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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY
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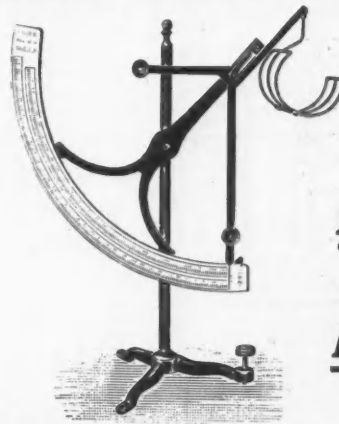
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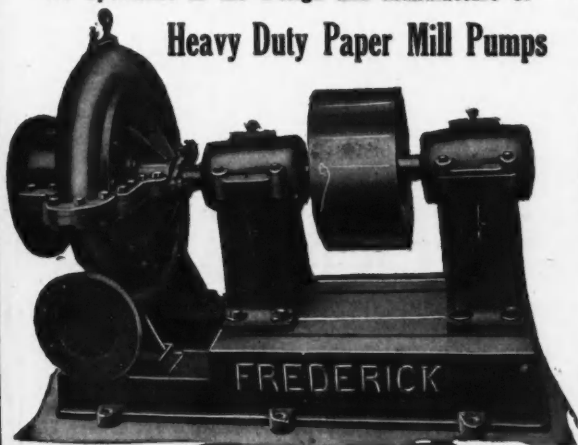
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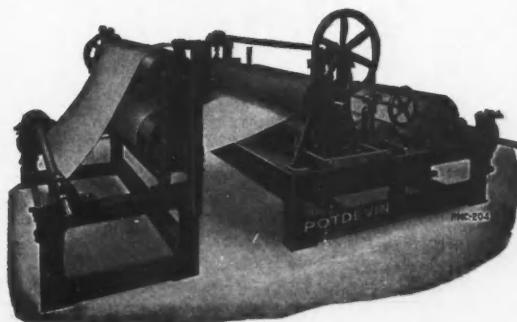


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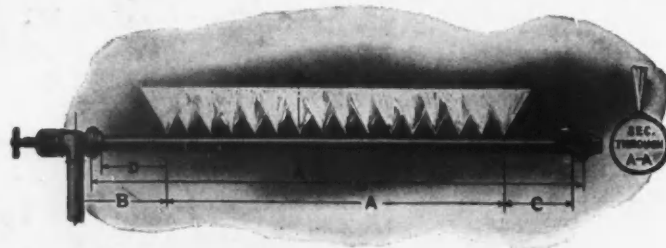
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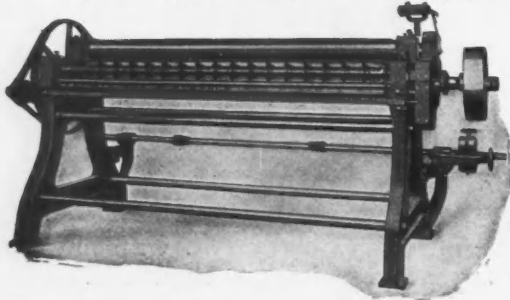
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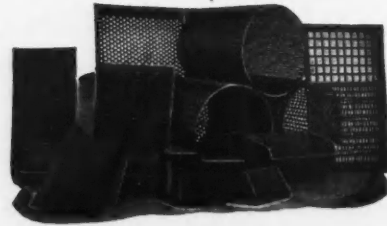
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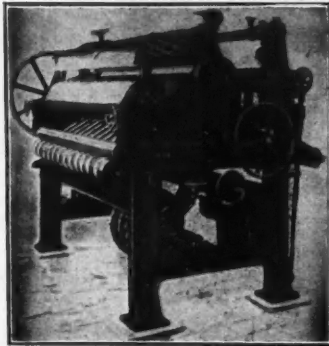
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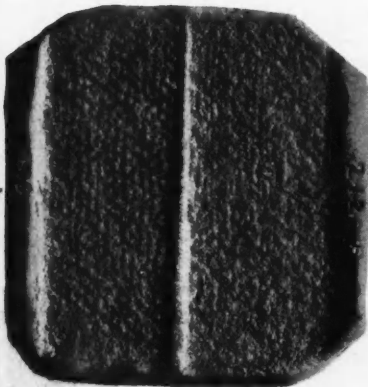
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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTY-FIRST YEAR

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LESLIE R. PALMER, President

J. W. VAN GORDON, Vice-President

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NEW YORK AND CHICAGO

Thursday, August 10, 1922

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JOINT PRINTING COMMITTEE MAKES PAPER AWARDS

Bids for Paper for the U. S. Government Printing Office Which Were Opened Last Monday for a Six Months' Supply of Paper Beginning September 1 Are Rejected in a Large Number of Instances Because the Prices Are Too High—List of the Successful Paper Concerns to Whom the Awards Are Made Together With Prices at Which the Bids Are Let

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 7, 1922.—The Joint Committee on Printing, after practically an all-day session spent in consideration of the proposals received for the supply of paper for the U. S. Government Printing Office for the six months' beginning September 1, made the following report:

Printing Papers

- No. 1—40,000 lbs., White News, 24x36—32 lbs.; rolls, 19 ins. wide.
All bids rejected.
- No. 2—1,000,000 lbs., White News, 24x36—32 lbs.; rolls, 48 ins. wide.
All bids rejected.

Machine-Finish Printing, No. 1

- No. 3—150,000 lbs., 25x38—35 lbs.; cut 24x32 ins. flat.
Dobler & Mudge, 6.47c.
- No. 4—600,000 lbs., 25x38—35 lbs.; cut 24x38 and 38x48 ins. flat.
Dobler & Mudge, 6.72c.
- No. 5—600,000 lbs., 25x38—35 lbs.; cut 24x38 and 38x48 ins. flat.
International Paper Company, 6.76c.
- No. 6—700,000 lbs., 25x38—35 lbs.; rolls, 38 and 48 ins. wide.
All bids rejected.
- No. 7—1,000,000 lbs., 25x38—35 lbs.; rolls, 18, 19, 21, and 23 ins. wide.
All bids rejected.
- No. 8—700,000 lbs., 25x38—35 lbs.; rolls, 38 and 48 ins. wide.
All bids rejected.
- No. 9—100,000 lbs., 25x38—40 lbs.; rolls, 38 and 48 ins. wide.
P. H. Glatfelter Company, Spring Grove, Pa., 5.60c.
- Nos. 10, 11, 12 and 13—No bids called for.
- No. 14—40,000 lbs., 25x38—40 lbs.; rolls, 19 ins. wide.
All bids rejected.
- No. 15—300,000 lbs., 25x38—40 lbs.; cut 24x38 and 38x48 ins. flat.
All bids rejected.
- No. 16—250,000 lbs., 25x38—40 lbs.; rolls, 36¾ ins. wide.
P. H. Glatfelter Company, 5.6c.
- No. 17—50,000 lbs., 25x38—50 lbs.; rolls, 33¾ ins. wide.
P. H. Glatfelter Company, 5.6c.
- No. 18—200,000 lbs., 25x38—50 lbs.; cut 24x38, 28x40, 32x42, 38x48, and 41x52 ins. flat.
P. H. Glatfelter Company, 5.8c.
- No. 19—150,000 lbs., 25x38—60 and 70 lbs.; cut 29x41 and 38x48 ins. flat (the grain of sheet to run as ordered).
P. H. Glatfelter Company, 5.8c.
- No. 20—8,000 lbs., Machine-finish, Printing Paper, No. 1, salmon, 25x38—50 lbs. flat. Minimum order, 5,000 lbs.
No bids.

Plant-Fiber Machine-Finish Printing, No. 1

- No. 21—250,000 lbs., 25x38—40 lbs.; rolls, 19, 38, and 48 ins. wide.
No bids.
- No. 22—250,000 lbs., 25x38—40 lbs.; rolls, 19, 38, and 48 ins. wide.
No bids.

Antique Printing

- No. 23—15,000 lbs., 25x38—50 lbs.; cut 25x38, 29x41, and 38x50 ins. flat.
All bids rejected.

Opaque Printing, High Machine Finish

- No. 24—15,000 lbs., 25x38—30 lbs.; cut 32x48 and 38x48 ins. flat.
No bids.

Rag Machine-Finish Printing

- No. 25—150,000 lbs., 25x38—40 lbs.; cut 32x48 ins. flat.
No bids.
- No. 26—100,000 lbs., 25x38—40 lbs.; cut 38x48 ins. flat.
No bids.
- No. 27—100,000 lbs., 25x38—40 lbs.; cut 38x48 ins. flat.
No bids.
- No. 28—50,000 lbs., 25x38—40 and 45 lbs.; cut any size, flat, max. width 42 ins.
No bids.
- No. 29—50,000 lbs., 25x38—40 and 45 lbs.; cut any size, flat, max. width 42 ins.
No bids.

Sized and Supercalendered Printing (Sample A)

- No. 30—40,000 lbs., 25x38—45 lbs.; cut 24x32 and 32x48 ins. flat.
All bids rejected.
- No. 31—300,000 lbs., 25x38—45 lbs.; cut 31¼x45½ ins. flat.
All bids rejected.
- No. 32—500,000 lbs., 25x38—50 lbs.; cut 24x38 and 38x48 ins. flat.
All bids rejected.
- No. 33—250,000 lbs., 25x38—45 lbs.; rolls, 19 and 38 ins. wide.
All bids rejected.
- No. 34—5,000 lbs., 25x38—45 and 50 lbs.; cut any size, flat, max. width 42 ins.
No bids.

Sized and Supercalendered Printing (Sample B)

- No. 35—10,000 lbs., 25x38—40, 45, and 50 lbs.; cut any size, flat, max. width 42 ins.
No bids.

Halftone Printing

- No. 36—100,000 lbs., 25x38—70 lbs.; cut 24x38 and 38x48 ins. flat.
All bids rejected.

Single-Coated Both Sides Book

- No. 37—50,000 lbs., 25x38—70 lbs., cut any size, flat, max. width 42 ins.
All bids rejected.

Double-Coated One Side Book (Sample A)

- No. 38—5,000 lbs., 25x38—70 lbs.; cut any size, flat, max. width 42 ins.
All bids rejected.

Double-Coated Both Sides Book (Sample A)

- No. 39—80,000 lbs., 25x38—70 and 80 lbs.; cut any size, flat, max. width 42 ins.
All bids rejected.

Double-Coated One Side Book (Sample B)

- No. 40—5,000 lbs., 25x38—70 lbs.; cut any size, flat, max. width 42 ins.
All bids rejected.

Double-Coated Both Sides Book (Sample B)

- No. 41—25,000 lbs., 25x38—70 and 80 lbs.; cut any size, flat, max. width, 42 ins.
All bids rejected.

U S M O Writing

- No. 42—1,500 lbs., No. 16; rolls, 8½ ins. wide.
All bids rejected.

White French Folio

- No. 43—750 lbs., No. 10, cut 17x22 ins., flat, min. order, 750 lbs.
No bids.

Writing, White and Colored, High Machine Finish

- No. 44—25,000 lbs., White Writing Paper, No. 13; cut 23x32 ins. flat.
All bids rejected.
- No. 45—300,000 lbs., White Writing Paper, No. 16; cut 21½x32½ and 26x34½ ins. flat.
R. P. Andrews Paper Company, 6.79c.
- No. 46—300,000 lbs., White Writing Paper, No. 20; cut 17x28 and 21x32 ins. flat.
R. P. Andrews Paper Company, 6.79c.
- No. 47—40,000 lbs., White Writing Paper, No. 13; rolls, min. width 8 ins., max. width 38 ins.
All bids rejected.
- No. 48—20,000 lbs., White Writing Paper, No. 161; rolls, min. width 8 ins., max. width 48 ins.
All bids rejected.
- No. 49—300,000 lbs., White Writing Paper, No. 20; rolls, min. width 8 ins., max. width 48 ins.
R. P. Andrews Paper Company, 6.39c.
- No. 50—20,000 lbs., Colored Writing Paper, blue, green, pink, and yellow, Nos. 11 and 13; cut 17x28, 21x32, and 22x34 ins. flat.
No bids.
- No. 51—60,000 lbs., Colored Writing Paper, blue, green, pink, and yellow, Nos. 16 and 20; cut 17x28, 21x32, and 22x34 ins. flat.
All bids rejected.

White Writing, Tub-Sized, Air or Loft Dried

- No. 52—100,000 lbs., No. 13; cut 23x36, 24x38, and 28x34 ins. flat.
The Aetna Paper Company, Dayton, Ohio, 13.16 cents.
- No. 53—350,000 lbs., No. 16; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 10.76c.
- No. 54—50,000 lbs., No. 16; cut 22¾x31½ ins. flat.
The Aetna Paper Company, 11.06c.
- No. 55—700,000 lbs., No. 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 9.76c.
- No. 56—700,000 lbs., No. 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 9.76c.
- No. 57—250,000 lbs., No. 24; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 9.56c.
- No. 58—5,000 lbs., No. 36; cut 19x24, and 20x28 ins. flat.
The Aetna Paper Company, 14.06c.

Colored Writing, Tub-Sized, Air or Loft Dried

- No. 59—160,000 lbs., blue, buff, green, dark pink, light pink, salmon, and yellow, No. 16; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 12.06c.
- No. 60—180,000 lbs., blue, buff, green, dark pink, light pink, salmon, and yellow, No. 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 11.96c.
- No. 61—180,000 lbs., blue, buff, green, dark pink, light pink, salmon, and yellow, No. 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 11.96c.

- No. 62—5,000 lbs., blue, buff, green, dark pink, light pink, salmon, and yellow, No. 24; cut any size; flat, min. width 17 ins., max. width 32 ins.
All bids rejected.

Fine White Writing, Tub-Sized and Loft-Dried

- No. 63—2,000 lbs., Nos. 28 and 32; cut 21x32 ins. flat, min. order, 2,500 lbs.
R. P. Andrews Paper Company, 21c.

Safety Writing, Machine Finish

- No. 64—1,500 lbs., blue, pink, green, salmon, and yellow, No. 24; cut 17x28 and 21x32 ins. flat.
No bids.

U S M O Blue Safety Writing, Machine Finish, Safety or Sensitive Design

- No. 65—250,000 lbs., No. 16; rolls, 11 and 22 ins. wide.
R. P. Andrews Paper Company, 18.8c.

Map, Lithograph Finish (Sample A)

- No. 66—25,000 lbs., Nos. 16 and 20; cut any size; flat, max. width 44 ins.
- Government Printing Office Delivery.
Old Dominion Paper Company, 11.999c.
 - F. O. B. Menasha, Wis.
Old Dominion Paper Company, 11.129c.

Map, Lithograph Finish, Tub-Sized, Air or Loft Dried (Sample B)

- No. 67—50,000 lbs., Nos. 16 and 20; cut any size; flat, max. width 44 ins.
- Government Printing Office Delivery.
Old Dominion Paper Company, 14.999c.
 - F. O. B. Neenah, Wis.
Old Dominion Paper Company, 13.858c.

Thin Bond, White and Colored, Glazed and Unglazed, Tub-Sized, Machine or Air Dried

- No. 68—120,000 lbs., No. 9; cut 17x28, 19x24, 21x32, and 22½x34½ ins. flat.
The Whitaker Paper Company, Baltimore, Md., 15.09c.
- No. 69—25,000 lbs., No. 13; cut 21x32, 24x38, and 28x34 ins. flat.
The Aetna Paper Company, 13.16c.
- No. 70—2,500 lbs., blue, buff, green, pink, salmon, and yellow, No. 9; cut 17x28, 21x32, and 22x34 ins. flat.
All bids rejected.
- No. 71—15,000 lbs., blue, buff, green, pink, salmon, and yellow, No. 13; cut 21x32, 24x38, and 28x34 ins. flat.
R. P. Andrews Paper Company, 13.6c.

Stationery Bond, White and Colored, Glazed and Unglazed, Tub-Sized, Air or Loft Dried

- No. 72—25,000 lbs., Nos. 16 and 24; cut 17x28, 18x23, and 21x32 ins. flat.
The Aetna Paper Company, 11.16c.
- No. 73—200,000 lbs., No. 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
The Aetna Paper Company, 10.86c.
- No. 74—5,000 lbs., blue, green, pink, salmon, and yellow, Nos. 16 and 20; cut any size; flat, min. width 17 ins., max. width 32 ins.
All bids rejected.

Fine Bond, White, Glazed and Unglazed, Tub-Sized and Loft Dried

- No. 75—5,000 lbs., Nos. 16, 20, and 24; cut 16x21 and 17x22 ins. flat.
All bids rejected.

Declaration Bond, Tub-Sized and Loft Dried

- No. 76—2,500 lbs., No. 20; cut 17x22 ins. flat, min. order, 2,000 lbs.
All bids rejected.

Parchment Deed

No. 77—1,000 lbs., Tub-sized and Loft dried, Nos. 32 and 36; cut 33x34 ins. flat, min. order, 1,000 lbs.
All bids rejected.

Commercial Ledger, White, Tub-Sized, Air or Loft Dried

No. 78—60,000 lbs., No. 28; cut 17x28, 18½x36, 21x32, 28x29, and 28x34 ins. flat.

Dobler & Mudge, Baltimore, Md., 14.2 cents

No. 79—50,000 lbs., No. 32; cut 21x32 and 23x36 ins. flat.

Dobler & Mudge, 14.2c.

No. 80—80,000 lbs., Nos. 36 and 40; cut 19x24, 20x28, and 21x32 ins. flat. (Strength shall be not less than 58 points, No. 40.)

Dobler & Mudge, 14.2c.

No. 81—5,000 lbs., No. 48; cut 21x32½ ins. flat. (Strength shall be not less than 65 points.)

R. P. Andrews Paper Company, 16.44c.

Commercial Ledger, Colored, Tub-Sized, Air or Loft Dried

No. 82—60,000 lbs., blue, pink, and yellow, Nos. 28, 32, and 36; cut 17x28, 18½x36, 19x24, 21x32, and 23x36 ins. flat.

Dobler & Mudge, 15.2c.

No. 83—30,000 lbs., blue, buff, green, pink, salmon, and yellow, No. 48; cut 21x32½ ins. flat. (Strength shall be not less than 65 points.)

All bids rejected.

No. 84—10,000 lbs., blue, buff, green, pink, salmon, and yellow, No. 60; cut 21x32½ ins. (Without watermark. Strength shall be not less than 80 points.)

All bids rejected.

Ledger, White, Tub-Sized and Loft Dried

No. 85—25,000 lbs., No. 24; cut 17x28, 22¾x31½, and 24x38 ins. flat.

All bids rejected.

No. 86—60,000 lbs., No. 28; cut 17x28, 21x32, 23x36, and 24x38 ins. flat.

All bids rejected.

No. 87—30,000 lbs., No. 32; cut 17x28, 18½x42, 21x32, and 23x36 ins. flat.

All bids rejected.

No. 88—20,000 lbs., No. 36; cut 17x28, 20x28, and 24x38 ins. flat.

All bids rejected.

No. 89—20,000 lbs., No. 40; cut 21x32½ and 21x42 ins. flat. (Strength shall be not less than 88 points.)

All bids rejected.

No. 90—20,000 lbs., No. 48; cut 20½x24¾, 21x32½ and 22¾x31½ ins. flat. (Strength shall be not less than 100 points.)

All bids rejected.

Heavy Ledger, White, Single-Ply, Tub-Sized and Loft Dried

No. 91—80,000 lbs., No. 60; cut 20½x30½ and 21x32½ ins. flat.

R. P. Andrews Paper Company, 22.57.

Tissue

No. 92—1,000 lbs., White Tissue Paper, 20x30—8 lbs.; flat, min. order, 500 lbs.

All bids rejected.

Body Stereo

No. 93—750 lbs., Body Stero Tissue Paper, 19x24—6 lbs.; min. order, 750 lbs.

All bids rejected.

Smooth Cover, Colored

No. 94—70,000 lbs., dark blue, light blue, brown, granite, green, pink, tea, and yellow, 20x26—50 lbs.; cut 20x25 and 33x46 ins. flat.

R. P. Andrews Paper Company, 8.48c.

Rough Cover, Colored (Sample A)

No. 95—7,000 lbs., quaker drab, robin's egg, and terra cotta, 20x25—48 lbs. flat.

R. P. Andrews Paper Company, 8.48c.

Rough Cover, Colored (Sample B)

No. 96—40,000 lbs., dawn, sage, goblin blue, suede, khaki, and moss green, 20x25—48 lbs. flat.

All bids rejected.

Coated Cover, Colored

No. 97—20,000 lbs., india tint, light green, and primrose, 26½x41—104 lbs. flat.

All bids rejected.

Cloth-Lined Cover

No. 98—5,000 sheets, brown, quaker drab, russet, and white, 20x26—65 lbs.

All bids rejected.

Kraft Wrapping

No. 99—20,000 lbs., 24x36—30 to 80 lbs.; cut any size. (Soft ream fold in bundles.)

R. P. Andrews Paper Company, 6.6c.

Wood Manila

No. 100—50,000 lbs., 24x36—38 to 60 lbs.; cut 21x32 and 25x38 ins. flat.

All bids rejected.

No. 101—350,000 lbs., 24x36—38 to 60 lbs.; rolls, min. width 6 ins., max. width 48 ins.

R. P. Andrews Paper Company, 4.94c.

Sulphite Manila, High Finish

No. 102, 100,000 lbs., 24x36—133 lbs.; cut any size; flat.

All bids rejected.

No. 103—30,000 lbs., 24x36—80 lbs.; rolls, 18 ins. wide.

All bids rejected.

Rope Manila

No. 104—10,000 lbs., 24x36—60 lbs.; cut 24x38, 27x38, and 40x42 ins. flat.

No bids.

No. 105—15,000 lbs., 24x36—70 lbs.; cut 24x38 ins. flat.

No bids.

No. 106—25,000 lbs., 24x36—80 lbs.; cut 27x38, 33x33, and 38x38 ins. flat.

All bids rejected.

No. 107—30,000 lbs., 24x36—140 lbs.; cut 24x38 ins. flat.

All bids rejected.

No. 108—5,000 lbs., 24x36—70 lbs.; rolls, min. width 6 ins., max. width 36 ins.

No bids.

Oiled Manila Tympan

No. 109—10,000 lbs., 24x36—86 lbs.; rolls, 19, 38, 48, and 55 ins. wide; max. weight 150 lbs.

All bids rejected.

Manila Board

No. 110—40,000 lbs., 22½x28½—75 lbs.; rolls, 21¾ ins. wide.

Samuel S. Alcorn, Philadelphia, Pa., 4.95c.

Manila Cardboard

No. 111—20,000 lbs., 22½x28½—200 lbs.; cut 17x28, 21x32, and 22½x28½ ins. flat.

Samuel S. Alcorn, 5.50c.

Manila Tag Board, Calendered

No. 112—50,000 lbs., 22½x28½—75 lbs.; rolls, 24 and 26¾ ins. wide.

All bids rejected.

A New Sulphite for Book Mills!



CLEAN

GOOD STRENGTH

HIGH COLOR

UNBLEACHED SULPHITE

Made by the MO och DOMSJÖ A.-B., STOCKHOLM, SWEDEN

This pulp contains all the necessary requirements demanded by Mills wanting an exceptionally high color, clean, strong sulphite

*Wire us for Samples and Quotations
For Shipments over the Balance of the Year*

A. J. PAGEL & CO., Inc.

347 Madison Avenue

New York City

Colored Cardboard

No. 113—10,000 lbs., ash gray, blue, buff, green, lemon, and orange, 22x28—196 lbs. flat, min. order, 2,000 lbs.
Old Dominion Paper Company, 8.999c.

White China Board

No. 114—10,000 lbs., 22x28—196 lbs. flat, min. order, 2,000 lbs.
Old Dominion Paper Company, 7.999c.

Colored Bristol Board

No. 115—120,000 lbs., buff, blue, gray, green, melon, pink, quaker drab, and yellow, 21x31—102 lbs. flat.
Deerfield Valley Paper Company, Boston, Mass., 4.87c.

No. 116—150,000 lbs., blue, brown, gray, green, melon, pink, and yellow, 22½x28½—100 lbs.; rolls, 20 ins. wide.
Deerfield Valley Paper Company, 4.7c.

No. 117—150,000 lbs., blue, brown, gray, green, melon, pink, and yellow, 22½x28½—100 lbs.; rolls, 20 ins. wide.
Deerfield Valley Paper Company, 4.7c.

White and Colored Bristol Board, No. 1

No. 118—50,000 lbs., White Bristol Board, 22½x28½—120 lbs.; cut 21x32 and 22½x28½ ins. flat.
All bids rejected.

No. 119—5,000 lbs., blue, brown, gray, green, melon, pink, and yellow, 22½x28½—100 lbs. flat.
No bids.

U. S. Postal Card Cream Bristol

No. 120—3,500,000 lbs., 22½x28½—104 lbs.; rolls, 44½ ins. wide.
All bids rejected.

Index Bristol Board

No. 121—1,000 lbs. white, 22½x28½—181 lbs. flat.
No bids.

No. 122—3,000 lbs., blue, buff, fawn, green, pink, salmon, and yellow, 22½x28½—181 lbs. flat.
No bids.

White Paraffin

No. 123—1,000 lbs., 24x38—16 lbs. flat, min. order, 500 lbs.
The Whitaker Paper Company, 14.0c.

White and Colored Noncurling Gummed

No. 124—2,000 lbs., white, 17x22—23 lbs. and 20x24—30 lbs. flat, min. order, 250 lbs.
R. P. Andrews Paper Company, 14.4c.

No. 125—250 lbs., blue and pink, 17x22—23 lbs. and 20x24—30 lbs. flat, min. order, 250 lbs.
R. P. Andrews Paper Company, 20.4c.

Blotting

No. 126—1,000 lbs., white, blue, and pink, 60 and 80 lbs.; cut 19x24 ins. flat, min. order, 500 lbs.
Mathers-Lamm Paper Company, 8.23c.

Stereotype Molding, White

No. 127—1,500 lbs., 19x24—50 lbs. flat, min. order, 1,000 lbs.
R. P. Andrews Paper Company, 9.97c.

Stereotype Molding, Red

No. 128—500 lbs., 19x24—20 lbs. flat, min. order, 500 lbs.
The Whitaker Paper Company, 12.47c.

Offset, for Web Presses

No. 129—6,000 lbs., 24x36—30 lbs.; rolls, 39 ins. wide, min. order, 2,000 lbs.
Republic Bag and Paper Company, 6.9c.

Plate Wiping, for Embossing Presses

No. 130—1,000 lbs., 24x36—60 lbs.; rolls, without breaks or scraps, wound solid at an even tension, 4, 5, 6, 7 and 8 ins. wide, max. diameter 12 ins. with 1¾ ins. hole in the center.
R. P. Andrews Paper Company, 7.9c.

Back Lining, for Case-Making Machines

No. 131—800 lbs., 24x36—90 lbs.; rolls, 24 ins. wide, min. order, 1,000 lbs.
No bids.

Lining, for Headband, Lining, and Crashing Machines

No. 132—1,000, 24x36—80 lbs.; rolls, 24 ins. wide, min. order, 2,000 lbs.
R. P. Andrews Paper Company, 7.3c.

Tablet Stripping

No. 133—500 lbs., 24x36—40 lbs.; rolls, 24 ins. wide, min. order, 500 lbs.
R. P. Andrews Paper Company, 7.3c.

Pressboard

No. 134—1,000 lbs., 24x32 ins., weight 80 lbs to 144 sheets flat, min. order, 1,000 lbs.
R. P. Andrews Paper Company, 10.72c.

Binder's Boards

No. 135—500 lbs., News Board, 26x38 ins., Nos. 100 and 120. (To be trimmed square on four sides.) Minimum order, 500 lbs.
All bids rejected.

No. 136—220,000 lbs., Chip Board, 26x38 ins., No. 50
All bids rejected.

No. 137—40,000 lbs., Strawboard, 26x38 ins., No. 50.
All bids rejected.

No. 138—5,000 lbs., Strawboard, lined, 26x38 ins., No. 50.
All bids rejected.

No. 139—40,000 lbs., Box Board, lined one side, rolled, flat, non-warping, of even thickness, approximately .06 in., and free from lumps, irregularities, and defects; size, 24½x34 ins., 35 sheets to the bundle of 50 lbs.
All bids rejected.

No. 140—300,000 lbs., Binder's Board, No. 2 quality, rolled, flat, nonwarping, of even thickness, and free from lumps, irregularities, and defects. Boards must be springy and corners should not break readily when bent sharply.
Nos. 16 to 40, 25x30 ins.
All bids rejected.

No. 141—10,000 lbs., Binder's Board, No. 1 quality, medium hard-rolled, flat, nonwarping, of even thickness and free from lumps, irregularities, and defects. Boards must be decidedly springy and corners should not break readily when bent sharply. Nos. 12 to 30, 25x30 ins.
All bids rejected.

No. 142—60,000 lbs., Binder's Board, best quality hard-rolled, flat, nonwarping, of even thickness and free from lumps, irregularities, and defects. Boards must be decidedly springy and corners should not break readily when bent sharply. Nos. 18 to 45, 19x30; Nos. 16 to 90, 22x26 ins.
All bids rejected.

No. 143—10,000 lbs., Trunk Board, medium hard-rolled, flat, nonwarping, of even thickness and free from lumps, irregularities, and defects. Boards must be decidedly springy and corners should not break readily when bent sharply. Size 34x44 ins., Nos. 6 to 10.
All bids rejected.

