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# PAPER TRADE JOURNAL

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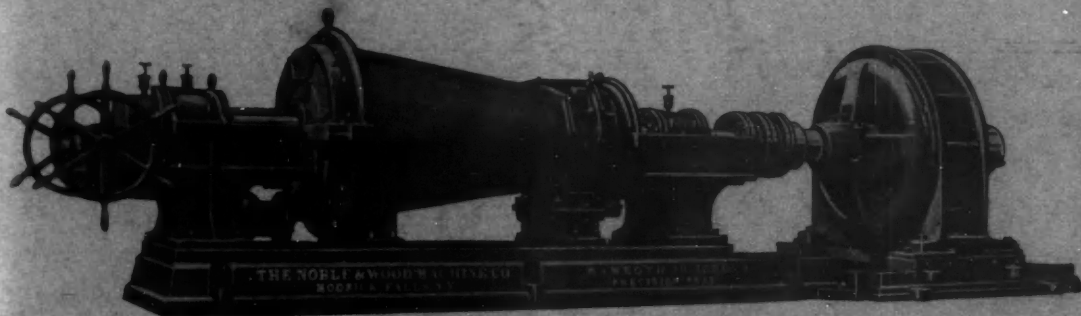
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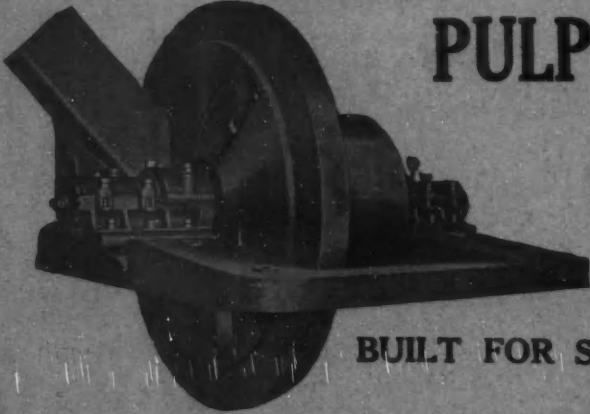
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The International Weekly of the Paper and Pulp Industry and the Pioneer Publication in its field

## FIFTY-FIRST YEAR

Published Every Thursday by the

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## Table of Contents

#### NEWS OF THE TRADE:

PAGE

PAGE

|  |    |
|--|----|
| Production of All Papers for the Month of January.....   | 22 |
| Oswegatchie Pulp Mill at Natural Dam Burned .....        | 25 |
| Floyd L. Carlisle in Watertown .....                     | 25 |
| Dr. Pietsch Goes with Knowlton Bros. ....                | 25 |
| S. A. Upham of Brownville Paper Co. Returns .....        | 25 |
| Uncas Paperboard Co. Expanded .....                      | 25 |
| Orders in Philadelphia Are Fairly Satisfactory .....     | 26 |
| Paper Stock Without Change .....                         | 26 |
| New Jobbing House .....                                  | 26 |
| Universal Waste Products New Warehouse .....             | 26 |
| Consolidation of Nashua Gummed Paper Co.'s Offices ..... | 26 |
| New Secretary of West Jersey Paper Co. ....              | 28 |
| Larger Warehouse for Huff Paper Company .....            | 28 |
| General News of the Philadelphia Trade .....             | 28 |
| Crocker-McElwain Provide for Expansion .....             | 28 |
| Paper Mills in Toronto Continue Well Employed .....      | 30 |
| New Garden City Paper Mill .....                         | 30 |
| Endorse Plan of Reforestation .....                      | 30 |
| American Sales Book Co. Had Good Year .....              | 30 |
| Mattagami is Busier .....                                | 30 |
| Kenora Pulp Plant Will Start Soon .....                  | 30 |
| Notes and Jottings of the Toronto Trade .....            | 30 |
| Speculation as To Price of News Print in Canada .....    | 32 |
| New Paper Supply for the West .....                      | 32 |
| Toll of Forest Fires .....                               | 32 |
| Lumber Cut Back to Normal .....                          | 32 |
| Kenogami Dam Contract .....                              | 32 |
| Belgo Paper Company Adds to Output .....                 | 32 |
| Bathurst Co. Appeals Court Ruling .....                  | 32 |
| St. Lawrence Paper Mills .....                           | 32 |
| Recent Incorporations .....                              | 34 |
| New York Trade Jottings .....                            | 36 |
| Program for Paper Week .....                             | 38 |
| J. E. A. Dubuc Retires .....                             | 38 |
| Dr. Baker at Forestry Hearing .....                      | 38 |

|  |    |
|--|----|
| Findings Reported Drawn up in Coast Paper Case .....   | 43 |
| Increased Consumption of Pulpwood .....                | 43 |
| Specialty Paper Mills Bankrupt .....                   | 43 |
| National Paper Box Men to Meet May 9-11 .....          | 43 |
| Thos. O. Ross to Speak on Paper in South America ..... | 43 |
| Foresters' Tables .....                                | 46 |
| Adirondack Paper Corp Leases Mill .....                | 49 |
| May File Briefs Until April 1 in Dumping Case .....    | 56 |
| American Writing Paper Co. Improves .....              | 56 |
| "The Forests of New York State" .....                  | 56 |
| Business Improving in Holyoke .....                    | 56 |
| Paper and Paper Stock Imports of the U. S. ....        | 58 |
| Paper and Paper Stock Exports of the U. S. ....        | 60 |
| Imports and Exports of Paper and Paper Stock .....     | 62 |

#### EDITORIAL:

|                                 |    |
|---------------------------------|----|
| Coming Events .....             | 42 |
| To Be Big Paper Week .....      | 42 |
| Import Statistics Resumed ..... | 42 |

#### TECHNICAL SECTION:

|   |    |
|---|----|
| Composition of the Rosin Size Emulsion .....          | 45 |
| Woodland's Section Meeting .....                      | 46 |
| Members' Exchange .....                               | 46 |
| Spruce Bud Worms in Northern Idaho .....              | 47 |
| Work of the Freight Container Bureau .....            | 48 |
| Waste in the Pulp and Paper Industry .....            | 49 |
| Effect of Sunlight on the Vegetable Paper Sizes ..... | 50 |
| Thickness and Weight Indicator .....                  | 52 |

#### COST SECTION:

|                                    |    |
|------------------------------------|----|
| Budgetary Control over Costs ..... | 53 |
|------------------------------------|----|

#### MARKET REVIEW:

|                             |    |
|-----------------------------|----|
| N. Y. Market Review .....   | 64 |
| Market Quotations .....     | 65 |
| Miscellaneous Markets ..... | 68 |

Want and For Sale Advertisements, Pages 72, 73, 74 and 75

# PRODUCTION OF ALL PAPERS FOR THE MONTH OF JANUARY

According to Statistics Just Issued by the Federal Trade Commission the Mill Stocks on Hand at the End of the Month Equalled Five Days' Average Output of News Print, Thirteen Days' Average Output of Book Paper, Nine Days' Average Output of Paper Board, Twenty Days' Average Output of Wrapping Paper and Thirty-five Days' Average Output of Fine Paper.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 8, 1923.—Following the tabulation of production, shipments, and stocks regularly carried in the Statistical Summary, this month's issue carries a Special Tabulation for identical mills, reporting to the Federal Trade Commission for December, 1920, 1921 and 1922, and for January, 1921, 1922 and 1923, in news print, book paper, paperboard and wrapping. There is also carried in this issue, a special tabulation of loss of production for paper board (including boxboard) showing by months number of machines, hours operated, hours idle and reasons therefor, for the years 1921 and 1922. On part two of this tabulation is shown the number of machines in mills down completely during any entire month, for 1921 or 1922. This tabulation does not include mills that made grades other than paperboard or boxboard.

The attached tabulation is a summary of production, shipments, and stock of paper mills in the United States, as reported to the Federal Trade Commission, for the month of January, 1923. This summary is compared with the month of January, 1918, to 1922, inclusive.

The average production for all grades, except boxboard, is based upon the production for the years 1918 to 1922, inclusive, and the average stocks on hand at the end of the month are for the 60 months of 1918 to 1922, inclusive. Figures for boxboard prior to March, 1920, were included in paperboard. The average production and stocks for boxboard are based upon the figures tabulated during the period March, 1920, to December 31, 1922.

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

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

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

### Tonnage Summary

Production, shipments and stocks of paper, by grades, for the month of January, 1923, compared with January, 1922, 1921, 1920, 1919 and 1918, together with average production and stocks.

| Grade  | Number of Mills | Stocks on hand 1st of month. |                      |                     |                                       |
|--|-----------------|------------------------------|----------------------|---------------------|---------------------------------------|
|  |                 | Net Tons                     | Production. Net Tons | Shipments. Net Tons | Stocks on hand end of month. Net Tons |
| <b>News Print (Standard and Special Grades of News):</b> |                 |                              |                      |                     |                                       |
| January, 1923.....                                       | 73              | 19,208                       | 127,452              | 123,656             | 23,004                                |
| January, 1922.....                                       | 65              | 23,934                       | 105,808              | 103,192             | 26,550                                |
| January, 1921.....                                       | 85              | 24,763                       | 123,830              | 116,176             | 32,417                                |
| January, 1920.....                                       | 89              | 15,369                       | 129,663              | 128,098             | 16,934                                |
| January, 1919.....                                       | 66              | 19,408                       | 116,154              | 114,343             | 21,219                                |
| January, 1918.....                                       | 66              | 31,713                       | 105,700              | 108,485             | 28,928                                |
| Average .....  | ..              | .....                        | 115,908              | .....               | 24,813                                |

| Standard News (included in News Print): |    |        |         |         |        |
|---|----|--------|---------|---------|--------|
| January, 1923.....                      | 61 | 15,128 | 117,497 | 114,168 | 18,457 |
| January, 1922.....                      | 53 | 19,607 | 98,702  | 96,525  | 21,784 |
| January, 1921.....                      | 67 | 19,573 | 113,764 | 106,228 | 27,109 |
| January, 1920.....                      | 66 | 12,338 | 114,957 | 112,719 | 14,576 |
| January, 1919.....                      | 51 | 15,656 | 106,002 | 105,169 | 16,469 |
| January, 1918.....                      | 50 | 26,482 | 97,086  | 96,336  | 27,232 |
| Average .....                           | .. | .....  | 105,456 | .....   | 20,368 |

| Book (M. F., S. S. C. and Coated): |    |        |        |        |        |
|------------------------------------|----|--------|--------|--------|--------|
| January, 1923.....                 | 93 | 26,231 | 97,318 | 94,667 | 38,882 |
| January, 1922.....                 | 81 | 38,757 | 73,466 | 73,760 | 38,463 |
| January, 1921.....                 | 93 | 25,005 | 64,382 | 60,507 | 28,880 |
| January, 1920.....                 | 98 | 23,279 | 96,419 | 96,152 | 23,546 |
| January, 1919.....                 | 90 | 28,431 | 70,443 | 64,836 | 34,038 |
| January, 1918.....                 | 90 | 36,845 | 74,219 | 82,082 | 28,982 |
| Average .....                      | .. | .....  | 77,766 | .....  | 31,889 |

| Paperboard—total (straw, Fibre, Leather, Chip, Box, etc.): |     |        |         |         |        |
|--|-----|--------|---------|---------|--------|
| January, 1923.....   | 214 | 54,693 | 209,473 | 206,732 | 57,434 |
| January, 1922.....   | 202 | 63,018 | 145,198 | 145,485 | 62,731 |
| January, 1921.....   | 244 | 53,104 | 105,806 | 100,431 | 58,479 |
| January, 1920.....   | 249 | 40,329 | 211,934 | 209,035 | 43,228 |
| January, 1919.....   | 236 | 46,196 | 140,859 | 133,838 | 53,217 |
| January, 1918.....   | 236 | 42,411 | 153,602 | 161,299 | 34,714 |
| Average .....  | ..  | .....  | 170,092 | .....   | 52,102 |

| Boxboard, (included in Paperboard): |     |        |         |         |        |
|-------------------------------------|-----|--------|---------|---------|--------|
| January, 1923.....                  | 122 | 25,451 | 156,214 | 154,535 | 27,130 |
| January, 1922.....                  | 122 | 31,964 | 105,416 | 107,897 | 29,483 |
| January, 1921.....                  | 144 | 25,451 | 74,870  | 71,625  | 28,696 |
| January, 1920.....                  | ..  | .....  | .....   | .....   | .....  |
| Average .....                       | ..  | .....  | 69,186  | .....   | 27,078 |

| Wrapping, (Kraft, Manila, Fibre, etc.): |     |        |        |        |        |
|---|-----|--------|--------|--------|--------|
| January, 1923.....                      | 152 | 45,848 | 82,703 | 80,428 | 48,123 |
| January, 1922.....                      | 126 | 48,848 | 65,791 | 60,133 | 54,506 |
| January, 1921.....                      | 142 | 35,800 | 44,620 | 35,179 | 45,241 |
| January, 1920.....                      | 151 | 26,791 | 70,109 | 71,247 | 25,653 |
| January, 1919.....                      | 160 | 40,499 | 50,490 | 39,592 | 51,397 |
| January, 1918.....                      | 160 | 53,551 | 48,732 | 58,978 | 43,305 |
| Average .....                           | ..  | .....  | 63,362 | .....  | 47,015 |

### "Statistical Summary"

| Grade  | Number of Mills | Stocks on hand 1st of month. |                      |                     |                                       |
|--|-----------------|------------------------------|----------------------|---------------------|---------------------------------------|
|  |                 | Net Tons                     | Production. Net Tons | Shipments. Net Tons | Stocks on hand end of month. Net Tons |
| <b>Bag (all kinds):</b>                              |                 |                              |                      |                     |                                       |
| January, 1923.....                                   | 40              | 3,795                        | 13,573               | 13,418              | 3,950                                 |
| January, 1922.....                                   | 38              | 3,085                        | 16,797               | 16,092              | 3,790                                 |
| January, 1921.....                                   | 38              | 3,031                        | 6,296                | 5,861               | 3,466                                 |
| January, 1920.....                                   | 46              | 2,087                        | 20,963               | 20,707              | 2,343                                 |
| January, 1919.....                                   | 37              | 3,408                        | 11,691               | 11,203              | 3,896                                 |
| January, 1918.....                                   | 37              | 6,498                        | 14,875               | 16,001              | 5,372                                 |
| Average .....  | ..              | .....                        | 15,418               | .....               | 5,417                                 |
| <b>Fine (Writing, Bonds, Ledgers, etc.):</b>         |                 |                              |                      |                     |                                       |
| January, 1923.....                                   | 103             | 36,742                       | 34,946               | 32,866              | 38,822                                |
| January, 1922.....                                   | 100             | 34,000                       | 27,405               | 26,074              | 35,331                                |
| January, 1921.....                                   | 105             | 30,317                       | 22,756               | 18,320              | 34,748                                |
| January, 1920.....                                   | 110             | 31,516                       | 32,886               | 35,611              | 28,791                                |
| January, 1919.....                                   | 114             | 34,576                       | 27,675               | 26,176              | 36,075                                |
| January, 1918.....                                   | 114             | 32,500                       | 28,865               | 28,690              | 32,675                                |
| Average .....  | ..              | .....                        | 28,964               | .....               | 33,880                                |
| <b>Tissue (Toilet, Crepe, Fruit Wrappers, etc.):</b> |                 |                              |                      |                     |                                       |
| January, 1923.....                                   | 87              | 8,712                        | 18,342               | 17,612              | 9,442                                 |
| January, 1922.....                                   | 82              | 6,185                        | 14,954               | 14,103              | 7,036                                 |
| January, 1921.....                                   | 99              | 8,774                        | 7,704                | 7,356               | 9,122                                 |
| January, 1920.....                                   | 96              | 5,697                        | 15,695               | 15,542              | 5,850                                 |
| January, 1919.....                                   | 90              | 5,400                        | 10,611               | 9,667               | 6,344                                 |
| January, 1918.....                                   | 90              | 6,083                        | 11,589               | 11,646              | 6,026                                 |
| Average .....  | ..              | .....                        | 13,962               | .....               | 7,083                                 |
| <b>Hanging (No. 2 Blank, Oatmeal, Tile, etc.):</b>   |                 |                              |                      |                     |                                       |
| January, 1923.....                                   | 25              | 2,835                        | 11,931               | 12,188              | 2,578                                 |
| January, 1922.....                                   | 21              | 7,782                        | 7,486                | 8,179               | 7,089                                 |
| January, 1921.....                                   | 26              | 3,027                        | 9,507                | 7,735               | 4,799                                 |
| January, 1920.....                                   | 26              | 1,452                        | 9,935                | 10,427              | 960                                   |
| January, 1919.....                                   | 21              | 2,933                        | 9,180                | 9,447               | 2,666                                 |
| January, 1918.....                                   | 21              | 6,789                        | 4,304                | 4,629               | 6,464                                 |
| Average .....  | ..              | .....                        | 7,332                | .....               | 4,823                                 |

| Felts and Building (Roofing, Sheathing, etc.):       |     |         |         |         |         |
|--|-----|---------|---------|---------|---------|
| January, 1923.....                                   | 45  | 8,112   | 36,014  | 35,954  | 8,172   |
| January, 1922.....                                   | 42  | 8,472   | 25,608  | 24,521  | 9,559   |
| January, 1921.....                                   | 52  | 13,420  | 17,885  | 17,752  | 13,553  |
| January, 1920.....                                   | 54  | 5,315   | 37,733  | 36,463  | 6,585   |
| January, 1919.....                                   | 48  | 7,699   | 15,039  | 13,272  | 9,466   |
| January, 1918.....                                   | 48  | 8,341   | 25,910  | 25,964  | 8,287   |
| Average.....   | ..  | .....   | 27,872  | .....   | 8,983   |
| Other Grades (Specialties Not otherwise classified): |     |         |         |         |         |
| January, 1923.....                                   | 107 | 23,047  | 32,801  | 32,289  | 23,559  |
| January, 1922.....                                   | 92  | 19,563  | 23,682  | 23,329  | 19,916  |
| January, 1921.....                                   | 94  | 17,160  | 17,682  | 16,606  | 18,236  |
| January, 1920.....                                   | 95  | 12,482  | 24,956  | 23,433  | 14,005  |
| January, 1919.....                                   | 62  | 11,310  | 14,094  | 14,150  | 11,254  |
| January, 1918.....                                   | 62  | 13,382  | 23,214  | 23,385  | 13,210  |
| Average.....   | ..  | .....   | 22,230  | .....   | 15,663  |
| TOTAL—All grades:                                    |     |         |         |         |         |
| January, 1923.....                                   | ..  | 239,223 | 664,553 | 649,810 | 253,966 |
| January, 1922.....                                   | ..  | 253,644 | 506,195 | 494,868 | 264,971 |
| January, 1921.....                                   | ..  | 214,396 | 420,468 | 385,923 | 248,941 |
| January, 1920.....                                   | ..  | 164,317 | 650,293 | 646,715 | 167,895 |
| January, 1919.....                                   | ..  | 199,860 | 466,236 | 436,524 | 229,572 |
| January, 1918.....                                   | ..  | 238,113 | 491,010 | 521,160 | 207,963 |
| Average.....   | ..  | .....   | 542,906 | .....   | 230,217 |

The following stocks were reported on hand at terminal and delivery points on January 31, in addition to the mill stocks shown in the tabulation: Newsprint, 7 tons; Book Paper, 2,691 tons; Paperboard, 100 tons; Wrapping, 8 tons; Fine, 18 tons; Bag, 158 tons; Tissue, 262 tons, and other grades, 350 tons; total, 3,594 tons.

Stocks of all grades except hanging increased during the month.

Stocks of all grades reported by manufacturers at the end of January amounted to 257,560 tons, including the stocks at terminal and delivery points. In addition to these stocks, jobbers and publishers reported newsprint stocks and tonnage in transit aggregating 230,923 tons.

**Ratio of Stocks to Average Production**

Comparing the stocks on hand at the domestic mills on January 31 with their average daily production, based upon the combined production for 1918 to 1922, inclusive, the figures show that:

News print paper mill stocks equal 5 days' average output. Book paper mill stocks equal 13 days' average output. Paperboard mill stocks equal 9 days' average output. Wrapping paper mill stocks equal 20 days' average output. Bag paper mill stocks equal 7 days' average output. Fine paper mill stocks equal 35 days' average output. Tissue paper mill stocks equal 18 days' average output. Hanging paper mill stocks equal 9 days' average output. Felts and building paper mill stocks equal 8 days' average output. Miscellaneous paper mill stocks equal 28 days' average output. Total paper mill stocks of all grades equal 12 days' average output.

**Tonnage of Identical Mills**

The following tabulation is a special summary of production, shipments, and stocks of Newsprint paper, Book paper, Paperboard and Wrapping paper for identical mills, for the months of December, 1920, 1921 and 1922, and January, 1921, 1922 and 1923:

|                     | Number of identical mills | Stock first of month | Net Tons 2,000 lbs. |           |                    |
|---------------------|---------------------------|----------------------|---------------------|-----------|--------------------|
|                     |                           |                      | Production          | Shipments | Stock end of month |
| <b>Newsprint:</b>   |                           |                      |                     |           |                    |
| December, 1922..... | 71                        | 18,955               | 119,252             | 119,055   | 19,152             |
| January, 1923.....  | 71                        | 19,152               | 126,181             | 122,467   | 22,866             |
| December, 1921..... | 71                        | 22,885               | 107,596             | 106,431   | 24,050             |
| January, 1922.....  | 71                        | 24,050               | 105,736             | 103,467   | 26,698             |
| December, 1920..... | 71                        | 19,271               | 121,583             | 117,441   | 23,413             |
| January, 1921.....  | 71                        | 23,413               | 121,594             | 114,144   | 30,863             |
| <b>Book:</b>        |                           |                      |                     |           |                    |
| December, 1922..... | 79                        | 29,270               | 86,186              | 81,241    | 34,215             |
| January, 1923.....  | 79                        | 34,215               | 94,827              | 92,585    | 36,457             |
| December, 1921..... | 79                        | 35,421               | 70,309              | 67,390    | 38,340             |
| January, 1922.....  | 79                        | 38,340               | 72,500              | 72,716    | 38,124             |
| December, 1920..... | 79                        | 22,097               | 73,467              | 72,479    | 23,085             |
| January, 1921.....  | 79                        | 23,085               | 62,882              | 58,327    | 27,640             |

| Paperboard:         |     |        |         |         |        |
|---------------------|-----|--------|---------|---------|--------|
| December, 1922..... | 174 | 48,986 | 169,000 | 171,060 | 46,926 |
| January, 1923.....  | 174 | 46,926 | 186,575 | 184,432 | 49,069 |
| December, 1921..... | 174 | 53,405 | 132,823 | 128,039 | 58,189 |
| January, 1922.....  | 174 | 58,189 | 127,452 | 128,155 | 57,486 |
| December, 1920..... | 174 | 39,940 | 86,566  | 82,916  | 43,590 |
| January, 1921.....  | 174 | 43,590 | 89,761  | 85,339  | 48,012 |

| Wrapping:           |    |        |        |        |        |
|---------------------|----|--------|--------|--------|--------|
| December, 1922..... | 97 | 42,696 | 67,927 | 67,713 | 42,910 |
| January, 1923.....  | 97 | 42,910 | 73,999 | 72,047 | 44,862 |
| December, 1921..... | 97 | 46,882 | 60,380 | 62,166 | 45,096 |
| January, 1922.....  | 97 | 45,096 | 61,790 | 56,621 | 50,265 |
| December, 1920..... | 97 | 22,483 | 48,463 | 39,254 | 31,692 |
| January, 1921.....  | 97 | 31,692 | 39,832 | 30,408 | 41,116 |

**Imports and Exports**

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

|                           | October, 1922 |             | October, 1921 |             |
|---------------------------|---------------|-------------|---------------|-------------|
|                           | Pounds        | Value       | Pounds        | Value       |
| <b>Imports:</b>           |               |             |               |             |
| News print.....           | 236,019,186   | \$8,336,705 | 151,195,091   | \$6,118,982 |
| Book paper.....           | 1,097,259     | 67,063      | 38,887        | 3,919       |
| Wrapping.....             | 8,574,633     | 382,773     | 1,024,116     | 37,400      |
| Hanging.....              | .....         | 25,282      | .....         | 22,427      |
| All other grades (a)..... | .....         | 227,587     | .....         | 188,629     |
| <b>Exports:</b>           |               |             |               |             |
| News print.....           | 2,261,636     | 108,848     | 1,408,737     | 71,293      |
| Book paper.....           | 1,834,630     | 193,016     | 1,381,958     | 134,040     |
| Paperboard.....           | .....         | 203,008     | .....         | 167,853     |
| Wrapping.....             | 2,822,695     | 198,658     | 1,431,334     | 106,081     |
| Bag.....                  | .....         | 104,549     | .....         | 43,315      |
| Fine.....                 | .....         | 14,062      | .....         | 179,553     |
| Tissue.....               | .....         | 173,419     | .....         | 107,540     |
| Hanging.....              | .....         | 36,829      | .....         | 30,517      |
| All other grades (a)..... | .....         | 412,494     | .....         | 365,553     |
| Total imports.....        | .....         | \$9,039,410 | .....         | \$6,371,357 |
| Total exports.....        | .....         | 1,444,883   | .....         | 1,205,745   |

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

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

The value of the exports of news print for October, 1922, was about 1 per cent of the imports.

The value of the total imports of all grades was about 72 per cent more than for September.

The value of the total exports for October, 1922, was less than the imports by \$7,594,527, and was \$239,138 more than the exports for October, 1921.

As to value, the principal grades exported were paperboard, wrapping, book, tissue and news print.

**Loss of Production**

The idle machine time reported to the Commission for January, 1923, is shown by grade in the attached tabulation.

The number of machines includes only those machines for which idle time was reported during the month. It does not include the machines in 26 mills that were closed down completely for the month.

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

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

The time lost in January, 1922, is given by grades and reasons, for purposes of comparison.

Loss of Production

Month of January, 1923 (with January, 1922 for comparison).

|                         | Lack of orders |        | Repairs |       | Other reasons |        | Total  |        |
|-------------------------|----------------|--------|---------|-------|---------------|--------|--------|--------|
|                         | 1923           | 1922   | 1923    | 1922  | 1923          | 1922   | 1923   | 1922   |
|                         | News print—    |        |         |       |               |        |        |        |
| Number of machines..... | 1              | 12     | 13      | 10    | 10            | 11     | 24     | 31     |
| Total hours idle.....   | 576            | 3,492  | 2,528   | 564   | 1,275         | 1,148  | 4,479  | 5,204  |
| Book Paper—             |                |        |         |       |               |        |        |        |
| Number of machines..... | 21             | 109    | 13      | 12    | 8             | 7      | 42     | 128    |
| Total hours idle.....   | 6,719          | 14,308 | 753     | 965   | 1,064         | 578    | 8,536  | 15,851 |
| Paperboard—             |                |        |         |       |               |        |        |        |
| Number of machines..... | 47             | 177    | 63      | 44    | 73            | 69     | 183    | 396    |
| Total hours idle.....   | 9,601          | 35,940 | 6,819   | 3,640 | 10,387        | 14,667 | 26,807 | 54,247 |
| Wrapping—               |                |        |         |       |               |        |        |        |
| Number of machines..... | 13             | 69     | 22      | 25    | 20            | 23     | 55     | 117    |
| Total hours idle.....   | 4,246          | 9,494  | 1,887   | 2,386 | 5,038         | 3,483  | 11,171 | 15,363 |
| Bag—                    |                |        |         |       |               |        |        |        |
| Number of machines..... | 2              | 21     | 2       | 1     | 3             | 6      | 7      | 28     |
| Total hours idle.....   | 790            | 3,660  | 544     | 117   | 528           | 835    | 1,862  | 4,612  |
| Fine—                   |                |        |         |       |               |        |        |        |
| Number of machines..... | 40             | 90     | 21      | 6     | 27            | 19     | 88     | 115    |
| Total hours idle.....   | 6,354          | 23,326 | 2,520   | 804   | 3,164         | 1,987  | 12,038 | 26,117 |
| Tissue—                 |                |        |         |       |               |        |        |        |
| Number of machines..... | 27             | 38     | 43      | 23    | 10            | 27     | 80     | 88     |
| Total hours idle.....   | 4,457          | 6,164  | 2,497   | 1,499 | 2,275         | 2,436  | 9,229  | 10,099 |
| Hanging—                |                |        |         |       |               |        |        |        |
| Number of machines..... | 0              | 6      | 3       | 1     | 5             | 1      | 8      | 8      |
| Total hours idle.....   | 0              | 2,061  | 1,158   | 15    | 1,131         | 54     | 2,289  | 2,130  |
| Felts and Buildings—    |                |        |         |       |               |        |        |        |
| Number of machines..... | 10             | 22     | 10      | 5     | 7             | 10     | 27     | 37     |
| Total hours idle.....   | 2,508          | 6,284  | 617     | 852   | 1,473         | 2,070  | 4,598  | 9,206  |
| Other Grades—           |                |        |         |       |               |        |        |        |
| Number of machines..... | 17             | 53     | 11      | 8     | 16            | 19     | 44     | 80     |
| Total hours idle.....   | 4,256          | 9,069  | 1,630   | 730   | 2,937         | 2,974  | 8,823  | 12,774 |

Loss of Production for Paperboard 1921-1922

The following tabulation for paperboard and boxboard showing the number of machines, hours operated, hours idle and reasons therefor, is given for the years 1921 and 1922. The number of machines includes only those that operated part time on paperboard or on boxboard. In other words, it does not include machines

in mills which reported grades of paper other than paperboard or boxboard.

