2.01 1/2 @ —
Sulphite, news grade. 60.00 @ 65.00	Gunny bagging.02 1/2 @ —

The Home of Quality

PAPER BAGS

Sacks and Specialties

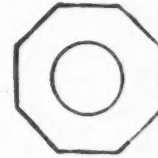
ESTABLISHED 1901

SCHORSCH & CO.

Manufacturers

500 East 133d Street : New York

This Registered Trade Mark Octagon



on a Paper Bag Vouches for Its Good Quality



FACTORY
132ND TO 133RD ST & BROOK AVE

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

Felt Test—Lowest Cost per Ton

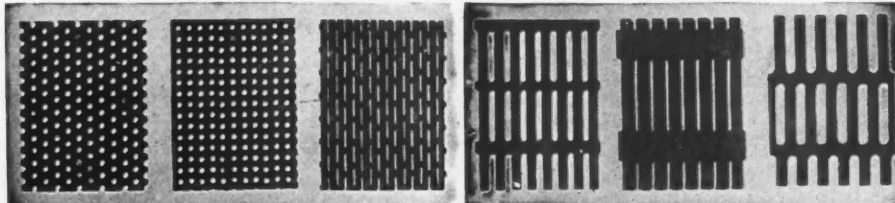
If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts, for ORR felts will produce the lowest cost per ton. They “stand up” under severe usage. Orr durability is acknowledged everywhere. Their strength and long life 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

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.

WANT AND FOR SALE ADVERTISEMENTS

HELP WANTED

CLASSIFIED RATES

Minimum rate for advertisements of 25 words or less, first insertion, \$1.00.

SITUATION WANTED, 4 cents a word for first insertion and 2 cents a word for each subsequent insertion of same ad. No ad of less than 25 words accepted.

HELP AND MISCELLANEOUS WANTS, and small For Sale Ads, 4 cents a word for each and every insertion. No ads of less than 25 words accepted.

When answering advertisements, please address the Box Number given in ad.

Answers can be forwarded care Paper Trade Journal, and will be promptly forwarded without extra charge. All should be sent to the New York office, 10 East 39th street. And all should be addressed as the advertisement directs in every case and not simply to the paper.

All classified ads for the current issue must be in hand not later than Monday preceding date of publication.

WANTED—Paper Bag and Envelope Salesmen. A Specialty House having recently enlarged its Manufacturing Equipment desires the services of young aggressive salesmen. A broad field and excellent future. Experience and knowledge essential. Write in detail. Address, Box 4628, care Paper Trade Journal. M-1

WANTED—Machine Help and Beaterman. Mill in good location. Address, Box 4831, care Paper Trade Journal. M-9

WANTED—Two machine tenders, two beater engineers, boss finisher and millwright, for book mill on Pacific Coast. Only first class men experienced in Machine Finished Book and Writings. References required. Address, Box 4847, care Paper Trade Journal. M-2

WANTED—Two Cylinder Machine tenders and two Beatermen experienced on high grade Manila Rope Specialties. Mill located in good Eastern City. Address, Box 4834, care Paper Trade Journal. M-2

WANTED—Machine Tender, Beater Foremen, Back Tenders in an Eastern Roofing Mill. Eight hours. In reply give references, stating age. Address, Box 4873, care Paper Trade Journal. M-2

WANTED—Three First Class Machine Tenders and three First Class Back Tenders on modern, high speed 158" Fourdrinier Machine making Kraft and Sulphite. None but first class men need apply. State age and experience, also submit references. Address, Box 4874, care Paper Trade Journal. M-9

WANTED—Man to take charge of a number of Coating Machines principally running on Book and Litho Paper. In replying state where present and past employed, giving entire experience. Address, Box 4861, care Paper Trade Journal. M-2

WANTED

A MAN WHO IS NOW EMPLOYED BETWEEN 30 AND 40 YEARS OF AGE, WHO HAS HAD EDUCATIONAL ADVANTAGES AND PRACTICAL EXPERIENCE IN PAPER MAKING. HE MUST POSSESS EXECUTIVE ABILITY AND HAVE A GOOD RECORD WITH PRESENT CONCERN. NO REFERENCES REQUIRED BUT NAME OF PRESENT EMPLOYERS, DUTIES, EXPERIENCE AND SALARY WOULD BE APPRECIATED AND HELD CONFIDENTIAL. THIS IS AN EXCEPTIONAL OPENING FOR A HIGH-CLASS MAN WITH CHANCES OF PROMOTION. ADDRESS BOX 4897, CARE PAPER TRADE JOURNAL. M-16

HELP WANTED

WANTED—A first class finisher on Book, Writing and Envelope Papers. Mill located in New York State. Address, Box 4862, care Paper Trade Journal. M-9

WANTED—High grade salesman for selling Pulp and Paper Mill Machinery. Address, Box 4864, care Paper Trade Journal. M-16

WANTED—Man who is familiar with the Paper Mill Trade to sell Jordan Filling, Fly Bars, and Bed Plates. References required. State wages expected. Address, Box 4881, care Paper Trade Journal. M-2

WANTED—One Machine Tender, One Back Tender for small Fourdrinier Machine on specialties. References required. Address, Box 4882, care Paper Trade Journal. M-2

MAN WANTED—Experienced in Wax Paper Plant, to take full charge. Growing concern. State salary, experience, etc. Address, Box 4883, care Paper Trade Journal. M-2

WANTED—Young man familiar with Paper Manufacturing and with knowledge of Chemistry, to sell specialties to paper mills, college graduate preferred. Please send details. Address, Box 4884, care Paper Trade Journal. M-2

WANTED—Two A-1 Asbestos Felt Machine Tenders. Give age, married or single, and references in first letter. Address, Box 4885, care Paper Trade Journal. M-23

WANTED—Experienced man to operate roofing plant in Maryland. One that has had experience with Guyton Cumfer Outfit preferred, as assistant superintendent. Must be sober, not afraid of work. For such a man there is a good chance to start with a company just starting to manufacture prepared roofing. Address, Box 4886, care Paper Trade Journal. M-16

DRAFTSMAN

AN EXPERIENCED DRAFTSMAN AND CHECKER WANTED FOR PAPER MACHINERY WORK. LONG ESTABLISHED CONCERN. ADDRESS AS BELOW, STATE AGE, EXPERIENCE AND FULL PARTICULARS. ADDRESS, BOX 4880, CARE PAPER TRADE JOURNAL. M-2

PAPER SALESMAN

EXCEPTIONAL OPPORTUNITIES OFFERED BY A NEW JOBBING HOUSE WITH SEVERAL FOREIGN AND DOMESTIC MILL CONNECTIONS TO HANDLE COARSE AND FINE PAPERS. MUST HAVE ESTABLISHED TRADE AND EXPERIENCE. REMUNERATION DEPENDS UPON RESULTS. STATE AGE AND EXPERIENCE. CONFIDENTIAL ADDRESS BOX 4895, CARE PAPER TRADE JOURNAL. M-2

SITUATIONS WANTED

SUPERINTENDENT—Open for position; 20 years experience. Practical paper maker on Bonds, Writings, Ledgers, Waxing and book. Will go to Canada or any Foreign Country. Address, Box 4737, care Paper Trade Journal. M-3

A-1 ALL AROUND MECHANIC—Wishes to make change. Twenty years' experience in Pulp and Paper Mills. Satisfactory work guaranteed. Employers interest is mine. References. Address, Box 4760, care Paper Trade Journal. M-2

PAPER SALESMAN in New York City who can produce a large volume of business with adequate co-operation, desires connection. Drawing account on Commission basis. Correspondence invited. Address, Box 4635, care Paper Trade Journal. M-1

WANTED POSITION—As superintendent. Twenty-one years' experience; used to Specialties, Colors and Wrapping, all grades of Boards and Fibres. Knows how to handle help. Can keep up repairs. Used to Fourdrinier and Cylinder Machines. Address, Box 4786, care Paper Trade Journal. M-1

MASTER MECHANIC with 20 years experience desires position. Good record in construction and maintenance in pulp and paper mills in United States and Canada. Best of references. Address, Box 4806, care Paper Trade Journal. M-9

SITUATION WANTED—Engineering draftsman, technical graduate, 12 years' experience, Pulp and Paper Mills, Power House and Hydro-Electric Design. Thoroughly practical and reliable. Address, Box 4815, care Paper Trade Journal. M-1

WANTED POSITION—Superintendent open for a position. Have had fifteen years' experience on all grades of Box Boards, Tests, Containers, etc. Familiar with repairs, maintenance, and knows how to handle men. Address, Box 4818, care Paper Trade Journal. M-16