Upson Co.'s Novel Vacation Scheme

LOCKPORT, N. Y., August 6, 1922.—The Upson Company, manufacturer of fiber board completed a novel vacation period for its mill and office employees extending from July 23 until August 7. While employees of the company were on vacation, a "skeleton organization" was retained to transact routine business matters. Letters mailed to the trade announcing the vacation urged at the same time that stocks be checked up and orders anticipated by at least thirty days.



"National" News



OF INTEREST TO DYERS AND THE COLOR USING INDUSTRIES IN GENERAL

Prepared by the

NATIONAL ANILINE & CHEMICAL COMPANY, INC.

An Express Package or a Carload



At its Branch Offices, located at the representative centers of the dyestuff using trades, the National Aniline & Chemical Company, Inc., maintains in ample volume stocks of those dyes usually called for by the local trades.

From these stocks prompt deliveries are made on orders calling for one pound in some cases, to five thousand pounds in others, to meet the needs of manufacturers who use color in their daily operations.

More About Dyes for Wall-Paper Lakes

In last month's announcement on this page attention was called to the extent of the "National" line of dyes suitable for wall-paper lakes.

In this advertisement we are listing a few of these dyes, selected as being especially suitable for the exacting requirements of the paper trade.

There are two main groups of lake dyes—basic and acid—each possessing certain advantages over the other, depending upon the results sought.

Basic Dyes are preferred where lakes are required of good strength, and consequent economy of production. Their permanency to light is sufficient for all ordinary purposes.

- National Auramine O
- National Chrysoidine Y Extra
- National Chrysoidine 3 R
- National Bismarck Brown Y Extra
- National Bismarck Brown 53
- National Safranin A
- National Rhodamine B
- National Fuchsine NB

- National Victoria Blue B
- National Methylene Blue BB
- National Victoria Green WB Cryst.
- National Brilliant Green B Cryst.

The "National" Acid Dyes suggested below give clear and brilliant shades and in some instances very good strength. Although as a class they are in this respect inferior to basic dyes their fastness properties are superior to the latter. Here is the list:

- National Quinoline Yellow
- National Wool Yellow Extra Conc.
- National Metanil Yellow 1955
- National Wool Orange A Conc.
- National Wool Orange R Conc.
- National Croceine Scarlet MOO
- National Lake Scarlet R
- National Azo Rubine Extra
- National Wool Violet 4 BN
- National Acid Fast Violet BG
- National Alkali Blue R
- National Alkali Blue B
- National Pure Soluble Blue A
- National Pure Soluble Blue B
- National Alphazurine A
- National Alphazurine FG
- National Acid Green L Extra
- National Fast Acid Green B

The "National" paper laboratories and the service of our technical staff are cheerfully at your service.

Ragbond and Ledger Writing Papers

To manufacture a sheet of writing paper that shall combine attractiveness, strength and permanency, the most careful selection of raw materials is imperative.

Aniline dyes are so important in the process of manufacture that their quality must conform to the high standard exacted of the other raw materials.

The various "National" dyes recommended for ragbond and ledger papers have been tested in use and may be counted upon to accomplish all the manufacturer claims for them. Every conceivable shade is at the paper maker's command. A uniform supply at all times is assured.

Our exceptional facilities for working out color problems in our laboratory are placed freely at the customer's disposal. We also stand ready to assist in the solution of any problems that may arise in his mill.

The following "National" dyes on account of their fastness to light are especially effective in producing permanent shades on high grade bond papers:

- National Chrysophenine YP
- National Quinoline Yellow P
- National Brilliant Paper Yellow C
- National Erie Fast Orange CGP
- National Erie Fast Orange AP
- National Croceine Scarlet MOOP
- National Erie Fast Pink BBP
- National Erie Fast Scarlet 4 BAP
- National Erie Violet 3 RP
- National Fast Sapphire P
- National Fast Sapphire FS
- National Acid Green BP
- National Acid Black 3 GP
- National Nigrosine 128 BP

We invite you cordially to utilize this service.

National Aniline & Chemical Company, Inc.

MAIN OFFICE

40 Rector St., New York City

- Boston 113 High St.
- Charlotte 236 W. First St.
- Chicago 111 W. Washington St.
- Hartford 209 State St.
- Montreal 8 Place Youville
- Philadelphia 653 N. Broad St.
- Providence 28 N. Main St.
- San Francisco 120 Second St.
- Toronto 14 Front St., East



SENATE MAKES REDUCTIONS IN THE PAPER SCHEDULE

General Reductions Are Made in the Bill as Reported to the Upper House by the Finance Committee, but the Paper Industry Did Not Suffer in This Respect More Than Any Other Industry—This Action Taken Because It Was Believed That It Would Be Impossible to Pass the Bill if the Rates Reported by the Finance Committee Were Allowed to Stand.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 7, 1922.—The Senate the latter part of last week passed the schedules of the tariff relating to paper and pulp, making general reductions from the rates reported by the Finance Committee.

The first paragraph of the schedule—namely, the chemical wood pulp item, was temporarily passed over on the first day of discussion of the schedule to permit quick disposal of other items.

Many Items Quickly Passed

The Senate agreed to a duty of 5 per cent on pulp board in rolls for use in the manufacture of wall board; to a duty of 25 per cent on filter stock, composed wholly or in part of wood pulp or vegetable fibre; to a duty of 25 per cent on indurated fibre ware, papier-mache, etc.

The following rates were agreed to upon tissue papers, India and Bible papers, carbon papers, pottery paper, etc.

Weighing less than 6 pounds to the ream of 480 sheets on a basis of 20 x 30 inches, 6 cents a pound and 15 per cent ad valorem.

Weighing between 6 and 10 pounds, 5 cents a pound and 15 per cent ad valorem.

The duty on crepe paper was fixed at 6 cents a pound and 15 per cent ad valorem.

Papers with coated surfaces, not specially provided for, were given duties of 5 cents a pound and 15 per cent ad valorem. Similar duties were fixed upon embossed papers, cloth-lined papers, and papers covered with metal solutions, weighing less than 15 pounds to the ream on the basis of 20 by 25 inches.

India and Bible papers weighing between 10 and 18 pounds to the ream, 4 cents a pound and 15 per cent ad valorem.

Decorated papers were given rates of 4½ cents a pound, and in addition thereto, if embossed or printed otherwise than lithographically, or covered with metal solutions, gelatin or flock, 15 per cent ad valorem.

Wax-covered papers and imitation parchment papers were given rates of 3 cents a pound and 15 per cent ad valorem.

Paper bags, and all other articles composed in chief value of paper, were given rates of 5 cents a pound and 20 per cent ad valorem.

The rates on basic paper for photographic purposes were fixed at 3 cents a pound and 15 per cent ad valorem; and on sensitized papers, 3 cents a pound and 20 per cent ad valorem. The rate on transfer papers was fixed at 65 per cent ad valorem.

No Action Necessary on Print Paper

It was not necessary, of course, for the Senate to take action on Paragraph 1301, which deals with printing paper, because no change was made in this paragraph by the Finance Committee.

In connection with pulp board in rolls, in Paragraph 1302, the Senate took the following clause out of the 10 per cent ad valorem duty and placed a 5 per cent duty on it, namely: "Pulp board in rolls for use in the manufacture of wall board."

There was a great deal of controversy in the trade regarding the basis of weight in Paragraph 1304, the tissue paper section. It was contended right along that this should remain on an 8 pound basis,

but, as already indicated, the committee changed this to a 6 pound basis and the committee was upheld by the Senate action. In that same paragraph, namely, 1304, the committee made a separate phrase of India and Bible paper, as follows: "India and Bible paper, weighing over 10 pounds and less than 18 pounds to the ream, 4 cents per pound and 15 per centum ad valorem."

Chemical Pulp on Free List

The Senate worked on the chemical wood pulp section of the bill all afternoon on last Thursday and finally by a vote of 30 to 22 chemical pulp was replaced on the free list as it passed the House. It is well known, of course, that the Finance Committee placed a five per centum duty on chemical pulp. As a matter of fact the majority of the committee felt that that duty should be left on, but they were overruled by the vote of the Upper House.

Senators Capper of Kansas, Hitchcock of Nebraska, and Glass of Virginia, newspaper publishers, withheld their vote. The committee amendment, of course, was for a five per centum duty and fifteen Republicans voted against the amendment and in favor of free pulp while three Democrats voted in favor of a duty—in other words, supported the Finance Committee's recommendation.

The debate on this section of the bill, which was the only section in the paper schedule which caused any trouble, was opened with a set speech by Senator Hale, of Maine, in defense of the proposed five per cent duty, in which he asserted that the duty was absolutely necessary to the protection of American workers. Senator Fernald, of Maine, was unable to enter into the debate because of a sore throat, but had a prepared statement in support of the duty which was read from the clerk's desk. Senators Pomerene of Ohio, and Walsh of Montana, attacked the duty and argued for a return of chemical pulp to the free list.

Rates in the Schedule Agreed To

The Senate agreed to rates in the paper schedule recommended by the Finance Committee as follows:

On labels and flaps printed in less than 8 colors, 25 cents a pound; Cigar bands of the same number of colors and printings, 35 cents a pound;

Labels and flaps printed in more than 8 colors, 35 cents a pound; cigar bands of the same number of colors, 50 cents a pound;

Flaps and labels printed in whole or part in metal lead, 60 cents a pound; cigar bands printed in metal leaf, 65 cents a pound.

Fashion magazines and periodicals printed by lithographic process, 8 cents a pound.

All other articles than those specifically provided for, not exceeding eight one-thousandths of an inch in thickness, 25 cents a pound; exceeding eight one-thousandths and not exceeding twenty one-thousandths and less than 25 square inches cutting size, 10 cents a pound; exceeding 35 square inches cutting size, 9½ cents a pound; and in addition, on all articles exceeding 8 and not exceeding twenty one-thousandths of an inch in thickness, if die-cut or embossed, one-half cent a pound; if both die-cut and embossed, one cent a pound; exceeding twenty one-thousandths of an inch, 7½ cents a pound.

The committee amendment subjecting to duties of 3 cents a pound and 15 per cent ad valorem imitation onion-skin paper calendared or uncalendared, weighing seven pounds or over per ream and similar papers, was adopted.

The committee amendments placing additional duties on plain envelopes of 5 per cent, bordered, embossed, printed or decorated envelopes of 10 per cent and lithographed, 30 per cent, were adopted by the Senate.

Resigns from Howard and Aetna Mills

CHICAGO, August 7, 1922.—P. A. Harris announces his resignation, effective August 1, as general manager of the Howard and Aetna mills. Mr. Harris has not as yet announced his future plans.

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.

PAPER MEN IN PHILADELPHIA DISCUSS TRADE CONDITIONS

Possibilities of Coal Shortage and Interrupted Railroad Transportation, It Was Brought Out at the Meeting of the Fine Paper Division of the Philadelphia Paper Trade Association Are the Only Factors Which Make the Future Doubtful—Chairman George W. Ward Reports for Committee Appointed to Consider Change in Trade Customs for Transacting Small Order Business.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 8, 1922.—Coal shortage and hampered railroad transportation were pictured as the only possibility of doubt in the prospects of future market conditions, as they were revealed by the several speakers who participated in the symposium on trade conditions, at the meeting Thursday noon of last week of the Fine Paper Division of the Philadelphia Paper Trade Association. While the meeting was called for general business the matter of deep consideration was the report of George W. Ward, as chairman of the special committee recently appointed to lay down recommendations for trade custom regarding the small order business and who returned from the conference meeting with the manufacturers previously held at Erie, Pa.

Early Fall Buying Expected

In the discussion of this report business experiences and prospects received a large portion of attention. The observations of the speakers generally were uniform and most of them commented on the rather curious fact that while business in the printing and publishing trades of Philadelphia is much more than seasonally quiet, the market for printing papers generally is entirely satisfactory, the time of year being considered, and that within the last ten days something like a real speed in buying had been noted. Consensus of opinion seemed to be that the paper consumers are impressed by the fact that because of the labor troubles in the mines and on the railroads there might be difficulty in securing necessary paper supplies and therefore that it was the part of wisdom to make reasonable provision for the future. While admitting present dullness the printing consumers all expressed themselves optimistically on the subject of early fall business and evidenced their confidence by their larger orders.

While the mill representatives for weeks past have been warning the distributors regarding the necessity for placing business immediately against the contingencies of the delayed deliveries and increased prices, a deep impression of their warning was only made during the last few days. While many of the distributors still believe that if conditions become as serious as the mill men have suggested they might become, their own business also would suffer and hence there would not be the necessity for increasing orders at this time, the general opinion is that it is good business to anticipate to a limited extent at least the possibilities of the near future. Practically all the mills have given notice that present prices are withdrawn for October and November deliveries and that orders for deferred deliveries are taken at the price prevailing at time of shipment. No actual increases in prices were reported during the week but on the whole line of fine papers they are very firm.

Unsettled Conditions in Board Market

A feverish condition exists in the paper board market with prices advancing sometimes as much as \$5.00 a ton and then a few days afterwards again receding, but not as much as the previous advance. Among the box board consumers there exists a condition of dullness analogous to that which exists in the printing industry and while nearly all are rather dull, only those having large specialty orders being at all active, this trade apparently is also

laying in supplies of board as a measure of security against shortage and further advance in prices. Chip board is selling at about \$45.00. Announcement of the financial embarrassment of one of the leading factors in the straw board production business was circulated through the trade during the week, but no details were available. Meanwhile the paper stock market continued with a real lively demand for all the grades save the still sluggish hard white and with outside prices maintaining but with no definite advance anywhere.

Report on Sales of Broken Lots

Because of the very decided opinion among all the fine paper distributors that something must be done immediately to end or to ease the evil of the profitless and often loss-causing small order business, the report which Mr. Ward presented fresh from the conference at Erie, was received by his associates in the Fine Paper Division with closest attention, and although no conclusive action followed, that was because of the importance of the matters presented and the general desire to give larger consideration than was possible in the meeting before taking definite action. It is not thought possible that a change in trade customs of major importance and involving broken cases can be put into effect until later in the season, and probably not until the close of the year because there is involved in the problem the co-operation of the manufacturers and to an extent a change upward in prices and it is not felt that the present time is auspicious to make such a change of small amounts while there is pending the probability of a substantial advance of larger volume and for that reason the larger question of broken case prices will for the time at least be held in abeyance. It is regarded as probable, however, that a price revision in order to make up for the loss on broken reams can be made effective in the near future, although it is admitted that nothing can be done by formal agreement which might be construed as actionable and only by the independent action of all the distributors.

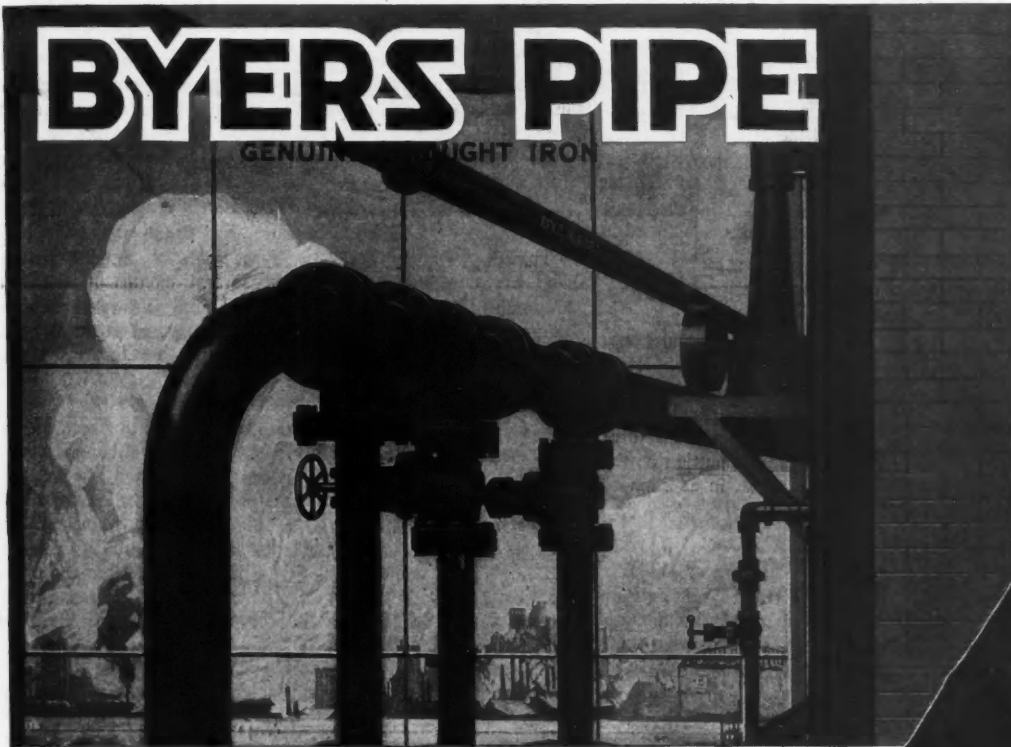
Paper Manufacturers' Company Buys Property

Title has been taken by the Paper Manufacturers' Company, 526-528 Cherry street, to a group of buildings in the neighborhood of Fifth and Willow streets, where the firm proposed to erect an entire new plant to be used as executive offices, warehouse and manufacturing plant. The group of dwellings include 408 to 418 inclusive on North Fifth street, and 502, 504 Willow street, and were bought for cash to the amount of \$72,500, the total assessment being \$22,400. The lot is 126 feet frontage of an irregular depth. There will be erected on the site a six story concrete and brick building of the slow burning factory type of construction. Demolition of the buildings now on the site is under way and the new building operations are to be started by September 1 and to be pushed with all expedition towards completion, the firm being hopeful of occupancy shortly after the new year. On the upper floors will be installed the manufacturing equipment for the cutting of die wiping papers and small roll products for adding machines, etc. The lower floors will be used for storage of stock of Krafts and other coarse papers in which the firm specializes. Sales offices and executive quarters will be on the main floor. The incorporators of the firm are F. A. O'Neil, John A. O'Neil and F. W. Coar. Vincent Durbin, manager of the firm, is on a two weeks' vacation trip in the Poconos.

W. C. Hamilton Co. to Make Improvements

Improvements of a general character and specifically in the chipper department where a new structure is to be erected over the recently installed cookers are planned by the new management of the W. C. Hamilton's Sons Company at the Riverside Mill at Miquon, formerly Lafayette, on the Schuylkill River, just above the city limits. While very extensive renovations and additions were made under the direction of Freas Brown Snyder, whose retirement as president recently was announced in these columns, his successor,

(Continued on page 26)



It Cost \$71.45 to Replace this Piece of Pipe—

"Its original cost was probably six or seven dollars," said an engineer. "Byers pipe would have cost a couple of dollars more. I took no chances on using cheap pipe this time."

Whether you invest fifty dollars or fifty thousand dollars in a pipe installation, the penalty of pipe failures is proportionately the same, and the ultimate saving effected by using Byers rust-resisting pipe is proportionately as great.

No one can foretell the durability of any metal except by a knowledge of its past performance. Change the metal in the slightest degree, and all calculations

as to its life may be upset. This is the reason why Byers pipe is still being made as it was fifty years ago—of genuine old-fashion wrought iron—the only ferrous pipe metal which can support its claim for durability by past performance of the most convincing character.

Byers Bulletin No. 38, "Installation Cost of Pipe," contains cost analyses of a variety of plumbing, heating, power and industrial pipe systems, with notes on corrosive effects in different kinds of service. Send for a copy.

A. M. BYERS CO · PITTSBURGH · PA
Established 1864

New York Philadelphia Boston Cleveland Chicago
Tulsa Houston Los Angeles

Look for the Name and Year rolled in every length

PAPER MEN IN PHILADELPHIA DISCUSS TRADE CONDITIONS

(Continued from page 24)

S. D. Hammer, who also is identified with the Columbian Paper Mills at Buena Vista, Va., is carrying out and making some additions. Two new beaters, one a Niagara and the other a Umpherson, have been installed and all the mills electrified for the purpose of speeding production of the book, writing, envelope and ledger papers, which the firm manufactures under the Hamilton brand. The company also makes the paper of exacting requirements used in the manufacture of a well known line of paper wrapped lead pencils.

N. T. Barry & Co. Adds Machinery

Mechanical equipment in the plant of the N. T. Barry & Co., which occupies a site facing on the P. B. W. Railroad and Lloyd street, is being renewed by the introduction of the modern facilities for the manufacture and converting of crepe papers and tissues into napkins, toilets and similar specialties. Each engine is being equipped with a 2½ horsepower motor. The firm manufactures under its own brand wrapped rolls and toilets and is putting on the market now a special 1,800 and 2,000 sheet package, in addition to manufacturing special brands for outside firms.

Selling Waste Paper Under Joint Contract

Secretary Banister, who is conducting the Waste Paper Division of the Typothetae of Philadelphia, sent out a letter under date of August 1 to the members of the division calling their attention to the fact that checks will be mailed for their waste under the joint contract with the Hemingway Company and that for what is called the No. 5 grade and in trade parlance is the mixed and commons an advance of 10 cents per hundredweight over the June prices would be included, prices on the other grades remaining as before. Similar letters have gone to non-members urging them to join and advancing the argument that if the contractor was able to secure additional tonnage, even better prices might be secured. There are now in the Division 50 printers, and 4 paper distributors, and the tonnage for July was approximately 100 or double that of the preceding month.

Paper Men on Novel Trips

Major Warren B. Haight, of the Whiting-Patterson Company, fine paper sales manager, left the city on Saturday to participate with friends in the printing industry including President Wm. T. Innes and Secretary manager Franklin W. Heath, of the Typothetae of Philadelphia, on a novel vacation trip. The party is the owner of a scow which has broad decks and a particularly heavy plank bottom and which draws but a few inches of water. It will be put afloat in the Susquehanna River main branch at Nichols, New York State, and the party will float down the river with the tide, gliding over the rocks in the several rapids in the stream and tying up wherever fancy suits. The scow has been decked over with a removable frame and canvas tent containing six bunks and there is carried a cooking outfit and a colored cook. An accompanying dory makes possible little excursions for fishing or to the mainland for supplies. The trip will last a week or more and probably will terminate at Tunkhannock, Pa., 125 miles from the start. Herbert L. Baker, of New York City, will be in the party.

An even more novel trip was entered upon during the week by R. P. Wood who has resigned his position with the Philadelphia branch of the American Writing Paper Company in the Bourse, and who will spend the next half year or so with Mrs. Wood, whose health demanded outdoor life, and Mr. and Mrs. J. R. Lloyd, neighbors, in a circuitous automobile trip which will extend as far as the Pacific coast. Attached to the car will be a trailer containing a camping outfit. On the tour Mr. Wood will deliver lectures in the principle cities passed through, on salesmanship, advertising, business correspondence and allied topics to the Typothetae, Rotary Clubs, Printing House Craftsmen and similar organizations. During his association with the service department of the Ameri-

can Writing Paper Company, in which he put forth untiring efforts in the "Eagle A" papers, Mr. Wood attained proficiency as a public speaker, and often spoke in advocacy of the campaign among the users and buyers of printing paper outlined by service manager, Joseph A. Borden. He also was instrumental in organizing Joseph A. Borden clubs in Trenton, Wilmington and other cities.

General News of the Trade

Treasurer Harvey E. Platt, of the J. L. N. Smythe Company, who has been on a vacation of several months in the Rocky Mountains, is scheduled to return to his desk this week. The company reports large increases of sales generally and particularly from its recently acquired Windsor Locks Mill, and July sales aggregating in number and in value a larger amount than has been enjoyed during any month for the last year and a half.

The effects of the Galner Press, 152 North Sixth street, of which many of the paper distributors were creditors, although none for large amounts, will be sold in a bankruptcy auction sale today.

The D. L. Ward Company has added to its stock the blotting products of the Standard Paper Manufacturing Company, Richmond, Va., which is now conducting a national publicity campaign. Its sales office was beautified during the week by the hanging of a reproduction in oil colors of the famous S. D. Warren Company panel picturing the paper maker, the paper distributor, the printer, and the consumer.

Edward B. B. Neuhauser, purchasing agent of the Dill & Collins Company, Sixth and Cherry streets, is on a two weeks' vacation trip to the woods of Maine.

H. D. Berry, Philadelphia manager of the Hinde & Dauch Paper Company in the Drexel Building, is on an extensive motor trip through the middle western states.

Roger S. Wood, salesman for Philip Rudolph & Sons, Inc., leaves the latter part of August for a trip through the Pennsylvania State territory.

Harry Clampman has been added to the sales force of the Enterprise Paper Company, Third and Callowhill streets. The company is in the market for a larger warehouse with a railroad siding required by expanding business. It has just added to its line the product of the Purity Paper Vessel Company of Baltimore, consisting of paper cans, cups, and containers, and will have the exclusive selling agency for Pennsylvania, New Jersey and Delaware.

Trade congratulations still are being showered on Morgan H. Thomas, vice-president of the Garrett-Buchanan Company, who recently passed another milestone on life's journey.

Strathmore Paper Co. Declares Stock Dividend

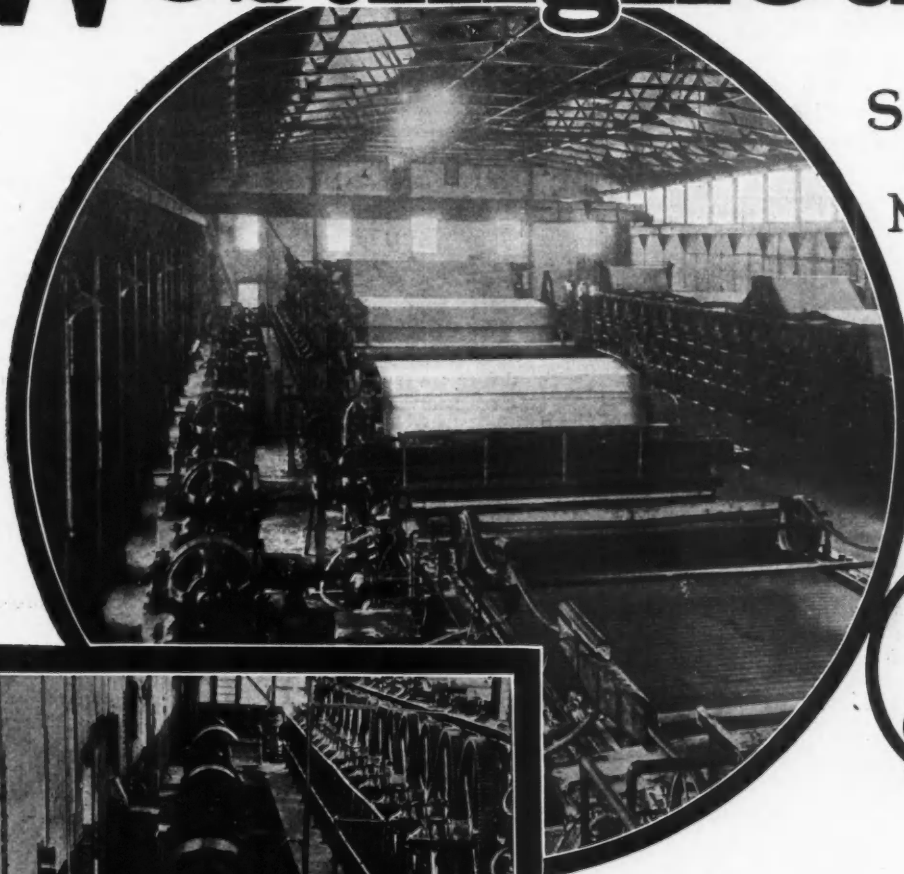
[FROM OUR REGULAR CORRESPONDENT]

MITTINEAGUE, Mass., August 7, 1922.—The Strathmore Paper Company has notified the Massachusetts commissioner of corporations of capital decrease and subsequent increase, the latter to be effected in part by a stock dividend. Authorized capital stock was reduced by retirement of \$400,000 par of employees' stock which had never been issued and by retirement of 2,750 shares of \$100 par preferred. Authorized capital thereafter stood at 10,000 shares of \$10 par employees' stock and 15,000 shares of \$100 par common.

Subsequent capital increase from \$1,600,000 authorized to \$11,100,000 authorized is to be effected by issue of 30,000 shares 6 per cent, cumulative new preferred, par \$100, and 65,000 additional shares of common \$100 par.

Of the new preferred, 15,000 shares, and 60,000 shares of common are to be issued to stock holders as a stock dividend in ratio of one new share of new preferred and four shares of common for each share of old common held.

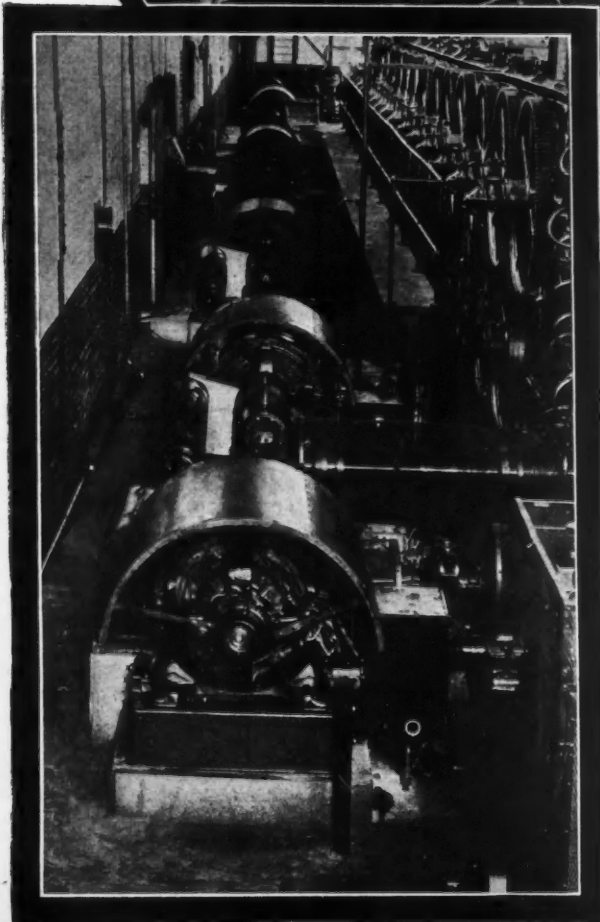
Westinghouse



Sectional Paper Machine Drive

98 and 166-inch Pusey & Jones Fourdrinier Book Machines, 250 to 500 feet per minute.