The number of machines in mills idle, any entire month, during 1921 or 1922, and reasons therefor, are given in a separate tabulation.

| Month     | Number machines |      | Hours operated |         | Hours idle |         | Lack of orders |         | Repairs |        | Miscellaneous |         | No reason given |         |
|-----------|-----------------|------|----------------|---------|------------|---------|----------------|---------|---------|--------|---------------|---------|-----------------|---------|
|           | 1922            | 1921 | 1922           | 1921    | 1922       | 1921    | 1922           | 1921    | 1922    | 1921   | 1922          | 1921    | 1922            |         |
|           | January         | 222  | 269            | 74,137  | 71,129     | 48,424  | 77,482         | 23,943  | 56,815  | 820    | 3,563         | 15,565  | 9,390           | 8,096   |
| February  | 182             | 271  | 59,253         | 70,794  | 32,467     | 66,132  | 15,374         | 45,071  | 412     | 2,616  | 12,414        | 10,433  | 4,267           | 8,012   |
| March     | 217             | 264  | 83,753         | 80,632  | 50,983     | 78,950  | 31,455         | 58,030  | 2,819   | 3,083  | 4,595         | 3,071   | 12,114          | 14,766  |
| April     | 222             | 268  | 78,554         | 72,135  | 43,442     | 78,756  | 28,316         | 49,484  | 3,876   | 1,100  | 4,168         | 8,489   | 7,082           | 19,683  |
| May       | 194             | 257  | 71,375         | 73,989  | 40,025     | 67,846  | 16,627         | 43,247  | 4,083   | 2,501  | 12,302        | 9,022   | 7,013           | 13,076  |
| June      | 199             | 268  | 80,630         | 82,124  | 33,419     | 73,760  | 13,828         | 48,774  | 5,171   | 1,843  | 8,643         | 10,854  | 5,777           | 12,291  |
| July      | 221             | 255  | 79,883         | 67,040  | 41,857     | 72,183  | 14,085         | 44,237  | 5,864   | 4,808  | 14,315        | 15,953  | 7,599           | 7,185   |
| August    | 213             | 259  | 90,491         | 82,570  | 37,333     | 72,010  | 9,321          | 31,547  | 4,377   | 2,834  | 12,723        | 18,589  | 10,912          | 19,040  |
| September | 185             | 208  | 65,828         | 63,130  | 35,740     | 50,289  | 15,049         | 24,805  | 4,653   | 1,377  | 8,465         | 14,915  | 7,573           | 9,192   |
| October   | 162             | 182  | 62,171         | 64,393  | 30,096     | 40,547  | 8,946          | 21,242  | 3,993   | 3,098  | 12,562        | 6,088   | 4,595           | 10,119  |
| November  | 151             | 205  | 54,190         | 74,284  | 29,103     | 37,323  | 9,426          | 24,275  | 5,374   | 498    | 10,332        | 6,771   | 3,971           | 5,778   |
| December  | 175             | 240  | 61,977         | 81,893  | 34,733     | 55,085  | 8,614          | 35,576  | 7,386   | 3,225  | 13,445        | 8,126   | 5,288           | 8,158   |
| Total     |                 |      | 862,742        | 884,113 | 457,622    | 770,363 | 194,984        | 483,103 | 48,828  | 30,547 | 129,529       | 121,699 | 84,281          | 135,014 |

\* Includes various and mixed reasons.

Machines in Mills Closed Down Completely, any Entire Month, During 1921 or 1922

| Month     | Number machines |      | Lack of orders |         | Repairs |        | Miscellaneous |        | No reason given |        |
|-----------|-----------------|------|----------------|---------|---------|--------|---------------|--------|-----------------|--------|
|           | 1922            | 1921 | 1922           | 1921    | 1922    | 1921   | 1922          | 1921   | 1922            |        |
|           | January         | 14   | 50             | 3,312   | 18,768  | 0      | 4,416         | 552    | 2,208           | 3,864  |
| February  | 22              | 20   | 4,536          | 6,048   | 0       | 504    | 0             | 1,512  | 6,552           | 2,016  |
| March     | 17              | 28   | 3,000          | 12,000  | 0       | 600    | 1,200         | 2,400  | 6,000           | 1,800  |
| April     | 15              | 19   | 2,760          | 8,640   | 0       | 0      | 1,656         | 1,152  | 3,864           | 1,152  |
| May       | 13              | 32   | 2,880          | 8,832   | 576     | 552    | 576           | 2,760  | 3,456           | 5,520  |
| June      | 24              | 36   | 6,336          | 11,520  | 0       | 576    | 1,152         | 4,608  | 6,336           | 4,032  |
| July      | 16              | 35   | 3,864          | 11,040  | 0       | 0      | 3,864         | 3,312  | 552             | 4,968  |
| August    | 24              | 40   | 4,800          | 10,800  | 0       | 1,200  | 6,000         | 8,000  | 3,000           | 3,600  |
| September | 3               | 28   | 0              | 8,280   | 1,104   | 552    | 552           | 2,208  | 0               | 4,416  |
| October   | 9               | 17   | 1,152          | 4,032   | 0       | 0      | 2,304         | 1,152  | 1,728           | 4,032  |
| November  | 11              | 13   | 1,104          | 1,104   | 2,208   | 1,104  | 552           | 4,968  | 2,208           | 0      |
| December  | 9               | 18   | 0              | 4,032   | 0       | 576    | 2,208         | 4,508  | 2,760           | 1,152  |
| Total     |                 |      | 33,744         | 105,096 | 3,888   | 10,080 | 21,216        | 39,188 | 40,320          | 34,896 |

\* Includes various and mixed reasons.

|                            |        |         |        |        |        |        |        |         |
|----------------------------|--------|---------|--------|--------|--------|--------|--------|---------|
| Total No. of Machines..... | 178    | 597     | 201    | 135    | 179    | 192    | 558    | 924     |
| Total hours idle.....      | 39,607 | 113,798 | 20,953 | 11,573 | 29,272 | 30,332 | 89,832 | 155,603 |

## OSWEGATCHIE PULP MILL AT NATURAL DAM BURNED

Fire Causes a Loss of About \$20,000 But Does Not Damage New Structure Which Is Just Being Erected—Loss Is Partially Covered by Insurance—New Mill of Oswegatchie Paper Co. Expected to Be Ready for Operations This Spring—Floyd L. Carlisle Returns to Watertown from Florida—Dr. Kurt Pietsch, Formerly of the Bautzen Paper Co., Germany.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., March 12, 1923.—The wood mill of the Oswegatchie Paper Company at Natural Dam, near Gouverneur, was destroyed by fire Saturday morning, entailing a loss of \$20,000, although there was partial insurance. This building was the only survivor of the fire of June, 1920, when the plant of the Aldrich Paper Company was consumed by flames, and this time the new structure being built adjacent for the main mill of the new company was not damaged.

At about 3 o'clock in the morning the night shift in the main mill discovered flames in the wood mill. They promptly communicated with company officials, and called the Gouverneur fire department, two miles away. The firemen negotiated the drifts and soon had streams pouring on the blaze, and the main plant and nearby residences were saved.

The wood mill was a frame structure with concrete side walls. It housed three rossers, a chipper, a saw, minor machinery, belting and shafting. The firemen put in several hours before the fire was all out, and it was then found necessary to wait for a gang of men to shovel drifts that had accumulated in the meantime before the pumper could be gotten back to the village.

The Oswegatchie Paper Company purchased the Aldrich Paper Company property last August, and at once started the erection of a new paper mill. The wood mill was to be used in connection with the new paper mill. It is expected that the new plant will be ready for operations this spring.

### Floyd L. Carlisle in Watertown

Floyd L. Carlisle, head of the Wall Street brokerage firm bearing his name, president of the St. Regis Paper Company and the Hanna Paper Corporation, also prominent official of the Northern New York Utilities, Inc., the Power Corporation of New York and the Northern New York Trust Company, arrived in the city Thursday morning accompanied by Roy K. Ferguson, of the Wall Street office.

Mr. Carlisle's face showed a fine coat of tan which he acquired beneath the rays of a Southern sun over the golf course at Belleair, Florida, where he has been passing the winter with his family. He just came up to New York and on to this city, and said he would return to Florida next week to remain until about April 1, when he would bring his family to their Long Island home.

The special reason for his visit here at this time was the quarterly meeting of the board of directors of the Northern New York Utilities, Inc., Saturday. At that time dividends amounting to about \$100,000 were declared. The preferred stock dividend rate is 7 per cent and the common stock at the annual rate of 12 per cent.

Mr. Carlisle left Sunday for New York to attend the quarterly meeting of the board of directors of the St. Regis Paper Company scheduled for Monday. He expressed much pleasure over the record production of the Deferiets plant during the month of February and the high daily records made.

### Dr. Pietsch Goes with Knowlton Brothers

Dr. Herr Kurt Frederick Pietsch, a lieutenant with four years'

service in the German army during the World War, where he was awarded the iron cross, arrived in the city Thursday afternoon, and has been given employment in Knowlton Brothers paper mill. While he is a college graduate, a chemist of extended experience and a paper mill worker in Germany, he is starting the business in this country from the bottom. He will learn English as he goes.

The young man reached New York Wednesday on board the steamship Bavaria from Hamburg. He came directly to Watertown to meet Carl Schneider, chemist at Knowlton Brothers, through advance arrangements made through a mutual friend. He expresses a decision to make his home here and to become a citizen of the United States. His original plan was to go to a paper mill in Canada, but the Canadian law would not permit him as a German soldier to enter the country.

Dr. Pietsch's home was in Dresden and his college degree was obtained in the Dresden Polytechnic College. Chemistry was his specialty, and he devoted much of his war service to nitrogen gas manufacture. He later held employment with the Bautzen Paper Company, with mills near his home city. His ultimate plan here is to become a chemist in one of the larger paper mills of this country. It is his first visit to this country.

A conspicuous scar across his cheek is recognized as another mark of distinction for college graduates of Germany. It was obtained in one of the duels he was called upon to fight at college. "The student who never fights a duel is regarded as a coward," said Dr. Pietsch through Mr. Schneider, his interpreter. They do not fight to kill, but to wound. They battle in rounds like our prize fights, a round lasting from five to 15 minutes, depending upon advance articles of agreement. Each combatant often receives facial lacerations, but the wounds are dressed by a physician maintained in the institution for the purpose, and the battle continues to the number of rounds fixed in advance.

In speaking of the Ruhr occupation by the French, Dr. Pietsch expressed a belief that unless some other adjustment is soon made it will lead to armed resistance by Germany. He says that the presence of so many political factions in Germany contributes to a lack of concerted action, but that these conditions are correcting themselves, and a strong party is now in the making. He expressed the belief that the French will meet with ultimate failure in the Ruhr, even though it does not lead to open hostilities.

He is now making his home with Mr. and Mrs. Carl Schneider at 1211 Madison avenue.

### S. A. Upham of Brownville Paper Co. Returns

Samuel A. Upham, head of the Brownville Paper Company, returned last week from about seven weeks passed in Pasadena and Southern California. He took his family with him, although part of the time was passed in calling upon his trade on the Coast. He said he did not know just when the other members of his family would return to Watertown.

### Uncas Paperboard Co. Expanded

NORWICH, Conn., March 12, 1923.—President James E. Smith, of the Uncas Paperboard Company, was here last week and let contracts to double the capacity of the mill, increasing the output from 100 to 200 tons per day. One contract was given to the Pucy & Jones Company, of Wilmington, Del., covering the installation of 30 new dryers to the No. 1 machine. A second contract was let to the Downington Manufacturing Company, of Downington, Pa. This contract covers 25 extra dryers for the No. 2 machine and also five extra vats, together with the full equipment for them.

This mill was only recently purchased by President Smith, who at once started work in getting things into running condition. The equipment was sufficient for the output mentioned when running full, and now Mr. Smith is installing machinery to double this capacity.

## ORDERS IN PHILADELPHIA ARE FAIRLY SATISFACTORY

**In Fine Papers Demand Is Mostly for Small Quantities But in the Aggregate This Business Makes Good Showing—Demand for Coarse Paper Is Somewhat More Active Than It Has Been—Paper Stock Market Continues Without Change—Welsh Paper Co. and Paper Service Co. to Occupy Building at 19 South 7th Street—New Warehouse for Universal Waste Products Co.**

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, March 12, 1923.—Though business conditions of the week in both the fine and coarse paper markets were almost as variable as the weather, the accumulation at the week end of orders made the first full week of March 1 of complete satisfaction to all concerned. Spotty character of the buying with extremes of quiet and of activity apparently without explanation and continuance of a multitude of small orders were the only outstanding features of the week's business. There was no explanation forthcoming why these contrasty conditions of the market should exist and indeed little thought was given to them because at the week end they bulked up financially big enough to cause satisfaction. One of the observations of the cost accountant who recently applied himself particularly to the paper distributing business was that no order amounting to less than about \$7 could be handled with profit if due allowance for all the overhead and other expenses was made. But trade experience as it is employed in many of the houses show that a very large percentage of March business was of orders below that minimum and that these nevertheless were handled at a profit.

All the grades of fine and printing papers moved along easily and quietly with no changes of prices of any moment. The small order buying of printers apparently were not so much of hesitancy because of high prices or possibility of reduction, as to quiet business in the print shops. Trading, however, was of a healthful character and entirely free from any cause for apprehension.

The coarse paper market moved along a bit livelier during last week than during the preceding. Because of restricted shipments from the mills some grades are approaching the point of scarcity. This is particularly the case with screenings. Tissues are very firm in price and in good demand. The wax paper market was strong, orders increasing in number and size because of the approaching Easter-tide. Price concessions of one-quarter to one-half cent were made on some news print lines and were attributed to the competition of the foreign made article. All varieties of roofing paper were inactive because of the large amount of building construction which is under way and which is to start with the opening of spring. Distributors, judging from the attitude of mill representatives, are of the opinion that the paper mills are fairly well stocked up with business because there is no longer in evidence the keenness to secure orders shown some time ago.

### Paper Stock Without Change

The paper stock market continued without change. Packers believe, however, that embargoes and delivery obstacles which prevent large shipments out of the city is responsible. They are of the opinion that just as soon as all the freight roads open up and a greater outlet is afforded, competition to secure supplies will develop strong enough to increase prices. Meanwhile with the outlets restricted there is not yet any evidence of accumulation and such comparatively small amounts of stock are coming in that those in the trade do not believe there will be a glut even though present conditions remained unchanged for a month or more.

### New Jobbing House

Another fine paper jobbing store will be added to the Philadel-

phia list shortly when the Welsh Paper Company and the Paper Service Company, now occupying office space on the third floor of the Carter Building, northwest corner of 7th and Chestnut streets, enters into occupancy of the building at 19 South 7th street. At the present time both companies are carrying stock in this city, but elsewhere than at their offices. When improvements now under way to the South 7th street building are completed at about the end of next month the first floor will be used as a sales store and for the executive offices and the third for the storage of stock. The Welsh Paper Company, at the head of which is W. A. Welsh, carries a general line of bond, ledgers, writings and cardboard, and these are to be supplemented when the larger facilities of the new business home are available. The Paper Service Company, at the head of which is J. W. Welsh, son of the proprietor of the Welsh Company, caters almost exclusively to the paper boxmaker's trade and its line is mainly one of plain glazed and enameled papers for box covers, linings and allied purposes. With a store available, there will be a development along the line of a general jobbing business.

### Universal Waste Products New Warehouse

The Universal Waste Products Company, which virtually has been without a warehouse for several months, although continuing its business with as little interruption as this fact made possible, is about to open premises for assortment of stock and baling in the double front property, at Kater street, near 16th and South streets, under the management of William Biles. The former plant of the concern was one of the largest establishments in the city. It was located at 25th and Callowhill streets, on property which has been condemned by the city for municipal purposes, and so the big structure which the company had completely renovated and had equipped with electrical hoists, baling machines and the like, was doomed. The new home is four stories in height with a frontage of thirty-six feet and a depth of one hundred and twenty running through to Bainbridge street and is of sufficient size to enable the concern as before to grade and pack. The company has continued operations from its Delaware River wharf at Pier 78 South, but has not yet been able to secure a Schuylkill River pier adapted to its purpose of handling large barge shipments and to replace the one which it lost when it was forced to remove. On Thursday of last week the company for the first time in the last month or two has been able to operate uninterruptedly its fleet of barges which carry stock from the New York market and gather it up in South Philadelphia and then swing up the Schuylkill to the plant of the Philadelphia Paper Manufacturing Company at Manayunk. The Universal Company began operations about eight years ago with headquarters at 1508 Filbert street under the Pennsylvania Railroad elevated tracks, the concern at that time handling all the waste of that great traffic system which averaged twenty-five tons per week. In 1920, however, the company itself engaged in the sorting and packing of paper stock under the management of William Sturgeon. Then the Universal Company moved to 25th and Callowhill streets.

### Consolidation of Nashua Gummed Paper Co.'s Offices

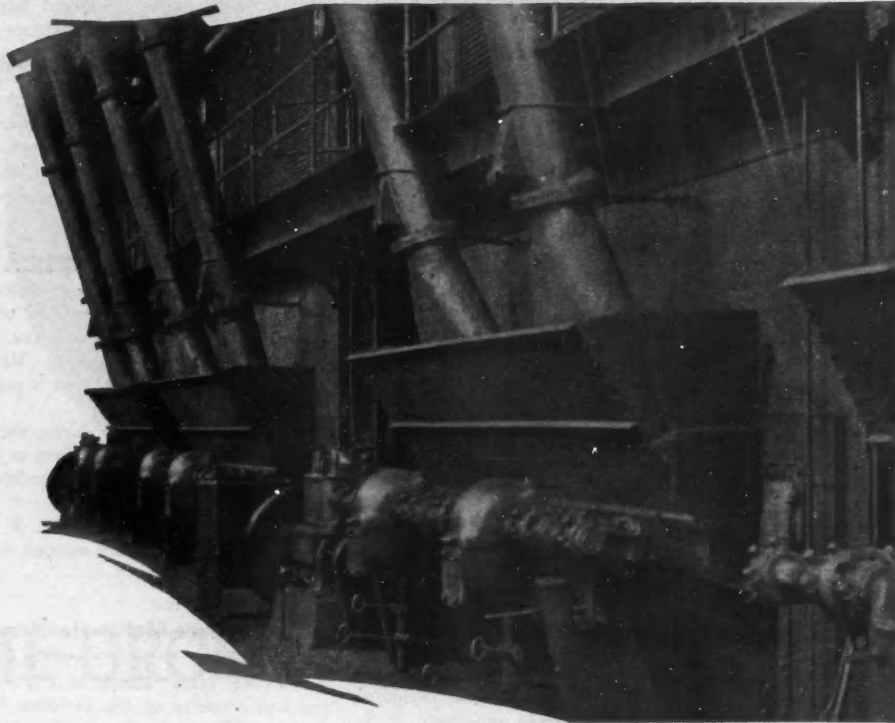
Consolidation has just been effected of the Philadelphia offices of the Nashua Gummed and Coated Paper Company, which formerly maintained two distinct offices in this city. The package sealer division which was located at 112 North Broad street under the management of G. C. Dardner has been discontinued and this division transferred to the management of the Main Paper headquarters, 353 Drexel Building under the management of D. S. McQuesten, who recently was appointed chief of the Philadelphia headquarters, taking the place of Harold D. Stillman who was transferred to the San Francisco offices to a similar capacity. Mr. McQuesten formerly was connected with the mills at Nashua, N. H., and looked after the New York State territory for the firm's line of coated papers and gummed specialties. The Philadelphia headquarters has three divisions, Leo Friedman was ap-

(Continued on page 28)



# Fifteen Repeat Orders from the West Virginia Pulp and Paper Company

54 Boilers—  
32,391 H.P.



**T**HE West Virginia Pulp and Paper Company ordered its first Edge Moor Boiler in 1899.

Fifteen times since then, they have purchased Edge Moor Boilers.

Fifty-four boilers, totalling 32,391 H. P., are installed in four of this great company's plants—15 boilers at Covington, Va.; 20 at Piedmont, W. Va.; 15 at

Mechanicsville, N. Y.; 4 at Tyrone, Pa.

Repeat orders come only when worth has been proved. Some of the most convincing evidence of the *proved* value of Edge Moor Boilers is found in our sales records.

Tell us where to send you a copy of the Edge Moor catalogue.

Edge Moor Boilers in the Tyrone, Pa., Plant of the West Virginia Pulp and Paper Company

**EDGE MOOR IRON COMPANY**

Established 1868

EDGE MOOR, DELAWARE



New York    Charlotte  
Chicago    St. Paul  
Boston    Pittsburgh

# EDGE MOOR Water Tube BOILERS

**FOR INCREASED FUEL ECONOMY**

## ORDERS IN PHILADELPHIA ARE FAIRLY SATISFACTORY

(Continued from page 26)

pointed division manager of the package sealer department, H. E. Rumsey is in charge of the wax paper division and boxmakers' paper, while Mr. McQuesten looks after the coated papers and gummed specialties. Mr. Friedman who takes the place of G. C. Gardner resigned was transferred from the Buffalo headquarters.

### New Secretary of West Jersey Paper Company

The West Jersey Paper Company, Camden, N. J., has elected as its secretary Edward K. Shelmerdine as successor to the late John Chalmers who after service of thirty-eight years as secretary and general manager of the concern, died in January last in his sixty-second year, following an attack of grippe which culminated in heart failure. The mills of the company, of which Thos. S. Safford is president, are located at Front and Elm streets. The concern dates back to 1876 and while its production of rope manillas is but ten tons a day is regarded as one of the leading producers in this line, making high grade rope specialties such as pattern papers and papers for sanding, together with a general line of specialties.

### Larger Warehouse for Huff Paper Company

Larger quarters in the warehouse at Delaware avenue and Green street have just been taken by the Huff Paper Company, whose executive offices are in the Denkla Building, 11th and Market streets, occupying a suite on the fourth floor. With the addition the firm now occupies twenty-five thousand square feet in the warehouse, ten thousand of these consisting of the new floor space. The Huff Company is sole selling agent for Eastern Pennsylvania, Delaware and South Jersey of the products of the Continental Paper and Bag Mills, catering directly to the jobbing trade. It also distributes the No-Leak Paper Dish Company specialties and those produced at the Bush Terminal Branch of the Continental Mills, and consisting of glassines, coffee bags, envelopes and similar goods. As recently re-organized the personnel of the Huff Company consists of T. L. Warren, president; H. L. Adler, treasurer; H. H. Muquemele, secretary and F. P. Hufnal, assistant secretary.

William McAllister, formerly connected with the Huff Paper Company has just been added to the sales force of E. Latimer, Jr., 126 N. Fourth street. John Davis, formerly associated with M. O. Ragiuel, is now office manager. Harry Haeberle, formerly of the sales organization has left for a business trip to Europe on his own account.

### General News of the Philadelphia Trade

On March 15 Sylvester S. Garrett, 3rd and Spruce streets, takes possession of new offices on the first floor, the second having been reached through the adjoining Lawrence Publishing Company. Extensive repairs to the building including installation of steam heating system are being made.

W. E. Piper, manager of sales of the Crystal Tissue Company, Middletown, Ohio, called on the Philadelphia trade during the week.

Simon Walter, head of the S. Walter, Inc., coarse paper and twines, 144 North Fifth street, spent the week in White Sulphur Springs, Va., on a brief vacation and before returning to the city stopped over at some of the Southern mills, looking after new shipments and connections.

President Nobart A. Considine of the Paper House of Pennsylvania, who recently journeyed South on a sudden call to New Orleans, extended his trip as far as Havana, Cuba, returning to the City at the close of last week.

Although definite arrangements have not yet been made chairman Daniel I. Murphy, of the banquet committee of the Paper Stock Dealers' Association, is planning to have its annual func-

tion held at the Manufacturers' Club of which he is a member.

Charles Beck, head of the Beck Machine Company, 606 Chestnut street, leaves for the West this week where he will make the rounds of the paper trade and box manufactories in interest of the Beck paper specialty machines such as cutters, slitters and winders. J. F. Wilhelm, New York State salesman for the Beck Company, returned from that State this week after a tour of the central and Western sections with many good orders for machinery. The Charles Beck Company will be represented at the Indianapolis convention of the National Paper Box Manufacturers in May, where a booth will be erected displaying the various types of machines which the firm specializes on, and for which they are sole patentees.

Charles J. Cohen, head of the Charles J. Cohen Company, envelope manufacturer, Ludlow above 5th street, a member of the executive committee of the Philadelphia Chamber of Commerce, and prominent in civic activities of the Quaker City, has been appointed to the board of directors of the Artists' Week Association, representing the Chamber. Mr. Cohen is a former president of the Commerce Chamber and is president of the Fairmount Park Art Association.

News came to the city during the week of the purchase of the Penn Paper Box Company plant at Reading, Pa., by Over Morning of Pottstown, Pa., from Randolph Stauffer, Charles A. Mills and Raymond Hindell.

The three machines of the R. T. Moorehouse Paper Company, 2665 Bridge street are now running full, two of them on manila and one on wrapper paper.

### Crocker-McElwain Provide for Expansion

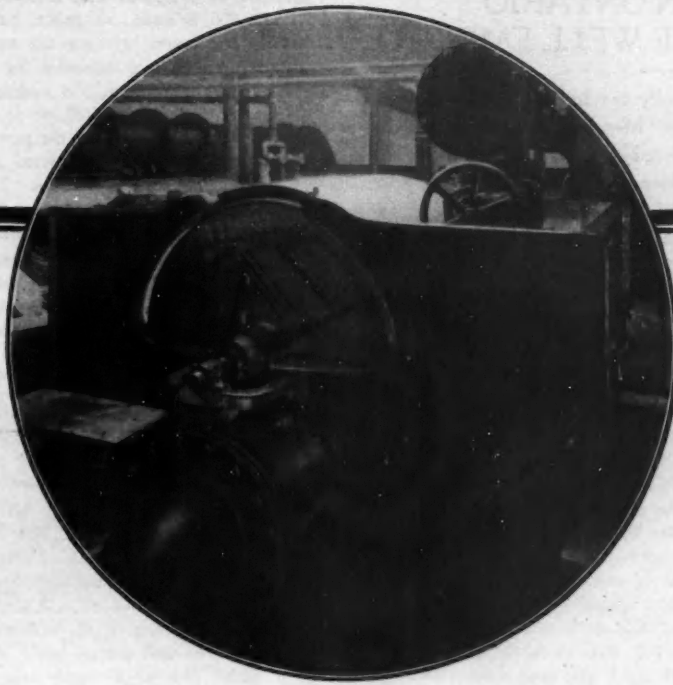
[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 12, 1923.—By the purchase of the building and property of the Holyoke Division of the United States Envelope Company, the Crocker-McElwain interests owning the Chemical Paper Manufacturing Company and the Crocker-McElwain Company have acquired all of the land between the two plants, some 17 acres in all, and their holdings extend from Main street to the river. It is understood in paper circles that the purchase was at an advantageous price and that the space is ample for any future expansion in the present generation. In fact, R. Frank McElwain of the companies intimated that they were not likely to let this land lie unoccupied for an indefinite period.