WANTED POSITION as superintendent used to making all Wrapping, Chip and Box Boards and Building Papers, also Filter Paper. Used to cylinder, fourdrinier and Harper machines. Knows how to handle help. 22 years' experience. Can furnish good references. Address, Box 4821, care Paper Trade Journal. M-9

MASTER MECHANIC—Desires position. Twenty years' experience in Mills of all grades of Paper and Pulp; also on Steam, Water and Electric Power. Best references. Address, Box 4765, care Paper Trade Journal. M-9

SUPERINTENDENT wants to make change. Twenty-seven years' experience on News, Book, Writing, Bond, Fibre and Board, also Sulphite and Ground Wood. Always increased the production wherever I have been and put the mill in A-No. 1 shape. 44 years old and can give the best of references. Address, Box 4827, care Paper Trade Journal. M-9

SUPERINTENDENT desires position running Friction or binders board mill. Have had many years of experience. Understands repairs and can superintend building of mill. Can furnish best of references. Address, Box 4828, care Paper Trade Journal. M-16

CHEMICAL & PRODUCTION ENGINEER—Quality on quantity basis, wants Western Mill or Industrial Commercial Position. Age 38. Address, Box 4849, care Paper Trade Journal. M-2

BOSS FINISHER—Practical Executive, wide experience, all grades and weights of Fourdrinier and cylinder paper, desires connection with good mill. Address, Box 4850, care Paper Trade Journal. M-2

SULPHITE PULP SUPERINTENDENT—With proven ability for big production at lowest costs, desires position. Would consider offer from concern where production is below the average. Address, Box 4851, care Paper Trade Journal. M-9

SITUATIONS WANTED

BOSS FINISHER—Open for position. Thoroughly experienced. All grades of book, writing, envelope and board papers. Highest references. Address, Box 4852, care Paper Trade Journal. M-2

CORRUGATED AND CONTAINER BOARD MILLS—Mill agent with well established trade wants to represent mill exclusively, New York and East. Commission or salary basis. Address, Box 4856, care Paper Trade Journal. M-2

A-1 BEATERMAN—Experienced on all grades, desires position. Best of references. Address, Box 4839, care Paper Trade Journal. M-2

SALESMAN—At present employed selling to jobbers in Minneapolis and St. Paul wants mill agency. Experienced on all lines of paper and specialties. Satisfactory references furnished. Address, Box 4840, care Paper Trade Journal. M-2

POSITION WANTED as Machine Tender. Good on fourdrinier and cylinder machine with Edwards attachments or without. Experienced on all grades of Tissue and Crepes. Married, have family. Can furnish best of references. Address, Box 4841, care Paper Trade Journal. M-2

SULPHITE SUPERINTENDENT with twelve years' practical experience, combined with technical training desires position with a Progressive Concern where ability is recognized. Excellent references. Address, Box 4875, care Paper Trade Journal. M-30

YOUNG MAN—College education. Four years' experience, desires connection with Board Mill, preferably in Purchasing Department. Address, Box 4876, care Paper Trade Journal. M-2

SUPERINTENDENT open for position, experienced on Book, News, Manila, Specialties and Colors. Am experienced Paper Mill Engineer of ability. Can furnish very best of references. Address, Box 4877, care Paper Trade Journal. M-9

PRODUCTION MANAGER or Superintendent of Waxing Plant open for position. Broad experience. Printing, Coating, and Waxing Paper, Plant Management, Production, Cost Systems, up-to-date methods, installations and maintenance. Can furnish references. Address, Box 4866, care of Paper Trade Journal. M-2

GRADUATE MECHANICAL ENGINEER, 25. Four years experience Paper and Box Industry, desires position as assistant to Chief Engineer in large Paper Mill. Address, Box 4863, care of Paper Trade Journal. M-2

SUPERINTENDENT—Wants position capable of producing counter, heeling Shank and Filler, Board and all kinds of high grade Fibre Boards. Thoroughly understands and can operate all machinery used in making Fibre Boards. Good mechanic. Address, Box 4869, care Paper Trade Journal. M-9

WANTED

Young man with fifteen years' experience in the selling end of the paper business, for reasons entirely foreign to his present connection, desires to make change. Now managing executive in a Division of one of the best known Fine Paper Merchants in the country; 34 years of age, married. My record will stand the closest scrutiny. Correspondence must be strictly confidential. If interested, address Box 4829, care Paper Trade Journal. M-2

SITUATIONS WANTED

EXPERIENCED PAPER BAG SALESMAN seeks connection with manufacturer of high grade grocery, confectionery, millinery and notion bags to jobbing trade in Pennsylvania, New Jersey and Delaware. Fine following, highest reference, furnished at interview. Salary and expenses. Address, Box 4887, care Paper Trade Journal. M-2

SUPERINTENDENT — Wants position. Ledger, Bonds, Writing, colored specialties, hanging. Practical. Can make your mill pay. Go anywhere. Best references. Address, Box 4888, care Paper Trade Journal. A-12

MASTER MECHANIC with 20 years' experience desires position. Good record in construction and maintenance in pulp and paper mills in United States and Canada. Best of references. Address, Box 4889, care Paper Trade Journal. M-16

YOUNG MAN 30 years of age, with considerable experience in traffic management and sales promotion, desires connection with leading paper manufacturer or wholesale dealer. Can arrange immediate interview. Highest references. Address, Box 4890, care Paper Trade Journal. M-2

THE INDUSTRIAL SERVICE BUREAU is prepared to assist you with your employment problems. Confidential intermediary service for the employer and employee of the pulp, paper and allied trades. Write or wire your requirements. 1502 Monadnock Block, Chicago, Ill. M-2

MACHINE TENDER wishes to make a change from present position. Have had 15 years' experience on all grades of box boards, test and containers. Can furnish best of references. Am strictly sober and steady. Can get production. Address, Box 4891, care Paper Trade Journal. M-9

WANTED POSITION as cook or acid maker and can burn lead. Twenty years of experience, desires employment in U. S. or Canada. Address, Box 4892, care Paper Trade Journal. M-9

WANTED—To represent mills in paper specialties, for Colorado, Wyoming, Nebraska, on commission basis. Address, Box 4893, care Paper Trade Journal. M-2

SALESMAN, 25 years old, selling metropolitan jobbing trade seeks connection with mill desirous of selling to worth while dealers and large consumers. Address, Box 4894, care Paper Trade Journal. M-2

EXPERIENCED MEN IN THE PAPER BUSINESS—Our confidential and personal service limited to the pulp, paper and allied trades. Can be of the utmost value to you in locating desirable positions. Write. The Industrial Service Bureau, 1502 Monadnock Block, Chicago, Ill. M-2

FOR SALE

COAL—Moshannon and "E Seam" bituminous coals, low sulphur, low ash. Lowest freight rates east and north. Prices and freight rates will be furnished on request. Halden-Kelley Coal Company, 209 Market St., Clearfield, Pa. tf

NEKOOSA EDWARDS PAPER COMPANY

Port Edwards, Wis.

OFFERS FOR SALE
 1-2-18" x 42" Filer & Stowell Non-Condensing Engines 12' x 25" Flywheel. 135 lbs. Pressure. 110 R.P.M.
 2-2-16" x 36" E. P. Allis Non-Condensing Engines 10' x 25" Flywheel. 110 lbs. pressure. 100 R.P.M.
 3-1-24" x 42" R. H. Filer & Stowell Non-Condensing Engines 16' x 40" Flywheel 125 lbs. pressure. 90 R.P.M. M-9

FOR SALE

FOR SALE—Roofing and Saturating Machines, 12"x36" wide. Chilled steel rolls. Also Painter Mixing Machine, Grinders, etc. Address Box 4310, care Paper Trade Journal. tf

FOR SALE—14 Calender Rolls, 55" face, 8" to 14" diameter. 3 No. 1 Claffin Engines. 1 small Jordan Engine. 1 6" Horizontal Water Pump. 3 Air Fans. Complete triple-deck frames for 44 Dryers. Will arrange terms to suit. Chesapeake Paper Board Co., Baltimore, Maryland. tf

FOR SALE: DRYERS—8-60"x120" Dryers with bearings. A bargain. W. V. Sullivan, Call Bldg., San Francisco. tf

FOR SALE—Paper machine reel 110" Face. Heavy pattern revolving reel for 4 drums. Marinette & Menominee Paper Co., Marinette, Wisconsin. tf

FOR SALE—One Jones Standard Belt Driven Jordan Engine in first class condition having been in operation six months only. Reason for sale changing of plant to electric drives. Lewis, Slocum & Le Fevre Company, Beaver Falls, New York. M-16

Deming Apparatus Co., 150 Nassau St., New York City—Fullerton, La. Dismantling Plant International Alcohol Corporation, Fullerton, La. OFFERING MATERIAL GUARANTEED PERFECT CONDITION
 DIGESTERS 6 GLOBULAR ROTARY; KNIFE SHREDDERS 2; DIFFUSORS 9; EDGERTON PRESSES 4; HOOP DRIVER; BELT CONVEYORS 14; TRIPERS 4; CHAIN DRAGS 6; MAGNETIC PULLEY; ELECTRIC WEAVER; REVOLVING SCREENS; MOTORS, 125 H. P.; LIME SLACKING 2; PIPE COOLERS 4,000 LIN. FT. SPRINKLER SYSTEMS 10, COMPLETE, 1,000 HEADS. Y.