98-inch Machine Started July 25 and the 166-inch. Oct. 22, 1921.



West Virginia Pulp & Paper Co.

The Westinghouse Sectional Paper Machine Drives in the Tyrone (Pa.) mill of the West Virginia Pulp and Paper Company have been in service about ten months.

The performance of this, and similar installations, recommends Westinghouse Sectional Paper — Machine Drive to the consideration of all paper manufacturers.

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.
Sales Offices in All Principal American Cities

CONCERN SHOWN IN CHICAGO OVER THE STRIKE SITUATION

Otherwise, However, Paper Merchants Are Inclined to View the Situation Very Optimistically—American Writing Paper Co. Reports Excellent Results From Its Advertising and Sales Drives—Charles Krause, Salesman for the Chicago Paper Co. Seriously Injured in Auto Accident—Good Demand Is Reported for Coated Paper and Paper Board—General News of Interest to Paper Men.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, August 7, 1922.—The coal situation is becoming more and more acute and the estimation of the length of time before mills will close if conditions keep up as they are is about sixty days at the very longest.

The greater number of paper products on the market that have increased in the last week have gone up from 5 to 12 per cent. This means that in the near future, that is to say within the next ten days, paper is going to take some sort of strong turn.

Box boards have risen more noticeably than any other product on the market and the merchants have no idea what conditions will be effective within the next possible two weeks.

The American Writing Paper Company, 10 South La Salle street, has just concluded some advertising and sale drives on bond papers. These sales were established in all the big centers of the Middle States and Mr. Whitely, manager of the Chicago branch, was very much elated over the sale reports.

He remarked that printers who had never before used their bond papers had bought in large quantities and were coming back for more orders since their satisfaction of the first orders from the American Writing Paper Company.

When questioning Mr. Whitely about the summer season business he remarked with earnestness that he himself had been surprised over the large amounts of sales during the past summer months. He explained that this had been the best summer for business in a great number of years.

All mills of the American Writing Paper Company are working to full capacity and are not affected by the coal situation. The company's mills are located in the New England states, Ohio and Wisconsin.

Paper Salesman Hurt in Auto Accident

Charles Krause, salesman for the Chicago Paper Company, 801 South Wells street, Chicago, met with a serious accident August 2, when he with several companions were returning from a cruise to Mackinac Island. Mr. Krause, who is a member of the Chicago Yacht Club, with two other members, returning home in a De Luxe taxi cab, plunged over a thirty foot embankment in Grant Park on the Illinois Central tracks.

One of the yachtsmen was killed instantly and his two companions and the cab driver suffered injuries that were all of a serious nature. The first reports were that Krause was not expected to live since he had been injured internally and his legs broken. Later reports confirmed that he was the least injured of all and that his legs were bruised and hurt but not broken.

All the occupants were taken to St. Luke's hospital on a suburban train. Mr. Curtis had been instantly killed while all the others were unconscious. The latest reports confirmed the statement that Mr. Krause is resting easy and is on the road to rapid recovery. The taxi cab was completely demolished falling over the thirty foot embankment and plunging so that the top of the machine landed on the ground first.

Casein is a much discussed product amongst the Chicago tradesman. The advanced price of this product of about 100 per cent

will make a difference in prices that will be important to all salesmen.

All coated papers and card boards have had active selling sessions during the past week. Dealers in different coated papers respond to all sales which are declared able to be filled at short notice. Card boards of all grades are on the market and have active futures that show up strong.

Chicago and Milwaukee merchants met at the "Glen Dora" golf club last Thursday, August 3, and played several rounds of golf with champion intent. There were twenty-three visitors all told and each witnessed an enjoyable time. The men did not discuss paper movements or any business that tended toward that way for fear it would hamper their golf scores.

A. M. Collins Manufacturing Company, 30 E. Randolph street, is very optimistic over the future. Business during the time of the strikes has been fair and the officials believe that as soon as there is some kind of a settlement everything will be booming. The Collins company manufactures all kinds and grades of card boards, selling to the many coated board users.

W. J. Herrmann, of the E. H. Bower Company, Milwaukee, Wis., spent several days in Chicago on business. Mr. Herrmann reports that future conditions of the market and the trade in general have a rapid forward trend.

Geo. G. Custer, of the W. F. Nackie Paper Company, Milwaukee, Wis., transacted business in Chicago, August 1. Mr. Custer also has very optimistic views of the paper trade. He reports all possible speed is being used in production at the mills.

"Bob" Butterworth, manager of the Chicago office of the Champion Coated Paper Company, 111 West Washington Street, returned from the mills July 26. Bob has good news and brings back from the mills the report that all mills are working to the utmost capacity.

E. A. Rohrer, of the Empire Paper Company, 725 South Wells street, Chicago, is touring through the northern part of Wisconsin on his vacation. Mr. Rohrer and his family will be away from the city about three weeks and expect to be back sometime in August.

Several of the paper salesmen dealing in different grades of wrapping paper seem to agree that business has not been up to standard for the past two weeks. Whether this is caused by the strikes cannot be estimated but the salesmen imagine that the middle of August will bring back sales to normal.

Dean's Paper Makers' Directory for 1922

The Paper Makers' Directory of All Nations for 1922 has just been published by Dean & Son, Ltd., Debrett House, 29 King street, Covent Garden, London, W. C. 2. This volume is the most complete work ever put out by Dean & Son, its purely alphabetical arrangement making it easy of reference and its list of mill productions throughout the world, under more than 400 trade headings, together with its classified index to commercial prospectuses forming a complete buyers' guide.

The new directory contains 943 pages and its alphabetical classifications include every paper making or paper consuming nation in the world, from Algeria to Yugo Slavia as well as every type of mill product from absorbent paper to yeddo, a manufacture of Holland and Germany.

Elisson Resigns Vice-Presidency of Newton Falls

H. D. Elisson, vice-president and general manager of the Newton Falls Paper Company, Newton Falls, N. Y., has resigned and is going with the Hummell-Ross Fiber Corporation, of Hopewell, Va. Mr. Elisson will, however, remain with the Newton Falls Company until his successor has been selected.

450

BIRD SCREENS

Are daily helping to produce about 9,000 tons of paper in the United States and Canada.

The range of papers made covers almost every grade from book and sulphite bonds to boxboard and roofing felts.

This widespread popularity is based upon the fact that a BIRD ROTARY SCREEN:

Maintains a continuous flow of clean stock to the paper machine wire.

Improves the quality, because the stock is uniformly clean throughout the run and the weight of the paper is not varied by conditions at the screen.

Increases production because there are no costly shutdowns to wash up screens, and because there are fewer breaks in the paper caused by lumps or slime.

May we send you a list of mills where BIRD SCREENS are used?

BIRD MACHINE COMPANY

SOUTH WALPOLE,

MASSACHUSETTS

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

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

88-230

CANADIAN PAPER SITUATION IS GENERALLY SATISFACTORY

Conditions Are About as Favorable as Can Be Expected Under All the Circumstances and in Most Lines There Are Indications That a Foundation Is Being Laid for Good Business in the Fall—Fort William Paper Co. Sell Issue of \$2,100,000 First Mortgage Bonds to Peabody, Houghteling & Co., of Chicago—Angus McLean, President of Bathurst Co., Ltd., Says Rail Freight Rates Are Too High.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, August 7, 1922.—Generally speaking Canadian paper trade conditions are about as favorable as can be expected considering the hot weather and the holiday season and in most lines there are indications that a foundation is being laid for good business in the Fall. Particularly is this so among the manufacturers, most of whom have their plants running fairly full with the prospect of a steady demand, although it must be said that the jobbing end of the trade in Toronto and other big centres is dull. Slowness of trade among the jobbers is partially due to a season of slackness among the printers, but both printers and jobbers are convinced that the present quiet period will only be of a short duration and the fact that the paper mills have many orders on hand would indicate that buying is taking place against a renewal of good business in the fall. Tissue and toilet mills are busy and there is a good, steady demand for the product, with prices holding firm. Kraft mills, also, are busy, although the jobbing end of the business has fallen off some during the holiday season. Considerable quantities of card board and box board are coming in from the States and the paper box industry, which is extensive in Toronto, is enjoying a fair measure of prosperity. News print remains active and mills are running pretty much to capacity at the same time following their present policy to maintain the present year's prices. It is stated that the mills are making considerable inroads on their pulpwood purchased at high figures, and will have the benefit of wood which will be obtained at low prices. This year, it is stated, some mills have added to their wood piles at very low prices and this will enable them to put a satisfactory average on their stock costs. In this connection it is interesting to note that both Canadian and American mills purchasing supplies will receive some benefit under the recent railway freight reductions. The reduction is seven and one half per cent, making the rates on lumber and forest products in Eastern Canada 17½ per cent higher and in Western Canada 12½ per cent higher than the rates which were in effect immediately prior to the last general increase of Sept. 13, 1920. The pulp market in Canada as a whole remains firm and bleached sulphite is fairly active although there have been no price movements in any line of the raw material. Groundwood is still selling at \$30.00 to \$40.00 delivered; sulphite news grade at \$60.00 delivered, with book grade at around \$65.00. Bleached is quoted at \$85.00 to \$90.00 and sulphate at \$70.00, delivered. The coated paper mills report a fairly steady demand for their product and most of the mills are running full.

Fort William Paper Co. Sells Bond Issue

An issue of \$2,100,000 first mortgage bonds has been sold by the Fort William Paper Company, Limited, to Peabody, Houghteling & Co., of Chicago. The purchase of this issue is to redeem bonds already outstanding and to provide money for proposed extensions to the company's plant. The Fort William Paper Company, Limited, has had in operation since May, 1921, a groundwood pulp mill at Fort William, with a capacity of 125 tons of ground wood per day. The company is now proceeding to add a news print mill with a daily capacity of 150 tons of news print and the foundations

for this are now under way. The company expects to have the paper mill in operation by December 1, this year. The enterprise has an outstanding issue of \$1,000,000 first mortgage bonds, which have been called for redemption August 1, and it is to take the place of these bonds and to build the paper mill that the new issue has been created.

Pulpwood May Improve Soon

In view of reports that the depreciation in pulpwood prices is over a statement just issued by Gustave Piche, chief of the Provincial Forestry Service, is of deep interest in Ontario pulp and paper circles. Mr. Piche says: "Expectations had been that following the slump in the pulpwood business the conditions would improve very soon. This would have been logical had it not been for the devastation of some of the forest in the United States by the spruce budworm. This plague spread in the majority of the United States forest reserves. In some cases thirty and even fifty per cent of the trees have been attacked. The result is that they are now being cut and will be sufficient to meet the huge demand for pulpwood which had been expected. I take this opportunity to tell the lumber people not to overflow the market because another crisis may arise. The only way of meeting the situation is to be very conservative in the timber cutting and reduce it to a minimum."

High Rail Freight Rates

A statement just issued by Angus McLean, President of the Bathurst Company, Limited, of Bathurst, N. B. on the subject of freight rates and Scandinavian competition in pulp is of deep interest to the Ontario and United States pulp and paper trade. Mr. McLean states that both the company's sawmills and pulp mills are running at capacity but they are obliged to store considerable of the pulp owing to the market conditions at the present time being unsatisfactory. He adds: "The competition from the Scandinavian countries in the American markets on pulp at the present time is very keen and very low prices are being made. There is one most unfavorable feature in connection with the pulp business today and that is the high rail freight rates from our producing mills to the consuming mills in the United States. So bad is this situation that the Scandinavian mills today can move pulp from the Scandinavian countries and deliver it into the middle western United States at the same freight cost as from Bathurst to these Markets. Michigan and Ohio are large consumers of our pulp and these people can bring the pulp right straight from Scandinavian countries at a shade less than the cost of rail freight from Bathurst to such points as Grand Rapids and Kalamazoo, Mich., and points in the Miami River Valley in Ohio. One of the unsatisfactory features in connection with this is that our railroads persistently refuse to give us any adequate cut in rates to meet this competition. We have recently shipped a cargo of pulp by steamer from Bathurst to the head of the Great Lakes at just one half of the rail cost and in addition to that the cargo was carried up in just about half the time it would take to make rail delivery." The company has been for some time contemplating the construction of a paper mill but owing to some unsatisfactory conditions existing at the present time they are holding up the starting of this development.

Thunder Bay Paper Co. Get Charter

The Thunder Bay Paper Company, Limited, has been granted an Ontario charter, with headquarters at Port Arthur and a capital stock of \$100,000. The company is authorized to deal in and manufacture ground wood, sulphite, sulphate and paper products of all kinds. Among the incorporators are George Wilson Mead and George Phelps Berkey, of Wisconsin Rapids, Wis.

Coal from Newcastle

The industries of Thorold, Ont., this week received a cargo

(Continued on page 32)



Growing Two Blades of Grass in Place of One

Hours of Operating Profit may be added by the Patented Removable Fourdrinier which eliminates the Removal of rolls, savealls and suction boxes when Changing Wires

BELOIT IRON WORKS
BELOIT, WISCONSIN



Trade Marks Department

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

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

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

MILEEN—No. 164,741. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

FEATHERDOWN—No. 164,740. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

FABREEN—No. 164,739. White-Washburne Company, Inc., Hinsdale, N. H. For toilet paper.

MARVELLUM—No. 164,710. The Marvellum Company, Holyoke, Mass. For cover paper. No. 164,709. The Marvellum Company, Holyoke, Mass. For cover paper.

UTILITY—No. 164,333. C. P. Lesh Paper Company, Indianapolis, Ind. For writing, printing and book paper.

ASSET—No. 164,332. C. P. Lesh Paper Company, Indianapolis, Ind. For writing, printing and book paper.

WAUKON—No. 164,330. C. P. Lesh Paper Company, Indianapolis, Ind. For writing, printing and book paper.

TATSU—No. 164,329. C. P. Lesh Paper Company, Indianapolis, Ind. For writing, printing and book paper.

PURITAN WHITE—No. 163,093. C. P. Lesh Paper Company, Indianapolis, Ind. For writing, printing and book paper.

TRY THE DRUG STORE FIRST—No. 161,295. Blake, McFall Company, Portland, Ore. For wrapping paper.

LUXURY, in white letters on black shield surmounted by scroll bearing words: "Finest-Quality"—No. 150,970. Linton & Scott, New York. For toilet paper.

STRYPE in center panel of disc above words "Try the Drug Store First"—No. 162,067. Fred C. Strype, New York. For wrapping paper, writing paper, writing tablets, envelopes, typewriter paper, bond paper, ledger paper and blank books.

LASOLETTRE—No. 164,335. Macniven and Cameron, Limited, Edinburgh, Scotland. For writing paper, note paper, envelopes, notebooks, stationery, cabinets and writing pads.

THE "HANDY" LINE—No. 164,688. The Paul M. Adams Company, Baltimore, Md. For writing paper, envelopes, paper napkins, paper blotters, wax paper, loose leaf fillers, typewriting paper, crepe-paper table cloths, legal cap paper and toilet paper.

CANADIAN PAPER SITUATION

(Continued from page 30)

of coal from the Old Country. The new steamer *Chicago Tribune* of the Ontario Paper Company fleet, arrived at the company's plant with a full cargo of steam coal which she loaded at Newcastle-on-Tyne. The *Chicago Tribune*, which was built at Newcastle-on-Tyne for the Ontario Paper Company, brought over 1,999 tons of coal which was brought direct from the company's plant at Thorold through the Welland Canal. The steamer is about 268 feet in length and 44-foot beam, with dead-weight tonnage of 987 tons. A sister ship, *The New York News* arrived from the Old Country about a week ago. The two boats were constructed for the Ontario Paper Company, and will be engaged in the pulp-wood trade between lower St. Lawrence ports and Thorold.

General News of the Trade

Paper Sales, Limited, Colonial Building, King Street, West, Toronto, dealers in papers, boards and specialties, have opened an office at Montreal to take care of the Quebec end of their business. The office is at Room 508, Canada Cement Building, Phillips

Square and is in charge of Ralph H. Anderberg, who is well-known in the paper trade. Paper Sales, Limited, also handle exclusively the lines of the Arabol Manufacturing Company of Canada, Limited, whose mill is at Brampton.

In a recent issue, F. A. Ritchie, President of Ritchie & Ramsay, who recently returned from a trip to Europe, was inadvertently referred to as head of the Georgetown Coated Paper Mills. Mr. Ritchie is connected with the Ritchie & Ramsay Coated Paper Mill at West Toronto and not the Georgetown Mills.

Members of the Board of Railway Commissioners of Canada held a session in Sault Ste. Marie, Ont., this week, to hear an application by the Spanish River Pulp and Paper Mills, Limited, for an adjustment of the freight rate on Class A paper, which includes news print and hanging papers, from Espanola and Sturgeon Falls to Toronto.

G. D. Falkenberg, of Price Brothers Paper Company, Quebec, was a business visitor to Toronto during the present week.

A. G. Allen, of Paper Sales, Limited, King Street, Toronto, is spending some time in Montreal in connection with the opening of the branch office in that city.

George Carruthers, head of the Interlate Tissue Mills, Merritton, Ont., is spending a few days at his summer cottage at Wassaugua Beach.

News of the Holyoke Trade

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 7, 1922.—The Holyoke Water Power Company, during its annual shutdown, which ended at 6 on the morning of August 3, electrically equipped its headgates at the Holyoke dam, so that they may be operated by electricity as well as by water wheel. This is in line with other improvements which have been made at the company's plant since the advent of Robert E. Barrett as treasurer of the company.

The Holyoke division mill of the American Writing Paper Company resumed operations today after being shut down for three weeks. Officials of the company are optimistic regarding conditions in the paper market and look for further increased operations in the company's mills.

Employees of the Westfield River Paper Company, at Russell, Mass., have forwarded to the Willimansett flood relief committee, with headquarters in this city, a check for \$60 to be donated to the fund.

It has been almost a tradition in local paper mills circles to have business fall off about 20 per cent during the month of July, but such was not the case here last month. Officials of the American Writing Paper Company state that instead of showing a decrease a slight increase in the volume of business done by that company was registered.

The Gill and Albion division mills of the American Writing Paper Company resumed operations today. Three machines in the Parsons mill and one machine in the Riverside No. 3 mill also were put in operation today. The Linden division will open tomorrow.

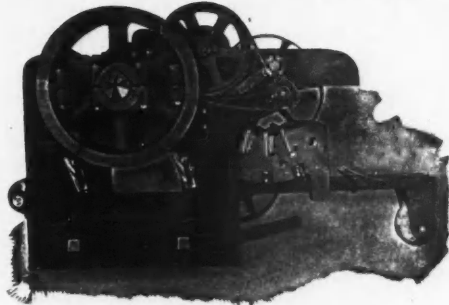
The fifth annual outing of the employees of the White & Wyckoff Manufacturing Company of this city was held Saturday at Forest Lake, Palmer. The mills of the company were all closed on that day because of the outing. The affair proved to be a big success.

An Interesting Number of Columbian Crew

"Coil No. 8, 4th Fathom" of the *Columbian Crew*, the monthly house organ of the Columbian Rope Company, 322-50 Genesee street, Auburn, N. Y., is just off the press. Among the interesting short articles contained in the booklet is one entitled, "6 lbs. Newspapers Bake 18 lbs. Bread." Using ten daily and six Sunday editions of the *New York Times* for fuel this unusual feat was accomplished in one of the new ovens of the Clark Stove Company, Inc., of Geneva, N. Y.

Don't Use Your Beaters For Rag Cutters

Put in a
GIANT
and cut your stock
thoroughly and evenly



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

NO. 11 TRIPLEX



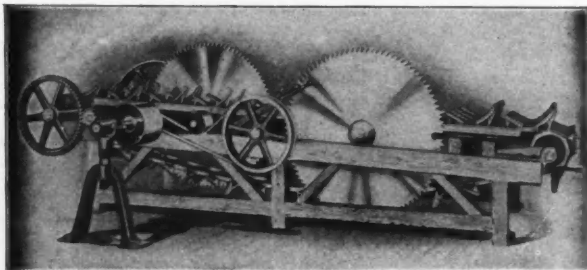
Canadian Manufacturers Under Patents: WATEROUS ENGINE WORKS CO., Brantford, Ont., Can.
I. MARX & CO., London, E. C., sole agents for the United Kingdom

Increased Capacity Lower Cost per Cord

THE

Ryther Slasher

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



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

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



NEWSPRINT CORPORATION IN NEW OFFICE

Monday of this week the Newsprint Paper Corporation, headed by George F. Steele moved into its new offices at 33 West 42nd street and started in business as the sole agent in the United States for practically all mills making news print paper in the Scandinavian Peninsula. The new concern has its officers G. F. Steele, president, L. Calder, vice-president, J. J. Nolan, secretary and F. W. Westlake, treasurer. Messrs. Calder and Westlake will remain in the offices of the Perkins-Goodwin Company in the same building, while Messrs. Steele and Nolan, accompanied by Harald Svenson who has been representing Holmens Bruks & Fabriks Aktiebolag, of Sweden, will occupy the new headquarters.

J. J. Nolan, who has, unfortunately, been ill for several weeks, is reported to be convalescing rapidly in the Berkshires and will join his partners in New York within a couple of weeks.

Mr. Steele announced that his corporation is now prepared to book orders for immediate shipment, adding that the approximate capacity of the mills represented aggregated over 100,000 tons per annum.

What the New Firm Intends to Do

The following statement and brief prospectus was recently given out by the Newsprint Paper Corporation:

G. F. Steele, formerly general manager of the Canadian Export Paper Company, Ltd., of Montreal, Canada, recently returned from a four months absence in Northern Europe; he went abroad on February 28 at the invitation of several of the larger news print paper producers of Northern Europe; visited many of the mills situated in Norway, Sweden, Finland and Germany and made contracts with practically all of such mills making this grade of paper in Norway and Sweden to act as sole sales representative for them in the United States and Canada. A corporation has been formed under the Laws of the State of New York, called—"Newsprint Paper Corporation"—with an authorized capital of \$200,000. Associated with Mr. Steele as Directors of the new Corporation are Louis Calder and F. W. Westlake, President and Vice-President respectively of the well known pulp and paper house of Perkins-Goodwin Co. and J. J. Nolan, now acting as sales representative for several Norwegian News Print Mills. Its officers are Mr. Steele, President; Mr. Calder, Vice-President; Mr. Westlake, Treasurer; Mr. Nolan, Secretary.

Unification of Sales

"The prime purpose of this unification of sales according to Mr. Steele is to bring about a more complete standardization of quality and better deliveries for American consumers, and to enable the foreign producers of news print paper to combine in taking larger contracts than has been possible for the separate mills. The production of news print paper at the present time in Norway and Sweden amounts to a little more than 300,000 tons annually. Participation on the part of Norway and Sweden in the American market has been of recent origin, starting with the year 1919, and has been brought about very largely by the collapse of the Russian market and the consequent necessity for the manufacturers of Finland to dispose of their surplus production in markets where they were formerly but slight participants. As the news print paper output of Finland is in the neighborhood of 110,000 tons annually, and as the return of the Russian market is not expected for a long time to come, it is inevitable that foreign producers must look to the American market for at least an amount equivalent to that lost through the Russian debacle.

Norway and Sweden Exports

"In the year 1921, Norway and Sweden exported news print paper to the United States to the extent of about 70,000 tons. During the first four months of that year imports amounted to 22,000 tons. For the first four months of this year the imports from

these two countries have amounted to 27,000 tons and it is probable that the amount of paper imported from these two countries this year will be fully as large as it was during the preceding year. The Scandinavian Mills are unfortunately in the same unhappy predicament as their Canadian and American competitors, in the respect that they have large inventories of high priced pulpwood, so that present prices which they are obtaining in the world's markets, are not particularly remunerative. They do enjoy, however, low freight rates to the Atlantic Seaboard, and are able to make prompt and satisfactory deliveries.

"It has taken the foreign producer some time to understand the particular requirements of the American market, as in no other country where foreign paper is sold is there such a tendency towards printing pictures and consequently the necessity for a good printing surface, but they are now producing paper which is fully comparable with the American and Canadian quality. With the present encouraging outlook in the newspaper publishing business, it is more than likely that all of the output of the American and Canadian Mills will not be sufficient to take care of the demand, and that the continuance of the sale of overseas paper will be a stabilizing factor in this market."

Newfoundland Project Takes on New Life

ST. JOHNS, N. F., August 8, 1922.—The plan for establishing a large paper making industry on the Humber River on the west coast of Newfoundland abandoned last winter, has been revived.

The original scheme was promoted by the Armstrong Whitworth Company of England, and the Reid-Newfoundland Company, on the understanding that the Newfoundland Government would guarantee the bonds to the extent of \$20,000,000.

It is announced that the Armstrong Whitworth Company purposes to buy out the interests of the other company and that the British and Newfoundland Governments will each guarantee \$10,000,000 of the bonds.

Plans for Hammermill Outing

ERIE, Pa., August 7, 1922.—The Hammermill Paper Company will hold its eleventh annual conference of Hammermill agents at Erie beginning August 24. The annual banquet will be held at 7 o'clock Thursday evening, August 24, at the Kohkwa Club.

The program for Friday, August 25, begins with breakfast at the Lawrence Hotel at 8:00 o'clock. At 9:00 o'clock cars will be ready to take guests to the Kahkwa Club where golf, tennis, shooting and other tournaments will take up the day. Luncheon will be served at 1:00 o'clock and dinner, concluding the meeting, at 6:30 o'clock.

Adams Paper Co. Issues Interesting House Organ

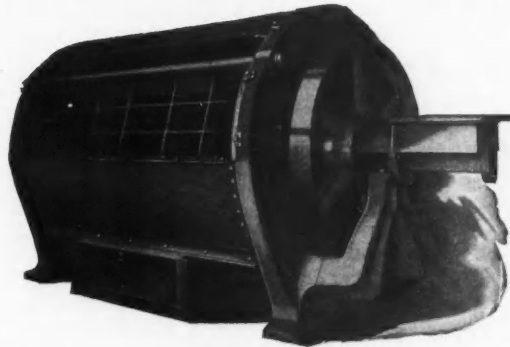
The Adams Paper and Specialties Company, of Waterloo, Ia., has recently printed its August number of *Paper Wads*. This entertaining and instructive little house organ has devoted an entire page of each issue to *Retailers Wants*, to be used as a sort of clearing house for their retail dealer friends. The insertion of a notice is free of charge if the copy is in by the 15th of the month.

Paper Mill Men Strike of Monroe

MONROE, Mich., August 8, 1922.—Two-hundred paper mill employees here were on strike today against a change in their working schedule, which they claimed required them to work eleven and thirteen hour shifts.

“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

*These deserve a
 place on your payroll!*

**BURT'S PAPER
 DRINKING
 CUP**

Old Sol, the water he uses to make hot damp days, and Burt's Paper Drinking Cups will all ceaselessly work for you this summer by making folks drink and drink and drink—if you let them.

Burt's Paper Drinking Cups For Particular People

Snow white of fine paper.
 No wax to make drink taste.
 No bottom to fall out.
 Nor to set aside on.
 No animal glue used.

One-at-a-time dustproof dispenser.
 Of ample capacity.
 No opening up and soiling.
 Drinking edge untouched by hands
 before use.

Treble reinforced to make holders
 unnecessary.
 Lowest in cost.
 Holds hot drinks.

You can sell such cups to particular people who stay sold and repeatedly come back for more—at a good profit to you.

F. N. BURT COMPANY, Ltd., Paper Cup Division, Buffalo, N. Y.

Obituary

Joseph P. Coyle

Joseph P. Coyle, president and general sales manager of the Coyle & Grant Company, fine papeterie manufacturers, New York, died after a brief illness at his home in Pelham Heights on Friday, August 4.

Mr. Coyle was in his fifty-fourth year. He was born March 15, 1868, at Bloomingdale, Ill. Early in his youth he left school to become a page in the Illinois Legislature and soon became chief page in the State Senate.

Mr. Coyle entered the stationery business when he was 22 years old, his first venture being the organizing of a concern known as the Coyle Stationery Company, located at Chicago. Since that time and for the past 32 years, Mr. Coyle has been continuously identified with the stationery trade. He has been associated with George B. Hurd, the Whiting Paper Company, and with Charles E. Weigand.

On January 22, 1922, Mr. Coyle formed the present Coyle & Grant Company, entering business with Charles J. Grant, treasurer and production manager of the company.

Mr. Coyle was president of the Brotherhood of Commercial Travellers, a prominent member of the Chicago Athletic Association, a member of the Stationers' Association of New York and a Mason (Normal Lodge of Chicago).

Masonic funeral services were held Monday, August 7, at the deceased's home in Pelham Heights. Members of the Brotherhood of Commercial Travellers acted as honorary pall bearers.

Mr. Coyle is survived by his widow and son, Edward R. Coyle, who is secretary of the Coyle & Grant Company.

Joseph Storer Wells

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 7, 1922.—Word has been received in this city of the death at Summit, N. J., of Joseph Storer Wells, formerly of this city. Mr. Wells was one of the old guard at the Riverside division of the American Writing Paper Company, having been employed there for a number of years.