"Our plans are to use the main part of the envelope building for storage space for the product of the chemical mill," he said, speaking of the intended use of the building. "There is over 70,000 feet of floor space or a space larger than the floor space of the Crocker-McElwain mill. We shall move to this new building the Departments of Maintenance, of Research and of Sales Promotion. Clifton A. Crocker, president of the company, has already moved into new offices in this building, and Sidney S. Rogers and Mr. Holmes have joined him there.

"The space vacated by transferring the finished products of the Chemical Company to the new building will be utilized in part by a storage of raw material and part reserved for future growth of the Chemical Company."

Sidney S. Rogers who has been vice-president and manager of the Chemical Paper Manufacturing Company has been elected a director and vice-president of the Crocker-McElwain Company, and will have general supervision over the merchandising of both companies. Walter E. Perry has been made sales manager of the Chemical Company and H. E. Lindquist manager of the board sales. Gordon Blanchard has been appointed sales manager of the Crocker-McElwain Company.



It pays

**THE ORONO PULP & PAPER CO.**

to use

## **BIRD WATER FILTER**

because it keeps the leaves, grass, sawdust, bark, fish, etc., from entering the mill.

Filtering fresh water results in fewer specks in the paper, longer service from the wires, and less trouble with machinery. The BIRD WATER FILTER can be installed independently or ahead of the sand filters.

**BIRD MACHINE COMPANY**

**SOUTH WALPOLE**

**MASSACHUSETTS**

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T. H. Savory, Jr., 1718 Republic Bldg.  
Chicago, Ill.

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

# **BIRD WATER FILTER**

## PAPER MILLS IN ONTARIO CONTINUE WELL EMPLOYED

**Orders, However, Are Usually for Immediate Requirements—Business With Paper Merchants Not Expanding as Rapidly as Was Expected—Advances Expected Soon on Higher Grades of Book and Writings—Plans Almost Completed for New Mill to Be Erected by the Garden City Paper Mills Co.—Backus-Brooks Co. to Start New Pulp Mill at Kenora Some Time This Month.**

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., March 12, 1923.—Business in the paper line is still rather dull with most paper merchants, and the prospects have not improved as rapidly as expected. Mills are busy, but purchases by customers are limited to immediate requirements. It is expected there will be an advance in the near future on the higher grades of book and writing papers of about ten per cent. The rumor has prevailed for some time, but so far the manufacturers have not taken any action. When it does come, there will be no surprise, as the new prices will be in line with other products. There has been a drop in ground wood prices and the paper mills are said to be pretty well stocked up. Some of them have not storage for any larger quantities than they have on hand at present. All the big paper companies are now operating with reduced inventories and increased working capital. They have written down their raw materials to bed rock in most cases and have begun to build up substantial reserves in other ways.

### New Garden City Paper Mill

It is understood that plans have been brought pretty nearly to a conclusion for the new paper mill, which will be erected at Merritton, by the Garden City Paper Mills Company, whose head office is at St. Catharines. The project has been delayed for some time owing to the illness of L. H. Gardner, president of the company, who is now spending a well-earned holiday in the South. The first machine to be installed will be a 90-inch Harper-Fourdrinier, which will make both wood and stock papers. These will be of the light-weight variety and there will be no duplication in the production of the new lines. It is reported that construction on the new mill will start shortly. The land and water power rights have been purchased for some time and the new machine will be the first unit in the continued expansion of the Garden City Company, which at present turns out toilet and tissue papers, towels, light weight and other specialties which have won a high place for quality.

### Endorse Plan of Reforestation

At the thirteenth annual session of the Chambers of Commerce of Western Ontario, held last week at Brantford, hearty approval was given to the reforestation plan now available through the Ontario government, with seedlings supplied for the reforesting of cut over and waste lands. It was pointed out that these could be turned into assets for the future. A resolution was carried to the effect that county councils in each county should take advantage of the arrangement made possible by the Ontario government in regard to reforestation.

### American Sales Book Co. Had Good Year

The American Sales Book Company, Limited, of which S. J. Moore, of Toronto, is president, had a very favorable year, according to the financial statement. The profits were the largest in the company's history, with the exception of 1920. Added to this excellent showing is the further fact that the company's business so far in 1923 has been most satisfactory, the gross for January and February being twenty-five per cent in excess of the gross for the corresponding period of 1922. The profits for the year 1922 total

\$558,364, as compared with \$515,936 in 1921. The balance forward of \$238,936 is added to profit, but there is deducted an item of \$34,050 for taxes, bringing the total to \$763,251. Appropriations include a substantial allotment for depreciation and for the reduction of patent account. In addition to the regular dividends on preferred, the sum of \$161,348 is paid on account of arrears, as compared with \$107,565 for the previous year. Arrears having been fully met, dividends were initiated on the common stock and \$49,172 was distributed on this account. The balance forward amounts to \$129,244.

### Mattagami is Busier

It is announced at the head office of the Mattagami Pulp and Paper Company, Toronto, whose pulp plant is located at the Smooth Rock Falls, Ont., that the improvement in the paper market in recent months has been of distinct advantage to the company, which has been practically enabled to wipe out its stock of high-priced pulp wood. The market for easy bleaching sulphite, of which the plant has a production of some hundred and fifty tons daily, is developing and no difficulty is anticipated in disposing of the output profitably.

### Kenora Pulp Plant Will Start Soon

The large pulp mill, which has been erected by the Backus-Brooks Company at Kenora, Ont., is almost completed and it is expected to start operations this month. Good progress has been made on construction and equipment and the opening of the mill will mean much to Kenora. About two million dollars have been spent in the building of the mill and plant for power development and excavation will shortly begin for the erection of a large news print mill. The wood supply will be obtained from the English river pulp wood concession, which was awarded to E. K. Backus, of Fort Frances, more than a year ago by the Ontario government.

### Notes and Jottings of the Industry

H. W. Long, formerly with Warwick Bros. & Rutter, Toronto, has joined the sales staff of the Canada Paper Company, Toronto, succeeding the late George Marshall as city representative.

T. H. McDermott, late of the firm of Samuel, McDermott Paper Company, 71 Bay street, Toronto, who have closed their office, has joined the selling staff of Cameron & Fraser, Toronto. Mr. McDermott is widely known in the trade and for many years was local manager of the Lincoln Paper Mills Company, of Merritton.

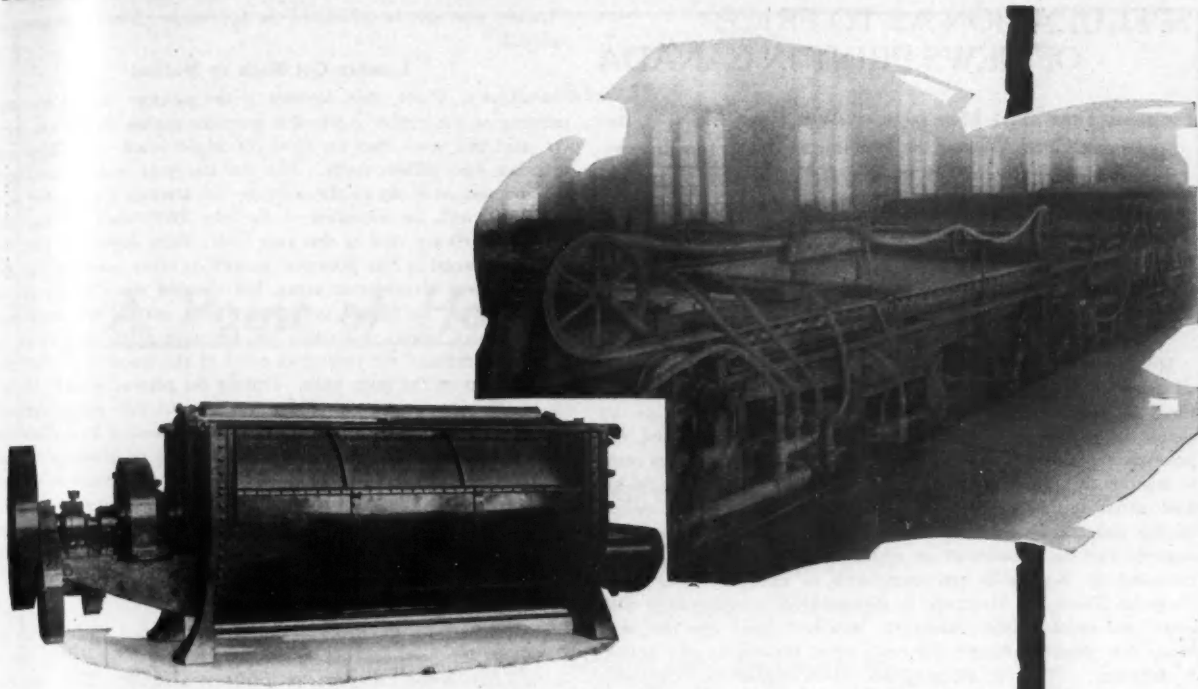
Among the callers on the trade in Toronto during the past week were F. W. Snyder, of the Warren Manufacturing Company, New York; R. H. Anderberg, of Montreal, eastern manager of Paper Sales, Limited, and David F. Robertson, general manager of the Canadian Paperboard Company, Montreal.

George C. Winlow, of Toronto, sales manager of Lincoln Mills, Limited, Merritton, recently gave an interesting address on the making of paper before the salesmanship class of the Toronto Typothetae.

Archibald Annan, formerly managing director of Parsons Trading Company, Limited, Australia, with headquarters at Sydney, was in Toronto during the past week calling upon several paper firms, which he will represent in Australia. A number of Canadian companies are making preparations to develop export business with the Antipodes on a large scale.

The Thompson & Heyland Company, Toronto, intend making contracts for about seventy thousand cords of pulpwood for the coming season and will enter into negotiations with a large number of settlers in Northern Ontario. A considerable quantity of poplar will be purchased, for which there is quite a demand. A shortage exists in this wood at present, which has resulted in prices stiffening.

Several bids were received recently for the assets and equipment of Waxed Paper Products, Toronto, which made an assignment some time ago. The bids were not considered satisfactory and a meeting of the bondholders will be held in a few days to consider what disposition will be made of the property.



## *A P.A.P.A. Rotary Inward-Flow Screen at the Wet End of Your Machine means Better Paper*

Better, cleaner paper, produced at lowered costs is the aim of every far sighted manufacturer. Users of P.A.P.A. rotary inward-flow screens tell us that they are obtaining these results. One manufacturer, whose name we will furnish on request, writes:

As compared with our flat screens the P.A.P.A. makes cleaner stock, requires little attention, is simple and solid and the screen runs evenly and noiselessly. The power consumed is small."

### **The Paper is Screened by Suction**

All shaking and vibration is eliminated and as a result it wears much longer, is noiseless in operation and can be placed directly on the floor without a foundation. It has a large capacity and requires very little attention. You need P. A. P. A. rotary inward-flow paper screens in your mill. Do not fail to get more information regarding them.

## **Valley Iron Works Company**

Plant, Appleton, Wis.  
New York Office, 350 Madison Ave.

### **Write for Booklet**

*We will be glad to send a pamphlet giving more particulars on P.A.P.A. rotary inward-flow screens. Write for it today. Our engineering department is ready on request to show you how P.A.P.A. screens can work to advantage in your mill.*

## SPECULATION AS TO PRICE OF NEWS PRINT IN CANADA

**Financial Times Says Manufacturers Will Profit More by Retaining Good Will of the Publishers Than From Increasing Prices, Because of the Favorable Market Conditions That Prevail at Present—Opening of the New Pulp Mill at Kenora Expected to Furnish New Source of News Print Supply for Western Canada—Lumber Cut Is Reported Back to Normal in the Province of Quebec.**

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., March 12, 1923.—The question as to the price of news print is one that is being much discussed at the present time, the point being as to whether the present level of \$75 per ton should be maintained or whether, in view of the keen demand, the price should be raised to \$80 or even \$85, if market conditions seem to warrant it. Manufacturers generally do not seem to be at all keen about raising the price in view of the experience of price-raising under war conditions and also in view of the fact that capacity for the production of news print is being considerably increased by new mills and extensions to existing mills. The *Financial Times*, of Montreal, in discussing the matter says that a new and rather subtle element has been introduced into the situation, that should influence the news print makers to give pause. It continues: "That is, the good-will of the publishers. The mill men hold this now to an extent probably unequaled before. They may risk it by following temporary market influences. The best interest of the Canadian industry demand that the question as to an increase in price in the near future be determined at least with equal regard to retaining the good-will, confidence and co-operation of the customer publishers, as to the mere technical market condition. Broad-minded and far-sighted as they have shown themselves to be in their faith in this industry the manufacturers are not likely to disregard the significance of the present situation."

### New Paper Supply for the West

A dispatch from Winnipeg states that the opening of the Backus-Brooks pulp mill at Kenora, 100 miles east of Winnipeg, is regarded as having a distinct significance for Western Canada because it is the nucleus of the plant that will represent a new source of supply of news print, more accessible than any other establishment now serving western consumers which gives promise of proportionately lower freight bills. At the back door of the Kenora mill lies pulpwood in abundance which can be floated in at the minimum of expense, while Western Canada will open up a market which is bound to expand to great proportions. The resources of timber in the immediately accessible hinterlands of the Lake of the Woods should be sufficient to sustain the mill indefinitely. It is planned to install a 100 ton paper machine this summer which is expected to turn out news print by December of this year.

### Terrible Toll of Forest Fires

Introducing in the Federal Parliament his resolution for Federal and Provincial co-operation for forest preservation, Pius Michaud, of Ricardo, Restigouche-Yamaska, declared that Canada had suffered in 1922 by more than 4,000 forest fires, resulting in loss of timber sufficient to cover a belt one mile wide from Halifax to Winnipeg. Added to the ravage of fire, he said, was that of pests. In the last ten years the spruce bud worm alone had caused a total loss in Quebec of 100,000,000 cords of pulpwood, and in New Brunswick, of 50,000,000 cords. Mr. Michaud's plea was furthered by T. W. Caldwell (Victoria-Carleton), who said that the forests of his Province had suffered vastly more from fire than from the woodman's axe. That greatest effort at present should be towards prevention of forest fires, was the contention of Hon. Charles

Stewart, who said he welcomed the resolution. The resolution was adopted.

### Lumber Cut Back to Normal

Gustave C. Piche, chief forester of the province of Quebec, commenting on the lumber cut in this province during the present winter, said this week that the total cut would reach one billion feet or about two million cords. The cut this year was normal, said he, and measured up to the average cut attained during the past ten years, with the exception of the year 1922, when the cut was only about 60 per cent of this year. Mr. Piche explained that the cutting of wood in this province, as well as other parts of Canada, which possess large forest areas, has changed considerably in the past 20 years. In former years the greater part of the wood was cut into sawn lumber, but today and for some years past, owing to the urgent demand for pulpwood, most of the wood is cut for the requirements of the pulp mills. During the present winter, for instance, 65 per cent of the billion feet are cut into pulpwood and about 25 per cent into sawn lumber. The remaining 10 per cent is made up of railway ties, shingles, telegraph and telephone poles and the like. Touching upon the protection and conservation of our forest areas, Mr. Piche emphasized the need of taking every precaution necessary to prevent the recurrence of the disastrous forest fires which swept through the most valuable limits of this province last year.

### Kenogami Dam Contract

The contract for the dams on the Chicoutimi and Sable rivers at Kenogami, has been granted by the provincial Cabinet to the Nova Scotia Construction Company, at a cost of \$985,682. This was the lowest tender. There was a difference of nearly \$500,000 between the successful tenderer's price and the next highest bidder. Work is to start at once.

### Belgo Paper Company Adds to Output

Following closely upon the starting up of the St. Lawrence Paper Mills at Three Rivers, a new machine of the Belgo Paper Company, at Shawinigan Falls is now in operation. On the second day it produced 59½ tons of news print out of a capacity, when tuned up, of about 75 tons. The machine was constructed by Chas. Walmsley & Co., and some of the parts by the Dominion Engineering Works. The normal speed of this machine is 750 feet per minute. This new machine will bring the production of the Belgo Company up close to 200 tons per day.

### Bathurst Co. Appeals Court Ruling

The Bathurst Company, Limited, pulp and paper manufacturer, of Bathurst, N. B., has lost its appeal to the New Brunswick Supreme Court on the levy of the New Brunswick Workman's Compensation Board. The board levied \$30,000 against the company. Agnes MacLean, the president of the Bathurst Company, Limited, refused to pay this sum, stating that the Board was too extravagant, and that most of the money levied on manufacturers went for paying salaries and traveling expenses of the board rather than to compensation for injured workmen and workwomen. The Bathurst Company, Limited, is expected to take further appeal to the Supreme Court of Canada, and, if necessary, to the Privy Council.

### St. Lawrence Paper Mills

A special general meeting of the shareholders of the St. Lawrence Paper Mills, Limited, has been called for the purpose of passing upon a proposal to issue an additional 15,000 shares of 8 per cent cumulative participating preferred stock. A further proposal is that the company shall carry on business with a capital of \$2,700,000 instead of the \$1,200,000 stated in the Letters Patent of the company. This is the company which took over the Three Rivers pulp and Paper Company, Ltd., N. A. Timmins being the president. The latter states that one of the paper machines is in operation, and the other is expected to be before the end of March.

Established 1886

## A Point of Honor

*A CONTRACT with this company is more than a signed instrument—it is a guarantee that both the spirit and the letter of our agreements will be complied with.*

*In a word, we believe that financial resources alone are not adequate; they must be backed by high moral responsibility and an intimate knowledge of all problems involved.*

*This business creed has been safe-guarding the interests of our customers for more than thirty-five years.*

## **M. GOTTESMAN & COMPANY**

—INCORPORATED—

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

*European Offices:  
Stureplan 13,  
Stockholm, Sweden.*

## Recent Incorporations

**NASSAU STATIONERY COMPANY**, Manhattan, New York. Capital, \$10,000. Incorporators: B. and S. and M. Benjamin. Attorneys, Roeder & Rud, 39 Church street, New York.

**SUNBEAM FOLDING BOX COMPANY**, Manhattan, New York. Capital, \$9,000. Incorporators: M. Barshop, H. Horowitz, M. Marger. Attorney, M. Sheinart, 305 Broadway, New York.

**WILLIAMANTIC RIVER PAPER COMPANY**, South Coventry, Connecticut, incorporated in Delaware to manufacture paper. Capital, \$325,000. Charles E. Clute, president; John M. Bell, vice-president and assistant secretary; Eugene W. Latimer, secretary, and Louis A. Kingsbury, treasurer.

**GRODE & WASH PAPER COMPANY**, Nekeosa, Wisconsin. Capital, \$15,000. F. X. Grode, president; C. E. Treleven, vice-president; J. P. Nash, secretary-treasurer.

**THE CENTENNIAL MILLS COMPANY, INC.**, Valatie, Columbia county, New York, to manufacture paper and products. Capital, \$25,000. Directors: J. G. Snyder and Althea Miller, of New York, and P. L. Houston, of Valatie.

**MOYER & PRATT**, Lyons Falls, New York, make paper. Capital, \$250,000. Incorporators: C. W. Pratt, J. W. and O. E. Moyer. Attorneys, Miller & Hubbell, Utica.

### Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 14, 1923.—The purchasing officer of the Government Printing Office will open bids on March 21 for the following:

35,700 pounds (350 reams) 21 x 31—102 Colored Bristol Board; 85,000 pounds 22½ x 28—100 Colored Bristol Board.

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

37,810 pounds 22½ x 28—181 and 120 White Index Bristol Board, the Whitaker Paper Company, \$26 and \$14; Old Dominion Paper Company, \$2,399 and \$1,300; Dobler & Mudge, \$105; R. P. Andrews Paper Company, \$219 and \$1,097; the Broderick Paper Company, \$105; Carter Rice & Co. Corporation, \$23 and \$1,125; H. P. Andrews Paper Company, \$145.

500 pounds 26 x 38—News Board: Philip Rudolph & Son, Inc., \$80.00; Dobler & Mudge, \$80.00; Mathers-Lamm Paper Company, \$70.00; R. P. Andrews Paper Company, \$107.60.

20,000 pounds 34 x 44—Trunk Board, No. 10: C. B. Hewitt & Bros., Inc., \$86.00; Kerr Paper Mill Company, \$86.00; Ingalls & Co., \$78.00; the Broderick Paper Company, \$89.50; the Republic Bag and Paper Company, \$99.80; Philip Rudolph & Son, Inc., \$95.00; Dobler & Mudge, \$90.00; Mathers-Lamm Paper Company, \$85.95; R. P. Andrews Paper Company, \$91.00.

50,000 pounds 26 x 38—Chip Board, No. 50: Denison-Pratt Paper Company, \$63.00; the Broderick Paper Company, \$61.00; the Whitaker Paper Company, \$60.75; Philip Rudolph & Son, Inc., \$62.50; Dobler & Mudge, \$60.00; Mathers-Lamm Paper Company \$53.72; R. P. Andrews Paper Company, \$61.10; Manhattan Paper Company, Inc., \$62.50.

60,000 pounds Binders Board, No. 2, 25 x 30: Denison-Pratt Paper Company, \$83.00; C. B. Hewitt & Bros., Inc., \$86.00; Kerr Paper Mill Company, \$86.00; Ingalls & Co., \$78.00; the Broderick Paper Company, \$84.25; the Republic Bag and Paper Company, \$87.50; Philip Rudolph & Son, Inc., \$82.50; Dobler & Mudge, \$85.00; Mathers-Lamm Paper Company, \$85.95; R. P. Andrews Paper Company, \$86.00.

The Government Printing Office will receive bids on March 23 for 36,000 lbs. (300 reams) of No. 1, 22½ x 28½—120 White Bristol Board. Bids will be opened on the same day for 3,452 lbs. of Safety Writing Paper.

The R. P. Andrews Paper Company has been awarded the con-

tract for furnishing the Government Printing Office with 15 reams of 36 x 36 drab cloth lined Cover Paper, at \$206 per thousand, bids for which were opened on February 23. Dobler & Mudge will furnish 42,435 pounds (645 reams) of various sizes white ledger paper at \$.275 per pound. The Broderick Paper Company will furnish 2,050 pounds of 22 x 28 gray photo mount board at \$12.10 per 100, and the Whitaker Paper Company will furnish 1,030 pounds of the same at \$6.534 per pound. Bids for these items were opened on February 26.

### News of the Chicago Trade

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, March 12, 1923.—Book papers are in greatest demand. All grades and weights are being purchased for immediate and future delivery. Ledgers and other fine papers are likewise receiving the attention of the consuming public. The annual moving season is rapidly approaching.

Wrapping and other coarse papers are in demand. A healthy manufacturing and retail condition necessitates an increased use of wrapping and other papers suitable for shipping purposes.

Old paper stock continues at the pace established early in February. Paper stock merchants are busy, but there is not the fevered scramble for old paper coincident with an active demand.

Railroad transportation has improved a trifle, but shipments from the East are still reaching this market behind schedule.

Prices generally are unchanged and firm. Some of the local merchants are attempting to clean up their broken stocks and are offering concessions on a miscellaneous assortment of papers in limited quantities.

Members of the Prepared Roofing Association will meet in convention at the Congress Hotel, this city, during the coming week.

Stewart Waring, president of the Great Lakes Wall Paper Mills, gave an address on wall paper with a motion picture reel and slides to illustrate his talk last Sunday before the Association of Arts and Industries at the Art Institute.

J. T. Hillyer has been appointed manager of the Chicago Division of the Whitaker Paper Company. In making this announcement the company says: "To the trade and the mills of this important industrial section Mr. Hillyer needs no introduction. His long experience and knowledge of the general paper business is equaled only by his intimate understanding of the requirements of this market. Through him we hope to make the Whitaker and Eagle-A Standard Qualities and the Whitaker Standard Service both from our warehouses and from our mills increasingly responsive to your needs."

### Dryden Board Changes

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., March 12, 1923.—After a meeting of the board of directors of Dryden Paper, it was announced that F. A. Sabbaton, of the Laurentide Company, had been appointed vice-president and managing director, replacing J. B. Beveridge, resigned, and George Chahoon, Jr., elected to the board to fill the vacancy. The board is now composed as follows: W. A. Black, president; F. A. Sabbaton, vice-president and managing director; J. H. A. Acer, Russell Bell, Geo. Chahoon, Jr., J. N. Greenshields, K. C., D. McLachlan, F. Perry, Hon. Lorne Webster.

### Eaton-Dikeman Co. Provides for Expansion

[FROM OUR REGULAR CORRESPONDENT.]

LEE, Mass., March 14, 1923.—The Eaton-Dikeman Company has just bought the Daley stable property, just south of its Housatonic mill here, comprising something less than an acre of land with buildings. The company is not ready to make any announcement as to its plans, but it is understood that eventually mill buildings will be erected on the land bought. For the present the stables will continue to be operated.



FOR QUALITY PAPERS  
USE

# A-1 Bleached Sulphite Pulp

MANUFACTURED BY

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

SOLE AGENTS FOR U. S.

## J. Andersen & Co.

21 East 40th Street

New York, N. Y.

# WAYAGAMACK

## KRAFT PULP

*Uniform in Quality*  
*Essential for Strength Requirement*

### The Pulp and Paper Trading Company

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

*Sole Agents for United States for*

**CANADIAN KRAFT, Ltd.**

**Three Rivers, CANADA**

## New York Trade Jottings

R. S. Kellogg, secretary of the News Print Service Bureau, of 342 Madison avenue, New York, returned to the city Tuesday of this week after a business trip to Washington.

Thomas W. Ross, president of the U. S. Pulp Producers' Association will address the Association's First Annual Meeting on Tuesday, April 10, Waldorf Astoria, on the subject of "Pulp Conditions in South America."

According to C. A. Bräutlecht, professor of chemistry of the University of Maine, at Orono, Me., that institution will be represented at the Paper Industries Exposition to be held at Grand Central Palace, New York, during the week of April 9.

O. M. Porter, secretary of the U. S. Pulp Producers' Association, spoke last week before the meeting of the Conservation Committee of the New York City Federation of Women's Clubs on the "Place of Forestry in the General Conservation Movement, Particularly as Applied to the Paper Industry."

A petition in bankruptcy has been listed against the Alexander-Holden Company, Inc., of 111 Hudson street, New York, by E. O. Dorman for \$919, Paper Corporation, \$523, and Drayage Corporation, \$92. The petition states the corporation has admitted its inability to pay its debts, but liabilities and assets are not given.

R. F. Hammond, Inc., of 342 Madison avenue, New York, have just taken over the exclusive selling agency for the Scottsville Paper Box Board Corporation of Scottsville, N. Y. The products manufactured by the Scottsville Company are double and single lined, Manila and solid Manila boards, also board specialties. The plant started full operation this week after a shut down of several months.

The New York Division of the Salesmen's Association of the Paper Industry held its Mill Executives' Luncheon at the Yale Club, New York, on Wednesday of this week. Approximately seventy-five mill executives and salesmen were in attendance. Besides W. J. Raybold, of the B. D. Rising Paper Company, Housatonic, Mass., and president of the American Paper and Pulp Association, Dr. Hugh P. Baker, executive-secretary of the Association and several prominent mill executives spoke.

W. G. MacNaughton, secretary of the Technical Association of the Pulp and Paper Industry, last week turned over to a *PAPER TRADE JOURNAL* representative the current issue of "Bollettino Della R. Stazione Sperimentale per L'Industria Della Carta e Lo Studio Delle Fibre Tessili Vegetali," of Milan, Italy. He pointed with something akin to pride to a passage which stated in part: "T. A. P. P. L., correzioni rese necessarie dato il tipo de pasta differente di quella al solito." Well, who wouldn't be proud?