Rebuilt Paper Mill Machinery in Stock and Guaranteed

NOT WHERE IS AND AS IS
FOURDRINIER TISSUE MACHINE—One 96", one 68".
FOURDRINIER PARTS—Pusey & Jones 118", 100". Kutter Trowbridge 96".
PRESS PARTS FOR PAPER MACHINES—Pusey & Jones bell crank housing two sets 18"x36", Black & Clawson swing arm housings with rolls.
DRYERS—Four 48"x111", thirteen 36"x95", four 48"x68", one 84"x67", eleven 42"x66".
MARSHALL DRIVES—Two Black & Clawson self-contained stand with friction clutch cone pulley and 6" mortise gears. Mortise gears and pinions for Pusey & Jones Marshall drives 5" to 8" face.
CHILLED CALENDERS—One 66" face, five roll; one 54" face five roll.
DILLON DOCTORS—For Machine Calenders 60" to 120" face.
SLITTERS AND WINDERS—One 120" Warren, one 108", 36" Kidders.
REELS—Pusey & Jones two drum upright 48" to 114".
BEATERS—Five 72"x42" Noble & Wood, one 66"x42" Noble & Wood, equipped with three cylinder washers; one Dilts 62"x50" iron tub, one Jones 62"x52", seven Horne 36"x36". Two No. 2 Claffins, two No. 1 Claffins.
JORDANS—One Wagg Majestic, three No. 2 Dillon Improved, one Large Horne, four Monarch, one Jones Standard, two Pope Brushing engines.
SCREENS—Six 10 plate open side Packer, two 6 plate, one Moore & White auxiliary.
STUFF PUMPS—Deane triplex, 9"x8", Gould triplex 8"x10", Sandusky triplex 4"x8".
REVOLVING SHEET CUTTERS—One 104" Horne, five 61" Hamblet, four 61" Finlay, one 50" Hamblet diagonal, one 42" Finlay.
WET MACHINES—Four 72" Bagley & Sewall Hydraulic.
SUPER CALENDERS—One 45", one 42", one 36" Holyoke.
 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.

FOR SALE

FOR SALE—One New York Safety 5"x8" vertical steam engine, 32"x4½" fly wheel, Pickering governor. One bank of 13 Dryers 28" diameter, 80" face, set in two tiers, complete with top and bottom felt stretcher guides, and carrying rolls in first-class condition, with steam headers. Now in use. One two drum reel for 84" machine complete, now in use. One 10 plate, Packer screen, complete with plates, driving pulley and three extra sets of plates. One Pope mullen screen, 10 plates, 12"x42". One 36" Holyoke Machine plater. Valley Paper Company, Holyoke, Mass. M-2

FOR SALE

BOX BOARD MILL. CENTRAL PART OF NEW YORK STATE, OR WILL CONSIDER OUTSIDE CAPITAL FROM EXPERIENCED MAN. GOOD OPPORTUNITY. ADDRESS BOX 4871, CARE PAPER TRADE JOURNAL. tf.

FOR SALE—Envelope Machine; Rau Envelope. Size 5½" x 6¾". Excellent operating condition. Plunger type. Will sacrifice. Budley, McCall Company, 236 West 37th St., New York. M-2

FOR SALE—Moore & White Sorting Table, absolutely new, equipped with motor. Size 57" x 60". Price reasonable. Address, Box 4830, care Paper Trade Journal. M-9

MISCELLANEOUS

MILLER PAPER CO., FRANK P., high grade specialties. Boards. East Downton, Pa. Mar-16

SIMMONS, JOHN, SONS, Paper and Paper Goods, 28 and 30 South Marshall street, Philadelphia, Pa. Mar-1

SWIFT, GEORGE W., JR., Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods, Bordentown, N. J. 1-1-24

PULP WANTED—Will pay cash for any quantity Foreign Pulps on spot and to arrive. Send particulars with price. Address, Box 4832, care Paper Trade Journal. tf

WANTED—To buy all Tissue Culls for drop shipment, direct from Manufacturer. Address, P. O. Box 871, Norfolk, Va. M-2

WANTED—Variable speed, second hand double engine, 12x12 to 16x16. State make, size, condition, price, and when can be inspected. Address, Box 4858, care Paper Trade Journal. M-9

MILL AGENCY WANTED

We are equipped to represent you in New York City and adjacent territory, or take over the entire sale of your product. Have a well organized and aggressive sales force with practical experience. Can assure you a steady volume of business. Address, Box 4896, care Paper Trade Journal. M-2

MISCELLANEOUS

WANTED—To purchase second hand National or Dulin Flat Bag Machines. Not particular as to condition. State sizes and prices. Address, Box 4879, care of Paper Trade Journal. M-2

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C. March 1, 1922. Sealed proposals are invited to furnish Dextrine, Oils, Textiles, Engravers' Supplies, Dry Colors, Paper Boxes, Paper and Check Paper during the fiscal year beginning July 1, 1922. The right is reserved to reject any or all bids or parts of bids. Samples of Dextrine, Oils, Textiles, Engravers' Supplies and Dry Colors must be received at the Bureau of Engraving and Printing not later than 2 P.M. Monday, April 10, 1922. Samples of Paper Box Blanks, Paper and Check Paper must be received not later than 2 P.M. Monday, April 3, 1922. Blank forms with specifications for proposals, giving dates on which the bids for the several schedules will be opened and further information will be furnished on application to James L. Wilmeth, Director. M-2

WANTED

THREE—27" STANDARD GRINDERS.
ONE—37" STANDARD GRINDER.
TWO GROUNDWOOD KNOTTERS.
FOUR—TAILING SCREENERS.
ONE—NO. 154 LANNOYE PATENT PULPER, MANUFACTURED BY RICE BARTON & FALES MACHINE & IRON COMPANY.

MINNESOTA & ONTARIO PAPER COMPANY
International Falls, Minn. M-9

Papier-Zeitung

Berlin SW 11 (Germany)

Founded by Carl Hofman, 1876

appears twice a week

Covers the whole paper trade (paper making, transforming, stationery). More than 12,000 bonafide subscribers all over the world.

Subscription: 4 Dollars

The Union Sulphur Company

Producers of the Highest Grade
Sulphur on the Market . . .

ABSOLUTELY FREE FROM ARSENIC OR SELENIUM

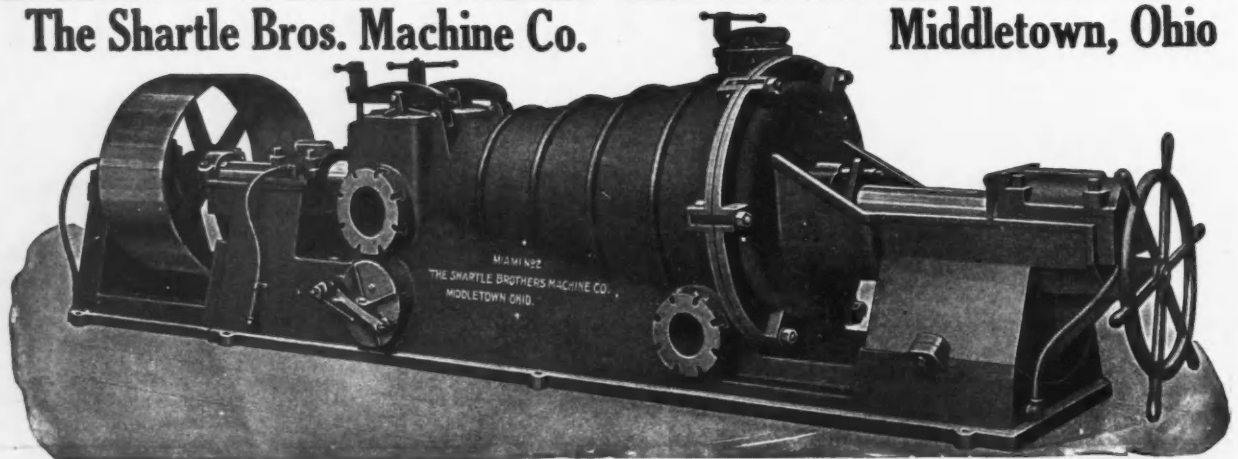
The Largest Sulphur Mine in the World

CALCASIEU PARISH, LOUISIANA

Main Offices: Frasch Building, 33 Rector Street, New York

The Shartle Bros. Machine Co.