John F. Conklin

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 7, 1922.—John F. Conklin, formerly a dealer in paper, twine, etc., with stock rooms at 155 Main street, this city, died during the past week at Worcester, Mass.

H. Z. Schniewind Speaks on Board Testing

The Schopper Board Folding Endurance Tester for testing the folding endurance of box boards, either before or after combined, was shown at the annual meeting of the National Association of Corrugated and Fibre Box Manufacturers' Association, at the Hotel Traymore, Atlantic City, N. J., on July 20.

H. Z. Schniewind, of the Foreign Paper Mills, Inc., 72 Duane street, New York, the sole agents for this machine in the United States and Canada, gave a very interesting talk after the luncheon on this date. He explained that in order for paper board boxes, corrugated containers, or fiber boxes to have the utmost strength value, they should have as nearly uniform a strength as possible with and against the grain. In order to determine this, it was said that the folding endurance test or the tensile strength test must be made both with and against the grain. It was said that the basic principle of Schopper tests is to test paper or board in the machine and cross machine direction, and that the per cent of uniformity thereby obtained was one of the main factors in either paper or paper board. This valuable factor cannot be found

by a bursting test. The weak point of a box as well as anything constituted its strength, and that the weak direction could only be guarded against by the Schopper principles of tests in the two directions.

Two samples of combined corrugated boards were tested to show the combined folding endurance. The Schopper Folding Endurance Tester is the only test that tests both sides alike of a combined corrugated board, which point is positively essential in making an accurate. There is no other method of testing that can claim this valuable point. The results were as follows:

NUMBER OF DOUBLE FOLDS		
Machine Direction		Cross Direction
Sample No. 1.	35,670	3,540
Sample No. 2.	6,322	3,460

Sample No. 1 showed over ten times the strength variation, while yet it had a very high bursting test, whereas, sample No. 2 had a very low bursting test, yet a very good uniformity, even better than one half strength variation. It can be seen that the Schopper Folding Test showed that sample No. 2 was very uniform, and only less than 5 per cent weaker in the weak direction than sample No. 1, whereas sample No. 1 had considerable more than double the bursting strength, and had 32,130 double folds greater strength in the machine direction over the cross direction, which is lost strength value, as the container made from such a combined board would give away in the weak direction, thereby the great strength in the other direction would be lost.

Arrangements are being made to have one of these Schopper Folding Box Board Machines at the Association's Headquarters in Chicago, and further valuable results are looked for.

H. I. Prankard Vice-President Brownville Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

BROWNVILLE, N. Y., August 8, 1922.—At a special meeting of the directors of Brownville Paper Company, held July 12, H. I. Prankard was elected director and vice-president and J. H. Lingenfelter was elected director and assistant secretary and treasurer.

Mr. Prankard has had a long, practical experience in the manufacture and sale of special papers and Mr. Lingenfelter is also a trained executive of many years' experience.

The election of these men adds strength to an organization already possessing an enviable reputation in the trade for thoroughness and excellence of product.

Only about a year ago Mr. Prankard resigned from Hercules Paper Corporation and Frank Gilbert Paper Company under trying circumstances.

The fact that he had the courage to buckle right in and "come back" so quickly is most gratifying to his many friends in the trade.

Stone & Forsyth Employes Have Outing

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., August 7, 1922.—The employes of Stone & Forsyth Company, Boston, held their Annual Outing last Saturday, Aug. 5, at the Riverside Recreation Grounds. Both the Boston store and Everett Box Factory participated, about 250 being present.

In the morning various races and contests were staged, including water events in the swimming pool.

At noon a substantial repast was served during which community singing was enjoyed. Following the dinner, short addresses were made by Mr. E. H. Stone and O. R. Karnheim, after which the prizes won in the morning sports were distributed.

The afternoon sport consisted of the annual baseball game between the store and the factory, which was finally won by the latter, 12 to 11. Dancing followed until a late hour.

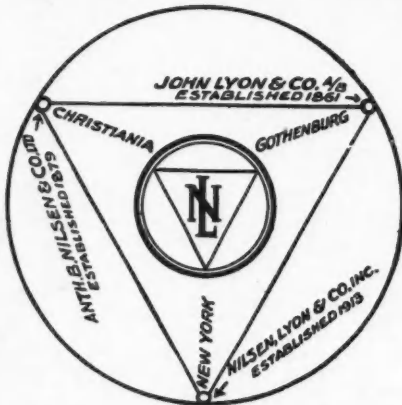
**GROUND WOOD
CHEMICAL PULPS**

PERKINS-GOODWIN CO.
NEW YORK

PAPER

WOOD PULP

QUALITY BRANDS



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

STOCKS CARRIED ON DOCK FOR PROMPT DELIVERY

For Samples and Prices Address

Nilsen, Lyon & Co., Inc.

140 NASSAU STREET

NEW YORK

New York Trade Jottings

A. Hartung & Co. have given up their New York office, located at 318 Broadway. Robert Miles, formerly manager of this headquarters, is no longer connected with the firm.

* * *

William E. Rudge, president of William Edwin Rudge, Inc., of 216 William street, left recently to spend his vacation in Alaska. He will return to New York in approximately thirty days.

* * *

The Alling & Cory Company, 461 Eighth avenue, New York, has recently sent to the trade an attractive folder describing and composed of their Clarion Super Calendered Book paper.

* * *

Edward A. Kendrick, president of the Redfield-Kendrick-Odell Company, Inc., located at 309-319 West 43rd street, New York, returned last week from a vacation trip near The Forks, Maine.

* * *

C. R. & W. A. Nelson, Inc., of Chicago, announce the opening of a New York office at 366 Madison avenue, with R. M. Glover as eastern sales manager and with the phone number Vanderbilt 6239.

* * *

A twenty-one page booklet on "Trade Standards in the Pump Industry" has recently been published by the Hydraulic Society, the secretary of which, C. H. Rohrbach, is located at 50 Church street, New York.

* * *

The Adam Paper Corporation has recently been organized with a capital of \$20,000. V. Massurotti, L. Watts and B. Iannucilli are the incorporators, their attorney being N. Permut, of 82 Duane street, New York.

* * *

Robert Blank, dealer in paper mill supplies, of 140 Nassau street, has recently installed another telephone to facilitate the handling of the increased number of inquiries that come in daily. The phone numbers are now Beekman, 8846-47-48-49.

* * *

At the recent International Joint Conference Council held at the Hotel Astor, plans were consummated for a health survey in the printing industry to be of two years' duration and to involve an expenditure of more than \$30,000.

* * *

Warren B. Bullock, Director of Publicity for the American Paper and Pulp Association, 18 E. Forty-first street, New York, leaves Friday of this week for a canoe trip in northern Wisconsin in the district where several big paper mill companies have large timber holdings.

* * *

Martin Cantine, of Saugerties, N. Y., and chairman of the Coated Paper Committee on the casein situation, was among the New York trade visitors of the last week. He stated that not much further could be done until the Senate resumes discussion of the Agricultural schedule.

* * *

Fred A. Leahy, vice-president of the Eastern Manufacturing Company, accompanied by George Clarke, president of the Western Book and Stationery Company, sailed from New York last week aboard the "Aquitania." They will spend several months in Europe and expect to return about September 1.

* * *

Folke Sundblad, president of the Wood Pulp Trading Company, Ltd., of 501 Fifth Avenue, New York, has recently returned from a business trip to England, Germany and the Scandinavian countries. He believes that foreign sulphite prices will rise steadily for some time to come.

R. S. Kellogg, secretary of the News Print Service Bureau, 342 Madison avenue, returned to New York Monday of this week, driving through from Ohio with his wife and family at a steady clip of 200 miles a day. His friends will be glad to learn that he will remain in New York for some time.

* * *

The Sinnigen-Latham Machinery Company, Inc., has recently formed, with headquarters at 78 Cliff street. The new firm will deal in all kinds of printers' boxmakers' and bookbinders' machinery. The officers of the company are: Herman Sinnigen, president and H. C. Latham, secretary-treasurer.

* * *

G. F. Ware, cost-accountant of the News Print Service Bureau, and O. M. Porter, secretary-treasurer of the Woodlands Section of the American Paper and Pulp Association, returned this week from the Babson Industrial Conference at Wellesley Hills, near Boston, Mass. Mr. Porter attended the first three days of the convention and Mr. Ware the last two.

* * *

David L. Engel has recently purchased the business of Syrkin & Back, Inc., paper merchants of 9 Bond street, New York. He will conduct the business in his own name hereafter, having resigned as president of the Majestic Mills Paper Company, 462-464 Broome street, New York. The new company will carry a complete line of paper stock and its transportation will be facilitated by the use of two delivery trucks.

* * *

Clarence F. Williams, for many years with Marcus Ward & Co., Inc., and lately with Coyle & Grant, will in the future represent the following factories in Greater New York: Hopper Paper Company, Johnsonburg, Pa.; B. Hopper Company, Kalamazoo, Mich.; Kalamazoo Stationery Company, Kalamazoo, Mich., and Hopper Paper Company, Inc., Richmond, Va. Mr. Williams has opened up a sample room at 200 Fifth avenue, Room 1129, telephone Gramercy 1890.

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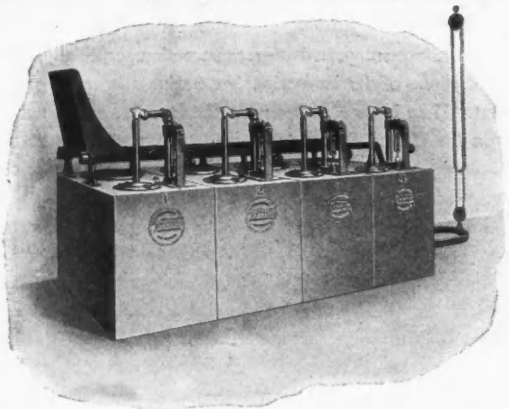
The Sterling Mill Supply Company, 233 Broadway, started into business this week and will deal in waste paper, rags and other supplies for the paper mill. The new organization will have as its officers N. J. Guariglia, E. Frost and M. Kay and will occupy the offices formerly used by the Sterling Paper Stock Company with telephone numbers Barclay 9996, 8286 and 8287. A modern warehouse will be maintained at 148 Wooster street, the phones being Spring 2394 and 4439.

* * *

Edwin C. Chadwick, formerly of the sales force of the American Writing Paper Company, 41 Park Row, New York, has resigned to accept a position with the L. L. Brown Paper Company of Adams, Mass., on September 1. This information came shortly after the announcement of the resignation of Donald P. Weston from the former company for the purpose of allying himself with the sales and advertisement department of the Esleek Manufacturing Company, Turner Falls, Mass., within the next ten days.

* * *

"Personally Yours" is the intimate title of the intimate house organ just adopted by Al M. Silverstein & Brothers, paper and twine wholesalers, of 12-14 W. 18th street, New York. Aesthetic word-pictures of feminine charms are injected at frequent intervals throughout the four-page circular to wean the attention to the reader to such prosaic articles as felt chair pads and paper drinking cups. "You can drink to the mermaids right merrily yo-ho! in your felt padded swivel chair, if you order now, at the rate of a thousand drinks for \$1.50," is a sample.

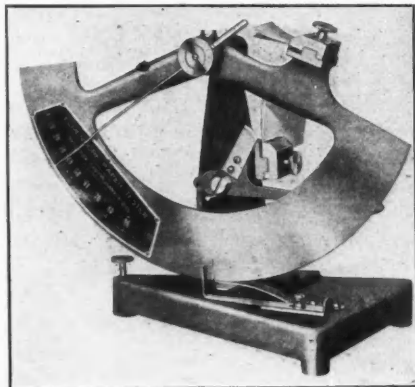


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95

Vortex

Editorial

Vol. LXXV New York, August 10, 1922 No. 6
FIFTY-FIRST YEAR

Why a Tariff Is Needed

Last week the president of the biggest paper company in the world sailed for Europe on the world's largest steamer—the *Aquitania*. Mr. Philip T. Dodge is almost as well known abroad as he is in this country. Enormous manufacturing plants of the Mergenthaler Linotype Company, of which he is also president, are located in England and Germany and Mr. Dodge himself perfected over 100 inventions in this machine. Within the last two decades he has patented many firearm improvements. He filed the first application made in the United States for photographic film of the type now used.

If all the wood that the International Paper Company has on hand today were piled in cords, four feet high and four feet wide, and these were stretched in one line, end to end, they would reach from New York to Denver.

Nearly a ton of coal is consumed for each ton of paper produced in the eighteen mills owned by the company, aside from pulp mills and saw mills.

Over 20,000 tons of sulphur alone are used each year and the four International mills which burn oil consume over a million barrels annually.

The International Paper Company has always been an American institution. It has been financed by American capital. It has exploited America's natural resources, employed American labor and it has sold the bulk of its output to American publishers. Now the company is gradually edging north—over the Canadian border. Mr. Dodge is burning his bridges behind him in the United States because he can foresee that within a few years the American paper manufacturer will be unable to compete with Canadian or European manufacturers. He has stated that some of the company's mills in this country will be operated more profitably as hydro-electric power plants.

Canadian news print production is ever gaining upon that of the United States. In 1913 Canada produced a scant 350,000 tons as opposed to this country's 1,305,000 tons. Last year they produced 813,000 tons while we turned out but 1,225,000 tons. In two years more, at this rate, Canadian production will surpass our own.

What is the reason for this? Why did the International Paper Company recently pick out Three Rivers, Quebec, as the site for one of the world's finest and most up-to-date mills, in preference to some spot in the United States? Ideal transportation conditions—proximity to raw materials, yes. But these were not the only reasons.

Why is a group of Chicago newspapers planning to start a mill across the border at Elko, B. C., in preference to some spot in northern Montana?

Through half a century of industry and unflagging effort the United States has come to be the world's largest producer of paper. When the time comes that the largest and most representative paper company in the United States can no longer profitably compete with Canadian and European companies by confining its operations to

American soil, a tariff law should be enacted that will give it the protection it needs.

During the present period of reconstruction, especially, America needs every one of its industries, but business is not a matter of sentiment. If as large a company as the International cannot make money in the United States, what may be expected of the smaller manufacturer who has not the same facilities for large scale production, minimum overhead and wholesale distribution?

Mr. Dodge and Mr. Curtis, vice-president of the International, have left for Europe "to study industrial conditions generally." They have studied "industrial conditions generally" and most intensely in the United States for quite a number of years. We wish them the greatest success on their voyage abroad, but we cannot help but feel that if conditions were made right in America for American paper manufacturers, these two heads of the world's largest paper concern would not be forced to look across the Atlantic for future business possibilities. It appears to us as though the nation would benefit if Mr. Dodge and Mr. Curtis had found it more profitable to "see America first."

Reductions in Tariff Bill

After a number of interruptions, the Senate the latter part of last week finally passed Schedule No. 13, on pulp, papers and books. As forecasted in last week's issue of the *PAPER TRADE JOURNAL*, Paragraph 1300, dealing with chemical wood pulp, caused the most trouble. Following a long controversy this item was again placed on the free list were it had been placed by the House.

Taking the schedule as a whole, general reductions were made in the bill as reported to the Upper House by the Finance Committee. However, the paper industry did not suffer any more reductions than any other industry. It was conceded some weeks ago that it would be impossible to pass a tariff bill if the high rates originally reported by the Finance Committee were allowed to stand. A large number of Western Republican Senators flatly refused to vote for the bill as originally reported.

The controversy resulting from Senator McCumber's charge week before last, as already reported in *PAPER TRADE JOURNAL*, that a newspaper conspiracy was responsible for the defeat of President Taft in 1912, was revived when the Senate began work on the paper schedule. Senator Robinson of Arkansas and other Democratic Senators reiterated previous denials of this charge in the arguments for putting print paper on the free list. Whether or not this charge is true paper men, judging from their experience in the past, cannot help feeling that it is characteristic of the methods employed by newspaper publishers in obtaining low priced paper at any cost, and it cannot fail to confirm the impression that has existed for years past that news print manufacturers have the most difficult customers in the world to do business with.

The reductions in paper and pulp schedules are naturally to be regretted, because it was not felt in the paper industry that the rates reported by the Finance Committee were sufficiently high to furnish adequate protection against the foreign competition which unless all the present signs are read incorrectly will in the not very distant future harm the home industry even more than at present.

Canada's Paper Exports Again Increase

MONTREAL, Que., August 1, 1922.—Canada's exports of pulp and paper in June again showed considerable increase over the previous month; every item listed by the Department of Trade and Commerce showing a gain over the May figures with the exception of bleached sulphite pulp.

The total value of the pulp and paper exports in June was \$10,534,876 compared with \$8,522,830 in May and with \$6,788,932 in June, 1921.

The largest increases were shown in book paper, 1,214 cwts. compared with 562 cwts. last month; newsprint, 1,729,585 cwts. compared with 1,515,657 cwts.; mechanical pulp, 751,121 cwts. compared with 238,244 cwts., and unbleached sulphite 430,016 cwts. compared with 225,537 cwts.

The figures for the month of June, 1922 and 1921, are as under:

	PAPER			
	June, 1921		June, 1922	
	Cwts.	Value	Cwts.	Value
Newsprint	847,604	\$4,295,181	1,729,585	\$6,136,649
Book	1,743	20,546	1,214	7,564
Other paper manufactures		247,781		613,311
Total paper		\$4,563,508		\$6,757,524

	PULP			
	June, 1921		June, 1922	
	Cwts.	Value	Cwts.	Value
Sulphate (Kraft).....	146,824	\$541,488	262,175	\$801,395
Sulphite, bleached.....	118,721	602,200	238,375	920,652
Sulphite, unbleached.....	187,250	711,664	430,016	1,086,909
Mechanical	196,090	370,072	751,121	968,396
Total	648,885	\$2,225,424	1,681,687	\$3,777,352

The principal countries of destination of these exports in June, 1922, were:

	Paper	Pulp	Total
United States.....	\$5,424,047	\$2,605,512	\$8,029,559
United Kingdom.....	302,775	732,857	1,035,632
All other	1,030,702	438,983	1,469,685

Exports of pulp wood in June were 75,897 cords valued at \$815,155 compared with 75,702 cords in May valued at \$740,287.

For the first three months of the fiscal year, ending June 30, there is also a considerable increase in pulp and paper exports over the corresponding three months of 1921, as shown in the following figures:

	PAPER			
	3 Months, 1921		3 Months, 1922	
	Cwts.	Value	Cwts.	Value
Newsprint	2,680,430	\$14,219,467	4,475,288	\$15,869,712
Book	9,421	123,251	1,811	12,688
Other paper and mfrs.....		1,215,691		1,346,876
Total		\$15,558,409		\$17,229,256

	PULP			
	3 Months, 1921		3 Months, 1922	
	Cwts.	Value	Cwts.	Value
Sulphate	402,977	\$1,630,003	676,913	\$2,076,515
Sulphite, bleached.....	247,801	1,365,187	738,055	2,682,080
Sulphite, unbleached.....	473,392	1,855,307	821,899	2,134,053
Mechanical	586,459	1,255,787	1,118,322	1,426,161
Total pulp.....	1,710,629	\$6,106,284	3,355,189	\$8,318,809

Total pulp and paper exports for these three months in 1922 amounted to \$25,548,065 compared with \$21,664,693 in 1921.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 9, 1922.—The purchasing officer of the Government Printing Office has received the following paper bids:

90 lbs. 19 x 24 4½ Facing Stereo Tissue: Whitaker Paper Company, at \$3.54 per ream; Mathers-Lamm Paper Company, \$3.48, and Sutphin Paper Company, Inc., \$3.45.

The Government Printing Office will open bids on August 11 for the following:

12,000 lbs. (250 reams) 20 x 25—48 Smooth Granite Cover Paper. The R. P. Andrews Paper Company has been awarded the contract for furnishing 15 reams of 19 x 24 brown paperoid at \$.096 per lb., bids for which were opened on July 24.

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

18,250 lbs. Map Paper, 28 x 38 and 32 x 48: Reese & Reese, at \$.18745 per lb.; Dobler & Mudge, \$.1645; Whitaker Paper Company, \$.1695; R. P. Andrews Paper Company, \$.155; B. F. Bond Paper Company, \$.1644; Old Dominion Paper Company, \$.1549; Barton, Duer & Koch Paper Company, \$.155, and H. P. Andrews Paper Company, \$.2175.

Paper Division Gets Supply of Latex

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 9, 1922.—The Paper Division of the Bureau of Foreign and Domestic Commerce has recently imported a supply of rubber latex via London, which it has distributed to American manufacturers interested. Very shortly arrangements will be made to import an additional supply for others interested in the process.

Walter S. Tower, Commercial Attache at London, has estimated that the price will be approximately four shillings a gallon, c. i. f. New York. This price is somewhat cheaper than the price of the shipment which has already been received, which was five shillings a gallon, f. o. b. London, plus transportation charges from London to the American mill. The price quoted covers only the expense of packing and shipping the latex.

The Paper Division announces that it will be glad to hear from any American manufacturers interested and will arrange for as early shipment as possible of any latex that may be desired.

John Matthews, Jr., Heads Paper Division

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 7, 1922.—John Matthews, Jr., formerly eastern and southern sales manager of the Miami Paper Company of West Carrollton, Ohio, began his work on August 1 as chief of the Paper Division of the Department of Commerce.

Mr. Matthews has been in the export paper business since 1912 and was for some time the South American foreign manager of the Parsons Trading Company. Mr. Matthews goes to the Department of Commerce in his capacity as chief of the Paper Division well equipped for the work and he should be of much help to those paper manufacturers who desire to build up an export trade.

A. W. de Revere to Manage Sales of Marvellum Co.

HOLYOKE, Mass., August 8, 1922.—The Marvellum Company, manufacturer of distinctive cover papers, announces the appointment of A. W. de Revere to the vice-presidency of the company, to take charge of sales.

Marvellustre, the gorgeous paper, which has met with such success as a cover and mount stock, will soon be accompanied by a sister cover—Marvelhide, the leather-like cover—made by the same manufacturer. Marvelhide will have the finish of old Spanish leather and bids fair to assume a worthy place among the distinctive cover lines.



Exclusive

Manufacturers

of
Ryan-Seaman Process

DRY SATIN WHITE

The Latest Development in The Coated Paper Industry

Casein
Crystal Boro Phosphate
(A solvent for casein)

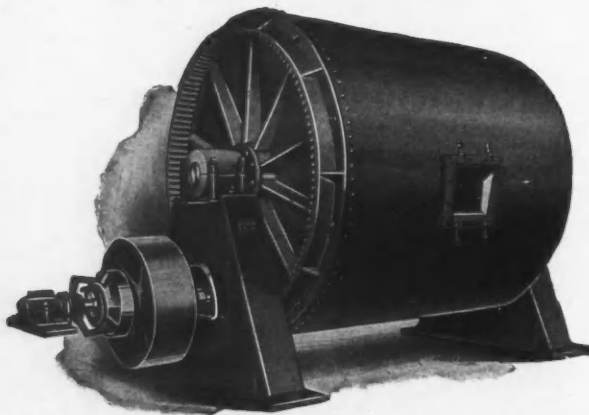
ALUM
Both Commercial and Iron Free
FOR PAPER MAKERS

Pulp Satin White
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MIX YOUR DRY SATIN WHITE IN A CROSSLEY BALL MILL



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Write for full information and prices.

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TRENTON, N. J.

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

PAPER TESTING METHODS

Microscopical, Chemical, and Physical Processes Described with an Account of the Apparatus Employed
BY COMMITTEE ON PAPER TESTING, TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY

(Continued from Last Week)

IV. Chemical Analysis

1. Ash Determination

(a) *Quantitative*—A one-gram sample of the paper to be tested is burned in a porcelain or nickel crucible. A Meker burner is very convenient for this purpose, as some heavily loaded papers require considerable time and heat to burn the last traces of carbon. Ordinarily a white paper will give a white ash, but if mineral pigments have been used the ash is likely to be colored. In any case the ash should be free from specks of unburned carbon.

Note—The sample of paper need not be weighed closer than 0.005 gram, since a one per cent variation in the moisture content will introduce an error of 0.01 gram. If the maximum error in the weight of the paper is 0.01 gram then the maximum error in the weight of the ash will be 0.01 gram for every 10 per cent of ash present. Therefore in a paper containing 10 per cent ash, the results will be reported to the nearest tenth. If special accuracy is required, the paper may be weighed in the "bone dry" condition. Then with the error due to moisture eliminated it is possible to weigh the paper to +0.0005 gram and the error will be 0.0001 gram for every 10 per cent of ash. The results may then be reported to the nearest hundredth. This latter result will of course be 1 per cent lower than the ash results on a 1-gram sample containing 10 per cent of moisture.

During the burning care must be taken that a portion of the ash is not lost by air currents. The ash is often light and fluffy, and the strong currents of air from the burners may blow away a portion of it. While cooling they may be kept in a dessicator, but this is not necessary, since the ash may be poured into a counterpoised aluminum pan as soon as the crucible is cool enough to avoid the danger of loss from convection currents. The ash will cool almost instantly and may be weighed at once. This saves the time required for the crucible to cool and also avoids the necessity of weighing the crucible.

Note—Aluminum is recommended as being less easily broken as well as lighter, than glass.

The ash as finally obtained includes all non-volatile and non-combustible matter in the paper. It may be derived from at least five sources:

(1)—The ash of the pulp from which the paper was made; (2) the ash from the various loading or filling materials added; (3) the ash from any surface coating or sizing, and (4) the ash of mineral coloring materials or pigments, and (5) the ash derived from alum used, though the amount traceable to this cause is very small and may be neglected. The complete quantitative analysis of an ash is a time-consuming and also a rather complicated process. It is possible, however, to obtain some idea of the composition of the ash by a few comparatively simple tests.

Once the paper is burned it is impossible to tell which portion of the ash is derived from the coating and which portion is derived from the filler. Therefore, if anything more than the total ash content is desired the coating must be stripped from the paper before ashing. In the case of coated papers where casein has been used as the adhesive, this can often be done by the use of dilute ammonia. The insoluble material may be filtered off, dried and weighed. The filtrate may be evaporated to dryness and the residue weighed. This will include the casein (or soluble caseinates if such be present) as well as any soluble material present. The difference between the weight of the total ash and the ash of the paper from which the coating has been stripped plus the weight of the coating will give the weight of the combustible portion (i. e. glue or casein) of the coating.

Note—Provided the insoluble portion of the coating has been ignited to the same extent as the total ash.

It is quite possible for a paper to have an ash of 3 to 5 per cent without being loaded. This might be due to the ash in the pulp, as well as to the ash derived from water, alum and sizing materials.

Where the ash is 5 to 20 per cent the paper is loaded. A list published in *Paper* *(70) gives the names of twenty-one loading materials. However, from the chemical standpoint many of these are practically the same material sold under different names. They are all silicates, sulphates or carbonates of aluminum, magnesium, barium or calcium. While an analysis will give the composition of the ash, it will not tell under what trade name the material may have been bought.

In this connection it is interesting to note the following percentages of ash in fibrous raw materials as given by Wrede. (*Paper*, Jan. 31, 1912)* (3).

Stock	Percentage Ash
Bleached linen half stuff.....	0.12—1.86
Bleached cotton half stuff.....	0.24—0.79
Unbleached cotton half stuff.....	0.24—1.12
Sulphite, unbleached.....	0.48—1.25
Soda.....	0.36—1.40
Adansonia.....	5.70—7.19
Japanese fibers.....	2.5

(b) *Qualitative* *(4, 11, 69).—To determine the kind of loading or coating material used, it is necessary to test the ash qualitatively, for which purpose at least 0.2 g. of ash is desirable. Briefly, tests should be made for the substances indicated in table, in which are also given the fillers that the presence of these substances would indicate.

Paper Fillers and their Indicators *(91)

Substance sought	Filler indicated
Calcium carbonate	Crown filler
Barium sulphate	Chalk
Magnesium silicate	Blanc fixe
Aluminum silicate	Talc
	China clay

These fillers have various trade names and do not in all cases have definite chemical formulas, but the presence of any great amount of any of the materials in the first column would indicate the kind of filler used, and further confirmatory tests may be made.

Burn enough paper to obtain at least 0.2 g. ash in a platinum or nickel crucible. Separate $\frac{1}{3}$ of the ash from the main portion; to this $\frac{1}{3}$ add 5 cc. water and boil until well extracted; filter; add a drop of hydrochloric acid to the filtrate and then 3 cc. 10 per cent barium chloride solution. A white precipitate is due to calcium sulphate or crown filler in the paper. To the residue from the water extraction add dilute hydrochloric acid. Effervescence of carbon dioxide gas is due to chalk in the paper. This test for chalk may be applied directly to the paper before ignition if the presence of chalk is suspected at the start.

To the $\frac{2}{3}$ portion of the ash add 1 g. sodium carbonate and mix well. Fuse the mass in a platinum crucible until it becomes a clear quiet liquid. Cool and dissolve in boiling dilute hydrochloric acid. This solution should be clear. If an undissolved white residue remains, filter this off. It is probably due to barium. Dip a clean platinum wire in this residue and hold it in a bunsen flame. Barium will give a characteristic green color. This shows the presence of *blanc fixe*.

If the previous hydrochloric acid solution was clear evaporate nearly to dryness. Dip a clean platinum wire in this mass and test for barium as given above. Then take up the mass with dilute hydrochloric acid; boil; filter. The residue is silica from silicates in the filter. A portion of this filtrate can be used as a confirmatory test for sulphates. To the filtrate from the silica separation add ammonium hydroxide until slightly alkaline. A white flocculent precipitate shows the presence of aluminum. Filter off this precipitate and make the filtrate acid with oxalic acid. Make alkaline slowly with ammonium hydroxide. The formation of a white precipitate shows the presence of calcium. Filter off this precipitate and make the filtrate alkaline with ammonium hydroxide. Add 5 cc. saturated solution of sodium acid phosphate and stir with a rod. There will be a crystalline precipitate formed if magnesium is present. It forms slowly and is best brought down by an occasional rubbing of the sides of the beaker with a stirring rod.