The offices of the Ajax Paper Mills, Inc., tissue manufacturers, the Franklin Coated Paper Company, coated paper manufacturer, and Unity Paper Mills, Inc., sulphite bond manufacturer have been moved to 110 East 42nd street in the Bowery Savings Bank Building, opposite the Grand Central Terminal. A. R. Melker, who has been identified with the paper business for the last twelve years, has been appointed the direct sales representative for the eastern territory. The new telephone numbers are Vanderbilt 6686-87.

Richards & Geier, patent and trade-mark attorneys, of 277 Broadway, N. Y., have recently issued the Second Edition of "Patents,"

covering Law and Practice, and the Third Edition of "Trade-Marks," including Trade-Names and Unfair Competition. These booklets should prove of undoubted interest to paper men as they contain all manner of information concerning patents and trade marks. Richards & Geier now have pending in their office a number of litigations in which paper trade marks are involved and will send copies of the above booklets to anyone interested.

Ellwood Wilson, of the Laurentide Company, will address the Woodlands Section of the American Paper and Pulp Association on Wednesday, April 11, on the "Use of Aeroplanes in Fire Control and Timber Mapping and Reconnaissance. At this meeting the Holt Caterpillar Tractor Company will present a motion picture illustrating the use of its tractors in the paper industry. The *piece de resistance* of the meeting, according to O. M. Porter, secretary of the Woodlands Section, will be papers and discussions upon "Pulpwood Decay as Affecting Pulp Producers of the United States," "The Hardwood Problem of Coniferous Pulpwood Stands," "Weighing Wood in the Manufacture of Pulp" and "Fundamental Forestry Education."

### Boston Paper Trade Association Meeting

BOSTON, Mass., March 14, 1923.—Boston paper men are making all plans to attend the annual meeting of the Boston Paper Trade Association, to be held at the Algonquin Club, Boston, March 21.

The speaker of the evening will be the Hon. W. W. Lufkin, collector of the port of Boston. Notices were mailed the past week by Joseph D. Snell, of the Von Olker-Snell Paper Company, Boston, who is secretary. Applications for membership in the association which will be acted on are those of W. J. Barnes, of the Warren Manufacturing Company, proposed by Joseph D. Snell, and William L. Bigley, of Casey, Bigley & Company, proposed by Thomas H. Casey. The Boston paper merchants interested in daylight saving are urged by Secretary Snell to write their Massachusetts Senator and Representative at once.

An interesting meeting of paper jobbers was held last Thursday evening at the City Club, Boston, the event being the March assembly of the New England Paper Merchants' Association, of which Joseph D. Snell is president. Matters of importance to the paper trade were discussed.

### Dudley Paper Co.'s Salesmen Meet

LANSING, Mich., March 12, 1923.—Sales representatives of the Dudley Paper Company, held a convention Friday and Saturday of last week. General sales were reported good, with future prospects exceptionally bright. Among the outside speakers were: L. J. Epley, assistant advertising manager of the Hammermill Paper Company; Merle Davis, sales representative of the same concern; J. E. Berry, Atlantic Bottle Company; H. W. Steinbrecher, Oval Wood Dish Corporation and W. A. Wrase.

### Dumping of Wrapping Paper

WASHINGTON, D. C., March 7, 1923.—The Customs Service of the Treasury Department has been investigating the dumping of kraft wrapping paper on the American market from Scandinavian countries for some months. While no official order has yet been issued, it is understood that dumping has been found and unless something should develop in the meantime an official announcement will be issued in the near future.

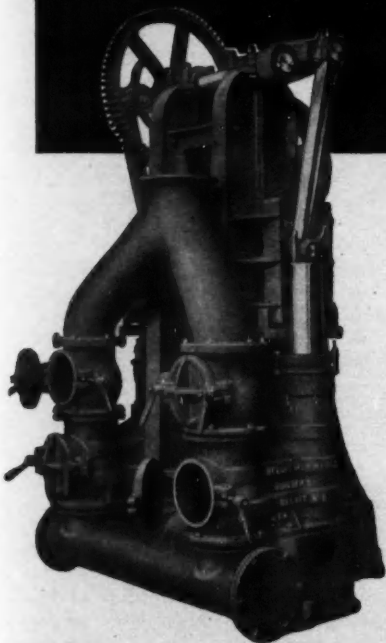
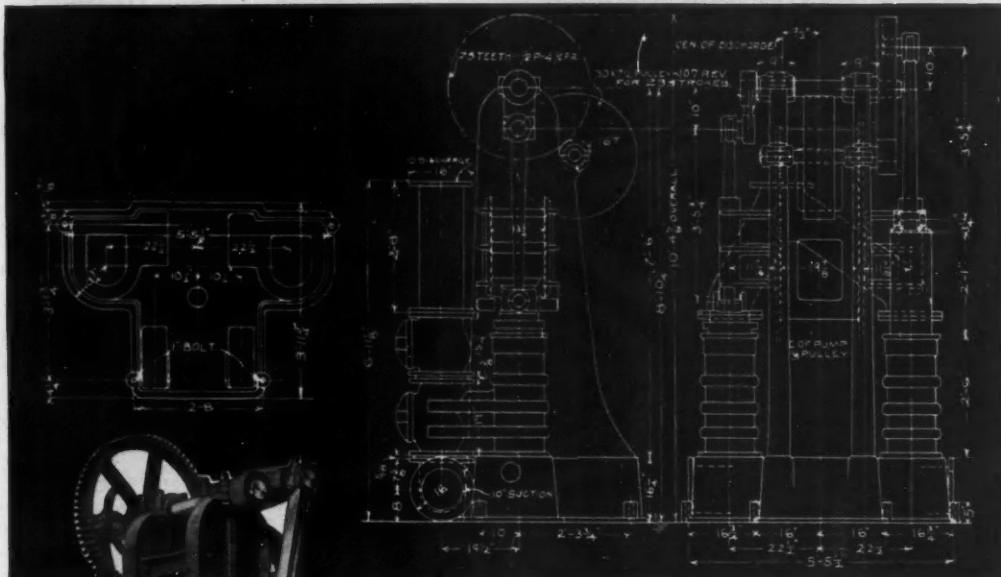
### Stevens & Thompson Start New Machine

WALLOOMSAC, N. Y., March 12, 1923.—Stevens & Thompson Paper Company, Walloomsac, N. Y., has started in operation its five-cylinder machine on high-grade boards.



# Beloit Heavy-Duty Duplex Stuff Pump

Long Stroke



**T**HE ILLUSTRATION at the left shows the popular **BELOIT No. 178 Pump**, built for heavy duty. Made in sizes, 8"x20" and 10"x20". Plungers, ball valves and seats are of bronze; crank pin bearings are bronze bushed. Equipped with self-oiling guides. Has hinged hand-hole plates through which both balls and seats may be inserted. Guides are adjustable to wear. Furnished with or without suction and discharge pipes. Blueprint diagrams above show various dimensions.

Send us your specifications.

*Sizes and Weights*

| SIZE  | NET WEIGHT | WEIGHT BOXED | CODE WORD |
|---|------------|--------------|-----------|
| 8"x20" Suction and Discharge connected .....  | 6,500 lbs. | 8,300 lbs.   | Adopt     |
| 8"x20" Suction and Discharge not connected..  | 5,600 lbs. | 7,150 lbs.   | Adore     |
| 8"x20" Suction connected only .....           | 6,125 lbs. | 7,825 lbs.   | Adrift    |
| 8"x20" Discharge connected only .....         | 5,975 lbs. | 7,625 lbs.   | Adroit    |
| 10"x20" Suction and discharge connected ..... | 8,300 lbs. | 10,600 lbs.  | Adgers    |
| 10"x20" Suction and discharge not connected.. | 7,200 lbs. | 9,500 lbs.   | Adobe     |
| 10"x20" Suction connected only .....          | 7,850 lbs. | 10,150 lbs.  | Adolphus  |
| 10"x20" Discharge connected only .....        | 7,650 lbs. | 9,950 lbs.   | Adonis    |

**Beloit Iron Works**



**Beloit, Wis., U. S. A.**

## PROGRAM FOR "PAPER WEEK"

The following is the tentative program to date for "Paper Week" in New York, during the week of April 9, just given out by the American Paper and Pulp Association:

| MONDAY, APRIL 9                         |                        |                                    |
|---|------------------------|------------------------------------|
| NAME                                    | ROOM                   | TIME                               |
| Morning                                 |                        |                                    |
| Technical Association                   | 107, 109, 110          | 10:00 A. M.                        |
| Afternoon                               |                        |                                    |
| Book Paper Manufacturers' Association   | East                   | 2:00 P. M.                         |
| Papermakers' Advertising Club           | 112                    | 12:30 P. M.                        |
| Technical Association                   | 107, 109, 110          | 2:00 P. M.                         |
| TUESDAY, APRIL 10                       |                        |                                    |
| Morning                                 |                        |                                    |
| Cost Association                        | 115                    | 10:00 A. M.                        |
| Gummed Paper Manufacturers' Association | 107                    | 10:00 A. M.                        |
| Salesmen's Association                  | East                   | 10:00 A. M.                        |
| Technical Association                   | Myrtle                 | 10:00 A. M.                        |
| Tissue Paper Manufacturers' Association | 110                    | 10:00 A. M.                        |
| Afternoon                               |                        |                                    |
| Cost Association                        | 115                    | 2:00 P. M.                         |
| Cover Paper Manufacturers' Association  | 110                    | 2:00 P. M.                         |
| Gummed Paper Manufacturers' Association | 107                    | 2:00 P. M.                         |
| Salesmen's Association                  |                        | Attend Paper Industries Exposition |
| Technical Association                   | Myrtle                 | 2:00 P. M.                         |
| U. S. Pulp Producers' Association       | 112                    | 1:00 P. M.                         |
| Vegetable Parchment Mfrs. Association   | 109                    | 2:00 P. M.                         |
| Evening                                 |                        |                                    |
| Salesmen's Association Banquet          | Roof Garden            | 7:00 P. M.                         |
| WEDNESDAY, APRIL 11                     |                        |                                    |
| Morning                                 |                        |                                    |
| Card Board Paper Mfrs. Association      | 107                    | 10:00 A. M.                        |
| Technical Association                   | Myrtle                 | 10:00 A. M.                        |
| Technical Association                   | 109 and 110            | 10:00 A. M.                        |
| Waxed Paper Mfrs. Association           | McAlpin Hotel          | 10:00 A. M.                        |
| Woodlands Section                       | 115                    | 10:00 A. M.                        |
| Wrapping Paper Mfrs. Service Bureau     | Tea Lounge—Roof Garden | 10:00 A. M.                        |
| Writing Paper Mfrs. Association         | East Room              | 10:00 A. M.                        |
| Afternoon                               |                        |                                    |
| Glazed & Fancy Paper Mfrs. Association  | 107                    | 1:30 P. M.                         |
| Technical Association                   | Myrtle                 | 2:00 P. M.                         |
| Technical Association                   | 109 and 110            | 2:00 P. M.                         |
| Waxed Paper Mfrs. Association           | Luncheon McAlpin       | 1:00 P. M.                         |
| Wrapping Paper Mfrs. Service Bureau     | Tea Lounge—Roof Garden | 2:00 P. M.                         |
| Writing Paper Mfrs. Association         | Luncheon—112           | 1:00 P. M.                         |

| THURSDAY, APRIL 12                |                         |  |
|-----------------------------------|-------------------------|--|
|                                   |                         |  |
| Writing Paper Mfrs. Association   | East Room               | 2:00 P. M.                             |
| Morning                           |                         |  |
| American Paper & Pulp Association | Astor Gallery           | 10:30 A. M.                            |
| Afternoon                         |                         |  |
| American Paper & Pulp Association |                         | Attend Paper Industries Exposition     |
| Binders Board Mfrs. Association   | 112                     | 1:00 P. M.                             |
| Technical Association             |                         | Program at Paper Industries Exposition |
| Evening                           |                         |  |
| American Paper & Pulp Association | Banquet—Grand Ball Room | 7:00 P. M.                             |
| Headquarters, Cost Association    | Room 106                |  |
| Headquarters, Information Service | Room 151                |  |

### J. E. A. Dubuc Retires

The resignation of J. E. A. Dubuc from the committee of management and the Board of the Ha! Ha! Bay Sulphite Company, and also from the board of the Saguenay Pulp and Paper Company, owing to ill-health, removes the most outstanding figure among the French-Canadians in connection with the pulp and paper industry of the Province of Quebec. Mr. Dubuc had been connected with the Chicoutimi Pulp Company for 22 years. In that time, the mills of this company, situated on the Saguenay River, gradually developed until at the present time, with an output of 110,000 tons of groundwood pulp, they rank as the largest in the world.

Mr. Dubuc came into prominence in the pulp and paper industry through the North American Pulp and Paper Companies' Trust which combined the Chicoutimi Pulp Company; Saguenay Light and Power Company, Roberval-Saguenay Railway Company, Chicoutimi Port Company, St. Lawrence Pulp and Lumber Corporation, and others. The activities of Mr. Dubuc included news print manufacture in the Tidewater Mills in the United States, but these were disposed of to the *New York Times* several years ago, and the latter recently sold them to the Tidewater Paper Mills Sales Corporation.

On leaving the Saguenay, it is understood Mr. Dubuc will take an extended holiday in France.

### Dr. Baker at Forestry Hearing

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 14, 1923.—Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, appeared last week at the initial hearing on the forestry question before the special Senate committee appointed to study forestry under the Harrison resolution.

Dr. Baker told the committee that the paper industry of the United States is vitally interested in the forests of the country, because of its dependence upon the forests for its supply of raw materials. He said that because of the depletion of the forests in certain localities, the paper industry is paying a very high freight rate on lumber.

He said, however, that the industry is turning very rapidly to reforestation.

Secretary of Agriculture made a complete statement on the problems which face the establishment of a national forest policy.

hardly fail to note the results which follow the use of Vacuum Oil Company products and the technical service that accompanies them.

As a direct step toward your securing these results, we shall be glad to make a Lubrication Audit of your plant. Details of this service below.

## The Lubrication Audit

Explained Step by Step in Condensed Outline

**INSPECTION:** A thoroughly experienced Vacuum Oil Company representative in co-operation with your plant engineer or superintendent makes a careful survey and record of your mechanical equipment and operating conditions.

**RECOMMENDATIONS:**

We later specify, in a written report, the correct oil and correct application of the oil for the efficient and economical operation of each engine and machine.

This report is based on:—

- (1) The inspection of the machines in your plant.
- (2) Your operating conditions.
- (3) Our 57 years of lubricating experience with all types of mechanical equipment under all kinds of operating conditions throughout the world.
- (4) Our outstanding experience in manufacturing oils for every lubricating need.

**CHECKING:** Following the installation of our oils, periodical calls will be made.

FOR THE ABOVE FREE SERVICE address our nearest branch office.

**Domestic Branches:**

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|------------------------|---------------|-------------------|--------------|
| New York (Main Office) | Boston        | Chicago           | Philadelphia |
| Detroit                | Pittsburgh    | Indianapolis      | Minneapolis  |
| Des Moines             | Buffalo       | Milwaukee         | Albany       |
|                        | Dallas        | Rochester         |              |
|                        | Oklahoma City | Kansas City, Kan. |              |



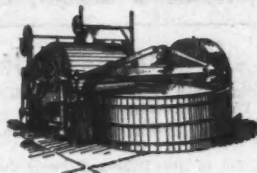
# Lubricating Oils

*A grade for each type of service*

## VACUUM OIL COMPANY

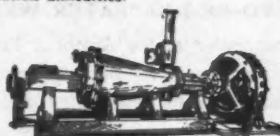
### A Lubrication Audit in the Paper Industry

would point out the Correct Lubrication for the important machines as follows:



#### Beaters

Beater bearings, generally unnecessarily hot, will run cooler if the stock leakage is eliminated and oiling is regularly attended to. The regular use of Gargoyles D. T. E. Oil Extra Heavy overcomes beater lubrication difficulties.



#### Jordans

Because of the high speeds and heavy pressures which are always present, and the side pull on bearings when belt driven, it is necessary to use a heavy bodied oil. For this purpose we recommend Gargoyles D. T. E. Oil Extra Heavy.

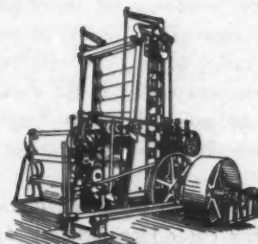
#### Paper Machines



For bearings of the paper machine, subjected to induced heat from steam used for drying, an extra heavy bodied oil is required such as Gargoyles

#### D. T. E. Oil Extra Heavy.

The rolls at the wet end subjected to moisture and heavy pressure demand a compounded oil which will resist the washing tendency and maintain a perfect oil film. We recommend Gargoyles Voco Engine Oil No. 1 for these specially trying conditions.



#### Calenders

Paper machine production is directly dependent upon uniform speed. Calender bearings are subjected to heavy pressures and high frictional heat. The regular application of Gargoyles D. T. E. Oil Extra Heavy insures uniform speed, and consequently minimizes "broke."

# Editorial

Vol. LXXVI New York, March 15, 1923 No. 11

HENRY J. BERGER, Editor

## COMING EVENTS

American Paper and Pulp Association, Convention and Meeting of Affiliated Associations, Waldorf-Astoria, April 9-13.

National Paper Trade Association, Convention, Waldorf-Astoria, April 10-12.

Technical Association of the Pulp and Paper Industry, Convention, Waldorf-Astoria, April 9-13.

Salesmen's Association of the Paper Industry, Convention, Waldorf-Astoria, April 9-12.

Paper Industries Exposition, Grand Central Palace, April 9-14.

National Association of Waste Material Dealers, Annual Meeting and Tenth Anniversary Banquet, Hotel Astor, March 21.

## TO BE BIG "PAPER WEEK"

The annual convention of the American Paper and Pulp Association and the meetings of its affiliated associations will bring a decided paper atmosphere to New York during the week beginning April 9. Judging from present indications, it will be a greater "Paper Week" than it has been in past years and paper men who have been in the habit of visiting New York on these occasions will appreciate that this is venturing a decidedly broad assertion.

Convention headquarters will, as usual, be at the Waldorf Astoria, but this year the Paper Industries Exposition also is expected, afternoons and evenings, all during the week to attract visitors when they are not occupied by any of their special meetings.

According to the tentative program, the convention of the Technical Association of the Pulp and Paper Industry, for which Secretary William G. MacNaughton has arranged an unusually strong program, will get down to business on Monday morning. The association will hold sessions Monday afternoon and all day Tuesday and Wednesday. On Thursday afternoon the association will conduct its program at the Paper Industries Exposition. The annual banquet of the association will be held at the Hotel Astor on Tuesday evening.

The Salesmen's Association of the Paper Industry, although among the newer organizations to take part in "Paper Week," also has arranged a rather unusual and very attractive program. In addition to its meetings earlier in the week, the association will attend the Paper Industries Exposition Tuesday afternoon and will hold its annual banquet on the Roof Garden of the Waldorf Tuesday evening.

One or several meetings during the week have also been arranged of the Book Paper Manufacturers' Association, the Paper-makers' Advertising Club, the Cost Association of the Paper Industry, the Gummed Paper Manufacturers' Association, the Tissue Paper Manufacturers' Association, the Cover Paper Manufacturers' Association, the United States Pulp Producers' Association, the Vegetable Parchment Manufacturers' Association, the Card Board Manufacturers' Association, the Waxed Paper Manufacturers' Association, the Woodland's Section, the Wrapping Paper Manufacturers' Service Bureau, the Writing Paper Manufacturers' Association, the Glazed and Fancy Paper Manufacturers' Association and the Binders Board Manufacturers' Association.

The American Pulp and Paper Association will deviate slightly from its usual plan this year by holding but a single business session on Thursday morning. This session will be opened by a widely known economist, and will be followed by discussions of general business conditions and brief reviews of the condition of the pulp and paper industry during the spring. In the afternoon the association will visit the Paper Industries Exposition.

The annual banquet of the association will be held Thursday evening at the Waldorf Astoria. Dr. Hugh P. Baker, the executive secretary of the association, is making efforts to have one of America's best known public men as the chief speaker, and if these efforts are successful, paper manufacturers will, it is said, hear one of the most notable addresses given in recent years. Those who plan to attend should secure their tickets early. The attendance promises to be very large and it may be possible to accommodate late comers only with difficulty, if, indeed, it may not be necessary to disappoint some.

The National Paper Trade Association will hold its convention Wednesday and Thursday and the annual banquet will be held Wednesday evening. Secretary William C. Ridgway expects a large attendance.

Dr. Baker has again made arrangements whereby all those attending the convention may secure over practically all of the important trunk lines transportation for the round trip at the price of single fare and one half. In buying tickets a convention certificate should be requested, whether it is expected that this will be used or not, as a certain number of certificates must be passed in at the convention before this arrangement becomes effective.

Paper men who intend to be in New York during "Paper Week" should make their hotel reservations at the earliest possible moment. The hotels are always crowded at this season of the year and it will be possible to secure the most desirable accommodations only by making arrangements well in advance of the convention date.

## IMPORT STATISTICS RESUMED

The PAPER TRADE JOURNAL is pleased to announce to the numerous individuals and concerns who have made inquiries regarding the delay in publishing the import statistics of paper, pulp and paper makers' materials, that the publication of these statistics is resumed in this issue.

In sending out the statistics for October the Department of Commerce issues the following explanation in connection with the report for October: "The new tariff law, which became effective September 22, 1922, necessitated a revision of the statistical classification, based on the new rates of duties for imports into the United States on and after that date. This means that in the September statements the imports from September 1 to 21 under the old law must be kept separate from imports after that date under the new tariff. In order to avoid the delay which would be caused by compiling two sets of import statements in one month, it has been decided to close the September report with imports under the old law to the 21st, inclusive, and to carry over the imports from September 22 to 30 under the new tariff to the October reports. A like course will be pursued with the statement of 'Imported merchandise remaining in bonded customs warehouses,' which will be

closed with the entries and withdrawals under the old tariff law to September 21, inclusive."

The reports for the months succeeding October will be printed in the PAPER TRADE JOURNAL as soon as they are received and as the tangle caused by the change in the tariff law has apparently been straightened out by the statisticians at the Bureau of Foreign and Domestic Commerce at Washington the persons in the pulp and paper business who have been anxiously awaiting these statistics for the complete year of 1922 may undoubtedly expect to have them available at a comparatively early date.

### Findings Reported Drawn Up in Coast Paper Case

(FROM OUR REGULAR CORRESPONDENT.)

WASHINGTON, D. C., March 14, 1923.—Officials of the Federal Trade Commission, of course, will not discuss the commission's case against the Pacific Coast Paper Trade Association and others, but it is understood on very good authority that the commission's attorneys have drawn up findings which will be submitted to the Pacific Coast paper men.

If these findings are finally accepted by the paper dealers, the stipulation, together with the findings and the cease and desist order, will be formally laid before the trade commission by its attorneys. It is probable if the case goes that far that the commission will accept the findings without question.

It will be remembered that when the extended conferences were held in Washington some weeks ago between the Pacific Coast paper men and attorneys of the commission, two or three companies were not represented. It is understood that up to this time these companies have refused to sign the stipulation accepted by the other paper jobbers and if they persist in this attitude the commission, of course, will have to take testimony and carry on its case against these particular paper men. It is hoped, however, by the paper jobbers who did sign the stipulation that they will be able to persuade the companies who are holding out to sign the stipulation.

### Increased Consumption of Pulpwood

The Department of Commerce announces that, according to preliminary statistics compiled by the Bureau of the Census, acting in co-operation with the Forest Service, United States Department of Agriculture, the total quantity of pulpwood consumed by 172 mills was 3,726,963 cords in 1922, as against 3,196,846 cords by the same mills in 1921. The production of woodpulp by these mills in 1922 amounted to 2,437,530 tons, as against 2,062,773 tons in 1921. These plants consumed nearly 70 per cent of the total quantity of pulpwood used in 1921 and produced about 72 per cent of the total quantity of pulp.

In this comparative statement, which covers more than two-thirds of the total number of active mills, 21 States are represented. The returns indicate that the total figures for 1922 of consumption of pulpwood and production of wood pulp will exceed those of 1921 by about 17 per cent, predicating a total consumption of approximately 5,300,000 cords of wood and a total production of nearly 3,400,000 tons of pulp for 1922, providing the percentage of increase holds true for the mills which have not reported.

### Specialty Paper Mills Bankrupt

TORONTO, Ont., March 12, 1923.—The Specialty Paper Mills, Limited, Camden East, Ont., have been adjudged bankrupt and G. T. Clarkson, Wellington street, West, of this city, has been appointed receiver. Accounts and bills payable are approximately \$91,392.61. The first meeting of the creditors will be held Monday, March 19 at the office of the receiver.

### National Paper Box Men to Meet May 9-11

Extensive preparations for the fifth annual convention of the National Paper Box Manufacturers' Association and the annual meeting of the Western Division which are to be held jointly at Indianapolis on May 9, 10 and 11, and in connection with which there is to be a trade exposition of unusual interest, have already been completed, according to reports from Harry B. Mahan of the Harry B. Mahan Company of Indianapolis, chairman of the convention committee and James L. Kalleen, of the Paper Package Company of Indianapolis, chairman of the exposition committee.

The trade exposition, which is to be conducted under the same roof, where the convention is to be held, promises to be a veritable market for the entire industry, with supply and machinery men from every part of the United States displaying their products under the exceptional advantages which the central location of the convention city, and the modern conveniences of an up-to-date convention building allow.

A recent arrangement of importance is the plan for holding the yearly meeting of the Box Supplies Association at Indianapolis in conjunction with the fifth annual convention of the National Association of Paper Box Manufacturers.

The trade exposition is to open one day earlier than the convention, on May 8, and as an added feature will remain open an extra day in order to permit residents of Indianapolis and business men from all over the state of Indiana to attend.

An executive office has been opened at 608 Chamber of Commerce Building, Indianapolis, in charge of Claude S. Wallin, exposition director. Persons desiring to reserve space in the trade exposition can do so by addressing either Mr. Kalleen or Mr. Wallin, in care of the executive office.

H. O. Alderman, of the Alderman-Fairchild Company of Rochester, N. Y., president of the National Association of Paper Box Manufacturers has announced through Wm. W. Baird, National Secretary, the appointment of the following persons to carry out the details of convention and exposition arrangements.

CONVENTION COMMITTEE—Harry B. Mahan, chairman, Indianapolis, Ind.; Mrs. H. O. Alderman, Rochester, N. Y.; John B. Campbell, South Bend, Ind.; Mrs. James L. Kalleen, Indianapolis, Ind.; Mrs. Harry B. Mahan, Indianapolis, Ind.; Ira J. Pirman, Cincinnati, Ohio; Wm. Sieman, Cincinnati, Ohio; W. G. Thomas, Lafayette, Ind.

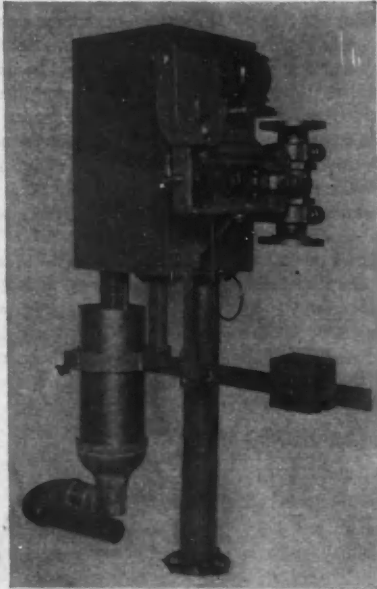
EXPOSITION COMMITTEE—James L. Kalleen, chairman, Indianapolis, Ind.; W. Buford Dickerson, Nashville, Tenn.; Ernest R. Spaulding, Cambridge, Mass.; A. G. Burry, Fort Wayne, Ind.; Marshall Haywood, Lafayette, Ind.; Frank Stone, Philadelphia, Pa.; Samuel J. Craig, Cleveland, Ohio; E. B. Hoy, Chicago, Ill.; Walter E. Trum, Brooklyn, N. Y.; Fred Davenport, Cincinnati, Ohio; John T. Robinson, Boston, Mass.; H. A. Zorn, Chicago, Ill.