Middletown, Ohio

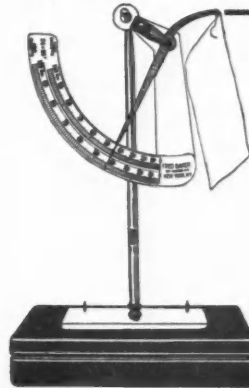


USE Claflin Continuous Beaters

In these days of reconstruction and industrial readjustment **ECONOMY** is the byword of business progress. **CLAFLINS MAKE FOR INCREASED PRODUCTION, GREATER ECONOMY, STRONGER, FINER AND MORE UNIFORM PULP.**

Best of all, they will meet any beating demand.
Let **CLAFLINS** solve your beating problems.

The Claflin Engineering Company
LANCASTER OHIO



MADE IN U. S. A. The Baker Universal Paper Scale

Collapsible, for Desk or Pocket. A small piece of paper indicates automatically ream weights per 480 and 500 sheets in sizes 24x36, 20x30, 17x22, 25x38 or any size desired. A scale for every purpose.

FRED BAKER
Manufacturer of Precision Paper Scales
34 West 28th St., New York City
Established 1912
Phone: Chelsea 9135-9136

Hudson Bag Co., Inc.

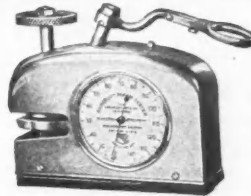
Our Brands:
**Prominent
My Choice
Popular
Favorite**

MANUFACTURERS OF
**Self-Opening
Square and Flat Bags**

SACKS AND SPECIALTIES

New York Office, 516 Fifth Ave.
(Cor. 43rd St.)

Factory: Brooklyn, N. Y.



The Ashcroft Paper Tester

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 Morse Co., Montreal and Toronto.



The Ashcroft Thickness Gauge

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

DANIEL M. HICKS

(INCORPORATED)

PAPER MILL SUPPLIES

200 Fifth Avenue New York City

STRATFORD PAPER CO. 160 Cornelison Ave. Jersey City, N. J.

High Grade Fourdrinier Tissues in Stock for Immediate Delivery

Super Calenders
Breaker Calenders
Friction Calenders
Embossing Calenders
Hydraulic Presses and Pumps



Successors to the Granger Foundry & Machine Co.

The Textile-Finishing Machinery Company
PROVIDENCE, R. I.

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.

TIMBER ESTIMATING
P. T. COOLIDGE
Forest Engineer
 31 Central Street Bangor, Maine
 Maps and reports prepared with care and accuracy.

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.
 200 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, Design,
 Specifications, Valuations

H. B. PRATHER
 CONSULTING ENGINEER
 CONSULTATIONS REPORTS ESTIMATES
 Complete Designs Pulp and Paper Mills—Steam and Electric
 Power Plants—Equipments
 600 ROCKEFELLER BLDG., CLEVELAND, OHIO

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.

WILLIAM T. FIELD
 Consulting Engineer
 204 Broadway, Flower Bldg.,
 New York, N. Y. Watertown, N. Y.
 DESIGNS ESTIMATES REPORTS

J.H. WALLACE & COMPANY.
 TEMPLE COURT BUILDING
 NEW YORK CITY, U.S.A.
 CABLES. TRIPLEX, N.Y.

**PULP
 AND
 POWER
 PLANTS**

**ENGINEERS
 & CHEMISTS**
 INDUSTRIAL DESIGN
 PLANT IMPROVEMENT
 LABORATORY TESTS

VITALE & ROTHERY
 FOREST ENGINEERS
 527 Fifth Avenue New York, N. Y.

ENGINEERS PLANNING POWER TRANSMISSIONS
 Secure Data and Estimates of "MORSE" DRIVES
 SAVE Construction, Space, Light, Fuel Producing More with Less
MORSE CHAIN CO. ITHACA, N. Y.
 Engineering Service, Assistance, Bulletins
 Baltimore New York Chicago Pittsburgh Montreal
 Boston Kansas City Cleveland San Francisco Minneapolis
 Charlotte, N. C. Detroit Philadelphia Atlanta St. Louis

HERBERT S. KIMBALL
 Member Am. Soc. C. E.
 CONSULTING ENGINEER
 177 State Street, Boston 9, Mass.
 Economic Investigations.
 Chemical Equipment in Sulphite and Soda Mills.
 Paper Machine Room Construction.

Timber Lands Bought and Sold.
Timber and Pulp Wood Estimates.
R. R. BRADLEY,
Consulting Forester
 58 Telegraph Building, Hospital St., Montreal, P. Q.

Twenty Years' Experience
TIMBER ESTIMATING
 REPORTS MAPS
 James W. Sewall, Forest Engineer
 Old Town, Maine Munsy Building, Washington, D. C.
 Largest Cruising House in America

"A type to meet every stoker need"

SANFORD RILEY STOKER CO.
 WORCESTER, MASS.
 Makers of
**RILEY
 UNDERFEED
 STOKERS**
 BOSTON NEW YORK
 CINCINNATI PHILADELPHIA
 CHICAGO PITTSBURGH
 ST PAUL

MURPHY IRON WORKS
 DETROIT, MICH.
 Makers of
**MURPHY
 AUTOMATIC
 FURNACES**
 BUFFALO CLEVELAND
 DENVER

STEBBINS ENGINEERING & MFG. CO.

Mill Architects Watertown, N. Y.

Sulphite and Soda Mill Equipment

Specialty: ACID SYSTEMS, DIGESTER AND ACID PROOF LININGS GUARANTEED.

Service department always ready for emergencies. Only high class experienced men employed.

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

GREEN BAY WIRE WORKS
GREEN BAY, WISCONSIN

Manufacturers of **FOURDRINIER WIRES**

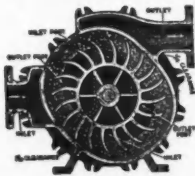
Cylinder Washer Save-all
Brass Bronze Monel



LAWSON

PAPER ROLL PLUGS SUCTION BOX COVERS DRY AND WET BROKE CARS MENASHA WOOD SPLIT PULLEY CO.

Menasha, Wisconsin PAPER MILL SUPPLIES FOR 36 YEARS



EFFICIENT SUCTION ROLL OPERATION demands the **NASH HYTOR** THE NASH ENGINEERING CO. SOUTH NORWALK, CONN.

ANNOUNCEMENT OF

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

J. O. Ross Engineering Corp.

30 E. 42nd St.

CHICAGO NEW YORK CITY BOSTON

VAPOR ABSORPTION SYSTEMS

BELLE ALKALI COMPANY, Belle, W. Va.

PURE CHLORINE

In cylinders and tanks

BELLE BRAND

CAUSTIC SODA

76%—Solid and Flake

Arnold Hoffman & Co. Inc., Sole Agents, PROVIDENCE BOSTON NEW YORK PHILADELPHIA CHARLOTTE

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: 918 So. Michigan Ave., Chicago, Ill. Long Distance Phones, Harrison 2840 and 5557

In every sense,
the "Last Word"

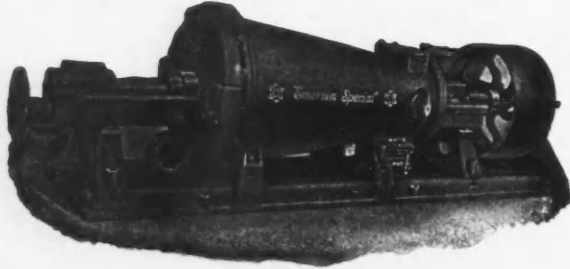
LAWRENCE GROCERS' BAGS

James Lawrence, President

The Lawrence Bag Company

Miamisburg, Ohio

EMERSON MANUFACTURING 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 manufactur-
envelopes.

Designing, pattern making and machine work.

150 Eleventh Avenue, New York City,
New York, U. S. A.

For reliable running and average long life

Lindsay Fourdrinier Wires

ARE UNSURPASSED

We make them for the largest and fastest machines.
Cylinder Wires all sizes.

The Lindsay Wire Weaving Co.

COLLINWOOD STA.