These tests indicate the possible combinations of elements in the filler. Where there are several names for one chemical combination—such as *talc*, *asbestine*, *agalite*, etc.—for various magnesium silicates a microscopic analysis and comparison of the crystal form with known samples is necessary. Quantities of aluminum invariably indicate clay. Silica and magnesium indicate *talcs*, *agalites* or *asbestine* and water-soluble sulphates from filler point to calcium sulphate.

*(12) If the paper contains calcium sulphate, the ash obtained may consist partly of calcium sulphide, due to reducing action of the carbon found on ignition, and the amount will, therefore, not represent the true amount added. The ash should be moistened with a few drops of sulphuric acid, and again ignited, in order to reconvert it into calcium sulphate. It should also be borne in mind that the sulphate of lime as present in the paper is combined with two atoms of water $\text{CaSO}_4 + 2\text{H}_2\text{O}$, and, therefore, that every part of calcium sulphate obtained represents 1.26 parts of *pearl-hardening* actually in the paper.

(c) *Amount of Coating*. *(11).—Weigh a piece of the paper cut exactly 2 x 5 inches and place in a flat glass dish. The dishes used for developing in photography are convenient for this purpose. Cover with water containing 1 per cent of NH_4OH and set

aside in a warm place (two or three hours is generally sufficient to loosen the coating). Remove the paper to a large watch glass, rub the surface with a small camel's hair brush cut off square, and wash the coating into a beaker. If the paper is double-coated, turn it over and repeat on the other side. Continue the operation until all the coating is washed into the beaker. Dry the paper and weigh it under the same conditions as those under which the original paper was weighed. The loss in weight is the weight of coating. Calculate this to per cent of the original sample and also figure the weight of coating on the basis of a ream of 500 sheets 25 x 40 inches.

2. Paraffin

There are several paraffin solvents which may be used for this determination. Gasoline is easily obtained and comparatively cheap. It has, however, the serious disadvantage of being very inflammable. Carbon tetrachloride (CCl_4) is not combustible. It is superior to chloroform, since the fumes are not likely to produce anesthesia. Both gasoline and carbon tetrachloride have been found satisfactory.

Note—Carbon tetrachloride cannot be kept in ordinary "tin" cans on account of its action on iron.

Enough of the paper must be taken to obtain a weighable amount of paraffin. One or two grams of paper should be sufficient.

Place the paper in a soxhlet or in an ordinary erlenmeyer flask fitted with a reflux condenser, cover with gasoline or carbon tetrachloride and extract until the paraffin is all dissolved. If the erlenmeyer flask be used it will probably be necessary to make a second extraction with a fresh amount of solvent.

The solution may then be evaporated to dryness and the paraffin weighed. If the paraffin shows a tendency to "creep" over the edge of the dish it may be easier to weigh the paper before and after extraction and consider the loss in weight as paraffin.

The following qualitative test for paraffin known as the Dunlop method may be of value for determining the presence of paraffin in the presence of rosin:

It consists in boiling the sample with acetic anhydride and observing the behavior of the solution on cooling. If paraffin is present the anhydride becomes turbid and the paraffin separates out on the top in a white precipitate. Less than 1 per cent of paraffin may be detected in this manner. (Allen's Commercial Organic Analysis.)

3. Sizing Materials

d. Rosin.—Sammet Method: Alcohol-ether Method. *(103).

Cut five grams of paper into strips approximately one-half inch wide and fold them into numerous small crosswise folds. Place the folded strips in a soxhlet extractor and fill with acidulated alcohol. Acidulated alcohol solution is made by adding 900 cc. of 95 per cent alcohol to 95 cc. of distilled water and 5 cc. of glacial acetic acid. Place the soxhlet flask directly in the boiling water of a steam bath and extract by siphoning from six to twelve times, according to the nature of the paper. Wash the alcoholic extract of rosin, which may contain foreign material, into a beaker and evaporate to a few cc. on a steam bath. Cool, take up in about 25 cc. of ether, transfer to a 300 cc. separatory funnel containing about 150 cc. of distilled water to which has been added a small quantity of sodium chloride to prevent emulsification, shake thoroughly and allow to separate. Draw off the water into a second separatory funnel and repeat the treatment with a fresh 25 cc. portion of ether. Combine the ether extracts which contain the rosin and any other ether-soluble material and wash twice or until the ether layer is perfectly clear and the line between the ether and the water is sharp and distinct, with 100 cc. portions of distilled water to remove salts and foreign matter. Should glue which is extracted from the paper by alcohol interfere by emulsifying with the ether, it may be readily removed by adding a strong solution of sodium chloride to the combined ether extracts, shak-

ing thoroughly and drawing it off, repeating if necessary before washing with distilled water. Transfer the washed ether extract to a weighed platinum dish, evaporate to dryness and dry in a water oven at from 98°C. to 100°C. for exactly one hour, cool and weigh. This length of time is sufficient to insure complete drying. Prolonged heating causes a continual loss of rosin.

Some objections have been made to portions of the foregoing method. It has been stated that the sodium chloride is sufficiently soluble in the ether to produce high results. Some also prefer to carry the evaporation of the alcohol extract to complete dryness and then take up in ether and in water. The residue as obtained is only partially soluble in ether, but in case the entire amount of ether-soluble material should not be secured, after as much has

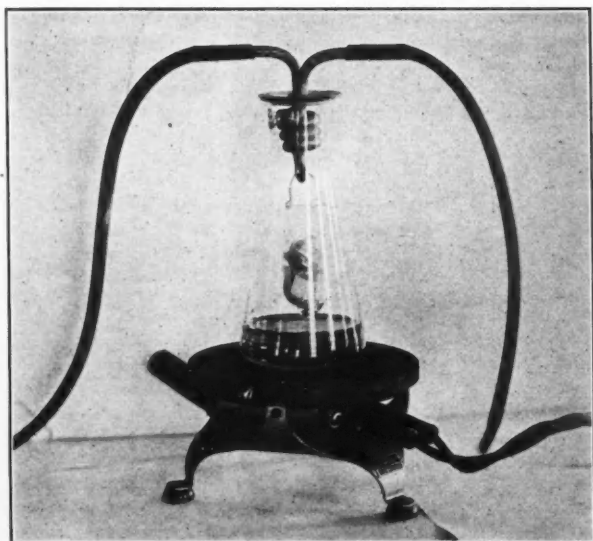


PLATE NO. 43. ROSIN EXTRACTION

A simple apparatus for determining the rosin content of paper. (American Writing Paper Company, Holyoke, Mass.)

been dissolved by the ether as possible, the remainder of the residue is taken up in water. The ether and water is then separated in a separatory funnel in the usual manner. There appears to be no reason why a glass dish should not be as satisfactory as a platinum dish. It is also asserted that the extraction may be carried out in an erlenmeyer flask instead of a soxhlet. The number of extractions required depend upon the character of the paper used. In some individual cases it has been found that a single extraction took out practically all the rosin. This extraction was done on a hot plate and the alcohol was in contact with the paper for about half an hour. It is not known to what extent this time could be shortened or in what per cent of cases a single extraction would be sufficiently accurate.

Note—For extracting rosin, the apparatus shown in Plate 43 will do the work of a soxhlet extractor with greater convenience. It is essentially the same as the soxhlet in principle, but can be set up very quickly, takes less solvent, keeps the condensed solvent surrounded by hot vapors, occupies less space, and is less liable to breakage. The time of extraction is lessened because of more frequent flushing of the small well with the condensed solvent. This apparatus is listed as an *Underwriter's Extractor*, and has been extensively used in the extraction of rubber.

QUALITATIVE TEST FOR ROSIN

Boil a small portion of the paper in 5 cc. acetic anhydride in a dry test tube. Cool. Add carefully down the side of the test tube a small amount of concentrated sulphuric acid. The development of a pink ring shows the presence of rosin.

Rosin *(3) is used almost exclusively in the beater to impart waterproof properties to the paper. There is no single test of a

simple nature which will demonstrate positively the presence or absence of rosin and any judgment regarding it must be based on the indications of a number of different tests. If a little ether is dropped onto a sheet of paper and allowed to evaporate there will be formed, in the case of rosin-sized paper, a ring of rosin at the edge of the zone where the ether evaporated. This will be absent in most unsized papers, and it will, of course, be formed in any paper which contains any ether soluble material besides rosin.

Another test is made by boiling a little of the paper for a few minutes in glacial acetic acid and pouring the acid into a little distilled water. A pronounced turbidity indicates rosin, but a slight opalescence may be caused by other soluble substances and must be disregarded.

A third test is that known as the *Raspail reaction*. If a drop of concentrated sulphuric acid be placed on the paper and grain or two of sugar added a pronounced raspberry red color will develop with rosin-sized papers, while with unsized papers red color is also formed when albuminous materials are present so they must first be proved absent before the test can be considered indicative of rosin.

(b) *Glue and Casein*.—There appears to be no quantitative method known for the determination of these materials in the presence of each other. Both substances contain nitrogen. If only one be present and the nitrogen content of the original material as added to the paper be known, then by means of the nitrogen determination the content of glue or casein may be determined.

QUALITATIVE TEST FOR GLUE

Boil a small portion of the paper with 10 cc. of water in a test tube. Decant the extract to another test tube and cool. Then add 5 cc. of ammonium molybdate solution, followed by a few drops of nitric acid. The formation of a white amorphous precipitate shows presence of glue.

DETERMINATION OF NITROGEN

Place from three to five grams of the paper which has been cut into small pieces in a kjeldahl digestion flask, add ten grams potassium sulphate, 0.7 gram of mercury and 25 cc. of concentrated sulphuric acid.

The mercury acts as a catalytic agent aiding in the decomposition of the nitrogenous material. The potassium sulphate serves to raise the boiling point of the sulphuric acid. It is probable that sodium sulphate can be used in place of potassium sulphate, but it is recommended that 15 grams of sodium sulphate crystals be used in this case.

Heat gently at first to avoid frothing and finally increase the heat as the digestion proceeds. At the finish the solution should be colorless, or of a pale straw color, and of a syrupy consistence. At the completion of the digestion, which may require one and a half to two hours, the contents of the flask are allowed to cool and 30 cc. of a 4 per cent solution of potassium sulphide are added.

The potassium sulphide is necessary to break up nitrogen compounds of mercury. Other materials than potassium sulphide have been used for this purpose, but are not recommended.

Before the distillation can be made the mass must be rendered alkaline. First dilute with about 200 cc. of distilled water and then neutralize by adding an excess of saturated solution of sodium hydroxide.

The volume of the solution after the sodium hydroxide has been added should be about 400 cc., therefore the volume of water added must be calculated so that just enough room would be left for the sodium hydroxide solution. Commercial sodium hydroxide (95 per cent) has been found satisfactory.

There should be an excess of caustic soda equal to about 5 cc. of a saturated solution. It is convenient to add a few drops of methyl orange indicator or phenolphthalein indicator solution to the flask before adding the sodium hydroxide. The solution will

become yellow or red respectively when it becomes alkaline.

The sodium hydroxide solution is carefully poured down the side of the flask so that it does not mix with the contents. The flask is immediately connected to the condenser and then the flask is shaken in order to thoroughly mix the contents.

If about 5 grams of granulated zinc or a few small pieces of pumice stone are added to this flask just before the sodium hydroxide, they will help to prevent bumping.

The distillate is caught in a flask containing a known amount of standard acid diluted to a volume of 100 cc. with distilled water. (The equivalent of 30 cc. tenth normal acid should be ample.) A few drops of indicator should be added to this solution. Sodium alizarin sulphonate and methyl red have been recommended as indicators. The end of the condenser tube should dip beneath the surface of the acid. The distillation should continue for forty-five minutes and the distillate should equal 200 cc. Titrated with tenth normal alkali.

This same operation of distillation should be carried out, using only the chemicals involved in order to have a check on their purity. This is known as the "blank."

Subtract the number of cc. of tenth normal alkali required to neutralize the distillate, from the number of cc. required by the blank. This difference is the number cc. of tenth normal alkali equivalent to ammonia.

$$\text{No. cc.} \times 0.014 = \text{g. nitrogen.}$$

The following factors should be used on unknown samples: For *casein* use the factor 6.3 and for *glue* use the factor 5.6. In all cases this factor should be determined wherever possible, as those values will vary, depending on the grade of material used.

Note—Copper sulphate, weight for weight, can be substituted for the mercury as a catalytic agent in this determination; it serves as an indicator for alkalinity by turning a characteristic blue when the solution is made alkaline previous to distillation. Small glass beads can be effectively substituted for granulated zinc to prevent bumping in the distilling flask.

Casein *(3) may be detected in paper by moistening the sample with Millon's reagent and warming gently either over a flame or over an open steam bath. If casein is present a brick-red color will develop. In the case of coated paper in which much satin white is used, the alkali present determines the formation of a yellow color. In this case proof may be obtained by moistening the paper first with dilute nitric acid, to neutralize the alkali, and then applying the Millon's reagent as before; tested in this way satin white coated paper will give the usual red color. Casein may also be detected by boiling the paper with water and a few drops of ammonia, filtering and adding to the filtrate dilute acetic acid very gradually. Casein will precipitate when the solution becomes very faintly acid, but it may redissolve on adding a considerable excess. This test is also given, though usually less strongly, by rosin, so the precipitate should be tested with Millon's reagent to confirm the presence of casein. Casein is seldom used except in the coating; cases of surface sizing or of its use in the beaters are very rare.

Glue *(3) is sometimes used as an adhesive in coating papers and in rare instances in the beaters; the better grades known as gelatines are used in surface sizing. If glue is present alone it may be detected by boiling the sample of paper in water, filtering if necessary, and adding a little dilute tannic acid solution; a grayish, flocculent precipitate indicates glue. Casein is also precipitated by tannic acid and the presence of starch prevents the precipitation of glue so that when either casein or starch is present there is apparently no means of proving the presence or absence of glue.

c. Starch

PROCEDURE FOR ANALYSIS

The paper to be analyzed is tested with the usual iodine reagent. If but a trace of starch is present, no acetic is required in extraction. A 5-gram sample is cut into small pieces and placed in a

500-cc. round-bottom flask. Two hundred cc. of water is added, and 5 cc. glacial acetic acid is run in, making a 2½ per cent solution. The flask is connected with a reflux condenser by means of a clean rubber stopper and the contents boiled vigorously for 1½ hours. The extract is decanted through a Büchner funnel equipped for suction filtration and the pulp washed with about 50 cc. of hot water. To the filtrate is added 15 cc. of HCl (37 per cent) and boiling continued for thirty minutes, the volume of the solution being permitted to decrease by evaporation to about 200 cc. The hot acid solution is neutralized by the addition of solid sodium carbonate until effervescence ceases and the volume is determined. This solution is titrated into a measured quantity of Fehling's solution (2 to 10 cc., according to the amount of starch present). After each addition of sugar solution the mixture is heated to the boiling-point and maintained at that temperature for one minute. The reaction mixture may be diluted if this is considered desirable. The end-point is determined on a spot plate with a potassium ferrocyanide-acetic acid solution and is that point at which no immediate color is produced on the plate; it may be determined to within ½ to 1 cc. of sugar solution, depending on the volume of solution employed. It was found that the potassium ferrocyanide became colored when allowed to remain a number of days with the acetic acid, and that a sharper and more distinct end-point can be obtained if the acid is added separately to the spot plate when the test is to be made. One drop of each solution is used for a test.

QUANTITATIVE ANALYSIS FOR STARCH* (120)

Method of Kamm and Voorhees.

PREPARATION OF REAGENTS—The usual Fehling's solution is employed.

Solution A—69.3 g. of crystallized copper sulphate are dissolved in water and the solution diluted to 1000 cc.

Solution B—346 g. of Rochelle salt and 120 g. of sodium hydroxide are dissolved in water and the solution also diluted to 1000 cc.

Solutions A and B are kept separate and equal volumes mixed when ready to be used. In a given experiment, where it is reported that 10 cc. of Fehling's solution is used, it is understood that 5 cc. of solution A is added to 5 cc. of solution B. According to the literature, 10 cc. of such a solution should be equivalent to 0.05 grams of dextrose when an analysis is run in a specified empirical manner. It is found more convenient to standardize the solution with a known quantity of starch, the latter being hydrolyzed and titrated under the same conditions used later for the hydrolysis and titration of starch in paper. The advantage is obvious.

Potassium ferrocyanide solution. A 10 per cent solution of $K_4Fe(CN)_6 \cdot 3H_2O$ is used.

Acetic acid solution. A 50 per cent solution of acetic acid is found convenient.

METHOD OF CALCULATION OF RESULTS

It has already been suggested that Fehling's solution be standardized against one of the ordinary starches used in paper manufacture. Such a procedure is justified by the close agreement in the reducing values of corn-starch, Hercules gum, feculose and dextrin.

Example—A sample of corn-starch was dried at 105° C. for three hours. A 0.5-gram portion was then weighed out and hydrolyzed with about 190 cc. of a 4 per cent HCl solution during a period of thirty minutes. After neutralization with solid sodium carbonate, the final volume was adjusted to 200 cc., and the solution titrated against 10 cc. of Fehling's solution; 20 cc. of sugar solution were required and 10 cc. of Fehling's solution are therefore

$$\text{equivalent to } \frac{20}{200} \times 0.50 = 0.050 \text{ gram starch.}$$

In an analysis of a 5-gram sample of paper the volume of the final hydrolysis mixture was 217 cc. Of the latter solution 39 cc. were required for reaction with 10 cc. of Fehling's solution. The per cent of starch in the sample of paper is therefore:

$$\frac{217}{39} \times \frac{\text{Value of Fehling's solution in grams of starch} \times 100}{\text{Wt. of sample of paper}} = 5.5 \text{ per cent}$$

Since, however, a 5-gram sample of paper is used, and since our Fehling's solution is equivalent to 0.05 gram starch to 10 cc. of solution, the calculation is simplified thus:

$$\frac{217}{39} = 5.5 \text{ per cent starch.}$$

Mention might be made of the polarimetric method of Dr. C. E. G. Porst and H. A. Crown. See *Journal of Industrial and Engineering Chemistry*, vol. 5, No. 4, April, 1913.

Qualitative Test to Indicate its Presence in Paper

Make a dilute solution of iodine in potassium iodide by adding a small amount of water to a mixture of three or four crystals of iodine and one gram of potassium iodide, stirring until the iodine is completely dissolved, and then diluting the solution with pure water until a pale straw-yellow color is obtained. Add a drop of this solution to the paper under examination, a blue color indicates the probable presence of starch. If this blue coloration is obtained it is well to confirm the test by boiling the paper with water and testing the water extract with the iodine solution, because cellulose in the presence of water when subjected to certain mechanical processes gives rise to modifications known as hydrocelluloses. These hydrocelluloses are not soluble to any great extent in boiling water, but they will give rise to a blue coloration when brought into direct contact with the iodine solution.

An alternate procedure is as follows: The universal test for starch *(3) is to apply a dilute iodine solution to the paper when a blue to violet color will appear if starch is present. It is well to confirm this test by boiling some of the paper with a little water, filtering and testing the filtrate, after cooling, with a few drops of iodine solution. This is necessary because hydrocelluloses, which are only slightly soluble in boiling water, also give a blue color when brought into direct contact with iodine solution. Microscopic examination will show whether the starch granules have been burst by boiling or whether the starch was used without cooking. If the paper to be tested is torn so that it splits on the edge before being moistened with the iodine solution it is generally possible to tell whether it is surface sized or not. If it is surface sized only, the interior of the sheet will remain white while the surface will turn blue; if, however, considerable starch was used in the beater, this is in part cooked and drawn to the surface by the heat of the driers so that the paper has the appearance of being surface sized when in reality it was not. Microscopic examination of the papers after treating with iodine will sometimes enable an opinion to be formed though it is seldom possible to prove positively in such a case whether the paper is surface sized or not.

d. Dextrine in Presence of Beater Starch. Method of Kamm and Tendick *(119)

The procedure adopted consists in the removal of the surface sizing by a 45-minute leaching of the sample of paper with water at a temperature of 60° C. For a 5-gram sample 200 cc. of water is used. The extract is removed by suction filtration and the soluble carbohydrate material hydrolyzed and estimated according to the procedure already described in detail. See *Method for quantitative determination of starch*. The starch remaining in the paper may then be isolated by the dilute acetic acid extraction method recommended in the article on starch determination.

4. Chlorine

The determination of free chlorine in paper is carried on in a manner similar to that used in testing half-stuff; namely, take a

small mass of the stuff to be tested, from the beater, press it with the hand and test with a few drops of potassium iodide starch solution. If free chlorine is present the characteristic blue color will be developed.

For the testing of finished paper the determination is best carried out as follows: Cut the paper into small pieces, moisten with distilled water, and test with starch iodide paper; this is best done on a glass plate.

Instead of starch iodide paper one may mix a small piece of starch to a paste with cold water, and mix it with a solution of potassium iodide.

5. Sulphur. *(127)

The apparatus consists of a 500 cc. round bottom flask with a neck about two inches long and one inch in diameter. The mouth of this neck is ground to a flat surface and on this is placed a glass tube about four inches long and an inch in diameter, the lower end of which is also ground flat to fit tightly upon the upper surface of the neck of the flask. The whole is so arranged that after placing a piece of filter paper between the two ground surfaces, the tube and flask can be securely clamped together so that all gas generated in the flask must pass through the filter paper and then up through the superimposed glass tube.

The procedure for the testing of tissue papers is as follows: A sample of 25 square inches is taken and its weight determined. It is then shaken up in a wide mouth, glass-stoppered bottle with 10 cc. of distilled water; when partial disintegration has taken place, another 10 cc. of water is added and the shaking continued until the paper has been completely reduced to pulp. The larger part of the pulped mass is now transferred to the flask described above, and the residue which is left in the bottle is rinsed into the flask with a mixture of 10 cc. of water.

Prepare turnings from the highest grade, pure stick zinc, which must be free from sulphur and arsenic. Treat one gram of these turnings with 10 cc. of a dilute solution of copper sulphate containing about .002 gram actual copper. After a few minutes all the copper will have deposited and the turnings are then thoroughly washed to remove every trace of zinc sulphate.

The turnings are added to the flask and a wad of cotton inserted in its neck. Between the two ground glass surfaces is then clamped a piece of filter paper about two inches square which has been perforated with small pin holes about one-eighth of an inch apart and which just before use is moistened with several drops of lead acetate solution. Finally a loose wad of cotton is placed in the tube above the paper.

The flask is placed on the steam bath and allowed to stay, with occasional shakings, for an hour. The filter paper is then removed from the neck of the flask and air dried. It is best compared with the standard test pieces by placing them side by side on a piece of white paper and covering them with a thin piece of clear, white glass. The standard test pieces are prepared by using sulphur-free cotton in the flask instead of the disintegrated paper and adding to this definite volumes of a very weak solution of sodium thiosulphate whose strength is accurately known. The sulphur-free cotton is prepared by boiling absorbent cotton in weak caustic soda solution and washing thoroughly with distilled water.

The sensitivity of this test is such that the presence of 0.000001 gram of sulphur in the flask will give a distinct color on the lead acetate paper. From tests of a considerable number of papers which have been found satisfactory in actual practice it has been proved that tissue paper is safe for wrapping silverware if it does not contain more than 0.000002 gram of sulphur per 25 square inches of paper (about 0.25 gram).

6. Coloring Matter *(28)

Smalts, existing as it does in high-class papers, usually without admixture with loading materials, can be estimated with sufficient accuracy by incinerating the paper, weighing the ash, and making a

correction for the small proportion of the latter due to the fiber, etc. This proportion does not usually exceed 2 per cent.

The *ultramarines* are of variable and even doubtful composition, and are, therefore, best estimated by comparing the depth of color of the ash with that of standard mixtures of the pigment with known proportions of china clay.

Chrome yellow, orange, etc., also of variable composition, may be determined, if necessary, by estimating the lead and chromium separately, and calculating the results to the nearest indicated composition. It is scarcely necessary here to describe the full gravimetric process as it is likely to be but rarely required. It will be sufficient to say that the lead is precipitated and estimated as the sulphate, and the chromium as chromic oxide.

Prussian blue may be determined approximately by estimating the iron by igniting the paper, fusing the ash with sodium carbonate, treating the fused product with hot water, filtering, and boiling the residue with dilute hydrochloric acid and a drop or two of nitric acid. The solution is then again filtered, and the iron and alumina precipitated with ammonia in the presence of a little ammonium chloride. The precipitate of iron and aluminum hydrates is washed, filtered off, and digested with excess of caustic soda, then filtered again and carefully washed. The residue, which consists entirely of iron, is washed, dried, ignited, and weighed as the oxide. This process also serves for the estimation of all other iron pigments except the *natural pigments, ochres, etc.*

(To be concluded.)

COMMENTS ON FELT STANDARDIZATION

GEORGE D. BEARCE, NEWS PRINT SERVICE BUREAU

In the July issue of the PAPER TRADE JOURNAL the article entitled "Impracticability of Standardizing Felts," by William H. Lee, seems to deprecate the efforts being made by the Joint Felt Committee.

The author concedes that "there is possibly *some* logic in the theory of a standardizing on sizes," which is the principal point that has been under discussion in the "Standardization of Felts." Standard practice in this respect should be mutually beneficial to the maker and user and there appears to be no logical reason why this is not practical.

Standardization Never Studied

It is recognized that the standardization of grades has limitations and this is considered as secondary in the co-operative study of paper machine felts. However, it seems rather premature to state that such a thing is impossible when it has never been studied. In the case of mills making news print paper exclusively it is possible that the requirements of the majority of machines are nearly the same and that standardization is within the realm of possibility. The same conditions might be found in other groups of mills making the same grade of paper.

How Life of Felt is Measured

The paper maker is not so much interested in the grades of felts, as their wearing qualities and ability to remove water from the sheet. The life of a felt is generally measured in "tons of paper per felt," or by the standard unit "pounds of paper per pound of felt." There are apparently very few methods of measuring the other functions performed by felts similar to the tests applied to finished paper. In the paper industry there are recognized "standard tests" for weight, strength, tear, fold, thickness, glare, moisture, etc., by which the buyer and seller are guided. A standard instrument of proven value of interest to felt makers is the plastometer which measures the hardness of rubber rolls. It may be possible to devise special apparatus that will be valuable in testing felts. It might be feasible to develop an instrument to measure the speed at which a felt will remove moisture or what might be termed as its "water absorbability." Any apparatus that will reduce the characteristics or abilities of the felt to numerical terms will be of value to both maker and user. It should help to eliminate "rule of thumb" methods and be of assistance in solving the problems common to both the felt manufacturer and paper maker.

To Dispense With Odd Sizes

The "Standardization of Felts" as suggested by the Joint Felt Committee is primarily to reduce as far as possible, the vast number of odd sizes used in different mills. This should result in appreciable benefit to both maker and user because it will tend to reduce the cost, make felts more interchangeable between machines, permit smaller inventories and decrease the chances for delays and shut-downs due to felt accidents. Any co-operative study of standardization either in sizes or grades would make available

extensive information that would be of assistance in solving the problem. Work of this nature should be productive of results if we do not assume that it is impossible before it has been given a fair tryout.

T. A. P. P. I. Asks Co-operation of Woodlands Section

The Technical Association of the Pulp and Paper Industry has asked the co-operation of the Woodlands Section of its study of waste, particularly as related to the production and storage of pulpwood. The manufacture of paper starts in the woods, where questions of expediency as regards operating costs, volume production and the protection and reforestation of cut-over lands, govern the cutting limits. In the past, in both the lumber and paper industries, quantities of material have been left in the woods, which now appears to have a marketable value. The utilization of stumps, the top diameter limit, brush disposal—all these bear directly on the cost of pulpwood production and productive capacity of pulpwood lands.

The size of the pulpwood unit, whether 4, 8, 12, 16 or other foot lengths, has much to do with the costs and efficiency of cutting, driving and rail transportation. Even after the wood has been piled in the mill yards, comes the question of loss through the decay and destruction by fungi and wood boring insects. This whole question of avoidable loss in the basic raw material of the paper industry is one which must receive careful consideration and the Woodlands Section is glad to offer its co-operation to the Technical Association in their studies along these lines.

Japs Coming to See Drake Process

CLEVELAND, Ohio, August 7, 1922.—The Drake Process Machinery Company, 2344 E. 105th Street, which manufactures patented machinery for the making of paper containers direct from the pulp, and without the intervention of making the paper itself, announces that it has leased the right to manufacture containers in Japan, to a Japanese concern. A committee of technical men connected with the Japanese concern is now on the way to America from Tokio to visit the Cleveland plant and study the methods in operation here. The Drake company not only manufactures the machinery used for the process, but also makes the containers at its local factories. Manufacturing rights have already been disposed of in many foreign countries.

International Paper Plant Makes New Record

INTERNATIONAL FALLS, Minn., August 7, 1922.—During the month of July, the International Falls plant of the Minnesota and Ontario Paper Company broke all previous daily and monthly records for production, establishing an average daily production of 241.5 tons. The highest daily run was July 15, when 254.8 tons of paper were produced.