RECEPTION COMMITTEE—Joseph H. Cochrane, Des Moines, Iowa; Samuel R. Parry, Rochester, N. Y.; Harry G. Williams, Chicago, Ill.

### Thos. O. Ross to Speak on Paper in South America

A feature of convention week of the American Paper and Pulp Association will be an address by Thomas O. Ross, president of the United States Pulp Producers' Association, on paper and pulp conditions in South America. Mr. Ross has just returned from an extended trip and will give first-hand observation at the luncheon of the Pulp Producers, to be held at 1 o'clock Tuesday, April 10.

Pulp producers who are not as yet members of the United States Pulp Producers' Association are being invited to attend this luncheon, as well as the members of the association. You, of course, will be present to hear Mr. Ross' description of what he saw in the South.



Don't GUESS at the Consistency of  
Your Stock!

*KNOW what it is, and keep it UNIFORM by using*

## THE TRIMBEY AUTOMATIC CONSISTENCY REGULATOR

(Patented)

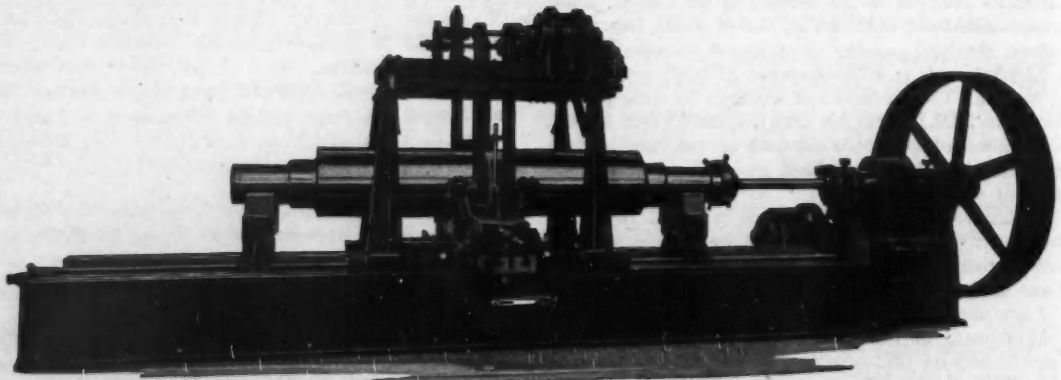
More than 175 in use in the United States, Canada  
and Foreign Countries.

Regulators to fill Canadian orders are now  
being manufactured for us by the Engineering  
and Machine Works of Canada, Ltd., St. Cath-  
arines, Ont.

*Address all correspondence to*

**Trimbey Machine Works, Glens Falls, N. Y.**

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



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

**LOBDELL** Micrometer Calipers are handy and accurate.

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



Section of the

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



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



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

**COMPOSITION OF THE ROSIN SIZE EMULSION\***

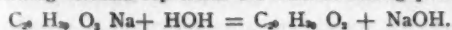
By **N. D. IVANOFF, (GOVERNMENT PAPER TESTING STATION, MOSCOW)**

It has been observed in the practice of paper sizing that better results are obtained if a high free rosin size is used. In order to explain this fact it was decided first of all to shed some light upon the question of composition of the rosin size emulsion, relative to which no strictly scientific investigations have so far been published in the paper literature, so far as we know.

**Substances Unlike in Properties**

The substances entering into the preparation of rosin size are quite unlike in their properties; rosin, a very weak organic acid, can be classified as a colloid, because it has neither a crystalline structure nor a high molecular weight, while caustic soda is a very strong base.

In cooking the size there are undoubtedly formed the sodium salts of the rosin acids, but when an emulsion is made from this size, i. e., on dilution with water, hydrolysis takes place, and the component substances are regenerated, giving caustic soda and free rosin, the latter in a colloidal state. The extent of hydrolysis will, evidently, depend upon the concentration of the hydroxyl ions. The following formula represents the reaction taking place:



The distinct alkalinity of the size solution as tested by phenolphthalein is a sign of hydrolysis. When heated the emulsion withstands a temperature up to 80° C without change. The emulsion is very non-uniform with respect to the magnitude of the particles of free rosin, these particles varying in size between 0.5 and 3 microns.

The Brownian movement of the particles of rosin visible under the microscope, the coagulation of the rosin by the addition of electrolytes (salting out), etc., make it clear that the rosin size emulsion is colloidal; therefore, in order to determine the extent of hydrolysis of sodium resinate, those of the methods usually employed with colloidal solutions were chosen which allow the study of the colloidal properties of the solutions without the introduction of foreign substances. These methods were: 1. Coagulation by freezing out; 2. Ultrafiltration.

**Preparation of the Emulsion**

Rosin soap was prepared from American rosin "H" and caustic soda. The rosin analyzed as follows:

|                             |      |
|-----------------------------|------|
| Ether number .....          | 3    |
| Acid number .....           | 117  |
| Saponification number ..... | 120  |
| Ash per cent .....          | 0.06 |

The proportions of rosin, caustic soda, and water were the same as those generally employed in paper mills. The rosin was gradually added to a hot solution of caustic soda. After a half hour of boiling, the saponification was complete.

The hot soap was then poured in a thin stream into distilled water at 70° C with strong agitation of the latter. A part of the free rosin separated out as a lump. Such separation of rosin is always observed in practice when diluting and mixing by hand, and to prevent this, atomizers are used which give very uniform emulsions. This emulsion was further diluted with water to a concentration of 15 g. rosin per liter of emulsion. The analysis of the emulsion was:

|                    |           |
|--------------------|-----------|
| Total rosin .....  | 15.392 g. |
| Caustic soda ..... | 1.116 g.  |

Assuming that all of the alkali is in the combined state, then 1.116 g. of caustic soda are equivalent to 9.3 g. rosin (saponif. number 120); therefore, the rosin is divided as follows:

|                                |       |
|--------------------------------|-------|
| 9.3 g. combined rosin or ..... | 60.4% |
| 6.092 g. free rosin or .....   | 39.6% |

The following three concentrations, obtained by dilution with distilled water, were used in these experiments:

- (1) 15.392 g. total rosin per liter
- (2) 5 g. total rosin per liter
- (3) 0.5 g. total rosin per liter

**Coagulation By Freezing**

The experiments involving coagulation by freezing were performed in the following manner: 25 cc. of the emulsion were placed in a porcelain vessel (glass vessels could not resist the expansion of the liquid on freezing and cracked), and the liquid was exposed to the open air, the temperature varying between 6° and 20° C.

The photograph on the following page shows the test tubes with the liquids before and after freezing; the least concentrated emulsions appear clearest after the rosin has precipitated.

The precipitate, formed through freezing was filtered through filter paper, washed with water, dried at 100° to 103° C. to constant weight and weighed. To the filtrate hydrochloric acid was

\*Bumazhnaia Promyshlennost, I, No. 1, 33-38 (July-Aug., 1922). Translated by M. L. Caust, B. S. Memb. TAPPI.

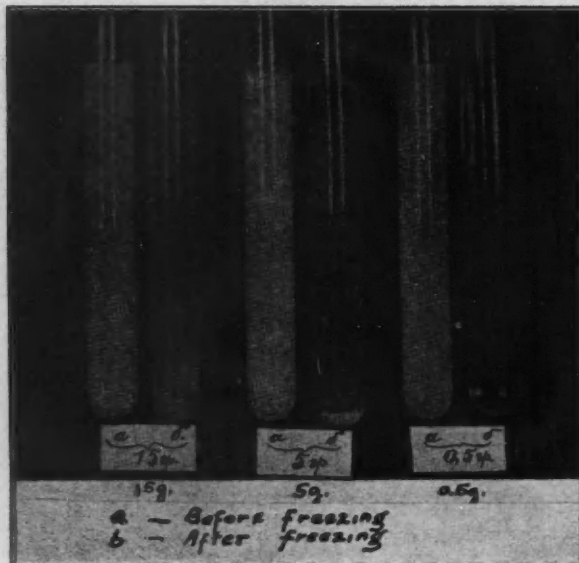
added in slight excess, causing the separation of the rosin in solution; this, too, was filtered, washed, dried and weighed.

Analysis gave the following figures:

| Total rosin per liter of emulsion | Rosin precipitated by freezing |          | Rosin precipitated from filtrate by HCl |          |
|-----------------------------------|--------------------------------|----------|---|----------|
|                                   | Grams.                         | Per cent | Grams.                                  | Per cent |
| 15.392                            | 12.248                         | 79.57    | 3.144                                   | 20.43    |
| 5.0                               | 4.528                          | 90.60    | 0.472                                   | 9.40     |
| 0.5                               | 0.476                          | 95.20    | 0.024                                   | 4.80     |

These figures justify the conclusion that the hydrolysis of sodium resinate is dependent upon the concentration, and is greater the less the concentration of the rosin size emulsion.

Making use of the figures given in the table we can determine the hydrolysis constant for sodium resinate. In calculating the



equivalent quantity of alkali we shall use the saponification number 120, found on analysis.

|   |           |           |           |
|---|-----------|-----------|-----------|
| Total rosin per liter of emulsion   | 15.392 g. | 5.0 g.    | 0.5 g.    |
| Caustic soda per liter of emulsion  | 1.116 g.  | 0.372 g.  | 0.0372 g. |
| Rosin precipitated from the filtrate after freezing   | 3.144 g.  | 0.472 g.  | 0.024 g.  |
| Caustic soda equivalent to the rosin obtained from filtrate   | 0.3773 g. | 0.0567 g. | 0.0029 g. |
| Caustic soda liberated through hydrolysis (difference between total amount of alkali in emulsion and above figures) | 0.7387 g. | 0.3153 g. | 0.0343 g. |
| Hydrolysis Constant   | 0.662     | 0.847     | 0.922     |

Analysis of the precipitate formed on freezing showed it to contain 1.35 per cent mineral matter (average of 2 tests), as caustic soda, or, subtracting the ash of the rosin, we find that the amorphous rosin precipitate retains 1.29 per cent caustic soda.

The small amount of soda held by the rosin precipitate must be accounted for by absorption to the highly developed surface of the amorphous rosin, since, if we should credit this alkali to undecomposed sodium resinate, then, the latter should have dissolved on washing the precipitate and gone to the filtrate; for this reason this amount of alkali was disregarded in calculating the hydrolysis constants.

#### Ultrafiltration

Sigmund's ultrafiltration apparatus was used. On account of the alkalinity of the emulsion, there was danger that the collodion film used as a filter might cause some changes in the composition of the filtrate and thus obscure the observations on the progress of

TECHNICAL SECTION, PAGE 108

hydrolysis. We limited ourselves to several experiments on emulsions containing 0.5 g. total rosin per liter.

The ultrafiltrate was absolutely transparent. On addition of hydrochloric acid to the ultrafiltrate a cloudiness appears and then, after some time, a precipitate forms. Analysis gave 0.0225 g. rosin per liter of ultrafiltrate. Considering that there were 0.0372 g. of caustic soda per liter of the filtered emulsion, of which 0.0027 g. is the equivalent of the 0.0225 g. of rosin (saponif. number 120) separated from the ultrafiltrate, therefore, the quantity of caustic soda liberated on account of hydrolysis is,  $0.0372 - 0.0027 = 0.0345$  g.

$$0.0345$$

and the hydrolysis constant is:  $\frac{0.0345}{0.0372} = 0.928$ .

$$0.0372$$

Comparing the results obtained by freezing and by ultrafiltration, we find complete agreement, consequently, for an emulsion containing 0.5 g. of rosin per liter we can accept as the average hydrolysis constant:  $(0.922 + 0.928) \div 2 = 0.925$ .

Taking into consideration these experimentally determined constants of hydrolysis, we can say, that the composition of the sodium resinate emulsion at a concentration of 0.5 g. rosin per liter will not be the same as is generally supposed. This can be seen from the following table:

| In 1 liter of emulsion | Assuming that the rosin is combined |          | Composition of emulsion where Constant = 0.925 |          |
|------------------------|-------------------------------------|----------|--|----------|
|                        | Grams.                              | Per cent | Grams.   | Per cent |
| Total rosin            | 0.5                                 | .....    | 0.5  | .....    |
| of which combined      | 0.302                               | 60.4     | 0.02265  | 4.53     |
| free                   | 0.198                               | 39.6     | 0.47735  | 95.47    |

The figures clearly indicate the important change that takes place in the composition of the emulsion on large dilution. It is such dilution that takes place in actual practice in the beater; consequently, we can consider the size here as completely hydrolyzed, giving a colloidal solution of rosin in an alkaline medium.

The tendency to increase the amount of free rosin in size which we observe in practice, tends to raise the hydrolysis constant as a result of the mass action law, and it can be predicted that in a rosin soap solution which does not contain free rosin, the hydrolysis constants for concentrations considered above will be smaller.

#### Foresters' Tables

O. M. Porter, Secretary of the Woodlands Section of the American Paper and Pulp Association and of the United States Pulp Producers Association is co-author of a compilation of foresters' tables just published as an official bulletin of the New York State College of Forestry at Syracuse, N. Y., H. C., Delyea of the forest engineering department of the college being the other forester engaged in its compilation. Surveyors' tables, scalers, tables and volume tables, sixty-six in all, as well as eleven miscellaneous tables are given in the publication which has been issued in convenient pocket size.

#### Woodland's Section Meeting

A very cordial invitation to the members of the Technical Association is received from O. M. Porter, secretary of the Woodland's Section, to attend the third annual meeting, which will be held on Wednesday, April 11, at the Waldorf Astoria.

Subjects on the program to be discussed include: "Pulpwood Decay as Affecting Pulp Production," "Utilization of Hard Woods," "Weighing Wood in Pulp Manufacture," all of which will be of interest to members of the Technical Association.

#### Members Exchange

An inquiry is received from a member in the East for a man of chemical training with some experience in making sulphite.

# SPRUCE BUD WORMS IN NORTHERN IDAHO

By JAMES C. EVANDEN, ENTOMOLOGIST IN CHARGE OF NORTHERN ROCKY MOUNTAIN FIELD STATION, COEUR D'ALENE, IDAHO

During the winter of 1921-22, a report was received at the Forest Insect Field Station of the Bureau of Entomology, Coeur d'Alene, Idaho, from the forest supervisor, Kaniksu National Forest, relative to the dying of hemlock near Priest Lake, Idaho. In June, 1922, Mr. Rust, entomological ranger assigned to the Coeur d'Alene station, examined this area and found that not only the hemlock but the larch, cedar, white fir, white pine and Engelmann spruce were being severely defoliated by a small worm or caterpillar (*Harmolaga fumifera* Clum). A number of these cater-

tips of the branches, and twigs. On the heads of the Payette and Little Salmon rivers, where the attack was the heaviest recorded, the needles of the new growth were stripped from every limb of the Douglas fir and white fir. With hemlock and larch the needles are fairly well eaten from the entire limb, while with white pine, Douglas fir, white fir and Engelmann spruce the attack is apparently confined to the new growth at the tips of the limbs. This condition may be regulated by the severity of the epidemic and the abundance of the host material. During June and July if



THE SPRUCE BUDWORM AND EVIDENCE OF ITS DESTRUCTIVENESS

Left—The spruce budworm in various stages. A shows adult moths; B empty pupal cases; C needle nest; D worms or caterpillars. Center—Engelmann spruce showing the work of the budworm. Right—White pine is also subject to the ravages of the spruce budworm.

pillars were collected and reared to adult moths at the Coeur d'Alene station, which were then determined by Mr. Heinrich, specialist in forest lepidoptera, Washington, D. C., as the spruce budworm.

The writer recorded the work of this insect on the Payette and Little Salmon River watersheds, and from reports submitted from forest officers during the past season it is very evident that this insect is fairly well established throughout Northern Idaho. Mr. Meinrich writes as follows: "It is somewhat doubtful how long the spruce budworm has been working in the West, but inasmuch as it is an American insect it is quite likely that it has been present there for a long time. It is now known from British Columbia to the Southwest and most everywhere that hemlock and spruce occur." To the best of the writer's knowledge, this is the first authentic record which we have of a spruce budworm epidemic in the West.

### Attack Easily Recognized

The defoliation or attack by the spruce budworm is readily recognized by the blighted appearance of the new growth at the

these limb tips are examined it will be seen that the needles of the new growth have been gnawed through at the base, but little bundles of these are still held together by a few silken threads. In these loose masses the caterpillars are often found. Pupation also takes place within or attached to the outside of these nests.

The earliest record of a spruce budworm epidemic in the United States is given by Dr. Packard, in which he presents the possibility that the widespread destruction of spruce in the Casco Bay territory in 1807 was due to this insect. Dr. A. D. Hopkins, forest entomologist, U. S. Department of Agriculture, writes of the history concerning the known epidemics of that insect as follows: "In 1878 to 1885 an invasion of this insect swept over the New England and New Brunswick woods and, aided by bark beetles and disease, caused the death of a large percentage of the old spruce and fir. Then for about 30 years there was no evidence of its presence. Another outbreak developed in 1910, which continued its depredations in different areas throughout the north woods until 1921. Now it is claimed by experts, who have made a special study of the insect and its depredations in Maine

and Canada, that from 25 to 75 per cent of the merchantable or older fir and a somewhat less per cent of the spruce has been killed in Maine, New Brunswick and Quebec. Like the epidemic of about 30 years ago, the greatest abundance of the insects and the defoliation of the timber on any given area occurred during the first two or three years, after which the trees began to die, and continued dying for five or six or more years, due largely to secondary causes such as root diseases and bark-boring insects."

#### Extent Infestation Hard to Foresee

The future of this epidemic in Idaho is impossible to foresee. In the eastern part of our continent during epidemics this insect, assisted by bark beetles and tree diseases, has been responsible for the destruction of an immense amount of timber. Furthermore, there is apparently no doubt but that in severe epidemics the spruce budworm can become independently destructive to the timber. During the summer of 1921 these insects were only in sufficient numbers as to attract attention in one small area. During the past season the epidemic increased in such proportions as to be reported throughout the northern part of the state. Should this condition continue for a number of years there is little doubt but that a large volume of timber will be destroyed as a result of the attacks of this insect.

Artificial control of this epidemic, which covers a tremendous area, is practically impossible because of the expense of the operation. To control an epidemic of forest tree defoliators it would be necessary to destroy a large per cent of the worms, or caterpillars, by the application of a stomach poison to their food plant. The thoughts of applying this poison by spraying forest trees, aside from parks and wood lots, are impracticable. The March, 1922, issue of the National Geographic Magazine describes the successful treatment of a grove of catalpa trees in Ohio which were infested by a defoliating insect, by showering poison dust

from an airplane. This method seems the most feasible at this time for the treatment of forest defoliator epidemics and may in time become an economic possibility. However, as the use of air machines for low flying over mountainous regions would be extremely hazardous, this method is hardly feasible with our present equipment. It is possible that a large per cent of the loss incurred during these epidemics could be prevented by the controlling of other insect attacks.

In a paper on this insect read before the Woodlands Section of the American Paper and Pulp Association, Dr. Hopkins called attention to a principle of adjustment of forest management to avoid losses from this and similar insects which make their principal attack on merchantable sized trees. He concludes that "the key to future successes in preventing serious losses from forest insects in general is to be found in the management of the growing timber and its utilization when the crop is ready to harvest."

Though as yet none have been recorded by officers of this station, it is hoped that these insects have natural enemies, or that there will be some natural influence that will check this epidemic. In the past the continuance of epidemics of the larch sawfly, pine butterfly, hemlock looper, and other defoliating insects have been prevented by natural agencies, and it is upon this hope that the cessation of the spruce budworm outbreak in Northern Idaho depends.

At this time the work of this insect is confined for the most part to the less valuable timber species of the state. No work was recorded in yellow pine, but at Priest Lake considerable work was found in white pine. Hemlock was apparently the preferred host in the white pine, and Douglas fir in the yellow pine forest types. Should this insect become adapted to white pine as a host, this problem will immediately become of serious economic importance throughout the white pine forests of Idaho and Montana.

## WORK OF THE FREIGHT CONTAINER BUREAU

In circulars issued recently by Col. B. W. Dunn, Chief Engineer, American Railway Association, 30 Vesey street, New York, there is considerable of interest to paper manufacturers, although they are primarily addressed to freight shippers.

Many shippers are disposed to consider favorably reasonable suggestions which they would oppose being forced to adopt by tariff amendments.

The Freight Container Bureau studies the packing of a commodity for shipment and makes recommendations based upon what it considers a reasonable combination of cost and efficiency.

These recommendations are intended to serve as a signboard showing the best road to those who desire to deliver their shipments to their customers in good condition and thereby avoid the expense, delay and dissatisfaction of customers, necessarily incident to the filing and collection of loss and damage claims.

In Circular 7, Crates for Refrigerators, the tentative specifications for interior packing and preparation of refrigerators for crating are given.

#### Interior Packing and Preparation of Refrigerators for Crating

Paper wrapping: All finished surfaces must be protected with at least one thickness of paper weighing not less than 25 pounds per ream, 24 x 36 inches, 480 sheets, as an outside wrapper. It is strongly recommended that the paper used should be treated with paraffin or wax and the treated side placed next to finished surfaces to afford better protection to those surfaces.

NOTE:—The purpose of covering the finished surfaces of refrigerators with paper is to protect the finish from dust, splatterings of oil or grease and moisture. The reason for specifying 25 pound paper is that investigation has brought out the fact that most shippers are using either the weight of paper specified or a heavier paper, and that a lighter weight paper would be unsuitable due to lack of substance and strength to resist abrasion and tearing. It is recommended that a kraft paper be used, one side of which is treated with wax or paraffin.

TECHNICAL SECTION, PAGE 110

In Circular 6, Solid Fiber and Plyboard Boxes, for boots and shoes, the portion that is of particular interest to manufacturers of the paper, as well as the box makers, follows:

#### Material

All materials used must be of accepted commercial standards as regards condition and quality. All pulp shall be free from grease, dirt or other deleterious foreign matter, and shall be screened to prevent the introduction of large particles or fragments into the paper.

Plyboard must consist of not less than two liners and may have one or more fillers of chipboard between them.

(a) Liners must be manufactured with the outer facing of new chemical pulp consisting of jute or other long fibered stock; solid board must have both facings of the same material. The balance of the stock in liners or solid board may consist of reworked material of which not to exceed 50 per cent of the entire amount of pulp in the paper may be ground wood or mechanical pulp. An amount of mineral matter, as loading material, not exceeding 10 per cent of the weight of the paper, will be allowed.

(b) Liners must be calendered to as even a thickness as possible and must have a weight, dry, of not less than 4.35 pounds per 1,000 square feet of surface for each 0.001 inch in thickness.

(a) Fillers may be manufactured from mechanically ground or chip stock properly beaten. They must have proper bending qualities so that when combined into the plyboard they will not crack in any bending necessary in forming the boxes.

(b) Fillers must be calendered to as even a thickness as possible and have a minimum weight of 4.00 pounds per 1,000 square feet of surface for each 0.001 inch in thickness.

NOTE:—These paragraphs indicate the quality of material required. They do not depart from present customary good practice and should not, therefore, work any hardship.

Silicate of soda used in the manufacture of plyboard or for cementing the closures of boxes thereof must conform to the following analysis:

(a) For manufacturing plyboard the ratio of soda to silica must not be greater than 1 to 2.8 with a specific gravity not exceeding 47° Be. at 68° F., and it is recommended that silicate of soda having ratio of soda to silica not exceeding 1 to 3.25 with a specific gravity not exceeding 43° Be. at 68° F. be used where manufacturing conditions permit.

(b) The silicate of soda must be as evenly spread as possible and should not exceed in amount from 15 to 18 pounds per 1,000 sq. ft. of each film of cement used in the board.

(c) For cementing the closures of plyboard boxes the ratio of soda to silica must not be greater than 1 to 2.8 with a specific gravity not exceeding 47° Be. at 68° F., nor be less than 1 to 3.0 with a specific gravity not less than 41° Be. at 68° F.

It should be reasonably free from organic matter, except that artificial coloring matter is not objectionable.

NOTE:—(a) and (b) For manufacturing plyboard, silicate of soda having the greatest ration of soda to silica should be used consistent with good results in order to reduce the amount of alkali per 1,000 sq. ft. of board to a minimum owing to the destructive effect on the waterproofing which this material exerts. For the same reason the total quantity of silicate used should be reduced as far as possible.

(c) For cementing the closures of boxes the ratio of soda to silica should be larger than in those silicates used for manufacturing the board. The higher percentages of alkali are necessary in order to attack the waterproofing of the surfaces in contact and get a bond and such silicates are more "tacky" and take hold better. The film of silicate is separated from the outer waterproofed surface of the board by a greater thickness of paper than when used in manufacturing and the deteriorating effect is negligible.

Both surfaces of any board used in the manufacture of boxes must be waterproofed to the extent that when the board is clamped as a solid gasket at the bottom of an open cup or cylinder filled with water to a height of 3 inches above the board, the under side of the board must remain dry after an exposure of 6 hours.

NOTE:—This test is in accordance with methods used by the Bureau of Chemistry, Washington, D. C. It is illustrated in the PAPER TRADE JOURNAL of January 19, 1922. The results of tests made in this manner show that a reduction in bursting strength of as high as 47 per cent may occur, even when the paper is not wet through.

Both surfaces should, in our opinion, be water-proofed to protect, insofar as practicable, the contents of the box in case the package is subjected to damp or humid conditions. Most boxes used by shippers of boots and shoes are so manufactured at present, and the slight increase in cost appears to be outweighed by the large increase in durability under adverse conditions.

Paper tape for sealing the seams of boxes must be manufactured from paper known as No. 1 Kraft, 100 per cent sulphate pulp, weighing not less than 60 pounds per standard ream of raw paper—480 sheet, 24 x 36 inches—and must have a Mullen test of not less than 60 pounds before the glue is applied. It shall be uniformly coated with animal glue of a grade equal to, or better than, No. 1 3/4 Peter Cooper Standard.

NOTE:—No standard for paper tape is written into the present classification. Our opinion is that the tape to be used is too important an element to be ignored. The standard required here is that recommended by the Gummed Paper Manufacturers' Association and has been proved proper and efficient by experience.

### Weight and Dimension Limits

When manufactured from paper pulp board, either solid or plyboard, boxes for the shipment of boots and shoes must conform to the restrictions of the following table:

| Minimum thickness of board (in.) | Required strength, Mullen test (lb.) | Maximum combined dimensions length and width and depth (in.) | Maximum gross weight package and contents (lb.) |
|----------------------------------|--------------------------------------|--|---|
| 0.060                            | 225                                  | 60   | 40  |
| 0.080                            | 275                                  | 65   | 65  |
| 0.100                            | 325                                  | 70   | 90  |

NOTE:—The strength, Mullen tests, of the above-mentioned boxboards must be determined as follows:

(a) In testing, the board must be clamped firmly in the machine to prevent slipping; the wheel of the testing machine must be turned

at a constant and uniform speed of approximately two revolutions per second.

(b) Six punctures must be made, three from each side of the board. Two of the results on each side of the board, and also the average of the six results, must equal or exceed the required (specified) strength in order to pass the test.

(c) If the board fails to pass the test as above specified then a re-test may be made consisting of twelve punctures, six from each side of the board. If five of the results on each side of the board, and also the average of the twelve results are found to be equal to or greater than the required (specified) strength, then the board shall be considered as acceptable.

NOTE:—The Mullen requirements in this table are higher than at present required. This seems desirable from the fact that boxes now in use, when manufactured from this material, are of considerably higher test than the Classification requirements, though not so marked and, therefore, these better boxes are the ones desired by a majority of shippers. The requirements have not been put as high as some boxes tested, but at a point which now produces a good average box and, since this is made a minimum requirement, the resulting boxes should be efficient.

### Waste in the Pulp and Paper Industry

B. T. MCBAIN, DIRECTOR OF MFG., NEKOOSA EDWARDS PAPER CO.

One of my friends on the Pacific Coast in a letter just received, writes:

"Just got and have read your 'Talk-E-Talk' on 'Waste.' My God, isn't it awful; National, State, commercial, personal waste! The operation of much departmental activity is waste. The result of bureau activity is more waste. The performance of all commissions is waste; with no exception, they serve no useful purpose.