CLEVELAND, OHIO

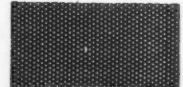
Perforated Metal Screens

For Pulp and Paper Mills

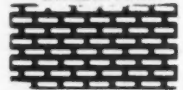
STEEL, COPPER, BRASS, BRONZE
and other Alloys

punched for Centrifugal and
Rotary Screens, Pulp Washers,
Drainer Bottoms, Filter Plates, etc.

CHARLES MUNDT & SONS
53-65 FAIRMONT AVE.



3/8 Inch Round



1/2 x 1/2 Inch Slots

JERSEY CITY, N. J.

WILLIAM A. HARDY & SONS COMPANY, Fitchburg, Mass., U. S. A.



The New 1922 Edition
of
Lockwood's Directory

of the
Paper and Allied Trades

An encyclopedia of the Paper and Pulp Industry and Allied lines, thoroughly revised and up-to-date. Its contents include complete lists of

PAPER AND PULP MILLS, ALSO CLASSIFICATION OF THEIR PRODUCTS, MAKERS OF PAPER SPECIALTIES, GENERAL PAPER MERCHANTS, PULP, RAG AND PAPER STOCK DEALERS, CONVERTERS OF PAPER, MILL OFFICIALS AND THEIR CONNECTIONS, WATER-MARKS, BRANDS, STATISTICAL INFORMATION, TRADE ASSOCIATIONS AND AUTHENTIC LIST OF WHOLESALE AND RETAIL STATIONERS.

Price \$7.00

Express Prepaid

Send in Your Order Now
You cannot afford to be without this book!

Lockwood Trade Journal Co., Inc.
10 East 39th St., **New York**

SUPERIOR CHEMICAL CO.

JOLIET, ILLINOIS

Manufacturers

PAPER MAKERS' and FILTER**ALUM***WE BUILD***Head Gates and Gate Hoists**

FOR ALL PURPOSES

Our Illustrated Catalogue Mailed Upon Request

DAYTON BEATER & HOIST CO.
Dayton, Ohio**GRISSINGER**
Patented**AUTOMATIC
TUBE
MACHINE**

Wire Stitched Tube

TOILET PAPER
MACHINERY**GRISSINGER MACHINE WORKS**
PHILADELPHIA, PA.Patented { June 24, 1913.
August 10, 1915**ALUM**

FOR THE PAPER MAKER

Manufactured by

The Jarecki Chemical Co.

QUALITY

SERVICE

Sole Selling Agents

ISAAC WINKLER & BRO.
CINCINNATI :: :: NEW YORK**BLEACHED SULPHITE**

FOR

Writing, Book and Tissue Papers

PARSONS**Pulp and Lumber Co.**

EDWIN J. DEWEY, Manager Pulp Sales

Office, 1807-1810 Finance Bldg.,
PHILADELPHIA, PA.Mills at
PARSONS, WEST VA.**“DRAPER”
FELTS***For Any Grade of Paper or Pulp***ARE GUARANTEED***To Give Entire Satisfaction*

MANUFACTURED BY

DRAPER BROS. CO., CANTON, MASS.

FOREIGN and DOMESTIC
Paper Stock
New Cuttings
and Rags

CASTLE, GOTTHEIL & OVERTON

Jute Stock
Sizing, Sulphite
and Soda Pulps

200 FIFTH AVE. NEW YORK

HEINE

LARGE-UNIT

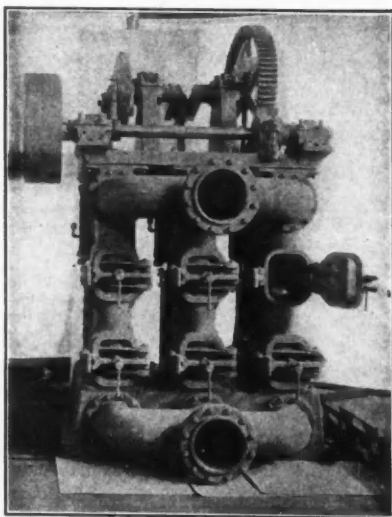
BOILERSLONGITUDINAL AND
CROSS DRUM TYPES
WASTE-HEAT BOILERS
ALL CONFORM TO ASME CODE*Heine Boiler Company Saint Louis USA*

BOILER MANUFACTURERS FOR 40 YEARS

The Black-Clawson Co.

Hamilton, Ohio

Builders of All Types of Paper Making
Machines and Machinery



for
PAPER
and
PULP
MILLS

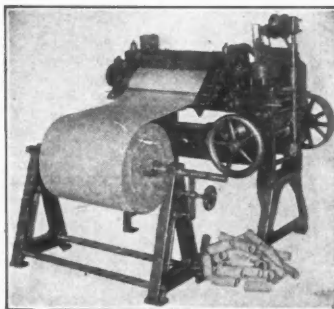
Successful machines in operation are proof
our work is built right.

Dietz Toilet Paper Machinery

AND LATEST IMPROVED PATENTED

Automatic Tube Machines

For Making Tubes for Toilet
Paper Rolls, Paper Towel Rolls



Capable of pro-
ducing 3,600

**Toilet
Tubes**

per hour direct
from roll.

**Towel
Tubes**

are made at rate
of 1,800 per hour.
Substantially built
and fully guaran-
teed.

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

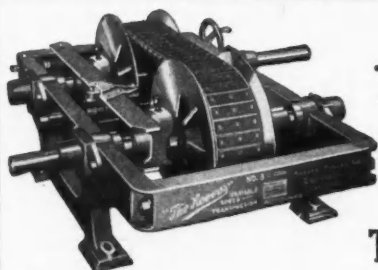
Toilet Paper Machines for making Toilet Rolls with or without perforations and machines for making Sanitary Crêpe Paper Towels, Punch Presses for Sheet Toilet Paper, Drop Roll Slitters, Slitting and Rewinding Machines, Side and Center Seam Merchandise Envelope Machines, Photo Mount Beveling Machines,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



The Reeves

Variable
Speed
Transmission

If it's a question of getting the exact speed on your Paper Machine to suit the condition of the paper being manufactured, then "THE REEVES" Variable Speed Transmission is exactly what you want.

The following are a few improvements and refinements incorporated in the manufacture of "THE REEVES" Transmission:

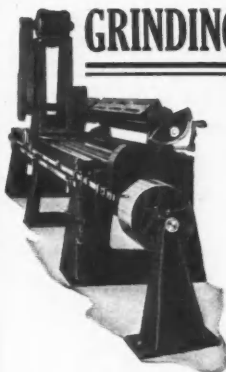
- TWO KEYS, full length of shaft**
- LARGER DISCS**
- LARGER DISC HUBS**
- PATENT EQUALIZING COLLARS**

Special high duty Ball Bearings are furnished for the main thrust bearings and the main box bearings if desired.

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

REEVES PULLEY COMPANY
COLUMBUS, INDIANA

IMPROVED PAPER KNIFE GRINDING CONSTRUCTIONS



FULL AUTOMATIC
LONGER LIFE
LESS SPACE
LESS WEAR
FEWER PARTS

Our new machines represent the highest development ever reached in fitting paper knives with full automatic machine tool precision. Half the floor space of the older type grinders.

Write for illustrations and prices of our latest developments for paper knife grinding.

Machinery Company of America
Big Rapids, Mich., U. S. A.

Branch: 534 First Ave., South, Seattle, Wash.

Job Lots, Rejections, Side Rolls Wanted

SPOT CASH paid for jobs in bond paper, white or colors, any grade that will cut down to 11 x 17, any weight. Send samples, with lowest spot cash prices. No lot too small, and none too large.

MIDWEST PAPER CO., 712 Federal Street, Chicago, Ill.



Special Shaped Carbon, Black Diamond POINTS FOR TURNING Paper, Cotton Chilled Iron and Hardened Steel Calender Rolls, Hard Rubber, Fibre, etc. Successor to John Dickinson. Established 1796. Agents for Great Britain, C. W. BURTON, GRIFFITHS & CO., Ludgate Square, London. Manufactured by THOS. L. DICKINSON. 26 Gold St., NEW YORK

"WATERBURY"

Felts-Jackets

ORISKANY, N. Y.

OUR TIGHT FITTING, DIAMOND "W" JACKETS
WILL NOT LICK UP AT ANY SPEED
1869 {MADE ONLY BY} 1921
 {GUARANTEED BY}

H. WATERBURY AND SONS COMPANY, ORISKANY, N. Y.

Manufacturers of All Special Small Roll Products

Adding Machine, Cash Register, Die Wiping, Hand Rolls, Etc., Etc.

PAPER MANUFACTURERS CO., Inc., Phila., Pa.

SLITTERS and SPECIAL MACHINES

for use in paper industry

C. BENNINGHOFEN & SONS

Hamilton, Ohio

Send us your requirements regardless of what they may be

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.