THE EFFECT OF TEMPERATURE AND SALTING-OUT AGENTS ON THE RETENTION OF DYE BY PAPER PULP*

BY H. A. BROWN AND L. S. HATCH

In present day paper mill practice, about ninety-five per cent of the coloring of paper is done in the beater. In nearly every case, a greater or less amount of the dye remains in the backwater. In the days of easy profits, this loss was not given much attention, but owing to the present keen competition, it has become important. It was brought to the notice of the writers that in most mills there was still little being done to improve the retention of the dye by the stock, although the matter has been emphasized by dye manufacturers. The latter recommend in many cases the use of elevated temperatures and the addition of a salting-out agent, such as sodium chloride. It was the purpose of this investigation to determine the effect of these methods upon the retention of different classes of dyes.

Investigation in Literature

Aniline dyes, due to cheapness, ease of application, uniformity of strength and shades have replaced, in American practice, the pigments in natural dyestuffs, with minor exceptions.

Paper dyes are commonly divided into four classes:

- | | |
|------------|--------------------------------|
| (1) Basic. | (3) Direct. |
| (2) Acid. | (4) Pigment dyes and vat dyes. |

The order of adding color, size, and alum to the beater is usually:

- (1) Dye (mixed with pulp).
- (2) Size.
- (3) Alum.

although in the case of basic dyes, it is best to add size and alum before the dye to avoid alkalinity.

The effect of hydration on dye retention has been reported by Kress.¹ An increase in retention is caused by an increase in hydration, but the effect is not appreciable within the ordinary beating period.

In the matching of colors, it is considered preferable to use daylight, when possible. According to Kress,¹ "The various daylight lamps now on the market are valuable for matching shades, but daylight is to be preferred." There are many claims for the tint photometers now on the market. These find use in the recording of shades by numbers, but are considered to be less accurate than the eye in distinguishing between very slight differences of shade.

The use of elevated temperature and salting-out agents with direct dyes to increase retention is suggested by many authorities. Watkins² recommends a temperature of one hundred forty degrees F., with the addition of a mixture of sodium chloride and sodium carbonate.

Kress³ states that direct colors are best dyed at about one hundred forty degrees F., with the addition of common salt to more fully exhaust the color. In general, paper mills do not follow this procedure, even though it would save some of the waste of color occurring in the backwater. He also states that with acid dyes, an excess of alum will improve the backwater. The use of basic aluminum chloride with acid dyes is suggested by another investigator.⁴

After careful consideration of all the information available relating to this problem, the writers decided to conduct all dyeing experiments in an experimental beater, capacity 12 oz. dry weight. An alternative procedure, that of dyeing a small quantity of beaten pulp in a beaker, was rejected as being too inaccurate for the present purpose, and would not permit the removing of even small samples without a large relative error.

A one-eighth horse power split-phase induction motor was used to drive the beater. The motor speed was 1760 RPM, which was reduced by means of a counter shaft to give a speed of about 350 RPM on the beater roll, a speed found to operate very satisfactorily with a beater of this size. The beater was used chiefly as a mixing device, no attempt being made to secure more than moderate beating effect on the pulp.

In order to obtain heat in the beater for the work at higher temperature, steam was piped to it. This steam was passed through a steam separator, made from a large, wide-mouth bottle, and then into the beater. At first live steam was passed into the stock, and it was found possible to heat the mixture to 140 degrees F. very quickly. The dilution, however, caused by condensation of steam, was not desired, so an attempt was made to pass the steam through some sort of heating coil. Some difficulty was met in finding a coil which would heat the stock rapidly enough, and yet permit a free flow of stock around the beater. Finally, a cylinder of tin about two inches in diameter and 14 inches long was obtained which would give the rapid heating desired and yet did not prevent a free flow of stock around the beater. A thermometer, clamped to the frame of the beater near the backfall, was used to read the temperature of the stock.

There were suggested two general methods of determining the retention of dye by the stock. The first method was by a comparison of the depth of color on hand sheets, and the second, by a comparison of the backwaters. Both of these methods were used, the one found most suitable and convenient for any particular dye being used for the work on that dye.

Hand sheets were made upon fourdrinier wire in a 6-inch büchner funnel. The wire was supported upon a ring made of rubber tubing to even the suction produced by the water in a tube attached to the bottom of the funnel. No other suction was used. These sheets were pressed, and dried on a steam cylinder at 212 degrees F. It was found possible to make satisfactory sheets in a very short time with a minimum amount of stock. The sheets were matched in daylight against a white background, since the light in the laboratory was fairly even, and all work was done in the daytime. A daylight lamp was available, but was not used, since, as previously noted, daylight is considered preferable when it can be used for all work done. The quantitative procedure consisted in making a hand sheet under a given set of conditions, and matching this sheet under another set of conditions, noting the quantity of dye necessary to produce the shade under each set of conditions. Care must be taken to have the sheets of uniform thickness, and sufficiently thick so that light could not shine through to an extent sufficient to falsify the shade.

The other method of determining retention, that of comparing backwaters, was carried out as follows: A standard dye solution, which was called the original concentration, was made. This was done by making up a small amount of dye solution of a concentration equal to that which would be produced in the beater were no dye retained by the fiber. This made necessary a careful con-

*Information from a thesis submitted in partial fulfillment of the requirements for the B. S. degree in Chemical Engineering, University of Maine. Problem directed by J. S. Merrill and P. P. Gooding. C. A. Brautlecht.

¹ Otto Kress Paper XVIII No. 21 (1918).

² W. H. Watkins Paper XXIV No. 15 (1919).

³ Otto Kress Paper XXV No. 18, 19, 20 (1920).

⁴ Paper Trade Journal LI No. 7 (1910).

trol of the volume of water in the beater. Losses by leakage were avoided as far as possible. Losses by evaporation were negligible except at the higher temperatures which were maintained for only a short time. In order to determine the amount of color in the backwater not retained by the fiber, a small sample of stock was dipped from the beater, and filtered several times through its own pulp in a gooch crucible. Care was necessary to prevent fibers from going through and giving the backwater a false color. The standard solution previously mentioned was diluted to match the sample of backwater. From the dilution necessary, the percentage of the original dye left in the backwater was calculated.

Since the amount of dye left in the backwater is, as a rule, small compared with that retained by the fiber, the method of comparison by means of matching backwater would appear to be more accurate than the method of comparing sheets. For example, of one hundred per cent. of dye added to the beater, ninety is retained by the fiber, while ten remain in the backwater, if the fiber can be made to retain five per cent. more dye, there will be a change of fifty per cent. in the concentration of the backwater against a change in color on the sheet of less than five per cent. In some cases, however, the backwater was found to be turbid, or modified in color so that a comparison with the diluted standard was impossible. The writers were unable to discover any reason for the turbidity of the modification in shade, since it occurred even when no filler, size, or slum were added to the beater. This difficulty occurred, however, with only one of the dyes, and was found to be somewhat lessened when five to six per cent. common salt had been added to the beater. In this case, recourse was had in the method of comparing sheets.

Beater Furnish

The stock used in this investigation was bleached sulphite. The beater was found to operate most satisfactorily with one-quarter pound of bone dry stock. To avoid the necessity of making moisture determinations for each run, a large amount of stock was dried and several quarter-pound lots weighed out.

The filler used is known to the trade as CC filler, or asbestine (a 97 per cent magnesium silicate). Eleven and five-tenths per cent, based on bone dry stock, was used. This amount was chosen as being an average mill figure.

The size was obtained in the form of a suspension of known concentration. It was found by calculation that 48.3 cc. of this suspension would give 1 per cent total rosin, based on bone dry fiber.

The alum used was iron-free aluminum sulfate, containing about 54 per cent aluminum. A solution was made of such a strength that 25 cc. would give 1.5 per cent alum based on the bone dry fiber.

The dye was introduced in the form of a solution, the strength of which was made such that the number of cc added could be easily converted to pound dye per 1,000 pound bone dry fiber. For example, in one case the solution was made up so that 100 cc represented 1 lb./1,000. All calculations in the investigation are based on this unit of 1,000-pound bone dry fiber.

In charging the beater, the following order was used:

- (1) Stock
- (2) Filler
- (3) Dye
- (4) Size
- (5) Alum

Victoria Blue B.

The first work done with this basic dye was for the purpose of working out methods of procedure and finding out how closely the operations could be controlled. Since it was at this time planned to obtain quantitative data by comparing hand sheets, it was desired to know what concentration of dye would give a

shade easy to match. (Differences in shade are easier to detect in light shades than in dark.) A run was made as follows:

Run A—

Furnish—Bleached sulphite
Rosin, 1%.
Alum, 1.5%.
Filler, 11.5%.

Time	Temperature	Dye (lb./1000)	Notes
2:00	73° F.	...	Stock in, filler added.
2:30	75.5° F.	.5	Followed by size and alum,
2:45	77° F.	...	Two sheets made.
2:45	...	.625	...
3:05	78° F.	...	Two sheets made. Noticeably darker than first.
3:05	...	.750	...
3:25	79° F.	...	Two sheets made. Noticeably darker than above.

From this run it was learned that a concentration of about .5 pound per 1,000 pound b. d. stock, for this dye, was about right for matching, since the addition of a small amount of dye caused a very noticeable difference in shade.

Another run was made to determine if the working conditions could be sufficiently well controlled. That is, it was desired to know whether the errors possible in weighing the stock and measuring the dye solution, with those due to leakage, spattering, removal of samples, etc., were sufficient to cause changes in shade in different runs with the same furnish. If such variation did occur, it would be impossible to tell whether a difference in shade were due to intentionally imposed conditions or to lack of control. For the purpose of determining this, another run was made, as follows:

Run B—

Furnish—Same as Run A.
Dye, .5 lb./1000 Sample 1.
Temp., 70-71° F.

Two sheets were made, and were found to be identical with those made in the previous run at the same concentration.

It was safe to consider, then, that the changes observed in future runs were due to conditions intentionally imposed.

It occurred to the writers at this point to determine the nature of the backwater. It was found, on filtering, that the backwater was practically colorless, thus showing that the dye, at that concentration, was almost entirely retained by the fiber. More work at that concentration was obviously useless, so another run was made to determine the retention at higher concentrations under ordinary conditions.

Run C—

Furnish—Bleached sulphite
Rosin, 1%.
Alum, 1.5%.
Filler, 11.5%.

Time	Temperature	Dye (lb./1000)	Notes
2:00	70° F.	...	Stock in, filler added.
2:15	71° F.	2.5	Followed by size and alum.
2:25	...	3.0	...
2:50	...	...	Backwater practically colorless.
3:00	72° F.	4.0	...
3:10	...	...	Backwater practically colorless.
3:15	73.5° F.	5.0	...
3:25	...	...	Backwater practically colorless.
3:25	...	7.0	...
3:35	...	...	Backwater slightly colored.
3:50	...	9.5	...
4:00	74° F.	...	Backwater slightly colored.
4:10	...	...	Sheet made.

Even at this depth of shade, the retention is practically perfect, as shown by the above run. Work with the dye was therefore abandoned, since no improvement was possible.

Summary: Victoria Blue B is retained by bleached sulphite stock with no appreciable loss up to a concentration of 9.5 pounds per 1,000 at room temperature and without the addition of any chemical other than the filler, size and alum.

Pontacyl Blue Black SX

The first work done with this acid dye was to determine the

retention with different concentrations of dye. A run was made as follows:

Run A—

Furnish—Bleached sulphite				
	Rosin, 1%			
	Alum, 1.5%			
	Filler, 11.5%			
Time	Temperature	Dye (lb./1000)	Backwater	Notes
1:50	64° F.	...	.....	Stock in, filler added.
2:05	66° F.	.6	.....	Followed by size, alum.
2:15	.....	.....	Colorless.	
2:20	.....	1.0	.....
2:30	.....	.....	Colorless.	
2:30	67° F.	2.0	.....
2:45	.....	.....	.....	Somewhat colored.
3:15	69° F.	3.0	.....
3:25	.....	.....	.....	More colored.
4:00	120° F.	.....	.....	Slightly darker.
4:10	140° F.	.....	.....	Slightly darker.

It was seen from this run that at low concentration, the retention was perfect, but at a concentration of 3 lb./1000 there was considerable dye remaining in the backwater. It was also observed that the elevation of the temperature did not improve retention, but, on the other hand, decreased it.

The next run was made to determine the effect of the addition of aluminum chloride on the retention of the dye, as suggested in one of the references previously noted. In this run the percentage of dye remaining in the backwater was determined colorimetrically as previously described.

Run B—

Furnish—Bleached sulphite				
	Rosin, 1%			
	Alum, 1.5%			
	Filler, 11.5%			
Time	Temperature	Dye (lb./1000)	Backwater (% dye left)	Notes
9:15	68° F.	3.0	.....	Stock and filler in.
10:00	70° F.	.....	9%	Followed by size and alum.
10:15	.....	.....	.....	1% aluminum chloride added (hyd. crystals)
10:45	.....	.....	3%	.....
10:50	.....	.....	.....	1% aluminum chloride added.
11:15	75° F.	.....	3%	.....

From this run it is seen that a saving of 6 per cent of the dye, or .18 pounds, by the addition of 1 per cent aluminum chloride, or 10 pounds. It may also be seen that the addition of another per cent of the aluminum chloride did not increase the retention further.

The next run was made for the purpose of determining the effect of aluminum sulphate on the retention of the dye. The salt used was the ordinary alum used in paper mills, and the amounts noted were in addition to the 1.5 per cent used in sizing.

Run C—

Furnish—Bleached sulphite				
	Rosin, 1%			
	Alum, 1.5%			
	Filler, 11.5%			
Time	Temperature	Dye (lb./1000)	Backwater (% dye left)	Notes
9:20	.....	.....	.....	Stock in, filler added.
9:40	.....	3.0	.....	Size and alum added.
10:05	67° F.	.....	8%	
11:05	68.5° F.	.....	8%	
11:20	70° F.	.....	5.7%	
11:05	.....	.....	.....	.6% alum added.
11:20	.....	.....	.....	.6% alum added (Total 1.2%)
1:55	72° F.	.....	3.0%	
2:42	140° F.	.....	6.25%	

From this run it is seen that a saving of dye is accomplished by the addition of, and at an unwarranted expense, however, of alum, and that the heating of the stock lessened the retention considerably.

Cost of dye saved per 1000 lb.:

Per cent dye saved 8—3=5 per cent.

5 per cent of 3 lb.=.15 lb.

.15 lb. at \$0.09=\$0.135.

Cost of alum used/1000 lb.

1.2 per cent of 1,000 lb.=12 lb.

12 lb. at \$0.025=\$0.30.

Thus, at this concentration (3 lb./1000), although a saving of dye is possible, it is not economical.

The next run was made for the purpose of noting the retention

at a higher concentration and determining the effect of the addition of alum.

Run D—

Furnish—Bleached sulphite				
	Rosin, 1%			
	Alum, 1.5%			
	Filler, 11.5%			
Time	Temperature	Dye (lb./1000)	Backwater (% dye left)	Notes
8:30	Room	.....	.....	Stock in, filler added.
8:45	.....	3.0	.....
9:15	.....	4.0	.....	Size and alum added.
9:45	.....	.....	16%	
9:55	.....	.....	.....	.6% alum added.
10:25	.....	.....	5.7%	
10:30	.....	.....	.....	.3% alum added.
10:45	.....	.....	4%	
10:45	.....	.....	.....	.3% alum added.
11:10	.....	.....	4%	
11:10	.....	.....	.....	.3% alum added.
11:30	.....	.....	4%	

Cost of dye saved per 1000 lb.:

Dye saved 16—4=12 per cent.

12 per cent of 4 lb.=.48 lb.

.48 lb. at \$0.90=\$0.432.

Cost of alum used per 1000 lb.:

.9 per cent of 1000 lb.=9 lb.

9 lb. at \$0.025=\$0.225.

This represents a saving of \$0.207 per 1,000 pounds or \$41.40 per day for a 100-ton mill. Roughly, this would mean a saving of about \$12,000 per year. Since alum is used in the beater for sizing, it simply becomes a matter of increasing the ratio of alum to rosin. The ratio used in the run which gave the maximum saving with the least amount of alum was 2.4 of alum to 1 of rosin.

Summary—It was found that an elevated temperature decreased the retention of the dye. It was found that an excess of alum did increase the retention, but that up to concentrations of 3 lb. per 1,000 this saving was not sufficient to balance the cost of the excess alum. At a concentration of 4 lb. per 1,000, however, a direct saving effected. It was found that a ratio of alum to rosin of 2.4 to 1 was most economical for this dye. The addition of aluminum chloride increased the retention, but the writers would not recommend its use, since the same saving can be more conveniently and economically effected with alum.

Pontamine Brown R.

A direct dye.

Run A—

Furnish—Bleached sulphite				
	Rosin, 1%			
	Alum, 1.5%			
	Filler, 11.5%			
Time	Temperature	Dye (lb./1000)	Backwater	Notes
10:00	Room	4.0	.....	Stock in, filler in, size and alum added.
10:25	.....	.....	.....	Colorless
10:25	.....	6.0	.....	Colorless
10:45	.....	.....	.....	Colorless
10:45	.....	9.0	.....	Colorless
10:55	.....	.....	.....	Colorless
10:55	.....	10.0	.....	Colorless
11:05	.....	.....	.....	Colorless
11:05	.....	12.0	.....	Colorless
11:15	.....	.....	.....	Colorless Sheet made.

Summary—This dye was found to be completely retained by bleached sulphite up to a concentration of 12 lb. per 1,000. Consequently, no more work was done with the dye. The manufacturers of the dye recommend for a furnish of .75 per cent bleached rag and 25 per cent bleached soda, the addition 60 pound common salt per 1,000 and heating to 140° F. The results with show that this procedure is unnecessary in all bleached sulphite furnish.

Pontamine Yellow SX

A direct dye.

The first run was made for the purpose of determining the retention at different concentrations under ordinary conditions.

Run A—

Furnish—Bleached sulphite
Rosin, 1%
Alum, 1.5%
Filler, 11.5%

Time	Temperature	Dye (lb./1000)	Backwater	Notes
10:00	Room	2.0	.....	Stock in, filler added, size and alum added.
10:15	.....	.....	.....	Colorless
10:15	.....	6.0	.....	.....
10:35	.....	.....	.....	Very slightly colored.
10:45	.....	8.0	.....	.....
10:55	.....	.....	.....	Slightly colored.
11:45	110° F.	.....	.....	Approx. 1% Same as above

It will be seen from the above results that the loss in the backwater is negligible up to 6 lb./1000. The backwater was modified so that it was possible to compare it only approximately with the diluted standard.

The next run was a continuation of the preceding one, for the purpose of determining the retention at higher concentration.

Run B—

Furnish—Bleached sulphite
Rosin, 1%
Alum, 1.5%
Filler, 11.5%

Time	Temperature	Dye (lb./1000)	Backwater	Notes
2:00	77° F.	8.0	.....	Stock in, filler added, size and alum added.
2:15	78° F.	.....	.....	Somewhat colored
2:15	.....	10.0	.....	.....
2:30	.....	.....	.....	Darker
2:50	.....	13.4	.....	.....
3:05	.....	.....	.....	Darker
3:45	140° F.	.....	.....	Same as above
4:00	.....	.....	.....	Added 5% common salt
4:25	135° F.	.....	.....	Same as above

This run shows that there is a very considerable amount of dye in the backwater at the higher concentration, which is 13.4 lb./1000. Here a difficulty was met with in matching backwaters. Their shade was modified from that of the diluted standard dye solution, and there was also some turbidity which could not be removed by repeated filterations through the pulp. This made it impossible to compare the backwaters qualitatively with each other. It can also be seen that an elevated temperature and the addition of common salt apparently did not increase the retention.

The next run was made for the purposes of determining the effect on retention of the addition of three per cent sodium chloride and three per cent sodium carbonate, as recommended by Watkins. (References previously noted.)

Run C—

Furnish—Bleached sulphite
Rosin, 1%
Alum, 1.5%
Filler, 11.5%

Time	Temperature	Dye (lb./1000)	Backwater	Notes
9:30	Room	15.0	.....	Stock in, filler added, size and alum added
9:50	.....	.....	.....	Rather dark
10:10	.....	.....	.....	Added 3% NaCl and 3% Na ₂ CO ₃
10:35	.....	.....	.....	Very dark

It will be seen that the addition of a mixture of salt and soda ash caused a great deal of the dye to go back into the backwater. The writers were unable to account for this action. It is, however, contrary to common mill practice, where the paper is finished in an acid solution.

It occurred to the writers that the modification in shade of the backwater, experienced in the previous runs, might be due to the presence of the sizing agents. Consequently a run was made without the size and alum.

Run D—

Furnish—Bleached sulphite
No size or alum.
Filler, 11.5%

Time	Temperature	Dye (lb./1000)	Backwater	Notes
9:30	Room	15.0	.....	Stock in, filler added
9:50	.....	.....	.....	Rather dark
10:30	.....	.....	.....	Added 6% NaCl
11:00	Much less colored

The above results indicate qualitatively that on unsized stock

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and at room temperature, the retention of this dye is greatly increased by the addition of common salt. The same difficulty previously noted in the matching of the backwaters, was met with in this run. These results apply directly in the case of blottings and other unsized papers, which must be colored with direct dyes.

In the following run, which was made for the purpose of determining the effect of an elevated temperature on the retention of the dye, the filler was omitted. This was done in the hope that the turbidity of the backwater might be decreased so that it could be compared with the original dye solution.

Run E—

Furnish—Bleached sulphite
No filler, size or alum

Time	Temperature	Dye (lb./1000)	Backwater
2:00	76° F.	15.0	.....
2:25	78° F.	.....	Rather dark
2:50	140° F.	.....	.....
3:00	140° F.	.....	Same as above

It will be seen from the above that an increase in temperature alone has no appreciable effect on the retention of the dye.

It was next desired to obtain more complete data on the effect of the addition of common salt on the retention of the dye. For this purpose a run was made to determine the effect of the successive addition of small amounts of the salt.

Run F—

Furnish—Bleached sulphite
No filler, size, or alum

Time	Temperature	Dye (lb./1000)	% NaCl	Notes
1:45	Room	15.0	.....	Stock in
2:30	.....	.....	.....	.....
3:00	.....	.....	1.0	.....
3:05	.....	.....	2.0	.....
3:15	Room	15.0	3.0	.....
3:25	.....	.....	4.0	.....
3:35	.....	.....	5.0	.....
3:45	.....	.....	6.0	.....

With each addition of common salt, there was a progressive increase in the retention.

It was next desired to determine this increase in retention quantitatively. It was decided to ascertain the quantity of dye which would be necessary to match a sample, with the addition of 6 per cent sodium chloride on the weight of the bone dry fiber.

Run G—

Furnish—Bleached sulphite
No filler, size or alum

Time	Temperature	Dye (lb./1000)	Notes
2:00	Room	5.0	Stock in 6% sodium chloride added
2:15	.....	.....	.....
2:20	Room	7.0	.....
2:30	.....	.....	.....
2:45	.....	7.5	.....
3:00	.....	.....	.....
3:15	.....	8.0	.....
3:25	.....	.....	.....

The money value of the saving is calculated below.

Cost of dye saved/1000 lb.:
Dye saved = 15 - 8 = 7 lb.
7 lb. at \$1.10 = \$7.70.

Cost of salt used/1000 lb.
6 per cent of 1000 lb. = 60 lb.
60 lb. at \$13 long ton = \$35.
\$0.35

\$7.35 Saved per 1000 lb. bone dry stock.

This would represent a saving of \$14.70 per day for a one hundred ton mill.

(The prices used for the dyes were quoted by the manufacturer in April of the present year. The prices of the salt and alum were taken from a current number of "Chemical and Metallurgical Engineering.")

Summary—It was found that up to a concentration of 6 lb./1000, there was no appreciable loss in the backwater. Above this con-

centration, however, the loss increased rapidly. It was found that, with unsized papers, this loss was greatly decreased by the addition of common salt. An increase in temperature was found to have a negligible effect.

Conclusion

Victoria Blue B—Basic.

This dye is retained by bleached sulphite stock with no appreciable loss up to a concentration of 9.5 lb., at room temperature, and without the addition of any chemical other than the filler, size and alum. This dye is typical of basic dyes, which are usually well retained by sized papers.

Pontacyl Blue Black SX—Acid.

An elevated temperature decreased the retention of this dye. At concentrations 4 lb./1000 and higher, a direct saving is effected by an excess of alum, an alum to rosin ratio of 2.4: 1 being found most economical. Aluminum chloride increases the retention of the dye, but is more costly and less conveniently obtained than alum. These results bear out the statement made by Kress that an excess of alum will improve the backwater from acid dyes.

Pontamine Brown R—Direct.

This dye is completely retained by bleached sulphite up to a concentration of 12 lb./1000 at room temperature, and without addition of any salt.

Pontamine Yellow SX—Direct.

This dye is practically all retained by bleached sulphite up to a concentration of 6 lb./1000. Above this concentration, however, there is a considerable loss in the backwater, which may be greatly decreased by the addition of common salt. An elevated temperature is of no value.

As previously noted, an elevated temperature with the addition of common salt is recommended for direct dyes. It is possible that with furnish containing some rag stock, an elevated temperature may be helpful in increasing the retention of direct dyes. With an all sulphite finish, however, no such benefit is obtained.

Recommendations

Every mill producing colored papers has its own problems, which it must solve for itself. There are many factors affecting

the action of a dye, such as the nature of the dye itself, the character of the furnish, the filler, sizing agents, etc. No information is available which will give the paper manufacturer positive information as to his own problems. The literature is all too brief, and recommendations, when made, are general in nature, and of little help with specific problems. For example, the writers found recommendations for the use of elevated temperatures and the addition of common salt to increase the retention of direct dyes. No mention was made of the nature of the furnish, amount of sizing, concentration of dye, or any other beating condition. It was found by the writers, in the case of one common direct dye, that, with or without salt, a higher temperature had no appreciable effect. Again, new dyes are constantly being put on the market. No information is obtainable except the dye manufacturers' recommendations, which are very incomplete.

The only reliable information which the paper manufacturer can obtain in regard to his dyeing problems, is that which he works out for himself under his own mill conditions. Every mill making colored papers should have complete apparatus for color experimentation. The writers believe that the procedure outlined in this investigation will be found satisfactory for all ordinary mill problems in the coloring of paper.

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AMERICAN PAPER MAN IN SWEDEN

DR. HUGH P. BAKER,

EXECUTIVE SECRETARY, AMERICAN PAPER AND PULP ASSOCIATION

UPSALA, Sweden, July 15, 1922.—A visit to the forests of Sweden with the Swedish Society of Foresters concluded our study of Swedish paper and pulp production. The extent of the forests, and the manner in which they are being protected, and managed as well, means that America will face a maintained competition of Swedish paper and pulp. The forests are being handled for a maintained future production, so that the nation can for centuries to come continue to produce timber products at the actual rate of growth of the timber in the forests.

The labor situation in Scandinavia is very difficult, and I hope to be able to write more of it later.

This much is evident now, however—the tendency of socialism in this country is to scale down the skilled worker to the basis of the unskilled. In America the tendency is to scale the unskilled up to the earning basis of the skilled worker. The tendency in Sweden is very evidently due to the influence of the Russian movement, and to the Communists.

The Socialists are in control in Sweden, moderate of course in their policies, nevertheless, in control. Their efforts are towards two things, greater government activity even to actual operation in the forests and forest industries, and towards a leveling down to the common laborer in wages, and in incentives of course.

In the recent troubles in our mills in America skilled labor was

favored in all the negotiations, their wages being kept up, while common labor was neglected, the wages cut, etc. Here it is the other way around. Common labor is in the saddle and there is apparently a general leveling down to the wage of the common labor and skilled labor gets the small end of the deal. Thinking Swedes appreciate the danger of this in their efforts to maintain quality in their struggle to retain world markets. The eight hour day is in force everywhere apparently except on farms and the general opinion is that labor is strong enough to prevent any change. One mill manager offered his men a chance to work over the midsummer holiday which consists of several days, but was told by the local leader that if they worked this year the manager would hold them to work next year, so they did not work. The labor organization sent out notice just before the midsummer holiday this year that only 54 per cent of the laborers in Sweden took advantage of the holiday last year and that they wanted all to take the holiday this year.

Communism is here but is not strong and is not particularly feared, yet I found radical poster on the walls of a large saw mill.

In the Wista Varfs and Kramfors Section labor is about 120 per cent higher than in 1914, common laborers getting 70 ore (.7 Kroner) per hour, about one half of our common labor.

CURRENT PAPER TRADE LITERATURE

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

Properties, Chemistry and Testing of Raw Materials and Finished Product

Value for Paper Making of the Bark of Baobab.—L. Matrod and F. Moreau. *Rev. Gén. Industrie Textile*, vi, 23-24, 27-28 (1921); *Chem. Abs.*, xvi, 1315 (April 20, 1922).—The fibers after energetic carding, with or without retting, yield a material which appears to have a general application in the cordage and textile industries. The examination so far reveals a great amount of tannin in the fiber, ash 13.2 per cent, of which more than half is calcium carbonate, ether extract 0.56 per cent, lignin 35 per cent, cellulose not more than 51.0 per cent with notable amounts of oxycelluloses and methoxycelluloses, which lessen its value as a source of paper.—A. P.-C.

Value for Paper Making of the Bark of Baobab.—L. Matrod and F. Moreau. *Rev. Gén. Industrie Textile*, vi, 37-39 (1921); *Chem. Abs.*, xvi, 1504 (May 10, 1922).—The results of an elaborate microchemical examination are reported. The pulp yielded 33 per cent of paper which was rough, very white with a pearly reflection, rather pliable, had no rattle, and had fairly satisfactory tensile, tearing and folding strengths. The fiber is not strong enough for spinning. While pulp from baobab cannot at present prices compete with wood pulp, it may prove a valuable reserve supply.—A. P.-C.