If we had brought back from France the lessons of economy—everywhere apparent—and applied them, the World War would have been paid for now. We have done worse. Our expenses are increased instead of decreased. The saddest pronouncement of Harding's administration was when he said 'I started to cut down the number of employees in the bureaus and departments, but met so much opposition, it had to be abandoned.'

How different from Lincoln's statement when urged to appoint a commission to look into something. 'I will appoint no more commissions. They are only devices to cheat the Government.'

But, setting aside all other waste and sticking with our own industry, can we not arrange for a day at the coming Annual Convention of the American Paper & Pulp Association, where the higher-ups, the officials of the various pulp and paper mills of America, can be made to listen to what is surely going to be the death knell of the industry unless something is done and done promptly?

The Technical Association of the industry can talk about the matter all they please and the Superintendents' Association can give it consideration from every angle, but unless the powers-that-be of the industry really are ready to be shown, see the light, order an investigation and then back up the investigators to the fullest extent, what's the use?

There is waste in every move we make today, from the woods to the loading of the car in the pulp and paper industry, this might be denied by some, but not by any one who has looked into the matter and given it any kind of conscientious study and who knows.

What are the big ones in the industry going to do about it? Don't think, know!"

### Adirondack Paper Corp. Leases Mill

BALSTON SPA, N. Y., March 12, 1923.—The mill formerly operated by the Flintkote Company, has been leased for one year by a new organization known as the Adirondack Paper Corporation. The management of the mill is in the hands of Bert Oldham, who was formerly connected with the American Paperboard Company of Balston Spa.

# THE EFFECT OF SUNLIGHT ON THE VEGETABLE PAPER SIZES<sup>1</sup>

By L. P. ZHEREBOFF

It has been observed long ago that papers sized with rosin size lose in sizing fastness when exposed to sunlight for any length of time. Thus, in 1896,<sup>2</sup> W. Herzberg published the results of his observations upon five different papers during 1888, and upon another series during 1890-1891, two of these papers having been sized with animal and vegetable size, while the others contained only vegetable size. These papers were of different compositions. One year later Wolesky and Haase, also Liesegang, published in *Papier-Zeitung* the results of their experiments, dealing with the same question.

## Results Far from Agreement

The results of all of the above observations were far from being in agreement. Thus, Herzberg's second experiment, as well as the tests of Wolesky and Haase, showed that all papers, irrespective of composition, rapidly lost in sizing fastness. On the other hand, it could be concluded from Herzberg's first experiments and from the tests of Liesegang that the papers containing mechanical wood fibers retained their sizing, while absence of groundwood meant deterioration of sizing on exposure.

According to Wolesky and Haase (also Dr. Burkhardt) animal

sizing does not change, but according to Herzberg papers containing vegetable and animal size, as well as animal size alone, decrease in sizing fastness. It was merely a question of time. It took four months to make vegetable sized paper slack-sized or unsized, while it required a year to destroy animal sizing.

Herzberg also found that temperature had no effect, and that papers sized in the laboratory with free rosin alone lost their sizing faster than the papers sized in the regular way of the mill, and that ether dropped upon exposed papers did not give the transparent ring characteristic of rosin size.

Wolesky and Haase state that the greater the calendering of the paper the quicker the loss in sizing, which is not surprising, since calendering increases the transparency of the paper, thus enabling the rays of light to penetrate deeper into the sheet.

The above contradictory data is all we have on this complex and interesting question.

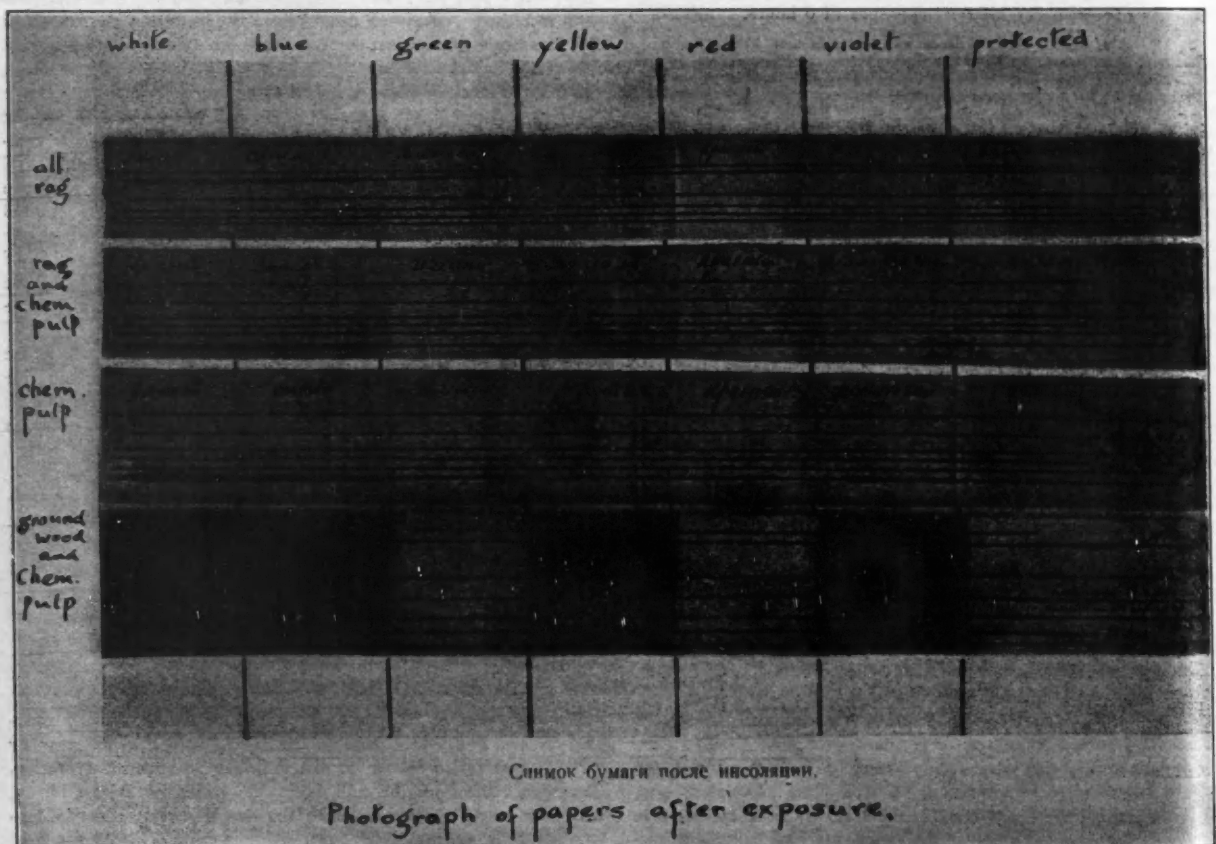
## Darker Field of Conjecture

When we come to seeking an explanation for the observed facts we enter a still darker field of conjectures.

Wolesky and Haase suggest that the sizing of paper is dependent not upon the presence of free rosin, but upon a chemical combination between rosin and the fibers, and that the rays of the sun destroy this chemical union and, therefore, also the sizing.

Burkhardt, on the contrary, considers sizing a physical phenome-

<sup>1</sup> Bumazhnaia Promyshlennost, I, No. 1, 25-32, July-Aug., 1922. Translated by M. L. Caust, B.S. Memb. TAPPI.  
<sup>2</sup> Mittheilungen aus den Königl.-technischen Versuchsanstalten 1896. Refr. 5/6.



non, whereby the fibre retains small particles of the finely divided rosin. Sunlight destroys the physical attachment and the sizing disappears. Finally, Herzberg, finding the above explanations without sufficient justification, appears to be inclined to explain the destruction of sizing in paper by a change in the chemical composition of the rosin proper, caused by the rays of the sun.

To the present author this question is of especial interest, because it is connected with the very essence of paper sizing.

I have pointed out long ago that sizing is not due to the filling up of the pores of the paper with free rosin, as is being continually repeated since Wurster published his work, but is due to the conversion of the open canals of the fibers from capillary to anticapillary, and that this process is caused by the sodium resinolate of the size emulsion forming a thin, molecular layer of free rosin on the fiber.<sup>3</sup> Taking this view of sizing, the fact that sizing is rapidly destroyed—sometimes within a month—appears to me not only not surprising but, to the contrary, very natural.

It is clear to me that the continual attack of the waves of light is not fated to break up against the masses of rosin, with which the theory of Wurster carefully guards all entrances into the sheet; quite to the contrary, the rosin scarcely covers the surfaces of the fibers and cannot long resist the destructive action of the attacking waves of light. The high sensitiveness of sizing to the action of sunlight is hard to explain if we imagine the pores of the paper filled up with masses of rosin, but becomes quite comprehensible if we are dealing with a molecular layer of rosin on the surfaces of the fibers.

However, if this is so, then the phenomenon of deterioration of sizing must be independent of the composition of the papers, and yet what information there is available appears contradictory. It was necessary to check up the observations, which I did, and the results are seen in the accompanying photograph.

**Tests Under Special Conditions**

In order to make the results more convincing, and in order to get at the same time an answer to another question which quite naturally arose in my mind, I made the tests under somewhat special conditions. A part of the tested paper strips was protected from light to make sure that destruction of sizing was due to light and nothing else. Furthermore, as long as we are dealing with a molecular layer of rosin, the experiment must give different results with the different rays of light. Being in the finely divided state, the molecules of abietic acid must show what vibrations of the ray of light they respond to most, if at all.

It was with these ideas in mind that the experiment was arranged. As can be seen in the photograph on the preceding page taken after the experiment, four strips of writing paper were exposed. The upper strip was all rag; the next, rag and chemical pulp; the third, almost entirely chemical pulp, and finally, the fourth, ground wood and chemical pulp.

The different rays of the spectrum were obtained by means of colored glass plates inserted in regular order into a common frame. The vertical black lines show where the glass plates touched. At the extreme left the white plate was inserted, admitting all the rays; next followed the blue, green, yellow, red and violet plates. At the extreme right, the stripes of paper were protected from light by a sheet of white rag cardboard. At intervals the papers were tested for sizing in the usual manner, i. e., by drawing lines 3/4 mm. wide (using alizarine ink and the same pen). The results were recorded on the protected part of the papers and are seen in the photograph.

**Results Obtained**

The results were as follows:

1. All papers, irrespective of composition, lose in sizing fastness through exposure to light.
2. The action of light is strong and shows its effects within a

<sup>3</sup>L. Zereboff. "The Theory and Practice of Paper Sizing," pp. 88-84.

short time (in this experiment already after 10 days); the composition of the paper is of little account even in this respect. After one and a half to two months all papers become slack-sized, and after one-half year as if entirely unsized.

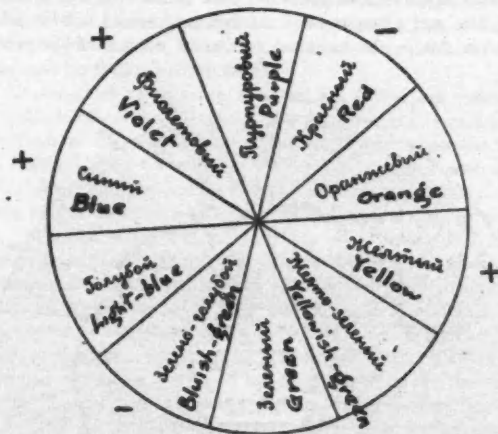
3. The rays destroying sizing are: violet, blue and yellow—the last, however, less than the first. The green and red rays have little effect. This made it clear that the causes of deterioration of sizing lay in the rosin itself, and not in the composition of the papers nor in the relation of the fibers to the rosin.

4. The rapidity of destruction of sizing indicates that the rosin, which determines the sizing of paper, is in an extremely accessible condition to the action of light, and this can only occur if the rosin is present as a very thin molecular film on the surface of the fibers making the pores of the papers anticapillary, but not at all if we are dealing with those coarse agglomerations of rosin, those lumps which P. Klemm so recently observed, and upon the more or less artful fritting of which he conditioned the success of sizing.<sup>4</sup>

Colored glass plates are not correct light filters, therefore, when arranging this experiment, I intended, in case it was necessary, to repeat it, using correct liquid light filters, but the results were so definite that repetition of the work was not called for.

**Rays of Different Wave Length**

At first glance it seems strange that in the rapidly acting group of rays, as well as in the slowly acting group, there are rays quite



different as to amplitude and length of wave, i. e., the influence of the rays of light upon sizing does not follow the order of length and amplitude of wave, but comes in jumps. In this experiment the glass plates were arranged in the order of the colors in the spectrum, while on the photograph we see that the slowly and rapidly acting rays come interchangeably.

Arranging the solar spectrum in a circle, with the different rays as sectors, and marking the strongly acting rays +, and the weakly acting -, we see that the equally acting rays are diametrically opposite. They are the complementary colors, i. e., they give white light when combined.

Strange as this may seem at first, it can be explained by the fact that rosin is more capable of transmitting red and green rays than any other. We know that some rosins on looking through appear reddish-brown, others slightly greenish,<sup>5</sup> especially noticeable on thin fragments, depending upon the place of origin and the method of preparation. On the other hand, blue and violet rays are completely

<sup>4</sup>C. Shwalbe and several other famous paper technologists accepted this view.

<sup>5</sup>The greenish color is probably due to chlorophyll which I separated from American rosin, while the reddish hue is explained by the presence of rosin acids and charred matter.

absorbed. Evidently, the fundamental photochemical law that only those rays which are absorbed by a body can act upon it chemically, is also here of prime significance.

Finally, the following is to be pointed out. The lowest strip of paper was made of mechanical pulp; also the others, not excluding the rag paper, contained traces of ligno and pecto-cellulose. The rays which were most active in destroying sizing also destroyed the compound celluloses. Those places which were exposed only to the green and red rays preserved the sizing longest and yellowed only slightly, i. e., the fibers were least affected by the light. From this the following conclusion automatically follows: Libraries, archives, or places where precious manuscripts are kept should not be illuminated by white light, even if it is only reflected light, nor by arc lamps. The light should either be reflected from green surfaces, or should be filtered through light green window glass.

The experiment described in this article gave very definite answers to the propounded questions, but does not and could not clarify the

still puzzling problem as to what conditions bring about good and permanent sizing of paper. We saw that the blue rays are most active, followed by the violet\* and yellow rays, but we do not know the reasons for this. The green and red rays act slowly, but whether the difference between this and the first group is qualitative or only quantitative, we also do not know. The sizing was destroyed in the ordinary atmosphere of the room, but the experiment could not show whether oxygen or any other constituent of the air played any part in the action.

Finally, and this is most important, is the selective responsiveness of the size to the rays of light a quality inherent in the crude rosin? To determine this it was necessary to undertake new experiments, which was done, and the results of which will be described in a later article.

\* A violet glass does not give correct violet rays and the results may be slightly different with a correct light filter.

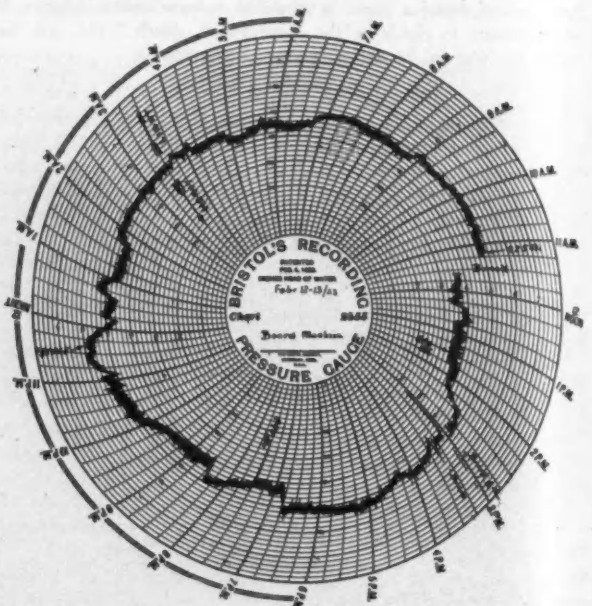
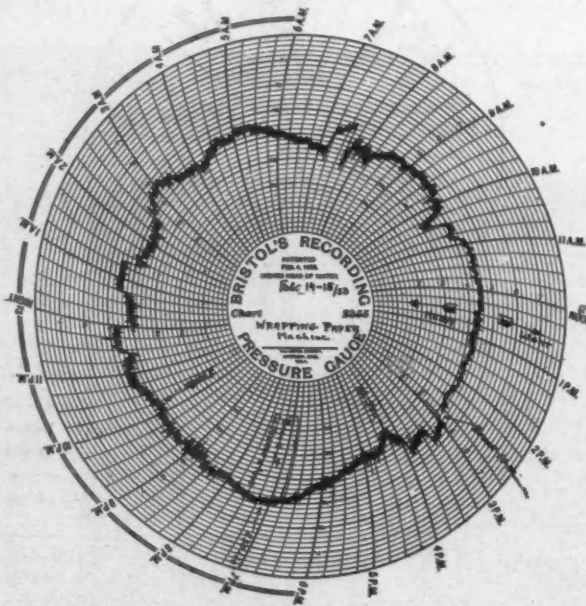
## THICKNESS AND WEIGHT INDICATOR

Editor PAPER TRADE JOURNAL THOROLD, Ont., March 12, 1923.

I am taking the liberty of enclosing a short description of a recently developed automatic thickness and weight indicator for use on paper machines. I enclose a chart obtained with this device, now being in continuous operation on a board machine, which runs on sulphite and ground wood tailings, and would kindly ask you to publish this in the technical section of your valuable paper, as

formed the machine tender will be as to the condition of his sheet and so be able to control same more efficiently. Uniformity is economy. On the other hand, taking samples too often will considerably increase the percentage of broke in one finished reel.

Carrying in mind this strict physical control, after several months of experimenting, we completed a simple and effective little device giving us a continuous test, thus we know just what our sheet is,



I feel confident that mill managers and superintendents will find this thing very interesting.

It is common practice in every up to date paper mill, to test the sheet for weight and bulk or thickness, and up till the present time to obtain this, a sample had to be taken by a man in attendance, and the sample weighed and calipered. In the physical testing of paper there is a definite range set for weight and thickness, called the "tolerance limit." This testing is very important for the paper maker, as there are several factors tending to change the sheet from the time it leaves the flowbox in a liquid state, until it is rolled up into reels at the winder.

It is easily understood the more samples are taken, the better in-

going to the reels, and these tests are continually recorded on a Bristol gage 24-hour chart, thereby doing away with the constant tearing of samples to obtain the required tests. If the line described by the pen is straight, the sheet is uniform. If it swings one way or the other the weight, the bulk, also the finish have changed. Besides it will record all breaks on the machine, and the amount of time lost due to these breaks.

The device is constructed in such a way as to allow an easy installation on any make of paper machine and the gage may be set at any convenient or desired place in the machine room. The indicator gage will in no way interfere with the operations of the paper machine.



Section of the  
**COST ASSOCIATION OF THE PAPER INDUSTRY**  
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 Conducted by **THOS. J. BURKE, C.A., Sec-Treas**

## BUDGETARY CONTROL OVER COSTS\*

BY GEORGE E. FRAZER

My partner, J. O. McKinsey, C. P. A., has recently published a book under the title of "Budgetary Control" (Ronald Press Company, 1922), in which Mr. McKinsey gives many illustrations of the value of budgetary control in management.

Because of your own experience in making sales and advertising expense estimates, which are now so common a feature in the management of every business, I need not dwell at any length upon the use of budgets by the management of a business.

Cost accountants have been the pioneers both in Great Britain and in America in the managerial use of accounts and statistics. While it is true that the cost accountant in his practice and in his literature has made little use of the term "Budgetary Control," it is equally true, and a great deal more to the point, that the cost accountant has for many years made daily use of budget estimates. "A rose by any other name would smell as sweet," and the cost accountant should receive full credit for his pioneer work in "Budgetary Control," even though he has not used that terminology.

I never fail to seize the opportunity of impressing upon cost accountants that their chief function is in the use of facts.

We have a very fine organization out in Chicago in connection with the Illinois Manufacturers' Association, a cost accountant's association that has a luncheon once a month, and as the chairman of the Program Committee of that association I find that the cost accountants are really intelligent.

What they want, however, is broadening discussion, and not narrow technical discussion. However, I am going to inflict upon you a somewhat technical discussion at this time and remind you of the things that you are doing in budgetary control in your own business.

### Setting of Selling Prices

One of these things is the setting of selling prices. It is axiomatic to say that costs are a basis for proper pricing. The estimating department of any of the large contracting companies of the country is necessarily basing its day by day work upon the job costs, the class costs and the departmental costs furnished by the cost accountant. Job, class and departmental costs are so vital to proper estimating for contracts that in my professional practice I have more than once advised that one of the important officers of a contracting organization should supervise both the cost department and the estimating department. Cost accountants pay too little attention to the estimating and pricing departments. The supervision of the cost department necessarily involves the production of costs that will be usable by the estimating department. The supervision of the

estimating department necessarily involves the use of estimated figures for material, labor, administrative, selling and erection expenses that are not merely fanciful estimates, or merely estimates based upon data obtained outside of the business, but are rather estimates based upon the actual matter-of-fact costs produced within the business by the cost department.

Nor is the close relationship of costs and estimating confined to the contracting business. Railroad and public utility rates are fixed on the basis of expense analyses. The tariff rates approved by the State Public Utility Commission for a particular gas company or electric light company are in themselves budget estimates of the revenue needed to offset costs as found within the cost department of the particular public utility.

This is equally true in the field of merchandising. The heads of departments in a large department store in setting prices on merchandise must necessarily be informed, not only of the cost of the specific items of merchandise, but they must also be informed as to the cost of operating, warehousing display, advertising, delivery, etc., as affecting particular classes of merchandise. The most interesting problem I had as general auditor for one of the largest mail order houses of the country was this very problem of prorating operating costs so as to set up predetermined percentages of operating costs that could be used successfully by the buyers in setting their catalog prices.

What I have just said is for the purpose of calling your attention to the constant present-day use of cost figures in setting prices. This is the usual sense in which cost figures are used today along budgetary lines. The bid price estimates by the estimating department of a contracting organization are a budgetary estimate of the amount necessary to offset the cost and to produce a satisfactory profit.

### Budgetary Estimates

The catalog prices set by the buyers in a large mail-order house and printed in the bulky catalog are budgetary estimates covering:

(a) Cost in merchandise; (b) operating and overhead expense, and (c) a budgeted or estimated ratio of gross profit for each particular class of merchandise.

When anybody tells you that a budget cannot be worked out in his business because it makes three or four hundred lines of different products, you can think of the experience of a large mail-order house, where the very existence of the enterprise consists of budgeting prices in August to last until May on perhaps 90,000 different items. It is done every year with astonishing results.

If I dwell upon this point at some little length, it is simply to

\*From Year Book of National Association of Cost Accountants.

remind the cost accountants here present that they are not only in favor of budget control, but that they are actually participants from day to day in budgetary control to a very considerable extent in that they are continually producing costs for use in setting prices. It must be admitted that a price is a budgetary estimate.

In arriving at proper costs, either job costs or class costs, cost accountants have constantly before them the problem of the proper prorating of overhead expense. There is nothing so axiomatic as the observation that any form of prorating is simply a form of estimating, i. e., in itself a budgetary device. In this specific sense the cost accountants must indeed carry away the palm as the originators of budgetary control and as the large users of budgetary control in America today. If you prorate your overhead expenses on the basis of numbers of sales deliveries, you are for the purposes of executive control setting up a budgetary device. In effect, this method of prorating on the basis of sales deliveries indicates that it is the judgment of the enterprise that each sales dollar received by the enterprise must include a certain predetermined share of overhead expense. I say predetermined share of overhead expense because necessarily overhead expenses are contracted before the sales dollar is received. All of the factors in overhead expense are predetermined factors in cost, as G. C. Harrison and many other cost accountants have very well pointed out. We adopt methods of prorating overhead expense for the express purpose of arriving at percentages of overhead to the sales dollar or to hours of work or to departmental process with the thought and hope that such predetermined percentages and ratios will be actively used by the management in executive control.

#### Departmental Factors

Perhaps the best illustration of budgetary control and cost accounting lies in the present widespread use of departmental factors. This practice needs little explanation before this audience. We divide the processing within a factory into departments—for example, into the core room, the molding department, the cupola, the rough casting finishing department, machine shop "A," machine shop "B," etc. For each of these departments we find in our cost department the cost by days and weeks of direct and indirect labor, of direct and indirect material and of overhead expenses. Thus we are enabled to set up a departmental cost or departmental expense analysis showing the cost of each mechanical department for a day or week or month. Then we take some factor in the production, such as number of tons produced, or number of spindles employed, or number of direct labor hours, or number of units produced, etc., and week by week or month by month we find the cost per ton, or per hour, or per spindle, or per unit. Such departmental costs necessarily vary from season to season and from year to year. That we may have a reliable factor, we as cost accountants have learned to set up a standard factor, or predetermined factor, and to use such standard factor or predetermined factor in our costing rather than the variable factor.

Having arrived at a standard factor, let us say in the foundry, per ton produced, or in the machine shop per unit handled, we compare this predetermined or standard or average factor with the variable factor that we have in our costs from day to day or week to week or month to month. We say that the actual production cost has absorbed 80 per cent of the standard, or 100 per cent of the standard factor; that is, we measure our work by our costs from one period to another in the terms of the percentage of the variable factor to the standard factor. This is one of the many innumerable services that cost accountants are constantly rendering to the management. It is a service that is familiar to all of you. In the best concerns in America today there is keen inquiry at the close of each accounting period for the statistics which account for the standard factors and the variable factors. The standard factor is, of course, a budgetary estimate and the comparison between the standard factor and the variable factor is a striking example of the use of the budgetary estimate in managerial control.

#### COST SECTION

Another use of budgets by the cost accountants that will be familiar to all of you is the setting of the maximum and minimum quantity for each balance of stores item. Indeed the setting of maxima and minima for balances of stores is one of the principal uses that is made of the perpetual inventory by the cost accountant. The maxima and minima set upon each item in finished stores are forms of budgetary estimate that affect not only the production that is to be had from each sale, but affect also the maximum and minimum on each item of raw material in the raw material stores. Manufacturing enterprises making large use of assembled items; that is, items purchased in complete form from the outside, must necessarily constantly correlate the maxima and minima on items of their own production with the maxima and minima on balance of stores on items that are purchased from the outside. Practically all of the automobile manufacturers of the country are necessarily extensive users of this form of budgetary control.

#### Predetermination of Right Balance

The predetermination of the right balance to be kept on hand of each item of raw material and each item of finished stock, is of the greatest interest to the cost accountant. It is the statistics of the cost accountant as to work-in-process that furnishes the connecting link between the maxima and minima on raw materials and on assembled items and maxima and minima on completed products.

Indeed it would be of little value for the cost accountant to produce his statistics as to work-in-process were it not for the comparison that will be made of his work-in-process figures with the predetermined or estimated balances of assembled items and of finished stock to be kept on hand.

Procedures in connection with cost accounting for work-in-process are a fertile field for the cost accountant. I have seen industrial engineers go into a concern and take away \$40,000 and \$50,000 in fees for putting in a planning and production control department, which was nothing at all except a restatement of the work-in-process accounting. Why can't we wake up?

Of course, in a factory that is managed at all, there has got to be work-in-process, and of course the work must be followed through from beginning to end. Any superintendent who hopes to get production at all has got to know how long it takes an article to get through and how the processes interrelate. Furthermore, any superintendent or any manager at all must know about the economical production and economical scheduling. But that is a part and parcel of good cost accounting in the work in process accounts.

I make no plea this morning that the cost accountant replace the industrial engineer. I do not want to see that, but I do want to say this, that a proper appreciation of the budgetary value of work-in-process accounting is needed in place after place, time after time. I have seen in my professional visits a planning department that was routing and scheduling, and a cost accounting department that was classifying and recording, and they were absolutely separated from each other and knew nothing about each other's processing or work or hope or aspirations in the business.

I know as a matter of positive knowledge that the kind of scheduling and planning room that works and keeps on working is a control board device that is tried and proven out by the work-in-process accounting. That is a use of budgetary control that the cost accountant needs education in, and I hope at your next annual meeting you will give a whole day to the discussion of scheduling and dispatching in its relation to cost accounting.