AGALITE FILLER

UNITED STATES TALC CO.

GOVERNEUR

NEW YORK

CAMACHINE

SLITTERS AND WINDERS

CAMERON MACHINE CO. BROOKLYN, N. Y.

Salomon Bros. & Co.

IMPORTERS OF

All Grades of Rag and Paper Stock

200 FIFTH AVENUE, NEW YORK

COTTON WASTE :: LINTERS :: RAMIE

Penn Paper and Stock Company

PACKERS OF ALL GRADES OF
WASTE PAPER

240 N. FRONT STREET

PHILADELPHIA

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.

UNION TALC COMPANY

Finest Grades of Agalite

132 Nassau Street

New York

WILLIAM B. DILLON

DILLON & BARNES

Paper Mill Products and Supplies

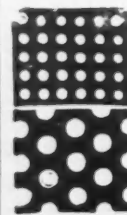
52 VANDERBILT AVENUE, NEW YORK

Telephone, 7353 Murray Hill

FRANKLIN PAPER CO. HOLYOKE, MASS.

MANUFACTURERS OF

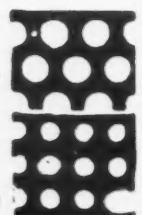
Index Bristols, White Bristol Blanks, Etc.



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

**SLITTERS**

AND

WINDERS

SAMUEL M. LANGSTON COMPANY

CAMDEN, N. J.

BAKER MANUFACTURING CORPORATION

Formerly
BAKER & SHEVLIN COMPANY

Sole Manufacturers of

THE MAGAZINE GRINDER

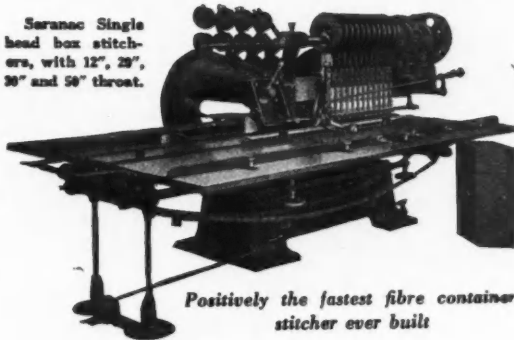
For the United States of America. This is the grinder that is making all of the ground wood manufactured by the Laurentide Co., Grand Mere, Quebec, as used on their new paper making machines, the largest in many ways and fastest running (1020 ft. per minute) in the world.

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 stitchers, with 12", 20", 30" and 50" 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.

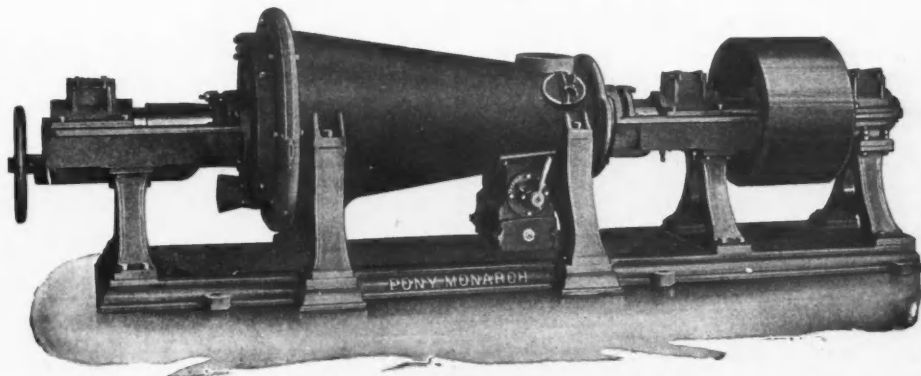
Write for Full Particulars.

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 3/4 LBS.
TO 3000 LBS.**



The Noble & Wood Machine Co., Hoosick Falls, N. Y.

CLASSIFIED INDEX TO ADVERTISEMENTS

ADDING MACHINE ROLLS.	Page	CLAY	Page	FELT ROLLS.	Page
Paper Manufacturers Co.....	82	Atterbury Bros.....	Front Cover	Kodney Hunt Machine Co.....	—
AGALITE.		John W. Higman Co.....	—	FILTERING SYSTEMS.	
UnionTalc Co.....	82	Paper Makers Chemical Co.....	4	Nerwood Engineering Co.....	5
U. S. Talc Co.....	82	Western Paper Makers Chemical Co.....	4	FLOOR COVERINGS.	
ALUM.		Star Clay Company.....	88	L. Sonneborn & Sons.....	—
The Kalbfleisch Corp.....	—	CLUTCHES (Friction, Etc.).		FLOOR HARDENER (Concrete).	
Pennsylvania Salt Mfg. Co.....	88	Hill Clutch Co.....	69	L. Sonneborn & Sons.....	—
Superior Chemical Co.....	80	COAL MINING.		FOURDRINER WIRES.	
Winkler Bros., Inc.....	80	Empire Coal Mining Co.....	—	Appleton Wire Works.....	88
ARCHITECTS AND ENGINEERS.		COATED PAPERS.		Buchanan Bolt & Wire Co.....	71
George F. Drew.....	76	McLaurin-Jones Co.....	—	Cable Excelsior Wire Mfg. Co.....	88
Hardy S. Ferguson.....	76	COGS.		Cheney, Bigelow Wire Works.....	86
William T. Field.....	76	N. P. Bowsher Co.....	88	Eastwood Wire Mfg. Co.....	88
George F. Hardy.....	76	Menasha Wood Split Pulley Co.....	77	Green Bay Wire Works.....	77
Herbert S. Kimball.....	76	COMPRESSORS (Air).		Lindsay Wire Weaving Co.....	78
Management Engineering and Development Co.....	77	The Nash Engineering Co.....	77	Joseph O'Neill Wire Works.....	78
H. B. Prather.....	76	CONVEYORS (Pulpwood).		The W. S. Tyler Company.....	87
F. L. Smith.....	76	Jeffrey Mfg. Co.....	64	FURNACES (Automatic).	
Stebbins Engineering Co.....	77	CORDAGE.		Murphy Iron Works.....	76
Thomas L. Tomlines & Son.....	76	Columbian Rope Co.....	—	GAUGES (Caliper).	
Vitale & Rothery.....	76	CUTTERS.		Farrel Foundry & Machine Co.....	25
Joseph H. Wallace & Co.....	76	Smith & Winchester Mfg. Co.....	7	GAUGES (Pressure, Indicating and Recording).	
ASBESTINE PULP.		DIE CUTTERS.		Bristol Co., The.....	7
International Pulp Co.....	Front Cover	Hoggson & Pettis Mfg. Co.....	—	GUMMED PAPERS.	
ASH-HANDLING MACHINERY.		Independent Die Co., Inc.....	6	McLaurin-Jones Co.....	—
Jeffrey Mfg. Co.....	64	DIGESTERS.		GUMMING AND GLUING MACHINERY.	
BALL BEARINGS.		American Welding Co.....	—	Potdevin Machine Co.....	9
S. K. F. Industries, Inc.....	—	DRINKING CUPS.		HEATERS.	
BARKERS.		F. N. Burt Company, Ltd.....	33	Gordon Co., Inc., Robert.....	—
Valley Iron Works.....	29	DRIVES (Gear).		IRON EXTRACTORS.	
BEARINGS (Collar Oiling).		Farrel Foundry & Machine Co.....	25	Oakes Co., Roland T.....	69
Hill Clutch Co.....	69	DRIVES (Silent Chain).		KNIVES, ETC.	
BEATER PADDLES.		Morse Chain Co.....	76	Bolton & Son, J. W.....	9
Menasha Wood Split Pulley Co.....	77	DRYER EXHAUSTS.		Machinery Co., of America.....	81
BEATING ENGINES.		The Nash Engineering Co.....	77	LUBRICANTS.	
Beloit Iron Works.....	14	DRYING SYSTEMS.		Vacuum Oil Co.....	—
Claffin Engineering Co.....	75	Open Coil Heater & Purifier Co.....	—	MICROMETERS.	
Dayton Beater & Hoist Co.....	80	W. F. Pickles.....	12	Ashcroft Mfg. Co.....	75
Dillon Machine Company, Inc.....	86	Ross Engineering Co., J. O.....	77	E. J. Cady & Co.....	23
Dilts Machine Works, Inc.....	69	DYES, ANILINE.		Foreign Paper Mills, Inc.....	3
Downingtown Mfg. Co.....	86	Calco Chemical Co.....	—	MICROMETER CALIPERS.	
Emerson Mfg. Co.....	78	Heller & Merz.....	12	Lobdell Car Wheel Co.....	46
Noble & Wood Machine Co.....	83	Mathieson Alkali Works.....	57	MILL COGS.	
Valley Iron Works.....	29	National Aniline & Chemical Co.....	—	N. P. Bowsher & Co.....	88
BELTING.		The White Tar Aniline Corporation.....	—	MILL INSTALLATIONS.	
Goodyear Tire & Rubber Co.....	—	DYE STUFFS.		The Layne-Ohio Company.....	31
R. D. Skinner & Co., Inc.....	—	E. I. Du Pont de Nemours & Co.....	—	MOTORS.	
BOILERS.		ELECTRIC HOISTS.		B. F. Perkins & Son, Inc.....	11
Heine Boiler Co.....	80	Shepherd Electric Crane & Hoist Co.....	63	OILS AND GREASE.	
BRONZE CASTINGS.		ENVELOPE MACHINES.		Vacuum Oil Co.....	—
Hyde Windlass Co.....	—	Potdevin Machine Co.....	9	PACKING.	
BUCKETS (Elevator).		F. L. Smith Machine Co.....	78	Jenkins Bros.....	63
Hendrick Mfg. Co.....	9	EVAPORATORS.		PAINTS AND VARNISHES.	
CALENDER ROLLS.		Zarembo Company.....	—	Du Pont de Nemours Co., E. I.....	—
Farrel Foundry & Machine Co.....	25	FAN PUMPS.		PAPER BAG MACHINERY.	
Lobdell Car Wheel Co.....	46	Valley Iron Works.....	29	Potdevin Machine Co.....	9
Norwood Engineering Co.....	5	FELTS AND JACKETS.		Smith & Winchester Mfg. Co.....	7
B. F. Perkins & Son, Inc.....	11	Albany Felt Co.....	10	PAPER BAG MANUFACTURERS.	
Textile Finishing Machinery Co.....	75	Appleton Woolen Mills.....	6	Hudson Bag Company.....	75
CARBON TOOLS.		Draper Bros. Co.....	80	Lawrence Bag Co.....	77
Thomas L. Dickinson.....	82	Fitchburg Duck Mills.....	2	Schorsch & Co.....	71
CASEIN.		F. C. Huyck & Son.....	13	PAPER BOX BOARDS.	
Caslin Mfg. Co.....	—	Knox Woolen Co.....	3	C. L. La Boiteux Co.....	5
CENTRIFUGAL PUMPS.		Lockport Felt Co.....	—	PAPER CUTTERS.	
Valley Iron Works.....	29	Orr Felt & Blanket Co.....	71	Hamblet Machine Co.....	11
CHAINS.		Shuler, Benninghofen Co.....	88	McLauthlin & Co., G. T.....	—
Jeffrey Mfg. Co.....	64	Waterbury Felt Co.....	4	PAPER DEALERS.	
CHEMICALS, COLORS, ETC.		Waterbury & Sons Co., H.....	82	M. M. Elish & Co.....	—
Arnold, Hoffman & Co., Inc.....	77	CLAY		R. F. Hammond.....	Front Cover
Du Pont de Nemours & Co.....	12	Atterbury Bros.....	Front Cover	Midwest Paper Co.....	82
Heller & Merz Co.....	12	John W. Higman Co.....	—	PAPER EXPORTERS.	
Kuttroff, Pickhardt & Co.....	87	Paper Makers Chemical Co.....	4	Hudson Trading Co.....	2
Mathieson Alkali Works.....	57	Western Paper Makers Chemical Co.....	4	Parsons Trading Co.....	Front Cover
The White Tar Aniline Corporation.....	—	Star Clay Company.....	88	Fred C. Strype.....	63
C. K. Williams & Co.....	88	CLUTCHES (Friction, Etc.).			