Amylocellulose Considered as a Compound of Silicic Acid and Amylose.—G. Malfitano and M. Catoire. *Compt. Rend.*, clxxiv, 1128-1130 (1922); *J. Soc. Chem. Ind.*, xli, 429A (June 15, 1922).—Experimental evidence is given in support of the view that amylocellulose is really a complex compound of amylose with silicic acid of the type $(\text{SiO}_2(\text{C}_6\text{H}_{10}\text{O}_5)_n)_m\text{H}_2$. Other amylose materials are similarly thought to be complexes of silicic acid, phosphoric acid, or even water with the group $\text{C}_6\text{H}_{10}\text{O}_5$, and it is considered that this view is better in accord with experimental facts than that which requires varying stages of polymerization and condensation.—A. P.-C.

Wood Preparing and Equipment

Guard for Circular Saws.—G. E. H. Spiller. Can. Patent 216,987, March 21, 1922; U. S. A. Patent 1,422,316, July 11, 1922.—The guard consists of a casing fixed to the saw bench and a drawer sliding in the casing and having two plates in each side, spaced apart in order to leave a gap between the plates.—A. P.-C.

Chipper.—H. E. Tidmarsh and The Union Iron Works. Can. Patent 219,485, June 6, 1922.—The patent covers a device for holding down the bed knife against the bed in its adjusted position, and for taking up wear. It consists of a solid block of cast steel, which fits in an opening formed by cutting away the portion at the foot of the chute directly overlying the adjacent end of the knife, and which rests directly on the latter, so that the pressure exerted through it assists materially in overcoming any tendency of the knife to move out of place. The parts are so constructed as to permit of adjusting the position of the bed knife initially and moving it from time to time to compensate for wear.—A. P.-C.

Groundwood Manufacturing and Equipment

Wood Pulp Grinder.—W. R. Tidmarsh and The Union Iron Works. Can. Patent 216,895, March 14, 1922.—The patent covers a simple and effective device for automatically reversing the flow of water, retracting the pressure foot, and opening the door of each pocket as soon as the pocket becomes empty.—A. P.-C.

Wood and Like Cellulose Pulp and Fibers.—L. Enge. Eng.

Patent 169,802, Nov. 23, 1922.—In the preparation of light-colored, strong fibrous material for the paper trade from wood or other substances containing cellulose, in logs or billets, the material is saturated, softened, or boiled with water in vacuum or under pressure mechanically produced, water, air or steam pressure. Either a high temperature of 105 to 120° C., or a low temperature of about 80° C. and a high pressure of 5 to 10 atmospheres or a low pressure of 350 mm. of mercury can be employed. Neutral, acid, or alkaline reagents may be added to the water. A flowing movement of the liquid used is maintained in the direction parallel to the direction of the fibers of the wood. When treating under vacuum an air pump is used during the whole operation, lasting from six to eight hours, the drop in temperature being made up by indirect heating.—A. P.-C.

Acid Processes of Pulp Manufacture and Equipment

Determination of the Chlorine Consumption Number of Sulphite Pulp.—Rudolph Sieber. Translation by John L. Parsons in *Pulp and Paper*, xx, 425-427 (May 25, 1922). See this journal, lxxiv, No. 21, 60, May 25, 1922.—A. P.-C.

Manufacture of a Mastic or Binding Material from Sulphite Waste Liquor.—E. Pollacsek. Eng. Patent 157,907, Jan. 10, 1921.—A liquid of great adhesive power, and suitable for use in the manufacture of briquettes and the like, is made by neutralizing sulphite waste liquor with slaked lime, evaporating the liquid after separation of the precipitated sludge, until a sample immediately solidifies on cooling, and then adding to the boiling mass a heavy mineral oil in such quantity that a further sample remains liquid on cooling.—A. P.-C.

Preliminary Treatment of the Chips in the Cooking of Wood.—E. L. Rinman. Can. Patent 217,294, March 28, 1922.—The chips are treated with hot water or with hot diluted waste liquors at a temperature of 80 to 90° C. so that they become impregnated with a hot neutral liquid. The excess liquid is removed, cooking liquor is added, and the cooking carried out as usual. It is claimed that the yield of pulp is increased, and the quality improved, while the total time of treatment is not appreciably lengthened.—A. P.-C.

Apparatus for Circulating Liquor in Pulp Digesters.—Fr. Patent 533,730 Escher, Wyss & Co., Dec. 19, 1921. *Papier*, xxv, 160-162 (April, 1922).—The digester is equipped with three liquor orifices, one at the top, one about a quarter of the height down, and the third at the bottom, the first and second acting only as inlet and outlet respectively, and being equipped with check valves to this end, while the third can act either as inlet or as outlet, as required. The liquor passes (always in the same direction) through a heater and from there is fed to the digester through piping arranged so that the direction of circulation can be reversed merely by operating a lever, or the like. By thus reversing the circulation, a thorough agitation of the material in the digester can be obtained.—A. P.-C.

Sizing and Impregnating Paper, Cardboard, Woven Fabrics, Etc.—A. Lutz. Eng. Patent 156,514, Jan. 5, 1921.—Animal size or casein used for sizing and impregnating paper, cardboard, fabrics, etc., is hardened by treating it, either before or after the impregnating operation, with 2 per cent (on the weight of dry size) of "methyloformamide," $\text{H. CO. NH. CH}_2\text{OH}$. When used in large quantities, e.g., 20 per cent on the weight of paper or fabric treated, "methyloformamide," by virtue of its hygroscopic properties, imparts a flexible, leather-like character to the material.—A. P.-C.

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Equitable Trust Company, Oscar II, Copenhagen, 161 bls., 50 rolls.
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J. P. Heffernan Paper Company, by same, 347 rolls, 252 bls.
Brown Brothers & Co., by same, 16 bls.
L. A. Consmiller, Orbita, Hamburg, 12 cs.
Wilkinson Brothers & Co., Inc., by same, 7 cs.
Coenca, Morrison & Co., by same, 22 cs.
F. H. Peiry & Co., Mancharia, Hamburg, 5 cs.
American Shipping Company, by same, 18 cs.
Sternberg & Co., by same, 7 cs.
Hensel, Bruckman & Lorbacher, by same, 14 cs.

RAGS, BAGGING, ETC.

E. Butterworth & Co., Inc., Baltic, Liverpool, 325 bls. bagging.
R. F. Downing & Co., by same, 144 bls. bagging.
Chase National Bank, Niagara, Bordeaux, 139 bls. rags.
A. Salomon, Inc., by same, 70 bls. rags.
First National Bank of Boston, by same, 455 bls. rags.
National Shawmut Bank, by same, 113 bls. rags.
Castle, Gottheil & Overton, by same, 326 bls. rags.
Brown Brothers & Co., by same, 197 bls. rags.
Irving National Bank, Finland, Antwerp, 262 bls. flax waste.
Ladenburg, Thalman & Co., Laconia, Liverpool, 48 bls. paper stock.
Castle, Gottheil & Overton, Westerdijk, Rotterdam, 37 bls. rags.
Katzenstein & Keene, Inc., by same, 47 bls. bagging.
International Acceptance Bank, Saxonia, Hamburg, 81 bls. rags.
E. J. Keller Company, Inc., Oscar II, Copenhagen, 556 bls. rags., 34 bls. jute cuttings, 446 bls. bagging.
Chemical National Bank, President Garfield, London, 214 bls. rags.
Irving National Bank, San Michele, Marseilles, 47 bls. paper stock.
E. Butterworth & Co., Inc., Bonic, Manchester, 79 bls. bagging.
First National Bank of Boston, by same, 51 bls. cotton waste.
Irving National Bank, by same, 44 bls. threadwaste.
Dexcar Trading Company, by same, 414 bls. rags.
Dexcar Trading Company, Chicago City, Bristol, 311 bls. rags.
Brown Brothers & Co., by same, 437 bls. rags.
American Exchange National Bank, by same, 51 bls. rags.
Equitable Trust Company, African Prince, Dundee, 81 bls. paper stock.
American Express Company, African Prince, Middlesbrough, 181 bls. rags.
Mechanics & Metals National Bank, African Prince, Leith, 141 bls. bagging.
Salomon Brothers & Co., Idaho, Hull, 7 bls. news cuttings.
E. J. Keller Company, Inc., by same, 18 bls. paper stock.
M. O'Meara Company, M. V. Linnell, Buenos Aires, 48 bls. rags.
E. J. Keller Company, Inc., New Amsterdam, Rotterdam, 21 bls. paper stock.
E. J. Keller Company, Inc., by same, 507 bls. rags.
Katzenstein & Keene, Inc., by same, 97 bls. rags.
Waste Materials Trading Corporation, by same, 354 bls. paper stock, 140 bls. bagging, 160 bls. shoppies.
Irving National Bank, Cedric, Liverpool, 32 bls. threadwaste.
Brown Brothers & Co., by same, 31 bls. cotton waste.
Royal Manufacturing Company, by same, 25 bls. cotton waste.
Castle, Gottheil & Overton, Hoosac, London, 43 bls. waste paper.

OLD ROPE

Brown Brothers & Co., Idaho, Hull, 360 coils, 136 bls.
Waste Materials Trading Corporation, President Harding, Bremen, 108 coils.
E. J. Keller Company, Inc., New Amsterdam, Rotterdam, 66 coils.
E. J. Keller Company, Inc., Oscar II, Copenhagen, 50 coils.
Irving National Bank, by same, 75 coils.
W. H. Cummings & Son, S. Michele, Marseilles, 53 coils.
Bemis Brothers Bag Company, by same, 36 coils.
Brown Brothers & Co., Chicago City, Bristol, 103 coils.
E. J. Keller Company, Inc., Londonier, Havre, 57 coils.

WOOD PULP

J. Andersen & Co., Stavangerfjord, Kristiania, 1,350 bls.
M. Gottesman & Co., Inc., Westerdijk, Rotterdam, 690 bls.
Irving National Bank, Knut Jarl, Kotka, 976 bls., 162 tons.
Tidewater Papermills Company, Nova Queen, Liverpool, N. S., 8,350 bls. 835 tons.
Wood Pulp Trading Company, Ausable, Harnosand, 8,370 bls.
Wood Pulp Trading Company, Santo Matta, Hudiksvall, 3,600 bls.

WOOD FLOUR

A. Kramer & Co., Inc., Orduna, Hamburg, 476 bags.
Hansa Company, Orbita, Hamburg, 1,535 bags.

CASEIN

Casein Manufacturing Company, City of Botania, Bombay, 175 bags.

CHINA CLAY

English China Clay Sales Corporation, Chicago City, Bristol, 100 casks.
J. Lee Smith, by same, 60 casks.
Reichard Coulston Company, by same, 134 bags.

PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 5, 1922

E. J. Keller Company, Inc., Editor, Havre, 372 bls. rags.
E. J. Keller Company, Inc., Binnendyk, Rotterdam, 530 bls. rags, 64 bls. rope.
E. J. Keller Company, Inc., Edgehill, Antwerp, 55 bls. rags.
Irving National Bank, African Prince, Middlesbrough, 153 bls. rags.
D. M. Hicks, Inc., by same, 71 bls. waste paper.
Old Colony Trust Company, by same, 81 coils rope.
Katzenstein & Keene, Inc., Binnendyk, Rotterdam, 472 bls. rags.
Castle, Gottheil & Overton, Sonora, Bordeaux, 295 bls. rags.
Wood Pulp Trading Company, Noruega, Kristiania, 1,200 bls. wood pulp.
Lagerloef Trading Company, Knut Jarl, Kotka, 600 bls., 101 tons wood pulp.
Lagerloef Trading Company, Knut Jarl, Helsingfors, 2,032 bls., 304 tons wood pulp.
Irving National Bank, by same, 1,055 bls., 178 tons wood pulp.
Nilsen, Lyon & Co., by same, 800 bls. 100 tons wood pulp.
Paper House of Pennsylvania, by same, 281 reels news print.
Paper House of Pennsylvania, Knut Jarl, Kotka, 421 reels news print, 418 bls. printing paper.
Johnston Paper Company, by same, 228 rolls news print.
Huduna Trading Company, Braeholm, Gothenburg, 104 bls., 310 rolls Kraft paper.

BALTIMORE IMPORTS

WEEK ENDING AUGUST 5, 1922

Wood Pulp Trading Company, Surichco, Hudiksvall, 1,854 bls. wood pulp.
Wood Pulp Trading Company, Honolulu, Harnosand, 5,280 bls. wood pulp.
M. Gottesman & Co., Inc., West Helix, Hamburg, 689 bls. wood pulp.
Irving National Bank, Knut Jarl, Helsingfors, 5,028 bls., 768 tons wood pulp.
Irving National Bank, Knut Jarl, Kotka, 3,117 bls., 614 tons wood pulp.
Lagerloef Trading Company, by same, 745 bls., 126 tons wood pulp.
Wood Pulp Trading Company, West Catanoco, Vancouver, 3,299 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING AUGUST 5, 1922

E. J. Keller Company, Inc., De La Salle, Reuen, 171 bls. bagging.

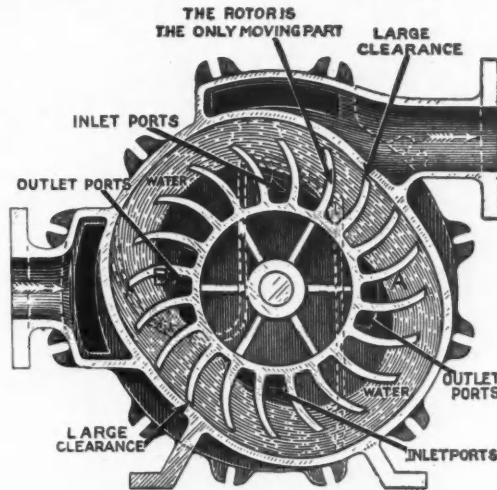
(Continued on page 64)

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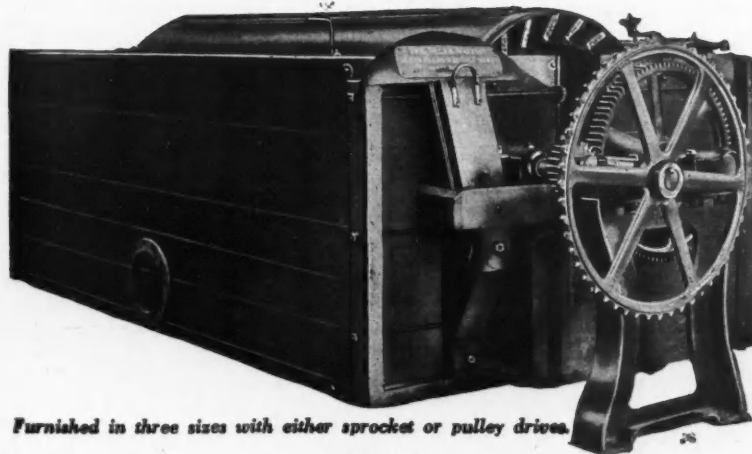
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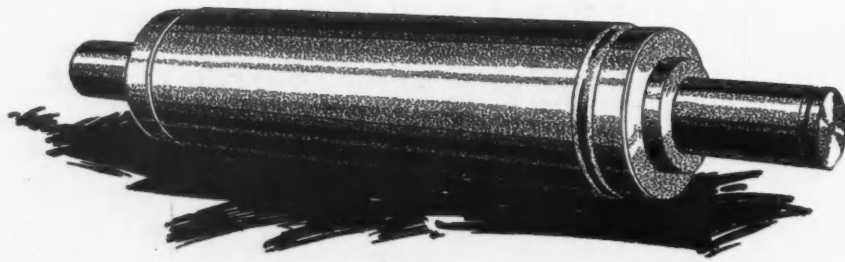
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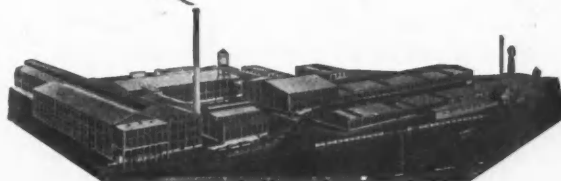
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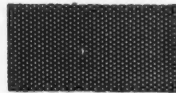
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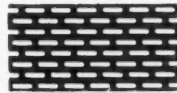
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New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
TUESDAY, August 8, 1922.

Practically every market of interest to the paper industry, including the various chemical markets, as well as the markets for wood pulp, paper stock, board, tissue, kraft, news print, and others are now feeling the effects of the coal and rail strikes. Crippled transportation facilities hamper the transport of incoming raw materials as well as the filling of contracts on finished paper products, and the scarcity of anthracite has made many producers unwilling to quote a definite shipping date due to the fact that their coal supply is on the ragged edge of depletion.

Steamship companies have found it more profitable to ship coal from English and European mines than to load their boats with China clay or Scandinavian pulp and thus the coal situation has assumed an international aspect. From all indications both strikes will be over within the next ten days to two weeks. The supplies of coal at many mills will not last much longer than this, and the chances are that at least a month will be required for conditions to become adjusted even after an amicable settlement is attained.

News print is still hitting the high spots and there are absolutely no indications of an abatement in the existing strong demand. In spite of the increasing number of long-time contract orders which manufacturers have signed up with the publishers, news print is, apparently, going into consumption almost as rapidly as it can be produced and shipped.

The book situation appears to be clearing up after several months of comparatively dull business. The sudden spurt which has come to this market during the past week may be attributable to the coal shortage and transportation tie-up, but merchants in general are inclined to believe that the market for book paper has got off to an early fall business and that there will be no slacking up even when these external conditions are adjusted. Exporters of book paper were more optimistic last week than they have been in some time.

Even fine paper is picking up in and around New York. Dealers are shy of ready stocks and have been for some time. Coincident with the approach of better times, the tendency seems to be to replenish badly depleted stock rooms and to place more confidence in the market. From the multitude of inquiries that were received by fine paper merchants in the city last week it is apparent that buyers are commencing to evince more than a passing interest, all of which bodes well for a healthy fall business.

Tissue mills are loaded up with orders for present and future shipment but their bins are almost void of coal. Demand has been heavy for some weeks now in this market and the various mills were just beginning to get squarely upon their feet after the last textile strike together with the New England shoe strike, when they were confronted with this additional problem. Demand for tissue is not largely from any specific industry at the present time, but the demand from the nation as a whole would keep every mill working to capacity if a few strike monkey-wrenches could be kept out of the erstwhile smooth-running machinery.

Kraft prices are expected to rise automatically if the existing heavy demand is made upon wrapping paper mills for any length of time. Plants are operating full-blast and manufacturers are filling orders as fast as transportation facilities will allow them. Bogus mills are in sore straits as far as coal is concerned and the fabulous prices they have been forced to pay for the commodity in recent weeks are reflected in the prices of the finished product.

No less is this condition true in board mills. Many mills refuse future shipment orders and quotations fluctuate nearly every time the ticker announces some new development in the coal situation. Nearly every grade of board is being listed on a nominal basis, therefore, but any price revision is almost sure to be in an upward

direction due to the fact that the cost of raw materials is also steadily rising.

Mechanical Pulp

Pulpwood grinders have had the wettest "dry" season they have ever experienced and ground wood production has, as a result continued to pour forth in goodly quantities to meet the steady demand of consumers. Dealers believe that the market will hold firm until the usual heavy fall business sets in and are confident that this year will see an unusually large volume of production in response to the strongest demand ever known on the part of news print producers as well as in many other paper markets.

Chemical Pulp

That confidence has been regained in the chemical pulp market is evidenced by the re-entry of many buyers, who had retired to some place of obscurity in recent weeks, and who now are placing orders with old time interest. It will not be long, in the estimation of the majority of large dealers in chemical pulp, before a booming business takes this market by the horns. European pulps are offering less competition at present than they have for some time due to the fact that England has been requiring considerable quantities for her mills. September 1 should herald the beginning of a new and brisk era in this market.

Old Rope and Bagging

A slight relaxation in the demand for old Manila rope has called at least a temporary halt to the soaring prices of this commodity. Mixed strings are moving along at a steady clip and the demand continues for sisal strings at prices as high as \$1.10 per cwt. Scrap bagging is moving in fair amounts and the market is generally thought to be in a firm condition despite the slight change in prices. Gunny bagging and No. 1 scrap are taken up in regular quantities and it is reported that roofing bagging is enjoying a period of real prosperity.

Waste Paper

The bulky grades of mixed paper continue to firm in price and are in excellent demand by consumers. The market is active and dealers report a steady volume of business in many grades. It was stated last week that No. 1 Mixed paper was in good demand, judging from the number of inquiries, at prices ranging up to 65 cents per cwt. It was also reported that New England buyers have evidently reentered the New York market. This was reflected in the firmer position of book stock.

Rags

Rag graders are taking in goodly quantities of mixed rags, in ratio to the strong demand for roofing stock, and collectors are of the opinion that higher prices are not far off. The fact that Germany has restricted the export of many grades of rags should contribute to the strengthening of the position of the domestic rag market. Nearly every grade of rag has undergone a slight upward price revision during the course of the past week or ten days, and the general attitude of dealers is one of optimism for the coming fall business.

Twine

With the exception of the fact that there has been no advance in prices during the past few weeks, twine dealers are quite satisfied with the progress which has been made in this market during the first two, ordinarily dull, summer months. All twines now being offered on the market were manufactured from jute which was purchased at a much more attractive price than that which is being offered to importers today. It is fully expected that when India's short crop of jute, and the resultant higher prices for the commodity, make themselves felt in the New York market a buying stimulus will automatically be created and the industry will enjoy a season of normal business.

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations August 8, 1922:

Table with columns: Company Name, Bid, Asked. Includes American Writing Paper Company, International Paper Company, etc.

Paper

F. o. b. Mill.

Table listing various paper products like Ledgers, Bonds, Writings, etc. with prices.

Domestic Rags

New

Prices to Mill, f. o. b. N. Y.

Table listing domestic rags like Shirt Cuttings, New White, etc. with prices.

Table listing tissues like White, Colored, Anti-Tarnish, etc. with prices.

Table listing Kraft paper like No. 1 Domestic, No. 2 Domestic, etc. with prices.

Table listing Manila paper like No. 1 Jute, No. 2 Jute, etc. with prices.

Table listing Fiber Papers like No. 1 Fiber, No. 2 Fiber, etc. with prices.

Table listing Boards like News, Straw, Chip, etc. with prices.

Table listing Wax Paper like Self Sealing White, etc. with prices.

Table listing Glassine like Bleached, basis 25, etc. with prices.

Mechanical Pulp

(Ex-Dock.)

Table listing mechanical pulp like No. 1 Imported, No. 1 Domestic, etc. with prices.

Chemical Pulp

(Ex-Dock, Atlantic Ports.)

Table listing chemical pulp like Sulphite (Imported), Bleached, Easy Bleaching, etc. with prices.

Table listing various types of paper like India, Light, Dark, B. C., etc. with prices.

Old Waste Papers

(F. o. b. New York)

Table listing old waste papers like Shavings, Flat Stock, Manila, etc. with prices.

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill

Table listing paper products in Chicago like All Rag Bond, No. 1 Rag Bond, etc. with prices.

Old Papers

Table listing old papers in Chicago like Shavings, Ledgers and Writings, etc. with prices.

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Table listing paper products in Philadelphia like Bonds, Ledgers, Writings, etc. with prices.

Table listing paper products in Philadelphia like Best Tarred, 1-ply, etc. with prices.

Bagging

F. o. b. Phila.

Table listing bagging products like Gunny No. 1, Foreign, etc. with prices.

Old Papers

F. o. b. Phila.

Table listing old papers in Philadelphia like Shavings, No. 1, Hard, etc. with prices.

(Continued on page 66)

Imports and Exports of Paper and Paper Stock

(Continued from page 56)

CLEVELAND IMPORTS

WEEK ENDING AUGUST 5, 1922

S. Silberman, New Amsterdam, Rotterdam, 148 bls. shopperies.
S. Silberman, Westerdyk, Rotterdam, 179 bls. shopperies.

BOSTON IMPORTS

WEEK ENDING AUGUST 5, 1922

Kalbfeisch Corporation, M. V. Linnell, Buenos Aires, 417 bags casein.
J. A. & W. Bird & Co., by same, 892 bags casein.

Guaranty Trust Company, Vincent, Havre, 353 bls. cotton waste.
Merchants' National Bank, Finland, Antwerp, 157 bls. cotton waste.
Kidder, Peabody & Co., by same, 9 bls. cotton waste.
Brown Brothers & Co., Stavangerfjord, Kristiania, 34 coils old rope.
A. Katzenstein & Co., Belgian, Liverpool, 141 bls. new rags.
Train Smith Company, by same, 95 bls. new rags.
M. O'Meara & Co., by same, 96 bls. bagging.
Bird & Son, Inc., by same, 318 bls. rags.
E. Butterworth & Co., Inc., by same, 275 bls. paper stock.
A. Katzenstein & Co., Ninian, Manchester, 190 bls. rags.
G. W. Wheelwright Paper Company, by same, 77 bls. waste paper.
International Purchasing Company, by same, 641 coils manila rope.
J. B. Moors & Co., by same, 181 bls. waste paper.

Train, Smith Company, by same, 72 bls. waste paper, 47 coils manila rope.
Crocker, Burbank & Co., by same, 140 bls. waste paper.
American Express Company, by same, 265 bls. waste paper.
Smith Paper Company, by same, 173 bls. rags.
Z. N. W. Crane, by same, 49 bls. rags.
International Purchasing Company, Bonic, Liverpool, 85 coils manila rope.
Hollingsworth & Vose Company, by same, 169 coils manila rope.
Train Smith Company, by same, 114 bls. rags, 54 bls. waste paper.
E. Butterworth & Co., Inc., by same, 222 bls. paper stock.
E. Butterworth & Co., Inc., Valemore, Liverpool, 163 bls. waste paper.
Brown Brothers & Co., by same, 71 bls. waste paper.
E. Butterworth & Co., Inc., Belgian, Liverpool, 167 bags hide cuttings.
F. F. Russ Company, Ninian, Liverpool, 557 bags hide cuttings.

SWEDES SEEKING EVERY MODERN DEVICE

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., Aug. 7, 1922.—"I agree with Dr. H. P. Baker when he says that we must watch out or Sweden will get all our paper manufacturing business," said E. L. Bassett of Felts Mills who just returned from six months of intimate association with the paper trade in that country. He points out that the manufacturers there are seeking every modern device to stimulate production, are building many mills and are able to enter the markets of the world on a production cost that will only be overcome by tariff walls.

Mr. Bassett went to Sweden last winter to introduce the wood grinding process of Wood Grinding Service, Inc., of this city to the industry of that country. He installed the process in the mills of the Skonviks Aktiebolag located at Matfors in the northern part of Sweden about 14 miles from Sunvall on the coast. Lenneft Norstrom, head of the big paper corporation, visited the local offices last fall and made arrangements for the installation.

Mr. Bassett Presented With Loving Cup

How well Mr. Bassett performed his duty, his standing in the mill town and with the officers and men of the company and the satisfaction the process gave, is indicated by the inscription upon a very large silver loving cup handed to him as he boarded the train for home. "Mr. E. L. Bassett. Many thanks from the Skonviks Aktie Bolag." The inscription is in Swedish but it is a gift very highly cherished by Mr. Bassett. He had not the slightest inkling of the plan to present the cup and when the mill superintendent handed it to him in the presence of dozens of mill workmen, some of whom had walked two miles and a half to the station, he was more than surprised. He could not speak their language nor could they speak his, but they understood his feelings and he understood theirs.

The officials of the paper company expressed great satisfaction over the success of the process in their mills both to Mr. Bassett and by letter to Amos G. Howland, vice-president and general manager of Wood Grinding Service, Inc., and in all probability the usual royalty contract will be closed at once.

Mr. Bassett said that he reached Matfors, Sweden on February 16, after some delay on account of being caught in the ice near Stockholm. For six weeks he was idle because of a strike in progress which had entirely darkened the mills of the company. A reduction in wages had caused the strike. He then pointed out how different the labor situation is there from conditions in this country.

How Strikes Are Conducted

"There are no strikebreakers there and not the slightest trouble from strikers. When a strike is called the mills simply close down and everything is quiet until the strike is adjusted. The unions are strong there, the men receiving aid from the government while idle—the money coming from a tax system—besides the union aid. The same class of workmen receives the same pay in all parts of the country. Skilled men get 32 cents an hour on eight hour day and the unskilled get about 20 cents an hour."

Matfors is a mill town of 2,000 population located in the center of a vast forest. Besides the news print mill of 75 to 95 tons daily capacity and the pulp mill of 200 tons capacity, employing 425 men in the winter and 550 men in the summer, there are a woolen mill and a log chain factory there. There are schools but no hotel. Boarding houses prevail and liberal prices are charged. The paper company owns a power development of 12,000 horsepower.

It was March 23 before the strike was settled and work on installing the process was begun. The company furnished Mr. Bassett an interpreter who lived seven years in Minnesota, but none of the employees could speak English. By April 15 the stones in the pulp mill were all equipped with the process and it was found that a reduction of about 30 per cent in the sulphite requirements had been made.

Swedish Publications Use Strong Sheet

It was pointed out by Mr. Bassett that all Swedish publications demand a very strong sheet. The manufacturer seems to desire most in the increase in production, and he had satisfactory success along that line. He was able to increase the speed of the two machines—one making a 110 inch trimmed sheet and the other 156 inches—from 160 or 170 meters a minute to as high as 230 meters a minute. They ran all the while at 210 meters or more.

The paper is first wound into a roll weighing five tons, then rewound with 6,500 feet on a roll, wrapped and incased in wood and shipped to France, Australia, United States or South America. Mr. Bassett said he had the mill running smoothly by the middle of June, but stayed until the middle of July before leaving the conduct of the mill to the regular employees.