The trouble with scientific management in this country has been that it has lacked proof, and it has lacked proof because the scheduling and planning departments were not proven out week by week and month by month by the cost accounting department through a well-classified system of work-in-process account.

#### What We Are Beginning to Find Out

What I want to say this morning in an informal way is that the cost accountant for 70 years has been doing budgeting and is now

commencing to find it out. In 70 years more he may be able to realize his proper function in business other than to find facts. Fact finding is the cheapest work in the world. You don't pay anything in the factory for the man who distributes the payroll or the man who distributes the material account. The ascertaining of facts is cheap work and is turned over to a \$20-a-week clerk.

What you have to pay money for is opinions—opinions as to the proper share of factory expense and administrative expense and selling expense, and opinions as to the proper gross profit to be earned. The cost accountant has made tremendous strides in getting opinions accepted on a major part of his work, until today all business men are interested in the opinions of cost accountants as to the proper costing of overhead expense.

If we have gone so far in giving our opinions as to be the masters of opinions in pricing and in reserve accounting and in estimating payrolls, I hope the time will come when we will be masters of opinions in setting minima and maxima on stores and interlocking our cost accounting records with the scheduling and planning departments of the business and then we will commence to be professional advisers.

It is a long cry from the cost clerk to the cost accountant, and I hope that what I have said this morning will provoke enough antagonism so that you will discuss this matter at your own local chapter meetings. I will like to think that cost accountants were determined to have a part in the budgetary control of the business, not simply because they were ambitious, but because they originated the budgetary control and are today the best users of it. Furthermore, any cost accountant should welcome budgetary control. You cannot have good estimates as to the future unless you have good opinions as to what has happened in the past, and the cost accountant is a master of the past and is a proper man to advise as to the future.

Another example for the use of budgetary control by the cost accountant lies in the weekly or semi-monthly estimate that the cost accountant is usually required to prepare as to the amount of cash necessary to meet the payroll.

#### Budgetary Control

If time were sufficient I should like to dwell at some length on the thesis that all production planning is and should be considered as budgetary control. The estimate as to the length of time it will take to produce any article in any factory is a very vital estimate. No matter what system of industrial engineering is used in the factory, the general superintendent or works manager must keep before him the progress of special and standard orders from one department to another department. This progress of orders may be reflected on control boards or planning boards in a simple or very elaborate system of control records. The tendency today is to divorce such progress records from the cost accounts. In my opinion, the cost accounts of the modern manufacturing concern should in their work-in-process classification interlock with and verify the progress records of the planning department. The planning department that is dependent upon mechanical progress records for its production budgetary control will constantly make serious mistakes both as to delivery promises and as to production economies that would be avoided were such mechanical progress records constantly checked against properly classified work-in-process cost accounts.

The modern cost accountant no longer needs argument as to the absolute necessity for the balancing in of his cost accounts with the accounts on the general ledger of his company. Cost accounts are in their nature detailed analyses of the general accounts of the company and should be self-proving. The trial balance of the cost of material, labor and overhead expense should agree with the trial balance of final cost accounts (by jobs, classes or departments), and both such trial balances should agree with the control accounts on the general ledger. The interlocking of cost accounts and general accounts was ably argued by the English authority, Hawkins, over half a century ago, and all the important authorities are in

agreement. I touch upon this here merely because it serves as an illustration of the interdependence of the cost estimates and the general estimates in any business.

The cost accountant in setting up his predetermined costs, and particularly in setting up his standard factors for the prorating of expenses, should bear in mind the use of such standard factors in making the sales estimates, the selling expense estimate, the inventory estimate and all other estimates for the control of the business. Above all else, the standard factors for each department in a factory should be reliable—they should really forecast the expenses of a department as a necessary part of factory production.

#### How Sales Estimates Are Affected

In many cases in my own experience I have found that the sales estimate has been properly affected by known conditions as to raw materials and by known conditions as to the labor market. At the same time the sales estimate had not been properly reviewed in the light of the expense factors in the various departments of the factory. It is not enough that the sales estimate should cover only the material market situation or the labor market situation; the sales estimates should also be carefully reviewed in the light of internal economies and adjustments. There is no more telling criterion as to such internal economies and adjustments than the proper uses of standard factors. Similarly the budget of the treasurer as to cash requirements is constantly affected by the inventory control within the enterprise and the very life of inventory control lies in the proper setting of maxima and minima, not only on items of finished stores but on raw materials and on the assembled parts purchased from the outside. The work of the cost accountant in setting the balance of stores estimates from day to day is certainly a very vital part of the budgetary plans of any business.

Certainly no sales budget and no budget of cash requirements for an enterprise can be set up without inviting the statistics and reasoned conclusions of the cost accountants as to work-in-process estimates. It is exactly at this point that the cost accountant needs vision. It is not enough for the cost accountant today that he be capable of ascertaining and setting down facts after they have occurred; the cry and urge of important modern business is for closer and closer estimates of future costs. Manufacturers are awake to the fact that material cost estimates must be more than engineering specifications. Here the cost accountant comes in with his estimates of scrap and salvage and defects and wastage. Manufacturers are awaking equally to the important fact that labor cost estimates are not simply a matter of mathematical determination by the planning department. Here the cost accountant comes in with his estimates as to labor turnover and idle time and non-productive time and machine assembly time. More than ever the estimates by the cost accountant will be welcome as to future factors of expense to prime cost.

#### Setting of Reserves

Other examples of budgeting are the setting of reserves. Let us take several ordinary illustrations of reserves. There is the reserve for taxes, the reserve for casualty insurance and the reserve for changes in inventory value. You all use those reserves. You seek to set up at the beginning of a fiscal period an estimate based on your past experiences as to what will be the cost during the coming fiscal period of your taxes, your insurance and your inventory fluctuations.

As cost accountants you say to yourselves, "We do not want to include this overhead expense in January, it is a big loss." Perhaps it is a big tax payment to the government, or a big casualty—two or three men having been killed in one of the shops. Perhaps it was a big drop in the price of steel.

As cost accountants we recognize that in order that our accounts may be practical and not theoretical in their use, we must take items of that character and spread them over a period of time so that our costs will not vary so much from month to month so as to be use-

less because of extraordinary happenings. We set up a reserve on bad debts as a part of the cost of selling, say, one-quarter of one per cent. That is too low this year. We will take five per cent of the sales every month and we will set it aside in a reserve fund and then against that reserve fund we will charge extraordinary losses of bad debts from month to month, and by having a uniform fund created we distribute the cost and make our costs more useful because they are not so violently affected by the sharp loss of one big bad debt account in one month.

We use a similar practice as to inventory fluctuations. I hope you are using inventory reserves, but if you are not, I want to tell you that it is a mighty fine managerial device and it would be a mighty fine thing for you as cost accountants to call the attention of the president at the beginning of the year to the fact that inventory fluctuations will occur throughout the year, and that it is wise to make provision in an inventory reserve account for those fluctuations. If you do set aside an inventory reserve from month to month and then charge against that reserve the violent fluctuations and costs of material, you will have cost accounts on materials that will be more usable than if you charged that cost of materials over every month into your cost accounts.

Now such a practice is usual and not novel budgetary control. I remember at the very first meeting of our Illinois Manufacturers' Cost Accountants' Association in Chicago, seven years ago, we discussed the use of reserves for distributing costs over the year.

We did not discuss seven years ago, however, the use of reserves for distributing costs in the future years.

#### Pioneers in Use of Reserves

One of the best discussions of the whole use of reserves is found in a book written by Hawkins in 1854 in England. Cost accountants are indeed pioneers in the use of reserves. Every reserve, from its very nature, is a budgetary estimate set up for the manager for the control of extraordinary incidents in business.

Another very trite illustration of budgetary control, and one I need hardly mention, is the estimate the cost accountant should make as to the amount of money needed for the payroll from week to week or from month to month. There is no man who is better acquainted with the labor analysis than the cost accountant.

I get very impatient as I go around from day to day and find a lot of psychologists running personnel offices. The cost accountant is the man that ought to furnish the inside figures as to labor. The reason why the psychologists do it is because the cost accountant is so narrow on his job. The cost accountant is the man who knows, and the psychologists come along and use what the cost accountant knows and get twice the salary.

The cost accountant who is alive to his job knows the labor turnover, and he knows labor costs, and he ought to analyze the payroll and should be the right hand in advising the treasurer as to what the financial requirements of a factory are, both with respect to payroll and material.

Proper cost accounting is the basis for budgetary control, and the good cost accountant will welcome the prospects of budgetary control for the simple reason that the more a business relies upon carefully prepared future estimates, the more it will be necessary for the business to have before it scientifically recorded costs.

#### May File Briefs Until April 1 in Dumping Case

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 14, 1923.—It is understood that officials of the Customs Service have notified importers of kraft wrapping paper from Scandinavian countries that they will be given until April 1 in which to file briefs in connection with the dumping of this class of paper on the American market. An investigation has been under way for some time by the Customs Service but before issuing a final order in accordance with its regular custom, the service is allowing the importers an opportunity to set forth their side of the case.

COST SECTION

#### American Writing Paper Co. Improves

After two years of poor business American Writing Paper Company is getting to where it should show substantial earnings on preferred stock, says the *Wall Street Journal*. Earnings at present just about cover fixed charges, including depreciation and bond interest, but increasing operations are being reflected in improving earning power. There is \$12,500,000 preferred stock outstanding, with dividends of 7 per cent annually accumulated since 1913.

The market for fine papers is good and price trend upward. So far this year, prices of writing papers are up 5 to 10 per cent, although increased labor costs are offsetting advances to some extent.

The strike of Swedish pulpmakers in effect since the first of the year is strengthening markets on belief that cutting off of some pulp supplies may mean a paper shortage. Fine paper market follows closely general business conditions, so that the American Writing Paper Company seems assured of activity better than at any time since 1920.

The 1922 annual statement to be published within a few weeks will probably show a deficit, estimated to approximate \$500,000 after fixed charges, depending to some extent on how depreciation is handled. Conditions the greater part of last year were poor and when improvement set in the company was handicapped by the earlier deficit. Operations in the early months were between 50 and 60 per cent of normal.

A deficit of \$500,000 last year would mean approximately \$2,000,000 deficit for two years 1922 and 1921. In 1920 net earnings available for the stock were \$1,688,000, equal to \$13.50 a share on the preferred.

#### "The Forests of New York State"

Under the above title, A. B. Recknagel, B. A., M. F., Professor of Forest Management and Utilization at Cornell University has written a very interesting book, replete with trustworthy statistical information not elsewhere assembled. "Half of New York State," says the author, "is better suited to the growing of forests than to any other purpose, and while seventy years ago the state was preeminent in the lumber industry, she is to-day spending vast sums for imported timber."

An entire chapter is devoted to the pulp and paper industry, and Mr. Recknagel deals entirely with the economic aspects of the subject. It is the author's aim to show what the forests of the Empire State have meant in the past development of the state and nation, and to give some idea of their present significance and their vast potentialities for the future. The volume contains an introduction by Liberty Hyde Bailey, former Dean of the New York State College of Agriculture. Copies may be obtained through The Macmillan Company, publishers, at \$2.50 each.

#### Business Improving in Holyoke

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., March 14, 1923.—Western Massachusetts paper manufacturers are already noting a considerable improvement in orders and here and there a mill is running at full or near full capacity, but there is yet room for improvement. The manufacturers are, as a whole, optimistic, and the finer writing bond ledger and linen papers of all kinds are being more generally sought than for any period since the 1914.

Prices are stiffening, and to meet the advanced costs of labor locally, further slight advances may be required.

The American Writing Paper Company reports demand for its higher grade papers that encourages the belief that the consumers are again looking for quality instead of a paper that "will do well enough." After two years of poor business, the company feels that it is in a way to make a better showing this year than for some years.

# THE APPLETON MACHINE COMPANY



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

APPLETON

WISCONSIN

# Nilsen, Lyon & Co., Inc.

110 East 42nd St.

*Selling Agents For*

NEW YORK



|            |                            |
|------------|----------------------------|
| TOFTE      | Bleached Sulphite          |
| HISSMOFORS | Strong Unbleached Sulphite |
| OSKARSTROM | Easy Bleaching Sulphite    |
| DIESEN     | Bleached Sulphate          |
| ESSVIK     | Unbleached Sulphite        |
| KROGSTAD   | Easy Bleaching Sulphite    |

*Stocks Carried on Dock For Prompt Delivery*

CHRISTIANIA

NEW YORK

GOTHENBURG

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

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

IMPORTS—PAPER.

| PAPER AND MANUFACTURES OF                                 | October 1921 |             | October 1922 |             | Ten Months Ended October 31 1921 |              | Ten Months Ended October 31 1922 |              |
|---|--------------|-------------|--------------|-------------|----------------------------------|--------------|----------------------------------|--------------|
|   | Quantity     | Value       | Quantity     | Value       | Quantity                         | Value        | Quantity                         | Value        |
| Paper, except printed matter (total).....                 |              | \$6,733,608 |              | \$9,871,719 |                                  | \$75,339,083 |                                  | \$69,499,192 |
| Printing papers—  |              |             |              |             |                                  |              |                                  |              |
| Standard newsprint.....lbs..Free                          | 151,195,091  | \$6,118,982 | 236,019,186  | \$8,336,705 | 1,276,600,503                    | \$67,186,036 | 1,665,316,057                    | \$58,401,015 |
| All other, n. e. s.....lbs..Dut.                          | 38,887       | 3,919       | 1,197,259    | 67,063      | 1,334,381                        | 195,036      | 2,572,965                        | 195,912      |
| Grease proof and waterproof papers.....lbs..Dut.          |              |             | 289,024      | 20,827      | 8,531,055                        | 413,237      | \$289,024                        | \$20,827     |
| Wrapping paper.....lbs..Dut.                              | 1,024,106    | 37,400      | 8,574,633    | 382,773     | 49,727,433                       | 49,727,433   | \$286,949                        | \$20,827     |
| Writing, drawing, band, etc.....lbs..Dut.                 |              |             | 286,949      | 70,281      |                                  |              | \$286,949                        | \$70,281     |
| Surface coated.....lbs..Dut.                              | 18,357       | 6,470       | 60,708       | 16,054      | 677,857                          | 175,972      | 799,568                          | 190,616      |
| Tissue papers.....lbs..Dut.                               |              |             | 152,136      | 50,511      |                                  |              | \$152,136                        | \$50,511     |
| Paper boards—   |              |             |              |             |                                  |              |                                  |              |
| Pulp boards in rolls.....lbs..Dut.                        | 3,190,649    | 88,260      | 4,878,985    | 113,318     | 33,053,786                       | 955,664      | 53,344,666                       | 1,362,748    |
| Other paper boards, n. e. s.....lbs..Dut.                 |              |             | 2,792,457    | 82,821      |                                  |              | \$2,792,457                      | \$82,821     |
| Cigarette paper, cigarette books and covers.....lbs..Dut. |              | 236,240     | 657,051      | 394,296     |                                  | 2,954,256    |                                  | 3,640,133    |
| Photographic paper.....lbs..Dut.                          | 178,669      | 25,261      | 338,146      | 72,302      | 1,558,623                        | 305,184      | 2,100,615                        | 408,614      |
| Printing paper.....lbs..Dut.                              |              | 22,427      | 174,297      | 25,282      |                                  | 305,498      |                                  | 514,923      |
| Decalcomania, not printed.....lbs..Free                   |              | 6,020       | 56,799       | 11,899      |                                  | 171,983      |                                  | 87,094       |
| All other.....lbs..Dut.                                   |              | 188,629     |              | 227,587     |                                  | 2,676,217    |                                  | 2,480,813    |

CRUDE PAPER STOCK.

|  |            |         |            |         |            |           |              |           |
|--|------------|---------|------------|---------|------------|-----------|--------------|-----------|
| Rags for paper stock.....lbs..Free               | 5,827,626  | 93,490  | 38,388,823 | 546,859 | 77,073,742 | 1,447,353 | 242,399,693  | 3,766,335 |
| Waste bagging, waste paper, etc.....lbs..Free    |            |         | 17,383,428 | 204,835 |            |           | \$17,383,428 | \$204,835 |
| Old rope and all other paper stock.....lbs..Free | 12,428,528 | 230,175 | 15,556,267 | 517,148 | 84,985,919 | 1,797,383 | 135,637,925  | 3,397,651 |

WOOD PULP.

|   |        |           |        |           |         |            |         |            |
|---|--------|-----------|--------|-----------|---------|------------|---------|------------|
| Mechanically ground.....tons..Free      | 23,569 | 612,274   | 23,144 | 625,240   | 114,662 | 3,693,123  | 140,766 | 3,923,352  |
| Chemical—                               |        |           |        |           |         |            |         |            |
| Sulphite, unbleached.....lbs..Free      | 28,115 | 1,498,476 | 41,282 | 2,013,354 | 130,427 | 10,087,660 | 296,847 | 15,590,791 |
| Sulphite, bleached.....lbs..Free        | 7,338  | 591,990   | 22,885 | 1,904,716 | 60,045  | 6,847,319  | 164,841 | 13,955,071 |
| Total.....tons..Free                    | 35,453 | 2,090,466 | 64,167 | 3,918,070 | 190,472 | 16,934,979 | 461,688 | 29,545,862 |
| Imports from—                           |        |           |        |           |         |            |         |            |
| Finland.....tons                        |        |           | 3,710  | 215,511   |         |            | 25,900  | 1,340,392  |
| Norway.....tons                         |        |           | 4,031  | 288,357   |         |            | 50,742  | 3,738,520  |
| Sweden.....tons                         |        |           | 20,439 | 966,324   |         |            | 143,176 | 7,956,204  |
| Canada.....tons                         |        |           | 32,337 | 2,246,770 |         |            | 218,458 | 15,194,015 |
| Other countries.....tons                |        |           | 3,659  | 201,108   |         |            | 23,412  | 1,316,651  |
| Soda pulp.....lbs..Free                 |        |           | 100    | 4,684     |         |            | \$100   | \$4,684    |
| Sulphate pulp, unbleached.....lbs..Free | 22,259 | 1,203,687 | 27,928 | 1,614,936 | 91,196  | 7,250,403  | 204,867 | 11,988,252 |
| Imports from—                           |        |           |        |           |         |            |         |            |
| Finland.....tons                        |        |           | 2,959  | 151,459   |         |            | 17,995  | 866,856    |
| Norway.....tons                         |        |           | 1,276  | 60,101    |         |            | 6,079   | 311,745    |
| Sweden.....tons                         |        |           | 7,644  | 370,662   |         |            | 66,064  | 3,380,148  |
| Canada.....tons                         |        |           | 16,049 | 1,032,714 |         |            | 113,259 | 7,342,708  |
| Other countries.....tons                |        |           |        |           |         |            | 1,470   | 86,795     |
| Sulphate pulp, bleached.....tons..Free  | 1,390  | 78,088    | 5,536  | 320,671   | 2,331   | 155,731    | 13,339  | 836,984    |
| Other pulp.....tons..Free               |        |           | 377    | 8,685     |         |            | \$377   | \$8,685    |

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

|  |         |         |           |         |           |           |              |           |
|--|---------|---------|-----------|---------|-----------|-----------|--------------|-----------|
| Color lakes.....tons..Dut.   |         |         | 16        | 23      |           |           | \$16         | \$23      |
| Indigo—  |         |         |           |         |           |           |              |           |
| Natural.....tons..Dut.   | 992     | 372     |           |         | 38,624    | 71,861    | 11,348       | 12,790    |
| Synthetic.....tons..Dut.   | 21,719  | 49,952  |           |         | 58,129    | 91,650    | 72,218       | 101,448   |
| Colors, dyes, stains, color acids, and color bases, n. e. s.....tons..Dut. |         |         | 237,832   | 290,861 |           |           | \$237,832    | \$290,861 |
| Imports from—  |         |         |           |         |           |           |              |           |
| Germany.....tons   |         |         | 67,851    | 66,763  |           |           |              |           |
| Switzerland.....tons   |         |         | 121,172   | 164,740 |           |           |              |           |
| United Kingdom.....tons  |         |         | 826       | 1,835   |           |           |              |           |
| Other countries.....tons   |         |         | 47,983    | 57,523  |           |           |              |           |
| Casein or lactarene.....tons..Free   | 825,694 | 42,432  |           |         | 8,804,087 | 784,657   | \$10,321,399 | \$853,276 |
| Kaolin, china, and paper clay.....tons..Dut.                               | 19,759  | 188,162 | 1,232,891 | 155,587 |           |           | \$1,232,891  | \$155,587 |
|  |         |         | 34,063    | 373,034 | 99,943    | 1,069,887 | 219,241      | 2,387,755 |

PULPWOOD

|                         |  |         |           |         |  |            |  |           |
|-------------------------|--|---------|-----------|---------|--|------------|--|-----------|
| Rough.....cu. ft..Free  |  | 98,938  | 3,775,889 | 299,100 |  | 2,942,636  |  | 1,940,604 |
| Peeled.....cu. ft..Free |  | 354,018 | 6,721,132 | 530,938 |  | 10,004,037 |  | 6,192,534 |
| Rosced.....cu. ft..Free |  | 68,229  | 1,192,391 | 143,965 |  | 1,396,125  |  | 1,289,680 |

\*Sept. 22 to Oct. 31. \*Jan. 1 to Sept. 21. \*Beginning Sept. 22.

(Continued on page 60).

# ANY DISCUSSION

As to the widest Book Machines in the World is not complete until we have told of the 198" machines in operation at the mill of

**Kimberly-Clark Company**  
Niagara Falls, N. Y.

*Ask Us*

**THE PUSEY AND JONES COMPANY**  
Wilmington, Delaware

# ROGERS WET MACHINE

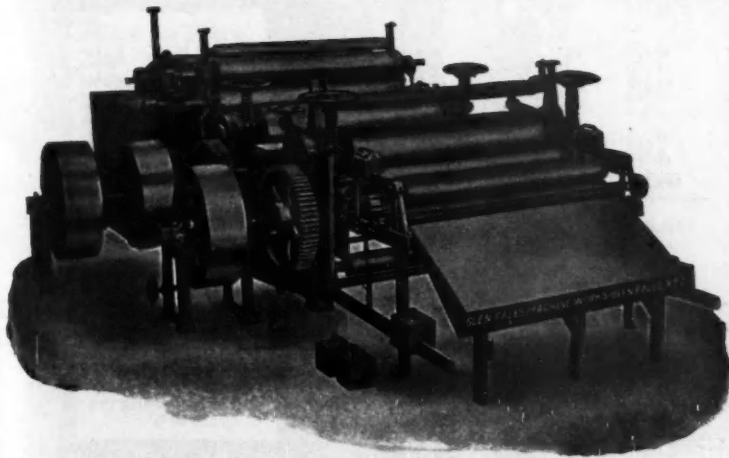


Illustration Shows Rogers Double Press Wet Machine

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

TYPES—Single and Double Press 72" wide.