"BIGGS" ROTARY BLEACHING BOILERS

have been regarded as standard equipment for the last 34 years

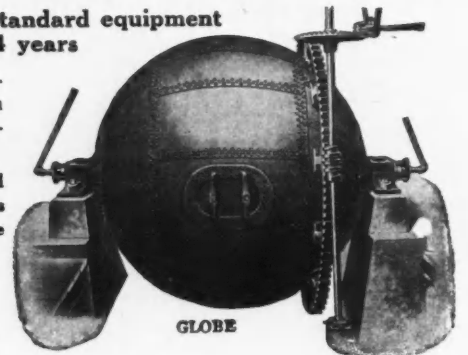


CYLINDER

May we not figure with you on your next installation?

Steel Storage and Pressure Tanks for every purpose

Write for prices



GLOBE

The Biggs Boiler Works Company Akron, Ohio, U.S.A.

CLASSIFIED INDEX TO ADVERTISEMENTS

PAPER MANUFACTURERS.	Page	PRESS ROLLS.	Page	SUCTION BOX COVERS.	Page
Bayless Mfg. Co.	4	Rodney Hunt Machine Co.	—	Menasha Wood Split Pulley Co.	77
Becker Paper Corporation	37	PLUGS (Wood).		SULPHITE, BLEACHED AND UNBLEACHED.	
Brown Company	5	O. L. Bartlett	11	J. Andersen & Co.	4 and 27
Collins Mfg. Co.	13	PULP PROCESS.		The Booregaard Co., Inc.	35
Diamond State Fibre Co.	Front Cover	Castle, Gotthel & Overton	6	Butterworth & Co., Inc.	77
Eastern Mfg. Co.	62	PULP STONES.		Canadian Robert Dollar Co.	41
Eaton-Dikeman Co.	—	International Pulp Stone Co.	Front Cover	Craig-Becker Co., Inc.	3
Fort Howard Paper Co.	11	Lombard & Co.	87	Eastern Manufacturing Co.	62
Franklin Paper Co.	82	PUMPS.		Mead Sales Co., The	59
Hammermill Paper Co.	61	Frederick Iron & Steel Co.	—	Parsons Pulp and Lumber Co.	80
Hanna Paper Corporation	5	Hayton Pump & Blower Co.	—	Price & Pierce, Ltd.	Front Cover
Howard Paper Co.	69	The Layne-Ohio Company	31	Pulp & Paper Trading Co.	4
McLaurin-Jones Co.	—	PUMPS (Vacuum).		SULPHUR.	
Missisquoi Pulp & Paper Co.	3	The Nash Engineering Co.	77	Texas Gulf Sulphur Co.	13
Mountain Mill Paper Co.	4	PRESSURE BULKERS.		Union Sulphur Co.	74
Poland Paper Co.	35	B. F. Perkins & Son, Inc.	11	TANKS.	
St. Regis Paper Co.	5	RAG CUTTERS.		W. E. Caldwell Co.	—
Sherman Paper Co.	82	B. F. Perkins & Son, Inc.	11	New England Tank & Tower Co.	87
Stratford Paper Co.	75	Taylor-Stiles & Co.	—	Stearns Lumber Co.	—
Wausau Sulphate Fibre Co.	—	REAM CUTTERS.		G. Woolford Wood Tank Co.	10
West Virginia Pulp & Paper Co.	8	Geo. T. McLauthlin Co.	—	TIMBER ESTIMATES.	
PAPER AND PULP MACHINERY.		RECORDING INSTRUMENTS.		R. R. Bradley	76
Bagley & Sewell Co.	—	Bristol Co.	7	P. T. Coolidge	76
Baker Mfg. Co.	83	REGISTERS.		James W. Sewall	76
Beloit Iron Works	14	Standard Register Co.	39	TRANSMISSION MACHINERY.	
Bird Machine Co.	21	ROLL GRINDERS.		H. W. Caldwell & Sons Co.	9
Black-Clawson Co.	81	Farrel Foundry & Machine Co.	25	Hill Clutch Co.	69
Clark-Aiken Co.	8	Lobdell Car Wheel Co.	46	Reeves Pulley Co.	81
Frank H. Davis	73	ROSIN.		TURBINES.	
Downingtown Mfg. Co.	86	Hercules Powder Co.	—	S. Morgan Smith Co.	—
Farrell Foundry & Machine Co.	25	ROSIN SIZE.		TURPENTINE.	
Glens Falls Machine Works	64	Arabol Mfg. Co.	87	Hercules Powder Co.	—
Improved Paper Machinery Co.	41	Paper Makers Chemical Co.	4	TWINES.	
Sandy Hill Iron & Brass Co.	—	Western Paper Makers Chemical Co.	4	American Manufacturing Co.	62
Shartle Bros. Machine Co.	74	ROTARY BLEACHING BOILERS.		VALVES.	
Smith & Winchester Mfg. Co.	7	Biggs Boiler Works Co.	84	Crane Co.	43
Trimble Machine Works	46	SAVEALLS.		Jenkins Bros.	63
Valley Iron Works	29	Bird Machine Co.	21	VAPOR ABSORPTION SYSTEMS.	
Waterville Iron Works	2	SATIN WHITE.		Ross Engineering Co., J. O.	76
PAPER MILL AGENTS.		Kaltheisch Corporation	—	VENTILATING FANS.	
Dillon & Barnes	82	Paper Makers Chemical Co.	4	B. F. Perkins & Son, Inc.	11
Melver, Dana T.	2	Western Paper Makers Chemical Co.	4	Ross Engineering Co., J. O.	76
Melby, E. C.	—	SCALES (Paper).		VEGETABLE PARCHMENT PAPERS.	
PAPER AND PULP MILL BROKERS.		Fred Baker	75	Kalamazoo Vegetable Parchment Co.	8
Gibbs-Brower Co.	—	E. J. Cady & Co.	23	WATER SUPPLIES.	
PAPER SPECIALIST.		Foreign Paper Mills, Inc.	3	The Layne-Ohio Company	31
Charles W. Bell	77	SCREENS.		WAXED PAPERS.	
PAPER STOCK.		Bird Machine Co.	21	Dragon Paper Mfg. Co.	—
Atterbury Bros.	Front Cover	Central Mfg. Co.	78	WOOD FLOUR.	
Butterworth & Co., Inc.	75	Wm. A. Hardy & Sons Co.	28	Union Wood Flour Co.	82
Castle, Gotthel & Overton	80	Union Screen Plate Co.	85	WOOD PULP IMPORTERS.	
Gumbinsky Bros.	88	SHREDDERS (Pulp and Paper).		American Wood Pulp Corp.	3
Hicks, Daniel M.	75	Valley Iron Works	29	J. Andersen & Co.	4 and 27
Mendelson Bros. Paper Stock Co.	77	SKYLIGHTS.		Ira L. Beebe & Co.	87
Penn Paper & Stock Co.	82	E. Van Noorden & Co.	87	The Booregaard Co., Inc.	35
Salomon Bros. & Co.	82	SLASHERS.		M. Gottesman & Co.	—
Train-Smith Co.	Front Cover	Ryther & Pringle Co.	—	Hammond, R. F.	Front Cover
PAPER TESTERS.		SLITTERS AND REWINDERS.		E. T. Keller Company	87
Ashcroft Mfg. Co.	75	C. Benninghofen & Sons	82	Lagerloef Trading Co.	12
Foreign Paper Mills, Inc.	3	Cameron Machine Works	82	Mead Sales Co., The	59
B. F. Perkins & Son, Inc.	11	Dietz Machine Works	81	Nilsen, Rantoul & Co., Inc.	59
Valley Iron Works	29	Samuel M. Langston Co.	82	A. J. Pagel & Co., Inc.	19
PAPER TUBE MACHINERY.		STARCH.		I. F. Patton & Co., Inc.	10
Dietz Machine Works	81	Corn Products Refining Company	8	Perkins-Goodwin Co.	37
Grissinger Machine Works	80	STEAM SPECIALTIES.		Scandinavian-American Trading Company	Front Cover
PAPER WAXING MACHINERY.		Crane Co.	43	WOOD ROLLS.	
Farrel Foundry & Machine Co.	9	Open Coil Heater & Purifier Co.	—	Rodney Hunt Machine Co.	—
Potdevin Machine Co.	—	STITCHING MACHINERY.			
PERFORATING MACHINES.		Saranac Machine Co.	83		
Dietz Machine Works	81	STOCK REGULATORS.			
PERFORATING METAL.		Trimble Machine Works	46		
Harrington & King Perforating Co.	71				
Hendrick Mfg. Co.	9				
Charles Mundt & Sons	78				
Manhattan Perforated Metal Co.	82				