"From the cup, the expressions of the owners and results obtained I know they are more than satisfied," said Mr. Bassett. "Personally I am more than pleased with the treatment accorded me. I found the Swedish people the most kind hearted people I ever met."

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The Royal Trust Company, Montreal, Authorized Trustee for the properties of Great Eastern Paper Company, Limited, Authorized Assignor, offers subject to prior sale:

Spruce logs about 5,000,000 ft. B.M.
Balsam logs about 5,000,000 ft. B.M.
Cedar logs about 4,000,000 ft. B.M.

These logs are in, or on the banks of, the Madeleine River, Gaspé County, Quebec, and are offered for sale as they lie, but the purchaser would have the use (on terms to be arranged) of such of the Company's plant as is necessary for handling the wood. All facilities will be given for the inspection of the wood and of the opportunities for its removal. The Vendor expressly stipulates that intending purchasers must satisfy themselves, and that the sale is not being made on the Vendor's representations in any way. Address Tenders to The Royal Trust Company, Montreal.

MONTREAL, July, 1922. CANADA

Whalen Sulphite Pulps

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Robert Dollar Co., L. C. Smith Bldg., Seattle, Wash.

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
TUESDAY, August 8, 1922.

ALUM.—Ammonia alum is being consumed in moderate quantities by paper manufacturers, but the tone of the market is rather sluggish. 3.50 cents a pound for lump alum, 3.65 for ground and 3.90 for powdered are the prices quoted.

BLEACHING POWDER.—Bleach still holds steady at 1.60 cents a pound and while there are no signs of an immediate revision in prices, it is generally felt throughout the trade that prices may go higher before long. The demand is still strong and scarcity of supplies makes the market very firm.

BLANC FIXE.—The light demand from blanc fixe consumers has served to tide producers over a comparatively dull season, although in recent weeks activity has become slightly more pronounced. Blanc fixe pulp is quoted at \$37.50 to \$45 a ton while the dry commodity has remained firm at 3.50 to 3.75 cents a pound.

CASEIN.—Argentine casein has advanced in price approximately 200 per cent since last winter, when the bottom price averaged 6.50 cents a pound. Within the last month quotations on the commodity have doubled and what little casein is unearthed now finds a ready market at 18 to 20 cents a pound. Stimulated demand from coated paper manufacturers plus casein shortage plus the pending tariff measure placing an ad valorem duty of five cents a pound on all imports have hastily converted this former buyer's market into a typical, war-time market for the seller.

CAUSTIC SODA.—Not much change has been registered in caustic soda during the past week. Prices are still steady, the 60 per cent basis averaging 2.50 cents a pound, spot. Contract prices range from 3.10 to 3.25 cents a pound.

CHINA CLAY.—With the coal shortage another element has entered into the China clay situation. Both English and American steamers are finding it more profitable to transport coal from Great Britain than clay and freight rates are, in consequence, on the ascendant. English clays are quoted at \$14 to \$22 per ton and domestic clays hold firm at \$5.50 to \$8 for the unwashed and \$7 to \$10 for the washed.

LIQUID CHLORINE.—Price variations are great in the chlorine market. Demand is not active and transactions do not generally involve large quantities. Liquid chlorine is quoted nominally at 4.50 cents a pound to 7.00, the former being an average price for tank-car quantities and the latter for 100-pound cylinder lots.

ROSIN.—Quoted at \$6.20 per barrel of 280 pounds, f. o. b. New York for grades E, F and G, and \$5.20, Savannah, Ga., rosin has continued in fair demand by paper manufacturers.

SALTCAKE.—Stocks of saltcake are growing more scarce every day and pulp manufacturers are coming into the market strong with the result that prices are going straight up in the air. Chrome cake is quoted nominally at \$20 per ton and white cake, or acid cake, is in the neighborhood of \$25.

SATIN WHITE.—The improvement in this market has been gradual but steady. Satin white is now quoted at 1.50 to 2.00 cents a pound and the market is firming in tone.

SODA ASH.—Soda ash prices will probably remain the same until the new contract schedule comes out at the beginning of next year. Withdrawals are steady on old contracts at the present price of 1.51 cents a pound.

SULPHUR.—Similar to soda ash in that price alterations are apt to be made only on long-time schedules, brimstone has remained firm and in good demand at \$18 to \$20 per ton.

STARCH.—Paper maker's starch is quoted at 2.57 cents a pound in bags and 2.85 in barrels while pearl starch averages 2.47 and 2.75 for these quantities. The market has a firm tone and demand is good.

Market Quotations

(Continued from page 63)

Solid Ledger Stock. 2.25 @ 2.50	New Black Soft. .03 @ .03 1/4
Writing Paper..... 1.80 @ 2.00	New Light Sec. .02 @ .02 1/4
No. 1 Books, heavy. 1.60 @ 1.75	Khaki Cuttings... .02 1/4 @ .03 1/4
No. 2 Books, light. 1.40 @ 1.50	Corduroy ..... .02 @ .02 1/4
No. 1 New Manila. 2.75 @ 3.00	New Canvas..... .07 @ .07 1/4
No. 1 Old Manila.. 1.50 @ 1.75	New Black Mixed 2.75 @ 3.00
Container Manila.. 1.00 @ 1.10	White, No. 1—
Old Kraft..... 2.00 @ 2.25	Repacked ..... .06 @ .06 1/4
Overissue News.... .75 @ .80	Miscellaneous ... .04 1/4 @ .04 3/4
Old Newspaper.... .50 @ .60	White, No. 2—
No. 1 Mixed Paper. .45 @ .50	Repacked ..... .03 @ .03 1/4
Common Paper.... .40 @ .50	Miscellaneous ... .02 1/4 @ .02 3/4
Straw Board, Chip. .40 @ .45	Thirds and Blues—
Binders' Bd. Chip. .40 @ .45	Repacked 1.65 @ 1.80
Domestic Rags—New	Miscellaneous ... 1.40 @ 1.55
Price to Mill, f. o. b. Phila.	Black Stockings... 1.75 @ 2.25
Shirt Cuttings—	Roofing Stock—
New White, No. 1 .10 @ .10 1/4	No. 1..... 1.00 @ 1.10
New White, No. 2 .05 1/4 @ .06 1/4	No. 2..... .90 @ 1.00
Silecias, No. 1... .05 1/4 @ .06	No. 3..... .80 @ .90
New unbleached.. .09 @ .09 1/4	No. 4..... .80 @ .90
Washables ..... .03 1/4 @ .03 3/4	No. 5A..... nominal
Fancy ..... .04 1/4 @ .04 3/4	B..... nominal
Cottons—according to grades—	C..... nominal
Blue Overall.... .04 1/4 @ .05 1/4	
New Blue..... .02 @ .02 1/4	

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper	Wood, Vat Lined.. 47.25 @
Bonds ..... .06 1/4 @ .60	Filled News Board. 45.00 @
Ledgers ..... .07 1/4 @ .35	Solid News Board.. 42.00 @ 45.00
Writings ..... .07 1/4 @ .22 1/4	S. Manila Chip.... 52.50 @
Superfine ..... .15 @ .22 1/4	Pat. Coated..... 70.00 @ 75.00
Fine ..... .15 @ .18	
Books, S. & S. C... .07 @ .10	Old Papers
Books, M. F. .... .05 1/4 @ .07 1/4	Shavings—
Books, coated ..... .08 @ .10	No. 1 Hard White 3.70 @ 3.90
Label ..... .08 1/4 @ .09 1/4	No. 1 Soft White 3.30 @ 3.45
News sheets 3.75 @	No. 1 Mixed.... 1.50 @ 1.75
News rolls 3.50 @	Ledgers & Writings 1.70 @ 1.80
Manilas—	Solid Books 1.35 @ 1.80
No. 1 Manila ... \$6.75 @	Blanks 1.70 @ 1.80
No. 1 Fibre ..... .07 1/4 @	No. 2 Books Light. .70 @ .75
No. 1 Jute 8.50 @ 8.75	Folded News, over-
Kraft Wrapping ... .06 1/4 @ .07	issues 17.00 @ 19.00
Common Bogus ... 3.00 @	Gunny Bagging ... .85 @ .90
Boards	Manila Rope.... 5.75 @ 6.00
(Per Ton Destination)	Common Paper... .62 1/4 @ .67
Chip \$35.00 @ 37.50	Old News ..... .70 @ .75
News, Vat Lined... 36.50 @ 38.50	Old Kraft..... 1.75 @ 1.80

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper	Sulphite, bleached. 90.00 @ 95.00
(Mill Prices to Jobbers f. o. b. Mill)	Sulphate 70.00 @
Bond—	Old Waste Papers
Sulphite ..... .11 @ .12 1/4	(In carload lots, f. o. b. Toronto)
Light tinted.... .12 @ .13 1/4	Shavings—
Dark tinted.... .13 1/4 @ .15	White Env. Cut.. 3.75 @
Ledgers (sulphite). .13 @	Soft White Book 3.40 @ 3.45
Writing ..... .10 1/4 @ .13 1/4	White Bk News 1.70 @
News, f. o. b. Mills—	Book and Ledger
Rolls (carloads). 3.50 @	Flat Magazine and
Sheets (carloads). — @ 4.25	Book Stock (old) 1.70 @
Sheets (2 tons or over) @ 4.50	Light and Crum-
Book—	pled Book Stock 1.55 @
No. 1 M. F. (car-	Ledgers and Writ-
loads) 9.50 @	ings 1.95 @
No. 2 M. F. (car-	Solid Ledgers.... 1.95 @
loads) 8.50 @	Manilas—
No. 3 M. F. (car-	New Manila Cut. 1.70 @
loads) 8.00 @	Printed Manilas.. .90 @
No. 1 S. C. (car-	Kraft 2.25 @
loads) 10.00 @	News and Scrap—
No. 2 S. C. (car-	Strictly Overissue .90 @
loads) 9.00 @	Folded News.... .80 @
No. 1 Coated and	No. 1 Mixed Pa-
litho. 14.00 @	pers ..... .60 @
No. 2 Coated and	Domestic Rags—
litho. 13.00 @	Price to mills, f. o. b. Toronto.
No. 3 Coated and	Per lb.
litho. 12.25 @	No. 1 White shirt
Coated and litho.,	cuttings ..... .10 1/4 @ .11
colored 14.25 @	No. 2 White shirt
Wrappings—	cuttings ..... .05 1/4 @ .05 3/4
Grey 4.50 @	Fancy shirt cut-
White Wrap 5.00 @	tings ..... .05 @ .05 1/4
"B" Manila 5.50 @	No. 1 Old whites .04 @
No. 1 Manila 6.75 @	Thirds and blues .02 @ .02 1/4
Fibre 6.75 @	Per cwt.
Kraft, M. F. 8.00 @	Black stockings.. 2.00 @ 2.25
M. G. 8.15 @	Roofing stock:
Pulp	No. 1..... 1.35 @
(F. o. b. Mill)	No. 2..... 1.20 @
Ground wood.... \$27.50 @ 35.00	Roofing stock:
Sulphite easy bleach-	Manila rope ..... .05 1/4 @ .05 3/4
ing 60.00 @ 65.00	No. 2..... .01 1/4 @
Sulphite news grade. 50.00 @ 60.00	Gunny bagging... 1.00 @ 1.25

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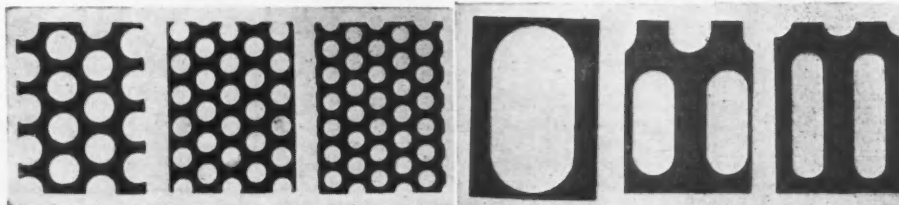
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HELP AND MISCELLANEOUS WANTS, and small For Sale Ads, 4 cents a word for each and every insertion. No ads of less than 25 words accepted.

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.

HELP WANTED

WANTED—Foreman on Satchel Bottom Paper Sack Machines, Rotary Tuber and Bottomers. Good chance. Steady job. New York City factory. Reply giving experience, age, salary expected, etc., to Box 5243, care Paper Trade Journal. A-10

WANTED—Man capable of supervising Fibre Container factory equipped with most modern machinery. Experienced man preferred. Address, Box 5246, care Paper Trade Journal. tf

WANTED—Experienced man with investment to connect himself permanently with paper stock company on Pacific Coast and take over management of Los Angeles plant. Write fully stating experience, salary expected, contemplated investment, etc. All correspondence confidential. Address, Box 5261, care Paper Trade Journal. A-10

WANTED—Night superintendent for waxed paper plant in the middle west. Must be experienced in bread wrapper work. Good permanent position. Address, Box 5284, care Paper Trade Journal. A-17

WANTED

MASTER Mechanic for two machine writing mill in good size middle west city. In application state age, experience and references. Address, Box 5282, care Paper Trade Journal. A-10

WANTED

By large, well known Dye-stuff House, salesman to visit Paper Mills in the East. Must have large following and be well acquainted with Dye-stuffs. Give full details. Address, Box 5319, care Paper Trade Journal.

HELP WANTED

WANTED: First Class Millwright capable of performing any paper mill repair work. Reply giving experience and references. Address, Box 5297, care Paper Trade Journal. A-10

WANTED: Three first class machine tenders, one back tender and one beater engineer for Book and Writing Mill. Send references in first letter. Address, Box 5299, care Paper Trade Journal. A-17

SALESMEN: Large New York City jobbers, carrying big assortment of paper and twine, can place a few salesmen with or without trade. Good opportunity for a hustler. Address, Box 5312, care Paper Trade Journal. A-10

BOSS MACHINE TENDER for Board Mill in Middle West making high grade Patent Coated. State experience and give references. Address, Box 5313, care Paper Trade Journal. A-17

FIRST CLASS MACHINE TENDER on Patent Coated and Combination Boxboard. References required. State experience and age. Address, Box 5314, care Paper Trade Journal. A-17

WANTED: Back Tender, Finishers and Beater Boss for Board Mill in East making Chip and News. Address, Box 5315, care Paper Trade Journal. A-10

WANTED: First Class Machine Tender for Container Board Mill. 45 tons daily, 2 tours. Mail references. Address, Box 5316, care Paper Trade Journal. A-10

WANTED: Chief engineer to take charge of Boiler House, Steam Engines, and all Electrical Maintenance in a paper mill. Address, Box 5317, care Paper Trade Journal. A-24

WANTED: Chemist by Writing Paper Mill in Middle West. Write, giving full details regarding education, experience, if any, salary expected, etc. Address, Box 5318, care Paper Trade Journal. A-17

BEATER ENGINEER WANTED for a News Mill in the Middle West consisting of six beaters. Strictly open shop. Address, Box 5329, care Paper Trade Journal. A-10

WANTED: Good, sober, steady machine tender for Container Board Mill. Two tours. Good wages. Address, Box 5332, care Paper Trade Journal. A-24

FOREMAN WANTED to take charge of De-inking Plant. Please state qualifications in first letter, salary desired, etc. Married man preferred. Address, Box 5334, care Paper Trade Journal. A-24

SITUATIONS WANTED

YOUNG MAN: 20, ambitious, familiar with fine papers, Bristols, etc., wishes to connect with concern where good future awaits. Address, Box 5333, care Paper Trade Journal. A-10

WRAPPING PAPER MANUFACTURERS

Manufacturers' agent, located in New Orleans, permanently established, well and favorably known to the larger jobbers in Louisiana and Texas, desires to represent, on a commission basis, manufacturers of Wrapping Papers, No. 2 News, and both B. F. and W. F. Fibres. Address Box 5292, care Paper Trade Journal. A-24

SITUATIONS WANTED

WANTED: By a New York Manager and Representative of an out of town Manufacturer of Toilet Paper and Paper Towels, similar connection with reputable manufacturer. Have been in the line over 20 years, over 15 years of which I have spent with my concern. Address, Box 5314, care Paper Trade Journal. A-10

PRACTICAL PAPER MAKER desires a position with a board or specialty mill. Having had experience in both cylinder and fourdrinier mills in all departments. Have been doing engineering work in different mills for past four years. Experienced in construction and mechanical details. Address, Box 5233, care Paper Trade Journal. tf

MILL CONNECTION WANTED for the Greater New York territory and vicinity, by selling organization in touch with the large buyers and users of paper. M. F. Super Coated, Litho Coated, Bond Kraft or News Print, preferred. Have ample capital to finance large volume of business. Eastern Mill preferred. Address, Box 5258, care Paper Trade Journal. A-10

SALES MANAGER—Man 40, college education, thoroughly experienced as salesman, wishes to make connection with firm desiring a sales or district manager. Have wide experience in selling beater room equipment and knives. Large following among paper mills in Eastern Penna. Address, Box 5270, care Paper Trade Journal. A-10

SULPHATE PULP SUPERINTENDENT, or Assistant, with proven ability, desires connection with mill having production trouble. Nine years' experience in the U. S. and Canadian mills. Best of references. Address, Box 5276, care Paper Trade Journal. A-17

YOUNG MAN, age 30, seven years experience paper line, four selling. Well acquainted with New York Trade also mills. Open for engagement with reliable fine paper jobber or mill agent. Either in selling or executive capacity. Address, Box 5286, care Paper Trade Journal. A-10

SITUATION WANTED—Sheet calender man would like steady work running sheet calenders. Ten years' experience running light and heavy weight linen ledgers and bond papers. Address, Box 5290, care Paper Trade Journal. A-10

UNIVERSITY GRADUATE in chemistry with broad training and experience, several years in pulp and paper work, particularly along chemical lines, desires position in the paper industry. Chemical control, operating or sales. At present employed. Address, Box 5300, care Paper Trade Journal. A-17

GRADUATE MECHANICAL ENGINEER: 24 years old, married, 3½ years in Drafting Room. 1 year estimating engineer on all repairs, new building and machine additions. At present employed. Would like a position as assistant to Mechanical Superintendent or as Engineer on erection job. Address, Box 5320, care Paper Trade Journal. A-24

PARTNER

To provide for further expansion. Established importer with valuable foreign connections and an extensive list of customers in United States and Canada, requires additional capital and will be pleased to hear from party interested in entering the business as active or silent partner. Address, Box 5331, care Paper Trade Journal. A-10.

SITUATIONS WANTED

BACK TENDER 25 years of age. Open for position. Experienced running light and heavy weight Linen Ledgers, Bond Paper and News Print. Wishes to connect with mill running modern speed, and having Fourdrinier Machines. Good references furnished on request. Address, Box 5321, care Paper Trade Journal. A-24

BACK TENDER: Now employed wishes position in western mill. Prefer Pacific Coast mills. Will consider most any position with chance of advancement. Experienced on Fourdrinier. Machine running 400 feet. Making Manila and Manila Finished Paper, also two years' experience as Beater Engineer in a News Mill. Address, Box 5322, care Paper Trade Journal. A-17

WANTED to connect with Mill or Selling Agent handling assorted line of Wrapping Papers. Fifteen years in control Southwestern States. Address, Box 5323, care Paper Trade Journal. A-10

MASTER MECHANIC with 12 years' paper mill experience wishes to make a change. A practical machinist and millwright, up in all Mill Repairs and not afraid of work. Best references. Address, Box 5324, care Paper Trade Journal. A-24

POSITION WANTED as machine tender, experienced on Manila, News, Hanging and high grade Tissue. Fourdrinier cylinders, Harper machines. Address, Box 5325, care Paper Trade Journal. A-24

WANTED: Position as Manager or Superintendent of Paper Box Board Mill running all grades and colors. Have the facility of handling labor and taking care of plant in its entirety. Address, Box 5326, care Paper Trade Journal. A-17

MAN 30, long experience in purchase of printing and paper for large corporation wishes connection with paper mill, or company in similar position where results count. Address, Box 5327, care Paper Trade Journal. A-10

SALESMAN—Specialist on Coated Lithographic Papers and Boards; also Offset and Printing Papers, desires to connect with mill or dealers having mill connections. Can produce good business. Address, Box 5260, care Paper Trade Journal. A-24

YOUNG MAN college educated, thoroughly experienced in Sulphate Mill operation, desires position as foreman or assistant to superintendent. Familiar with mill control methods. References. Address, Box 5305, care Paper Trade Journal. A-10

SUPERINTENDENT or assistant superintendent. Swede, 30 years of age, graduated from Technical University, Chemical Department in Sweden, with practical experience (1) Two years as laborer in different departments at different mills during the college time. (2) Four years as tour foreman at one of the most modern and largest paper mills for high grade paper in Sweden (high grade paper of rag and sulphite, blotting paper, tissue of rag and sulphite, crepe paper, wax paper and boxboard.) (3) Superintendent at paper mill one half year, during manager's absence (book paper, magazine, envelope, manilla and M. G.) (4) Superintendent at paper mill nine months until mill shut-down due to the general depression of business (high grade sulphite paper.) Came to America last year in August and got position as assistant superintendent at paper mill (bond, writing, ledger and book papers). Wish now to go to another mill and preferably to a mill with good opportunities. Address, Box 5309, care Paper Trade Journal. A-17

DO YOU WANT a practical News Superintendent or Assistant of 25 years' experience? News business good now. I can produce. Best references from last employer. Address, Box 5301, care Paper Trade Journal. A-10

SULPHITE SUPERINTENDENT with paper mill experience, technically educated, looks for position as Assistant Manager in sulphite mill. 36 years of age. Experience in United States, Canada and abroad. Address, Box 5303, care Paper Trade Journal. A-17

FOR SALE

FOR SALE: One Pulp Drying Machine. Modern type. Will make three widths. Address, Box 5328, care Paper Trade Journal. A-10

FOR SALE, Address Rheabat Corporation, East Pepperell, Mass. One 36" Finlay Cutter. One 53" Finlay Cutter. Two 51" Finlay cutter. Two 43" Finlay Cutter. One Foster & Brown splitter. One 63" Finlay cutter, dismantled. No. 1 Holyoke Machine Co. Seven rolls 37". Equipped with drive and winder. No. 2 Holyoke Machine Co. Seven rolls 42". Equipped with drive and winder. No. 3 Norwood Engineering Co. Seven rolls 51". Equipped with drive and winder. No. 4 Granger. Seven rolls 43". Equipped with drive and winder. No. 5 Norwood Engineering Co. Seven rolls 49". Equipped with drive and winder. No. 6 Holyoke Machine Co. Seven rolls 57". Equipped with drive and winder. No. 7 Holyoke Hydrant and Iron Works. Nine rolls 43". Equipped with drive and winder. No. 8 Holyoke Machine Co. Nine rolls 51". Equipped with drive and winder. A-10

FOR SALE—One No. 4 National Smith & Winchester Sack Machine, making complete sacks from 1/16 to 1/4 bbl., perfect running condition. If interested write for further particulars to Sneider Bros., Inc., 63 Washington St., No. Boston, Mass. A-10

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FOR SALE: Black & Clawson cylinder machine trimming 96". Wet and consists of 6 cylinders, 6 primary and 3 secondary presses. The drying end of the machine has 94 dryers 36" in diameter, 2 calender stacks with respectively 5 and 7 rolls in each. The winder is attached direct to the machine. Machine in good running order. We invite correspondence. Bogalusa Paper Company, Inc., Bogalusa, Louisiana. A-17

FOR SALE—Double patent coated white cardboard Offcuts running from 5" to 9" in width of different lengths. Cheap. High grade quality. Address, Mill Dept. Rose Lithographic Corporation, 55 33rd Street, Brooklyn, New York. A-17

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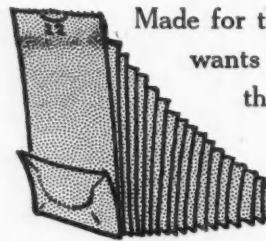
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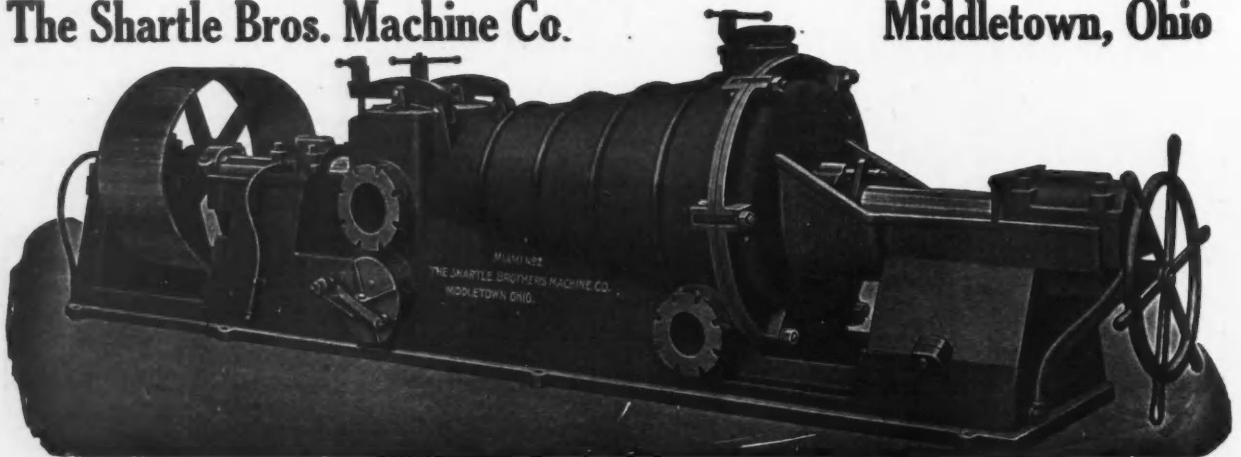
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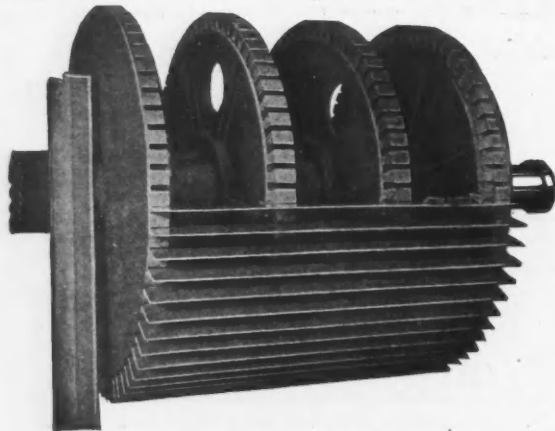
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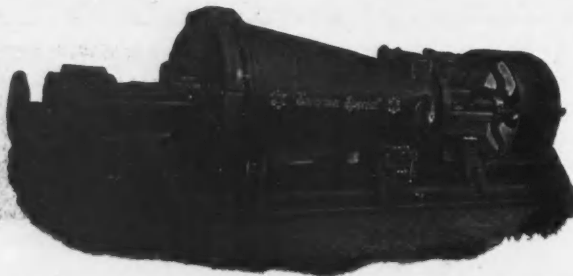
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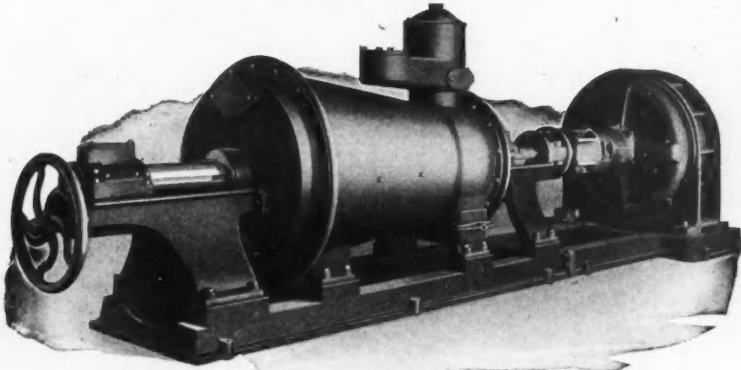
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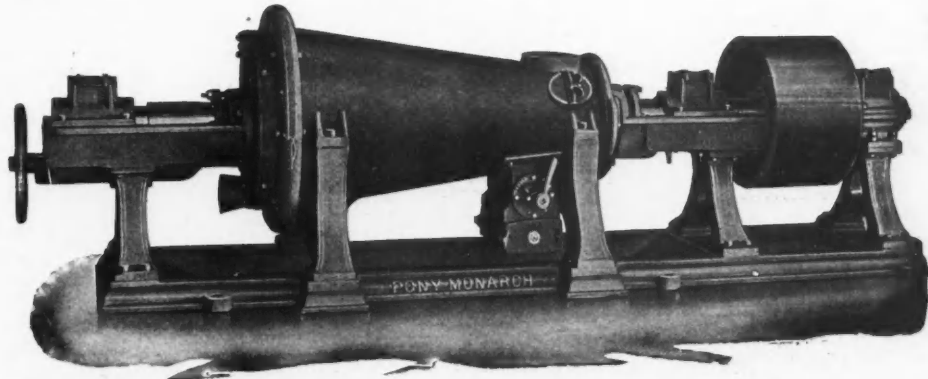
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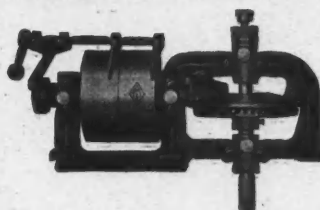
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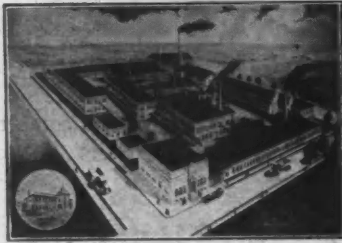
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