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

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

**WORKMANSHIP AND MATERIAL GUARANTEED**

**GLENS FALLS MACHINE WORKS      Glens Falls, N. Y.**

*Try Our Split Cams for Your Flat Screens*

## PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(Continued from page 58)

| PAPER AND MANUFACTURES OF   | October   |             |           |             | Ten Months Ended October 31 |              |            |              |
|---|-----------|-------------|-----------|-------------|-----------------------------|--------------|------------|--------------|
|   | 1921      |             | 1922      |             | 1921                        |              | 1922       |              |
|   | Quantity  | Value       | Quantity  | Value       | Quantity                    | Value        | Quantity   | Value        |
| Paper, except printed matter (total).....                         |           | \$1,360,978 |           | \$2,020,108 |                             | \$25,879,419 |            | \$19,868,226 |
| PRINTING PAPER—   |           |             |           |             |                             |              |            |              |
| News Print..... lbs.  | 1,408,737 | \$71,293    | 2,261,636 | \$108,848   | 27,930,638                  | \$1,900,340  | 44,973,567 | \$2,015,669  |
| Exported to—  |           |             |           |             |                             |              |            |              |
| Canada.....   | 22,043    | 1,758       | 167,872   | 11,137      | 464,433                     | 41,771       | 1,784,120  | 116,630      |
| Central America.....  | 171,644   | 9,817       | 213,562   | 10,471      | 1,863,571                   | 1,379,786    | 1,379,012  | 73,509       |
| Cuba.....   | 617,401   | 26,283      | 1,226,303 | 54,416      | 13,952,734                  | 878,478      | 16,155,472 | 662,363      |
| Argentina.....  |           |             |           |             | 4,262,098                   | 310,300      | 12,522,613 | 496,523      |
| Other South America.....  | 207,063   | 13,191      | 250,919   | 13,364      | 2,077,873                   | 168,750      | 4,092,161  | 198,815      |
| China.....  | 30,259    | 1,596       |           |             | 333,482                     | 23,123       | 1,447,517  | 59,747       |
| Philippine Islands.....   | 307,982   | 15,324      | 313,489   | 14,049      | 3,151,790                   | 211,901      | 3,024,519  | 138,309      |
| Other countries.....  | 52,345    | 3,324       | 89,491    | 5,411       | 1,824,657                   | 138,231      | 4,568,153  | 269,773      |
| Bible or India paper..... lbs.                                    |           |             | 269       | 100         |                             |              | 29,828     | 4,117        |
| Other book paper, not coated..... lbs.                            | 1,381,958 | 134,040     | 1,834,630 | 193,016     | 37,549,023                  | 5,586,143    | 23,415,785 | 2,258,265    |
| Exported to—  |           |             |           |             |                             |              |            |              |
| United Kingdom.....   | 24,843    | 5,976       | 26,652    | 6,413       | 297,515                     | 69,125       | 431,085    | 94,858       |
| Canada.....   | 245,227   | 24,137      | 258,825   | 27,894      | 2,659,255                   | 325,082      | 2,157,488  | 226,776      |
| Central America.....  | 27,347    | 3,978       | 50,892    | 5,068       | 926,820                     | 166,307      | 324,892    | 35,672       |
| Mexico.....   | 256,934   | 26,919      | 112,710   | 13,828      | 3,397,016                   | 489,287      | 2,355,325  | 207,624      |
| Cuba.....   | 198,742   | 13,978      | 346,535   | 34,600      | 4,152,590                   | 638,579      | 4,446,934  | 437,172      |
| Argentina.....  | 17,727    | 2,536       | 26,688    | 4,351       | 5,664,852                   | 803,448      | 1,105,446  | 94,714       |
| Brazil.....   | 82,679    | 8,523       | 188,485   | 19,925      | 1,215,953                   | 225,332      | 1,349,312  | 147,953      |
| Venezuela.....  | 67,618    | 7,282       | 30,688    | 3,546       | 519,900                     | 81,453       | 616,801    | 67,801       |
| Other South America.....  | 122,063   | 10,722      | 134,361   | 12,812      | 2,734,642                   | 414,591      | 1,193,491  | 119,562      |
| British India.....  |           |             | 40,831    | 4,299       | 1,014,333                   | 144,110      | 215,944    | 23,986       |
| China.....  | 54,865    | 5,724       | 76,090    | 7,297       | 2,981,740                   | 512,695      | 1,942,371  | 167,229      |
| Japan.....  | 159,652   | 11,446      | 104,749   | 11,942      | 1,872,970                   | 195,832      | 3,197,996  | 237,163      |
| Philippine Islands.....   | 53,379    | 4,551       | 269,200   | 21,198      | 2,912,214                   | 502,288      | 2,168,789  | 204,442      |
| Australia.....  | 24,947    | 2,245       | 132,343   | 15,147      | 4,567,902                   | 602,564      | 826,602    | 81,369       |
| Other countries.....  | 45,935    | 6,023       | 35,581    | 4,696       | 2,631,321                   | 415,450      | 1,115,701  | 111,942      |
| Cover paper..... lbs.   |           |             | 331,283   | 32,328      |                             |              | 1,385,110  | 191,053      |
| Grease-proof and waterproof paper..... lbs.                       |           | 10,433      | 117,586   | 16,731      |                             | 116,661      | 941,038    | 120,735      |
| Wrapping paper..... lbs.  | 1,431,334 | 95,684      |           |             | 21,571,547                  | 2,008,079    |            |              |
| Kraft wrapping..... lbs.  |           |             | 19,554    | 1,689       |                             |              | 658,537    | 53,637       |
| Other wrapping..... lbs.  |           |             | 2,686,555 | 180,238     |                             |              | 27,726,455 | 1,755,503    |
| Writing paper and envelopes.....                                  |           | 179,553     |           |             |                             | 4,020,680    |            |              |
| Writing paper, except in papereries..... lbs.                     |           |             | 534,317   | 86,371      |                             |              | 6,085,068  | 976,519      |
| Surface-coated paper..... lbs.                                    |           |             | 281,209   | 43,331      |                             |              | 3,037,841  | 459,779      |
| Tissue and toilet paper..... lbs.                                 |           | 89,018      |           |             |                             | 774,033      |            |              |
| Tissue and crepe paper..... lbs.                                  |           |             | 235,782   | 70,917      |                             |              | 2,117,066  | 559,524      |
| Toilet paper..... lbs.  |           |             | 408,026   | 45,206      |                             |              | 4,270,400  | 445,881      |
| Paper towels and napkins..... lbs.                                |           | 18,522      |           | 18,699      |                             | 155,624      |            | 123,317      |
| Bristols and bristol board..... lbs.                              |           |             | 103,242   | 10,838      |                             |              | 1,398,786  | 160,446      |
| Paper board and straw board..... lbs.                             |           | 135,735     | 3,651,122 | 167,736     |                             | 2,037,265    | 41,218,377 | 1,714,426    |
| Sheathing and building paper..... lbs.                            |           |             | 682,812   | 23,880      |                             |              | 4,836,953  | 177,690      |
| Wall board of paper or pulp..... sq. ft.                          |           | 32,118      | 983,704   | 35,272      |                             | 585,273      | 8,913,577  | 324,632      |
| Cigarette paper and books..... lbs.                               |           |             | 107,569   | 38,597      |                             |              | 654,099    | 251,529      |
| Photographic paper..... lbs.                                      |           |             | 109,923   | 115,423     |                             |              | 1,196,423  | 1,237,488    |
| Paper hangings (wall paper)..... yard                             |           |             | 30,517    | 36,829      |                             |              | 13,726,130 | 338,621      |
| Paper bags..... lbs.  |           | 43,315      | 1,152,370 | 104,549     |                             | 714,197      | 9,963,391  | 900,068      |
| Boxes and cartons..... lbs.                                       |           | 99,269      | 647,245   | 79,225      |                             | 1,087,705    | 7,706,361  | 626,973      |
| Carbon paper..... lbs.  |           | 28,564      | 56,395    | 44,104      |                             | 424,591      | 588,138    | 457,169      |
| Envelopes..... lbs.   |           | 207,329     | 41,098    |             |                             |              | 2,157,742  | 417,317      |
| Indurated fiber ware..... lbs.                                    |           |             | 114,809   | 7,494       |                             |              | 314,505    | 28,300       |
| Playing cards..... pack   |           | 19,153      | 573,139   | 81,680      |                             | 546,500      | 3,961,200  | 494,854      |
| Cash-register and adding-machine paper..... lbs.                  |           | 8,211       | 91,320    | 9,053       |                             | 143,817      | 717,604    | 78,834       |
| Papereries (writing paper in boxes)..... lbs.                     |           |             | 49,024    | 14,062      |                             |              | 288,913    | 101,979      |
| Other paper and paper products, n.e.s. lbs.                       |           | 365,553     | 4,181,370 | 412,794     |                             | 5,246,936    | 31,066,734 | 3,593,901    |
| Books, maps, pictures and other printed matter..... lbs.          |           | 1,731,342   |           |             |                             | 18,076,920   |            |              |
| Books and Pamphlets..... lbs.                                     |           |             | 2,374,442 | 882,732     |                             |              | 18,070,689 | 6,437,037    |
| Maps and charts..... lbs.   |           |             | 8,142     | 14,077      |                             |              | 98,234     | 142,392      |
| Music in books or sheets..... lbs.                                |           |             | 56,932    | 35,077      |                             |              | 391,658    | 263,584      |
| Souvenir post cards..... lbs.                                     |           |             | 28,559    | 21,808      |                             |              | 906,608    | 179,884      |
| Lithographic printed matter, except post cards and maps..... lbs. |           |             | 214,621   | 129,071     |                             |              | 1,437,538  | 1,011,163    |
| Other printed matter..... lbs.                                    |           |             | 2,013,725 | 778,737     |                             |              | 16,870,675 | 5,900,737    |
| WOOD PULP AND PAPER STOCK   |           |             |           |             |                             |              |            |              |
| Wood Pulp..... tons   | 1,814     | 90,091      |           |             | 21,140                      | 1,521,680    |            |              |
| Mechanical wood pulp..... tons                                    |           |             | 18        | 302         |                             |              | 81         | 4,804        |
| Sulphite wood pulp..... tons                                      |           |             | 456       | 34,729      |                             |              | 14,021     | 676,851      |
| Soda wood pulp..... tons  |           |             | 177       | 13,804      |                             |              | 2,931      | 250,869      |
| Kraft wood pulp..... tons   |           |             |           |             |                             |              |            |              |
| Other wood pulp..... tons   |           |             | 375       | 15,833      |                             |              | 1,742      | 88,936       |
| Rags, and other paper stock..... lbs.                             | 4,265,146 | 82,698      | 3,017,752 | 77,577      | 29,749,453                  | 576,800      | 63,004,677 | 1,079,869    |
| PAPER AND PULP MILL MACHINERY                                     |           |             |           |             |                             |              |            |              |
| Paper and pulp-mill machinery.....                                |           | 175,138     |           |             |                             | 2,457,153    |            |              |
| Pulp-mill machinery..... lbs.                                     |           |             | 64,915    | 11,699      |                             |              | 742,068    | 63,303       |
| Paper-mill machinery..... lbs.                                    |           |             | 1,010,366 | 117,341     |                             |              | 5,714,878  | 1,156,793    |



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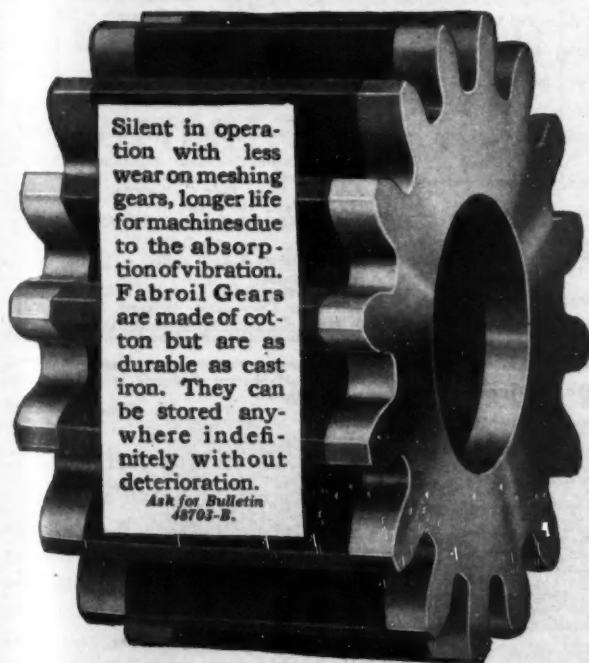
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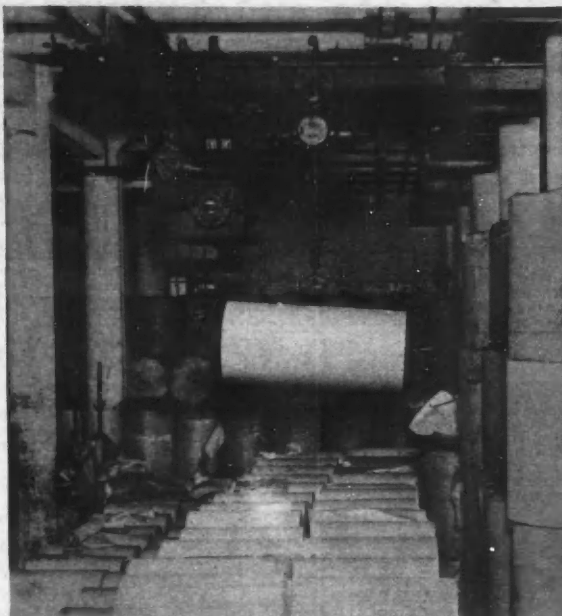
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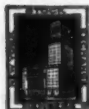
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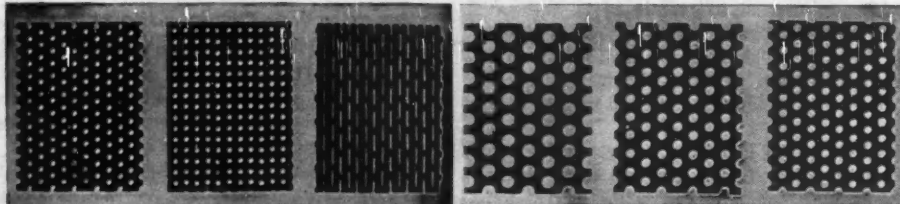
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## New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,  
WEDNESDAY, MARCH 14, 1923.

The paper, pulp and paper stock markets of New York, while displaying a range of tendencies from exceptional activity to unusual dullness, have, for the most part, exhibited healthy signs of continued expansion. Practically all grades of finished paper—book, fine, tissue, kraft and board have held in constant demand at steadily firming prices. Though ground wood has continued to ease slightly in tone, the morale of the pulp markets has been maintained by the chemical grades, several quotational advances having been registered in the course of the past week. Lower grades of waste paper sagged a trifle further, but brisk trading was reported for the better qualities, book and ledger stock as well as other medium listings holding their own. Rags gained strength and several domestic dealers reported that their cable orders to Belgium and Germany were greeted with the return message: "Sold for home consumption."

Among the topics of discussion for the New York paper trade during the week, the Swedish pulp strike probably ranked first. This was motivated, doubtlessly, by the enlivenment which crept into the chemical pulp market as each day passed. A month ago many pulp and paper men regarded the lockout as inconsequential. They looked for a speedy settlement and moreover, a wide ocean separated this country from the scene of the disturbance. Meanwhile, Great Britain and continental Europe have grown panicky. Sweden is now approximately 200,000 tons behind in production. Her own paper mills and those of European countries close by will be anxious competitors of the United States in the bidding for pulp at first open water and at the strike's termination. American consumers are now beginning to fear there will not be enough pulp to go around.

News print last week continued its uninterrupted gait and leading producers reported capacity production, a lightening in the freight car shortage, a plentitude of mechanical pulp and orders on hand covering the next sixty to ninety days. Newspapers have continued to run exceptionally large editions as well as numerous ones, a variety of circulation-building features and, despite the high prevailing rates, a tremendous volume of advertising. The immediate outlook is nothing if not optimistic.

Book paper men of New York had their full share of justice in the course of the week when a "break" in the casein market was reported, the commodity dropping off several cents a pound and, apparently, heading toward an easier level in consequence of flush milk production in Argentine. Many manufacturers are over sold for the present month and are booking future contracts with caution.

Fine papers enjoyed a week's solid business and the tone of the market held very strong. Salesmen encountered practically no stumbling blocks in their consuming trade and had the advantage of practically dictating terms of shipment in the "seller's market" which now prevails. Export demand has continued to improve.

Tissues have been in steady call by consumers and since the recent strike amongst New York garment workers trading has taken a brisk turn and prices are stronger. Further advances over those instituted week before last are expected in the near future.

Krafts of all descriptions moved in goodly volume during the week. The growing scarcity of kraft pulp and impending higher prices at that end are exerting bullish effects on the market for finished wrappings.

Board is again on the ascendant. Producers ascribe the recent price drops of \$5 to \$10 per ton to causes which, they assert, were purely artificial. The fundamental strength of the market is demonstrated, they say, by the resiliency with which prices rebounded from their momentary depression. Board making grades

of waste paper are somewhat less expensive and the immediate outlook is promising.

### Mechanical Pulp

Ground wood, while maintaining a steady tone and enjoying a considerable turnover, receded, in the course of the week, from \$1 to \$1.50 per ton. An abundance of water in grinding regions coming as a result of recent heavy rains and thaws has enabled producers to grind full-blast.

### Chemical Pulp

Judging from the observations of New York pulp authorities last week, the tide has turned in this market. Both importers and domestic dealers reported substantial gains in consuming demand following several weeks of comparative lassitude on the part of buyers. Both sulphite and kraft were in heavy call, and practically every listing advanced in tone. Further increases are expected to take place in the next ten days.

### Old Rope and Bagging

With old rope production below average and consumption heavy, this market held a firm tone during the last week's business.

Bagging, particularly the roofing grades, has held in steady demand and No. 1 Scrap has advance to the level of 1.15 to 1.30 cents a pound.

### Rags

The paper mill demand for white rags increased perceptibly during the week; roofing rags have been exceptionally active; thirds and blues have held quite firm, and specialty grades have moved in goodly volume. European embargoes, retaining rags for home consumption abroad, have had the effect of adding considerable strength to the market here.

### Waste Paper

Board making grades of old papers continued to ease off during the week, mixed papers dropping to a level of 1.15 to 1.25 cents a pound. The latter has, however, moved to board mills in heavier quantities than has folded news, with the result that the latter has declined from 10 to 15 cents a hundred pounds. Higher grades of waste paper have not wanted for strength and consumers have found no fault with the current prices quoted. It is generally believed that the present lull in a few grades of waste paper is but a transitory one and prices are soon expected to return to firmer levels.

### Twine

The demand for both hard and soft fibres was attended by a noticeable degree of steadiness throughout the week past, and though transactions generally involved larger quantities of twine than usual, the call was hardly sufficient to stimulate quotations. Dealers reported a regular activity but stated that present prices are too low in proportion to the cost of raw jute.

## Swedish Wood Pulp Exports Continue Large

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., March 12, 1923.—The Paper Division of the Department of Commerce has the following cablegram from the American Consul General at Stockholm regarding the Swedish paper and pulp industry in January:

"Exports of wood pulp during January amounted to 45,000 tons while 24,000 tons of paper were sent out of Sweden. The value of all shipments was 317,000,000 kroner. Sales of wood pulp during January exceeded production. Although industry is slackened by the strikes and lockouts basic economic conditions are undisturbed. So far Government mediation in the strikes has failed and about 65,000 employees are out in all the industries involved."



## Imports and Exports of Paper and Paper Stock

(Continued from page 62)

American Wood Pulp Corporation, Waukegan, Havre, 55 bls. rags.  
 American Wood Pulp Corporation, W. Cherow, Antwerp, 693 bls. rags.  
 E. J. Keller Company, Inc., by same, 501 bls. rags, 31 bls. bagging.  
 Castle & Overton, by same, 455 bls. bagging, 194 bls. rags.  
 Katzenstein & Keene, Inc., by same, 25 bls. rags.  
 E. Butterworth & Co., Inc., by same, 153 bls. bagging.  
 E. Butterworth & Co., Inc., Argus, Antwerp, 25 bls. bagging.  
 Castle & Overton, by same, 129 bls. bagging, 43 bls. rags.  
 E. J. Keller Company, Inc., by same, 123 bls. rags.  
 American Exchange National Bank, by same, 355 bls. rags.  
 D. J. Murphy & Co., by same, 181 bls. rags.  
 Katzenstein & Keene, Inc., Manchester Hero, Manchester, 181 bls. rags.  
 Katzenstein & Keene, Inc., Manchester Port, Manchester, 51 bls. rags.  
 Katzenstein & Keene, Inc., Sabale, Hull, 351 bls. rags.  
 Katzenstein & Keene, Inc., Hudson, St. Nazaire, 275 bls. rags.  
 Katzenstein & Keene, Inc., Venusia, London, 126 bls. rags.  
 Katzenstein & Keene, Inc., V. de 'Djiboute, Marceilles, 444 bls. rags.  
 Castle & Overton, by same, 413 bls. rags.  
 Castle & Overton, Venusia, London, 748 bls. waste paper.  
 Castle & Overton, Sonora, Rouen, 213 bls. rags, 35 bls. bagging.  
 Castle & Overton, Capulin, London, 623 bls. waste paper.  
 Waste Material Trading Corporation, K. Maersk, 97 bls. rags.  
 E. J. Keller Company, Inc., Nitonian, Antwerp, 184 bls. rags.

Katzenstein & Keene, Inc., W. Cherow, Antwerp, 74 coils old rope.  
 Katzenstein & Keene, Inc., Kristianafjord, Naples, 209 coils old rope.

### BOSTON IMPORTS

WEEK ENDING MARCH 10, 1923

International Purchasing Company, Colonial, Liverpool, 143 coils manila rope.  
 Katzenstein & Keene, by same, 53 bls. new cuttings.  
 Maurice O'Meara Company, by same, 149 bls. old bagging.  
 Train, Smith Company, by same, 110 bls. new bag cuttings, 135 bls. old rags.  
 International Purchasing Company, Napierian, Antwerp, 95 bls. old rope.  
 E. Butterworth & Co., Inc., by same, 172 bls. paper stock.  
 Katzenstein & Keene, Netonian, Manchester, 57 bls. new cuttings.  
 Train, Smith Company, by same, 103 bls. paper stock.  
 Train, Smith Company, Mahopac, Antwerp, 170 bls. rags.  
 International Purchasing Company, Winifredian, Liverpool, 81 coils rope.  
 E. Butterworth & Co., Inc., by same, 70 bls. rags.  
 E. Butterworth & Co., Inc., Netonian, Liverpool, 30 bls. bagging.  
 George M. Graves Company, Breedyk, Rotterdam, 14 bls. rags.  
 M. Gottesman & Co., Inc., Sinasta, Hamburg, 1,200 bls. wood pulp.  
 Castle & Overton, W. Elcasco, Rotterdam, 252 bls. wood pulp.  
 J. A. & W. Bird & Co., Lassell, Buenos Aires, 500 bgs. casein.  
 J. A. & W. Bird & Co., Tekoa, Melbourne, 56 bgs. casein.

Katzenstein & Keene, Inc., Bolivian, London, 58 bls. new cuttings.  
 Katzenstein & Keene, Inc., W. Celina, London, 110 bls. new cuttings.

### BALTIMORE IMPORTS

WEEK ENDING MARCH 10, 1923

M. Gottesman & Co., Inc., Carisholm, Gothenburg, 9,600 bls. wood pulp.  
 H. Hollesen, Heesen, Hamburg, 1,819 bls., 361 tons wood pulp.  
 Scandinavian-American Trading Company, by same, 828 bls., 138 tons wood pulp.  
 Alex. Brown & Co., W. Eldara, St. Nazaire, 226 bls. rags.  
 Alex. Brown & Co., W. Eldara, Bordeaux, 688 bls. rags.  
 Certainteed Products Corporation, by same, 137 bls. rags.  
 Katzenstein & Keene, Inc., Venusia, London, 1,010 bls. rags.

### CHARLESTON IMPORTS

WEEK ENDING MARCH 10, 1923

E. J. Keller Company, Inc., Sundance, Antwerp, 190 bls. bagging.  
 Castle & Overton, by same, 244 bls. rags.

### NEW ORLEANS IMPORTS

WEEK ENDING MARCH 10, 1923

Castle & Overton, Michigan, Rouen, 142 bls. rags.  
 Castle & Overton, Andaluser, Antwerp, 247 bls. rags.  
 Katzenstein & Keene, Inc., Salvation Lass, Barcelona, 385 bls. bagging.

### Green Bay Napkin Co. Reorganized

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., March 13, 1923.—Reorganization of the Green Bay Napkin Company has been effected and the plant, under a new management has resumed operations with a force of about 20 persons. It has sufficient orders on its books to keep operating at capacity for about 45 days.

The Green Bay Napkin Company was organized more than a year ago and the plant was operated intermittently. Recently considerable new capital was secured and a change in management effected. Officers of the company now are confident that it will develop into one of the principal industries of Green Bay.

The company manufactures flat and folded paper napkins and is preparing to engage in the making of other paper novelties. A high speed napkin folding and printing machine, designed by P. J. Christman and J. J. DeLoye, is counted upon to bring success to the company. The machine has a capacity of about 600 folded napkins a minute.

Officers of the company are Byron L. Brown, Green Bay, president; Martin Weyenberg, Appleton, vice-president; P. J. Christman, Green Bay, secretary and general manager; D. E. McCarty, Appleton, treasurer.

### News of the Kalamazoo Trade

KALAMAZOO, Mich., March 12, 1923.—The nomination of Felix Pagenstecher, president of the Bryant Paper Company, as member of the board of directors of the United States Chamber of Commerce, has been received by D. A. Skinner, secretary of the national organization. Mr. Pagenstecher was placed in nomination by President Graves, Battle Creek Chamber of Commerce, as director from the 6th district. If he is named at the May meeting, to be held in New York, he will be the sole representative of the paper industry on the board.

Clarence A. Bradford, vice-president of the Rex Paper Company, has been elected president of the Kalamazoo Exchange Club. Robert L. Staebler, secretary-treasurer of the Kalamazoo Paper Box Company, district governor, has been named to represent the local Chamber of Commerce at the annual convention of the United States Chamber of Commerce, which will be held in New York, in May.

James H. Wright, of this city, manufacturers' agent and widely known to the paper trade of the middle west, is on an extended business trip to Pacific Coast points.

### Wolverine Carton Co. Installs Machinery

GRAND RAPIDS, Mich., March 12, 1923.—The Wolverine Carton Company, has received three carloads of machinery, which is now being installed in its new plant. The company has a large number of advance orders for cartons and plans to get under operation at an early date. Thomas V. Spees, formerly superintendent of the Joliet plant of the American Can Company, is president of the company.

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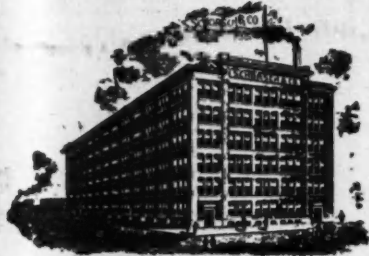


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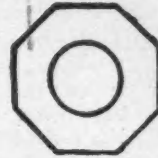
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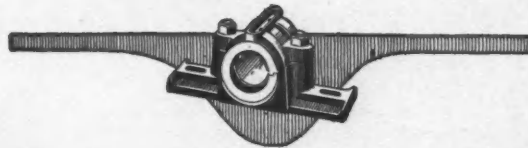
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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL

TUESDAY, MARCH 13, 1923.

BLEACHING POWDER.—Bleach continued firm throughout the past week and producers reported a uniformly steady demand from the paper manufacturing trade. Prices held in the neighborhood of 1.90 to 2.00 cents a pound, works.

BLANC FIXE.—No variations were noted in the quotational listing for blanc fixe during the week, the price of \$45 to \$50 per ton holding for blanc fixe pulp of good quality and \$85 to \$90 per ton for the dry commodity.

CAUSTIC SODA.—The schedule price of 2.50 cents a pound has ruled in the caustic soda market since the first of the year and paper mill demand for the 60 per cent basis quality has shown no diminution of late. Caustic producers still are hampered by unsettled transportation conditions and the high cost of raw materials leads them to expect prices to remain firm if not to advance in the near future.

CHINA CLAY.—Clay of all descriptions are in exceptionally strong demand in this country, according to several leading importers and domestic producers. Foreign China clay is quoted at \$17 to \$22 per ton, domestic washed at \$12 to \$15 and domestic unwashed at \$9 to \$12.

CASEIN.—Since the placing of the import duty on casein last fall, this commodity has been quoted almost continuously at prices averaging 100 per cent higher than its previous listing. If this increase could be analyzed arbitrarily, approximately 40 per cent might be accredited to the duty itself, 20 per cent to the increased paper mill demand and the remaining 40 per cent to the extreme scarcity of the milk product, the last of which has been aggravated by light importations. Argentine is now exporting considerable quantities to this country and production there is at its maximum for the year. Domestic prices are easing off slightly as a result, an average of 19 cents a pound being quoted during the past week.

LIQUID CHLORINE.—Hundred-pound cylinders of liquid chlorine have held in the neighborhood of 6.00 to 6.20 cents a pound and the market is reported to be very firm.

PAPERMAKERS' GLUE.—No changes have affected prices in the market for hide glue used in tub sizing. Quotations were from 14 to 19 cents a pound throughout the week past and consuming demand is steady.

ROSIN.—From all appearances, the rosin market reached its low ebb in point of prices last week, when the Savannah, Ga., listing was 4.90 cents a pound for grades E, F and G in barrels of 280 pounds. In the last few days quotations have advanced to 5.15 and 5.20 cents, Savannah, resulting from increased foreign and domestic consumption and dwindling supplies. The New York price of 5.85 cents has not yet been affected by the increase in gum rosins.

SALTCAKE.—With chrome cake quoted at \$25 to \$26 per pound and acid cake around \$27, this market has held very firm in recent weeks, and a strong demand prevails.

SODA ASH.—Forty-eight per cent basis soda ash has maintained its firm schedule listing of 1.20 cents a pound and the amelioration in the New England embargo conditions has precipitated a heavier movement to paper-making consumers.

STARCH.—The starch market has evinced no drastic change of tone for many weeks, demand holding strong and the movement of both paper making and powdered grades to mills increasing in volume. The former is quoted at 2.82 and 3.10 cents a pound for bag and barrel lots, respectively, while powdered starch is held at 2.72 and 3.00 cents for these amounts.

SULPHUR.—With no recorded variation from the quoted \$18 to \$20 per ton, sulphur continued to move to consumers throughout the past week in satisfying volume. Prices are very firm and should hold for an indeterminate period.

Market Quotations

(Continued from page 65)

Table of market quotations including items like Solid Ledger Stock, Writing Paper, No. 1 Books heavy, No. 2 Books light, No. 1 New Manila, No. 1 Old Manila, Container Manila, Old Kraft, Overseas News, Old Newspaper, No. 1 Mixed Paper, Common Paper, Straw Board, Chipp, Binders Bd., Domestic Rags, Price to Mill, f. o. b. Phila., Shirt Cuttings, New White, No. 1, No. 2, Silicia, No. 1, New unbleached, Washables, Fancy, Cottons according to grades, Blue Overall, New Blue, New Black Soft, New Light Sec, Bonds, Knaki Cuttings, Cardstock, New Casvas, New Black Mixed, Old, White, No. 1, Repacked, Miscellaneous, White, No. 2, Repacked, Miscellaneous, Thirds and Blues, Repacked, Miscellaneous, Black Stockings, Roofing Stock, No. 1, No. 2, No. 3, No. 4, No. 5A, B, C.

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Table of Boston market quotations including Paper (Bonds, Ledgers, Writings, Superfines, Fine, Books, S. & S. C., Books, M. F., Books, coated, Label, News, sheets, News, rolls, Manila—No. 1 Manila, No. 1 Fiber, No. 1 Jute, Kraft Wrapping, Common Bogen), Boards (Chip, News, Vat Lined), Old Papers (Shavings—No. 1 Hard White, No. 1 Soft White, No. 1 Mixed, Ledgers & Writings, Solid Books, Blanks, No. 2 Light Books, Folded News, over-issues, Gunny Bagging, Manila Rope, Common Paper, Old News, Old Kraft).

TORONTO

[FROM OUR REGULAR CORRESPONDENT]

Table of Toronto market quotations including Paper (Sulphite, bleached, Sulphate), Old Waste Papers (In carload lots, f. o. b. Toronto), Shavings—White Env. Cut., Soft White Book shavings, White Blk News, Book and Ledger—Flat Magazine and Book Stock (old), Light and Crumpled Book Stock, Ledgers and Writings, Solid Ledgers, Manila—New Manila Cut, Printed Manilas, Kraft, News and Scrap—Strictly Overseas, Folded News, No. 1 Mixed Papers, Domestic Rags—Price to mills, f. o. b. Toronto, Per lb.—No. 1 White shirt cuttings, No. 2 White shirt cuttings, Fancy shirt cuttings, No. 1 Old whites, Thirds and blues, Black stockings, Roofing stock—No. 1, No. 2, Roofing stock—Manila rope, Gunny bagging.