Fitchburg, Mass., U. S. A.
UNION SCREEN PLATE COMPANY
Lennoxville, P. Q. Canada

UNION BRONZE SCREEN PLATES

(Best phosphorized Cast Metal)

Old Plates RECLOSED and RECUT to accurate gauge.

UNION BRONZE SCREWS for Screen Plates

ROLLED BRASS

(Union Quality)

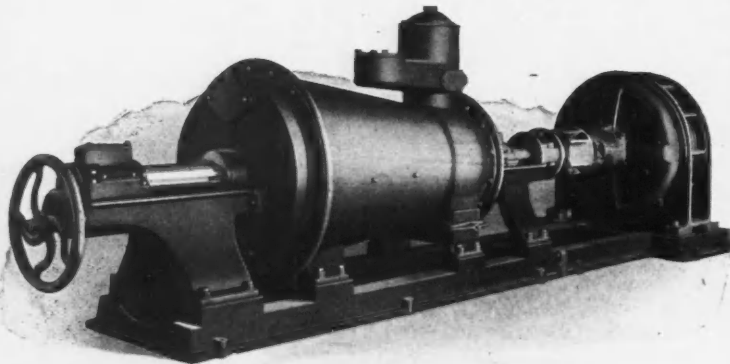
UNION BRONZE SUCTION BOX PLATES



THE UNION-WITHAM SCREEN PLATE VAT AND FASTENERS
 THE ORIGINAL THE BEST
 Over One Thousand in Successful Operation Recommended by Screen Makers

Immediate Delivery of the Largest Orders. Satisfaction Guaranteed.

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.

COUCH ROLLS—DRUM ROLLS

Rubber Covered Press Rolls
Gun Metal Covered Press Rolls

Felt rolls of wood, steel tube and copper covered. Highest quality material. Best of workmanship.

DOWNINGTOWN MANUFACTURING CO.
EAST DOWNINGTOWN, PA. U. S. A.

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

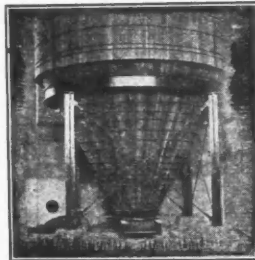
Dry Rosin Size



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

NEW ENGLAND TANK & TOWER CO.



**WOOD TANKS
FOR ALL
PURPOSES**

Everett Station, Boston, Mass.
New York Office, 30 Church St.

E. J. KELLER COMPANY

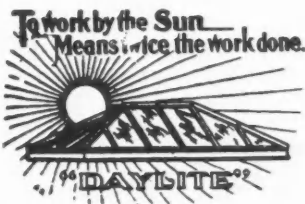
INCORPORATED

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.

Importers and Dealers

236-238 A Street : BOSTON, MASS.
Branch at Montreal, Canada

ESTABLISHED 1851

IRA L. BEEBE

CYRUS E. JONES

IRA L. BEEBE & CO.

132 Nassau St., New York

IMPORTERS AND DEALERS IN



WOOD PULP

"TYLER" Fourdrinier Wires

In all widths up to 250 inches

CYLINDER FACES

WASHER WIRES

In Brass, Bronze and Phosphor Bronze

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.
FOURDRINIER WIRES
 BELLEVILLE, NEW JERSEY, U.S.A.

THE WM. CABLE
EXCELSIOR WIRE MFG. CO.

Established 1846
 Incorporated 1870-1896

Manufacturers of
 Superior Fourdriner
 Wires
 Brass, Copper and
 Iron Wire Cloth of
 Every Description.
 Best Quality of
 Wire Rope.

Write for Price List

74-90 Ainslie St. BROOKLYN, N. Y.

Don't Guess at Important Matters

BOWSHER'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. Bowsher Co., South Bend, Ind.

NATRONA
Porous Alum
 MANUFACTURED BY
PENNSYLVANIA SALT MFG. COMPANY
 PHILADELPHIA

Hamilton "A" Plate
Press Felts

Are unsurpassed for durability and for excellence of finish on paper. 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 Coppers Works of Allentown, Pa.

Manufacturers, Miners and Importers of Coloring Materials, such as Venetian Reds, Red, Brown, Black, Yellow, Oxides, Chrome and other Ochres, also Paper Fillers—as Agalites, Mineral Pulp, Tale, China and other Clays.

COLORS FOR PAPER
MANUFACTURERS' USE

Rags are the most expensive paper-making material. Lower your ultimate costs with America's best

"G.B." 3RDS & BLUES

Inquiries solicited

GUMBINSKY BROS. CO.

America's Largest Packers of Rags and Waste Paper
 2261 South Union Ave., Chicago, Illinois

STAR CLAY Co.
 MINERS & MANUFACTURERS OF
WHITE CHINA CLAY,
 ESPECIALLY ADAPTED TO PAPER MAKERS USE.
 MERTZTOWN, PA.

FOURDRINIER
CYLINDER
WASHER. **WIRES**

50 years' experience as wire makers
 insures highest quality of product

"Appleton Wires
Are Good Wires"

Appleton Wire Works Appleton, Wis.